Appendix D: Transportation Impact Analysis

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Mission Valley Community Plan Update

Transportation Impact Study

~~Draft~~ Revised Report

~~January 24, 2019~~May 31, 2019

Prepared for:

The City of SAN DIEGO

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The following street names have changed since the release of the Draft TIS (January 24, 2019):

- Street "J" changed to Riverwalk Street "J"
- Levi-Cushman Street "B" changed to Rivewalk Street "U"
- Street "I" changed to Mission City Street "I"

1.0 Introduction

1.1 Purpose of the Report

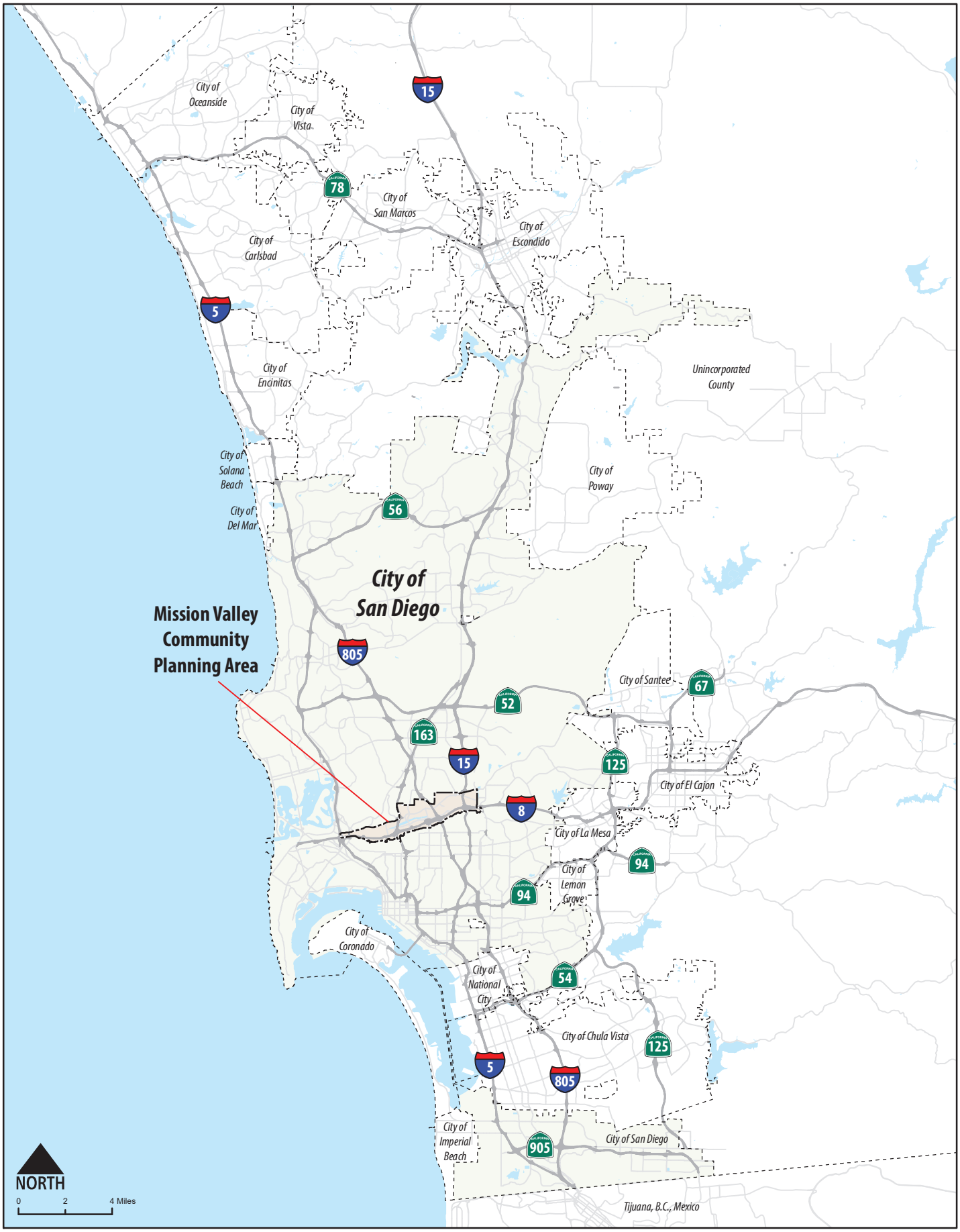
This Transportation Impact Study (TIS) serves to identify and document potential traffic impacts related to buildout of the proposed Mission Valley Community Plan Update land uses and mobility alternatives, as well as to recommend improvements/mitigation measures for any identified roadway, intersection, and freeway impacts, as appropriate.

Figure 1-1 displays Mission Valley's location in the San Diego Region.

Study Scenarios

Six (6) mobility scenarios were evaluated, including four alternatives based on the Mission Valley Community Plan Update land uses (CPU land uses). The six scenarios consist of the following:

- Existing – utilized to establish the existing (Year 2015-2016) baseline traffic operations within the project study area.
- Currently Adopted Community Plan (No-Project) – represents buildout of the Mission Valley currently Adopted Community Plan land uses and roadway network.
- Four-Lane Via Las Cumbres Alternative – represents buildout of the CPU land uses and proposed roadway network with Via Las Cumbres as a four-lane roadway. Improvements resulting in the roadway network were developed in collaboration with community members, city staff, and the project consultant team. Detailed network development process and recommendations can be found in Chapter 3 of the *Mobility Technical Report*.
- Two-Lane Via Las Cumbres Alternative – represents buildout of the CPU land uses and the Four-Lane Via Las Cumbres Alternative roadway network, except the Via Las Cumbres connection between Friars Road and ~~Levi-Cushman Street "B"~~Riverwalk Street "U" is proposed to have two travel lanes, Class II buffered bicycle lanes and painted median from Friars Road to ~~Levi-Cushman Street B~~Riverwalk Street "U" (with additional lanes at intersections as needed), grade separated from the trolley and bridge over the San Diego River; plus enhancements to Fashion Valley Road to raise it to the 15-year flood level with Class IV two-way cycle track.
- Cross-Valley Connection Alternative – represents buildout of the CPU land uses and Two-lane Via Las Cumbres Alternative proposed network except a new road (~~Street "J"~~Riverwalk Street "J") connecting Friars Road to Hotel Circle South with two travel lanes, a painted median and Class II buffered bicycle lanes replaces Via Las Cumbres as the north-south connection west of Fashion Valley Road. This alternative provides for crossing under the MTS trolley tracks (in a manner similar to how Qualcomm Way and Mission Center Road cross under Friars Road), which eliminates the need for an elevated roadway within the core of the Mission Valley community. Like the Four-Lane and Two-Lane Via Las Cumbres alternatives, this alternative would require a bridge over the San Diego River, constructed to allow for the 100-year flood event.
- No-Connection Alternative – represents buildout of the proposed land uses and Four-lane Vas Cumbres Alternative roadway network, with the following two exceptions: the Fenton Parkway connection over the San Diego River to Camino del Rio North / Mission City Parkway and the Via Las Cumbres connection over the San Diego River and Interstate 8 were removed from the proposed roadway network.



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Figure 1-1
Mission Valley within the Region

All study alternatives were modeled using the calibrated SANDAG Series 13 Regional Model – Mission Valley Community Plan Update Subarea Model (the "Model"). This customized Model assumed buildout of the proposed Mission Valley land uses and the respective mobility networks for Mission Valley and Horizon Year 2050 land uses and transportation improvements for the rest of the San Diego region. Detailed modeling information and documentation can be found in Chapter 4 of the *Mobility Technical Report*.

For the purpose of traffic impact assessments, Plan-to-Ground analysis was conducted by comparing each of the future alternatives to the existing conditions.

1.2 Report Organization

The remainder of this report is organized into the following chapters:

2.0 *Analysis Methodology* – This chapter describes the methodologies and standards utilized to analyze roadway segment, intersection, freeway segment, and ramp metering traffic operation conditions.

3.0 *Existing Conditions* – This chapter describes the existing traffic network within the study area and provides traffic analysis results under the existing conditions.

4.0 *Currently Adopted Community Plan (No-Project)* – This chapter discusses the traffic operations under the currently Adopted Community Plan conditions and assesses potential traffic impacts by comparing the Adopted Community Plan to the existing conditions. Roadway and freeway segments were evaluated in determining traffic impacts associated with the currently Adopted Community Plan.

5.0 *Four-Lane Via Las Cumbres Alternative* – This chapter discusses the traffic operations under the Four-Lane Via Las Cumbres Alternative and assesses potential traffic impacts by comparing this alternative to existing conditions. Roadway segments, intersections, freeway segments, and ramp meters were evaluated in determining traffic impacts associated with the Four-Lane Via Las Cumbres Alternative. Mitigation measures for significant traffic impacts are identified, as necessary.

6.0 *Two-Lane Via Las Cumbres Alternative* –This chapter discusses the traffic operations under the Two-Lane Via Las Cumbres Alternative and assesses potential traffic impacts by comparing this alternative to existing conditions. Roadway and freeway segments, as well as intersections influenced by the Via Las Cumbres connection, were evaluated in determining traffic impacts associated with the Two-Lane Via Las Cumbres Alternative. Mitigation measures for significant traffic impacts are identified, as necessary.

7.0 *Cross-Valley Connection Alternative* – This chapter discusses the traffic operations under the Cross-Valley Connection Alternative conditions and assesses potential traffic impacts by comparing this alternative to existing conditions. Roadway and freeway segments were evaluated in determining traffic impacts associated with the Cross-Valley Connection Alternative. Mitigation measures for significant traffic impacts are identified, as necessary.

8.0 *No-Connection Alternative* – This chapter discusses the traffic operations under the No-Connection Alternative and assesses potential traffic impacts by comparing this alternative to existing conditions. Roadway and freeway segments were evaluated in determining traffic impacts associated with the No-Connection Alternative.

2.0 Analysis Methodology

This chapter describes the various methodologies utilized to analyze the transportation network within the Mission Valley Community Plan Update study area. Analysis of the vehicular systems roadways, intersections and freeways – were prepared for this study in accordance with the *City of San Diego Traffic Impact Study Guidelines* and the enhanced California Environmental Quality Act (CEQA) project review process.

2.1 Selection of the Study Area

This chapter describes the criteria utilized to identify the Community Plan Update study area. This is consistent with all recent community plan updates initiated by the City of San Diego.

Roadway Segments

All Mobility Element classified streets (existing, planned, and proposed), and approximately one segment beyond the Community Planning area were evaluated.

Intersections

All of the ramp intersections that provide access to the community, and intersections where each street meet one of the following conditions were evaluated:

- Four or more lanes;
- 3-lanes roadways carrying more than 15,000 ADT; or
- 2-lane roadways carrying more than 10,000 ADT.

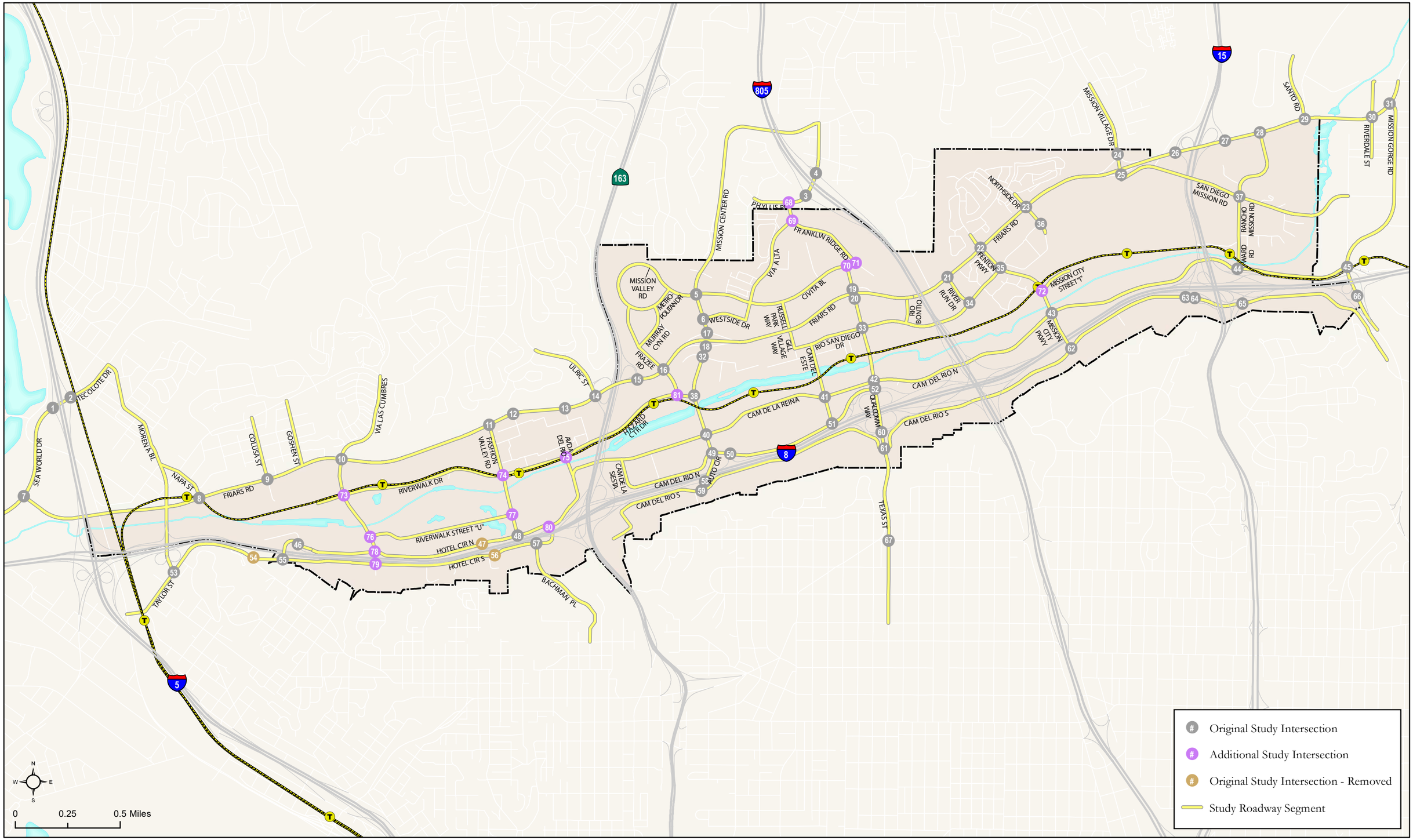
A total of 67 intersections were identified based on the criteria listed above under the existing conditions. Due to the increase in traffic volumes and new roadway connections, an additional 14 intersections were added under the future year conditions, for a total of 81 intersections. Figure 2-1 displays the location of these 81 study intersections.

Freeway Segments

All freeway segments within the Community Planning Area and one interchange beyond (approximately 25 freeway segments) were analyzed.

2.2 Level of Service Definitions

Analysis of the vehicular systems – roadways, intersections and freeways – was prepared for this study in accordance with City of San Diego Traffic Impact Study Guidelines. The vehicular analysis provides an evaluation of vehicular operations at intersections and along roadway and freeway segments. A description of the methodologies employed to evaluate vehicular travel is outlined throughout this chapter. Level of Service (LOS) is a quantitative measure representing the quality of service from the driver's perspective. LOS A represents optimal conditions for the driver, while LOS F represents the worst. Table 2.1 describes generalized definitions of vehicular LOS A through F.



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Figure 2-1
Mission Valley Project Study Area and Key Study Intersections

Table 2.1 Vehicular Level of Service Definitions

LOS	Characteristics
A	Primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Controlled delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.
B	Reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.
C	Stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.
D	Less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.
E	Unstable operation and significant delay. Such operations may be due to some combination of adverse signal progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.
F	Flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections have a volume-to-capacity ratio greater than 1.0.

Source: Highway Capacity Manual, Transportation Research Board (2010)

Roadway Segment Analysis

Roadway segment level of service standards and thresholds provided the basis for analysis of arterial roadway segment performance. The analysis of roadway segment level of service is based on the functional classification of the roadway, the maximum capacity, roadway geometrics, and existing or forecast Average Daily Traffic (ADT) volumes. Table 2.2 presents the roadway segment capacity and LOS standards utilized to analyze roadways evaluated in this report.

These standards are generally used as long-range planning guidelines to determine the functional classification of roadways. The actual capacity of a roadway facility varies according to its physical and operational attributes. LOS D is considered acceptable for Mobility Element roadway segments in the City of San Diego.

Table 2.2 City of San Diego Roadway Segment Daily Capacity and Level of Service Standards

Roadway Functional Classification	Lanes	Level of Service				
		A	B	C	D	E
Freeway	8	60,000	84,000	120,000	140,000	150,000
Freeway	6	45,000	63,000	90,000	110,000	120,000
Freeway	4	30,000	42,000	60,000	70,000	80,000
Expressway	6	30,000	42,000	60,000	70,000	80,000
Prime Arterial	8	35,000	50,000	70,000	75,000	80,000
Prime Arterial	6	25,000	35,000	50,000	55,000	60,000
Major Arterial	7	22,500	31,500	45,000	50,000	55,000
Major Arterial	6	20,000	28,000	40,000	45,000	50,000
Major Arterial	5	17,500	24,500	35,000	40,000	45,000
Major Arterial	4	15,000	21,000	30,000	35,000	40,000
Major Arterial	3	11,250	15,750	22,500	26,250	30,000
Major Arterial	2	7,500	10,500	15,000	17,500	20,000
Major Arterial (one-way)	3	12,500	16,500	22,500	25,000	27,500
Major Arterial (one-way)	2	10,000	13,000	17,500	20,000	22,500
Collector (w/ two-way Left-Turn lane)	4	10,000	14,000	20,000	25,000	30,000
Collector (w/ two-way Left-Turn lane)	3	7,500	10,500	15,000	18,750	22,500
Collector (w/ two-way Left-Turn lane)	2	5,000	7,000	10,000	13,000	15,000
Collector (w/o two-way Left-Turn lane)	4	5,000	7,000	10,000	13,000	15,000
Collector (w/o two-way Left-Turn lane)	3	4,000	5,000	7,500	10,000	11,000
Collector (w/o two-way Left-Turn lane)	2	2,500	3,500	5,000	6,500	8,000
Collector (w/o two-way Left-Turn lane) – no fronting property	2	4,000	5,500	7,500	9,000	10,000
Collector (one-way)	3	11,000	14,000	19,000	22,500	26,000
Collector (one-way)	2	7,500	9,500	12,500	15,500	17,500
Collector (one-way)	1	2,500	3,500	5,000	6,500	7,500
Sub-Collector (single-family)	2	-	-	2,200	-	-

Source: City of San Diego Traffic Impact Study Manual (1998)
Updated with input from City of San Diego Planning Department Mobility Staff (2017)

Peak Hour Intersection Level of Service Standards and Thresholds

This chapter presents the methodologies used to perform peak hour intersection capacity analysis, for both signalized and unsignalized intersections. The following assumptions were utilized in conducting all intersection level of service analyses:

- *Pedestrian Calls per Hour*: Existing pedestrian counts utilized under the existing conditions; and an assumption of 20 pedestrian calls per hour utilized for future year analyses.
- *Heavy Vehicle Factor*: A 2% heavy vehicle factor was assumed for all intersections within the study area. 2% is the standard, default heavy vehicle factor provided in HCM and Synchro 10.0 software. This number was compared to vehicle classification count data collected in support of this project, which demonstrated most segments have a heavy vehicle factor of 2% or less. Appendix A provides all roadway, intersection, and freeway-related count data, including the heavy vehicle percentage along segments where vehicle classification data was collected.
- *Peak Hour Factor*: 0.95 or obtained from existing peak hour counts, whichever is greater.

- *Signal Timing*: Obtained from existing signal timing plans (as of September 2015). Traffic signal timing and freeway ramp metering rates are included as Appendix B. All traffic signals were assumed to be optimized in future year analyses.

Signalized Intersection Analysis

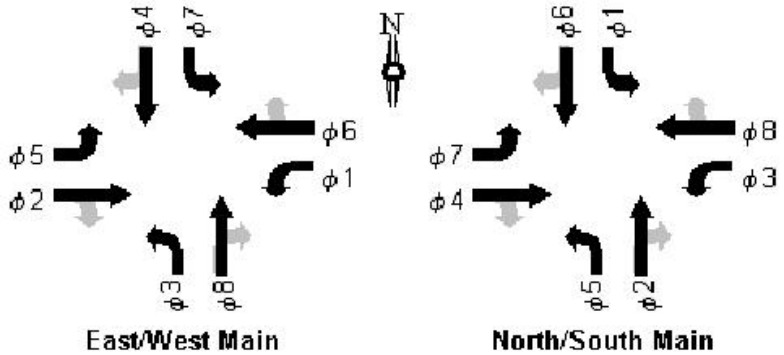
The signalized intersection analysis utilized in this study conforms to the operational analysis methodology outlined in *Highway Capacity Manual (HCM) 2010*. This method defines LOS in terms of delay, or more specifically, average control delay per vehicle (seconds/vehicle).

The *HCM 2010* methodology sets 1,900 passenger-cars per hour per lane (pcphpl) as the ideal saturation flow rate at signalized intersections based upon the minimum headway that can be sustained between departing vehicles at a signalized intersection. The service saturation flow rate, which reflects the saturation flow rate specific to the study facility, is determined by adjusting the ideal saturation flow rate for lane width, on-street parking, bus stops, pedestrian volume, traffic composition (or percentage of heavy vehicles), and shared lane movements (e.g. through and right-turn movements sharing the same lane). The LOS criteria used for this technique are described in Table 2.3. The computerized analysis of intersection operations was performed utilizing the *Synchro 10.0 (2010 HCM 2010 methodology)* traffic analysis software (by Trafficware, 2018).

Table 2.3 Signalized Intersection Level of Service HCM Operational Analysis Method

Average Control Delay Per Vehicle (seconds)	Level of Service (LOS) Characteristics
≤10.0	*LOS A* occurs when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
10.1 – 20.0	*LOS B* occurs when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
20.1 – 35.0	*LOS C* occurs when progression is favorable or the cycle length is moderate. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
35.1 – 55.0	*LOS D* occurs when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
55.1 – 80.0	*LOS E* occurs when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
>80.0	*LOS F* occurs when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: Highway Capacity Manual, Transportation Research Board (2010)



The HCM 2010 analysis methodology requires strict adherence to standard dual ring National Electrical Manufacturers Association (NEMA) phasing. Conflicting phase overlaps, clustered intersections, or other non-compliant phasing sequences cannot be analyzed using this method. Based upon geometry and phasing per their respective signal timing sheets, the following intersections did not adhere to standard NEMA phasing (as seen in the previous figure):

1. I-5 SB Ramps & Sea World Drive (de-facto free southbound right-turn lane)
8. Napa Street & Friars Road (exclusive pedestrian phase)
25. Friars Road EB & Mission Village Drive (cluster intersections)
42. Qualcomm Way & Camino De La Reina (cluster intersection)
52. Qualcomm Way & I-8 WB Off-Ramp (cluster intersection)
58. Mission Center Road & I-8 EB Ramps (cluster intersection with off-set signal phasing)
59. Mission Center Road & Camino Del Rio South (cluster intersection with off-set signal phasing)
63. I-15 SB Off-Ramp & Camino Del Rio South (cluster intersection)
64. I-15 SB On-Ramp & Camino Del Rio South (cluster intersection)
66. Fairmount Avenue & I-8 EB Off-Ramp (de-facto free eastbound right-turn approach and U-turn overlap)

Adjustments in geometric configuration, phasing, and signal timing were implemented in order to utilize the HCM 2010 methodology. Appendix C provides detailed information on the aforementioned adjustments.

Unsignalized Intersection Analysis

Unsignalized intersections, including two-way and all-way stop controlled intersections were analyzed using the *HCM 2010* unsignalized intersection analysis methodology. The Synchro 10.0 software supports this methodology and was utilized to produce LOS results. The LOS for a side street stop controlled (SSSC) intersection is determined by the computed or measured control delay and is defined for each minor movement. The LOS for an all-way stop controlled (AWSC) intersection is determined by the computed or measured average control delay of all movements. Table 2.4 summarizes the level of service criteria for unsignalized intersections. Consistent with City policy, LOS E was used in this study as the minimum acceptable LOS for peak hour intersection operations. Queuing analysis was also conducted at all of the study area off-ramps, congested and/or closely spaced intersections, and each metered freeway on-ramp during peak hours.

Table 2.4 Level of Service Criteria for Stop Controlled Unsignalized Intersections

Average Control Delay (sec/veh)	Level of Service (LOS)
≤10.0	A
10.1 – 15.0	B
15.1 – 25.0	C
25.1 – 35.0	D
35.1 – 50.0	E
>50.0	F

Source: Highway Capacity Manual, Transportation Research Board (2010)

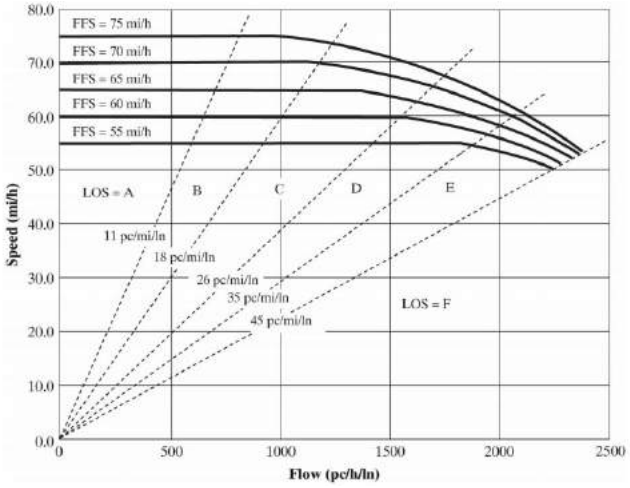
Freeway/State Highway Level of Service Standards and Thresholds

Freeway LOS analysis is based upon procedures developed by Highway Capacity Manual 2010. The procedure for calculating freeway LOS involves estimating the vehicle speed (mi/h) and density/flow (pc/mi/ln).

HCS 2010 software, developed by McTrans, was used to calculate both the vehicle speed and density/flow along the study area freeway segments. The HCS 2010 software required the following inputs to complete the speed and density/flow calculations:

- AADT – Caltrans Traffic Census 2015 AADT Volumes Report
- K (peak hour percentage) – Caltrans Traffic Census 2015 AADT Volumes Report
- D (directional split) – Caltrans Traffic Census 2015 AADT Volumes Report
- $AADT_{adj}$ – Calculated using AADT and D values provided by Caltrans using the following equation:
  - $AADT_{adj} = (\frac{D}{1-D})AADT$
  - represents the direction in the opposite direction of the Peak Direction
- PHF – Assumed to be a typical value of 0.95
- P_T (% Trucks and Busses) – Caltrans Traffic Census 2015 AADT Truck Volumes Report
- P_R (% RVs) – Assumed to be 0, HCM 2010 recommends grouping RV volumes with Trucks in Buses as the value is assumed less than a 5:1 ratio
- General Terrain – Assumed to be less than 2% grade and therefore Level Terrain (HCM 2010 11-16,17)
- f_p – Driver population factor assumed one as traffic is largely commuter traffic
- E_T – Value of 1.5 as terrain is Level (HCM 2010 11-15)
- E_R – Value of 1.2 as terrain is Level (HCM 2010 11-15)
- Lane Width – Assumed 12' maximum value by Google Earth survey
- Rt-Side Lat. Clearance – Assumed 6' maximum value by Google Earth survey
- Total Ramp Density, TRD – Found in the Caltrans Traffic Census 2015 AADT Ramp Volumes Report
  - Density calculated by total number of on/off ramps in single direction within segment length plus 3 miles in both directions, divided by the total length
- Base free-flow Speed, BFFS – Assumed 75.4 mph (HCM 2010 11-11)

Using the calculated freeway speed and density/flow, the LOS is determined using the chart to the right:



Ramp Metering Analysis

Ramp metering is a means of controlling the volume of traffic entering the freeway with the goal of improving the traffic operations and flow on the freeway main lanes. Freeway ramp meter analysis estimates the peak hour queues and delays at freeway ramps by comparing existing volumes to the meter rate at the given location. The excess demand, if any, forms the basis for calculating the maximum queues and maximum delays anticipated at each location. Substantial queues and delays can form where demand significantly exceeds the meter rate. This approach assumes a static meter rate throughout the course of the peak hour. However, Caltrans has indicated that the meter rates are continually adjusted based on the level of traffic using the on-ramp. To the extent possible, the meter rate is set such that the queue length does not exceed the available storage, smooth flow on the freeway mainline is maintained, and there is no interference to arterial traffic.

If the proposed CPU would cause a metered ramp to experience 15 minutes per vehicle or higher delay and the proposed CPU increases its delay by more than 2 minutes per vehicle if the downstream freeway segment operates at LOS E, or more than 1 minute per vehicle if the downstream freeway segment operates at LOS F, this would be considered a significant impact.

2.3 Determination of Significant Impacts

This chapter outlines the thresholds for determining significant project-related impacts to roadways, intersections, and freeways in the City of San Diego. Generally, a significant impact is identified when the addition of project traffic results in a level of service LOS E or F and exceeds the allowable change shown in Table 2.6.

Table 2.6 City of San Diego Measures of Significant Project Traffic Impacts

LOS with Project	Allowable Change Due to Impact					
	Freeways		Roadway Segments		Intersections	Ramp Metering*
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec)	Delay (min)
E	0.01	1.0	0.02	1.0	2.0	2.0
F	0.005	0.5	0.01	0.5	1.0	1.0

Source: CEQA Significance Determination Thresholds, City of San Diego Development Services Department (2016)

Note:
* For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

3.0 Existing Conditions

This chapter describes study area roadway segments, intersections, and freeway segments within the study area, as well as existing traffic operations. Level of service analysis results for all study area facilities under Existing Conditions are presented separately below.

3.1 Roadway Segment Analysis

Chapter 2.1 documents the selection of study area including all existing, planned, and proposed Mobility Element roads within Mission Valley, as well as roadways outside the boundary of the Mission Valley community due to their location within the sphere of influence and will be required for the environmental studies. Figure 3-1 displays the existing functional classifications of study area roadway segments. A description of each study roadway under the existing conditions is provided below and on the following pages.

East-West Roadways

Phyllis Place is a two-lane roadway with a striped median between the I-805 northbound ramps and the I-805 southbound ramps. Sidewalk is present on the north side of the roadway. A Class III bike route is provided. Parking is permitted on both sides of the roadway. Speed limits are not posted.

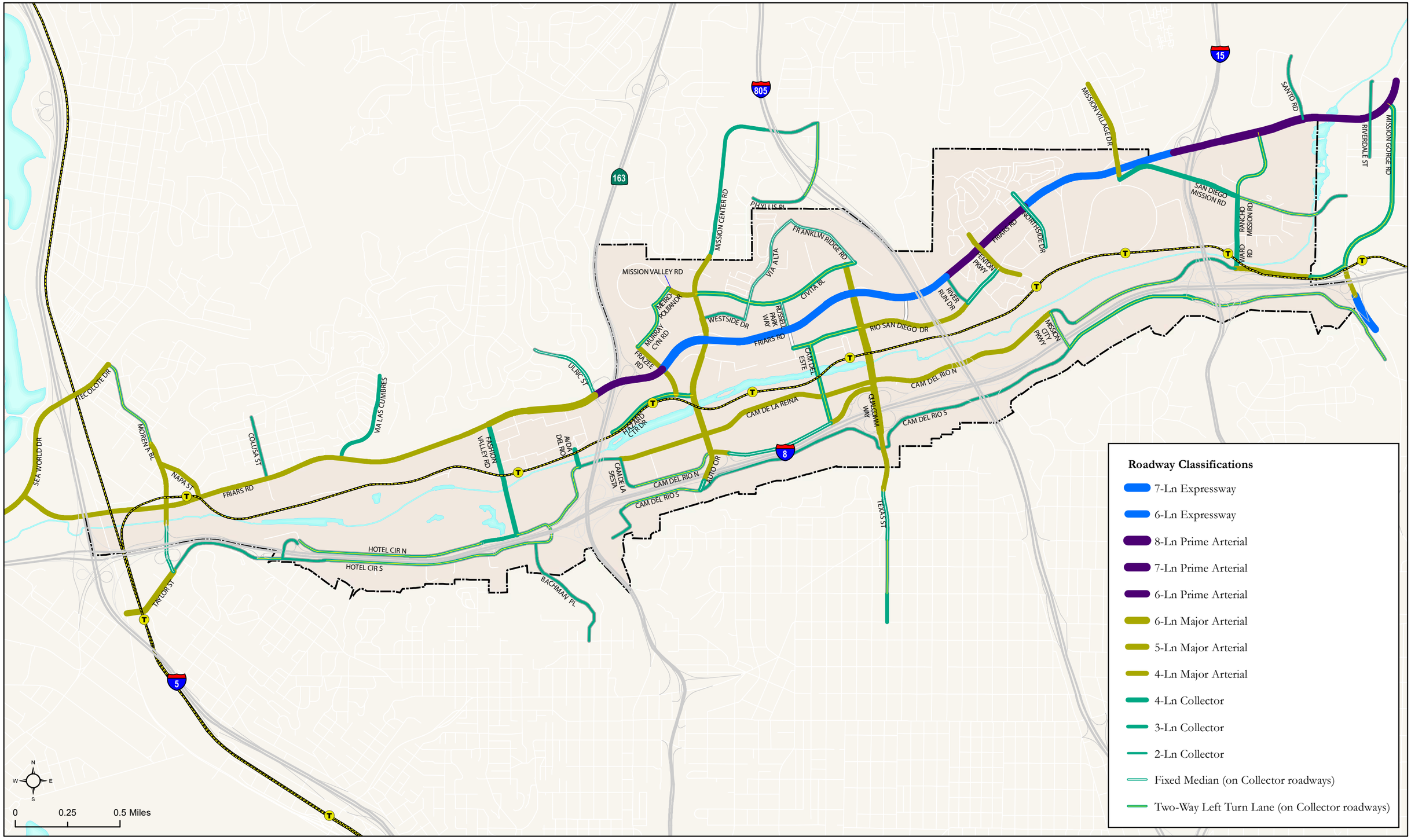
Sea World Drive is a four-lane roadway. Between Mission Bay Parkway and Friars Road, a raised median is present. Class II bicycle facilities are present on both sides of the roadway along this segment. Sidewalks are not present along this segment. Between Friars Road and the I-5 southbound ramps, Sea World Drive has a striped median. Sidewalks are present along the south side of the roadway. On-street parking is prohibited. Speed limits are not posted.

Tecolote Road is a four-lane roadway with a raised median. Class II bicycle facilities and sidewalks are present on both sides of the roadway. On-street parking is prohibited on both sides of Tecolote Road. Speed limits are not posted.

Mission Valley Road is a four-lane roadway with a raised median and a posted speed limit of 25 mph between Metropolitan Drive and Mission Center Road. Sidewalks and Class II bicycle facilities are present on both sides of the roadway. Parking is prohibited on both sides of the roadway. MTS routes 25 and 928 run along the roadway between Metropolitan Drive and Mission Center Road.

Civita Boulevard is a four-lane roadway with a landscaped raised median and no posted speed limit. Sidewalks, as well as Class II bicycle facilities, are present on both sides of the roadway. Parallel parking is permitted on both sides of the roadway.

Westside Drive is a two-lane undivided roadway with a posted speed limit of 25 mph. Sidewalks are present on both sides of the roadway, and no bicycle facilities are provided. Parallel and angled parking is permitted on both sides of the roadway.



Mission Valley Community Plan Update
Traffic Impact Study

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Figure 3-1
Existing Roadway Functional Classification

Friars Road is a four-lane roadway with a striped median and a posted speed limit of 55 mph between Sea World Drive and Napa Street. East of Napa Street, Friars Road becomes a four-lane roadway with a raised median and a posted speed limit of 45 mph until reaching Colusa Street. East of Colusa Street, Friars Road continues as a four-lane roadway, but its median varies between a center left-turn lane and a striped median until reaching Via Las Cumbres. East of Via Las Cumbres, Friars Road is a four-lane roadway with a center left-turn lane and a posted speed limit of 45 mph until reaching Fashion Valley Road. East of Fashion Valley Road, Friars Road transitions to a five-lane roadway with a raised median and a posted speed limit of 45 mph until reaching Avenida De Las Tiendas. East of Avenida De Las Tiendas, Friars Road transitions into a six-lane roadway with a raised median and no posted speed limit until reaching the SR-163 northbound ramps. East of the SR-163 northbound ramps, Friars Road is a six-lane roadway with a raised median and posted speed limit of 45 mph until reaching Frazee Road. East of Frazee Road, Friars Road is an eight-lane roadway with a striped median for approximately 1,500 feet, then its median transitions into a K-Rail median, and finally changes into a striped median approximately 1,600 feet before reaching Qualcomm Way. East of Qualcomm Way, Friars Road becomes a seven-lane roadway with a raised median until reaching Rio Bonito Drive, then narrowing to 6 lanes until Northside Drive. East of Northside Drive, Friars Road continues as a seven-lane roadway, and its median transitions from a raised median to a K-Rail median until reaching the I-15 southbound ramps. East of the I-15 southbound ramps, Friars Road has a striped median and a posted speed limit of 45 mph until reaching Santo Road. East of Santo Road, Friars Road is a six-lane roadway with a raised median and a posted speed limit of 45 mph until reaching its eastern terminus at Mission Gorge Road. Sidewalks are present on both sides of the roadway along the entire extent of Friars Road between Sea World Drive and Mission Gorge Road, with the exception of approximately 577 feet on each side of the road to the east of Sea World Drive, a section near Ulric Street and the SR-163 southbound ramps where sidewalks are only present along the south side of the roadway, expressway segments where sidewalks follow expressway exits, and between Mission Village Drive and the I-15 southbound ramps where sidewalks are not present. Bicycle facilities are present along Friars Road, including a two-way Cycle Track on the south side of the roadway between Sea World Drive and approximately 900 feet west of Fashion Valley Road, as well as Class II bicycle facilities intermittently present on both sides of the roadway. Parking is generally prohibited along the roadway, with some exceptions between Sea World Drive and Ulric Street/SR-163 southbound ramps. MTS bus route 14 runs along Friars Road between Rancho Mission Road and Mission Gorge Road. Additionally, several transit routes run between Fashion Valley Road and SR-163 to access the freeway, such as route 20 and 41. Route 120 runs between Fashion Valley Road and Ulric Street, and Routes 25 and 928 run between Fashion Valley Road and Frazee Road.

Mission Gorge Road is a six-lane roadway with a center left-turn lane between Friars Road and Zion Avenue. On-street parking is prohibited on both sides of the roadway. Sidewalks are present on both sides of the roadway. Class II bicycle facilities are present along the north side of the roadway.

Hazard Center Drive is a four-lane roadway. The median varies between a striped median and a raised median, with no posted speed limit, between its western terminus and Frazee Road. East of Frazee Road, Hazard Center Drive is a four-lane roadway with a raised median and no posted speed limit. Sidewalks are present on both sides of the roadway, but no bicycle facilities are provided. Parking is permitted on both sides of the roadway. This is based on 2015 conditions; Hazard Center Drive is currently under construction.

Rio San Diego Drive is a four-lane roadway with a posted speed limit of 40 mph. The roadway has a raised median between Gill Village Way and Qualcomm Way. East of Qualcomm Way, Rio San Diego Drive is a four-lane roadway with a raised median for approximately 477 feet, after which its median transitions to a center left-turn lane, then to a raised median, until reaching its eastern terminus at Fenton Parkway.

Sidewalks are present on both sides of the roadway. Class II bicycle facilities are present on both sides of the roadway between Gill Village Way and Qualcomm Way. Parking is prohibited between Gill Village Way and Qualcomm Way, but generally permitted between Qualcomm Way and Fenton Parkway.

San Diego Mission Road is a four-lane undivided roadway with a posted speed limit of 40 mph between Mission Village Drive and Rancho Mission Road. East of Rancho Mission Road, San Diego Mission Road is a two-lane roadway with a center left-turn lane and a posted speed limit of 35 mph, until reaching its eastern terminus at Fairmount Avenue. Sidewalks are present intermittently on both sides of the roadway. Class II bicycle facilities are present on both sides of the roadway east of Rancho Mission Road. Parking is intermittently permitted along San Diego Mission Road. MTS route 14 runs along this roadway between Friars Road and the southern terminus of the road, where the roadway's name changes to Ward Road.

Taylor Street is a five-lane roadway with a striped median between Pacific Highway and Morena Boulevard with a posted speed of 35 mph. Sidewalks are present on both sides of the roadway in this segment, although bicycle facilities are not present. Between Morena Boulevard and Hotel Circle South, Taylor Street reduces to a two-lane roadway with a striped median. Class II bicycle facilities are present on the south side of the road between Morena Boulevard and the I-8 eastbound ramps. There are no sidewalks present east of Morena Boulevard. On-street parking is prohibited along Taylor Street. MTS routes 44, 88 and 105 run along the roadway between the Old Town Transit Center and Morena Boulevard, whereas route 88 continues to run along Taylor Street to the roadway's terminus at Hotel Circle South.

Hotel Circle North is a two-lane roadway with a center left-turn lane and a posted speed limit of 35 mph between Hotel Circle Place and the I-8 westbound ramps. East of the I-8 westbound ramps, Hotel Circle North is a two-lane undivided roadway with a posted speed limit of 35 mph until reaching Fashion Valley Road. East of Fashion Valley Road, Hotel Circle North is a two-lane roadway with a center left-turn lane until reaching its terminus at Camino De La Reina. Sidewalks are present only on the north side of the roadway, with an exception east of Fashion Valley Road, where approximately 800 feet of sidewalk is missing. Class II bicycle facilities are present on both sides of the roadway between Hotel Circle Place and the I-8 westbound ramps. Parking is prohibited along the entire extent of the roadway. Several transit routes run along Hotel Circle North between the I-8 westbound ramps and Fashion Valley Road to access the Fashion Valley Transit Center, such as routes 20 and 120. In addition, route 88 runs along the entirety of the roadway.

Camino De La Reina is a two-lane roadway with a center left-turn lane and a posted speed limit of 25 mph between Hotel Circle North and Avenida Del Rio. East of Avenida Del Rio, Camino De La Reina continues to be a two-lane roadway with a posted speed limit of 30 mph, but transitions to a striped median for approximately 300 feet, before transitioning to a raised median before reaching Camino De La Siesta. East of Camino De La Siesta, Camino De La Reina is a four-lane roadway with a raised median and a posted speed limit of 35 mph until reaching Mission Center Road. East of Mission Center Road, Camino De La Reina is a four-lane undivided roadway for approximately 930 feet, before its median transitions to a raised median prior to reaching Park In The Valley Driveway. East of Park In The Valley Driveway, Camino De La Reina continues as a four-lane roadway with a raised median. Sidewalks are present along both sides of the roadway, although there are no bicycle facilities. On-street parking is generally permitted east of Camino De La Siesta. MTS bus route 6 runs along Camino De La Reina between Avenida Del Rio and Camino Del Este in both directions, as well as between Camino Del Este and Qualcomm Way in the eastbound direction.

Camino Del Rio North is a two-lane roadway between Camino De La Siesta and Mission Center Road. Between Mission Center Road and the I-8 westbound ramps, Camino Del Rio North becomes a four-lane

road. Between the I-8 westbound ramps and Camino Del Este, Camino Del Rio North becomes a three-lane road. Between Camino Del Este and Mission City Parkway, Camino Del Rio South becomes a four-lane roadway, before reducing to two lanes until Ward Road. Between Ward Road and Fairmount Avenue, Camino Del Rio North expands again to four lanes. Camino Del Rio South has a raised median between Camino De La Siesta and Mission City Parkway, and alternates between a striped median and a center left-turn lane between Mission City Parkway and Fairmount Avenue. A posted speed limit of 35 mph is present at the I-8 westbound ramps, with an increase to 45 mph at Qualcomm Way. On-street parking is prohibited, except between Camino De La Siesta and Mission Center Road. Sidewalks are located along the north side of the road between Camino De La Siesta and the I-8 westbound ramps, Camino Del Este and Qualcomm Way, and from approximately 800 feet east of Mission City Parkway to Fairmount Avenue. Sidewalks also exist along both sides of the road between Qualcomm Way and Mission City Parkway. Class II bicycle facilities are intermittent as well, and are present along both sides of the roadway between Qualcomm Way and Mission City Parkway, and from approximately 1,800 feet West of Ward Road to Fairmount Avenue. Class III sharrows are present between Camino Del Rio North and 1,800 feet west of Ward Road. MTS bus route 6 runs along Camino Del Rio North between Camino Del Este and Qualcomm way in the eastbound direction. MTS route 14 runs along the roadway between Ward Road and the Grantville Trolley Station. Additionally, route 18 runs along the roadway between the Grantville Trolley Station and Mission City Parkway in the westbound direction, as well as between Qualcomm Way and Mission City Parkway in the eastbound direction.

Hotel Circle South is a two-lane undivided roadway with a posted speed limit of 35 mph between the I-8 over-cross and approximately 1,270 feet to the east, where Hotel Circle South becomes a two-lane roadway with a center left-turn lane until reaching its eastern terminus at Hotel Circle North. Sidewalks are present only on the south side of the roadway, with the exception of between the I-8 over-cross and approximately 1,270 feet to the east, where sidewalks are missing. Pavement markings indicating a Class III bicycle route are present between the I-8 overpass and the I-8 westbound ramps. East of the I-8 westbound ramps, Class II bicycle facilities are present on both sides of the roadway. Parking is generally prohibited on both sides of the roadway, aside from a short segment west of the I-8 eastbound ramps. Several transit routes run along the roadway between Hotel Circle North and the I-8 eastbound ramps to access the freeway, such as routes 20 and 120. In addition, route 88 runs along the entirety of the roadway.

Camino Del Rio South is a predominantly two-lane roadway, which widens to three lanes between Mission City Parkway and the I-15 southbound off-ramp. Camino Del Rio South widens to four lanes between the I-15 southbound off-ramp and the I-15 southbound on-ramp, and narrows to two lanes between the I-15 southbound on-ramp and Fairmount Avenue. Camino Del Rio South has a center left-turn lane from approximately 1,800 feet west of Mission Center Road/Auto Circle to Mission Center Road/Auto Circle, and from Mission City Parkway ramp to Fairmount Avenue. Camino Del Rio South has a posted speed limit of 25 mph between its western terminus and approximately 1,800 feet west of Mission Center Road. There is a posted speed of 35 mph between Mission Center Road and Mission City Parkway, a posted speed of 45 mph between Mission City Parkway and the I-15 southbound off-ramp, and a posted speed of 40 mph between the I-15 southbound off-ramp and Fairmount Avenue. On-street Parking is allowed along the south side of the roadway between approximately 1,800 feet west of Mission Center Road and Texas Street, between Mission City Parkway and the I-15 southbound off-ramp, and between the I-15 southbound on-ramp and Fairmount Avenue. Sidewalks are present along the south side of the entire roadway, and are present on both sides of the roadway between the western terminus of Camino Del Rio South and approximately 1,800 feet west of Mission Center Road. Bicycle facilities are not provided, except between Mission Center Road and Texas Street, where Class II bicycle facilities are present on both sides of the roadway.

North-South Roadways

Morena Boulevard is a two-lane roadway with a center left-turn lane and a posted speed limit of 35 mph between Tecolote Road and West Morena Boulevard. Between West Morena Boulevard and the I-8 westbound off-ramps, Morena Boulevard widens to four lanes and has a raised median, with a posted speed limit of 40 mph. Morena Boulevard narrows to three lanes south of the I-8 westbound off-ramps, with two northbound lanes and one southbound lane. On-street parking is only permitted between Tecolote road and West Morena Boulevard. Sidewalks and Class II bicycle facilities are present on both sides of the roadway, although the I-5 overpass lacks bicycle facilities. MTS routes 44 and 105 run along the roadway between Taylor Street and Linda Vista Road, whereas route 105 continues along the roadway to Milton Street, north of Tecolote Road.

Napa Street is a four-lane roadway with a striped median and a posted speed limit of 25 mph. On-street parking is permitted on both sides of the roadway. Sidewalks are present on both sides of the roadway, but there are no bicycle facilities.

Colusa Street is a two-lane roadway with a striped median and a posted speed limit of 25 MPH. On-street parking is permitted on both sides of the roadway. Sidewalks are present on both sides of the roadway, but there are no bicycle facilities.

Via Las Cumbres is a three-lane roadway with two northbound lanes, one southbound lane, and a striped median. A speed limit is not posted in the segment studied, between Linda Vista Road and Friars Road. On-street parking is permitted on both sides of the roadway. Sidewalks are present on both sides of the roadway, although segments are missing along the east side of the roadway. Class II bicycle facilities are present on the east side of the roadway.

Fashion Valley Road is a four-lane roadway with a striped median. A speed limit is not posted. On-street parking is not permitted. Sidewalks are present on both sides of the roadway. There are no bicycle facilities present. Fashion Valley Road is used by many transit routes to access the Fashion Valley Transit Center, including routes 20, 25, 41, 88, 120, and 928.

Bachman Place is a two-lane undivided roadway with a posted speed limit of 40 mph. Sidewalks are present along the west side of the roadway. On-street parking is permitted on the west side of the roadway only. There are no bicycle facilities present.

Avenida Del Rio is a four-lane roadway with a center left-turn lane and no posted speed limit. On-street parking is not permitted. Sidewalks are present along the along both sides of the roadway, although sections are missing along the east side. There are no bicycle facilities present. The roadway is used by MTS bus route 6 to access the Fashion Valley Transit Center.

Ulric Street is three-lane roadway with two northbound lanes and one southbound lane and a striped median between Friars Road and approximately 600 feet south of Fashion Hills Boulevard. North of that point, Ulric Street narrows to a two-lane roadway. Ulric Street has a posted speed limit of 40 mph. On-street parking is not permitted. Sidewalks are present along the west side of the roadway, and Class II bicycle facilities are present on both sides of the roadway. MTS route 120 runs along this roadway between Friars Road and Linda Vista Road.

Camino De La Siesta is a two-lane undivided roadway with a posted speed limit of 25 mph. On-street parking is generally permitted on both sides of the roadway. Sidewalks are present on both sides of the roadway, although there are no bicycle facilities present.

Metropolitan Drive is a three-lane roadway with two northbound lanes and one southbound lane. A center left-turn lane is present. There is a posted speed limit of 25 mph. On-street parking is permitted on both sides of the roadway. Sidewalks are present on both sides of the roadway, although there are no bicycle facilities present. MTS routes 25 and 928 run along Metropolitan Drive, between Murray Canyon Road and Mission Valley Road.

Murray Canyon Road is a three-lane roadway with two northbound lanes and one southbound lane. A center left-turn lane is present. There is no posted speed limit. On-street parking is permitted on both sides of the roadway. Sidewalks are present on both sides of the roadway, although there are no bicycle facilities present. MTS routes 25 and 928 run along Murray Canyon Road between Frazee Road and Metropolitan Drive.

Frazee Road is a four-lane roadway with a raised median and no posted speed limit. On-street parking is intermittently permitted on both sides of the roadway. Sidewalks are present on both sides of the roadway. There are no bicycle facilities present. MTS routes 25 and 928 runs along Frazee Road between Friars Road and Murray Canyon Road.

Mission Center Road is a two-lane roadway between Murray Ridge Road and approximately 1,200 feet west of Murray Ridge Road. The roadway expands to two northbound and one southbound lanes until approximately 950 feet north of Mission Valley Road. From Mission Valley Road to Westside Drive, Mission Center Road expands to four lanes, and again to five lanes between Westside Drive and the Friars Road westbound ramps. Mission Center Road becomes a four-lane roadway once again until Mission Center Court, and expands to five lanes between Mission Center Court and Camino Del Rio North. Posted speed limits are 45 mph between Murray Ridge Road and approximately 950 feet north of Mission Valley Road, with a reduction to 40 mph for the remainder of the roadway. There is no on-street parking permitted. Sidewalks are generally present, except between Murray Ridge Road and approximately 950 feet north of Mission Valley Road. Class II bicycle facilities are present along both sides of the roadway. MTS routes 25 and 928 run along Mission Center Road between Mission Valley Road and Murray Ridge Road.

Auto Circle begins at the southern terminus of Mission Center Road and continues to Camino Del Rio South. Auto Circle is a four-lane roadway with a striped median between Camino Del Rio South and the I-8 eastbound ramps, and a raised median south of the I-8 eastbound ramps. There is no posted speed limit along the roadway. Sidewalks are present along the west side of the roadway. Class II bicycle facilities are present between Camino Del Rio North and the I-8 eastbound ramps. On-street parking is not permitted along the roadway.

Via Alta is a two-lane roadway between Westside Drive and Franklin Ridge Road with a raised median. There is no posted speed limit. On-street parking is prohibited. Sidewalks and Class II bicycle facilities are present on both sides of the roadway.

Murray Ridge Road is a two-lane road with a center left-turn lane between Mission Center Road and the I-805 northbound ramps, and a striped median between the I-805 northbound and I-805 southbound ramps. There is a posted speed limit of 25 mph, which increases to 35 mph approximately 250 feet north of Mission

Center Road. On-street parking is allowed north of the I-805 northbound ramps. Sidewalks and Class II bicycle facilities are present along both sides of the roadway.

Russell Park Way is a two-lane roadway with a raised median. There is no posted speed limit. On-street parallel parking is permitted on the west side of the roadway. Sidewalks and Class II bicycle facilities are present on both sides of the roadway.

Camino Del Este is a four-lane roadway that alternates between a raised median, striped median, and center left-turn lane. North of Camino De La Reina, the posted speed limit is 35 mph. South of Camino De La Reina, the posted speed limit is reduced to 25 mph. On-street parking is only permitted south of Camino De La Reina. Sidewalks are present along both sides of the roadway. Class II bicycle lanes are present north of Camino De La Reina. MTS bus route 6 runs along Camino Del Este between Camino De La Reina and Camino Del Rio North in the northbound direction.

Franklin Ridge Road is a future roadway that will provide north-south travel as a modified two-lane road with a center median. The roadway will be classified as a two-lane major street. It will begin at the eastern terminus of Civita Boulevard and run northerly to connect with Via Alta. Parking will be prohibited on both sides of Franklin Ridge Road, and it is planned to have Class II bike lanes.

Qualcomm Way is a two-lane roadway between the Friars Road westbound ramps and the Friars Road eastbound ramps. Qualcomm Way widens to six lanes between the Friars Road eastbound ramps and Camino Del Rio North. South of Camino Del Rio North, Qualcomm Way narrows to five lanes, before narrowing again to four lanes through the Camino Del Rio South, where the roadway changes names to Texas Street. Qualcomm Way is generally an undivided roadway, with a center left-turn lane between the Friars Road eastbound ramps and Friars Road westbound ramps, a raised median between the Friars Road westbound ramps and Rio San Diego Drive, and a striped median between Rio San Diego Drive and Camino Del Rio North. Qualcomm Way has no posted speed limits, and has intermittent on-street parking, generally between the Friars Road eastbound ramps and Rio San Diego Drive. Sidewalks are generally present, except for the east side of the roadway between Camino De La Reina and Camino Del Rio South. Class II bicycle lanes are generally present, except south of Camino De La Reina, where an unsigned paved shoulder is intermittently present. MTS bus route 6 runs along Qualcomm Way between Camino De La Reina and the roadway's southern terminus at Camino Del Rio South, where the roadway changes its name to Texas Street. In addition, MTS route 18 runs along the roadway between Camino Del Rio North and Camino Del Rio South.

Texas Street is a four-lane roadway between Camino Del Rio South and approximately 1,400 feet north of Madison Avenue, where the roadway narrows to three lanes. Between that point and Madison Avenue, there are two southbound and one northbound lanes. Between Madison Avenue and Meade Avenue, Texas Street narrows to a two-lane roadway, before widening again to a three-lane roadway, with two southbound lanes and one northbound lane, between Meade Avenue and El Cajon Boulevard. Texas Street has a raised median between Camino Del Rio South and Madison Avenue, a center left-turn lane between Madison Avenue and Meade Avenue, and is an undivided roadway south of Meade Avenue. There are no posted speed limits along the roadway. There is no on-street parking permitted north of Madison Avenue. Sidewalks are generally present throughout the roadway, but are missing from the east side of the roadway between Camino Del Rio South and approximately 1,400 feet north of Madison Avenue. Class II bicycle facilities lanes are available between Madison Avenue. MTS bus route 6 runs along Texas Street from the roadway's northern terminus at Camino Del Rio South to El Cajon Boulevard.

River Run Drive is a two-lane undivided roadway with no posted speed limit. On-street parking is permitted. Sidewalks are present throughout the roadway, however, there are no bicycle facilities present.

Fenton Parkway is a four-lane roadway. A raised median is present through all segments of Fenton Parkway. Speed limits are not posted along the roadway. On-street parking is not permitted, and sidewalks are present along the entire roadway. Class II bicycle facilities are generally present, except between the Portofino Apartments driveway and Friars Road.

Mission City Parkway is a two-lane undivided roadway with a posted speed limit of 35 mph. On-street parking is not permitted. Sidewalks are present along the roadway, although they switch sides halfway through the roadway. There are no bicycle facilities. MTS Route 18 runs along the entirety of the roadway.

Northside Drive is a four-lane roadway between the Portofino Apartments driveway and the Fenton Marketplace Driveway. South of the Fenton Marketplace Driveway, Northside Drive becomes a three-lane roadway, with two northbound lanes and one southbound lane. A raised median is present through all segments of Northside Drive. Speed limits are not posted along the roadway. On-street parking is permitted south of the Fenton Marketplace Driveway, as well as between Friars Road and the Fenton Marketplace Driveway, where a small segment of 15-minute parking exists. Sidewalks are present along the entire roadway. There are no Class II bicycle facilities.

Mission Village Drive is a four-lane roadway with a raised median between Ronda Avenue and the Friars Road westbound ramps. South of Friars Road, Mission Village Drive is an undivided roadway. There is a posted speed limit of 45 mph between Ronda Avenue and Friars Road. On-street parking is not permitted. Sidewalks are present along both sides of the roadway, and Class II bicycle facilities are present north of Friars Road.

Rancho Mission Road is a three-lane road with one southbound lane, two northbound lanes, and a center left-turn lane between Friars Road and San Diego Mission Road. There is a posted speed limit of 35 mph between Friars Road and San Diego Mission Road. On-street parking is permitted on both sides of the roadway. Sidewalks are present between Friars Road and San Diego Mission Road. Class II bicycle lanes are generally present, although there are no bicycle facilities between San Diego Mission Road and Camino Del Rio North.

Ward Road is a four-lane undivided roadway with no posted speed limit. On-street parking is permitted along both sides of the roadway. Sidewalks are present along both sides of the roadway. There are no bicycle facilities present. MTS bus route 14 runs along Ward Road between Camino Del Rio North and the northern terminus of the roadway, where the roadway name changes to Rancho Mission Road.

Santo Road is a two-lane roadway with a raised median and no posted speed limit. On-street parking is permitted along both sides of the roadway. Sidewalks are present along both sides of the roadway. There are no bicycle facilities present.

Riverdale Street is a two-lane undivided roadway with no posted speed limit. On-street parking is permitted along both sides of the roadway. Sidewalks are present along both sides of the roadway. There are no bicycle facilities present.

Mission Gorge Road is a four-lane roadway with a center left-turn lane and a posted speed limit of 30 mph. On-street parking is generally permitted along both sides of the roadway. Sidewalks are present along both

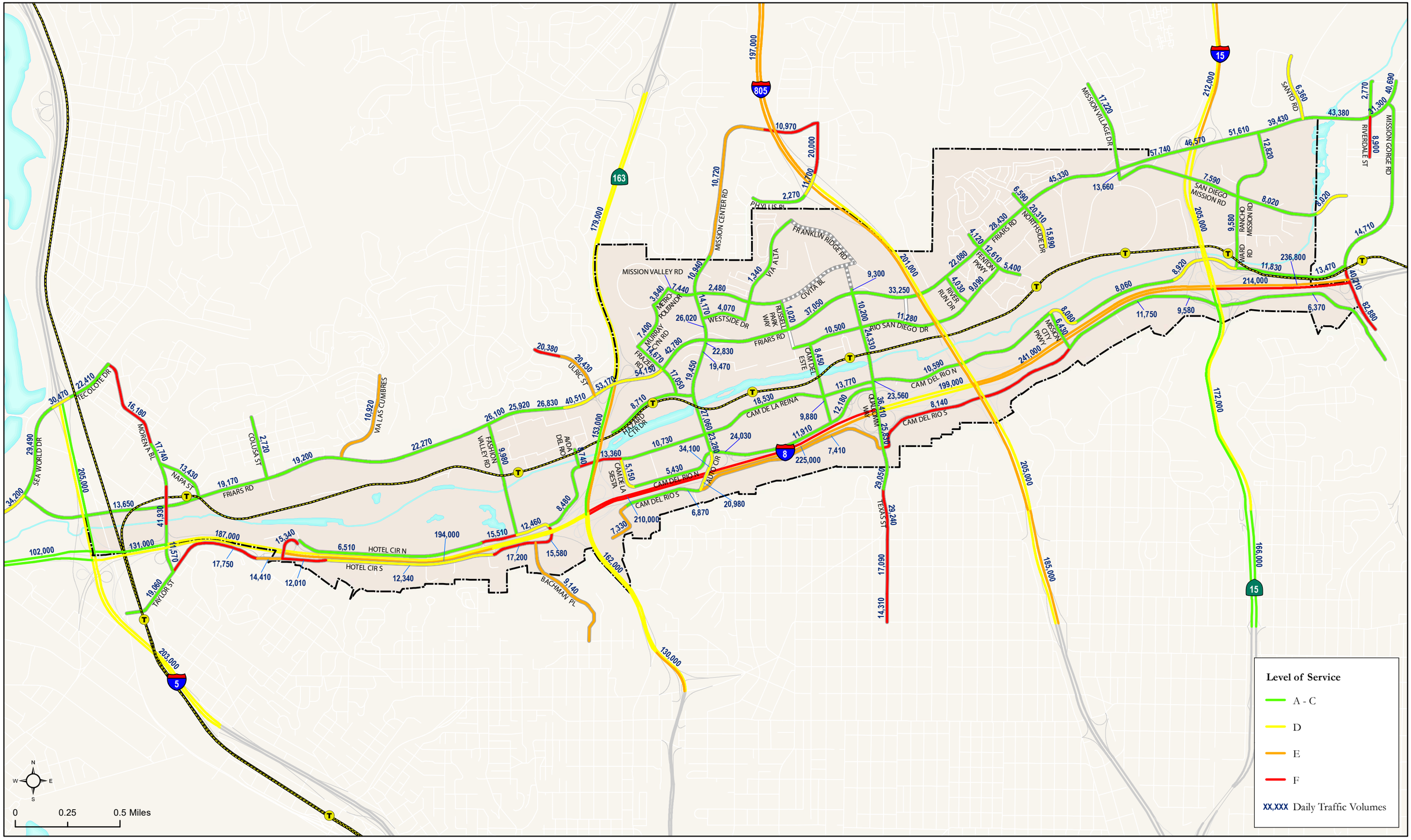
sides of the roadway. There are no bicycle facilities present. MTS bus route 13 runs along Mission Gorge Road between Zion Avenue and Mission Gorge Place in both directions, as well as between Mission Gorge Place and the roadway's southern terminus at Fairmount Avenue, in the northbound direction.

Fairmount Avenue is a four-lane roadway with a raised median between the Camino Del Rio North/I-8 westbound off-ramp and the I-8 eastbound off-ramp. Between the I-8 eastbound off-ramp and Camino Del Rio South, Fairmount Avenue widens to a five-lane roadway with three southbound lanes and two northbound lanes and a raised median. Speed limits are not posted. On-street parking is not permitted. Sidewalks are present along the east side of the roadway only. Bicycle facilities are generally present, including Class II bike lanes between the I-8 westbound off-ramp and the I-8 eastbound off-ramp, and a Class I bike path south of the I-8 eastbound off-ramp along the east side of the roadway between the I-8 eastbound off-ramp and Camino Del Rio South. MTS bus route 13 runs along the roadway in both directions from the southern community boundary to Camino Del Rio North, as well as in the northbound direction between Camino Del Rio North and Mission Gorge Road. Additionally, MTS route 18 accesses Fairmount Avenue at Camino Del Rio South, running south to Montezuma Road, and north to the Grantville Trolley Station.

Figure 3-2 displays existing average daily traffic volumes for the study roadway segments, along with the current LOS. Table 3.1 displays existing roadway segment ADT and LOS for the Mission Valley community. As discussed, Appendix A contains the roadway daily traffic counts utilized in this report.

As shown, 26 study segments currently operate at a substandard level of service (LOS E or F), including the following:

- Taylor Street, between Morena Boulevard and I-8 EB Ramps (LOS F)
- Taylor Street, between I-8 EB Ramps and Hotel Circle South (LOS E)
- Hotel Circle North, between Hotel Circle South and Hotel Circle Place (LOS F)
- Hotel Circle North, between I-8 WB Ramps and Fashion Valley Road (LOS F)
- Camino De La Reina, between Avenida Del Rio and Camino De La Siesta (LOS F)
- Hotel Circle South, between Hotel Circle North and 1200 Feet East of Hotel Circle North (LOS F)
- Hotel Circle South, between I-8 EB Ramps and Bachman Place (LOS F)
- Hotel Circle South, between Bachman Place and Hotel Circle North (LOS F)
- Camino Del Rio South, between Western Terminus and 1800 Feet west of Mission Center Road (LOS E)
- Camino Del Rio South, between Mission Center Road and Texas Street (LOS E)
- Camino Del Rio South, between Texas Street and Mission City Parkway (LOS F)
- Morena Boulevard, between Tecolote Road and West Morena Boulevard (LOS F)
- Morena Boulevard, between Linda Vista Road and I-8 WB Off-Ramp (LOS F)
- Via Las Cumbres, between Linda Vista Road and Friars Road (LOS E)
- Bachman Place, between Hotel Circle South and southern community boundary (LOS E)
- Ulric Street, between Fashion Hills Boulevard and 600 Feet South of Fashion Hills Boulevard (LOS F)
- Ulric Street, between 600 Feet South of Fashion Hills Boulevard and Friars Road (LOS E)
- Mission Center Road, between Murray Ridge Road and 1200 Feet West of Murray Ridge Road (LOS F)
- Mission Center Road, between 1200 Feet West of Murray Ridge Road and 950 Feet North of Mission Valley Road (LOS E)
- Murray Ridge Road, between Mission Center Road and I-805 NB Ramps (LOS F)
- Texas Street, between 1400 Feet North of Madison Ave and Madison Avenue (LOS F)
- Texas Street, between Madison Avenue and Meade Ave, (LOS F)
- Texas Street, between Meade Ave and El Cajon Boulevard (LOS F)
- Riverdale Street, between Friars Road and Vandever Avenue (LOS F)
- Fairmount Avenue, between Camino Del Rio North/I-8 WB Off-Ramp and I-8 EB Off-Ramp (LOS F)
- Fairmount Avenue, between I-8 EB Off-Ramp and Camino Del Rio South (LOS F)



Mission Valley Community Plan Update
Traffic Impact Study
CHEN RYAN

Figure 3-2
Existing Roadway Average Daily Traffic Volumes and Level of Service

Table 3.1 Existing Roadway Level of Service

ID	Roadway	Segment	Count Dates	Data Source	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS	Community
1	Phyllis Place	Between I-805 SB Ramps and Abbotshill Road	9/9/2015 - 9/10/2015	PTD	2-Ln Collector w/o TWLTL	8,000	2,270	0.284	A	Serra Mesa
2	Sea World Drive	Between Mission Bay Parkway and Friars Road	9/9/2015 - 9/10/2015	NDS	4-Ln Major Arterial	40,000	34,200	0.855	D	Mission Bay Park
3	Sea World Drive	Between Friars Road and I-5 SB Ramps	9/16/2015 - 9/17/2015	NDS	4-Ln Major Arterial	40,000	29,490	0.737	C	Mission Bay Park
4	Tecolote Road	Between I-5 SB Ramps and I-5 NB Ramps	9/16/2015 - 9/17/2015	NDS	4-Ln Major Arterial	40,000	30,470	0.762	D	Linda Vista
5	Tecolote Road	Between I-5 NB Ramps and Morena Boulevard	9/16/2015 - 9/17/2015	NDS	4-Ln Major Arterial	40,000	22,410	0.560	C	Linda Vista
6	Mission Valley Road	Between Metropolitan Drive and Mission Center Road	9/16/2015 - 9/17/2015	NDS	4-Ln Major Arterial	40,000	7,440	0.186	A	Mission Valley
7	Civita Boulevard	Between Mission Center Road and Qualcomm Way	9/16/2015 - 9/17/2015	NDS	4-Ln ~~Major Arterial~~Collector w/ TWLTL	~~40,000~~30,000	2,480	~~0.062~~0.0832	A	Mission Valley
8	Westside Drive	Between Mission Center Road and Via Alta	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/o TWLTL	8,000	4,070	0.508	C	Mission Valley
9	Friars Road	Between Sea World Drive and Napa Street	9/16/2015 - 9/17/2015	NDS	4-Ln Major Arterial	40,000	13,650	0.341	A	Mission Bay Park, Linda Vista
10	Friars Road	Between Napa Street and Colusa Street	9/9/2015 - 9/10/2015	PTD	4-Ln Major Arterial	40,000	19,170	0.479	B	Mission Valley
11	Friars Road	Between Colusa Street and Via Las Cumbres	9/9/2015 - 9/10/2015	PTD	4-Ln Major Arterial	40,000	19,200	0.480	B	Mission Valley
12	Friars Road	Between Via Las Cumbres and Fashion Valley Road	9/9/2015 - 9/10/2015	PTD	4-Ln Major Arterial	40,000	22,270	0.557	C	Mission Valley
13	Friars Road	Between Fashion Valley Road and Via De La Moda	9/9/2015 - 9/10/2015	PTD	5-Ln Major Arterial (3 EB, 2 WB)	45,000	26,095	0.580	C	Mission Valley
14	Friars Road	Between Via De La Moda and Fashion Valley Driveway	9/16/2015 - 9/17/2015	NDS	5-Ln Major Arterial (3 EB, 2 WB)	45,000	25,917	0.576	C	Mission Valley
15	Friars Road	Between Fashion Valley Driveway and Avenida De Las Tiendas	9/9/2015 - 9/10/2015	NDS	6-Ln Major Arterial	50,000	26,830	0.537	B	Mission Valley
16	Friars Road	Between Avenida De Las Tiendas and Ulric Street/SR-163 SB Ramps	9/16/2015 - 9/17/2015	NDS	6-Ln Major Arterial	50,000	40,510	0.810	D	Mission Valley

Table 3.1 Existing Roadway Level of Service

ID	Roadway	Segment	Count Dates	Data Source	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS	Community
17	Friars Road	Between Ulric Street/SR-163 SB Ramps and SR-163 NB Ramps	9/16/2015 - 9/17/2015	NDS	6-Ln Prime Arterial	60,000	53,170	0.886	D	Mission Valley
18	Friars Road	Between SR-163 NB Ramps and Frazee Road	9/16/2015 - 9/17/2015	NDS	6-Ln Prime Arterial	60,000	54,150	0.902	D	Mission Valley
19	Friars Road	Between Frazee Road and Mission Center Road	9/16/2015 - 9/17/2015	NDS	7-Ln Expressway	93,330	42,780	0.458	B	Mission Valley
20	Friars Road	Between Mission Center Road and Qualcomm Way	9/16/2015 - 9/17/2015	NDS	6-Ln Expressway	80,000	37,050	0.463	B	Mission Valley
21	Friars Road	Between Qualcomm Way and River Run Drive	9/9/2015 - 9/10/2015	PTD	6-Ln Expressway	80,000	33,250	0.416	B	Mission Valley
22	Friars Road	Between River Run Drive and Fenton Parkway	9/9/2015 - 9/10/2015	PTD	6-Ln Prime Arterial	60,000	22,080	0.368	A	Mission Valley
23	Friars Road	Between Fenton Parkway and Northside Drive	9/9/2015 - 9/10/2015	PTD	6-Ln Prime Arterial	60,000	28,430	0.474	B	Mission Valley
24	Friars Road	Between Northside Drive and San Diego Mission Road	9/9/2015 - 9/10/2015	PTD	6-Ln Expressway	80,000	45,330	0.567	C	Mission Valley
25	Friars Road	Between San Diego Mission Road and I-15 SB Ramps	9/9/2015 - 9/10/2015	PTD	6-Ln Expressway	80,000	57,740	0.722	C	Mission Valley
26	Friars Road	Between I-15 SB Ramps and I-15 NB Ramps	9/9/2015 - 9/10/2015	PTD	6-Ln Prime Arterial	70,000	46,570	0.776	C	Mission Valley
27	Friars Road	Between I-15 NB Ramps and Rancho Mission Road	9/9/2015 - 9/10/2015	PTD	7-Ln Prime Arterial	70,000	51,610	0.737	C	Mission Valley
28	Friars Road	Between Rancho Mission Road and Santo Road	9/9/2015 - 9/10/2015	PTD	7-Ln Prime Arterial	70,000	39,430	0.563	B	Mission Valley
29	Friars Road	Between Santo Road and Riverdale Street	9/9/2015 - 9/10/2015	PTD	6-Ln Prime Arterial	60,000	43,380	0.723	C	Mission Valley / Grantville
30	Friars Road	Between Riverdale Street and Mission Gorge Road	9/9/2015 - 9/10/2015	PTD	6-Ln Prime Arterial	60,000	31,300	0.522	B	Grantville
31	Mission Gorge Road	Between Friars Road and Zion Avenue	9/16/2015 - 9/17/2015	PTD	6-Ln Prime Arterial	60,000	40,690	0.678	C	Grantville
32	Hazard Center Drive	Between Western Terminus and Mission Center Road	9/9/2015 - 9/10/2015	PTD	4-Ln Collector w/ TWLTL	30,000	8,710	0.290	A	Mission Valley
33	Rio San Diego Drive	Between Gill Village Way and Qualcomm Way	9/16/2015 - 9/17/2015	NDS	4-Ln Collector w/ TWLTL	30,000	10,500	0.350	B	Mission Valley
34	Rio San Diego Drive	Between Qualcomm Way and River Run Drive	9/16/2015 - 9/17/2015	PTD	4-Ln Major Arterial	40,000	11,280	0.282	A	Mission Valley

Table 3.1 Existing Roadway Level of Service

ID	Roadway	Segment	Count Dates	Data Source	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS	Community
35	Rio San Diego Drive	Between River Run Drive and Fenton Parkway	9/16/2015 - 9/17/2015	PTD	4-Ln Collector w/ RM	30,000	9,090	0.303	A	Mission Valley
36	San Diego Mission Road	Between Friars Road EB Ramps and Rancho Mission Road	9/16/2015 - 9/17/2015	PTD	4-Ln Collector w/o TWLTL	15,000	7,590	0.506	C	Mission Valley
37	San Diego Mission Road	Between Rancho Mission Road and 950 Feet West of Fairmount Avenue	9/16/2015 - 9/17/2015	PTD	2-Ln Collector w/ TWLTL	15,000	8,020	0.534	C	Mission Valley
38	San Diego Mission Road	Between 950 Feet West of Fairmount Avenue and Fairmount Avenue	9/9/2015 - 9/10/2015	NDS	2-Ln Collector w/o TWLTL (NFP)	10,000	8,020	0.802	D	Mission Valley
39	Taylor Street	Between Pacific Highway and Morena Boulevard	9/9/2015 - 9/10/2015	NDS	5-Ln Major Arterial (3 EB, 2 WB)	45,000	19,057	0.423	B	Old Town
40	Taylor Street	Between Morena Boulevard and I-8 EB Ramps	9/9/2015 - 9/10/2015	NDS	2-Ln Collector w/o TWLTL (NFP)	10,000	17,750	1.775	**F**	Old Town
41	Taylor Street	Between I-8 EB Ramps and Hotel Circle South	9/9/2015 - 9/10/2015	NDS	2-Ln Collector w/ TWLTL	15,000	14,410	0.961	**E**	Old Town
42	Hotel Circle North	Between Hotel Circle South and Hotel Circle Place	9/9/2015 - 9/10/2015	NDS	2-Ln Collector w/o TWLTL (NFP)	10,000	15,340	1.534	**F**	Mission Valley
43	Hotel Circle North	Between Hotel Circle Place and I-8 WB Ramps	9/9/2015 - 9/10/2015	NDS	2-Ln Collector w/ TWLTL	15,000	6,510	0.434	B	Mission Valley
44	Hotel Circle North	Between I-8 WB Ramps and Fashion Valley Road	9/16/2015 - 9/17/2015	NDS	3-Ln Collector (2 EB, 1 WB)	11,250	15,510	1.378	**F**	Mission Valley
45	Hotel Circle North	Between Fashion Valley Road and Camino De La Reina	9/9/2015 - 9/10/2015	NDS	2-Ln Collector w/ TWLTL	15,000	12,460	0.831	D	Mission Valley
46	Camino De La Reina	Between Hotel Circle North and Avenida Del Rio	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/ TWLTL	15,000	8,480	0.566	C	Mission Valley
47	Camino De La Reina	Between Avenida Del Rio and Camino De La Siesta	9/9/2015 - 9/10/2015	PTD	2-Ln Collector w/o TWLTL (NFP)	10,000	13,360	1.336	**F**	Mission Valley
48	Camino De La Reina	Between Camino De La Siesta and Mission Center Road	1/20/2016 - 1/21/2016	AVC	4-Ln Major Arterial	40,000	10,730	0.268	A	Mission Valley
49	Camino De La Reina	Between Mission Center Road and Camino Del Este	1/20/2016 - 1/21/2016	AVC	4-Ln Major Arterial	40,000	18,530	0.463	B	Mission Valley

Table 3.1 Existing Roadway Level of Service

ID	Roadway	Segment	Count Dates	Data Source	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS	Community
50	Camino De La Reina	Between Camino Del Este and Qualcomm Way	9/16/2015 - 9/17/2015	PTD	4-Ln Major Arterial	40,000	13,770	0.344	A	Mission Valley
51	Camino Del Rio North	Between Camino De La Siesta and Mission Center Road	9/16/2015 - 9/17/2015	PTD	2-Ln Collector w/ TWLTL	15,000	5,430	0.362	B	Mission Valley
52	Camino Del Rio North	Between Mission Center Road and I-8 WB Ramps	9/16/2015 - 9/17/2015	PTD	4-Ln Major Arterial	40,000	24,030	0.601	C	Mission Valley
53	Camino Del Rio North	Between I-8 WB Ramps and Camino Del Este	9/16/2015 - 9/17/2015	PTD	3-Ln Collector w/ RM (1 EB, 2 WB)	22,500	11,910	0.529	C	Mission Valley
54	Camino Del Rio North	Between Camino Del Este and Qualcomm Way	9/9/2015 - 9/10/2015	NDS	4-Ln Major Arterial	40,000	12,180	0.305	A	Mission Valley
55	Camino Del Rio North	Between Qualcomm Way and Mission City Parkway	9/9/2015 - 9/10/2015	NDS	4-Ln Major Arterial	40,000	10,590	0.265	A	Mission Valley
56	Camino Del Rio North	Between Mission City Parkway and 800 Feet East of Mission City Parkway	9/16/2015- 9/17/2015	NDS	2-Ln Collector w/o TWLTL (NFP)	10,000	8,080	0.808	D	Mission Valley
57	Camino Del Rio North	Between 800 Feet East of Mission City Parkway and 1800 Feet West of Ward Road	9/16/2015- 9/17/2015	NDS	2-Ln Collector w/ TWLTL	15,000	8,060	0.537	C	Mission Valley
58	Camino Del Rio North	Between 1800 Feet West of Ward Road and Ward Road	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/o TWLTL (NFP)	10,000	8,920	0.892	D	Mission Valley
59	Camino Del Rio North	Between Ward Road and 1000 Feet West of Fairmount Avenue	9/16/2015 - 9/17/2015	NDS	4-Ln Major Arterial	40,000	11,830	0.296	A	Mission Valley
60	Camino Del Rio North	Between 1000 Feet West of Fairmount Avenue and Fairmount Avenue	9/16/2015 - 9/17/2015	NDS	4-Ln Collector w/ TWLTL	30,000	13,470	0.449	B	Mission Valley
61	Hotel Circle South	Between Hotel Circle North and 1200 Feet East of Hotel Circle North	9/16/2015 - 9/17/2015	PTD	2-Ln Collector w/o TWLTL (NFP)	10,000	12,010	1.201	**F**	Mission Valley
62	Hotel Circle South	Between 1200 Feet East of Hotel Circle North and I-8 EB Ramps	9/16/2015 - 9/17/2015	PTD	2-Ln Collector w/ TWLTL	15,000	12,340	0.823	D	Mission Valley
63	Hotel Circle South	Between I-8 EB Ramps and Bachman Place	9/16/2015 - 9/17/2015	PTD	2-Ln Collector w/ TWLTL	15,000	17,200	1.146	**F**	Mission Valley
64	Hotel Circle South	Between Bachman Place and Hotel Circle North	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/ TWLTL	15,000	15,580	1.038	**F**	Mission Valley

Table 3.1 Existing Roadway Level of Service

ID	Roadway	Segment	Count Dates	Data Source	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS	Community
65	Camino Del Rio South	Between Western Terminus and 1800 Feet west of Mission Center Road	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/o TWLTL	8,000	7,330	0.916	**E**	Mission Valley
66	Camino Del Rio South	Between 1800 Feet west of Mission Center Road and Mission Center Road	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/ TWLTL	15,000	6,870	0.458	B	Mission Valley
67	Camino Del Rio South	Between Mission Center Road and Texas Street	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/o TWLTL	8,000	7,410	0.927	**E**	Mission Valley
68	Camino Del Rio South	Between Texas Street and Mission City Parkway	9/16/2015 - 9/17/2015	PTD	2-Ln Collector w/o TWLTL	8,000	8,140	1.018	**F**	Mission Valley
69	Camino Del Rio South	Between Mission City Parkway and I-15 SB Off-Ramp	9/9/2015 - 9/10/2015	NDS	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	22,500	11,750	0.522	C	Mission Valley
70	Camino Del Rio South	Between I-15 SB Off-Ramp and I-15 SB On-Ramp	9/9/2015 - 9/10/2015	NDS	4-Ln Collector w/o TWLTL	15,000	9,580	0.638	C	Mission Valley
71	Camino Del Rio South	Between I-15 SB On-Ramp and Fairmount Avenue	9/9/2015 - 9/10/2015	NDS	2-Ln Collector w/ TWLTL	15,000	6,370	0.424	B	Mission Valley
72	Morena Boulevard	Between Tecolote Road and Morena Boulevard	9/16/2015 - 9/17/2015	PTD	2-Ln Collector w/ TWLTL	15,000	16,180	1.079	**F**	Linda Vista
73	Morena Boulevard	Between West Morena Boulevard and Linda Vista Road	9/9/2015 - 9/10/2015	NDS	4-Ln Major Arterial	40,000	17,740	0.443	B	Linda Vista
74	Morena Boulevard	Between Linda Vista Road and I-8 WB Off-Ramp	9/16/2015 - 9/17/2015	PTD	4-Ln Major Arterial	40,000	41,930	1.048	**F**	Linda Vista
75	Morena Boulevard	Between I-8 WB Off-Ramp and Taylor Street	9/16/2015 - 9/17/2015	PTD	3-Ln Collector w/ RM (2 NB, 1 SB)	22,500	11,570	0.514	C	Old Town
76	Napa Street	Between Morena Boulevard and Friars Road	9/16/2015 - 9/17/2015	PTD	4-Ln Major Arterial	40,000	13,430	0.336	A	Linda Vista
77	Colusa Street	Between Linda Vista Road and Friars Road	9/16/2015 - 9/17/2015	PTD	2-Ln Collector w/o TWLTL	8,000	2,720	0.339	B	Linda Vista
78	Via Las Cumbres	Between Linda Vista Road and Friars Road	9/16/2015 - 9/17/2015	PTD	3-Ln Collector (2 NB, 1 SB)	11,000	10,923	0.993	**E**	Linda Vista
79	Fashion Valley Road	Between Friars Road and Hotel Circle North	9/16/2015 - 9/17/2015	PTD	4-Ln Collector w/o TWLTL	15,000	9,980	0.665	C	Mission Valley

Table 3.1 Existing Roadway Level of Service

ID	Roadway	Segment	Count Dates	Data Source	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS	Community
80	Bachman Place	Between Hotel Circle South and southern community boundary	9/16/2015 - 9/17/2015	PTD	2-Ln Collector w/o TWLTL (NFP)	10,000	9,140	0.914	**E**	Mission Valley
81	Avenida Del Rio	Between Fashion Valley Parking Lot and Camino De La Reina	9/16/2015 - 9/17/2015	PTD	4-Ln Collector w/o TWLTL	15,000	8,740	0.583	C	Mission Valley
82	Ulric Street	Between Fashion Hills Boulevard and 600 Feet South of Fashion Hills Boulevard	9/16/2015 - 9/17/2015	PTD	2-Ln Collector w/ Striped Median	15,000	20,380	1.359	**F**	Linda Vista
83	Ulric Street	Between 600 Feet South of Fashion Hills Boulevard and Friars Road	9/16/2015 - 9/17/2015	NDS	3-Ln Collector w/ SM (1 NB 2 SB)	22,500	20,430	0.908	**E**	Linda Vista
84	Camino De La Siesta	Between Camino De La Reina and Camino Del Rio North	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/o TWLTL	8,000	5,150	0.643	D	Mission Valley
85	Metropolitan Drive	Between Mission Valley Road and Murray Canyon Road	9/16/2015 - 9/17/2015	NDS	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	22,500	3,840	0.171	A	Mission Valley
86	Murray Canyon Road	Between Metropolitan Drive and Frazee Road	9/9/2015 - 9/10/2015	PTD	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	22,500	7,400	0.329	A	Mission Valley
87	Frazee Road	Between Murray Canyon Road and Friars Road	9/9/2015 - 9/10/2015	NDS	4-Ln Major Arterial	40,000	14,670	0.367	A	Mission Valley
88	Frazee Road	Between Friars Road and Hazard Center Drive	9/16/2015 - 9/17/2015	NDS	4-Ln Major Arterial	40,000	17,050	0.426	B	Mission Valley
89	Mission Center Road	Between Murray Ridge Road and 1200 Feet West of Murray Ridge Road	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/o TWLTL	10,000	10,970	1.097	**F**	Mission Valley
90	Mission Center Road	Between 1200 Feet West of Murray Ridge Road and 950 Feet North of Mission Valley Road	9/16/2015 - 9/17/2015	NDS	3-Ln Collector (2 NB, 1 SB)	11,000	10,721	0.975	**E**	Mission Valley
91	Mission Center Road	Between 950 Feet North of Mission Valley Road and Mission Valley Road	9/16/2015 - 9/17/2015	NDS	4-Ln Major Arterial	40,000	10,940	0.273	A	Mission Valley
92	Mission Center Road	Between Mission Valley Road and Westside Drive	9/16/2015 - 9/17/2015	NDS	4-Ln Major Arterial	40,000	14,170	0.354	A	Mission Valley

Table 3.1 Existing Roadway Level of Service

ID	Roadway	Segment	Count Dates	Data Source	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS	Community
93	Mission Center Road	Between Westside Drive and Friars Road WB Ramps	9/16/2015 - 9/17/2015	NDS	5-Ln Major Arterial (3 NB, 2 SB)	45,000	26,018	0.578	C	Mission Valley
94	Mission Center Road	Between Friars Road WB Ramps and Friars Road EB Ramps	9/16/2015 - 9/17/2015	NDS	4-Ln Major Arterial	40,000	22,830	0.571	C	Mission Valley
95	Mission Center Road	Between Friars Road EB Ramps and Mission Center Court	9/9/2015 - 9/10/2015	PTD	4-Ln Major Arterial	40,000	19,470	0.487	B	Mission Valley
96	Mission Center Road	Between Mission Center Court and Hazard Center Drive	9/9/2015 - 9/10/2015	PTD	5-Ln Major Arterial (2 NB, 3 SB)	45,000	19,445	0.432	B	Mission Valley
97	Mission Center Road	Between Hazard Center Drive and Camino De La Reina	9/9/2015 - 9/10/2015	PTD	5-Ln Major Arterial (2 NB, 3 SB)	45,000	27,063	0.601	C	Mission Valley
98	Mission Center Road	Between Camino De La Reina and Camino Del Rio North	9/9/2015 - 9/10/2015	PTD	5-Ln Major Arterial (3 NB, 2 SB)	45,000	23,280	0.517	B	Mission Valley
99	Auto Circle	Between Camino Del Rio North and I-8 EB Ramps	9/16/2015 - 9/17/2015	NDS	4-Ln Major Arterial	40,000	34,100	0.852	D	Mission Valley
100	Auto Circle	Between I-8 EB Ramps and Camino Del Rio South	9/9/2015 - 9/10/2015	NDS	4-Ln Collector w/ RM	30,000	20,980	0.699	D	Mission Valley
101	Via Alta	Between Westside Drive and Franklin Ridge Road	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/ RM	15,000	1,340	0.089	A	Mission Valley
102	Murray Ridge Road	Between Mission Center Road and I-805 NB Ramps	9/16/2015 - 9/17/2015	NDS	2 Ln Collector w/ TWLTL	15,000	20,000	1.333	**F**	Serra Mesa
103	Murray Ridge Road	Between I-805 NB Ramps and I-805 SB Ramps	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/ TWLTL	15,000	11,700	0.780	D	Serra Mesa
104	Russell Park Way	Between Civita Boulevard and Friars Road	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/ RM	15,000	1,020	0.068	A	Mission Valley
105	Camino Del Este	Between Rio San Diego Drive and Camino De La Reina	9/16/2015 - 9/17/2015	NDS	4-Ln Collector w/ RM or TWLTL	30,000	8,450	0.282	A	Mission Valley
106	Camino Del Este	Between Camino De La Reina and Camino Del Rio North	9/9/2015 - 9/10/2015	PTD	4-Ln Collector w/ RM or TWLTL	30,000	9,880	0.329	A	Mission Valley
107	Franklin Ridge Road	Between Civita Boulevard and Via Alta	Future Roadway							Mission Valley

Table 3.1 Existing Roadway Level of Service

ID	Roadway	Segment	Count Dates	Data Source	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS	Community
108	Qualcomm Way	Between Civita Boulevard and Friars Road WB Ramps			Future Roadway					Mission Valley
109	Qualcomm Way	Between Friars Road WB Ramps and Friars Road EB Ramps	9/9/2015 - 9/10/2015	PTD	2-Ln Collector w/ TWLTL	15,000	9,300	0.620	C	Mission Valley
110	Qualcomm Way	Between Friars Road EB Ramps and Rio San Diego Drive	9/9/2015 - 9/10/2015	PTD	6-Ln Major Arterial	50,000	10,200	0.204	A	Mission Valley
111	Qualcomm Way	Between Rio San Diego Drive and Camino Del Rio North	9/9/2015 - 9/10/2015	PTD	6-Ln Major Arterial	50,000	24,330	0.487	B	Mission Valley
112	Qualcomm Way	Between Camino Del Rio North and I-8 WB Ramps	9/9/2015 - 9/10/2015	PTD	5-Ln Major Arterial (3 NB, 2 SB)	45,000	23,559	0.524	B	Mission Valley
113	Qualcomm Way	Between I-8 WB Ramps and I-8 EB Ramps	9/9/2015 - 9/10/2015	PTD	6-Ln Major Arterial	50,000	36,410	0.728	C	Mission Valley
114	Qualcomm Way	Between I-8 EB Ramps and Camino Del Rio South	9/9/2015 - 9/10/2015	PTD	4-Ln Major Arterial	40,000	25,830	0.646	C	Mission Valley
115	Texas Street	Between Camino Del Rio South and 1400 Feet North of Madison Ave	9/9/2015 - 9/10/2015	PTD	4-Ln Major Arterial	40,000	29,050	0.726	C	Greater North Park
116	Texas Street	Between 1400 Feet North of Madison Ave and Madison Avenue	9/16/2015 - 9/17/2015	PTD	3-Ln Collector w/ Raised Barrier (1 NB, 2 SB)	22,500	29,240	1.300	**F**	Greater North Park
117	Texas Street	Between Madison Avenue and Meade Ave	9/9/2015 - 9/10/2015	PTD	2-Ln Collector w/ TWLTL	15,000	17,090	1.139	**F**	Greater North Park
118	Texas Street	Between Meade Ave and El Cajon Boulevard	9/16/2015 - 9/17/2015	NDS	3-Ln Collector	11,000	14,310	1.300	**F**	Greater North Park
119	River Run Drive	Between Friars Road and Rio San Diego Drive	9/16/2015 - 9/17/2015	PTD	2-Ln Collector w/o TWLTL	8,000	4,030	0.504	C	Mission Valley
120	Fenton Parkway	Between Portofino Driveway and Friars Road	9/16/2015 - 9/17/2015	PTD	4-Lane Major Arterial	40,000	4,120	0.103	A	Mission Valley
121	Fenton Parkway	Between Friars Road and Rio San Diego Drive	9/16/2015 - 9/17/2015	PTD	4-Lane Major Arterial	40,000	12,610	0.315	A	Mission Valley
122	Fenton Parkway	Between Rio San Diego Drive and Del Rio Apartments Driveway	9/16/2015 - 9/17/2015	PTD	4-Lane Major Arterial	40,000	5,400	0.135	A	Mission Valley

Table 3.1 Existing Roadway Level of Service

ID	Roadway	Segment	Count Dates	Data Source	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS	Community
123	Mission City Parkway	Between Camino Del Rio North and Camino Del Rio South	9/9/2015 - 9/10/2015	NDS	2-Ln Collector w/ TWLTL	15,000	6,430	0.428	B	Mission Valley
124	Northside Drive	Between Portofino Driveway and Friars Road	9/9/2015 - 9/10/2015	NDS	4-Ln Collector w/ RM	30,000	6,590	0.220	A	Mission Valley
125	Northside Drive	Between Friars Road and Fenton Marketplace Driveway	9/9/2015 - 9/10/2015	NDS	4-Ln Collector w/ RM	30,000	20,310	0.677	C	Mission Valley
126	Northside Drive	Between Fenton Marketplace Driveway and Lowe's Frontage Road	9/9/2015 - 9/10/2015	NDS	3-Ln Collector w/ RM (2 NB, 1 SB)	22,500	15,890	0.706	D	Mission Valley
127	Mission Village Drive	Between Ronda Avenue and Friars Road WB Ramps	9/9/2015 - 9/10/2015	NDS	4-Ln Major Arterial	40,000	17,220	0.431	B	Mission Valley
128	Mission Village Drive	Between Friars Road WB Ramps and Friars Road EB Ramps	9/9/2015 - 9/10/2015	NDS	4-Ln Major Arterial	40,000	13,660	0.342	A	Mission Valley
129	Rancho Mission Road	Between Friars Road and San Diego Mission Road	9/16/2015 - 9/17/2015	NDS	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	22,500	12,820	0.570	C	Mission Valley
130	Ward Road	Between San Diego Mission Road and Camino Del Rio North	9/9/2015 - 9/10/2015	NDS	4-Ln Collector w/o TWLTL	15,000	9,580	0.639	C	Mission Valley
131	Santo Road	Between Northern Terminus and Friars Road	9/16/2015 - 9/17/2015	NDS	2-Ln Collector w/o TWLTL	8,000	6,360	0.796	D	Tierrasanta
132	Riverdale Street	Between Zion Road and Friars Road	9/9/2015 - 9/10/2015	PTD	2-Ln Collector w/o TWLTL	8,000	2,770	0.346	B	Grantville
133	Riverdale Street	Between Friars Road and Vandever Avenue	1/20/2016 - 1/21/2016	AVC	2-Ln Collector w/o TWLTL	8,000	8,900	1.113	**F**	Grantville
134	Mission Gorge Road	Between Friars Road and Camino Del Rio North	1/20/2016 - 1/21/2016	AVC	4-Ln Collector w/ TWLTL	30,000	14,710	0.490	C	Grantville
135	Fairmount Avenue	Between Camino Del Rio North/I-8 WB Off-Ramp and I-8 EB Off-Ramp	9/16/2015 - 9/17/2015	PTD	4-Ln Major Arterial	40,000	40,210	1.005	**F**	Grantville
136	Fairmount Avenue	Between I-8 EB Off-Ramp and Camino Del Rio South	9/16/2015 - 9/17/2015	PTD	6-Ln Expressway	80,000	82,880	1.036	**F**	Grantville

Source: Pacific Technical Data, Accurate Video Counts, City of San Diego

Notes:
Bold letter indicated substandard LOS E and F.
PTD = Pacific Technical Data. AVC = Accurate Video Counts.
RM = Raised Median. SM = Striped Median. TWLTL = Two-Way Left-Turn Lane. Turn pocket(s) may be considered in place of TWLTL. NFP = No Fronting Property.

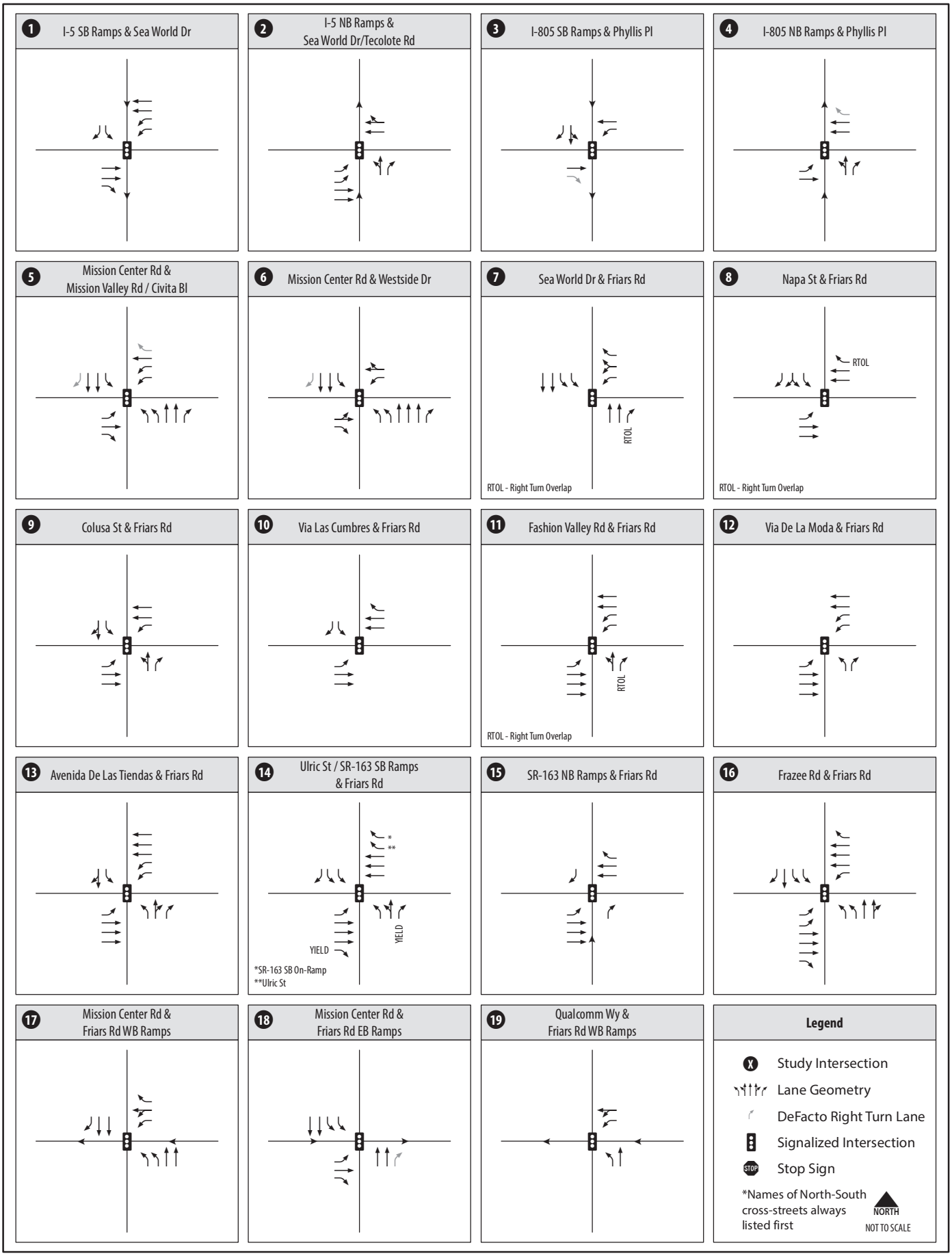
3.2 Intersection Analysis

As described in Chapter 2.1, a total of sixty-seven (67) study intersections were analyzed as part of the existing conditions assessment. Figure 3-3 displays existing intersection geometries. Figure 3-4a displays the AM/PM peak hour turning movements for all 67 study intersections, while Figure 3-4b displays the midday turning movements at selected locations. Intersection counts utilized in this report are provided in Appendix A, while intersection level of service calculation worksheets are provided in Appendix D.

The intersection analysis results are presented in Figure 3-5a for all 67 study intersections, during the AM and PM peak hours. Figure 3-5b presents the midday peak hour intersection level of service for 23 study intersections. Table 3.2 identifies the traffic control, provides the intersection level of service results and the average intersection delay for AM and PM peak hours for all study intersections. Table 3.2 also provides mid-day peak hour results for 23 of the study intersections where midday data was collected.

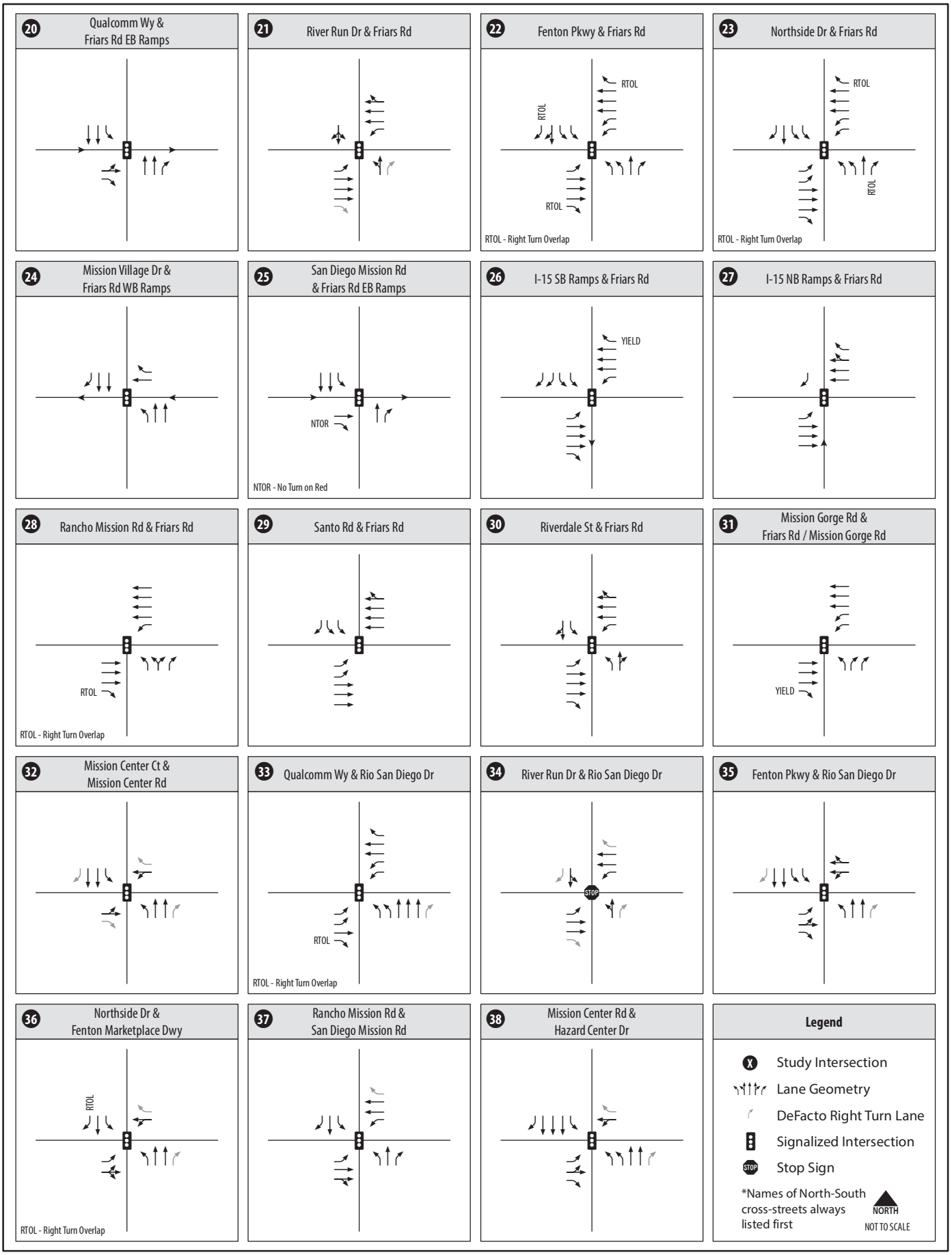
The following 13 intersections were found to operate at substandard (LOS E or F) levels of service during the AM, PM and/or midday peak hour:

- #2 I-5 NB Ramps and Sea World Drive/Tecolote Road – AM LOS E
- #5 Mission Center Road and Mission Valley Road/Civita Boulevard – PM LOS E
- #16 Frazee Road and Friars Road – PM LOS E
- #23 Northside Drive and Friars Road – PM LOS E
- #26 I-15 SB Ramps and Friars Road – PM LOS E
- #45 Fairmount Avenue/Camino Del Rio North and I-8 WB Off-Ramp – PM LOS E
- #47 I-8 WB Ramps/Handlery Hotel Driveway and Hotel Circle North (E) – AM/PM LOS E
- #55 Hotel Circle North and Taylor Street/Hotel Circle South – PM LOS E
- #56 I-8 EB Ramps and Hotel Circle South – PM LOS F
- #58 Mission Center Road and I-8 EB Ramps – PM LOS E
- #59 Mission Center Road and Camino Del Rio South – PM LOS F; Midday LOS E
- #61 Texas Street and Camino Del Rio South – AM/PM LOS E
- #67 Texas Street and Madison Avenue – AM LOS E



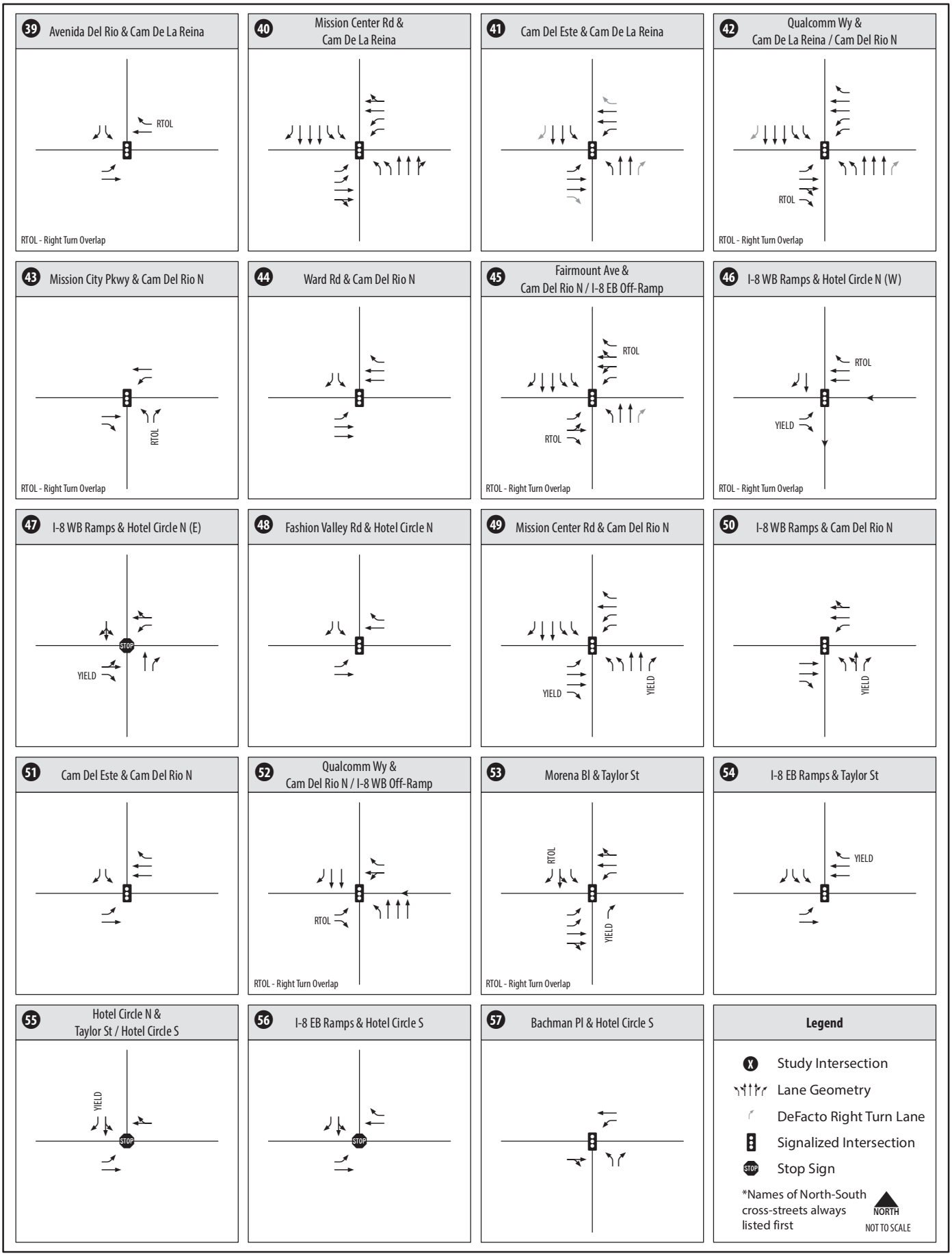
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Figure 3-3
Existing Intersection Geometrics
(Intersections 1-19)



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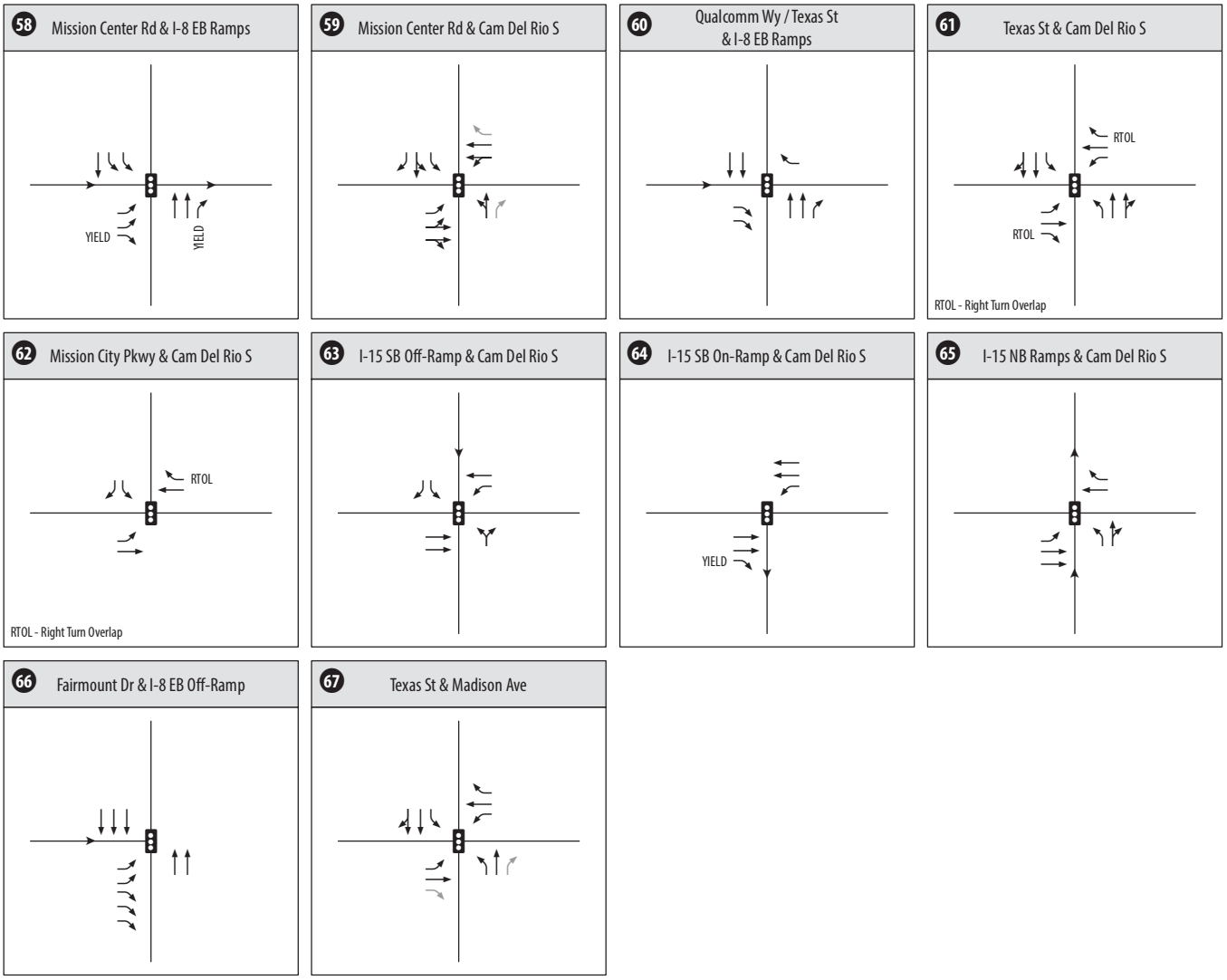
Figure 3-3
Existing Intersection Geometrics
(Intersections 20-38)



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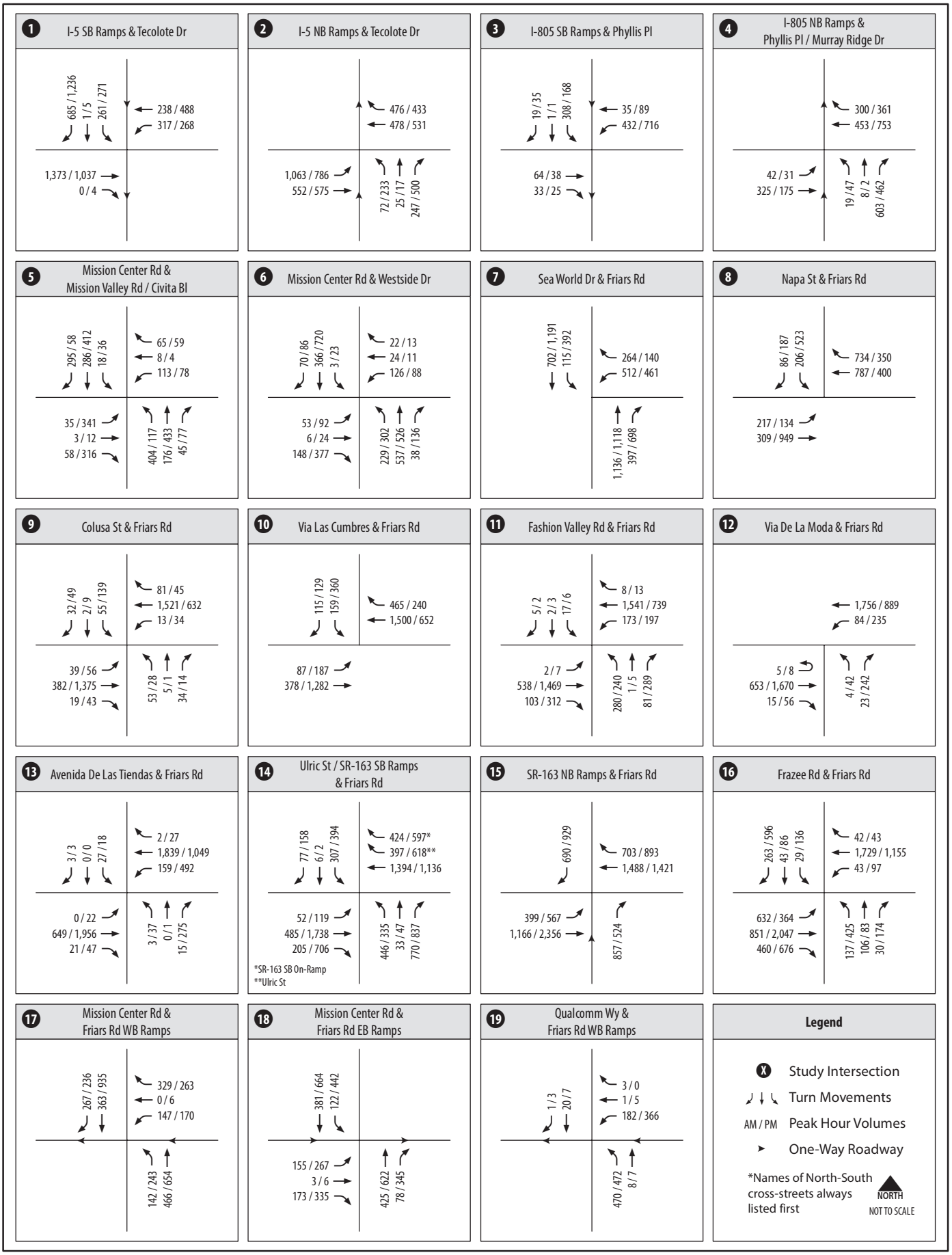
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Figure 3-3
Existing Intersection Geometrics
(Intersections 39-57)



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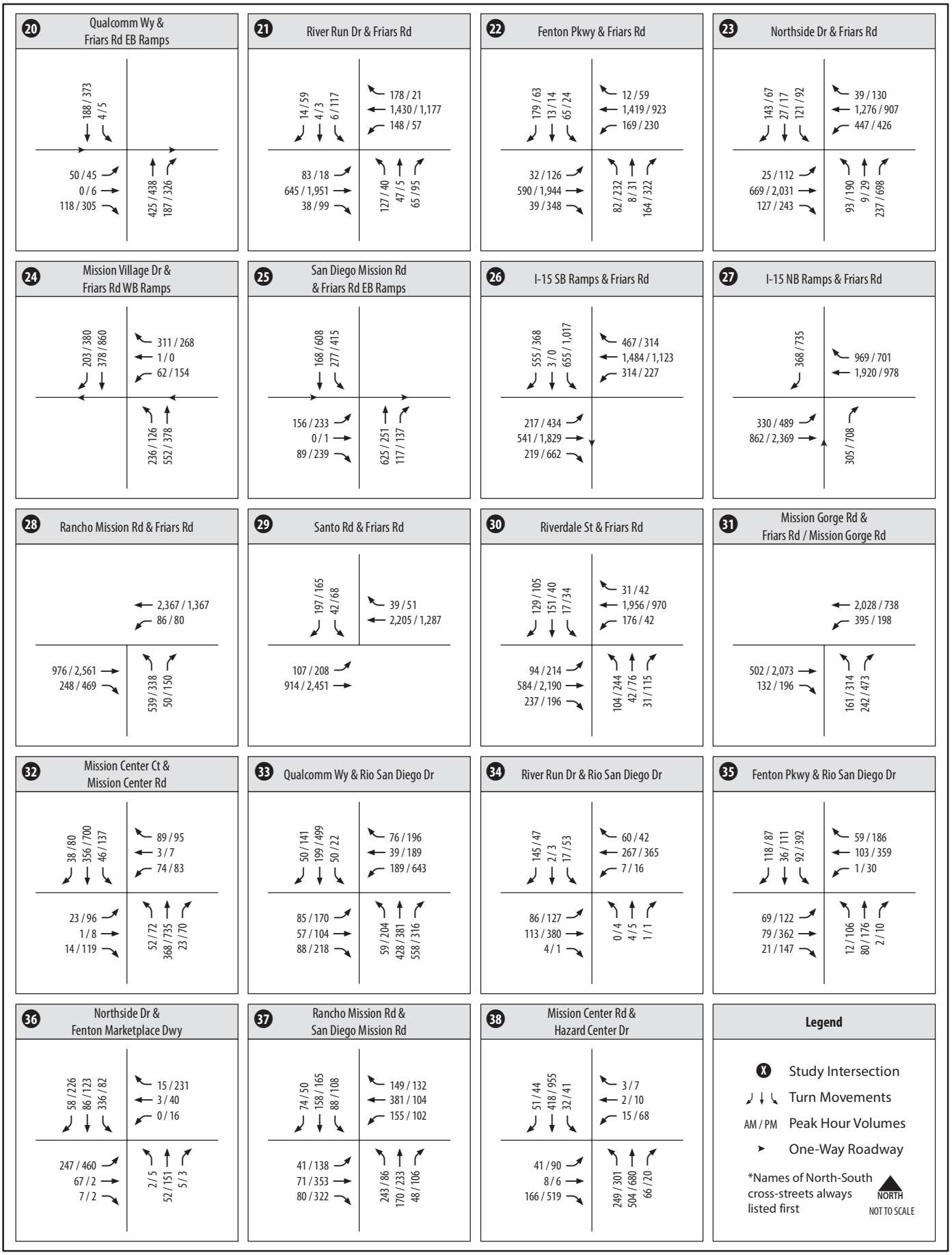
Figure 3-3
Existing Intersection Geometrics
(Intersections 58-67)



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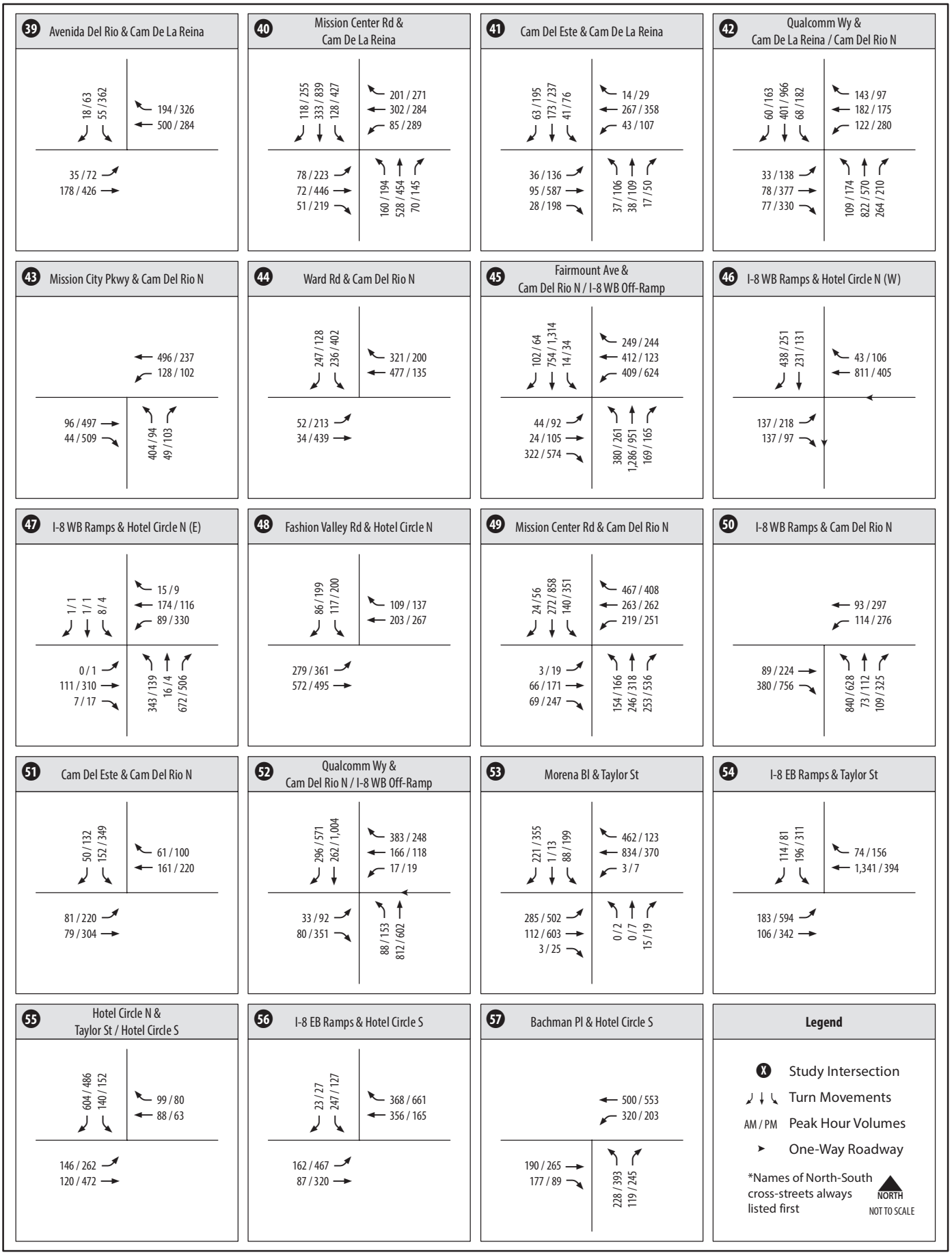
Figure 3-4a
Existing AM/PM Peak Period
Intersection Turning Movements (Intersections 1-19)



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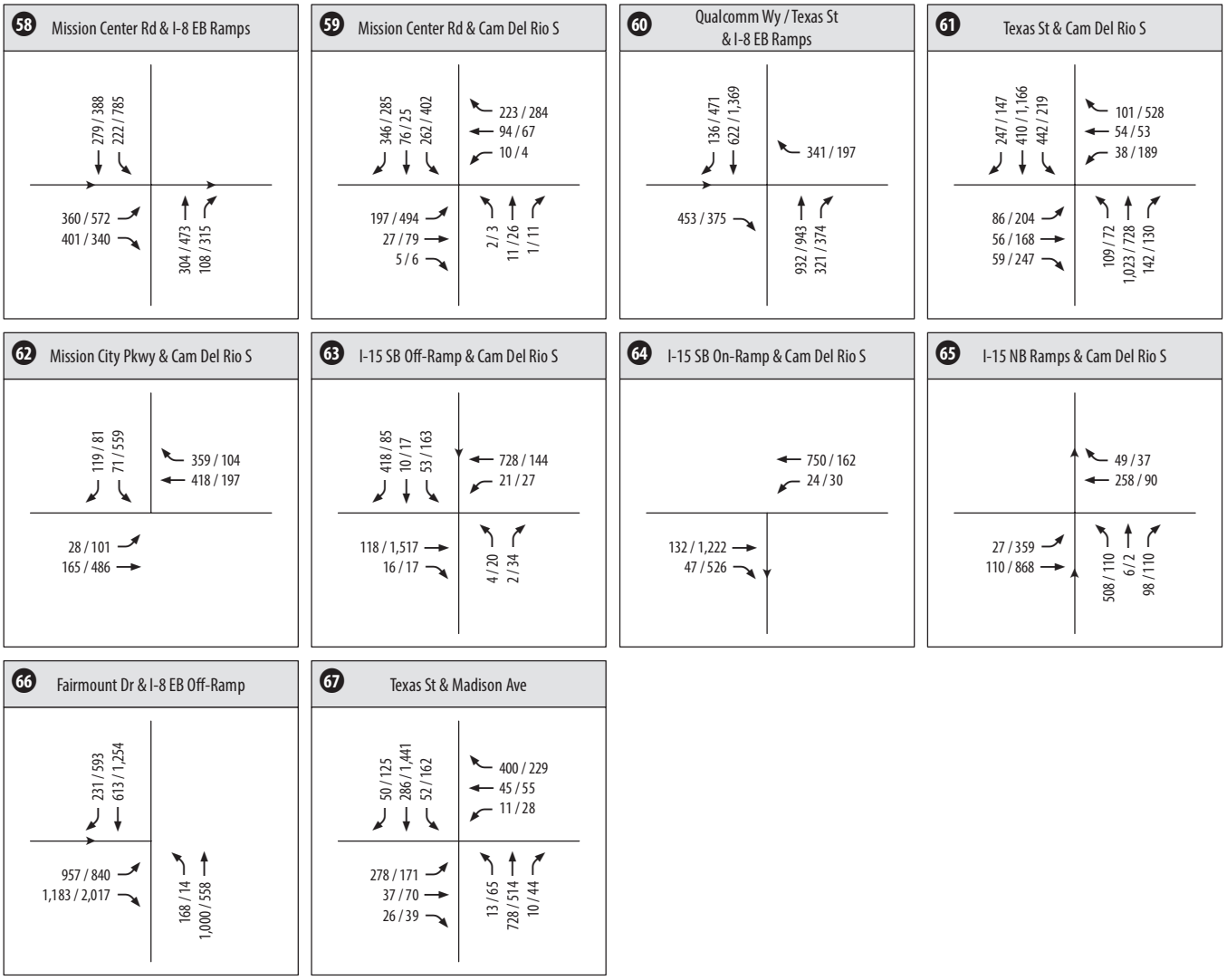
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Figure 3-4a
Existing AM/PM Peak Peak Period
Intersection Turning Movements (Intersections 20-38)



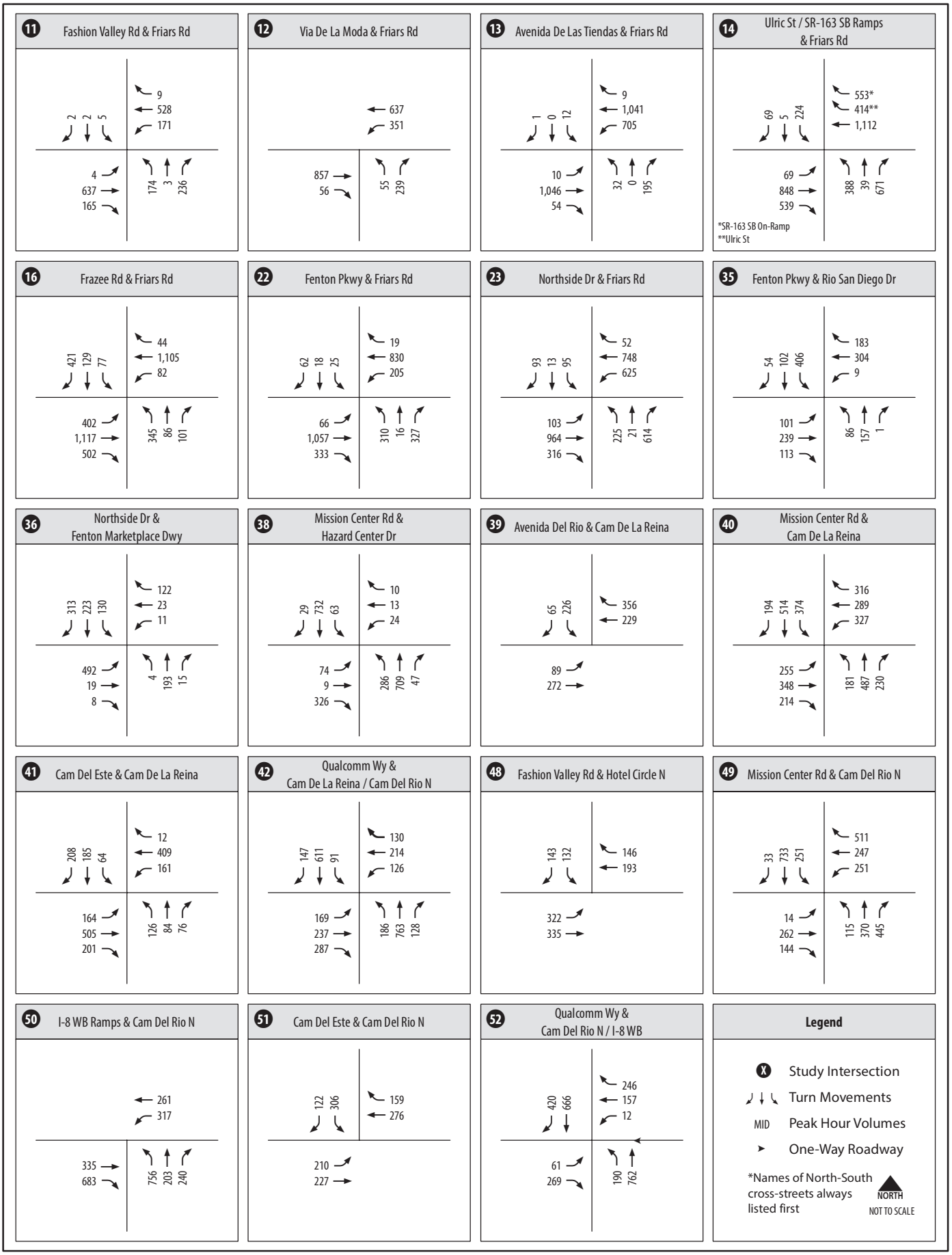
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Figure 3-4a
Existing AM/PM Peak Period
Intersection Turning Movements (Intersections 39-57)



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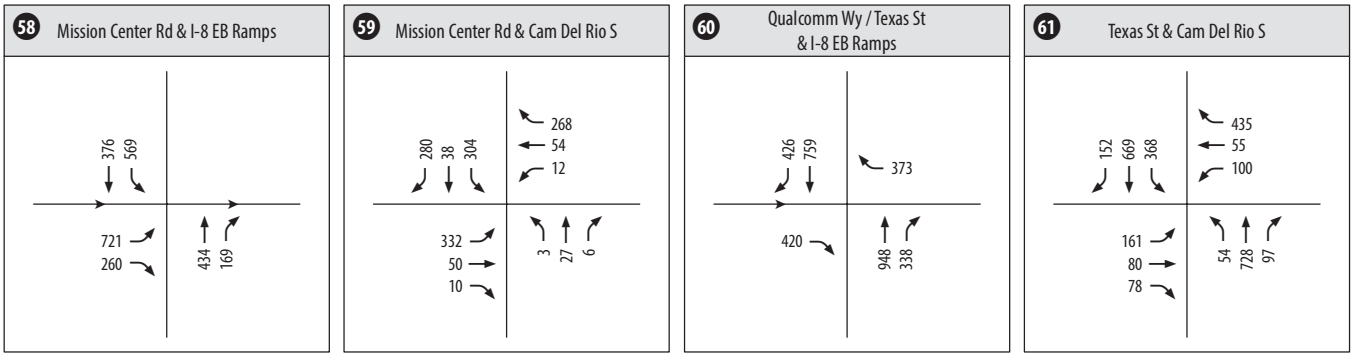
Figure 3-4a
Existing AM/PM Peak Period
Intersection Turning Movements (Intersections 58-67)



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Figure 3-4b
Midday Peak Period Intersection Turning Movements
(Intersections 11-14, 16, 22, 23, 35, 36, 38-42 and 48-52)



Legend

- X — Study Intersection
- Turn Movements
- MID — Peak Hour Volumes
- One-Way Roadway

*Names of North-South cross-streets always listed first

NORTH

NOT TO SCALE

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Figure 3-4b
Midday Peak Period Intersection Turning Movements
(Intersections 58-61)

Table 3.2 Existing Peak Hour Intersection Analysis

Intersection	Traffic Control	Count Date	Count Source	AM Peak Hour		PM Peak Hour		Midday Peak Hour	
				Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
1: I-5 SB Ramps / Sea World Drive	Signal	9/10/2015	PTD	33.1	C	27.4	C	-	-
2: I-5 NB Ramps / Sea World Drive/Tecolote Road	Signal	9/10/2015	PTD	58.6	**E**	44.3	D	-	-
3: I-805 SB Ramps / Phyllis Place	Signal	9/16/2015	PTD	20.2	C	20.1	C	-	-
4: I-805 NB Ramps / Phyllis Place	Signal	9/16/2015	PTD	14.7	B	10.0	B	-	-
5: Mission Center Road / Mission Valley Road/Civita Boulevard	Signal	9/16/2015	PTD	31.1	C	78.9	**E**	-	-
6: Mission Center Road / Westside Drive	Signal	9/16/2015	PTD	20.9	C	15.6	B	-	-
7: Sea World Drive / Friars Road	Signal	9/10/2015	PTD	15.9	B	19.9	B	-	-
8: Napa Street / Friars Road	Signal	9/10/2015	PTD	12.0	B	7.7	A	-	-
9: Colusa Street / Friars Road	Signal	9/10/2015	PTD	15.0	B	16.3	B	-	-
10: Via Las Cumbres / Friars Road	Signal	9/10/2015	PTD	16.5	B	20.8	C	-	-
11: Fashion Valley Road / Friars Road	Signal	9/10/2015	PTD	22.0	C	51.3	D	12.0	B
12: Via De La Moda / Friars Road	Signal	9/10/2015	PTD	2.5	A	6.7	A	10.1	B
13: Avenida De Las Tiendas / Friars Road	Signal	9/10/2015	PTD	5.4	A	28.0	C	12.0	B
14: Ulric Street/SR-163 SB Ramps / Friars Road	Signal	9/10/2015	PTD	35.0	C	39.9	D	22.4	C
15: SR-163 NB Ramps / Friars Road	Signal	9/10/2015	PTD	11.3	B	12.2	B	-	-
16: Frazee Road / Friars Road	Signal	9/10/2015	PTD	37.1	D	66.5	**E**	38.4	D
17: Mission Center Road / Friars Road WB Ramps	Signal	9/16/2015	PTD	12.4	B	10.9	B	-	-
18: Mission Center Road / Friars Road EB Ramps	Signal	9/16/2015	PTD	20.5	C	44.0	D	-	-
19: Qualcomm Way / Friars Road WB Ramps	Signal	9/16/2015	PTD	12.4	B	13.1	B	-	-
20: Qualcomm Way / Friars Road EB Ramps	Signal	9/16/2015	PTD	7.2	A	8.8	A	-	-
21: River Run Drive / Friars Road	Signal	9/16/2015	PTD	18.6	B	21.0	C	-	-
22: Fenton Parkway / Friars Road	Signal	9/16/2015	PTD	26.3	C	21.2	C	22.8	C
23: Northside Drive / Friars Road	Signal	9/16/2015	PTD	29.2	C	55.5	**E**	42.2	D
24: Mission Village Drive / Friars Road WB Ramps	Signal	9/16/2015	PTD	9.2	A	38.1	D	-	-
25: Mission Village Drive / Friars Road EB Ramps	Signal	9/16/2015	PTD	44.5	D	52.5	D	-	-
26: I-15 SB Ramps / Friars Road	Signal	9/16/2015	PTD	38.1	D	57.5	**E**	-	-

Table 3.2 Existing Peak Hour Intersection Analysis

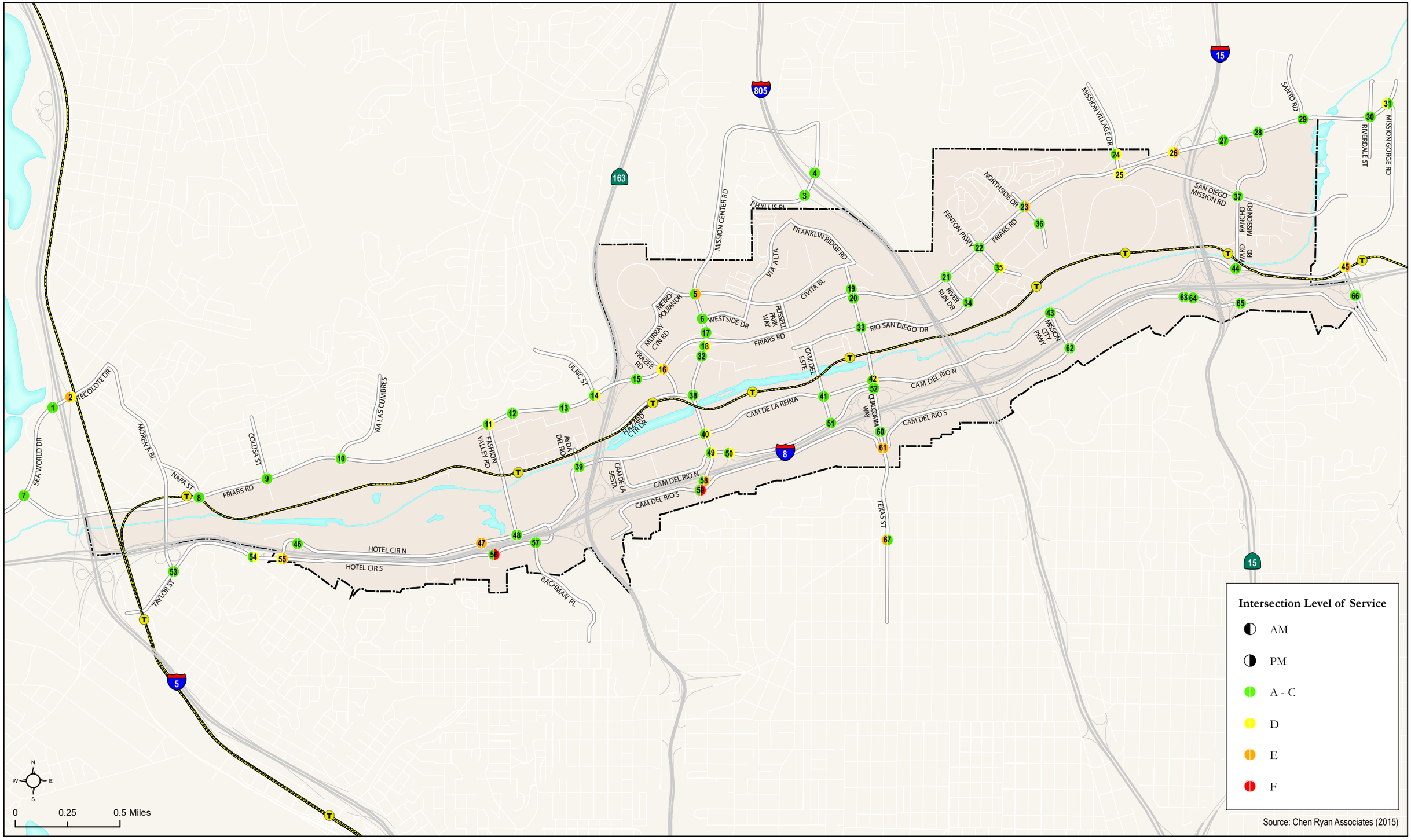
Intersection	Traffic Control	Count Date	Count Source	AM Peak Hour		PM Peak Hour		Midday Peak Hour	
				Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
27: I-15 NB Ramps / Friars Road	Signal	9/16/2015	PTD	5.2	A	4.8	A	-	-
28: Rancho Mission Road / Friars Road	Signal	9/16/2015	PTD	21.5	C	34.4	C	-	-
29: Santo Road / Friars Road	Signal	9/17/2015	PTD	13.0	B	13.0	B	-	-
30: Riverdale Street / Friars Road	Signal	9/17/2015	PTD	29.4	C	26.2	C	-	-
31: Mission Gorge Road / Friars Road	Signal	9/17/2015	PTD	39.8	D	33.4	C	-	-
32: Mission Center Road / Mission Center Court	Signal	9/16/2015	PTD	25.3	C	24.8	C	-	-
33: Qualcomm Way / Rio San Diego Drive	Signal	9/16/2015	PTD	14.6	B	30.4	C	-	-
34: River Run Drive / Rio San Diego Drive	AWSC	9/16/2015	PTD	9.5	A	10.4	B	-	-
35: Fenton Parkway / Rio San Diego Drive	Signal	9/16/2015	PTD	16.0	B	35.7	D	32.3	C
36: Northside Drive / Rio San Diego Drive	Signal	9/16/2015	PTD	19.0	B	16.2	B	21.2	C
37: Rancho Mission Road / San Diego Mission Road	Signal	9/17/2015	PTD	27.3	C	31.6	C	-	-
38: Mission Center Road / Hazard Center Drive	Signal	9/10/2015	PTD	12.9	B	33.1	C	17.1	B
39: Avenida Del Rio / Camino De La Reina	Signal	9/10/2015	PTD	7.5	A	11.2	B	9.8	A
40: Mission Center Road / Camino De La Reina	Signal	9/10/2015	PTD	21.9	C	42.2	D	35.6	D
41: Camino Del Este / Camino De La Reina	Signal	9/16/2015	PTD	10.7	B	17.6	B	20.5	C
42: Qualcomm Way / Camino De La Reina	Signal	9/17/2015	PTD	16.7	B	37.8	D	41.4	D
43: Mission City Parkway / Camino Del Rio North	Signal	9/17/2015	PTD	13.3	B	9.4	A	-	-
44: Ward Road / Camino Del Rio North	Signal	9/17/2015	PTD	12.0	B	14.6	B	-	-
45: Fairmount Avenue / Camino Del Rio North/I-8 WB Off-Ramp	Signal	9/17/2015	PTD	51.4	D	72.7	**E**	-	-
46: I-8 WB Ramps / Hotel Circle North (W)	Signal	9/10/2015	PTD	6.6	A	6.6	A	-	-
47: I-8 WB Ramps/Handlery Driveway / Hotel Circle North (E)	AWSC	9/10/2015	PTD	36.6	**E**	41.0	**E**	-	-
48: Fashion Valley Road / Hotel Circle North	Signal	9/10/2015	PTD	10.0	A	16.2	B	11.5	B
49: Mission Center Road / Camino Del Rio North	Signal	9/10/2015	PTD	16.3	B	43.1	D	21.0	C
50: I-8 WB Ramps/Mission Valley Mall Driveway / Camino Del Rio North	Signal	9/10/2015	PTD	19.8	B	53.7	D	38.8	D
51: Camino Del Este / Camino Del Rio North	Signal	9/10/2015	PTD	18.5	B	33.8	C	29.1	C

Table 3.2 Existing Peak Hour Intersection Analysis

Intersection	Traffic Control	Count Date	Count Source	AM Peak Hour		PM Peak Hour		Midday Peak Hour	
				Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
52: Qualcomm Way / Camino Del Rio N/I-8 WB Ramps	Signal	9/16/2015	PTD	12.4	B	17.7	B	15.7	B
53: Morena Boulevard / Taylor Street	Signal	9/10/2015	PTD	29.8	C	18.8	B	-	-
54: I-8 EB Ramps / Taylor Street	Signal	9/10/2015	PTD	20.3	C	39.4	D	-	-
55: Hotel Circle North / Taylor Street/Hotel Circle South	AWSC	11/19/2015	AVC	34.2	D	43.1	**E**	-	-
56: I-8 EB Ramps / Hotel Circle South	AWSC	9/10/2015	PTD	23.3	C	53.2	**F**	-	-
57: Bachman Place / Hotel Circle South	Signal	9/10/2015	PTD	22.9	C	19.5	B	-	-
58: Mission Center Road / I-8 EB Ramps	Signal	9/9/2015	PTD	17.5	B	60.5	**E**	51.1	D
59: Mission Center Road / Camino Del Rio South	Signal	9/10/2015	PTD	28.9	C	107.3	**F**	64.1	**E**
60: Qualcomm Way/Texas Street / I-8 EB Ramps	Signal	9/17/2015	PTD	0.9	A	0.8	A	1.0	A
61: Texas Street / Camino Del Rio South	Signal	9/16/2015	PTD	58.4	**E**	67.6	**E**	37.0	D
62: Mission City Parkway / Camino Del Rio South	Signal	9/17/2015	PTD	8.0	A	18.8	B	-	-
63: I-15 SB Off-Ramp / Camino Del Rio South	Signal	9/16/2015	PTD	3.5	A	6.9	A	-	-
64: I-15 SB On-Ramp / Camino Del Rio South	Signal	9/17/2015	PTD	1.3	A	3.2	A	-	-
65: I-15 NB Ramps / Camino Del Rio South	Signal	9/17/2015	PTD	17.0	B	11.6	B	-	-
66: Mission Gorge Road/Fairmount Avenue / I-8 EB Off-Ramp	Signal	9/17/2015	PTD	16.7	B	23.1	C	-	-
67: Texas Street / Madison Avenue	Signal	9/17/2015	PTD	64.3	**E**	31.9	C	-	-

Source: Pacific Technical Data, Accurate Video Counts, City of San Diego

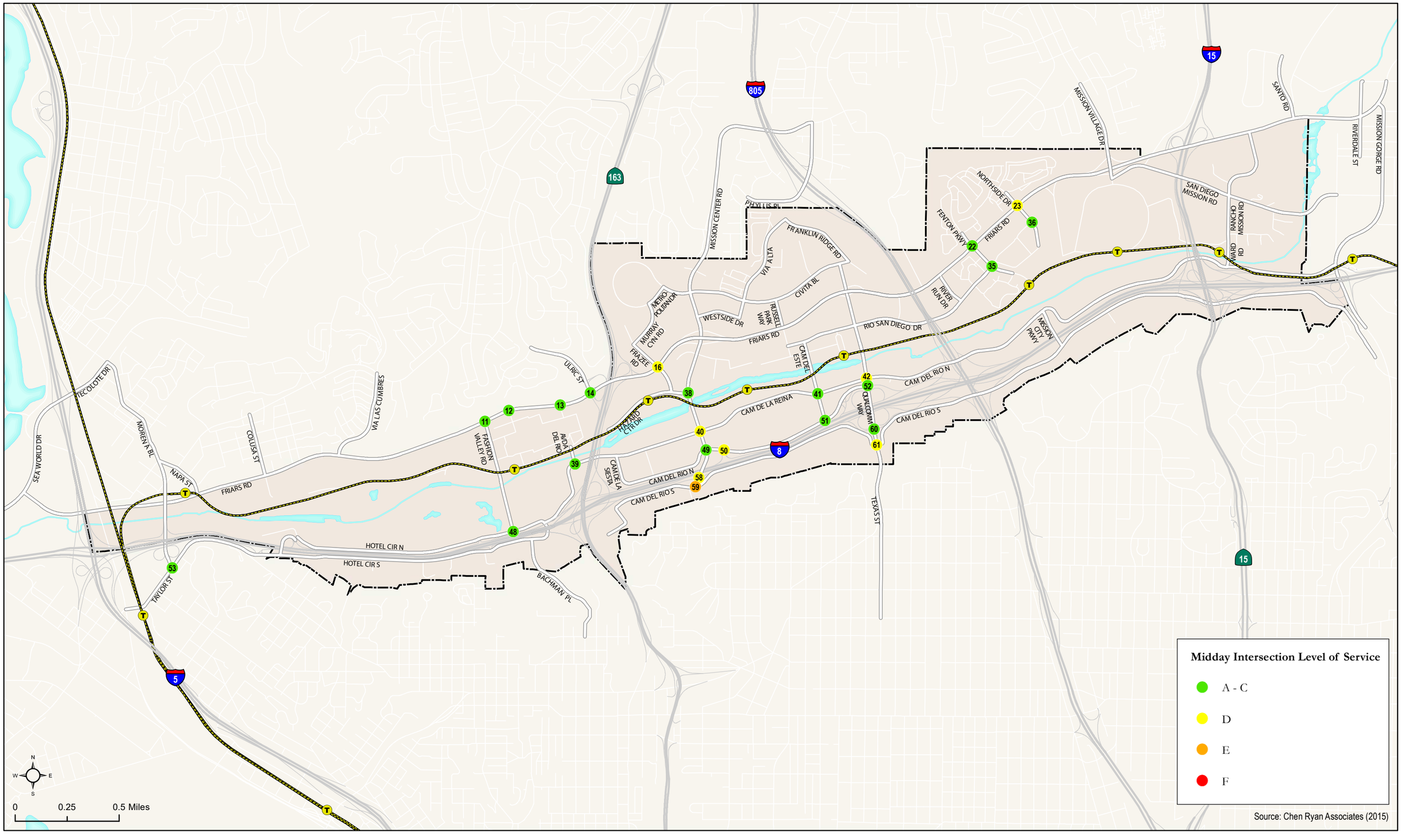
Notes:
Bold letter indicates substandard LOS E or F.
AWSC = All-way stop controlled.
PTD = Pacific Technical Data.
AVC = Accurate Video Counts.



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Figure 3-5a
Existing AM/PM Peak Hour Intersection LOS Results



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Figure 3-5b
Midday Peak Hour Intersection LOS Results

3.3 Freeway Segment Analysis

Five freeways run adjacent to or traverse Mission Valley, carrying significant traffic volumes while providing regional mobility. A description of each freeway is provided, within the Mission Valley study area context, followed by an operational analysis of freeway segments.

Interstate 5

Interstate 5 (I-5) is a north-south facility connecting San Diego County to the US-Mexico International Border to the south and Orange County to the north. The freeway is maintained and operated by Caltrans. I-5 has eight to nine mixed-flow/general purpose lanes (4 northbound lanes, 4-5 southbound lanes) and two to three auxiliary lanes (1 northbound lane, 1-2 southbound lanes) within the study area. Access within Mission Valley is provided by the I-8 interchange, however, I-5 is accessible just outside the community via Sea World Drive/Tecolote Road, Camino Del Rio West, Old Town Avenue. In 2015, I-5 accommodated between 203,000 and 205,000 ADT along segments adjacent to Mission Valley. Heavy vehicle traffic was estimated to account for 3.4% to 4.1% of total daily traffic.

State Route 163

State Route 163 (SR-163) is a north-south facility running from Interstate 15, north of State Route 52, to downtown San Diego. The freeway is maintained and operated by Caltrans. SR-163 varies from five to nine mixed-flow/general purpose lanes (3-5 northbound lanes, 2-4 southbound lanes) and zero to three auxiliary lanes (0-1 northbound lanes, 0-2 southbound lanes) within the study area. Access within Mission Valley is provided at Friars Road and the I-8 interchange. Genesee Avenue and Washington Street provide access to SR-163 just outside of the community. In 2015, SR-163 accommodated between 130,000 and 179,000 ADT along segments adjacent to Mission Valley. Heavy vehicle traffic was estimated to account for 3.0% to 3.7% of total daily traffic.

Interstate 805

Interstate 805 (I-805) is a north-south facility splitting from I-5 in Sorrento Valley and running parallel to I-5 to just north of the US-Mexico International Border, where the freeways merge back together. The freeway is maintained and operated by Caltrans. I-805 has nine to ten mixed-flow/general purpose lanes (4-5 northbound lanes, 4-6 southbound lanes) and zero to two auxiliary lanes (0-1 northbound lanes, 0-2 southbound lanes) within the study area. I-805 is accessible via the I-8 interchange within Mission Valley, and at Phyllis Place/Murray Ridge Road and Adams Avenue just outside of the community. In 2015, I-805 carried between 185,000 and 205,000 ADT along segments adjacent to Mission Valley. Heavy vehicle traffic was estimated to account for 6.5% of total daily traffic.

Interstate 15

Interstate 15 (I-15) is a north-south facility connecting San Diego County to Riverside County to the north and terminating in the Barrio Logan community, near I-5, to the south. South of I-8, I-15 becomes State Route 15 (SR-15). The freeway is maintained and operated by Caltrans. The freeway is comprised of seven to nine mixed-flow/general purpose lanes (3-4 northbound lanes, 3-5 southbound lanes) and zero to four auxiliary lanes (1-2 northbound, 0-3 southbound) within the study area. Access within Mission Valley is provided at Friars Road, the I-8 interchange, Camino Del Rio North, and Camino Del Rio South, with Adams Aero Drive and Adams Avenue providing access just outside of the community. In 2015, I-15 accommodated between 166,000 and 212,000 ADT along segments adjacent to Mission Valley. Heavy vehicle traffic was estimated to account for 2.2% to 5.0% of total daily traffic.

Interstate 8

Interstate 8 (I-8) is an east-west facility connecting Mission Valley to I-5 and the coastal communities to the west and La Mesa, El Cajon and eventually Imperial County to the east. The freeway is maintained and operated by Caltrans. Adjacent to Mission Valley I-8 varies from four to nine mixed-flow/general purpose lanes (2-5 westbound lanes, 2-5 eastbound lanes) and zero to four auxiliary lanes (0-2 westbound lanes, 0-2 eastbound lanes) adjacent to the community. Access within and adjacent to Mission Valley is provided at the I-5 interchange, Morena Boulevard, Taylor Street, Hotel Circle North (multiple access points), Hotel Circle South (multiple access points), SR-163 interchange, Mission Center Road, Camino Del Rio North, Qualcomm Way, I-805 interchange, Camino Del Rio South, and the I-15 interchange. In 2015, I-8 accommodated between 12,000 and 241,000 ADT along segments adjacent to Mission Valley. Heavy vehicle traffic was estimated to account for 1.0% to 3.5% of total daily traffic.

Tables 3.3a and 3.3b present freeway characteristics and the AM/PM level of service analysis results for segments within the vicinity of Mission Valley community plan update study area. Data was obtained from Caltrans and is representative of year 2015 and is provided in Appendix A.

As shown, the following 27 directional freeway segments operate at a substandard level of service E/F:

- EB I-8, I-5 Interchange to Morena Boulevard (PM – LOS E)
- EB I-8, Morena Boulevard to Taylor Street (PM – LOS F)
- EB I-8, Taylor Street to Hotel Circle (PM – LOS E)
- EB I-8, SR-163 Interchange to Mission Center Road (PM – LOS F)
- WB I-8, SR-163 Interchange to Mission Center Road (AM – LOS E)
- EB I-8, Mission Center Road to Qualcomm Way / Texas Street (PM – LOS F)
- WB I-8, Mission Center Road to Qualcomm Way / Texas Street (AM – LOS F)
- EB I-8, Qualcomm Way / Texas Street to I-805 Interchange (PM – LOS F)
- WB I-8, Qualcomm Way / Texas Street to I-805 Interchange (AM – LOS E)
- EB I-8, I-805 Interchange to I-15 Interchange (PM – LOS E)
- EB I-8, I-15 Interchange to Fairmount Avenue (PM – LOS F)
- SB I-5, Sea World Drive / Tecolote Road to I-8 Interchange (AM – LOS F)
- NB I-5, I-8 Interchange to Old Town Avenue (AM – LOS E)
- SB I-5, I-8 Interchange to Old Town Avenue (AM – LOS F)
- SB SR-163, Genesee Avenue to Friars Road (PM – LOS E)
- NB SR-163, Friars Road to I-8 Interchange (PM – LOS E)
- NB SR-163, I-8 Interchange to 6th Avenue (PM – LOS E)
- SB SR-163, 6th Avenue to Washington Street (AM & PM – LOS F)
- NB I-805, Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place (AM – LOS F)
- SB I-805, Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place (PM – LOS F)
- SB I-805, Murray Ridge Road / Phyllis Place to I-8 Interchange (PM – LOS F)
- NB I-805, I-8 Interchange to Adams Avenue (AM – LOS F)
- SB I-805, I-8 Interchange to Adams Avenue (PM – LOS E)
- NB I-805, Adams Avenue to El Cajon Boulevard (AM – LOS E)
- SB I-805, Adams Avenue to El Cajon Boulevard (PM – LOS F)
- NB I-15, Aero Drive to Friars Road (AM – LOS F)
- SB I-15, Aero Drive to Friars Road (PM – LOS E)

Table 3.3a Freeway Segment Level of Service Results – Existing Conditions AM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS
I-8	Sunset Cliffs to Sports Arena Boulevard	EB	2M	44.4%	7.8%	1.0%	12,000	429	70	3.2	A
		WB	2M	55.6%	7.2%	1.0%		470	70	3.6	A
	Sports Arena Boulevard to I-5 Interchange	EB	3M+1A	44.2%	7.7%	1.2%	102,000	3,554	70	17.9	B
		WB	3M+1A	55.8%	7.1%	1.2%		3,927	69.6	19.9	C
	I-5 Interchange to Morena Boulevard	EB	3M	31.7%	7.8%	2.8%	131,000	2,769	70	14.1	B
		WB	4M	68.3%	6.8%	2.8%		5,227	69.6	20.1	C
	Morena Boulevard to Taylor Street	EB	4M+1A	31.7%	7.8%	2.8%	187,000	3,852	70	15.1	B
		WB	5M	68.3%	6.8%	2.8%		7,461	68.2	23.4	C
	Taylor Street to Hotel Circle	EB	4M	31.7%	7.8%	2.8%	194,000	4,100	70	15.6	B
		WB	4M+1A	68.3%	6.8%	2.8%		7,741	61.3	33.8	D
	Hotel Circle to SR-163 Interchange	EB	4M+2A	31.7%	7.8%	2.8%	204,000	4,312	65	14.2	B
		WB	5M	68.3%	6.8%	2.8%		8,140	63.4	27.4	D
	SR-163 Interchange to Mission Center Road	EB	4M	31.7%	7.8%	3.2%	210,000	4,438	70	16.9	B
		WB	3M+2A	68.3%	6.8%	3.2%		8,379	55	40.7	**E**
	Mission Center Road to Qualcomm Way / Texas Street	EB	4M+1A	31.7%	7.8%	3.2%	225,000	4,755	65	19.5	C
		WB	4M+1A	68.3%	6.8%	3.2%		8,977	50.9	47.1	**F**
	Qualcomm Way / Texas Street to I-805 Interchange	EB	4M+1A	43.0%	7.8%	3.2%	199,000	6,854	62.4	29.4	D
		WB	4M+1A	57.0%	6.8%	3.2%		7,940	57.6	36.8	**E**
	I-805 Interchange to I-15 Interchange	EB	4M+2A	31.7%	7.8%	3.0%	241,000	5,094	70	15.6	B
		WB	4M+2A	68.3%	6.8%	3.0%		9,616	61.5	33.4	D
	I-15 Interchange to Fairmount Ave	EB	4M	32.0%	7.7%	3.5%	214,000	4,758	69.9	18.3	C
		WB	4M+2A	68.0%	7.4%	3.5%		8,838	64.3	29.5	D
I-5	Sea World Drive / Tecolote Road to I-8 Interchange	NB	5M+1A	54.0%	7.6%	3.4%	205,000	8,856	64.4	29.4	D
		SB	4M+2A	46.0%	7.1%	3.4%		11,370	52.5	46.3	**F**
	I-8 Interchange to Old Town Avenue	NB	4M+1A	54.0%	7.6%	4.1%	203,000	8,770	54.6	43.2	**E**
		SB	5M	46.0%	7.1%	4.1%		11,259	52.8	45.8	**F**
SR-163	Genesee Avenue to Friars Road	NB	5M	57.0%	8.8%	3.7%	179,000	9,183	63.1	31.3	D
		SB	4M	43.0%	8.4%	3.7%		6,150	67.6	24.4	C

Table 3.3a Freeway Segment Level of Service Results – Existing Conditions AM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS
SR-163	Friars Road to I-8 Interchange	NB	3M	45.1%	7.9%	3.7%	153,000	5,136	65.3	28.2	D
		SB	4M+2A	54.9%	7.8%	3.7%		6,242	69.8	19.2	C
	I-8 Interchange to 6th Avenue	NB	3M+1A	45.1%	7.9%	3.0%	162,000	5,439	63.7	30.4	D
		SB	3M+2A	54.9%	7.8%	3.0%		6,610	66.3	26.6	D
	6th Avenue to Washington Street	NB	3M	45.1%	7.9%	3.0%	130,000	4,363	68.5	22.7	C
		SB	2M+1A	54.9%	7.8%	3.0%		5,304	39.1	72.5	**F**
I-805	Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place	NB	5M	69.9%	7.6%	6.5%	197,000	11,032	53.2	45.2	**F**
		SB	5M	30.1%	8.1%	6.5%		4,742	70	14.8	B
	Murray Ridge Road / Phyllis Place to I-8 Interchange	NB	5M	74.6%	5.9%	6.5%	201,000	9,045	63.1	31.2	D
		SB	4M+2A	25.4%	8.4%	6.5%		4,106	70	12.8	B
	I-8 Interchange to Adams Avenue	NB	4M+1A	74.6%	5.9%	6.5%	205,000	9,225	50	50.3	**F**
		SB	6M	25.4%	8.4%	6.5%		4,188	70	10.9	A
	Adams Avenue to El Cajon Boulevard	NB	4M	74.6%	5.9%	6.5%	185,000	8,325	56.8	39.9	**E**
		SB	5M+1A	25.4%	8.4%	6.5%		3,779	70	11.8	B
I-15	Aero Drive to Friars Road	NB	4M+1A+2ML	60.5%	7.7%	5.0%	212,000	10,176	42.3	64.9	**F**
		SB	5M+1A+2ML	39.5%	7.5%	5.0%		6,649	69.4	20.7	C
	Friars Road to I-8	NB	4M+2A+2ML	51.5%	8.2%	2.2%	205,000	8,871	64.5	29.2	D
		SB	3M+3A+2ML	48.5%	8.2%	2.2%		8,364	63	28.2	D
	I-8 to Adams Avenue	NB	3M+2A	51.5%	8.2%	2.2%	172,000	7,443	63	31.4	D
		SB	5M	48.5%	8.2%	2.2%		7,018	69	21.6	C
	Adams Avenue to El Cajon Boulevard	NB	4M+1A	51.5%	8.2%	2.2%	166,000	7,183	64.2	29.7	D
		SB	5M+1A	48.5%	8.2%	2.2%		6,773	69.3	20.8	C

Source: Caltrans 2015 Traffic Volumes on California State Highways

Notes:
Bold letter indicates substandard LOS E or F.
M = Mainline. Aux = Auxiliary Lane.
Traffic volumes provided by Caltrans (2015).
[1] The capacity is calculated as 2,350 ADT per main lane and 1,410 ADT (60% of the main lane capacity) per auxiliary lane.
[2] D = Directional split.
[3] K = Peak hour %.
[4] HVF = Heavy vehicle %.

Table 3.3b Freeway Segment Level of Service Results – Existing Conditions PM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS
I-8	Sunset Cliffs to Sports Arena Boulevard	EB	2M	55.6%	7.8%	1.0%	12,000	538	70	4.1	A
		WB	2M	44.4%	7.2%	1.0%		376	70	2.8	A
	Sports Arena Boulevard to I-5 Interchange	EB	3M+1A	54.8%	7.7%	1.2%	102,000	4,488	68.3	23.2	C
		WB	3M+1A	45.2%	7.1%	1.2%		3,244	70	16.3	B
	I-5 Interchange to Morena Boulevard	EB	3M	57.0%	7.8%	2.8%	131,000	5,974	60	35.5	**E**
		WB	4M	43.0%	6.8%	2.8%		3,948	70	15.1	B
	Morena Boulevard to Taylor Street	EB	4M+1A	57.0%	7.8%	2.8%	187,000	8,527	56.5	40.3	**F**
		WB	5M	43.0%	6.8%	2.8%		5,636	70	17.2	B
	Taylor Street to Hotel Circle	EB	4M	57.0%	7.8%	2.8%	194,000	8,846	54.3	43.5	**E**
		WB	4M+1A	43.0%	6.8%	2.8%		5,847	68.5	22.8	C
	Hotel Circle to SR-163 Interchange	EB	4M+2A	57.0%	7.8%	2.8%	204,000	9,302	60.1	33.1	D
		WB	5M	43.0%	6.8%	2.8%		6,148	65	20.2	C
	SR-163 Interchange to Mission Center Road	EB	4M	57.0%	7.8%	3.2%	210,000	9,576	48.6	52.6	**F**
		WB	3M+2A	43.0%	6.8%	3.2%		6,329	63.8	26.5	D
	Mission Center Road to Qualcomm Way / Texas Street	EB	4M+1A	57.0%	7.8%	3.2%	225,000	10,260	39.5	69.4	**F**
		WB	4M+1A	43.0%	6.8%	3.2%		6,781	62.2	28.9	D
	Qualcomm Way / Texas Street to I-805 Interchange	EB	4M+1A	57.0%	7.8%	3.2%	199,000	9,074	50.1	48.4	**F**
		WB	4M+1A	43.0%	6.8%	3.2%		5,997	64.4	24.9	C
	I-805 Interchange to I-15 Interchange	EB	4M+2A	57.0%	7.8%	3.0%	241,000	10,990	54.7	42.9	**E**
		WB	4M+2A	43.0%	6.8%	3.0%		7,263	68.6	22.6	C
	I-15 Interchange to Fairmount Ave	EB	4M	59.2%	7.7%	3.5%	214,000	10,101	43.5	62.3	**F**
		WB	4M+2A	40.8%	7.4%	3.5%		6,081	69.9	18.7	C
I-5	Sea World Drive / Tecolote Road to I-8 Interchange	NB	5M+1A	40.5%	7.6%	3.4%	205,000	6,036	69.9	18.5	C
		SB	4M+2A	59.5%	7.1%	3.4%		7,749	67.7	24.5	C
	I-8 Interchange to Old Town Avenue	NB	4M+1A	40.5%	7.6%	4.1%	203,000	5,977	68.1	23.6	C
		SB	5M	59.5%	7.1%	4.1%		7,673	67.7	24.4	C
SR-163	Genesee Avenue to Friars Road	NB	5M	48.4%	8.8%	3.7%	179,000	8,613	65.1	28.4	D
		SB	4M	51.6%	8.4%	3.7%		8,162	58.6	37.4	**E**

Table 3.3b Freeway Segment Level of Service Results – Existing Conditions PM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS
SR-163	Friars Road to I-8 Interchange	NB	3M	50.9%	7.9%	3.7%	153,000	6,242	57.6	38.8	**E**
		SB	4M+2A	49.1%	7.8%	3.7%		6,022	69.9	18.5	C
	I-8 Interchange to 6th Avenue	NB	3M+1A	50.9%	7.9%	3.0%	162,000	6,610	54.6	43.2	**E**
		SB	3M+2A	49.1%	7.8%	3.0%		6,376	67.1	25.4	C
	6th Avenue to Washington Street	NB	3M	50.9%	7.9%	3.0%	130,000	5,304	64.5	29.3	D
		SB	2M+1A	49.1%	7.8%	3.0%		5,116	42.7	63.9	**F**
I-805	Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place	NB	5M	35.5%	7.6%	6.5%	197,000	6,064	69.8	18.9	C
		SB	5M	64.5%	8.1%	6.5%		11,032	53.2	45.2	**F**
	Murray Ridge Road / Phyllis Place to I-8 Interchange	NB	5M	37.3%	5.9%	6.5%	201,000	5,376	70	16.7	B
		SB	4M+2A	62.7%	8.4%	6.5%		12,060	46.3	56.7	**F**
	I-8 Interchange to Adams Avenue	NB	4M+1A	25.4%	5.9%	6.5%	205,000	3,141	70	12.2	B
		SB	6M	74.6%	8.4%	6.5%		12,300	57.6	38.8	**E**
	Adams Avenue to El Cajon Boulevard	NB	4M	37.3%	5.9%	6.5%	185,000	4,948	69.7	19.3	C
		SB	5M+1A	62.7%	8.4%	6.5%		11,100	52.8	45.8	**F**
I-15	Aero Drive to Friars Road	NB	4M+1A+2ML	39.2%	7.7%	5.0%	212,000	6,569	66.2	26.8	D
		SB	5M+1A+2ML	60.8%	7.5%	5.0%		10,176	58.5	37.5	**E**
	Friars Road to I-8	NB	4M+2A+2ML	51.5%	8.2%	2.2%	205,000	8,364	66.1	26.9	D
		SB	3M+3A+2ML	48.5%	8.2%	2.2%		7,886	63.9	26.2	D
	I-8 to Adams Avenue	NB	3M+2A	51.5%	8.2%	2.2%	172,000	7,018	64.9	28.7	D
		SB	5M	48.5%	8.2%	2.2%		6,617	69.5	20.2	C
	Adams Avenue to El Cajon Boulevard	NB	4M+1A	51.5%	8.2%	2.2%	166,000	6,773	65.8	27.3	D
		SB	5M+1A	48.5%	8.2%	2.2%		6,386	69.7	19.5	C

Source: Caltrans 2015 Traffic Volumes on California State Highways

Notes:
Bold letter indicates substandard LOS E or F.
M = Mainline. Aux = Auxiliary Lane.
Traffic volumes provided by Caltrans (2015).
[1] The capacity is calculated as 2,350 ADT per main lane and 1,410 ADT (60% of the main lane capacity) per auxiliary lane.
[2] D = Directional split.
[3] K = Peak hour %.
[4] HVF = Heavy vehicle %.

3.4 Freeway Ramp Metering Analysis

Table 3.4 presents the ramp metering analysis results for freeway ramp locations where metering is in place for either the AM or PM peak period. As previously mentioned, ramp meter rates were obtained from Caltrans District 11, and are provided along with traffic signal timing information in Appendix B. As shown in Table 3.4, none of the ramp meters within the study communities experience delays in excess of 15 minutes.

Table 3.4 Existing Freeway Ramp Metering Analysis

Location	Peak Hour	Total Demand [1] (veh/hr)	SOV Demand[2]	Meter Rate [3] (veh/hr)	Excess Demand [4] (veh/hr)	Delay [5] (min)	Queue [6] (ft)
I-5 NB On-ramp @ Sea World Drive	AM	1,564	782	965	0	0	0
	PM	1,236	618	972	0	0	0
I-5 SB On-ramp @ Sea World Drive	AM	318	318	444	0	0	0
	PM	277	277	444	0	0	0
I-805 NB On-ramp @ Murray Ridge Road	AM	350	350	851	0	0	0
	PM	394	394		Not Metered		
I-805 SB On-ramp @ Phyllis Place	AM	466	438		Not Metered		
	PM	742	586	691	0	0	0
I-15 NB On-ramp @ Friars Road	AM	1,299	552	558	0	0	0
	PM	1,190	530	529	1	0.11	25
I-15 SB On-ramp @ Friars Road (EB approach)	AM	536	536		Not Metered		
	PM	889	889	996	0	0	0
I-15 SB On-ramp @ Friars Road (WB approach)	AM	684	684		Not Metered		
	PM	748	748	828	0	0	0
I-8 EB On-ramp @ Texas Street (NB approach)	AM	321	321		Not Metered		
	PM	374	374	810	0	0	0
I-8 EB On-ramp @ Texas Street (SB approach)	AM	136	136		Not Metered		
	PM	471	396	444	0	0	0
I-8 EB On-ramp @ Fairmount Avenue (NB approach)	AM	480	480		Not Metered		
	PM	480	480	745	0	0	0
I-8 EB On-ramp @ Fairmount Avenue (SB approach)	AM	231	231		Not Metered		
	PM	593	593	745	0	0	0

Source: Caltrans Ramp Metering Data (2015)

Notes:
SOV = Single Occupancy Vehicle.
[1] Total Demand is the peak hour demand for both SOV and HOV lanes expected to use the on-ramp.
[2] SOV Demand = (Total Demand) – (HOV Demand).
[3] Meter Rate is the peak hour capacity expected to be processed through the ramp meter per lane. This value was obtained from Caltrans. The average between the "high" and "low" meter rate was used for this analysis.
[4] Excess Demand = (Demand) – (Meter Rate) or zero, whichever is greater.
[5] Delay = (Excess Demand / Meter Rate) X 60 min/hr.
[6] Queue = (Excess Demand) X 29 ft/veh. SOV volumes were used in the calculation of Queue. A zero represents no excess queue. It is important to note the on-ramps queues could also occur as a result of freeway congestion as the lack freeway capacity could limit the number of vehicles that can merge onto the freeway.
*HOV demand was obtained from Caltrans Performance Measurements System (PeMS).

4.0 Adopted Community Plan (No-Project)

This chapter discusses the traffic operations under the currently Adopted Community Plan (ACP) conditions and assesses potential traffic impacts by comparing the Adopted Community Plan to the existing conditions. Roadway and freeway segments were evaluated in determining traffic impacts associated with the currently Adopted Community Plan. Since this is not an alternative for possible adoption, intersection-level analysis was not conducted and mitigation measures were also not provided.

4.1 Roadway Segment Analysis

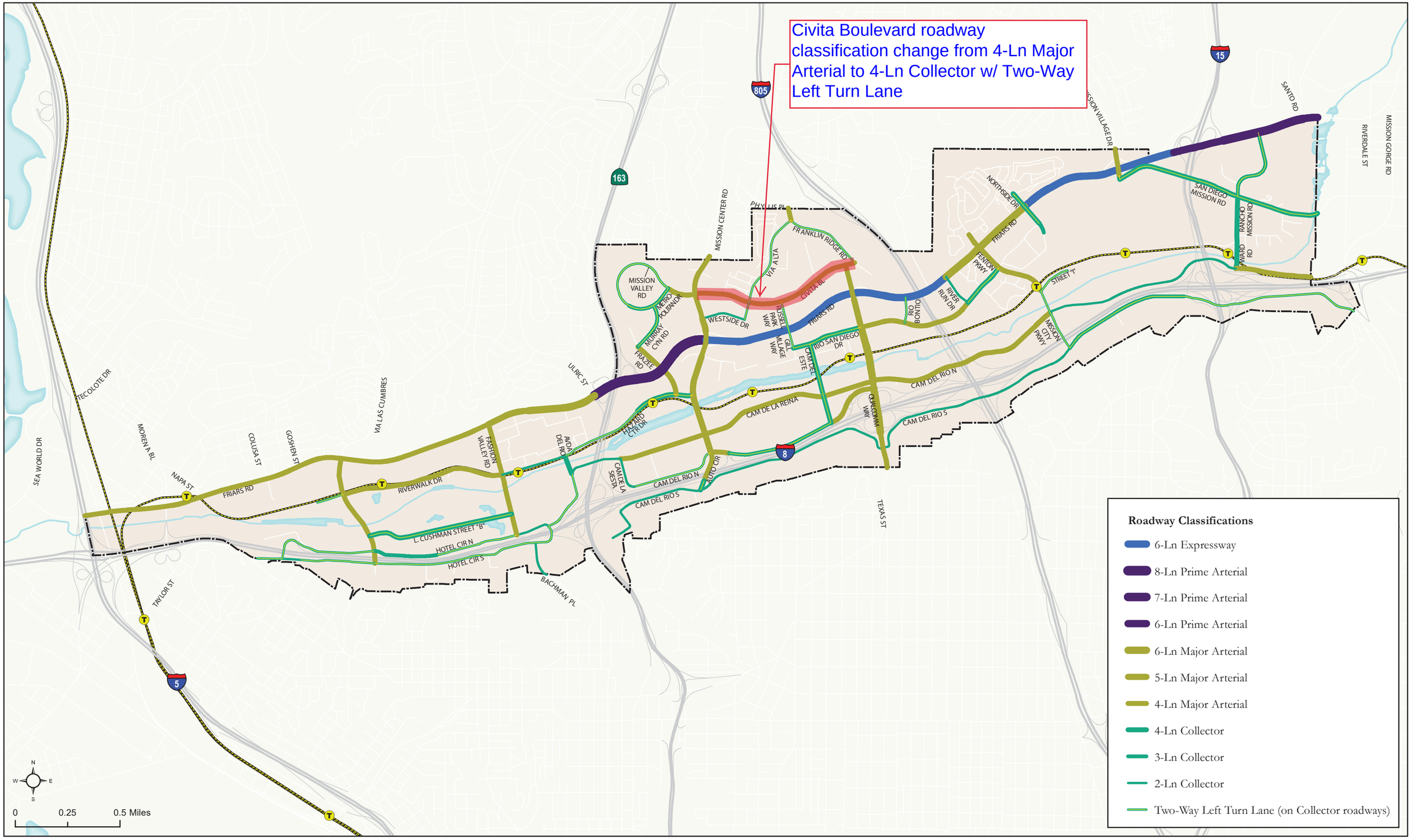
Roadway classification assumptions were largely based on the currently adopted Community Plan *Horizon Year Recommended Street Classification (*Figure 13 and page 83 of the *1985 Mission Valley Community Plan)*. Exceptions were made based on high level feasibility reviewed of the adopted plan classification, these facilities include:

- Friars Road, between Colusa Street and Via Las Cumbres - 1985 ACP: 6-Ln Major Arterial; Assumed: 4-Ln Major Arterial
- Friars Road, between Via Las Cumbres and Fashion Valley Road - 1985 ACP: 6-Ln Major Arterial; Assumed: 4-Ln Major Arterial
- Friars Road, between Fashion Valley Road and Via De La Moda - 1985 ACP: 6-Ln Major Arterial; Assumed: 5-Ln Major Arterial
- Friars Road, between Via De La Moda and Fashion Valley Driveway - 1985 ACP: 6-Ln Major Arterial; Assumed: 5-Ln Major Arterial
- Friars Road, between River Run Drive and Fenton Parkway - 1985 ACP: 6-Ln Expressway; Assumed: 6-Ln Major Arterial
- Friars Road, between Fenton Parkway and Northside Drive - 1985 ACP: 6-Ln Expressway; Assumed: 6-Ln Major Arterial
- Friars Road, between I-15 NB Ramps and Rancho Mission Road - 1985 ACP: 8-Ln Prime Arterial; Assumed: 7-Ln Prime Arterial
- Friars Road, between Rancho Mission Road and Santo Road - 1985 ACP: 8-Ln Prime Arterial; Assumed: 7-Ln Prime Arterial
- Hazard Center Drive, between Avenida Del Rio and Hazard Center W. Driveway - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector w/ TWLTL
- San Diego Mission Road, between Friars Road EB Ramps and Rancho Mission Road - 1985 ACP: 4-Ln Major Arterial; Assumed: 4-Ln Collector w/o TWLTL
- Hotel Circle North, between Hotel Circle South and Fashion Valley Road - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector No Fronting Property
- Hotel Circle North, between Fashion Valley Road and I-8 WB Off-Ramp - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector w/ TWLTL
- Hotel Circle North, between Via Las Cumbres and I-8 WB On-Ramp - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector w/ TWLTL
- Hotel Circle North, between I-8 WB On-Ramp and Hotel Circle South - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector w/ TWLTL
- Camino De La Reina, between Hotel Circle North and Avenida Del Rio - 1985 ACP: 4-Ln Major Arterial; Assumed: 2-Ln Collector w/ TWLTL
- Camino De La Reina, between Avenida Del Rio and Camino De La Siesta - 1985 ACP: 4-Ln Major Arterial; Assumed: 2-Ln Collector No Fronting Property

- Camino Del Rio North, between Camino De La Siesta and Mission Center Road - 1985 ACP: 3-Ln Collector; Assumed: 2-Ln Collector w/ TWLTL
- Camino Del Rio North, between I-8 WB Ramps and Camino Del Este - 1985 ACP: 4-Ln Collector; Assumed: 3-Ln Collector w/ RM
- Camino Del Rio North, between Mission City Parkway and 800 Feet East of Mission City Parkway - 1985 ACP: 4-Ln Major Arterial; Assumed: 2-Ln Collector No Fronting Property
- Camino Del Rio North, between 800 Feet East of Mission City Parkway and 1800 Feet West of Ward Road - 1985 ACP: 4-Ln Major Arterial; Assumed: 2-Ln Collector w/ TWLTL
- Camino Del Rio North, between 1800 Feet West of Ward Road and Ward Road - 1985 ACP: 4-Ln Major Arterial; Assumed: 2-Ln Collector No Fronting Property
- Camino Del Rio North, between 1000 Feet West of Fairmount Avenue and Fairmount Avenue - 1985 ACP: 4-Ln Major Arterial; Assumed: 4-Ln Collector w/ TWLTL
- Hotel Circle South, between Taylor Street and I-8 EB Off-Ramp - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector No Fronting Property
- Hotel Circle South, between I-8 EB Off-Ramp and Via Las Cumbres - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector w/ TWLTL
- Hotel Circle South, between Via Las Cumbres and I-8 EB On-Ramp - 1985 ACP: 3-Ln Collector; Assumed: 2-Ln Collector w/ TWLTL
- Hotel Circle South, between I-8 EB On-Ramp and Hotel Circle North - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector w/ TWLTL
- Camino Del Rio South, between 1800 Feet west of Mission Center Road and Mission Center Road - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector w/o TWLTL
- Camino Del Rio South, between Mission Center Road and Texas Street - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector w/o TWLTL
- Camino Del Rio South, between Texas Street and Mission City Parkway - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector w/o TWLTL
- Camino Del Rio South, between Mission City Parkway and I-15 SB Offramp - 1985 ACP: 4-Ln Collector; Assumed: 3-Ln Collector w/ TWLTL
- Camino Del Rio South, between I-15 SB Offramp and I-15 SB Onramp - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector w/ TWLTL
- Camino Del Rio South, between I-15 SB Onramp and Fairmount Avenue - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector w/ TWLTL
- Colusa Street, between Friars Road and Riverwalk Drive - 1985 ACP: 4-Ln Collector; Assumed: Removed
- Metropolitan Drive, between Mission Valley Road and Murray Canyon Road - 1985 ACP: 2-Ln Collector; Assumed: 3-Ln Collector w/ TWLTL
- Murray Canyon Road, between Metropolitan Drive and Frazee Road - 1985 ACP: 4-Ln Collector; Assumed: 3-Ln Collector w/ TWLTL
- Frazee Road, between Murray Canyon Road and Friars Road - 1985 ACP: 4-Ln Collector; Assumed: 4-Ln Major Arterial
- Mission Center Road, between Murray Ridge Road and 1200 Feet West of Murray Ridge Road - 1985 ACP: 4-Ln Collector; Assumed: 2-Ln Collector w/o TWLTL
- Mission Center Road, between 1200 Feet West of Murray Ridge Road and 950 Feet North of Mission Valley Road - 1985 ACP: 4-Ln Collector; Assumed: 3-Ln Collector
- Mission Center Road, between Mission Valley Road and Westside Drive - 1985 ACP: 6-Ln Major Arterial; Assumed: 4-Ln Major Arterial

- Mission Center Road, between Westside Drive and Friars Road WB Ramps - 1985 ACP: 6-Ln Major Arterial; Assumed: 5-Ln Major Arterial
- Mission Center Road, between Friars Road WB Ramps and Friars Road EB Ramps - 1985 ACP: 6-Ln Major Arterial; Assumed: 4-Ln Major Arterial
- Mission Center Road, between Friars Road EB Ramps and Mission Center Court - 1985 ACP: 6-Ln Major Arterial; Assumed: 4-Ln Major Arterial
- Mission Center Road, between Mission Center Court and Hazard Center Drive - 1985 ACP: 6-Ln Major Arterial; Assumed: 5-Ln Major Arterial
- Mission Center Road, between Hazard Center Drive and Camino De La Reina - 1985 ACP: 6-Ln Major Arterial; Assumed: 5-Ln Major Arterial
- Mission Center Road, between Camino De La Reina and Camino Del Rio North - 1985 ACP: 6-Ln Major Arterial; Assumed: 5-Ln Major Arterial
- Auto Circle, between Camino Del Rio North and I-8 EB Ramps - 1985 ACP: 6-Ln Major Arterial; Assumed: 4-Ln Major Arterial
- Auto Circle, between I-8 EB Ramps and Camino Del Rio South - 1985 ACP: 6-Ln Major Arterial; Assumed: 4-Ln Collector w/ RM
- Qualcomm Way, between Friars Road EB Ramps and Rio San Diego Drive - 1985 ACP: 6-Ln Major Arterial; Assumed: 5-Ln Major Arterial
- Qualcomm Way, between Camino Del Rio North and I-8 WB Ramps - 1985 ACP: 6-Ln Major Arterial; Assumed: 5-Ln Major Arterial
- Fenton Parkway, between Portofino Driveway and Friars Road - 1985 ACP: 4-Ln Collector; Assumed: 4-Lane Major Arterial
- Mission City Parkway, between Camino Del Rio North and Camino Del Rio South - 1985 ACP: 4-Ln Major Arterial; Assumed: 2-Ln Collector w/ No Fronting Property
- Northside Drive, between Friars Road and Fenton Marketplace Driveway - 1985 ACP: 4-Ln Primary Arterial; Assumed: 4-Ln Collector w/ RM
- Northside Drive, between Fenton Marketplace Driveway and Lowe's Frontage Road - 1985 ACP: 4-Ln Primary Arterial; Assumed: 3-Ln Collector w/ RM
- Rancho Mission Road, between Friars Road and San Diego Mission Road - 1985 ACP: 4-Ln Collector; Assumed: 3-Ln Collector w/ TWLTL
- Riverwalk Drive, between Friars Road and Colusa Street - 1985 ACP: 4-Ln Major Arterial; Assumed: Removed
- Riverwalk Drive, between Colusa Street and Via Las Cumbres - 1985 ACP: 4-Ln Major Arterial; Assumed: Local Collector
- Riverwalk Drive, between Fashion Valley Road and Avenida Del Rio - 1985 ACP: 4-Ln Collector w/ TWLTL; Assumed: 2-Ln Collector w/ Commercial Fronting

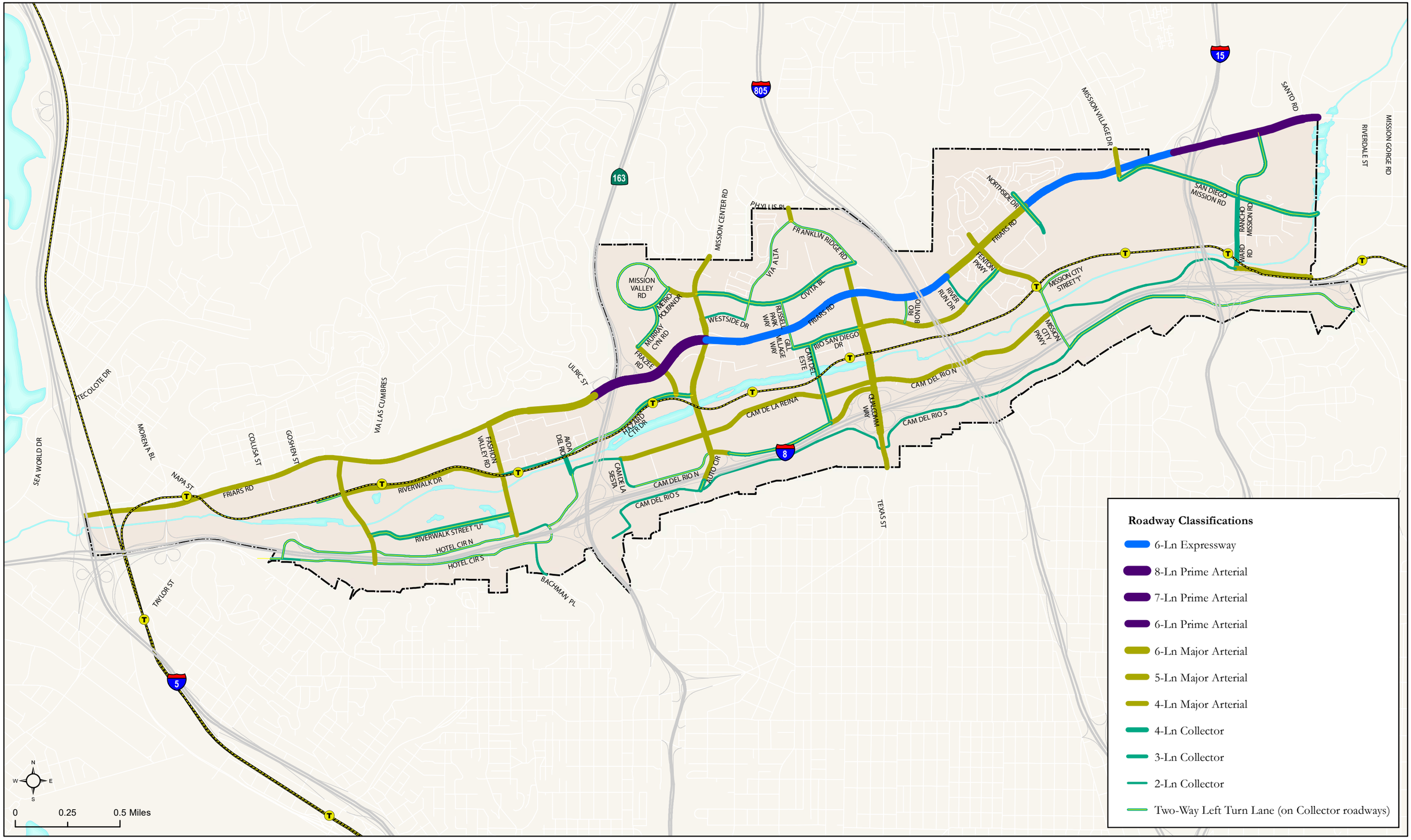
Figure 4-1 displays the roadway classification for the Adopted Community Plan scenario; while Figure 4-2 and Table 4.1 illustrate both forecasted ADT volumes and associated roadway LOS. Table 4.1 also identifies any potential traffic impacts associated with the Adopted Community Plan when comparing to the existing conditions.



Mission Valley Community Plan Update
Traffic Impact Study

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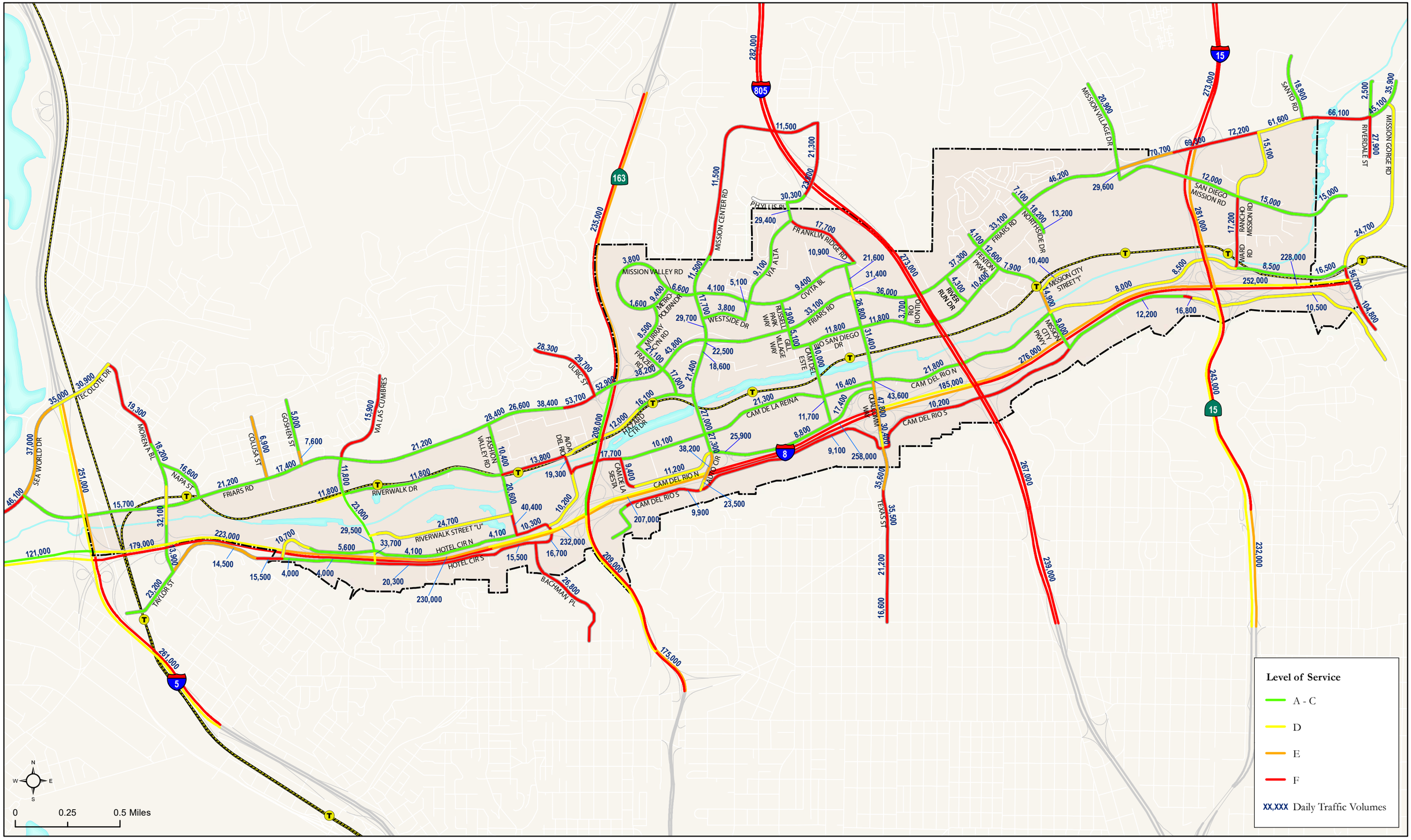
Figure 4-1
Roadway Classifications - Adopted Community Plan



Mission Valley Community Plan Update
Traffic Impact Study

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Figure 4-1
Roadway Classifications - Adopted Community Plan



Mission Valley Community Plan Update
Traffic Impact Study
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Figure 4-2
Daily Roadway Segment Traffic Volumes and Level of Service - Adopted Community Plan

Table 4.1 Roadway Segment Analysis – Adopted Community Plan

Roadway	Segment	Adopted Community Plan					Existing					
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Phyllis Place	Franklin Ridge Road to I-805 SB Ramps	5-Ln Major Arterial	45,000	30,300	0.673	C	2-Ln Collector w/o TWLTL	2,270	0.284	A	0.389	N
Sea World Drive	Mission Bay Parkway to Friars Road	4-Ln Major Arterial	40,000	46,100	1.153	**F**	4-Ln Major Arterial	34,200	0.855	D	0.298	**Y**
Sea World Drive	Friars Road to I-5 SB Ramps	4-Ln Major Arterial	40,000	37,000	0.925	**E**	4-Ln Major Arterial	29,490	0.737	C	0.188	**Y**
Tecolote Road	I-5 SB Ramps and I-5 NB Ramps	4-Ln Major Arterial	40,000	35,000	0.875	D	4-Ln Major Arterial	30,470	0.762	D	0.113	N
Tecolote Road	I-5 NB Ramps to Morena Boulevard	4-Ln Major Arterial	40,000	30,900	0.773	D	4-Ln Major Arterial	22,410	0.560	C	0.213	N
Mission Valley Road	Frazee Road to Metropolitan Drive (clockwise)	2-Ln Collector w/ TWLTL	15,000	3,800	0.253	A	2-Ln Collector w/ TWLTL	7,440	0.496	C	-0.243	N
Mission Valley Road	Metropolitan Drive to Mission Center Road (east of loop)	4-Ln Major Arterial	40,000	6,600	0.165	A	4-Ln Major Arterial	7,440	0.186	A	-0.021	N
Civita Boulevard	Mission Center Road to Via Alta	4-Ln Collector w/ TWLTL~~4-Ln Major Arterial~~	~~40,000~~30,000	4,100	0.137~~0~~.103	A	4-Ln Collector w/ TWLTL~~4-Ln Major Arterial~~	2,480	0.083~~0~~.062	A	0.054~~0~~.041	N
Civita Boulevard	Via Alta to Qualcomm Way	4-Ln Collector w/ TWLTL~~4-Ln Major Arterial~~	30,000~~4 0,000~~	9,400	0.313~~0~~.235	A	4-Ln Collector w/ TWLTL~~4-Ln Major Arterial~~	2,480	0.083~~0~~.062	A	0.230~~1~~0.173	N
Civita Boulevard	Qualcomm Way to Franklin Ridge Road	4-Ln Collector w/ TWLTL~~4-Ln Major Arterial~~	30,000~~4 0,000~~	10,900	0.363~~0~~.273	~~A~~B	4-Ln Collector w/ TWLTL~~4-Ln Major Arterial~~	2,480	0.083~~0~~.062	A	0.280~~1~~0.211	N
Westside Drive	Mission Center Road to Via Alta	2-Ln Collector w/o TWLTL	8,000	3,800	0.475	C	2-Ln Collector w/o TWLTL	4,070	0.508	C	-0.033	N
Friars Road	Sea World Drive to Napa Street	4-Ln Major Arterial	40,000	15,700	0.393	B	4-Ln Major Arterial	13,650	0.341	A	0.052	N
Friars Road	Napa Street to Colusa Street	4-Ln Major Arterial	40,000	21,200	0.530	C	4-Ln Major Arterial	19,170	0.479	B	0.051	N
Friars Road	Colusa Street to Via Las Cumbres	4-Ln Major Arterial	40,000	17,400	0.435	B	4-Ln Major Arterial	19,200	0.480	B	-0.045	N
Friars Road	Via Las Cumbres to Fashion Valley Road	4-Ln Major Arterial	40,000	21,200	0.530	C	4-Ln Major Arterial	22,270	0.557	C	-0.027	N

Table 4.1 Roadway Segment Analysis – Adopted Community Plan

		Adopted Community Plan					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Friars Road	Fashion Valley Road to Via De La Moda	5-Ln Major Arterial (3 EB, 2 WB)	45,000	28,400	0.631	C	5-Ln Major Arterial (3 EB, 2 WB)	26,100	0.580	C	0.051	N
Friars Road	Via De La Moda to Fashion Valley Driveway	5-Ln Major Arterial (3 EB, 2 WB)	45,000	26,600	0.591	C	5-Ln Major Arterial (3 EB, 2 WB)	25,920	0.576	C	0.015	N
Friars Road	Fashion Valley Driveway to Avenida De Las Tiendas	6-Ln Major Arterial	50,000	38,400	0.768	C	6-Ln Major Arterial	26,830	0.537	B	0.231	N
Friars Road	Avenida De Las Tiendas to Ulric Street/SR-163 SB Ramps	6-Ln Major Arterial	50,000	53,700	1.074	**F**	6-Ln Major Arterial	40,510	0.810	D	0.264	**Y**
Friars Road	Ulric Street/SR-163 SB Ramps to SR-163 NB Ramps	8-Ln Prime Arterial	80,000	52,900	0.661	C	6-Ln Prime Arterial	53,170	0.886	D	-0.225	N
Friars Road	SR-163 NB Ramps to Frazee Road	8-Ln Prime Arterial	80,000	38,200	0.478	B	6-Ln Prime Arterial	54,150	0.902	D	-0.425	N
Friars Road	Frazee Road to Mission Center Road	8-Ln Prime Arterial	80,000	43,800	0.548	B	7-Ln Expressway	42,780	0.458	B	0.090	N
Friars Road	Mission Center Road to Qualcomm Way	6-Ln Expressway	80,000	33,100	0.414	B	6-Ln Expressway	37,050	0.463	B	-0.049	N
Friars Road	Qualcomm Way to River Run Drive	6-Ln Expressway	80,000	36,000	0.450	B	6-Ln Expressway	33,250	0.416	B	0.034	N
Friars Road	River Run Drive to Fenton Parkway	6-Ln Major Arterial	50,000	37,300	0.746	C	6-Ln Prime Arterial	22,080	0.368	A	0.378	N
Friars Road	Fenton Parkway to Northside Drive	6-Ln Major Arterial	50,000	33,100	0.662	C	6-Ln Prime Arterial	28,430	0.474	B	0.188	N
Friars Road	Northside Drive to Mission Village Drive	6-Ln Expressway	80,000	46,200	0.578	C	6-Ln Expressway	45,330	0.567	C	0.011	N
Friars Road	Mission Village Drive to I-15 SB Ramps	6-Ln Expressway	80,000	70,700	0.884	**E**	6-Ln Expressway	57,740	0.722	C	0.162	**Y**
Friars Road	I-15 SB Ramps to I-15 NB Ramps	6-Ln Prime Arterial	60,000	69,300	1.155	**F**	6-Ln Prime Arterial	46,570	0.776	C	0.379	**Y**
Friars Road	I-15 NB Ramps to Rancho Mission Road	7-Ln Prime Arterial[1]	70,000	72,200	1.031	**F**	7-Ln Prime Arterial[1]	51,610	0.737	C	0.294	**Y**
Friars Road	Rancho Mission Road to Santo Road	7-Ln Prime Arterial[1]	70,000	61,600	0.880	D	7-Ln Prime Arterial[1]	39,430	0.563	B	0.317	N

Table 4.1 Roadway Segment Analysis – Adopted Community Plan

		Adopted Community Plan					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Friars Road	Santo Road to Riverdale Street	6-Ln Prime Arterial	60,000	66,100	1.102	**F**	6-Ln Prime Arterial	43,380	0.723	C	0.379	**Y**
Friars Road	Riverdale Street to Mission Gorge Road	6-Ln Prime Arterial	60,000	45,100	0.752	C	6-Ln Prime Arterial	31,300	0.522	B	0.230	N
Mission Gorge Road	Friars Road to Zion Avenue	6-Ln Prime Arterial	60,000	35,900	0.598	C	6-Ln Prime Arterial	40,690	0.678	C	-0.080	N
Hazard Center Drive	Avenida Del Rio to Hazard Center W. Driveway	2-Ln Collector w/ TWLTL	15,000	12,000	0.800	D	Does Not Exist				0.800	N
Hazard Center Drive	Hazard Center W. Driveway to Mission Center Road	4-Ln Collector w/ TWLTL	30,000	16,100	0.537	C	4-Ln Collector w/ TWLTL	8,710	0.290	A	0.247	N
Rio San Diego Drive	Gill Village Way to Qualcomm Way	4-Ln Collector w/ TWLTL	30,000	11,800	0.393	B	4-Ln Collector w/ TWLTL	10,500	0.350	B	0.043	N
Rio San Diego Drive	Qualcomm Way to River Run Drive	4-Ln Major Arterial	40,000	11,800	0.295	A	4-Ln Major Arterial	11,280	0.282	A	0.013	N
Rio San Diego Drive	River Run Drive to Fenton Parkway	4-Ln Collector w/ TWLTL	30,000	10,400	0.347	B	4-Ln Collector w/ RM	9,090	0.303	A	0.044	N
San Diego Mission Road	Friars Road EB Ramps to Rancho Mission Road	4-Ln Collector w/ TWLTL	30,000	12,000	0.400	B	4-Ln Collector w/o TWLTL	7,590	0.506	C	-0.106	N
San Diego Mission Road	Rancho Mission Road to 950' West of Fairmount Avenue	4-Ln Collector w/ TWLTL	30,000	15,000	0.500	C	2-Ln Collector w/ TWLTL	8,020	0.534	C	-0.034	N
San Diego Mission Road	950' West of Fairmount Avenue to Fairmount Avenue	4-Ln Collector w/ TWLTL	30,000	15,000	0.500	C	2-Ln Collector w/o TWLTL (NFP)	8,020	0.802	D	-0.302	N
Taylor Street	Pacific Highway to Morena Boulevard	5-Ln Major Arterial (3 EB, 2 WB)	45,000	23,200	0.516	B	5-Ln Major Arterial (3 EB, 2 WB)	19,060	0.423	B	0.093	N
Taylor Street	Morena Boulevard to I-8 EB Ramps	2-Ln Collector w/ TWLTL	15,000	14,500	0.967	**E**	2-Ln Collector w/o TWLTL (NFP)	17,750	1.775	**F**	-0.808	N
Taylor Street	I-8 EB Ramps to Hotel Circle South	2-Ln Collector w/ TWLTL	15,000	15,500	1.033	**F**	2-Ln Collector w/ TWLTL	14,410	0.961	**E**	0.072	**Y**
Hotel Circle North	Hotel Circle South to Fashion Valley Road	2-Ln Collector w/o TWLTL (NFP)	10,000	10,300	1.030	**F**	2-Ln Collector w/ TWLTL	12,460	0.831	D	0.199	**Y**
Hotel Circle North	Fashion Valley Road to I-8 WB Off-Ramp	2-Ln Collector w/ TWLTL	15,000	4,100	0.273	A	3-Ln Collector (2 EB, 1 WB)	15,510	1.410	**F**	-1.137	N

Table 4.1 Roadway Segment Analysis – Adopted Community Plan

		Adopted Community Plan					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Hotel Circle North	I-8 WB Off-Ramp to Via Las Cumbres	3-Ln Collector (2 EB, 1 WB)	11,000	4,100	0.373	B	2-Ln Collector w/ TWLTL	6,510	0.434	B	-0.061	N
Hotel Circle North	Via Las Cumbres to I-8 WB On-Ramp	2-Ln Collector w/ TWLTL	15,000	5,600	0.373	B	2-Ln Collector w/o TWLTL (NFP)	15,340	1.534	**F**	-1.161	N
Hotel Circle North	I-8 WB On-Ramp to Hotel Circle South	2-Ln Collector w/ TWLTL	15,000	10,700	0.713	D	2-Ln Collector w/o TWLTL (NFP)	15,340	1.534	**F**	-0.821	N
Camino De La Reina	Hotel Circle North to Avenida Del Rio	2-Ln Collector w/ TWLTL	15,000	10,200	0.680	D	2-Ln Collector w/ TWLTL	8,480	0.566	C	0.114	N
Camino De La Reina	Avenida Del Rio to Camino De La Siesta	2-Ln Collector w/o TWLTL (NFP)	10,000	17,700	1.770	**F**	2-Ln Collector w/o TWLTL (NFP)	13,360	1.336	**F**	0.434	**Y**
Camino De La Reina	Camino De La Siesta to Mission Center Road	4-Ln Major Arterial	40,000	10,100	0.253	A	4-Ln Major Arterial	10,730	0.268	A	-0.016	N
Camino De La Reina	Mission Center Road to Camino Del Este	4-Ln Major Arterial	40,000	21,300	0.533	C	4-Ln Major Arterial	18,530	0.463	B	0.070	N
Camino De La Reina	Camino Del Este to Qualcomm Way	4-Ln Major Arterial	40,000	16,400	0.410	B	4-Ln Major Arterial	13,770	0.344	A	0.066	N
Camino Del Rio North	Camino De La Siesta to Mission Center Road	2-Ln Collector w/ TWLTL	15,000	11,200	0.747	D	2-Ln Collector w/ TWLTL	5,430	0.362	B	0.385	N
Camino Del Rio North	Mission Center Road to I-8 WB Ramps	4-Ln Major Arterial	40,000	25,900	0.648	C	4-Ln Major Arterial	24,030	0.601	C	0.047	N
Camino Del Rio North	I-8 WB Ramps to Camino Del Este	3-Ln Collector w/ TWLTL (1 EB, 2 WB)	22,500	8,800	0.391	B	3-Ln Collector w/ RM (1 EB, 2 WB)	11,910	0.529	C	-0.138	N
Camino Del Rio North	Camino Del Este to Qualcomm Way	4-Ln Major Arterial	40,000	17,400	0.435	B	4-Ln Major Arterial	12,180	0.305	A	0.130	N
Camino Del Rio North	Qualcomm Way to Mission City Parkway	4-Ln Major Arterial	40,000	21,800	0.545	C	4-Ln Major Arterial	10,590	0.265	A	0.280	N
Camino Del Rio North	Mission City Parkway to 1800' West of Ward Rd	2-Ln Collector w/o TWLTL (NFP)	10,000	8,000	0.800	D	2-Ln Collector w/o TWLTL (NFP)	8,080	0.808	D	-0.008	N
Camino Del Rio North	1800' West of Ward Road to Ward Road	2-Ln Collector w/o TWLTL (NFP)	10,000	8,500	0.850	D	2-Ln Collector w/o TWLTL (NFP)	8,920	0.892	D	-0.042	N
Camino Del Rio North	Ward Road to 1000' West of Fairmount Avenue	4-Ln Major Arterial	40,000	8,500	0.213	A	4-Ln Major Arterial	11,830	0.296	A	-0.084	N

Table 4.1 Roadway Segment Analysis – Adopted Community Plan

		Adopted Community Plan					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Camino Del Rio North	1000' West of Fairmount Avenue to Fairmount Avenue	4-Ln Collector w/ TWLTL	30,000	16,500	0.550	C	4-Ln Collector w/ TWLTL	13,470	0.449	B	0.101	N
Hotel Circle South	Taylor Street to I-8 EB Off-Ramp	2-Ln Collector w/o TWLTL (NFP)	10,000	4,000	0.400	C	2-Ln Collector w/o TWLTL (NFP)	12,010	1.201	**F**	-0.801	N
Hotel Circle South	I-8 EB Off-Ramp to Via Las Cumbres	2-Ln Collector w/ TWLTL	15,000	4,000	0.267	A	2-Ln Collector w/ TWLTL	12,340	0.823	D	-0.556	N
Hotel Circle South	Via Las Cumbres to I-8 EB On-Ramp	2-Ln Collector w/ TWLTL	15,000	20,300	1.353	**F**	2-Ln Collector w/ TWLTL	12,340	0.823	D	0.530	**Y**
Hotel Circle South	I-8 EB On-Ramp to Bachman Place	2-Ln Collector w/ TWLTL	15,000	15,500	1.033	**F**	2-Ln Collector w/ TWLTL	17,200	1.146	**F**	-0.113	N
Hotel Circle South	Bachman Place to Hotel Circle North/Camino De La Reina	2-Ln Collector w/ TWLTL	15,000	16,700	1.113	**F**	2-Ln Collector w/ TWLTL	15,580	1.038	**F**	0.075	**Y**
Camino Del Rio South	Western Terminus to Mission Center Road	2-Ln Collector w/o TWLTL	8,000	9,900	1.238	**F**	2-Ln Collector w/ w/o TWLTL	7,330	0.916	**E**	0.322	**Y**
Camino Del Rio South	Mission Center Road to Texas Street	2-Ln Collector w/o TWLTL	8,000	9,100	1.138	**F**	2-Ln Collector w/ w/o TWLTL	7,410	0.927	**E**	0.211	**Y**
Camino Del Rio South	Texas Street to Mission City Parkway	2-Ln Collector w/o TWLTL	8,000	10,200	1.275	**F**	2-Ln Collector w/ w/o TWLTL	8,140	1.018	**F**	0.257	**Y**
Camino Del Rio South	Mission City Parkway to I-15 SB Off-Ramp	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	22,500	12,200	0.542	C	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	11,750	0.522	C	0.020	N
Camino Del Rio South	I-15 SB Off-Ramp to I-15 NB On-Ramp	2-Ln Collector w/ TWLTL	15,000	16,800	1.120	**F**	4-Ln Collector w/ TWLTL	9,580	0.319	A	0.801	**Y**
Camino Del Rio South	I-15 NB On-Ramp to Fairmount Avenue	2-Ln Collector w/ TWLTL	15,000	10,500	0.700	D	2-Ln Collector w/ TWLTL	6,370	0.424	B	0.276	N
Morena Boulevard	Tecolote Road to West Morena Boulevard	2-Ln Collector w/ TWLTL	15,000	19,300	1.287	**F**	2-Ln Collector w/ TWLTL	16,180	1.079	**F**	0.208	**Y**
Morena Boulevard	West Morena Boulevard to Linda Vista Road	4-Ln Major Arterial	40,000	18,200	0.455	B	4-Ln Major Arterial	17,740	0.443	B	0.012	N
Morena Boulevard	Linda Vista Road to I-8 WB Off-Ramp	4-Ln Major Arterial	40,000	32,100	0.803	D	4-Ln Major Arterial	41,930	1.048	**F**	-0.246	N
Morena Boulevard	I-8 WB Off-Ramp to Taylor Street	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	22,500	13,900	0.618	C	3-Ln Collector w/ RM (2 NB, 1 SB)	11,570	0.514	C	0.104	N

Table 4.1 Roadway Segment Analysis – Adopted Community Plan

Roadway	Segment	Adopted Community Plan					Existing					
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Napa Street	Morena Boulevard to Friars Road	4-Ln Major Arterial	40,000	16,600	0.415	B	4-Ln Major Arterial	13,430	0.336	A	0.079	N
Colusa Street	Linda Vista Road to Friars Road	2-Ln Collector w/o TWLTL	8,000	6,900	0.863	**E**	2-Ln Collector w/o TWLTL	2,720	0.339	B	0.524	**Y**
Via Las Cumbres	Linda Vista Road to Friars Road	3-Ln Collector w/o TWLTL (2 NB, 1 SB)	11,000	15,900	1.445	**F**	3-Ln Collector (2 NB, 1 SB)	10,920	0.993	**E**	0.452	**Y**
Via Las Cumbres	Friars Road to Riverwalk Drive	4-Ln Major Arterial	40,000	11,800	0.295	A	Does Not Exist				0.295	N
Via Las Cumbres	Riverwalk Drive to ~~Levi-Cushman Street "B"~~Riverwalk Street "U"	4-Ln Major Arterial	40,000	23,000	0.575	C	Does Not Exist				0.575	N
Via Las Cumbres	~~Levi-Cushman Street "B"~~Riverwalk Street "U" to Hotel Circle North	4-Ln Major Arterial	40,000	29,500	0.738	C	Does Not Exist				0.738	N
Via Las Cumbres	Hotel Circle North to Hotel Circle South	4-Ln Major Arterial	40,000	33,700	0.843	D	Does Not Exist				0.843	N
Fashion Valley Road	Friars Road to Riverwalk Drive	4-Ln Major Arterial	40,000	10,400	0.260	A	4-Ln Collector w/o TWLTL	9,980	0.665	C	-0.405	N
Fashion Valley Road	Riverwalk Drive to ~~Levi-Cushman Street "B"~~Riverwalk Street "U"	4-Ln Major Arterial	40,000	20,600	0.515	B	4-Ln Collector w/o TWLTL	9,980	0.665	C	-0.150	N
Fashion Valley Road	~~Levi-Cushman Street "B"~~Riverwalk Street "U" to Hotel Circle North	4-Ln Major Arterial	40,000	40,400	1.010	**F**	4-Ln Collector w/o TWLTL	9,980	0.665	C	0.345	**Y**
Bachman Place	Hotel Circle South to southern community boundary	2-Ln Collector w/o TWLTL (NFP)	10,000	26,800	2.680	**F**	2-Ln Collector w/o TWLTL (NFP)	9,140	0.914	**E**	1.766	**Y**
Avenida Del Rio	Fashion Valley Parking Lot to Camino De La Reina	4-Ln Collector w/o TWLTL	15,000	19,300	1.287	**F**	4-Ln Collector w/o TWLTL	8,740	0.583	C	0.704	**Y**
Ulric Street	Fashion Hills Boulevard to 600' South of Fashion Hills Blvd	2-Ln Collector w/ TWLTL	15,000	28,300	1.887	**F**	2-Ln Collector w/ TWLTL	20,380	1.359	**F**	0.528	**Y**
Ulric Street	600' South of Fashion Hills Boulevard to Friars Road	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	22,500	29,700	1.320	**F**	3-Ln Collector w/ SM (1 NB 2 SB)	20,430	0.908	**E**	0.412	**Y**

Table 4.1 Roadway Segment Analysis – Adopted Community Plan

		Adopted Community Plan					Existing					
Roadway	**Segment**	**Classification**	**Capacity**	**ADT**	**V/C**	**LOS**	**Functional Classification**	**ADT**	**V/C**	**LOS**	**Δ V/C**	**SI?**
Camino De La Siesta	Camino De La Reina to Camino Del Rio North	2-Ln Collector w/o TWLTL	8,000	9,400	1.175	**F**	2-Ln Collector w/ w/o TWLTL	5,150	0.643	D	0.532	**Y**
Metropolitan Drive	Mission Valley Road to Murray Canyon Road (clockwise)	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	22,500	9,400	0.418	B	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	3,840	0.171	A	0.247	N
Metropolitan Drive	Murray Canyon Road to Frazee Road (clockwise)	3-Ln Collector w/ TWLT (1 NB, 2 SB)	22,500	1,600	0.071	A	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	3,840	0.171	A	-0.100	N
Murray Canyon Road	Metropolitan Drive to Frazee Road	3-Ln Collector w/ TWLT (1 NB, 2 SB)	22,500	8,500	0.378	B	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	7,400	0.329	A	0.049	N
Frazee Road	Metropolitan Drive to Murray Canyon Road	Does Not Exist										
Frazee Road	Murray Canyon Road to Friars Road	4-Ln Major Arterial	40,000	21,100	0.528	C	4-Ln Major Arterial	14,670	0.367	A	0.161	N
Frazee Road	Friars Road to Hazard Center Drive	4-Ln Major Arterial	40,000	17,000	0.425	B	4-Ln Major Arterial	17,050	0.426	B	-0.001	N
Mission Center Road	Murray Ridge Road to 1200' West of Murray Ridge Road	2-Ln Collector w/o TWLTL	8,000	11,500	1.438	**F**	2-Ln Collector w/o TWLTL	10,970	1.097	**F**	0.341	**Y**
Mission Center Road	1200' W of Murray Ridge Rd to 950' N of Mission Valley Rd	3-Ln Collector w/o TWLTL (2 NB, 1 SB)	11,000	11,500	1.045	**F**	3-Ln Collector (2 NB, 1 SB)	10,720	0.975	**E**	0.070	**Y**
Mission Center Road	950' North of Mission Valley Road to Mission Valley Road	4-Ln Major Arterial	40,000	11,500	0.288	A	4-Ln Major Arterial	10,940	0.273	A	0.015	N
Mission Center Road	Mission Valley Road to Westside Drive	4-Ln Major Arterial	40,000	17,700	0.443	B	4-Ln Major Arterial	14,170	0.354	A	0.089	N
Mission Center Road	Westside Drive to Friars Road WB Ramps	5-Ln Major Arterial (3 NB, 2 SB)	45,000	29,700	0.660	C	5-Ln Major Arterial (3 NB, 2 SB)	26,020	0.578	C	0.082	N
Mission Center Road	Friars Road WB Ramps to Friars Road EB Ramps	4-Ln Major Arterial	40,000	22,500	0.563	C	4-Ln Major Arterial	22,830	0.571	C	-0.008	N
Mission Center Road	Friars Road EB Ramps to Mission Center Court	4-Ln Major Arterial	40,000	18,600	0.465	B	4-Ln Major Arterial	19,470	0.487	B	-0.022	N

Table 4.1 Roadway Segment Analysis – Adopted Community Plan

		Adopted Community Plan					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Mission Center Road	Mission Center Court to Hazard Center Drive	5-Ln Major Arterial (2 NB, 3 SB)	45,000	21,400	0.476	B	5-Ln Major Arterial (2 NB, 3 SB)	19,450	0.432	B	0.044	N
Mission Center Road	Hazard Center Drive to Camino De La Reina	5-Ln Major Arterial (2 NB, 3 SB)	45,000	27,000	0.600	C	5-Ln Major Arterial (2 NB, 3 SB)	27,060	0.601	C	-0.001	N
Mission Center Road	Camino De La Reina to Camino Del Rio North	5-Ln Major Arterial (3 NB, 2 SB)	45,000	27,300	0.607	C	5-Ln Major Arterial (3 NB, 2 SB)	23,280	0.517	B	0.090	N
Auto Circle	Camino Del Rio North to I-8 EB Ramps	4-Ln Major Arterial	40,000	38,200	0.955	**E**	4-Ln Major Arterial	34,100	0.852	D	0.103	**Y**
Auto Circle	I-8 EB Ramps to Camino Del Rio South	4-Ln Collector w/ TWLTL	30,000	23,500	0.783	D	4-Ln Collector w/ RM	20,980	0.699	D	0.084	N
Via Alta	Franklin Ridge Road to Civita Boulevard	2-Ln Collector w/ TWLTL	15,000	9,100	0.607	C	Does Not Exist				0.607	N
Via Alta	Civita Boulevard to Westside Drive	2-Ln Collector w/ TWLTL	15,000	5,100	0.340	B	2-Ln Collector w/ RM	1,340	0.089	A	0.251	N
Murray Ridge Road	Mission Center Road to I-805 NB Ramps	2-Ln Collector w/ TWLTL	15,000	21,300	1.420	**F**	2 Ln Collector w/ TWLTL	20,000	1.333	**F**	0.087	**Y**
Murray Ridge Road	I-805 NB Ramps to I-805 SB Ramps	2-Ln Collector w/ TWLTL	15,000	23,600	1.573	**F**	2-Ln Collector w/ TWLTL	11,700	0.780	D	0.793	**Y**
Russell Park Way	Civita Boulevard to Friars Road	2-Ln Collector w/ TWLTL	15,000	7,900	0.527	C	2-Ln Collector w/ RM	1,020	0.068	A	0.459	N
Camino Del Este	Rio San Diego Drive to Camino De La Reina	4-Ln Collector w/ TWLTL	30,000	10,000	0.333	A	4-Ln Collector w/ RM or TWLTL	8,450	0.282	A	0.051	N
Camino Del Este	Camino De La Reina to Camino Del Rio North	4-Ln Collector w/ TWLTL	30,000	11,700	0.390	B	4-Ln Collector w/ RM or TWLTL	9,880	0.329	A	0.061	N
Franklin Ridge Road	Phyllis Place to Via Alta	4-Ln Major Arterial	40,000	29,400	0.735	C	Does Not Exist				0.735	N
Franklin Ridge Road	Via Alta to Civita Boulevard	2-Ln Collector w/ TWLTL	15,000	17,700	1.180	**F**	Does Not Exist				1.180	**Y**
Qualcomm Way	Civita Boulevard to Friars Road WB Ramps	4-Ln Major Arterial	40,000	21,600	0.540	C	Does Not Exist				0.540	N
Qualcomm Way	Friars Road WB Ramps to Friars Road EB Ramps	4-Ln Major Arterial	40,000	31,400	0.785	D	2-Ln Collector w/ TWLTL	9,300	0.620	C	0.165	N
Qualcomm Way	Friars Road EB Ramps to Rio San Diego Drive	5-Ln Major Arterial (2 NB, 3 SB)	45,000	26,800	0.596	C	5-Ln Major Arterial (2 NB, 3 SB)	10,200	0.227	A	0.369	N
Qualcomm Way	Rio San Diego Drive to Camino Del Rio North	6-Ln M Major Arterial	50,000	31,400	0.628	C	6-Ln Major Arterial	24,330	0.487	B	0.141	N

Table 4.1 Roadway Segment Analysis – Adopted Community Plan

Roadway	Segment	Adopted Community Plan					Existing					
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Qualcomm Way	Camino Del Rio North to I-8 WB Ramps	5-Ln Major Arterial (3 NB, 2 SB)	45,000	43,600	0.969	**E**	5-Ln Major Arterial (3 NB, 2 SB)	23,560	0.524	B	0.445	**Y**
Qualcomm Way	I-8 WB Ramps to I-8 EB Ramps	6-Ln Major Arterial	50,000	47,800	0.956	**E**	6-Ln Major Arterial	36,410	0.728	C	0.228	**Y**
Qualcomm Way	I-8 EB Ramps to Camino Del Rio South	4-Ln Major Arterial	40,000	30,400	0.760	D	4-Ln Major Arterial	25,830	0.646	C	0.114	N
Texas Street	Camino Del Rio South to 1400' North of Madison Ave	4-Ln Major Arterial	40,000	35,600	0.890	**E**	4-Ln Major Arterial	29,050	0.726	C	0.164	**Y**
Texas Street	1400' North of Madison Ave to Madison Avenue	3-Ln Collector w/ TWLTL (1 NB, 2 SB)	22,500	35,500	1.578	**F**	3-Ln Collector w/ TWLTL (1 NB, 2 SB)	29,240	1.300	**F**	0.278	**Y**
Texas Street	Madison Avenue to Meade Ave	2-Ln Collector w/ TWLTL	15,000	21,200	1.413	**F**	2-Ln Collector w/ TWLTL	17,090	1.139	**F**	0.274	**Y**
Texas Street	Meade Ave to El Cajon Boulevard	3-Ln Collector w/o TWLTL (1 NB, 2 SB)	11,000	16,600	1.509	**F**	3-Ln Collector w/o TWLTL (1 NB, 2 SB)	14,310	1.300	**F**	0.209	**Y**
River Run Drive	Friars Road to Rio San Diego Drive	2-Ln Collector w/o TWLTL	8,000	4,300	0.538	C	2-Ln Collector w/o TWLTL	4,030	0.504	C	0.034	N
Fenton Parkway	Portofino Driveway to Friars Road	4-Ln Major Arterial	40,000	4,100	0.103	A	4-Ln Major Arterial	4,120	0.103	A	0.020	N
Fenton Parkway	Friars Road to Rio San Diego Drive	4-Ln Major Arterial	40,000	12,600	0.315	A	4-Ln Major Arterial	12,610	0.315	A	0.000	N
Fenton Parkway	Rio San Diego Drive to Del Rio Apartments Driveway	4-Ln Major Arterial	40,000	7,900	0.198	A	4-Ln Major Arterial	5,400	0.135	A	0.063	N
Fenton Parkway	Del Rio Apartments Driveway to ~~New Street "I"~~Mission City Street "I"	4-Ln Major Arterial	40,000	7,900	0.198	A	Does Not Exist				0.198	N
Fenton Parkway	~~New Street "I"~~Mission City Street "I" to Camino Del Rio North	2-Ln Collector w/ TWLTL	15,000	14,900	0.993	**E**	Does Not Exist				0.993	**Y**
Mission City Parkway	Camino Del Rio North to Camino Del Rio South	2-Ln Collector w/ TWLTL	15,000	9,000	0.600	C	2-Ln Collector w/ NFP	6,430	0.643	C	-0.043	N
Northside Drive	Portofino Driveway to Friars Road	4-Ln Collector w/ TWLTL	30,000	7,100	0.237	A	4-Ln Collector w/ RM	6,590	0.220	A	0.017	N

Table 4.1 Roadway Segment Analysis – Adopted Community Plan

Roadway	Segment	Adopted Community Plan					Existing					
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Northside Drive	Friars Road to Fenton Marketplace Driveway	4-Ln Collector w/ TWLTL	30,000	18,200	0.607	C	4-Ln Collector w/ RM	20,310	0.677	C	-0.070	N
Northside Drive	Fenton Marketplace Driveway to Lowe's Frontage Road	3-Ln Collector w/ RM (2 NB, 1 SB)	22,500	13,200	0.587	C	3-Ln Collector w/ RM (2 NB, 1 SB)	15,890	0.706	D	-0.119	N
Mission Village Drive	Ronda Avenue to Friars Road WB Ramps	4-Ln Major Arterial	40,000	20,900	0.523	B	4-Ln Major Arterial	17,220	0.431	B	0.092	N
Mission Village Drive	Friars Road WB Ramps to Friars Road EB Ramps	4-Ln Major Arterial	40,000	29,600	0.740	C	4-Ln Major Arterial	13,660	0.342	A	0.398	N
Rancho Mission Road	Friars Road to San Diego Mission Road	3-Ln Collector w/ TWLTL (1 NB, 2 SB)	22,500	15,100	0.671	D	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	12,820	0.570	C	0.101	N
Rancho Mission Road	San Diego Mission Road to Camino Del Rio North	4-Ln Collector w/o TWLTL	15,000	17,200	1.147	**F**	4-Ln Collector w/o TWLTL	9,580	0.639	C	0.508	**Y**
Santo Road	Northern Terminus to Friars Road	4-Ln Major Arterial	40,000	18,900	0.473	B	2-Ln Collector w/o TWLTL	6,360	0.796	D	-0.324	N
Riverdale Street	Zion Road to Friars Road	2-Ln Collector w/o TWLTL	8,000	2,500	0.313	A	2-Ln Collector w/ w/o TWLTL	2,770	0.346	B	-0.034	N
Riverdale Street	Friars Road to Vandever Avenue	2-Ln Collector w/o TWLTL	8,000	27,900	3.488	**F**	2-Ln Collector w/o TWLTL	8,900	1.113	**F**	2.375	**Y**
Mission Gorge Road	Friars Road to Camino Del Rio North	4-Ln Collector w/ TWLTL	30,000	24,700	0.823	D	4-Ln Collector w/ TWLTL	14,710	0.490	C	0.333	N
Fairmount Avenue	Camino Del Rio North/I-8 WB Off-Ramp to I-8 EB Off-Ramp	4-Ln Major Arterial	40,000	56,700	1.418	**F**	4-Ln Major Arterial	40,210	1.005	**F**	0.413	**Y**
Fairmount Avenue	I-8 EB Off-Ramp to Camino Del Rio South	6-Ln Expressway	80,000	104,800	1.310	**F**	6-Ln Expressway	82,880	1.036	**F**	0.274	**Y**
Riverwalk Drive	West of Via Las Cumbres	2-Ln Collector w/ TWLTL	15,000	11,800	0.787	D	Does Not Exist				0.787	N
Riverwalk Drive	Via Las Cumbres to Fashion Valley Road	4-Ln Major Arterial	40,000	11,800	0.295	A	Does Not Exist				0.295	N
Riverwalk Drive	Fashion Valley Road to Avenida Del Rio	2-Ln Collector w/o TWLTL	8,000	13,800	1.725	**F**	Does Not Exist				1.725	**Y**

Table 4.1 Roadway Segment Analysis – Adopted Community Plan

Roadway	Segment	Adopted Community Plan					Existing				Δ V/C	SI?
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS		
~~Levi Cushman Street "B"~~Riverwalk Street "U"	Via Las Cumbres to Fashion Valley Road	4-Ln Collector w/ TWLTL	30,000	24,700	0.823	D	Does Not Exist				0.823	N
Goshen St	Linda Vista Rd to Gaines St	2-Ln Collector w/o TWLTL	8,000	5,000	0.625	C	Not Analyzed				0.625	N
Goshen St	Gaines St to Friars Rd	2-Ln Collector w/o TWLTL	8,000	7,600	0.950	**E**	Not Analyzed				0.950	**Y**
~~New Street "I"~~Mission City Street "I"	Mission City Parkway to Eastern End	2-Ln Collector w/ TWLTL	15,000	10,400	0.727	D	Does Not Exist				0.340	N
Gill Village Way	Friars Rd to Rio San Diego Dr	2-Ln Collector w/ TWLTL	15,000	5,100	0.340	B	Not Analyzed				0.340	N
Rio Bonito Way	Friars Rd to Rio San Diego Dr	2-Ln Collector w/ TWLTL	15,000	3,700	0.247	A	Not Analyzed				0.247	N

Notes:
Bold letter indicates substandard LOS E or F.
RM = Raised Median.
SM = Striped Median.
TWLTL = Two-Way Left-Turn Lane. Turn pocket(s) may be considered in place of TWLTL~~.~~
NFP = No Fronting Property.
[1] Capacity for a 7-Ln Prime Arterial is calculated assuming that each additional lane above a 6-Ln Arterial adds 5,000 ADT for LOS A, 7,500 ADT for LOS B and 10,000 ADT for LOS C, D, and E.

As shown in Table 4.1, based on the criteria documented in Section 2.3, the Adopted Community Plan will result in a LOS of E or F along the following 46 roadway segments, and have a significant traffic impact to the following 44 roadway segments in **bold**, when comparing to the existing conditions (Adopted Plan-to-Ground):

- **Sea World Drive, Mission Bay Parkway to Friars Road (LOS F, Δ in V/C 0.298)**
- **Sea World Drive, Friars Road to I-5 SB Ramps (LOS E, Δ in V/C 0.188)**
- **Friars Road, Avenida De Las Tiendas to Ulric Street/SR-163 SB Ramps (LOS F, Δ in V/C 0.264)**
- **Friars Road, Mission Village Drive to I-15 SB Ramps (LOS E, Δ in V/C 0.162)**
- **Friars Road, I-15 SB Ramps to I-15 NB Ramps (LOS F, Δ in V/C 0.379)**
- **Friars Road, I-15 NB Ramps to Rancho Mission Road (LOS F, Δ in V/C 0.294)**
- **Friars Road, Santo Road to Riverdale Street (LOS F, Δ in V/C 0.379)**
- Taylor Street, Morena Boulevard to I-8 EB Ramps (LOS E, Δ in V/C -0.808) – not impacted
- **Taylor Street, I-8 EB Ramps to Hotel Circle South (LOS F, Δ in V/C 0.072)**
- **Hotel Circle North, Hotel Circle South to Fashion Valley Road (LOS F, Δ in V/C 0.199)**
- **Camino De La Reina, Avenida Del Rio to Camino De La Siesta (LOS F, Δ in V/C 0.434)**
- **Hotel Circle South, Via Las Cumbres to I-8 EB On-Ramp (LOS F, Δ in V/C 0.53)**
- Hotel Circle South, I-8 EB On-Ramp to Bachman Place (LOS F, Δ in V/C -0.113) – not impacted
- **Hotel Circle South, Bachman Place to Hotel Circle North/Camino De La Reina (LOS F, Δ in V/C 0.075)**
- **Camino Del Rio South, Western Terminus to Mission Center Road (LOS F, Δ in V/C 0.322)**
- **Camino Del Rio South, Mission Center Road to Texas Street (LOS F, Δ in V/C 0.211)**
- **Camino Del Rio South, Texas Street to Mission City Parkway (LOS F, Δ in V/C 0.257)**
- **Camino Del Rio South, I-15 SB Off-Ramp to I-15 NB On-Ramp (LOS F, Δ in V/C 0.801)**
- **Morena Boulevard, Tecolote Road to West Morena Boulevard (LOS F, Δ in V/C 0.208)**
- **Colusa Street, Linda Vista Road to Friars Road (LOS E, Δ in V/C 0.524)**
- **Via Las Cumbres, Linda Vista Road to Friars Road (LOS F, Δ in V/C 0.452)**
- **Fashion Valley Road, ~~Levi-Cushman Street "B"~~Riverwalk Street "U" to Hotel Circle North (LOS F, Δ in V/C 0.345)**
- **Bachman Place, Hotel Circle South to southern community boundary (LOS F, Δ in V/C 1.766)**
- **Avenida Del Rio, Fashion Valley Parking Lot to Camino De La Reina (LOS F, Δ in V/C 0.704)**
- **Ulric Street, Fashion Hills Boulevard to 600' South of Fashion Hills Blvd (LOS F, Δ in V/C 0.528)**
- **Ulric Street, 600' South of Fashion Hills Boulevard to Friars Road (LOS F, Δ in V/C 0.412)**
- **Camino De La Siesta, Camino De La Reina to Camino Del Rio North (LOS F, Δ in V/C 0.532)**
- **Mission Center Road, Murray Ridge Road to 1200' West of Murray Ridge Road (LOS F, Δ in V/C 0.341)**
- **Mission Center Road, 1200' W of Murray Ridge Rd to 950' N of Mission Valley Rd (LOS F, Δ in V/C 0.070)**
- **Auto Circle, Camino Del Rio North to I-8 EB Ramps (LOS E, Δ in V/C 0.103)**
- **Murray Ridge Road, Mission Center Road to I-805 NB Ramps (LOS F, Δ in V/C 0.087)**
- **Murray Ridge Road, I-805 NB Ramps to I-805 SB Ramps (LOS F, Δ in V/C 0.793)**
- **Franklin Ridge Road, Via Alta to Civita Boulevard (LOS F, Δ in V/C 1.180)**
- **Qualcomm Way, Camino Del Rio North to I-8 WB Ramps (LOS E, Δ in V/C 0.445)**
- **Qualcomm Way, I-8 WB Ramps to I-8 EB Ramps (LOS E, Δ in V/C 0.228)**
- **Texas Street, Camino Del Rio South to 1400' North of Madison Ave (LOS E, Δ in V/C 0.164)**
- **Texas Street, 1400' North of Madison Ave to Madison Avenue (LOS F, Δ in V/C 0.278)**
- **Texas Street, Madison Avenue to Meade Ave (LOS F, Δ in V/C 0.274)**
- **Texas Street, Meade Ave to El Cajon Boulevard (LOS F, Δ in V/C 0.209)**
- **Fenton Parkway, ~~New Street "I"~~Mission City Street "I" to Camino Del Rio North (LOS E, Δ in V/C 0.993)**

- Rancho Mission Road, San Diego Mission Road to Camino Del Rio North (LOS F, Δ in V/C 0.508)
- Riverdale Street, Friars Road to Vandever Avenue (LOS F, Δ in V/C 2.375)
- Fairmount Avenue, Camino Del Rio North/I-8 WB Off-Ramp to I-8 EB Off-Ramp (LOS F, Δ in V/C 0.413)
- Fairmount Avenue, I-8 EB Off-Ramp to Camino Del Rio South (LOS F, Δ in V/C 0.274)
- Riverwalk Drive, Fashion Valley Road to Avenida Del Rio (LOS F, Δ in V/C 1.725)
- Goshen St, Gaines St to Friars Rd (LOS E, Δ in V/C 0.950)

4.2 Freeway Segment Analysis

Freeway improvements within the Mission Valley study area under the Adopted Community Plan scenario are assumed to be the same as those identified in Chapter 4, derived from the Revenue Constrained scenario of SANDAG's *San Diego Forward: The Regional Plan* (2015), the currently adopted regional transportation plan, and are anticipated to be implemented by 2050.

Tables 4.2a and 4.2b present the AM and PM peak hour freeway segment analysis results, respectively, as well as any potential traffic impacts associated with the Adopted Community Plan when comparing to the existing conditions. HCS freeway segment analysis worksheets are provided in Appendix E.

Table 4.2a Freeway Segment Level of Service Results – Adopted Community Plan AM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
I-8	Sunset Cliffs to Sports Arena Boulevard	EB	2M	44.4%	7.8%	1.0%	80,000	2,851	68.9	21.9	C	70.0	A	-1.1	N
		WB	2M	55.6%	7.2%	1.0%		3,121	67.6	24.4	C	70.0	A	-2.4	N
	Sports Arena Boulevard to I-5 Interchange	EB	3M+1A	44.2%	7.7%	1.2%	121,000	4,381	68.6	22.5	C	70.0	B	-1.4	N
		WB	3M+1A	55.8%	7.1%	1.2%		4,641	67.8	24.1	C	69.6	C	-1.8	N
	I-5 Interchange to Morena Boulevard	EB	3M	31.7%	7.8%	2.8%	179,000	6,177	58.4	37.7	**E**	70.0	B	-11.6	**Y**
		WB	4M	68.3%	6.8%	2.8%		7,155	64.1	29.8	D	69.6	C	-5.5	N
	Morena Boulevard to Taylor Street	EB	4M+1A	31.7%	7.8%	2.8%	223,000	7,685	61.6	33.3	D	70.0	B	-8.4	N
		WB	5M	68.3%	6.8%	2.8%		8,903	64.3	29.6	D	68.2	C	-3.9	N
	Taylor Street to Hotel Circle	EB	4M	31.7%	7.8%	2.8%	230,000	7,913	60.3	35.1	**E**	70.0	B	-9.7	**Y**
		WB	4M+1A	68.3%	6.8%	2.8%		9,167	51.9	47.2	**F**	61.3	D	-9.4	**Y**
	Hotel Circle to SR-163 Interchange	EB	4M+2A	31.7%	7.8%	2.8%	232,000	7,993	63.7	26.8	D	65.0	B	-1.3	N
		WB	5M	68.3%	6.8%	2.8%		9,260	60.2	32.8	D	63.4	D	-3.2	N
	SR-163 Interchange to Mission Center Road	EB	4M	31.7%	7.8%	3.2%	207,000	7,124	64.3	29.6	D	70.0	B	-5.7	N
		WB	3M+2A	68.3%	6.8%	3.2%		8,253	55.8	39.5	**E**	55.0	**E**	0.8	N
	Mission Center Road to Qualcomm Way / Texas Street	EB	4M+1A	31.7%	7.8%	3.2%	258,000	8,882	51.6	46.0	**F**	65.0	C	-13.4	**Y**
		WB	4M+1A	68.3%	6.8%	3.2%		10,290	39.2	70.1	**F**	50.9	**F**	-11.7	**Y**
	Qualcomm Way / Texas Street to I-805 Interchange	EB	4M+1A	43.0%	7.8%	3.2%	185,000	6,355	63.7	26.6	D	62.4	D	1.3	N
		WB	4M+1A	57.0%	6.8%	3.2%		7,362	60.5	32.5	**D**	57.6	**E**	2.9	N
	I-805 Interchange to I-15 Interchange	EB	4M+2A	31.7%	7.8%	3.0%	276,000	9,514	62.0	32.8	D	70.0	B	-8.0	N
		WB	4M+2A	68.3%	6.8%	3.0%		11,022	54.5	43.2	**E**	61.5	D	-7.0	**Y**
	I-15 Interchange to Fairmount Ave	EB	4M	32.0%	7.7%	3.5%	252,000	8,187	58.4	37.6	**E**	69.9	C	-11.5	**Y**
		WB	4M+2A	68.0%	7.4%	3.5%		10,412	57.5	38.9	**E**	64.3	D	-6.8	**Y**
I-5	Sea World Drive / Tecolote Road to I-8 Interchange	NB	5M+1A	54.0%	7.6%	3.4%	251,000	10,843	55.5	41.7	**E**	64.4	D	-8.9	**Y**
		SB	4M+2A	46.0%	7.1%	3.4%		8,082	66.8	25.9	C	52.5	**F**	14.3	N
	I-8 Interchange to Old Town Avenue	NB	4M+1A	54.0%	7.6%	4.1%	261,000	11,291	31.1	97.4	**F**	54.6	**E**	-23.5	**Y**
		SB	5M	46.0%	7.1%	4.1%		8,416	65.7	27.5	**D**	52.8	**F**	12.9	N
SR-163	Genesee Avenue to Friars Road	NB	5M	57.0%	8.8%	3.7%	235,000	12,078	47.5	54.7	**F**	63.1	D	-15.6	**Y**
		SB	4M	43.0%	8.4%	3.7%		8,089	59.1	36.8	**E**	67.6	C	-8.5	**Y**

Table 4.2a Freeway Segment Level of Service Results – Adopted Community Plan AM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
SR-163	Friars Road to I-8 Interchange	NB	3M	45.1%	7.9%	3.7%	208,000	8,198	35.1	83.5	**F**	65.3	D	-30.2	**Y**
		SB	4M+2A	54.9%	7.8%	3.7%		8,498	65.5	27.9	D	69.8	C	-4.3	N
	I-8 Interchange to 6th Avenue	NB	3M+1A	45.1%	7.9%	3.0%	209,000	8,215	35.4	82.6	**F**	63.7	D	-28.3	**Y**
		SB	3M+2A	54.9%	7.8%	3.0%		8,517	56.6	40.2	**E**	66.3	D	-9.7	**Y**
	6th Avenue to Washington Street	NB	3M	45.1%	7.9%	3.0%	175,000	6,907	51.6	47.7	**F**	68.5	C	-16.9	**Y**
		SB	2M+1A	54.9%	7.8%	3.0%		7,160	0.0*	999.9*	**F**	39.1	**F**	-39.1	**Y**
I-805	Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place	NB	5M	69.9%	7.6%	6.5%	282,000	15,777	11.9	288.9	**F**	53.2	**F**	-41.3	**Y**
		SB	5M	30.1%	8.1%	6.5%		6,781	69.1	21.4	C	70.0	B	-0.9	N
	Murray Ridge Road / Phyllis Place to I-8 Interchange	NB	5M	74.6%	5.9%	6.5%	273,000	12,298	44.6	60.1	**F**	63.1	D	-18.5	**Y**
		SB	4M+2A	25.4%	8.4%	6.5%		5,583	70.0	17.4	B	70.0	B	0.0	N
	I-8 Interchange to Adams Avenue	NB	4M+1A	74.6%	5.9%	6.5%	267,000	12,021	20.1	162.9	**F**	50.0	**F**	-29.9	**Y**
		SB	6M	25.4%	8.4%	6.5%		5,457	70.0	14.2	B	70.0	A	0.0	N
	Adams Avenue to El Cajon Boulevard	NB	4M	74.6%	5.9%	6.5%	239,000	10,746	35.4	82.7	**F**	56.8	**E**	-21.4	**Y**
		SB	5M+1A	25.4%	8.4%	6.5%		4,879	70.0	15.2	B	70.0	B	0.0	N
I-15	Aero Drive to Friars Road	NB	4M+1A+2ML	60.5%	7.7%	5.0%	273,000	13,100	6.8	519.1	**F**	42.3	**F**	-35.5	**Y**
		SB	5M+1A+2ML	39.5%	7.5%	5.0%		8,560	65.1	28.4	D	69.4	C	-4.3	N
	Friars Road to I-8	NB	4M+2A+2ML	51.5%	8.2%	2.2%	281,000	10,819	56.0	41.1	**E**	64.5	D	-8.5	**Y**
		SB	3M+3A+2ML	48.5%	8.2%	2.2%		11,474	49.7	49.1	**F**	63.0	D	-13.3	**Y**
	I-8 to Adams Avenue	NB	3M+2A	51.5%	8.2%	2.2%	243,000	9,343	50.9	48.8	**F**	63.0	D	-12.1	**Y**
		SB	5M	48.5%	8.2%	2.2%		9,909	60.5	34.9	D	69.0	C	-8.5	N
	Adams Avenue to El Cajon Boulevard	NB	4M+1A	51.5%	8.2%	2.2%	232,000	8,907	54.2	43.7	**E**	64.2	D	-10.0	**Y**
		SB	5M+1A	48.5%	8.2%	2.2%		9,447	62.4	32.2	D	69.3	C	-6.9	N

Notes:
Bold letter indicates LOS E or F.
[1] M = Mainline; A = Auxiliary Lane.
[2] D = Directional Split.
[3] K = Peak Hour %.
[4] HVF = Heavy Vehicle Factor.
* Freeway volumes exceed HCS analysis capacity.

Table 4.2b Freeway Segment Level of Service Results – Adopted Community Plan PM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
I-8	Sunset Cliffs to Sports Arena Boulevard	EB	2M	55.6%	7.8%	1.0%	80,000	3,566	64.5	29.2	D	70.0	A	-5.5	N
		WB	2M	44.4%	7.2%	1.0%		2,495	69.8	18.9	C	70.0	A	-0.2	N
	Sports Arena Boulevard to I-5 Interchange	EB	3M+1A	54.8%	7.7%	1.2%	121,000	5,303	64.8	28.9	D	68.3	C	-3.5	N
		WB	3M+1A	45.2%	7.1%	1.2%		3,834	69.7	19.4	C	70.0	B	-0.3	N
	I-5 Interchange to Morena Boulevard	EB	3M	57.0%	7.8%	2.8%	179,000	8,178	36.0	81.0	**F**	60.0	**E**	-24.0	**Y**
		WB	4M	43.0%	6.8%	2.8%		5,405	69.3	20.8	C	70.0	B	-0.7	N
	Morena Boulevard to Taylor Street	EB	4M+1A	57.0%	7.8%	2.8%	223,000	10,175	43.3	62.8	**F**	56.5	**F**	-13.2	**Y**
		WB	5M	43.0%	6.8%	2.8%		6,725	69.3	20.7	C	70.0	B	-0.7	N
	Taylor Street to Hotel Circle	EB	4M	57.0%	7.8%	2.8%	230,000	10,477	40.4	69.3	**F**	54.3	**E**	-13.9	**Y**
		WB	4M+1A	43.0%	6.8%	2.8%		6,924	65.1	28.4	D	68.5	C	-3.4	N
	Hotel Circle to SR-163 Interchange	EB	4M+2A	57.0%	7.8%	2.8%	232,000	10,583	54.5	41.5	**E**	60.1	D	-5.6	**Y**
		WB	5M	43.0%	6.8%	2.8%		6,994	64.9	23.0	C	65.0	C	-0.1	N
	SR-163 Interchange to Mission Center Road	EB	4M	57.0%	7.8%	3.2%	207,000	9,432	49.8	50.6	**F**	48.6	**F**	1.2	N
		WB	3M+2A	43.0%	6.8%	3.2%		6,234	64.0	26.0	D	63.8	D	0.2	N
	Mission Center Road to Qualcomm Way / Texas Street	EB	4M+1A	57.0%	7.8%	3.2%	258,000	11,759	22.0	142.6	**F**	39.5	**F**	-17.5	**Y**
		WB	4M+1A	43.0%	6.8%	3.2%		7,772	58.5	35.5	**E**	62.2	D	-3.7	**Y**
	Qualcomm Way / Texas Street to I-805 Interchange	EB	4M+1A	57.0%	7.8%	3.2%	185,000	8,414	54.8	41.0	**E**	50.1	**F**	4.7	N
		WB	4M+1A	43.0%	6.8%	3.2%		5,561	64.9	22.9	C	64.4	C	0.5	N
	I-805 Interchange to I-15 Interchange	EB	4M+2A	57.0%	7.8%	3.0%	276,000	12,596	44.2	60.9	**F**	54.7	**E**	-10.5	**Y**
		WB	4M+2A	43.0%	6.8%	3.0%		8,325	66.1	26.9	D	68.6	C	-2.5	N
	I-15 Interchange to Fairmount Ave	EB	4M	59.2%	7.7%	3.5%	252,000	11,899	23.9	133.8	**F**	43.5	**F**	-19.6	**Y**
		WB	4M+2A	40.8%	7.4%	3.5%		7,164	68.7	22.4	C	69.9	C	-1.2	N
I-5	Sea World Drive / Tecolote Road to I-8 Interchange	NB	5M+1A	40.5%	7.6%	3.4%	251,000	9,237	63.1	31.3	D	69.9	C	-6.8	N
		SB	4M+2A	59.5%	7.1%	3.4%		9,488	62.1	32.7	D	67.7	C	-5.6	N
	I-8 Interchange to Old Town Avenue	NB	4M+1A	40.5%	7.6%	4.1%	261,000	9,618	47.8	54.0	**F**	68.1	C	-20.3	**Y**
		SB	5M	59.5%	7.1%	4.1%		9,880	60.1	35.3	**E**	67.7	C	-7.6	**Y**
SR-163	Genesee Avenue to Friars Road	NB	5M	48.4%	8.8%	3.7%	235,000	9,100	63.4	30.8	D	65.1	D	-1.7	N
		SB	4M	51.6%	8.4%	3.7%		10,736	37.2	77.5	**F**	58.6	**E**	-21.4	**Y**

Table 4.2b Freeway Segment Level of Service Results – Adopted Community Plan PM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
SR-163	Friars Road to I-8 Interchange	NB	3M	50.9%	7.9%	3.7%	208,000	8,498	30.7	99.1	**F**	57.6	**E**	-26.9	**Y**
		SB	4M+2A	49.1%	7.8%	3.7%		8,198	66.4	26.5	D	69.9	C	-3.5	N
	I-8 Interchange to 6th Avenue	NB	3M+1A	50.9%	7.9%	3.0%	209,000	8,517	31.0	97.8	**F**	54.6	**E**	-23.6	**Y**
		SB	3M+2A	49.1%	7.8%	3.0%		8,215	58.5	37.5	**E**	67.1	C	-8.6	**Y**
	6th Avenue to Washington Street	NB	3M	50.9%	7.9%	3.0%	175,000	7,160	48.9	52.2	**F**	64.5	D	-15.6	**Y**
		SB	2M+1A	49.1%	7.8%	3.0%		6,907	0.0	999.9	**F**	42.7	**F**	-42.7	**Y**
I-805	Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place	NB	5M	35.5%	7.6%	6.5%	282,000	6,781	69.1	21.4	C	69.8	C	-0.7	N
		SB	5M	64.5%	8.1%	6.5%		15,777	11.9	288.9	**F**	53.2	**F**	-41.3	**Y**
	Murray Ridge Road / Phyllis Place to I-8 Interchange	NB	5M	37.3%	5.9%	6.5%	273,000	4,187	70.0	13.0	B	70.0	B	0.0	N
		SB	4M+2A	62.7%	8.4%	6.5%		16,397	4.7	763.6	**F**	46.3	**F**	-41.6	**Y**
	I-8 Interchange to Adams Avenue	NB	4M+1A	25.4%	5.9%	6.5%	267,000	4,093	40.0	15.9	B	70.0	B	-30.0	N
		SB	6M	74.6%	8.4%	6.5%		16,028	36.1	80.7	**F**	57.6	**E**	-21.5	**Y**
	Adams Avenue to El Cajon Boulevard	NB	4M	37.3%	5.9%	6.5%	239,000	3,659	70.0	14.2	B	69.7	C	0.3	N
		SB	5M+1A	62.7%	8.4%	6.5%		14,328	27.1	115.0	**F**	52.8	**F**	-25.7	**Y**
I-15	Aero Drive to Friars Road	NB	4M+1A+2ML	39.2%	7.7%	5.0%	273,000	8,560	55.7	41.4	**E**	66.2	D	-10.5	**Y**
		SB	5M+1A+2ML	60.8%	7.5%	5.0%		13,499	36.0	81.0	**F**	58.5	**E**	-22.5	**Y**
	Friars Road to I-8	NB	4M+2A+2ML	51.5%	8.2%	2.2%	281,000	11,135	54.2	43.7	**E**	66.1	D	-11.9	**Y**
		SB	3M+3A+2ML	48.5%	8.2%	2.2%		10,819	53.5	43.0	**E**	63.9	D	-10.4	**Y**
	I-8 to Adams Avenue	NB	3M+2A	51.5%	8.2%	2.2%	243,000	9,909	46.1	57.1	**F**	64.9	D	-18.8	**Y**
		SB	5M	48.5%	8.2%	2.2%		9,343	62.8	31.6	D	69.5	C	-6.7	N
	Adams Avenue to El Cajon Boulevard	NB	4M+1A	51.5%	8.2%	2.2%	232,000	9,447	50.1	50.2	**F**	65.8	D	-15.7	**Y**
		SB	5M+1A	48.5%	8.2%	2.2%		8,907	64.4	29.4	D	69.7	C	-5.3	N

Notes:
Bold letter indicates LOS E or F.
[1] M = Mainline; A = Auxiliary Lane.
[2] D = Directional Split.
[3] K = Peak Hour %.
[4] Heavy Vehicle Factor.
* Freeway volumes exceed HCS analysis capacity.

As shown in the tables, the following 38 directional mainline freeway segments are projected to operate at LOS E or F. Based on the significant impact criteria outlined in Chapter 2, implementation of the Adopted Community Plan would result in a significant impact on 35 of those directional segments, as is depicted in **bold**:

- **I-8 EB, I-5 Interchange to Morena Boulevard (AM - LOS E, Δ Speed -11.6; PM - LOS F, Δ Speed -24.0)**
- **I-8 EB, Morena Boulevard to Taylor Street (PM - LOS F, Δ Speed -13.2)**
- **I-8 EB, Taylor Street to Hotel Circle (AM - LOS E, Δ Speed -9.7; PM - LOS F, Δ Speed -13.9)**
- **I-8 WB, Taylor Street to Hotel Circle (AM - LOS F, Δ Speed -9.4)**
- **I-8 EB, Hotel Circle to SR-163 Interchange (PM - LOS E, Δ Speed -5.6)**
- I-8 EB, SR-163 Interchange to Mission Center Road (PM - LOS F, Δ Speed 1.2) – not impacted
- I-8 WB, SR-163 Interchange to Mission Center Road (AM - LOS E, Δ Speed 0.8) – not impacted
- **I-8 EB, Mission Center Road to Qualcomm Way / Texas Street (AM - LOS F, Δ Speed -13.4; PM - LOS F, Δ Speed -17.5)**
- **I-8 WB, Mission Center Road to Qualcomm Way / Texas Street (AM - LOS F, Δ Speed -11.7; PM - LOS E, Δ Speed -3.7)**
- I-8 EB, Qualcomm Way / Texas Street to I-805 Interchange (PM - LOS E, Δ Speed 4.7) – not impacted
- **I-8 EB, I-805 Interchange to I-15 Interchange (PM - LOS F, Δ Speed -10.5)**
- **I-8 WB, I-805 Interchange to I-15 Interchange (AM - LOS E, Δ Speed -7.0)**
- **I-8 EB, I-15 Interchange to Fairmount Ave (AM - LOS E, Δ Speed -11.5; PM - LOS F, Δ Speed -19.6)**
- **I-8 WB, I-15 Interchange to Fairmount Ave (AM - LOS E, Δ Speed -6.8)**
- **I-5 NB, SeaWorld Drive / Tecolote Road to I-8 Interchange (AM - LOS E, Δ Speed -8.9)**
- **I-5 NB, I-8 Interchange to Old Town Avenue (AM - LOS F, Δ Speed -23.5; PM - LOS F, Δ Speed -20.3)**
- **I-5 SB, I-8 Interchange to Old Town Avenue (PM - LOS E, Δ Speed -7.6)**
- **SR-163 NB, Genesee Avenue to Friars Road (AM - LOS F, Δ Speed -15.6)**
- **SR-163 SB, Genesee Avenue to Friars Road (AM - LOS E, Δ Speed -8.5; PM - LOS F, Δ Speed -21.4)**
- **SR-163 NB, Friars Road to I-8 Interchange (AM - LOS F, Δ Speed -30.2; PM - LOS F, Δ Speed -26.9)**
- **SR-163 NB, I-8 Interchange to 6th Avenue (AM - LOS F, Δ Speed -28.3; PM - LOS F, Δ Speed -23.6)**
- **SR-163 SB, I-8 Interchange to 6th Avenue (AM - LOS E, Δ Speed -9.7; PM - LOS E, Δ Speed -8.6)**
- **SR-163 NB, 6th Avenue to Washington Street (AM - LOS F, Δ Speed -16.9; PM - LOS F, Δ Speed -15.6)**
- **SR-163 SB, 6th Avenue to Washington Street (AM - LOS F, Δ Speed -39.1; PM - LOS F, Δ Speed -42.7)**
- **I-805 NB, Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place (AM - LOS F, Δ Speed -41.3)**
- **I-805 SB, Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place (PM - LOS F, Δ Speed -41.3)**
- **I-805 NB, Murray Ridge Road / Phyllis Place to I-8 Interchange (AM - LOS F, Δ Speed -18.5)**
- **I-805 SB, Murray Ridge Road / Phyllis Place to I-8 Interchange (PM - LOS F, Δ Speed -41.6)**
- **I-805 NB, I-8 Interchange to Adams Avenue (AM - LOS F, Δ Speed -29.9)**
- **I-805 SB, I-8 Interchange to Adams Avenue (PM - LOS F, Δ Speed -21.5)**
- **I-805 NB, Adams Avenue to El Cajon Boulevard (AM - LOS F, Δ Speed -21.4)**
- **I-805 SB, Adams Avenue to El Cajon Boulevard (PM - LOS F, Δ Speed -25.7)**
- **I-15 NB, Aero Drive to Friars Road (AM - LOS F, Δ Speed -35.5; PM - LOS E, Δ Speed -10.5)**
- **I-15 SB, Aero Drive to Friars Road (PM - LOS F, Δ Speed -22.5)**
- **I-15 NB, Friars Road to I-8 (AM - LOS E, Δ Speed -8.5; PM - LOS E, Δ Speed -11.9)**

- I-15 SB, Friars Road to I-8 (AM - LOS F, Δ Speed -13.3; PM - LOS E, Δ Speed -10.4)
- I-15 NB, I-8 to Adams Avenue (AM - LOS F, Δ Speed -12.1; PM - LOS F, Δ Speed -18.8)
- I-15 NB, Adams Avenue to El Cajon Boulevard (AM - LOS E, Δ Speed -10.0; PM - LOS F, Δ Speed -15.7)

5.0 Four-Lane Via Las Cumbres Alternative

This chapter discusses the traffic operations under the Four-Lane Via Las Cumbres Alternative conditions and assesses potential traffic impacts by comparing this alternative to existing conditions. Roadway segments, intersections, freeway segments, and ramp meters were evaluated to determining associated traffic impacts. Mitigation measures for significant traffic impacts are identified, as necessary.

The Four-Lane Via Las Cumbres Alternative forecast traffic volumes were developed from the calibrated SANDAG Series 13 Regional Model – Mission Valley Community Plan Update Subarea Model (the "Model"). This customized Model assumed buildout of the CPU land uses and Four-Lane Via Las Cumbres Alternative mobility network for Mission Valley and Horizon Year 2050 land uses and transportation improvements for the rest of the San Diego region. Detailed modeling information and documentation can be found in Chapter 4 of the *Mobility Technical Report*. Final Forecast Model Results for Year 2050, including manual adjustments, are provided in Appendix F.

5.1 Roadway Segment Analysis

A list of Four-Lane Via Las Cumbres Alternative proposed roadway improvements, new roadways, intersection improvements, new intersections, and freeway improvements are presented throughout this chapter. These improvements are predominantly based on the future year traffic volumes that are projected under buildout of the CPU land uses and to accommodate the multimodal improvements.

Roadway Modifications

- *Fashion Valley Road, from Friars Road to Hotel Circle North* – Widen the roadway to the west as redevelopment occurs from a 4-Lane Collector without Two-Way Left-Turn Lane to a 4-Lane Major Arterial. The roadway widening would also be used to accommodate a Class IV Cycle Track (two-way) along the west side of the roadway.
- *Bachman Place, from Hotel Circle South to the Southern Community Boundary* – Widen this roadway to improve from a 2-Lane Collector to a 4-Lane Collector with Two-Way Left-Turn Lane. Left-turn pockets may be provided at intersection and driveway locations in lieu of a continuous two-way left-turn lane. The widening would also provide for Class II Bike Lanes.
- *Hotel Circle North and Hotel Circle South* – The full length of these two roadways will be transformed from 2-Lane Collector (with two-way left-turn lane) roadways into a one-way couplet with two lanes, running in a counterclockwise direction. The roadways would be classified as 2-Lane Collector (One-Way). The planned Class IV Cycle Track (two-way) would be accommodated through restriping within the existing roadway width along the land use side of each roadway.
- *Friars Road, from Ulric Street/SR-163 SB Ramps to Mission Center Road* – Consistent with the SR-163 Interchange Project, improve this section from a 5-/6-Lane Major Arterial to an 8-Lane Prime Arterial, which would require limiting future driveway access. The existing Class II Bike Lanes would be maintained from Ulric Street/SR-163 SB Ramps to Frazee Road. The planned Class IV Cycle Tracks (one-way) would be accommodated between Frazee Road and Mission Center Road through lane restriping.
- *Rio San Diego Drive, from River Run Drive to Fenton Parkway* – This segment would be restriped from a 4-Lane Collector to a 2-Lane Collector while maintaining the left-turn pockets. The additional right-of-way would be restriped to accommodate the planned Class II Bike Lanes with buffers between the vehicular travel lane and parking lane. On-street parking would be retained.

- *Camino Del Rio North, from Mission City Parkway to Ward Road* – This segment would be reconstructed to better align with Camino Del Rio North west of Mission City Parkway. The roadway would be classified as a 2-Lane Collector without Two-Way Left-Turn Lane. Class II Bike Lanes would be accommodated/maintained along this segment.
- *Camino Del Rio North, from 1000' West of Fairmount Avenue to the Eastern Community Boundary* – Reclassify this segment from a 4-Lane Major Arterial to a 4-Lane Collector with Two-Way Left-Turn Lane. No infrastructure changes would be required.
- *San Diego Mission Road, from Mission Village Drive to Rancho Mission Road* – Widen the roadway with redevelopment to improve this segment from a 4-Lane Collector without Two-Way Left-Turn Lane to a 4-Lane with Two-Way Left-Turn Lane and Class II Bike Lanes. Left-turn pockets may be provided at intersection and driveway locations in lieu of a continuous two-way left-turn lane.
- *San Diego Mission Road, between Rancho Mission Road and Fairmount Avenue* – Widen and restripe this section from a 2-Lane Collector to a 4-Lane Collector with Two-Way Left-Turn lane. Left-turn pockets may be provided at intersection and driveway locations in lieu of a continuous two-way left-turn lane. The existing Class II Bike Lanes would be retained.
- *Camino Del Rio South, between the western terminus and Mission City Parkway* – Restripe this section of Camino Del Rio South from a 2-Lane Collector and 2-Lane Collector with Two-Way Left-Turn Lane to accommodate bicycle lanes. Left-turn pockets may be provided at driveway locations as needed in lieu of a continuous two-way left-turn lane. On-street parking would be removed in some locations to facilitate implementation of the two-way left-turn lane or left-turn pockets, and Class II Bike Lanes.
- *Metropolitan Drive, from Mission Valley Road to Frazee Road* – Restripe this roadway from a 2-Lane Collector with Two-Way Left-Turn Lane to a 2-Lane Collector without Two-Way Left-Turn Lane to accommodate Class II Bike Lanes. On-street parking would be retained.
- *Mission Valley Road, from Frazee Road to Metropolitan Drive (clockwise)* - Restripe this roadway from a 2-Lane Collector with Two-Way Left-Turn Lane to a 2-Lane Collector without Two-Way Left-Turn Lane to accommodate Class II Bike Lanes. On-street parking would be retained.
- *Murray Canyon Road, from Frazee Road to Metropolitan Drive* – Restripe this roadway from a 3-Lane Collector with Two-Way Left-Turn Lane to a 2-Lane Collector without Two-Way Left-Turn Lane to accommodate buffered Class II Bike Lanes. On-street parking would be retained.
- *Rancho Mission Road/Ward Road, between Friars Road and Camino Del Rio North* – The full extent of this roadway will be restriped to a 2-Lane Collector with Two-Way Left-Turn Lane to provide for Class IV Cycle Tracks (one-way) in each direction. Left-turn pockets may be provided at intersection and driveway locations in lieu of a continuous two-way left-turn lane. On-street parking would be largely maintained.

<u>Roadway Extensions and New Roadways</u>

To provide better connectivity throughout the Mission Valley community and provide additional access to potential new developments within the existing "super blocks," the Four-Lane Via Las Cumbres Alternative proposes the following roadway extensions and new roadways:

- *Via Las Cumbres* – Via Las Cumbres would be extended from Friars Road to Hotel Circle South as a 4-lane Major Arterial, including grade separation of the trolley tracks, bridges over San Diego River and I-8.

  This extension would connect to the reconfigured Hotel Circle North and South couplet with reconfigured Interstate 8 on-/off-ramps. The benefits of this connection are further discussed in the Connectivity Assessment Paper provided in Appendix G. Class IV Cycle Tracks (one-way) would be provided along the roadway.

- *Frazee Road* – Extend Frazee Road northwards from Murray Canyon Road to Mission Valley Road/Metropolitan Drive. The extension would be constructed as a 2-Lane Collector without Two-Way Left-Turn Lane (No Fronting Property) and would accommodate the planned Class II Bike Lanes.

- *Franklin Ridge Road* – Extend Franklin Ridge Road north from Via Alta to Phyllis Place. This extension would be constructed as a 4-Lane Major Arterial.

- *Qualcomm Way* – Since completion of the Existing Conditions Report, Qualcomm Way, from Civita Boulevard to WB Friars Road on-/off-ramps has been constructed as a 4-Lane Major Arterial, including Class II Bike Lanes.

- *Fenton Parkway* – Extend Fenton Parkway south from the existing southern terminus to Camino Del Rio North as a 4-Lane Collector with turn lanes as needed, including grade separation and bridge over the San Diego River. The benefits of this connection are further discussed in the Connectivity Assessment Paper provided in Appendix G. Class II Bike Lanes would be provided along the Fenton Parkway extension.

- *Riverwalk Drive* – Extend Riverwalk Drive from Fashion Valley Road to west of Via Las Cumbres. This extension would be constructed as a 2-Lane Collector with Two-Way Left-Turn Lane, following the existing Riverwalk Drive alignment and continuing along the south side of the Trolley line. Class II Bike Lanes would be provided along the extension.

- ~~*Levi Cushman Street "B"*~~*Riverwalk Street "U"* – ~~Levi Cushman Street "B"~~Riverwalk Street "U" would be an east-west running roadway, spanning from Fashion Valley Road in the east to the new Via Las Cumbres extension to the west. This roadway would be constructed as a 4-Lane Collector with Two-Way Left-Turn Lane. A Class IV Cycle Track (two-way) would be provided along the new roadway.

- *Hazard Center Drive* – Hazard Center Drive would be extended west from the western terminus to Avenida Del Rio. This extension would be constructed as a 2-Lane Collector with Two-Way Left-Turn Lane or left turn pockets as appropriate.

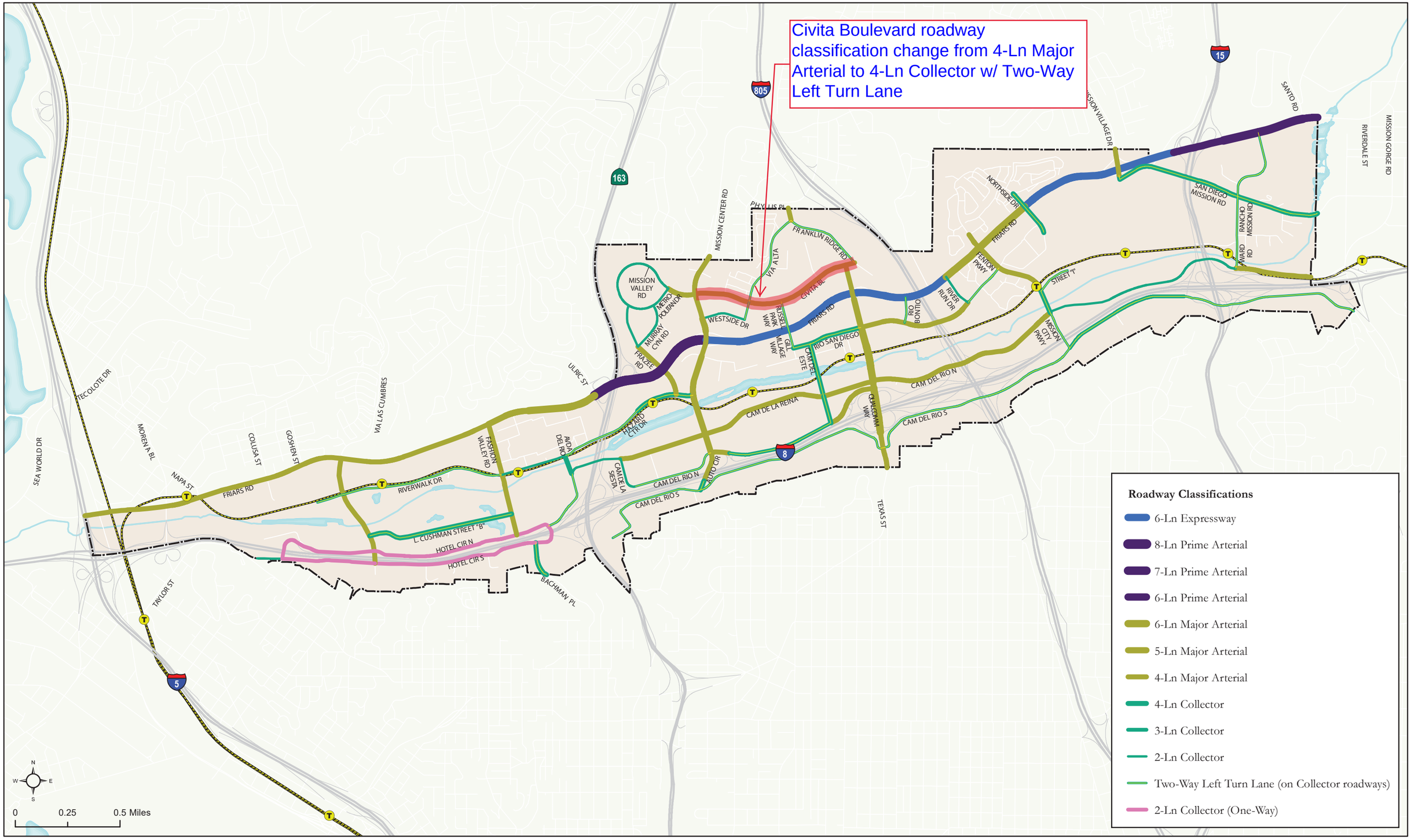
- ~~*New Street "I"*~~*Mission City Street "I"* – ~~New Street "I"~~Mission City Street "I" would be an east-west running roadway, from Fenton Parkway connecting to the future development on the stadium site. This roadway would be constructed as a 2-Lane Collector with Two-Way Left-Turn Lane. Class II Bike Lanes would be provided along the new roadway.

- *Avenida Del Rio, between Fashion Valley Mall Parking Lot and Camino de La Reina* – This segment would be shifted westward to align with the north-south portion of Camino De La Reina and the Fashion Valley Mall Parking Lot Driveway and would maintain the 4-Lane Collector without Two-Way Left-Turn Lane classification. A Class IV Cycle Track (two-way) would be provided along the realigned roadway.

It should be noted that implementation of these new roadway segments may necessitate additional right-of-way and/or require the redevelopment of adjacent properties. All roadways would be designed in accordance with the *City of San Diego Street Design Manual* and their corresponding classification.

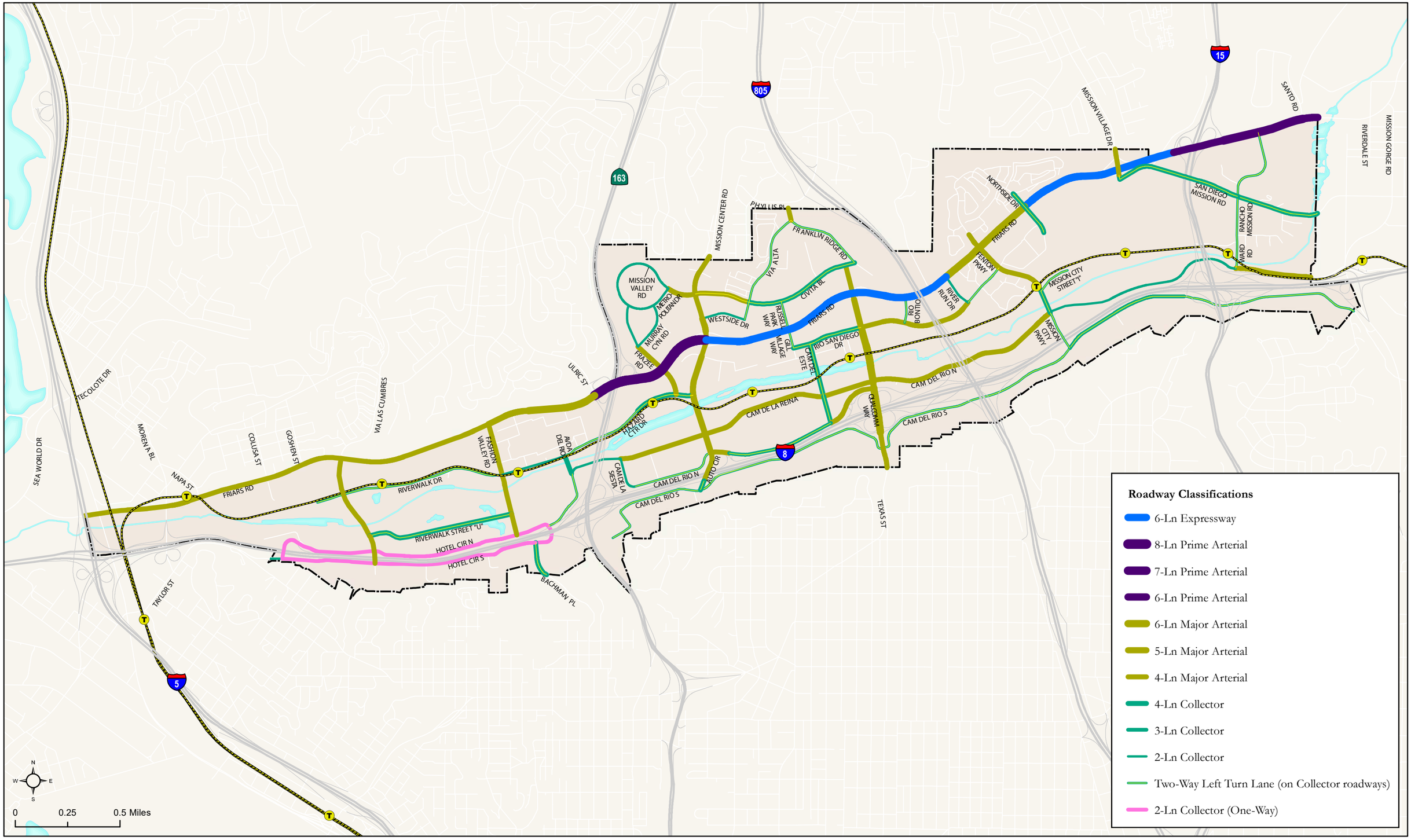
Figure 5-1 displays the Four-Lane Via Las Cumbres Alternative roadway classifications. A summary of the roadway modifications is presented in Table 5.1.

Figure 5-2 and Table 5.2 display the projected ADT volumes and associated roadway LOS under Four-Lane Via Las Cumbres Alternative conditions. Table 5.2 also identifies any potential traffic impacts associated with the Four-Lane Via Las Cumbres Alternative when comparing to existing conditions.



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Figure 5-1
Roadway Classifications - Four-Lane Via Las Cumbres Alternative



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Figure 5-1
Roadway Classifications - Four-Lane Via Las Cumbres Alternative

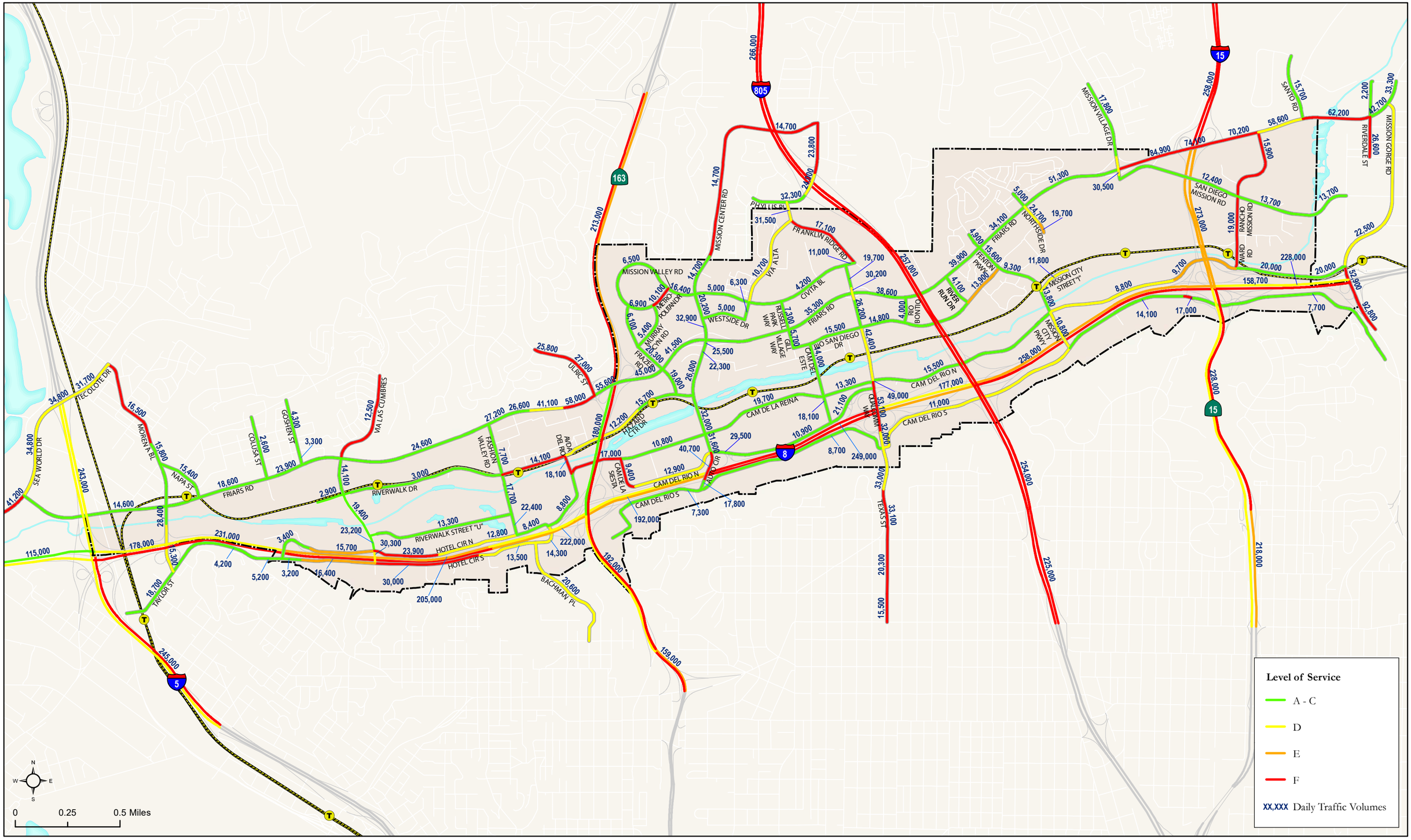
Table 5.1 Planned Roadway Modifications

Roadway	Segment	Existing Functional Classification	Planned Classification Designation[1]
Segment Modifications			
Fashion Valley Road	Friars Road to Hotel Circle North	4-Ln Collector w/o TWLTL	4-Ln Major Arterial
Bachman Place	Hotel Circle South to southern community boundary	2-Ln Collector No Fronting Property	4-Ln Collector w/ TWLTL
Qualcomm Way	Friars Road WB Ramps to Friars Road EB Ramps	2-Ln Collector w/ TWLTL	4-Ln Major Arterial (implemented)
Hotel Circle North	Hotel Circle South to Hotel Circle Place	2-Ln Collector No Fronting Property	One-Way Couplet
Hotel Circle North	Hotel Circle Place to I-8 WB Ramps	2-Ln Collector w/ TWLTL	One-Way Couplet
Hotel Circle North	I-8 WB Ramps to Fashion Valley Road	3-Ln Collector (2 EB, 1 WB)	One-Way Couplet
Hotel Circle North	Fashion Valley Road to Camino De La Reina	2-Ln Collector w/ TWLTL	One-Way Couplet
Hotel Circle North	I-8 WB On-Ramp to Hotel Circle South	2-Ln Collector w/ TWLTL	One-Way Couplet
Friars Road	Ulric Street/SR-163 SB Ramps to SR-163 NB Ramps	6-Ln Major Arterial	8-Ln Prime Arterial
Friars Road	SR-163 NB Ramps to Frazee Road	5-Ln Major Arterial (3 EB, 2 WB)	8-Ln Prime Arterial
Friars Road	Frazee Road to Mission Center Road	6-Ln Prime Arterial	8-Ln Prime Arterial
Rio San Diego Drive	River Run Drive to Fenton Parkway	4-Ln Collector w/ RM	2-Ln Collector w/ TWLTL
Camino Del Rio North	Mission City Parkway to 800 Feet East of Mission City Parkway	2-Ln Collector No Fronting Property	2-Ln Collector w/o TWLTL
Camino Del Rio North	1800 Feet West of Ward Road to Ward Road	2-Ln Collector No Fronting Property	2-Ln Collector w/o TWLTL
San Diego Mission Road	Rancho Mission Road to 950 Feet West of Fairmount Avenue	2-Ln Collector w/ TWLTL	4-Ln Collector w/ TWLTL
San Diego Mission Road	950 Feet West of Fairmount Avenue to Fairmount Avenue	2-Ln Collector No Fronting Property	4-Ln Collector w/ TWLTL
Hotel Circle South	Hotel Circle North to 1200 Feet East of Hotel Circle North	2-Ln Collector No Fronting Property	One-Way Couplet
Hotel Circle South	1200 Feet East of Hotel Circle North to Bachman Place	2-Ln Collector w/ TWLTL	One-Way Couplet
Hotel Circle South	Bachman Place to Hotel Circle North	2-Ln Collector w/ TWLTL	One-Way Couplet
Camino Del Rio South	Western Terminus to 1800 Feet west of Mission Center Road	2-Ln Collector w/ Commercial Fronting	2-Ln Collector w/ TWLTL
Camino Del Rio South	Mission Center Road to Mission City Parkway	2-Ln Collector w/ Commercial Fronting	2-Ln Collector w/ TWLTL
Metropolitan Drive	Mission Valley Road to Murray Canyon Road (clockwise)	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	2-Ln Collector w/o TWLTL (NFP)
Metropolitan Drive	Murray Canyon Road to Frazee Road (clockwise)	2-Ln Collector w/ TWLTL	2-Ln Collector w/o TWLTL (NFP)

Table 5.1 Planned Roadway Modifications

Roadway	Segment	Existing Functional Classification	Planned Classification Designation[1]
Mission Valley Road	Frazee Road to Metropolitan Drive (clockwise)	2-Ln Collector w/ TWLTL	2-Ln Collector w/o TWLTL (NFP)
Murray Canyon Road	Metropolitan Drive to Frazee Road	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	2-Ln Collector w/o TWLTL (NFP)
Rancho Mission Road	Friars Road and San Diego Mission Road	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	2-Ln Collector w/ TWLTL
Rancho Mission Road	San Diego Mission Road to Camino Del Rio North	4-Ln Collector w/o TWLTL	2-Ln Collector w/ TWLTL
New Roadways			
Via Las Cumbres	Friars Road to Hotel Circle South	*Does not exist*	4-Ln Major Arterial
Frazee Road	Mission Valley Road/Metropolitan Drive to Murray Canyon Road	*Does not exist*	2-Ln Collector w/o TWLTL
Franklin Ridge Road	Phyllis Place to Via Alta	*Does not exist*	4-Ln Major Arterial
Qualcomm Way	Civita Boulevard to Friars Road WB Ramps	*Does not exist*	4-Ln Major Arterial (Implemented)
Fenton Parkway	~~New Street "I"~~Mission City Street "I" to Camino Del Rio North	*Does not exist*	4-Ln Collector w/ TWLTL
Riverwalk Drive	Via Las Cumbres to Fashion Valley Road	*Does not exist*	2-Ln Collector w/ TWLTL
~~Levi Cushman Street "B"~~Riverwalk Street "U"	Via Las Cumbres to Fashion Valley Road	*Does not exist*	4-Ln Collector w/ TWLTL
Hazard Center Drive	Avenida Del Rio to Hazard Center Drive western terminus	*Does not exist*	2-Ln Collector w/ TWLTL
~~New Street "I"~~Mission City Street "I"	Mission City Parkway to eastern terminus	*Does not exist*	2-Ln Collector w/ TWLTL

Notes:
RM = Raised Median.
SM = Striped Median.
TWLTL = Two-Way Left-Turn Lane.
NFP = No Fronting Property.



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Figure 5-2
Daily Roadway Segment Traffic Volumes and Level of Service - Four-Lane Via Las Cumbres Alternative

Table 5.2 Roadway Segment Analysis – Four-Lane Via Las Cumbres Alternative

Roadway	Segment	Four-Lane Via Las Cumbres Alternative					Existing					
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI ?
Phyllis Place	Franklin Ridge Road to I-805 SB Ramps	5-Ln Major Arterial	45,000	32,300	0.718	C	2-Ln Collector w/o TWLTL	2,270	0.284	A	0.434	N
Sea World Drive	Mission Bay Parkway to Friars Road	4-Ln Major Arterial	40,000	41,200	1.030	**F**	4-Ln Major Arterial	34,200	0.855	D	0.175	**Y**
Sea World Drive	Friars Road to I-5 SB Ramps	4-Ln Major Arterial	40,000	34,800	0.870	D	4-Ln Major Arterial	29,490	0.737	C	0.133	N
Tecolote Road	I-5 SB Ramps and I-5 NB Ramps	4-Ln Major Arterial	40,000	34,800	0.870	D	4-Ln Major Arterial	30,470	0.762	D	0.108	N
Tecolote Road	I-5 NB Ramps to Morena Boulevard	4-Ln Major Arterial	40,000	31,700	0.793	D	4-Ln Major Arterial	22,410	0.560	C	0.233	N
Mission Valley Road	Frazee Road to Metropolitan Drive (clockwise)	2-Ln Collector w/o TWLTL (NFP)	10,000	6,500	0.650	C	2-Ln Collector w/ TWLTL	7,440	0.496	A	0.154	N
Mission Valley Road	Metropolitan Drive to Mission Center Road (east of loop)	4-Ln Major Arterial	40,000	16,400	0.410	B	4-Ln Major Arterial	7,440	0.186	A	0.224	N
Civita Boulevard	Mission Center Road to Via Alta	4-Ln ~~Major Arterial~~Collector w/ TWLTL	~~40,000~~30,000	5,000	0.167~~0.125~~	A	4-Ln Collector w/ TWLTL~~Major Arterial~~	2,480	0.083~~0.062~~	A	0.084~~0.063~~	N
Civita Boulevard	Via Alta to Qualcomm Way	4-Ln Collector w/ TWLTL~~Major Arterial~~	~~30,000~~40,000	4,200	0.140~~0.105~~	A	4-Ln Collector w/ TWLTL~~Major Arterial~~	2,480	0.083~~0.062~~	A	0.057~~0.043~~	N
Civita Boulevard	Qualcomm Way to Franklin Ridge Road	4-Ln Collector w/ TWLTL~~Major Arterial~~	~~30,000~~40,000	11,000	0.367~~0.275~~	~~A~~B	4-Ln Collector w/ TWLTL~~Major Arterial~~	2,480	0.083~~0.062~~	A	0.284~~0.213~~	N
Westside Drive	Mission Center Road to Via Alta	2-Ln Collector w/o TWLTL	8,000	5,000	0.625	C	2-Ln Collector w/o TWLTL	4,070	0.508	C	0.117	N
Friars Road	Sea World Drive to Napa Street	4-Ln Major Arterial	40,000	14,600	0.365	A	4-Ln Major Arterial	13,650	0.341	A	0.024	N
Friars Road	Napa Street to Colusa Street	4-Ln Major Arterial	40,000	18,600	0.465	B	4-Ln Major Arterial	19,170	0.479	B	-0.014	N
Friars Road	Colusa Street to Via Las Cumbres	4-Ln Major Arterial	40,000	23,900	0.598	C	4-Ln Major Arterial	19,200	0.480	B	0.118	N

Table 5.2 Roadway Segment Analysis – Four-Lane Via Las Cumbres Alternative

Roadway	Segment	Four-Lane Via Las Cumbres Alternative					Existing					
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI ?
Friars Road	Via Las Cumbres to Fashion Valley Road	4-Ln Major Arterial	40,000	24,600	0.615	C	4-Ln Major Arterial	22,270	0.557	C	0.058	N
Friars Road	Fashion Valley Road to Via De La Moda	5-Ln Major Arterial (3 EB, 2 WB)	45,000	27,200	0.604	C	5-Ln Major Arterial (3 EB, 2 WB)	26,100	0.580	C	0.024	N
Friars Road	Via De La Moda to Fashion Valley Driveway	5-Ln Major Arterial (3 EB, 2 WB)	45,000	26,600	0.591	C	5-Ln Major Arterial (3 EB, 2 WB)	25,920	0.576	C	0.015	N
Friars Road	Fashion Valley Driveway to Avenida De Las Tiendas	6-Ln Major Arterial	50,000	41,100	0.822	D	6-Ln Major Arterial	26,830	0.537	B	0.285	N
Friars Road	Avenida De Las Tiendas to Ulric Street/SR-163 SB Ramps	6-Ln Major Arterial	50,000	58,000	1.160	**F**	6-Ln Major Arterial	40,510	0.810	D	0.350	**Y**
Friars Road	Ulric Street/SR-163 SB Ramps to SR-163 NB Ramps	8-Ln Prime Arterial	80,000	55,600	0.695	C	6-Ln Prime Arterial	53,170	0.886	D	-0.191	N
Friars Road	SR-163 NB Ramps to Frazee Road	8-Ln Prime Arterial	80,000	45,000	0.563	B	6-Ln Prime Arterial	54,150	0.902	D	-0.339	N
Friars Road	Frazee Road to Mission Center Road	8-Ln Prime Arterial	80,000	41,500	0.519	B	7-Ln Expressway	42,780	0.458	B	0.061	N
Friars Road	Mission Center Road to Qualcomm Way	6-Ln Expressway	80,000	35,300	0.441	B	6-Ln Expressway	37,050	0.463	B	-0.022	N
Friars Road	Qualcomm Way to River Run Drive	6-Ln Expressway	80,000	38,600	0.483	B	6-Ln Expressway	33,250	0.416	B	0.067	N
Friars Road	River Run Drive to Fenton Parkway	6-Ln Major Arterial	50,000	39,900	0.798	C	6-Ln Prime Arterial	22,080	0.368	A	0.430	N
Friars Road	Fenton Parkway to Northside Drive	6-Ln Major Arterial	50,000	34,100	0.682	C	6-Ln Prime Arterial	28,430	0.474	B	0.208	N
Friars Road	Northside Drive to Mission Village Drive	6-Ln Expressway	80,000	51,300	0.641	C	6-Ln Expressway	45,330	0.567	C	0.074	N
Friars Road	Mission Village Drive to I-15 SB Ramps	6-Ln Expressway	80,000	84,900	1.061	**F**	6-Ln Expressway	57,740	0.722	C	0.339	**Y**
Friars Road	I-15 SB Ramps to I-15 NB Ramps	6-Ln Prime Arterial	60,000	74,100	1.235	**F**	6-Ln Prime Arterial	46,570	0.776	C	0.459	**Y**
Friars Road	I-15 NB Ramps to Rancho Mission Road	7-Ln Prime Arterial[1]	70,000	70,200	1.003	**F**	7-Ln Prime Arterial[1]	51,610	0.737	C	0.266	**Y**

Table 5.2 Roadway Segment Analysis – Four-Lane Via Las Cumbres Alternative

Roadway	Segment	Four-Lane Via Las Cumbres Alternative					Existing				Δ V/C	SI?
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS		
Friars Road	Rancho Mission Road to Santo Road	7-Ln Prime Arterial[1]	70,000	58,600	0.837	D	7-Ln Prime Arterial[1]	39,430	0.563	B	0.274	N
Friars Road	Santo Road to Riverdale Street	6-Ln Prime Arterial	60,000	62,200	1.037	**F**	6-Ln Prime Arterial	43,380	0.723	C	0.314	**Y**
Friars Road	Riverdale Street to Mission Gorge Road	6-Ln Prime Arterial	60,000	42,700	0.712	C	6-Ln Prime Arterial	31,300	0.522	B	0.190	N
Mission Gorge Road	Friars Road to Zion Avenue	6-Ln Prime Arterial	60,000	33,300	0.56	B	6-Ln Prime Arterial	40,690	0.678	C	-0.123	N
Hazard Center Drive	Avenida Del Rio to Hazard Center W. Driveway	2-Ln Collector w/ TWLTL	15,000	12,200	0.81	D	Does Not Exist				-	N
Hazard Center Drive	Hazard Center W. Driveway to Mission Center Road	4-Ln Collector w/ TWLTL	30,000	15,700	0.523	C	4-Ln Collector w/ TWLTL	8,710	0.290	A	0.233	N
Rio San Diego Drive	Gill Village Way to Qualcomm Way	4-Ln Collector w/ TWLTL	30,000	15,500	0.517	C	4-Ln Collector w/ TWLTL	10,500	0.350	B	0.167	N
Rio San Diego Drive	Qualcomm Way to River Run Drive	4-Ln Major Arterial	40,000	14,800	0.370	A	4-Ln Major Arterial	11,280	0.282	A	0.088	N
Rio San Diego Drive	River Run Drive to Fenton Parkway	2-Ln Collector w/ TWLTL	15,000	13,900	0.927	**E**	4-Ln Collector w/ RM	9,090	0.303	A	0.624	**Y**
San Diego Mission Road	Friars Road EB Ramps to Rancho Mission Road	4-Ln Collector w/ TWLTL	30,000	12,400	0.413	B	4-Ln Collector w/o TWLTL	7,590	0.506	C	-0.093	N
San Diego Mission Road	Rancho Mission Road to 950' West of Fairmount Avenue	4-Ln Collector w/ TWLTL	30,000	13,700	0.457	B	2-Ln Collector w/ TWLTL	8,020	0.534	C	-0.077	N
San Diego Mission Road	950' West of Fairmount Avenue to Fairmount Avenue	4-Ln Collector w/ TWLTL	30,000	13,700	0.457	B	2-Ln Collector w/o TWLTL (NFP)	8,020	0.802	D	-0.345	N
Taylor Street	Pacific Highway to Morena Boulevard	5-Ln Major Arterial (3 EB, 2 WB)	45,000	18,700	0.416	B	5-Ln Major Arterial (3 EB, 2 WB)	19,060	0.423	B	-0.007	N
Taylor Street	Morena Boulevard to I-8 EB Ramps	2-Ln Collector w/ TWLTL	15,000	4,200	0.280	A	2-Ln Collector w/o TWLTL (NFP)	17,750	1.775	**F**	-1.495	N
Taylor Street	I-8 EB Ramps to Hotel Circle South	2-Ln Collector w/o TWLTL (NFP)	10,000	5,200	0.520	B	2-Ln Collector w/ TWLTL	14,410	0.961	**E**	-0.441	N
Hotel Circle North	Hotel Circle South to Fashion Valley Road	2-Ln Collector (one-way)	17,500	8,400	0.480	B	2-Ln Collector w/ TWLTL	12,460	0.831	D	-0.351	N

Table 5.2 Roadway Segment Analysis – Four-Lane Via Las Cumbres Alternative

Roadway	Segment	Four-Lane Via Las Cumbres Alternative					Existing					
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI ?
Hotel Circle North	Fashion Valley Road to I-8 WB Off-Ramp	2-Ln Collector (one-way)	17,500	12,800	0.731	D	3-Ln Collector (2 EB, 1 WB)	15,510	1.410	**F**	-0.679	N
Hotel Circle North	I-8 WB Off-Ramp to Via Las Cumbres	2-Ln Collector (one-way)	17,500	23,900	1.366	**F**	2-Ln Collector w/ TWLTL	6,510	0.434	B	0.932	**Y**
Hotel Circle North	Via Las Cumbres to I-8 WB On-Ramp	2-Ln Collector (one-way)	17,500	15,700	0.897	**E**	2-Ln Collector w/o TWLTL (NFP)	15,340	1.534	**F**	-0.637	N
Hotel Circle North	I-8 WB On-Ramp to Hotel Circle South	2-Ln Collector (one-way)	17,500	3,400	0.194	A	2-Ln Collector w/o TWLTL (NFP)	15,340	1.534	**F**	-1.340	N
Camino De La Reina	Hotel Circle North to Avenida Del Rio	2-Ln Collector w/ TWLTL	15,000	8,800	0.587	C	2-Ln Collector w/ TWLTL	8,480	0.566	C	0.021	N
Camino De La Reina	Avenida Del Rio to Camino De La Siesta	2-Ln Collector w/o TWLTL (NFP)	10,000	17,000	1.700	**F**	2-Ln Collector w/o TWLTL (NFP)	13,360	1.336	**F**	0.364	**Y**
Camino De La Reina	Camino De La Siesta to Mission Center Road	4-Ln Major Arterial	40,000	10,800	0.270	A	4-Ln Major Arterial	10,730	0.268	A	0.002	N
Camino De La Reina	Mission Center Road to Camino Del Este	4-Ln Major Arterial	40,000	19,700	0.493	B	4-Ln Major Arterial	18,530	0.463	B	0.030	N
Camino De La Reina	Camino Del Este to Qualcomm Way	4-Ln Major Arterial	40,000	13,300	0.333	A	4-Ln Major Arterial	13,770	0.344	A	-0.011	N
Camino Del Rio North	Camino De La Siesta to Mission Center Road	2-Ln Collector w/ TWLTL	15,000	12,900	0.860	D	2-Ln Collector w/ TWLTL	5,430	0.362	B	0.498	N
Camino Del Rio North	Mission Center Road to I-8 WB Ramps	4-Ln Major Arterial	40,000	29,500	0.738	C	4-Ln Major Arterial	24,030	0.601	C	0.137	N
Camino Del Rio North	I-8 WB Ramps to Camino Del Este	3-Ln Collector w/ TWLTL (1 EB, 2 WB)	22,500	10,900	0.484	C	3-Ln Collector w/ RM (1 EB, 2 WB)	11,910	0.529	C	-0.045	N
Camino Del Rio North	Camino Del Este to Qualcomm Way	4-Ln Major Arterial	40,000	21,100	0.528	C	4-Ln Major Arterial	12,180	0.305	A	0.223	N
Camino Del Rio North	Qualcomm Way to Mission City Parkway	4-Ln Major Arterial	40,000	15,500	0.388	B	4-Ln Major Arterial	10,590	0.265	A	0.123	N
Camino Del Rio North	Mission City Parkway to 1800' West of Ward Rd	2-Ln Collector w/o TWLTL (NFP)	10,000	8,800	0.880	D	2-Ln Collector w/o TWLTL (NFP)	8,080	0.808	D	0.072	N

Table 5.2 Roadway Segment Analysis – Four-Lane Via Las Cumbres Alternative

Roadway	Segment	Four-Lane Via Las Cumbres Alternative					Existing					
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI ?
Camino Del Rio North	1800' West of Ward Road to Ward Road	2-Ln Collector w/o TWLTL (NFP)	10,000	9,700	0.970	**E**	2-Ln Collector w/o TWLTL (NFP)	8,920	0.892	D	0.078	**Y**
Camino Del Rio North	Ward Road to 1000' West of Fairmount Avenue	4-Ln Major Arterial	40,000	20,000	0.500	A	4-Ln Major Arterial	11,830	0.296	A	0.204	N
Camino Del Rio North	1000' West of Fairmount Avenue to Fairmount Avenue	4-Ln Collector w/ TWLTL	30,000	20,000	0.667	C	4-Ln Collector w/ TWLTL	13,470	0.449	B	0.218	N
Hotel Circle South	Taylor Street to I-8 EB Off-Ramp	2-Ln Collector (one-way)	17,500	3,200	0.183	A	2-Ln Collector w/o TWLTL (NFP)	12,010	1.201	**F**	-1.018	N
Hotel Circle South	I-8 EB Off-Ramp to Via Las Cumbres	2-Ln Collector (one-way)	17,500	16,400	0.937	**E**	2-Ln Collector w/ TWLTL	12,340	0.823	D	0.114	**Y**
Hotel Circle South	Via Las Cumbres to I-8 EB On-Ramp	2-Ln Collector (one-way)	17,500	30,000	1.714	**F**	2-Ln Collector w/ TWLTL	12,340	0.823	D	0.891	**Y**
Hotel Circle South	I-8 EB On-Ramp to Bachman Place	2-Ln Collector (one-way)	17,500	13,500	0.771	D	2-Ln Collector w/ TWLTL	17,200	1.146	**F**	-0.375	N
Hotel Circle South	Bachman Place to Hotel Circle North/Camino De La Reina	2-Ln Collector (one-way)	17,500	14,300	0.817	D	2-Ln Collector w/ TWLTL	15,580	1.038	**F**	-0.221	N
Camino Del Rio South	Western Terminus to Mission Center Road	2-Ln Collector w/ TWLTL	15,000	7,300	0.487	C	2-Ln Collector w/ w/o TWLTL	7,330	0.916	**E**	-0.429	N
Camino Del Rio South	Mission Center Road to Texas Street	2-Ln Collector w/ TWLTL	15,000	8,700	0.580	C	2-Ln Collector w/ w/o TWLTL	7,410	0.927	**E**	-0.347	N
Camino Del Rio South	Texas Street to Mission City Parkway	2-Ln Collector w/ TWLTL	15,000	11,000	0.733	D	2-Ln Collector w/ w/o TWLTL	8,140	1.018	**F**	-0.285	N
Camino Del Rio South	Mission City Parkway to I-15 SB Off-Ramp	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	22,500	14,100	0.627	C	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	11,750	0.522	C	0.105	N
Camino Del Rio South	I-15 SB Off-Ramp to I-15 NB On-Ramp	2-Ln Collector w/ TWLTL	15,000	17,000	1.133	**F**	4-Ln Collector w/ TWLTL	9,580	0.319	A	0.814	**Y**
Camino Del Rio South	I-15 NB On-Ramp to Fairmount Avenue	2-Ln Collector w/ TWLTL	15,000	7,700	0.513	C	2-Ln Collector w/ TWLTL	6,370	0.424	B	0.089	N
Morena Boulevard	Tecolote Road to West Morena Boulevard	2-Ln Collector w/ TWLTL	15,000	16,500	1.100	**F**	2-Ln Collector w/ TWLTL	16,180	1.079	**F**	0.021	**Y**
Morena Boulevard	West Morena Boulevard to Linda Vista Road	4-Ln Major Arterial	40,000	15,800	0.395	B	4-Ln Major Arterial	17,740	0.443	B	-0.048	N

Table 5.2 Roadway Segment Analysis – Four-Lane Via Las Cumbres Alternative

Roadway	Segment	Four-Lane Via Las Cumbres Alternative					Existing				Δ V/C	SI ?
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS		
Morena Boulevard	Linda Vista Road to I-8 WB Off-Ramp	4-Ln Major Arterial	40,000	28,400	0.710	C	4-Ln Major Arterial	41,930	1.048	**F**	-0.338	N
Morena Boulevard	I-8 WB Off-Ramp to Taylor Street	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	22,500	15,300	0.680	D	3-Ln Collector w/ RM (2 NB, 1 SB)	11,570	0.514	C	0.166	N
Napa Street	Morena Boulevard to Friars Road	4-Ln Major Arterial	40,000	15,400	0.385	B	4-Ln Major Arterial	13,430	0.336	A	0.049	N
Colusa Street	Linda Vista Road to Friars Road	2-Ln Collector w/o TWLTL	8,000	2,600	0.325	B	2-Ln Collector w/o TWLTL	2,720	0.339	B	-0.014	N
Via Las Cumbres	Linda Vista Road to Friars Road	3-Ln Collector w/o TWLTL (2 NB, 1 SB)	11,000	12,500	1.136	**F**	3-Ln Collector (2 NB, 1 SB)	10,920	0.993	**E**	0.143	**Y**
Via Las Cumbres	Friars Road to Riverwalk Drive	4-Ln Major Arterial	40,000	14,100	0.353	A	Does Not Exist				0.353	N
Via Las Cumbres	Riverwalk Drive to ~~Levi-Cushman Street "B"~~Riverwalk Street "U"	4-Ln Major Arterial	40,000	19,400	0.485	B	Does Not Exist				0.485	N
Via Las Cumbres	~~Levi-Cushman Street "B"~~Riverwalk Street "U" to Hotel Circle North	4-Ln Major Arterial	40,000	23,200	0.580	C	Does Not Exist				0.580	N
Via Las Cumbres	Hotel Circle North to Hotel Circle South	4-Ln Major Arterial	40,000	30,300	0.758	D	Does Not Exist				0.758	N
Fashion Valley Road	Friars Road to Riverwalk Drive	4-Ln Major Arterial	40,000	7,700	0.193	A	4-Ln Collector w/o TWLTL	9,980	0.665	C	-0.472	N
Fashion Valley Road	Riverwalk Drive to ~~Levi-Cushman Street "B"~~Riverwalk Street "U"	4-Ln Major Arterial	40,000	17,700	0.443	B	4-Ln Collector w/o TWLTL	9,980	0.665	C	-0.222	N
Fashion Valley Road	~~Levi-Cushman Street "B"~~Riverwalk Street "U" to Hotel Circle North	4-Ln Major Arterial	40,000	22,400	0.560	C	4-Ln Collector w/o TWLTL	9,980	0.665	C	-0.105	N
Bachman Place	Hotel Circle South to southern community boundary	4-Ln Collector w/ TWLTL	30,000	20,600	0.686	D	2-Ln Collector w/o TWLTL (NFP)	9,140	0.914	**E**	-0.399	N
Avenida Del Rio	Fashion Valley Parking Lot to Camino De La Reina	4-Ln Collector w/o TWLTL	15,000	18,100	1.207	**F**	4-Ln Collector w/o TWLTL	8,740	0.583	C	0.624	**Y**
Ulric Street	Fashion Hills Boulevard to 600' South of Fashion Hills Blvd	2-Ln Collector w/ TWLTL	15,000	25,800	1.720	**F**	2-Ln Collector w/ TWLTL	20,380	1.359	**F**	0.361	**Y**

Table 5.2 Roadway Segment Analysis – Four-Lane Via Las Cumbres Alternative

Roadway	Segment	Four-Lane Via Las Cumbres Alternative					Existing				Δ V/C	SI ?
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS		
Ulric Street	600' South of Fashion Hills Boulevard to Friars Road	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	22,500	27,000	1.200	**F**	3-Ln Collector w/ SM (1 NB 2 SB)	20,430	0.908	**E**	0.292	**Y**
Camino De La Siesta	Camino De La Reina to Camino Del Rio North	2-Ln Collector w/o TWLTL	8,000	9,400	1.175	**F**	2-Ln Collector w/o TWLTL	5,150	0.643	D	0.532	**Y**
Metropolitan Drive	Mission Valley Road to Murray Canyon Road (clockwise)	2-Ln Collector w/o TWLTL (NFP)	10,000	10,100	1.010	**F**	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	3,840	0.171	A	0.839	**Y**
Metropolitan Drive	Murray Canyon Road to Frazee Road (clockwise)	2-Ln Collector w/o TWLTL (NFP)	10,000	6,900	0.690	C	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	3,840	0.171	A	0.519	N
Murray Canyon Road	Metropolitan Drive to Frazee Road	2-Ln Collector w/o TWLTL (NFP)	10,000	5,400	0.540	B	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	7,400	0.329	A	0.211	N
Frazee Road	Metropolitan Drive to Murray Canyon Road	2-Ln Collector w/o TWLTL (NFP)	10,000	6,100	0.610	C	Does Not Exist				0.610	N
Frazee Road	Murray Canyon Road to Friars Road	4-Ln Major Arterial	40,000	20,300	0.508	B	4-Ln Major Arterial	14,670	0.367	A	0.141	N
Frazee Road	Friars Road to Hazard Center Drive	4-Ln Major Arterial	40,000	19,000	0.475	B	4-Ln Major Arterial	17,050	0.426	B	0.049	N
Mission Center Road	Murray Ridge Road to 1200' West of Murray Ridge Road	2-Ln Collector w/o TWLTL	8,000	14,700	1.838	**F**	2-Ln Collector w/o TWLTL	10,970	1.097	**F**	0.741	**Y**
Mission Center Road	1200' W of Murray Ridge Rd to 950' N of Mission Valley Rd	3-Ln Collector w/o TWLTL (2 NB, 1 SB)	11,000	14,700	1.336	**F**	3-Ln Collector (2 NB, 1 SB)	10,720	0.975	**E**	0.361	**Y**
Mission Center Road	950' North of Mission Valley Road to Mission Valley Road	4-Ln Major Arterial	40,000	14,700	0.368	A	4-Ln Major Arterial	10,940	0.273	A	0.095	N
Mission Center Road	Mission Valley Road to Westside Drive	4-Ln Major Arterial	40,000	20,200	0.505	B	4-Ln Major Arterial	14,170	0.354	A	0.151	N
Mission Center Road	Westside Drive to Friars Road WB Ramps	5-Ln Major Arterial (3 NB, 2 SB)	45,000	32,900	0.731	C	5-Ln Major Arterial (3 NB, 2 SB)	26,020	0.578	C	0.153	N
Mission Center Road	Friars Road WB Ramps to Friars Road EB Ramps	4-Ln Major Arterial	40,000	25,500	0.638	C	4-Ln Major Arterial	22,830	0.571	C	0.067	N

Table 5.2 Roadway Segment Analysis – Four-Lane Via Las Cumbres Alternative

		Four-Lane Via Las Cumbres Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI ?
Mission Center Road	Friars Road EB Ramps to Mission Center Court	4-Ln Major Arterial	40,000	22,300	0.558	C	4-Ln Major Arterial	19,470	0.487	B	0.071	N
Mission Center Road	Mission Center Court to Hazard Center Drive	5-Ln Major Arterial (2 NB, 3 SB)	45,000	26,000	0.578	C	5-Ln Major Arterial (2 NB, 3 SB)	19,450	0.432	B	0.146	N
Mission Center Road	Hazard Center Drive to Camino De La Reina	5-Ln Major Arterial (2 NB, 3 SB)	45,000	32,000	0.711	C	5-Ln Major Arterial (2 NB, 3 SB)	27,060	0.601	C	0.110	N
Mission Center Road	Camino De La Reina to Camino Del Rio North	5-Ln Major Arterial (3 NB, 2 SB)	45,000	31,600	0.702	C	5-Ln Major Arterial (3 NB, 2 SB)	23,280	0.517	B	0.185	N
Auto Circle	Camino Del Rio North to I-8 EB Ramps	4-Ln Major Arterial	40,000	40,700	1.018	**F**	4-Ln Major Arterial	34,100	0.852	D	0.166	**Y**
Auto Circle	I-8 EB Ramps to Camino Del Rio South	4-Ln Collector w/ TWLTL	30,000	17,800	0.593	C	4-Ln Collector w/ RM	20,980	0.699	D	-0.106	N
Via Alta	Franklin Ridge Road to Civita Boulevard	2-Ln Collector w/ TWLTL	15,000	10,700	0.713	D	Does Not Exist				0.713	N
Via Alta	Civita Boulevard to Westside Drive	2-Ln Collector w/ TWLTL	15,000	6,300	0.420	B	2-Ln Collector w/ RM	1,340	0.089	A	0.331	N
Murray Ridge Road	Mission Center Road to I-805 NB Ramps	2-Ln Collector w/ TWLTL	15,000	23,800	1.587	**F**	2 Ln Collector w/ TWLTL	20,000	1.333	**F**	0.254	**Y**
Murray Ridge Road	I-805 NB Ramps to I-805 SB Ramps	2-Ln Collector w/ TWLTL	15,000	24,000	1.600	**F**	2-Ln Collector w/ TWLTL	11,700	0.780	D	0.820	**Y**
Russell Park Way	Civita Boulevard to Friars Road	2-Ln Collector w/ TWLTL	15,000	7,300	0.487	C	2-Ln Collector w/ RM	1,020	0.068	A	0.419	N
Camino Del Este	Rio San Diego Drive to Camino De La Reina	4-Ln Collector w/ TWLTL	30,000	14,000	0.467	B	4-Ln Collector w/ RM or TWLTL	8,450	0.282	A	0.185	N
Camino Del Este	Camino De La Reina to Camino Del Rio North	4-Ln Collector w/ TWLTL	30,000	18,100	0.603	C	4-Ln Collector w/ RM or TWLTL	9,880	0.329	A	0.274	N
Franklin Ridge Road	Phyllis Place to Via Alta	4-Ln Major Arterial	40,000	31,500	0.788	D	Does Not Exist				0.788	N
Franklin Ridge Road	Via Alta to Civita Boulevard	2-Ln Collector w/ TWLTL	15,000	17,100	1.140	**F**	Does Not Exist				1.140	**Y**

Table 5.2 Roadway Segment Analysis – Four-Lane Via Las Cumbres Alternative

Roadway	Segment	Four-Lane Via Las Cumbres Alternative					Existing				Δ V/C	SI ?
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS		
Qualcomm Way	Civita Boulevard to Friars Road WB Ramps	4-Ln Major Arterial	40,000	19,700	0.493	B	Does Not Exist				0.493	N
Qualcomm Way	Friars Road WB Ramps to Friars Road EB Ramps	4-Ln Major Arterial	40,000	30,200	0.755	D	2-Ln Collector w/ TWLTL	9,300	0.620	C	0.135	N
Qualcomm Way	Friars Road EB Ramps to Rio San Diego Drive	5-Ln Major Arterial (2 NB, 3 SB)	45,000	26,200	0.582	C	5-Ln Major Arterial	10,200	0.227	A	0.355	N
Qualcomm Way	Rio San Diego Drive to Camino Del Rio North	6-Ln Major Arterial	50,000	42,400	0.848	D	6-Ln Major Arterial	24,330	0.487	B	0.361	N
Qualcomm Way	Camino Del Rio North to I-8 WB Ramps	5-Ln Major Arterial (3 NB, 2 SB)	45,000	49,000	1.089	**F**	5-Ln Major Arterial (3 NB, 2 SB)	23,560	0.524	B	0.565	**Y**
Qualcomm Way	I-8 WB Ramps to I-8 EB Ramps	6-Ln Major Arterial	50,000	53,100	1.062	**F**	6-Ln Major Arterial	36,410	0.728	C	0.334	**Y**
Qualcomm Way	I-8 EB Ramps to Camino Del Rio South	4-Ln Major Arterial	40,000	32,000	0.800	D	4-Ln Major Arterial	25,830	0.646	C	0.154	N
Texas Street	Camino Del Rio South to 1400' North of Madison Ave	4-Ln Major Arterial	40,000	33,000	0.825	D	4-Ln Major Arterial	29,050	0.726	C	0.099	N
Texas Street	1400' North of Madison Ave to Madison Avenue	3-Ln Collector w/ TWLTL (1 NB, 2 SB)	22,500	33,100	1.471	**F**	3-Ln Collector w/ TWLTL (1 NB, 2 SB)	29,240	1.300	**F**	0.171	**Y**
Texas Street	Madison Avenue to Meade Ave	2-Ln Collector w/ TWLTL	15,000	20,300	1.353	**F**	2-Ln Collector w/ TWLTL	17,090	1.139	**F**	0.214	**Y**
Texas Street	Meade Ave to El Cajon Boulevard	3-Ln Collector	11,000	15,500	1.409	**F**	3-Ln Collector	14,310	1.300	**F**	0.109	**Y**
River Run Drive	Friars Road to Rio San Diego Drive	2-Ln Collector w/o TWLTL	8,000	4,100	0.513	C	2-Ln Collector w/o TWLTL	4,030	0.504	C	0.009	N
Fenton Parkway	Portofino Driveway to Friars Road	4-Ln Major Arterial	40,000	4,900	0.123	A	4-Ln Major Arterial	4,120	0.103	A	0.020	N
Fenton Parkway	Friars Road to Rio San Diego Drive	4-Ln Major Arterial	40,000	15,600	0.390	B	4-Ln Major Arterial	12,610	0.315	A	0.075	N
Fenton Parkway	Rio San Diego Drive to Del Rio Apartments Driveway	4-Ln Major Arterial	40,000	9,300	0.233	A	4-Ln Major Arterial	5,400	0.135	A	0.098	N
Fenton Parkway	Del Rio Apartments Driveway to ~~New Street "I"~~Mission City Street "I"	4-Ln Major Arterial	40,000	9,300	0.233	A	Does Not Exist				0.233	N

Table 5.2 Roadway Segment Analysis – Four-Lane Via Las Cumbres Alternative

Roadway	Segment	Four-Lane Via Las Cumbres Alternative					Existing					
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI ?
Fenton Parkway	~~New Street "I"~~Mission City Street "I" to Camino Del Rio North	4-Ln Collector w/ TWLTL	30,000	13,800	0.460	B	Does Not Exist				0.460	N
Mission City Parkway	Camino Del Rio North to Camino Del Rio South	2-Ln Collector w/ TWLTL	15,000	10,800	0.720	D	2-Ln Collector w/ TWLTL	6,430	0.428	B	0.291	N
Northside Drive	Portofino Driveway to Friars Road	4-Ln Collector w/ TWLTL	30,000	5,000	0.167	A	4-Ln Collector w/ RM	6,590	0.220	A	-0.053	N
Northside Drive	Friars Road to Fenton Marketplace Driveway	4-Ln Collector w/ TWLTL	30,000	24,700	0.823	D	4-Ln Collector w/ RM	20,310	0.677	C	0.146	N
Northside Drive	Fenton Marketplace Driveway to Lowe's Frontage Road	Shopping Center Driveway[2]	22,500	19,700	0.876	**E**	3-Ln Collector w/ RM (2 NB, 1 SB)	15,890	0.706	D	0.170	**Y**
Mission Village Drive	Ronda Avenue to Friars Road WB Ramps	4-Ln Major Arterial	40,000	17,800	0.445	B	4-Ln Major Arterial	17,220	0.431	B	0.014	N
Mission Village Drive	Friars Road WB Ramps to Friars Road EB Ramps	4-Ln Major Arterial	40,000	30,500	0.763	D	4-Ln Major Arterial	13,660	0.342	A	0.421	N
Rancho Mission Road	Friars Road to San Diego Mission Road	2-Ln Collector w/ TWLTL	15,000	15,900	1.060	**F**	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	12,820	0.570	C	0.490	**Y**
Rancho Mission Road	San Diego Mission Road to Camino Del Rio North	2-Ln Collector w/ TWLTL	15,000	19,000	1.267	**F**	4-Ln Collector w/o TWLTL	9,580	0.639	C	0.628	**Y**
Santo Road	Northern Terminus to Friars Road	4-Ln Major Arterial	40,000	15,700	0.393	B	2-Ln Collector w/o TWLTL	6,360	0.796	D	-0.403	N
Riverdale Street	Zion Road to Friars Road	2-Ln Collector w/o TWLTL	8,000	2,200	0.275	A	2-Ln Collector w/ w/o TWLTL	2,770	0.346	B	-0.071	N
Riverdale Street	Friars Road to Vandever Avenue	2-Ln Collector w/o TWLTL	8,000	26,600	3.325	**F**	2-Ln Collector w/ w/o TWLTL	8,900	1.113	**F**	2.212	**Y**
Mission Gorge Road	Friars Road to Camino Del Rio North	4-Ln Collector w/ TWLTL	30,000	22,500	0.750	D	4-Ln Collector w/ TWLTL	14,710	0.490	C	0.260	N
Fairmount Avenue	Camino Del Rio North/I-8 WB Off-Ramp to I-8 EB Off-Ramp	4-Ln Major Arterial	40,000	52,900	1.323	**F**	4-Ln Major Arterial	40,210	1.005	**F**	0.318	**Y**
Fairmount Avenue	I-8 EB Off-Ramp to Camino Del Rio South	6-Ln Expressway	80,000	92,800	1.160	**F**	6-Ln Expressway	82,880	1.036	**F**	0.124	**Y**
Riverwalk Drive	West of Via Las Cumbres	2-Ln Collector w/ TWLTL	15,000	2,900	0.193	A	Does Not Exist				0.193	N
Riverwalk Drive	Via Las Cumbres to Fashion Valley Road	2-Ln Collector w/ TWLTL	15,000	3,000	0.200	A	Does Not Exist				0.200	N

Table 5.2 Roadway Segment Analysis – Four-Lane Via Las Cumbres Alternative

Roadway	Segment	Four-Lane Via Las Cumbres Alternative					Existing				Δ V/C	SI ?
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS		
Riverwalk Drive	Fashion Valley Road to Avenida Del Rio	2-Ln Collector w/o TWLTL	8,000	14,100	1.763	**F**	Does Not Exist				1.763	**Y**
~~Levi-Cushman Street "B"~~Riverwalk Street "U"	Via Las Cumbres to Fashion Valley Road	4-Ln Collector w/ TWLTL	30,000	13,300	0.443	B	Does Not Exist				0.443	N
Goshen St	Linda Vista Rd to Gaines St	2-Ln Collector w/o TWLTL	8,000	4,300	0.538	C	Not Analyzed				0.538	N
Goshen St	Gaines St to Friars Rd	2-Ln Collector w/o TWLTL	8,000	3,300	0.413	B	Not Analyzed				0.413	N
~~New Street "I"~~Mission City Street "I"	Mission City Parkway to Eastern End	2-Ln Collector w/ TWLTL	15,000	11,800	0.787	D	Does Not Exist				0.787	N
Gill Village Way	Friars Rd to Rio San Diego Dr	2-Ln Collector w/ TWLTL	15,000	5,700	0.380	B	Not Analyzed				0.380	N
Rio Bonito Way	Friars Rd to Rio San Diego Dr	2-Ln Collector w/ TWLTL	15,000	4,000	0.266	A	Not Analyzed				0.266	N

Notes:
Bold letter indicates substandard LOS E or F.
RM = Raised Median.
SM = Striped Median.
TWLTL = Two-Way Left-Turn Lane. Turn pocket(s) may be considered in place of TWLTL~~.~~
NFP = No Fronting Property.
SI = Significant Impact.
[1] Capacity for a 7-Ln Prime Arterial is calculated assuming that each additional lane above a 6-Ln Arterial adds 5,000 ADT for LOS A, 7,500 ADT for LOS B and 10,000 ADT for LOS C, D, and E.
[2] Shopping Center Driveway was analyzed as a 3-Ln Collector w/ TWLTL.

As shown in Table 5.2, based on the criteria documented in Section 2.3, the CPU land uses and Four-Lane Via Las Cumbres Alternative will result in a LOS of E or F along the following 39 roadway segments, and have a significant traffic impact to the 38 roadway segments in **bold**, when comparing to the existing conditions (Four-Lane Via Las Cumbres Alternative-to-Ground):

- **Sea World Drive, Mission Bay Parkway to Friars Road (LOS F, Δ in V/C 0.175)**
- **Friars Road, Avenida De Las Tiendas to Ulric Street/SR-163 SB Ramps (LOS F, Δ in V/C 0.35)**
- **Friars Road, Mission Village Drive to I-15 SB Ramps (LOS F, Δ in V/C 0.339)**
- **Friars Road, I-15 SB Ramps to I-15 NB Ramps (LOS F, Δ in V/C 0.459)**
- **Friars Road, I-15 NB Ramps to Rancho Mission Road (LOS F, Δ in V/C 0.266)**
- **Friars Road, Santo Road to Riverdale Street (LOS F, Δ in V/C 0.314)**
- **Rio San Diego Drive, River Run Drive to Fenton Parkway (LOS E, Δ in V/C 0.624)**
- **Hotel Circle North, I-8 WB Off-Ramp to Via Las Cumbres (LOS F, Δ in V/C 0.932)**
- Hotel Circle North, Via Las Cumbres to I-8 WB On-Ramp (LOS E, Δ in V/C -0.637) – not impacted
- **Camino De La Reina, Avenida Del Rio to Camino De La Siesta (LOS F, Δ in V/C 0.364)**
- **Camino Del Rio North, 1800' West of Ward Road to Ward Road (LOS E, Δ in V/C 0.078)**
- **Hotel Circle South, I-8 EB Off-Ramp to Via Las Cumbres (LOS E, Δ in V/C 0.114)**
- **Hotel Circle South, Via Las Cumbres to I-8 EB On-Ramp (LOS F, Δ in V/C 0.891)**
- **Camino Del Rio South, I-15 SB Ramps to I-15 NB Ramps (LOS F, Δ in V/C 0.814)**
- **Morena Boulevard, Tecolote Road to West Morena Boulevard (LOS F, Δ in V/C 0.021)**
- **Via Las Cumbres, Linda Vista Road to Friars Road (LOS F, Δ in V/C 0.143)**
- **Avenida Del Rio, Fashion Valley Parking Lot to Camino De La Reina (LOS F, Δ in V/C 0.624)**
- **Ulric Street, Fashion Hills Boulevard to 600' South of Fashion Hills Blvd (LOS F, Δ in V/C 0.361)**
- **Ulric Street, 600' South of Fashion Hills Boulevard to Friars Road (LOS F, Δ in V/C 0.292)**
- **Camino De La Siesta, Camino De La Reina to Camino Del Rio North (LOS F, Δ in V/C 0.532)**
- **Metropolitan Drive, Mission Valley Road to Murray Canyon Road (clockwise) (LOS F, Δ in V/C 0.839)**
- **Mission Center Road, Murray Ridge Road to 1200' West of Murray Ridge Road (LOS F, Δ in V/C 0.741)**
- **Mission Center Road, 1200' W of Murray Ridge Rd to 950' N of Mission Valley Rd (LOS F, Δ in V/C 0.361)**
- **Auto Circle, Camino Del Rio North to I-8 EB Ramps (LOS F, Δ in V/C 0.166)**
- **Murray Ridge Road, Mission Center Road to I-805 NB Ramps (LOS F, Δ in V/C 0.254)**
- **Murray Ridge Road, I-805 NB Ramps to I-805 SB Ramps (LOS F, Δ in V/C 0.820)**
- **Franklin Ridge Road, Via Alta to Civita Boulevard (LOS F, Δ in V/C 1.14)**
- **Qualcomm Way, Camino Del Rio North to I-8 WB Ramps (LOS F, Δ in V/C 0.565)**
- **Qualcomm Way, I-8 WB Ramps to I-8 EB Ramps (LOS F, Δ in V/C 0.334)**
- **Texas Street, 1400' North of Madison Ave to Madison Avenue (LOS F, Δ in V/C 0.171)**
- **Texas Street, Madison Avenue to Meade Ave (LOS F, Δ in V/C 0.214)**
- **Texas Street, Meade Ave to El Cajon Boulevard (LOS F, Δ in V/C 0.109)**
- **Northside Drive, Fenton Marketplace Driveway to Lowe's Frontage Road (LOS E, Δ in V/C 0.17)**
- **Rancho Mission Road, Friars Road to San Diego Mission Road (LOS F, Δ in V/C 0.49)**
- **Rancho Mission Road, San Diego Mission Road to Camino Del Rio North (LOS F, Δ in V/C 0.628)**
- **Riverdale Street, Friars Road to Vandever Avenue (LOS F, Δ in V/C 2.212)**
- **Fairmount Avenue, Camino Del Rio North/I-8 WB Off-Ramp to I-8 EB Off-Ramp (LOS F, Δ in V/C 0.318)**
- **Fairmount Avenue, I-8 EB Off-Ramp to Camino Del Rio South (LOS F, Δ in V/C 0.124)**
- **Riverwalk Drive, Fashion Valley Road to Avenida Del Rio (LOS F, Δ in V/C 1.763)**

5.2 Intersection Analysis

Several intersections are proposed to be modified to accommodate buildout of the roadway segment classifications. New intersection legs and twelve new intersections are recommended for the Mission Valley community.

New Intersections

Phyllis Place / Franklin Ridge Road
This intersection will be constructed to include 1 northbound left-turn lane, 1 eastbound through lane, 1 eastbound shared right-turn through lane, 2 westbound left-turn lanes, and 1 westbound through lane.

Via Alta / Franklin Ridge Road
This intersection will be constructed to include 1 northbound left-turn lane, 1 northbound shared right-turn through lane, 1 southbound left-turn lane, 1 southbound shared right-turn through lane, 1 eastbound left-turn lane, and 1 eastbound shared right-turn through lane.

Civita Boulevard / Qualcomm Way
This intersection will be constructed to include 1 northbound left-turn lane, 1 northbound right-turn lane with overlap phase, 1 eastbound through lane, 1 eastbound shared right-turn through lane, 1 westbound left-turn lane, and 1 westbound through lane.

Civita Boulevard / Franklin Ridge Road
This intersection will be constructed to include 1 northbound left-turn lane, 1 northbound through lane, 1 southbound shared right-turn through lane, 1 southbound right-turn lane, 1 eastbound left-turn lane, and 1 eastbound right-turn lane.

~~*New Street "I"*~~*Mission City Street "I" / Fenton Parkway*
This intersection will be constructed to include 2 northbound through lanes, 1 northbound shared right-turn through lane, 1 southbound left-turn lane, 2 southbound through lane, 1 westbound left-turn lane, and 1 westbound right-turn lane.

Riverwalk Drive / Via Las Cumbres
This intersection will be constructed to include 1 northbound through lane, 1 northbound shared right-turn through lane, 1 southbound left-turn lane, 2 southbound through lanes, 1 westbound left-turn lane, and 1 westbound right-turn lane

Riverwalk Drive / Fashion Valley Road
Reconstruct the west leg to provide 1 eastbound left-turn lane and 1 eastbound shared right-turn through lane. Restripe the east leg to provide 1 westbound left-turn lane and 1 westbound shared right-turn through lane.

~~*Levi Cushman Street "B"*~~*Riverwalk Street "U" / Via Las Cumbres*
This intersection will be constructed to include 1 northbound through lane, 1 northbound shared right-turn through lane, 1 southbound left-turn lane, 2 southbound through lanes, 1 westbound left-turn lane, and 1 westbound right-turn lane.

~~*Levi Cushman Street "B"*~~*Riverwalk Street "U" / Fashion Valley Road*
This intersection will be constructed to include 1 northbound left-turn lane, 2 northbound through lanes, 1 southbound through lane, 1 northbound shared right-turn through lane, 1 eastbound left-turn lane, and 1 eastbound right-turn lane.

Hotel Circle North / Via Las Cumbres
This intersection will be constructed to include 1 northbound left-turn lane, 2 northbound through lanes, 1 southbound through lane, 1 southbound shared right-turn through lane, 1 southbound right-turn lane, 1 westbound shared left-turn through lane, 1 westbound through lane, and 1 westbound right-turn lane. These improvements are consistent with the I-8 Corridor Study.

Hotel Circle South / Via Las Cumbres
This intersection will be constructed to include 1 northbound shared right-turn through lane, 2 southbound left-turn lanes. These improvements are consistent with the I-8 Corridor Study.

Hotel Circle South / Camino de La Reina
This intersection will be constructed to include 1 northbound through lane, 1 northbound right-turn lane, and 1 westbound right-turn lane. These improvements are consistent with the I-8 Corridor Study.

Additionally, the roadway network was evaluated to identify intersection locations, both existing and new intersections, that would benefit from the implementation of a roundabout or signalization. Traffic signal warrants were conducted at the intersections where signalization is recommended. Figure 4C-103 (CA) of the California Manual on Uniform Traffic Control Devices (MUTCD) 2014 Edition – Revision 3 (March 9, 2018) was utilized and all intersections would meet the warrants. Signal warrants worksheets are included in Appendix H. Further assessment of the viability of a roundabout should be considered and conducted at the project-level.

A summary of new intersections, new intersection legs, and major control modifications is presented in Table 5.3.

Table 5.3 Planned Intersection Modifications

No.	Intersection	Improvement	Proposed Control
5	Mission Center Road / Civita Boulevard	Split phase to protected (EW)	Signalized
10	Via Las Cumbres / Friars Road	Add south leg	Signalized
34	River Run Drive / Rio San Diego Drive	Single lane roundabout	Roundabout[1]
39	Avenida Del Rio / Camino De La Reina	Relocate intersection to the west (with bridge realignment)	Signalized
43	Mission City Parkway / Camino Del Rio North	Add north leg (bridge to Fenton Parkway)	Signalized
68	Phyllis Place / Franklin Ridge Road	New intersection	Signalized
69	Via Alta / Franklin Ridge Road	New intersection	Signalized
70	Civita Boulevard / Qualcomm Way	New intersection[2]	Signalized
71	Civita Boulevard / Franklin Ridge Road	New intersection[2]	Signalized
72	~~New Street "I"~~Mission City Street "I" / Fenton Parkway	New intersection	Signalized
73	Riverwalk Drive / Via Las Cumbres	New intersection	Signalized

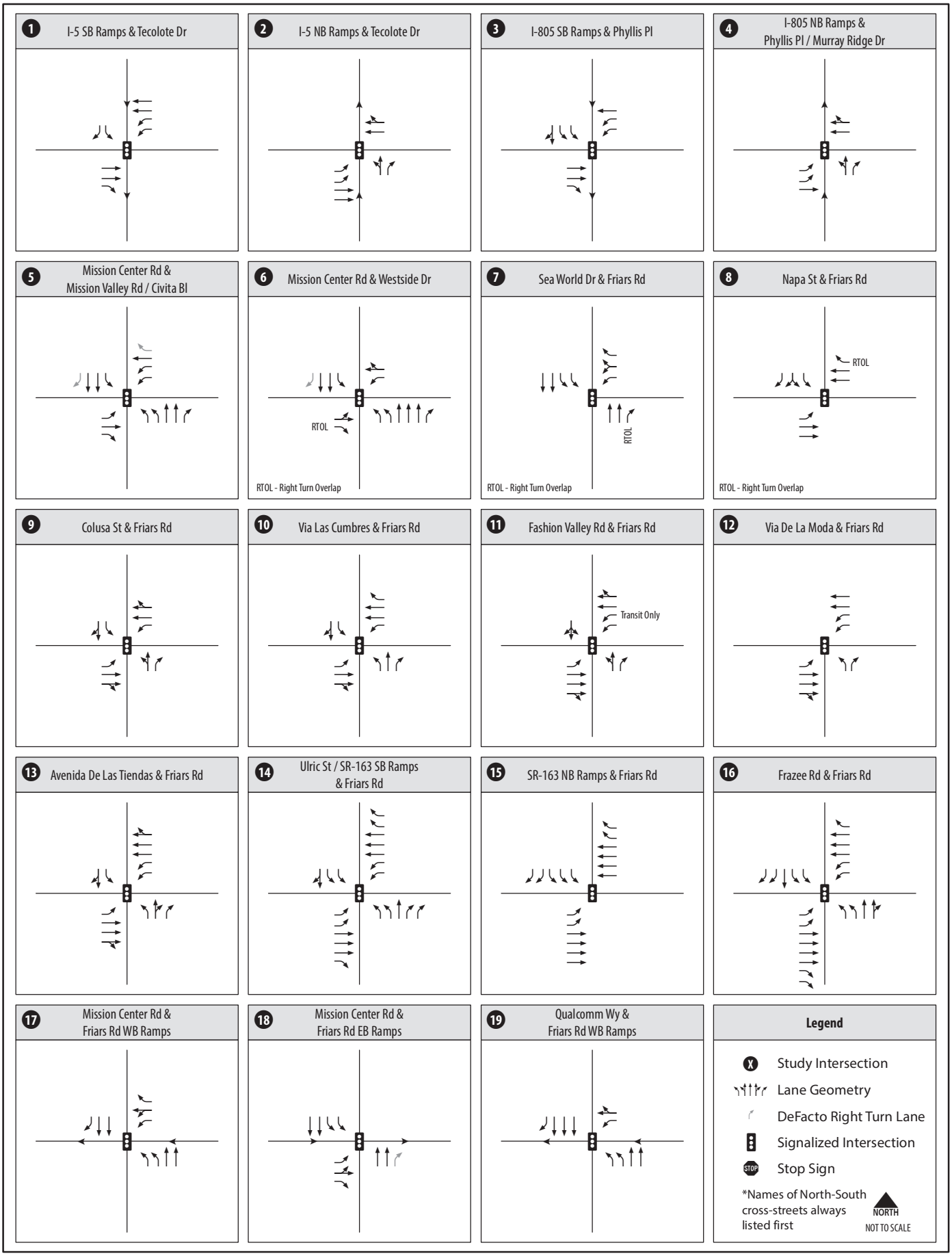
Table 5.3 Planned Intersection Modifications

No.	Intersection	Improvement	Proposed Control
74	Riverwalk Drive / Fashion Valley Road	Modify to accommodate Riverwalk Drive extension	Signalized
75	Avenida Del Rio / Fashion Valley Mall Driveway	Relocate intersection to the west (with bridge realignment)	Signalized
76	~~Levi Cushman Street "B"~~Riverwalk Street "U" / Via Las Cumbres	New intersection	Signalized
77	~~Levi Cushman Street "B"~~Riverwalk Street "U" / Fashion Valley Road	New intersection	Signalized
78	Hotel Circle North / Via Las Cumbres	New intersection	Signalized
79	Hotel Circle South / Via Las Cumbres	New intersection	Signalized
80	Hotel Circle South / Camino De La Reina	Convert to accommodate ne-Way Collector/cycle track	Signalized
--	Frazee Road / Murray Canyon Road	Add north leg & signalize	Signalized

Notes:
[1] High level feasibility assessment was conducted; however, a more detailed operational and feasibility analysis will be needed at the project-level.
[2] Intersection implemented since Existing Conditions Report.

Four-Lane Via Las Cumbres Alternative intersection geometrics are presented in **Figure 5-3**, while forecast AM and PM peak hour turning movements are displayed in **Figure 5-4**, and midday turning movements in **Figure 5-5**.

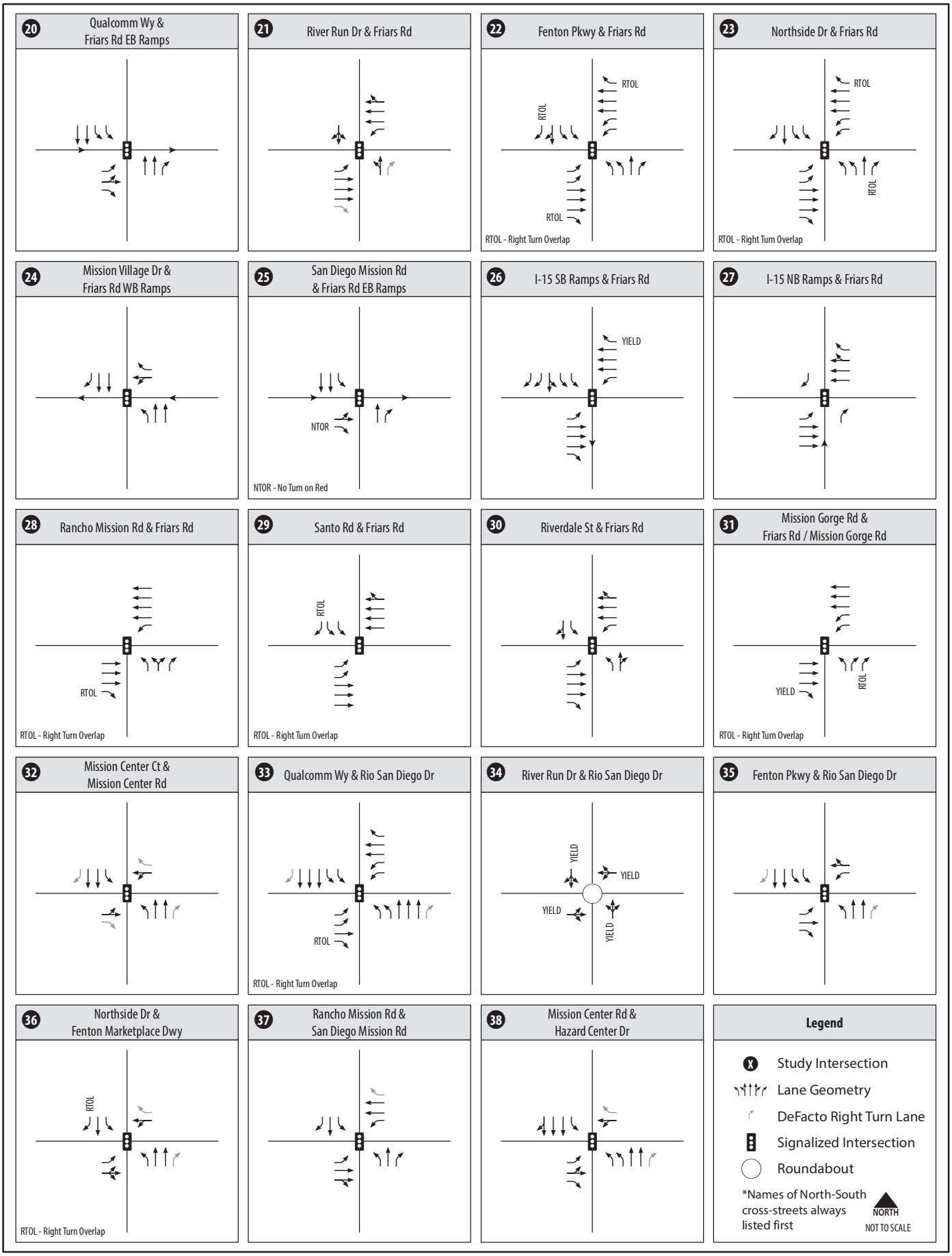
Figure 5-6 presents AM and PM peak hour intersection LOS analysis results, while midday results are displayed in **Figure 5-7**. AM and PM peak hour and midday LOS analysis results, as well as any potential traffic impacts associated with the Four-Lane Via Las Cumbres Alternative when comparing to the existing conditions are provided in **Table 5.4**. Signal timing was assumed to be optimized under Four-Lane Via Las Cumbres Alternative conditions. Intersection LOS calculation worksheets are provided in **Appendix I**.



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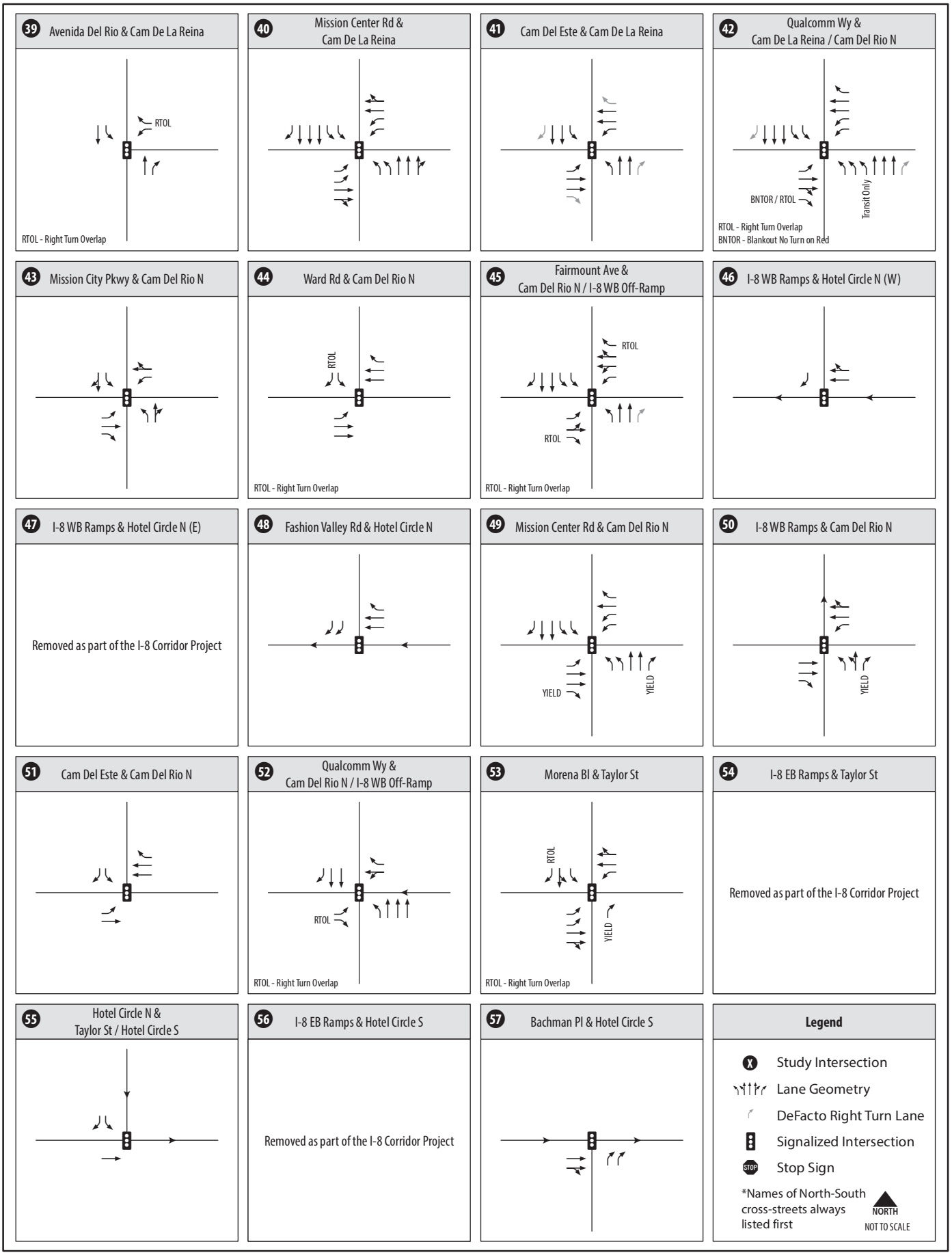
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Figure 5-3
Intersection Geometrics -
Four-Lane Via Las Cumbres Alternative (Intersections 1-19)



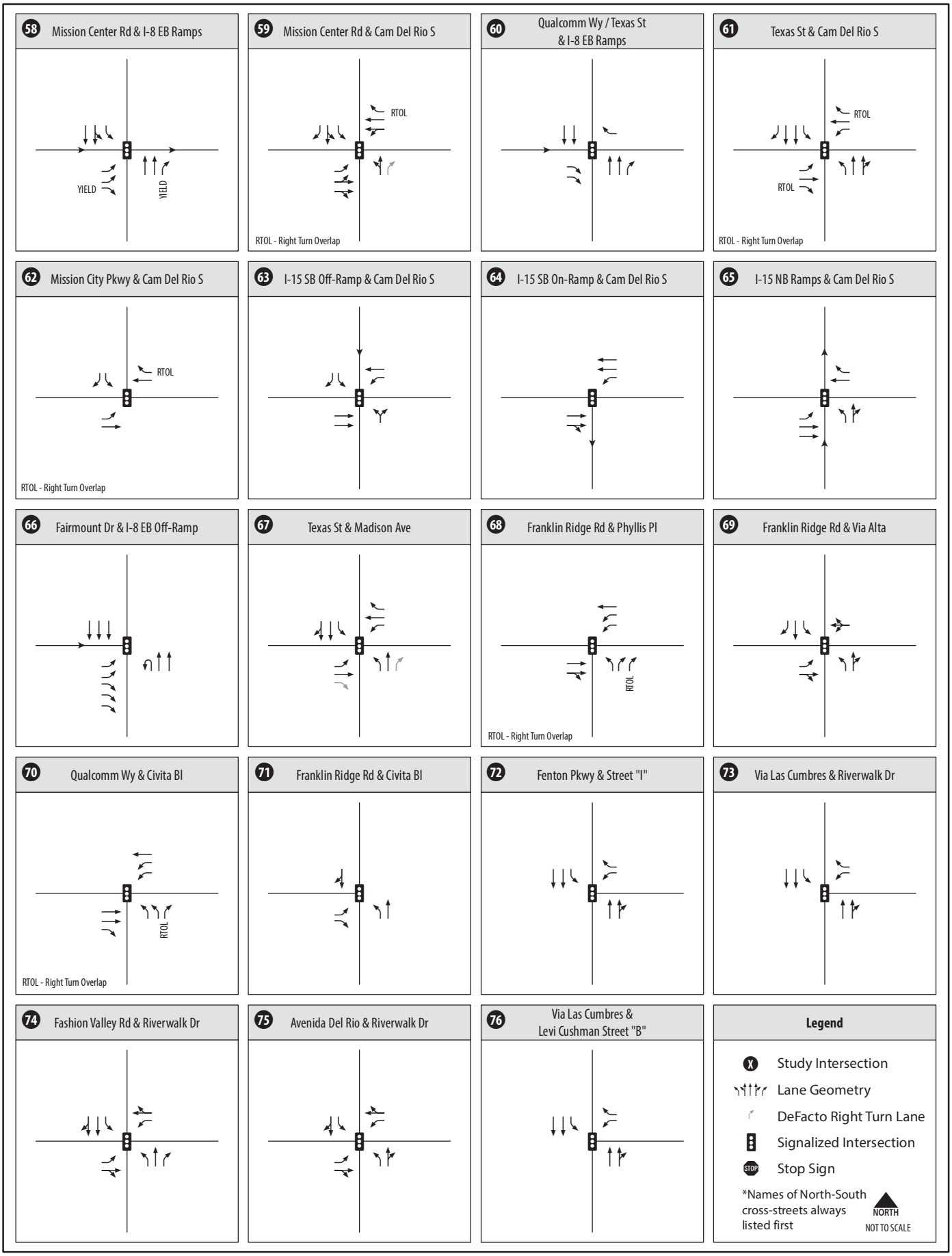
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Figure 5-3
Intersection Geometrics -
Four-Lane Via Las Cumbres Alternative (Intersections 20-38)



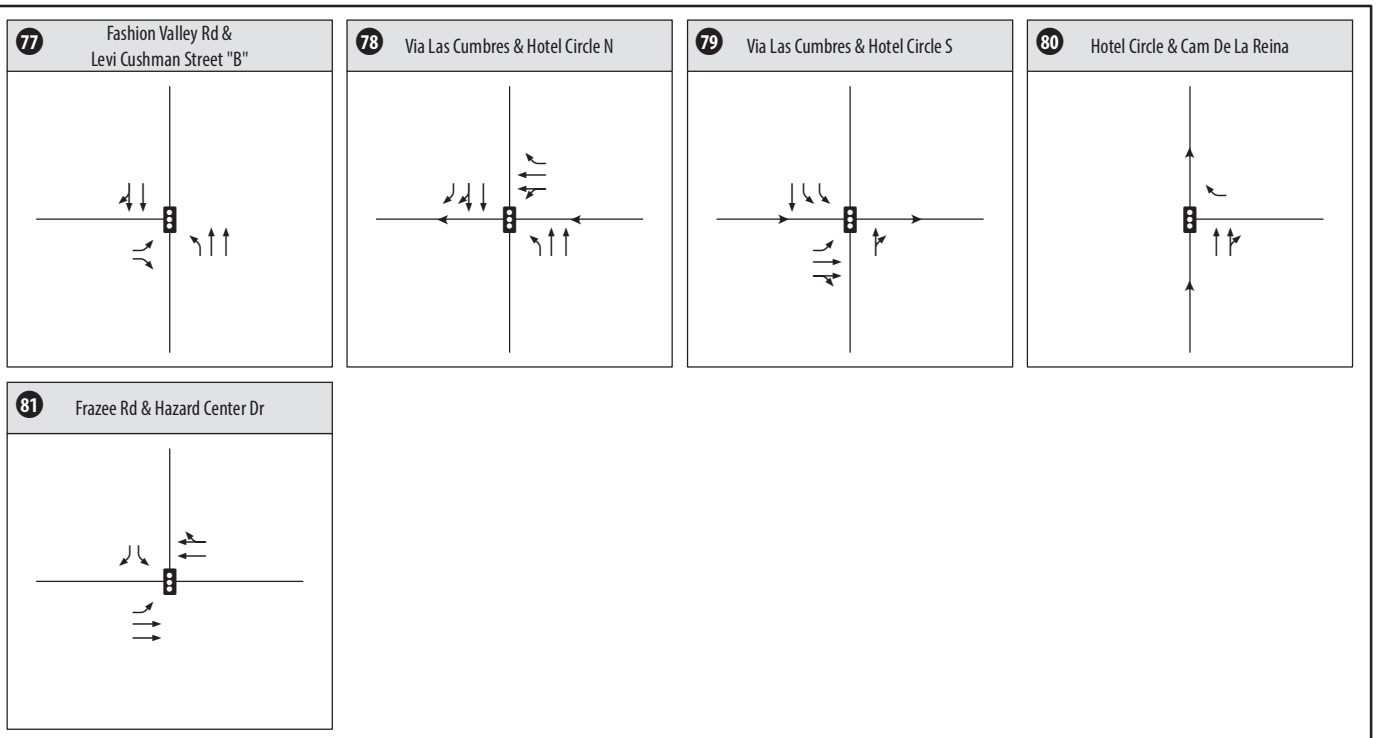
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Figure 5-3
Intersection Geometrics -
Four-Lane Via Las Cumbres Alternative (Intersections 39-57)



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Figure 5-3
Intersection Geometrics -
Four-Lane Via Las Cumbres Alternative (Intersections 58-76)



Legend

- Study Intersection
- Lane Geometry
- DeFacto Right Turn Lane
- Signalized Intersection
- Stop Sign

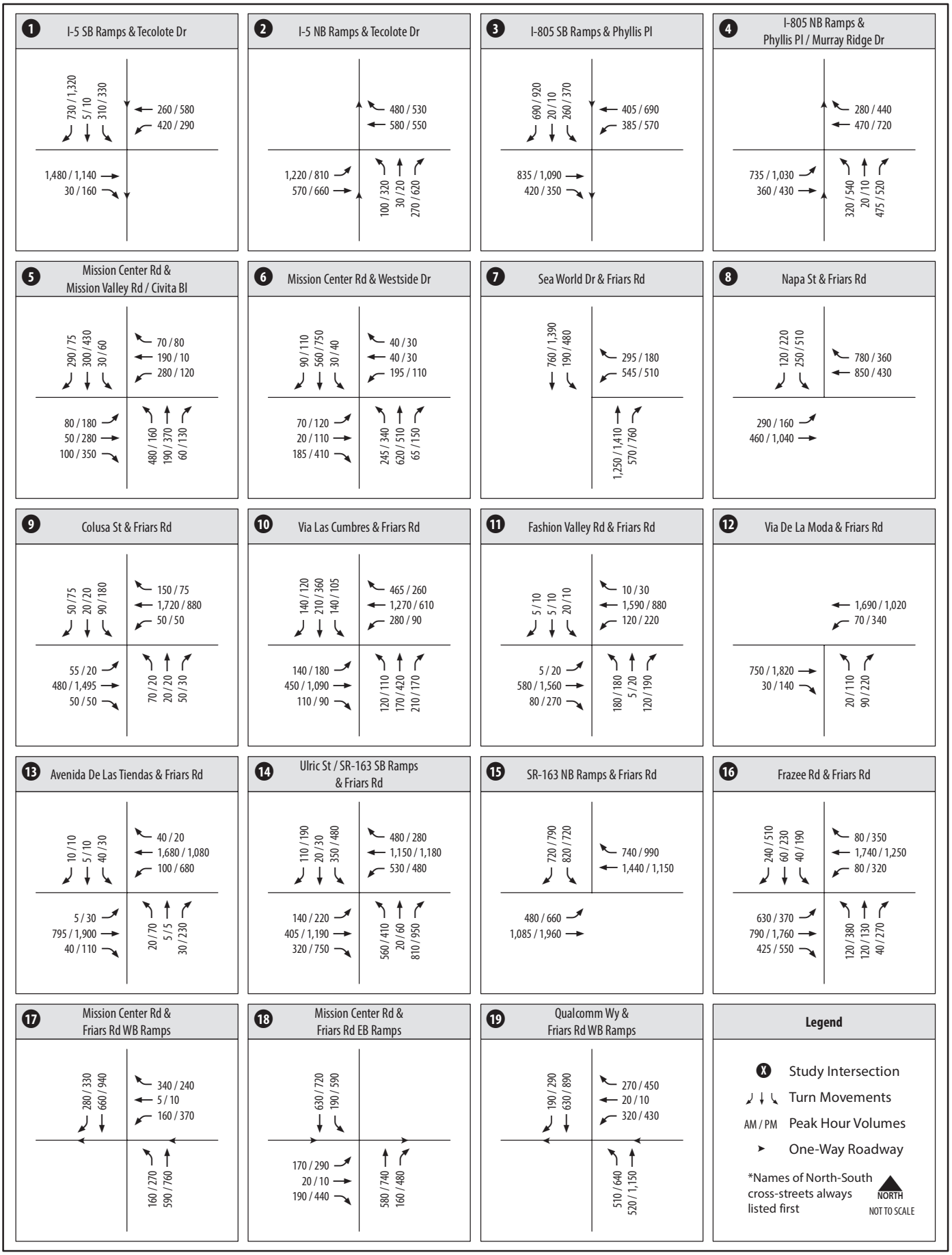
*Names of North-South cross-streets always listed first

NORTH

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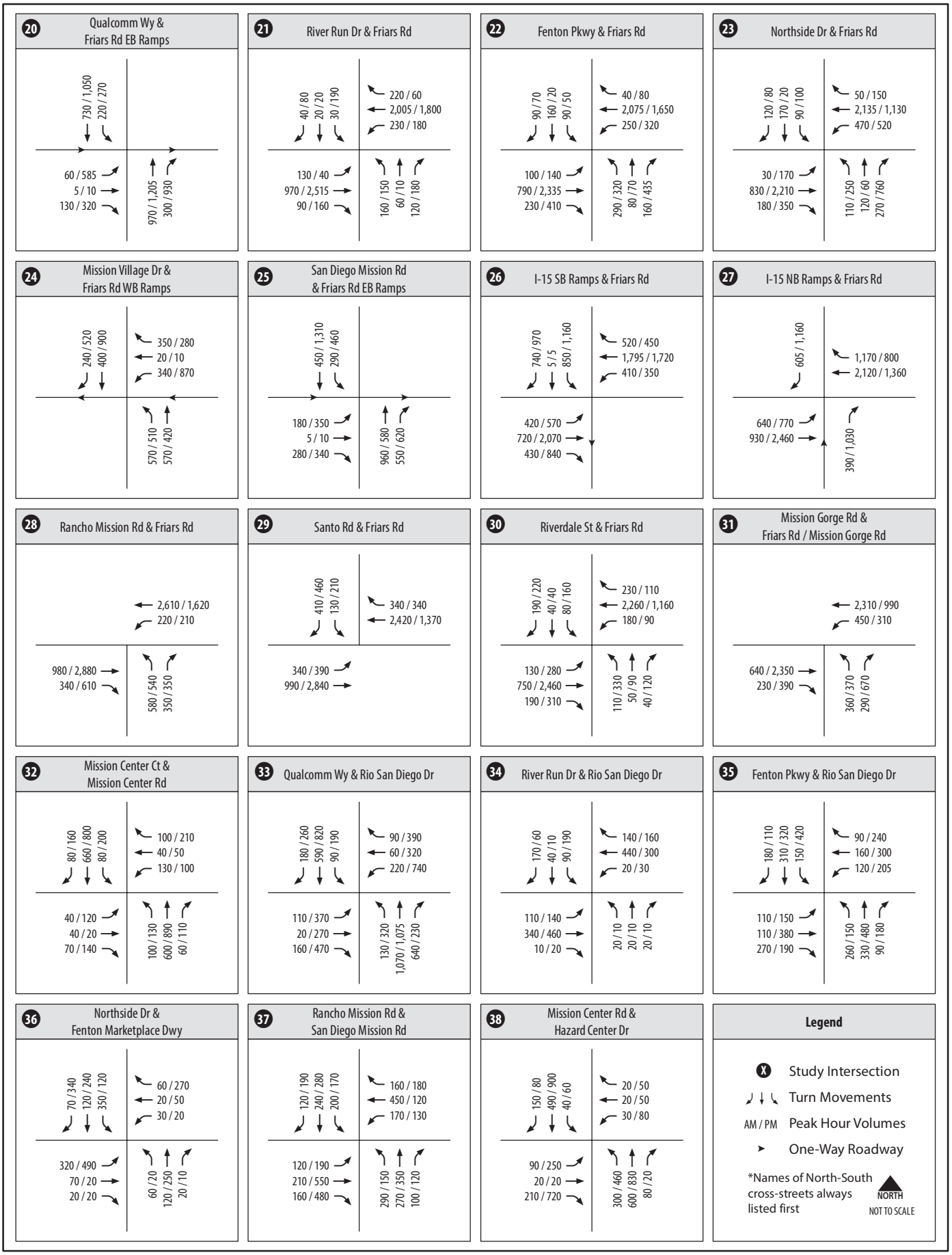
Figure 5-3
Intersection Geometrics -
Four-Lane Via Las Cumbres Alternative (Intersections 77-81)



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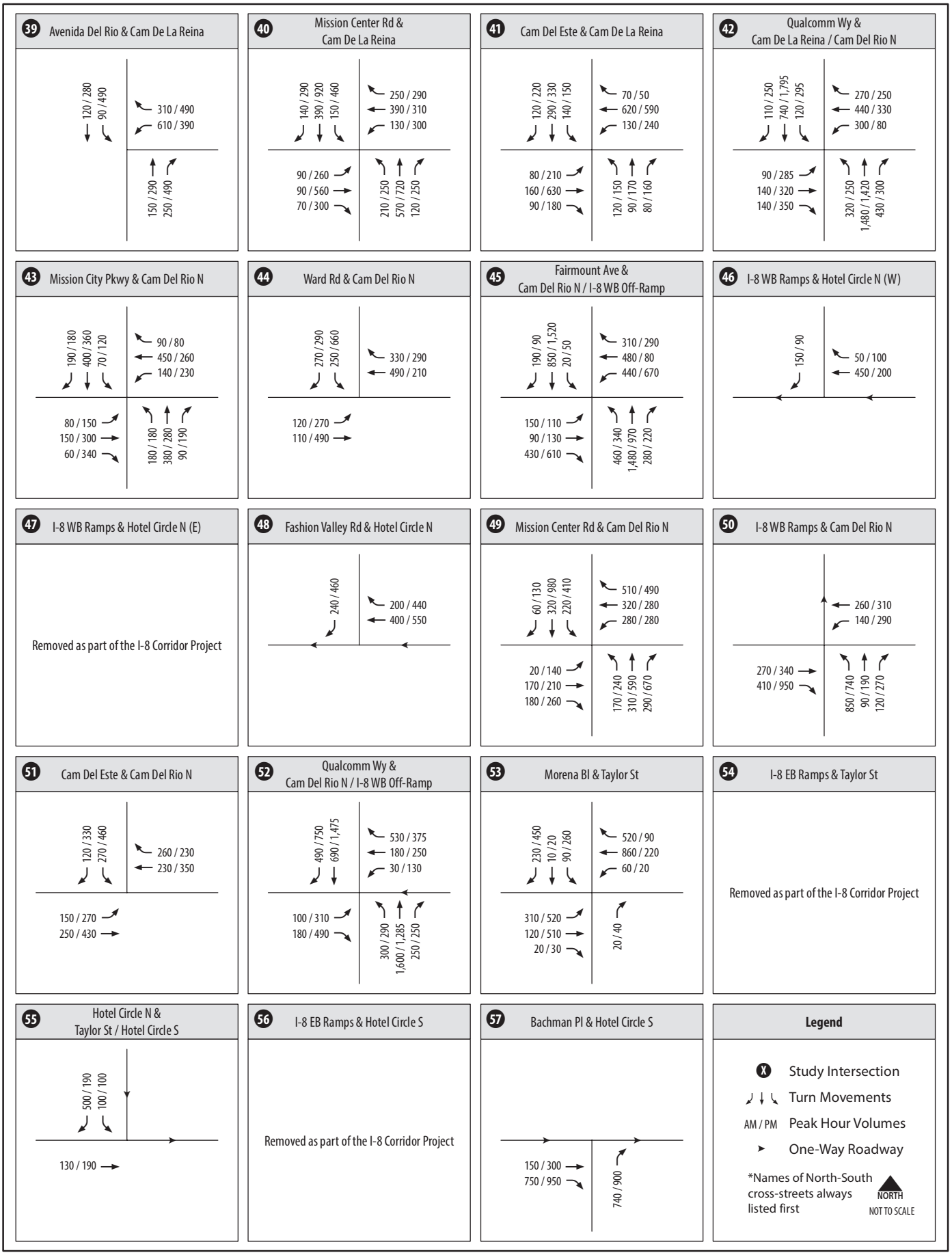
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Figure 5-4
AM/PM Peak Hour Intersection Volumes - Four-Lane Via Las Cumbres Alternative (Intersections 1-19)



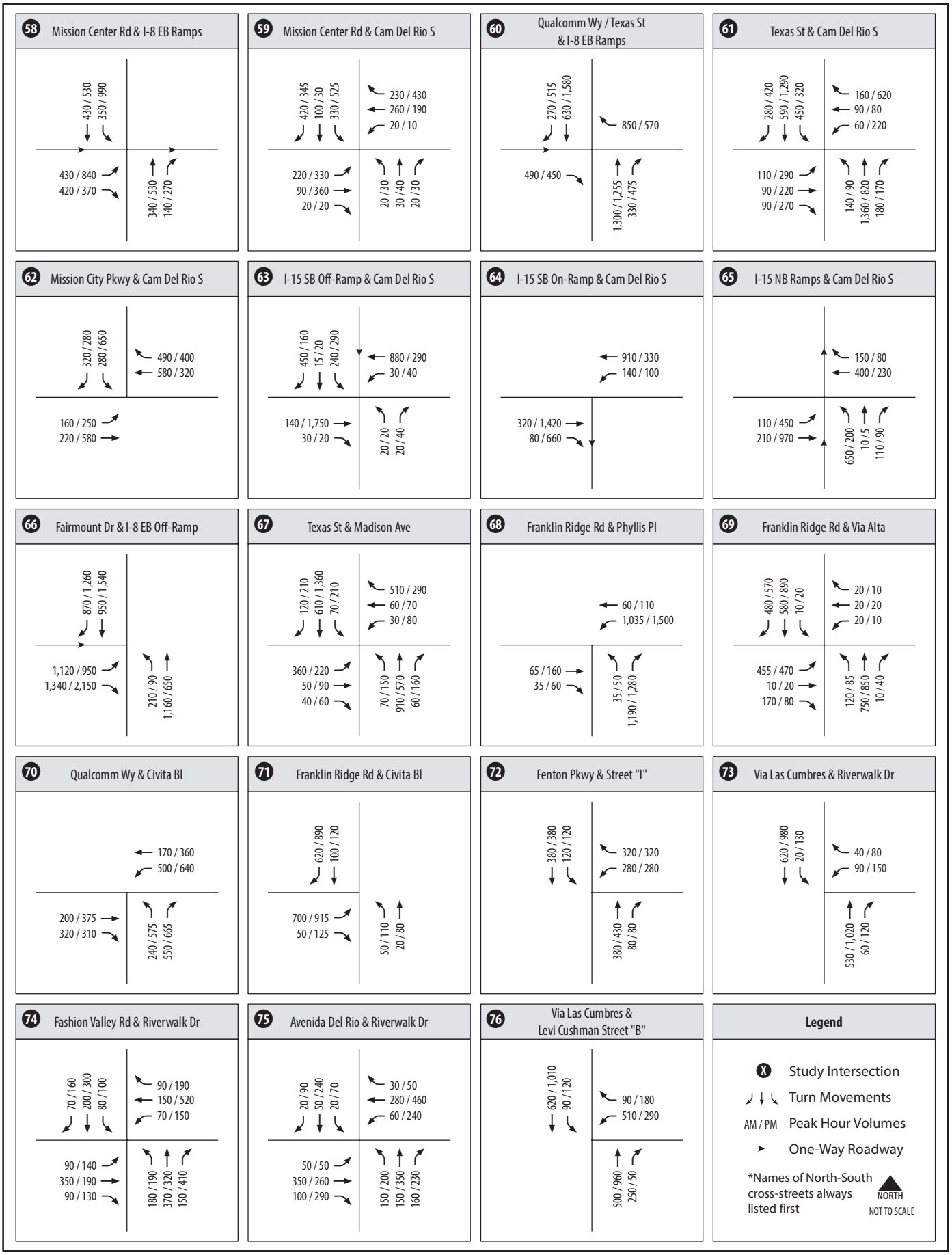
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Figure 5-4
AM/PM Peak Hour Intersection Volumes -
Four-Lane Via Las Cumbres Alternative (Intersections 20-38)



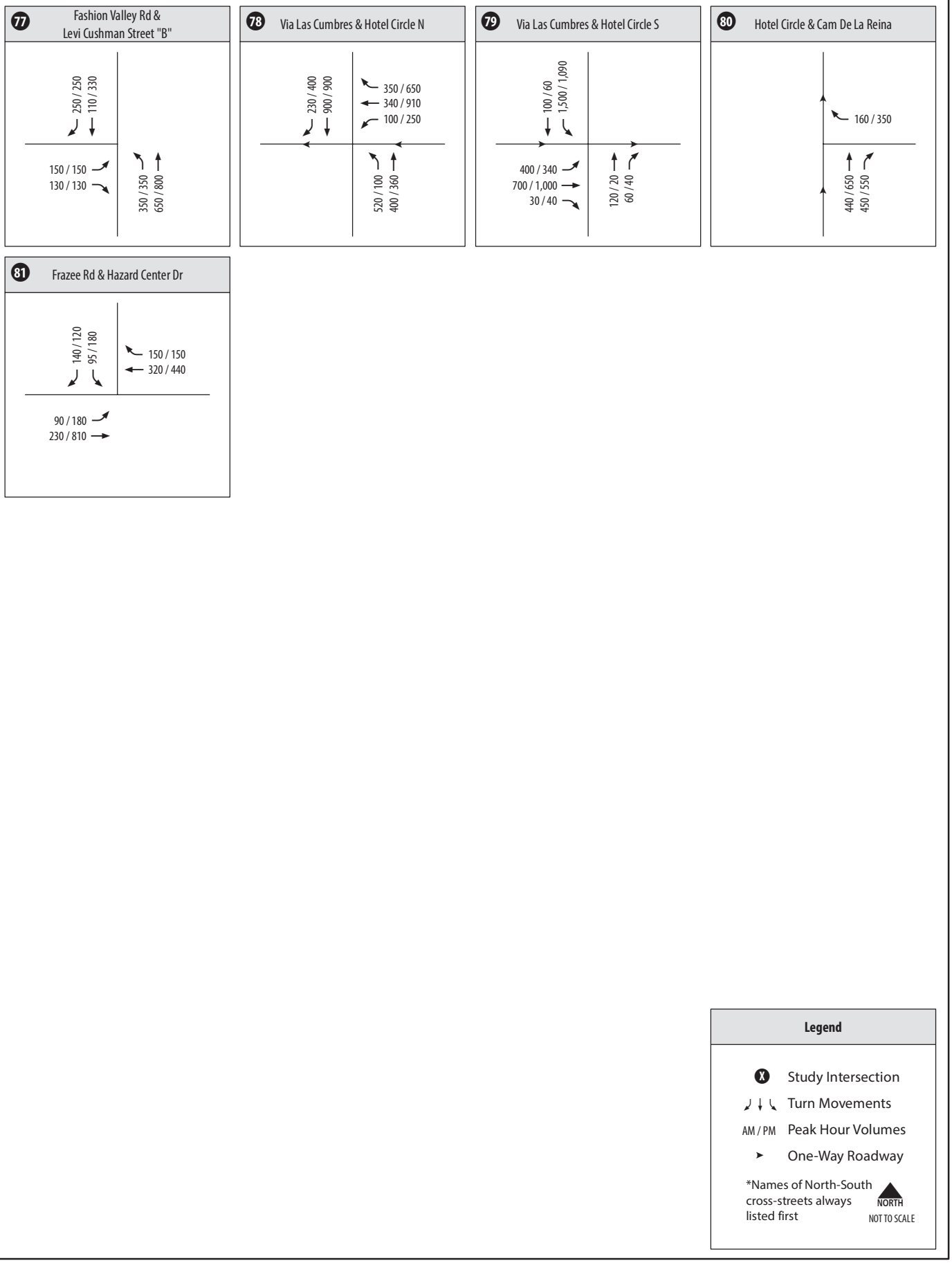
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Figure 5-4
AM/PM Peak Hour Intersection Volumes - Four-Lane Via Las Cumbres Alternative (Intersections 39-57)



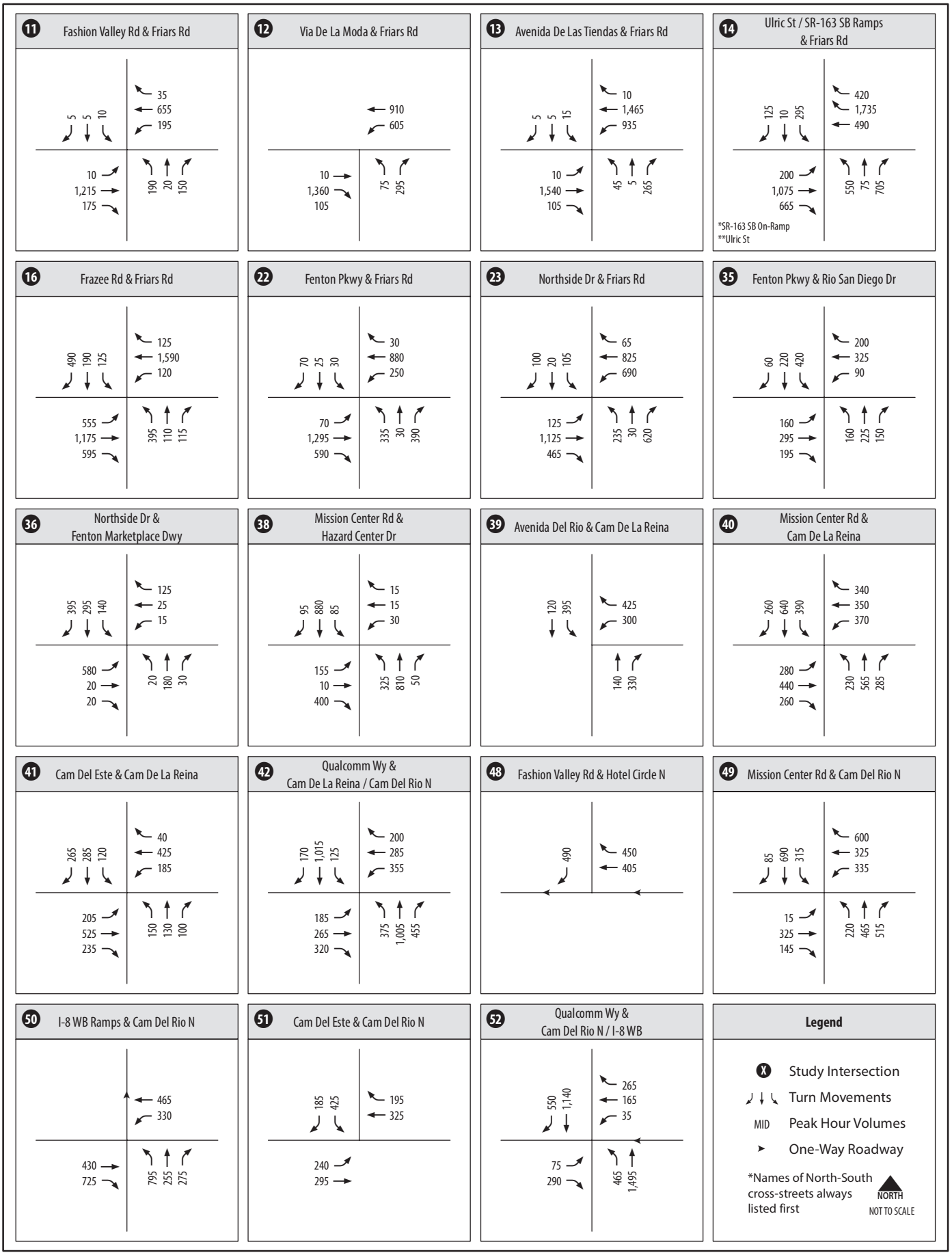
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Figure 5-4
AM/PM Peak Hour Intersection Volumes -
Four-Lane Via Las Cumbres Alternative (Intersections 58-76)



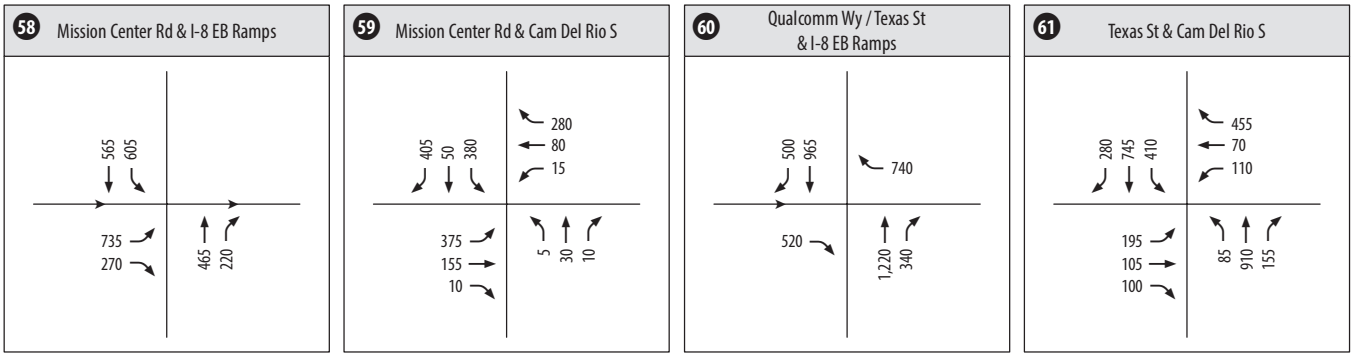
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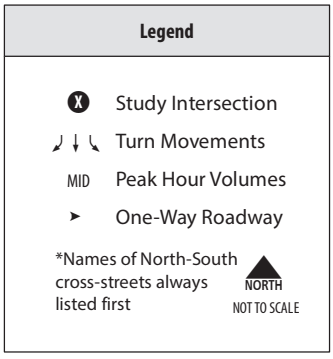
Figure 5-4
AM/PM Peak Hour Intersection Volumes -
Four-Lane Via Las Cumbres Alternative (Intersections 77-81)



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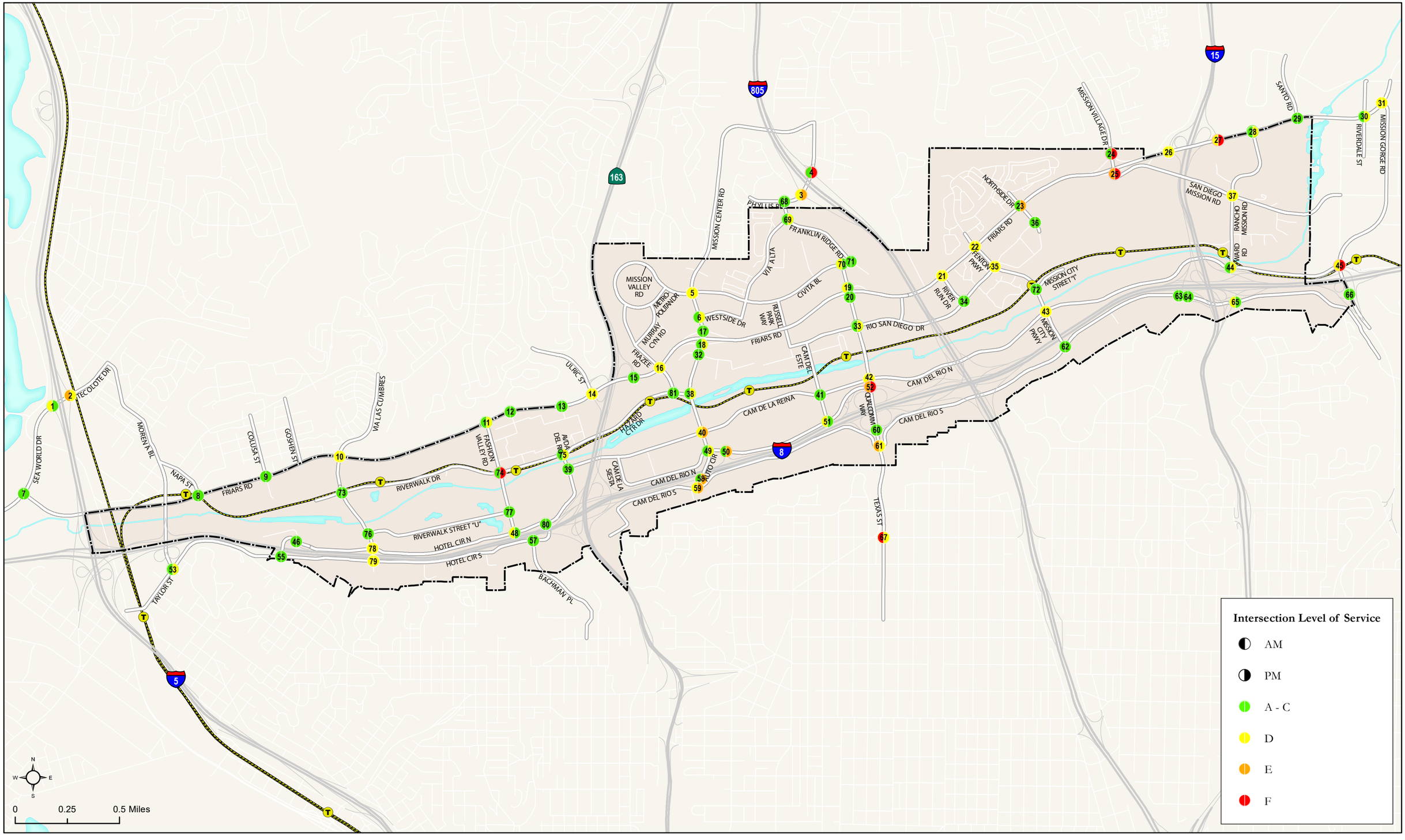
Figure 5-5
Midday Peak Hour Intersection Volumes - Four-Lane Via Las Cumbres Alternative
(Intersections 11-14, 16, 22, 23, 35, 36, 38-42 & 48-52)





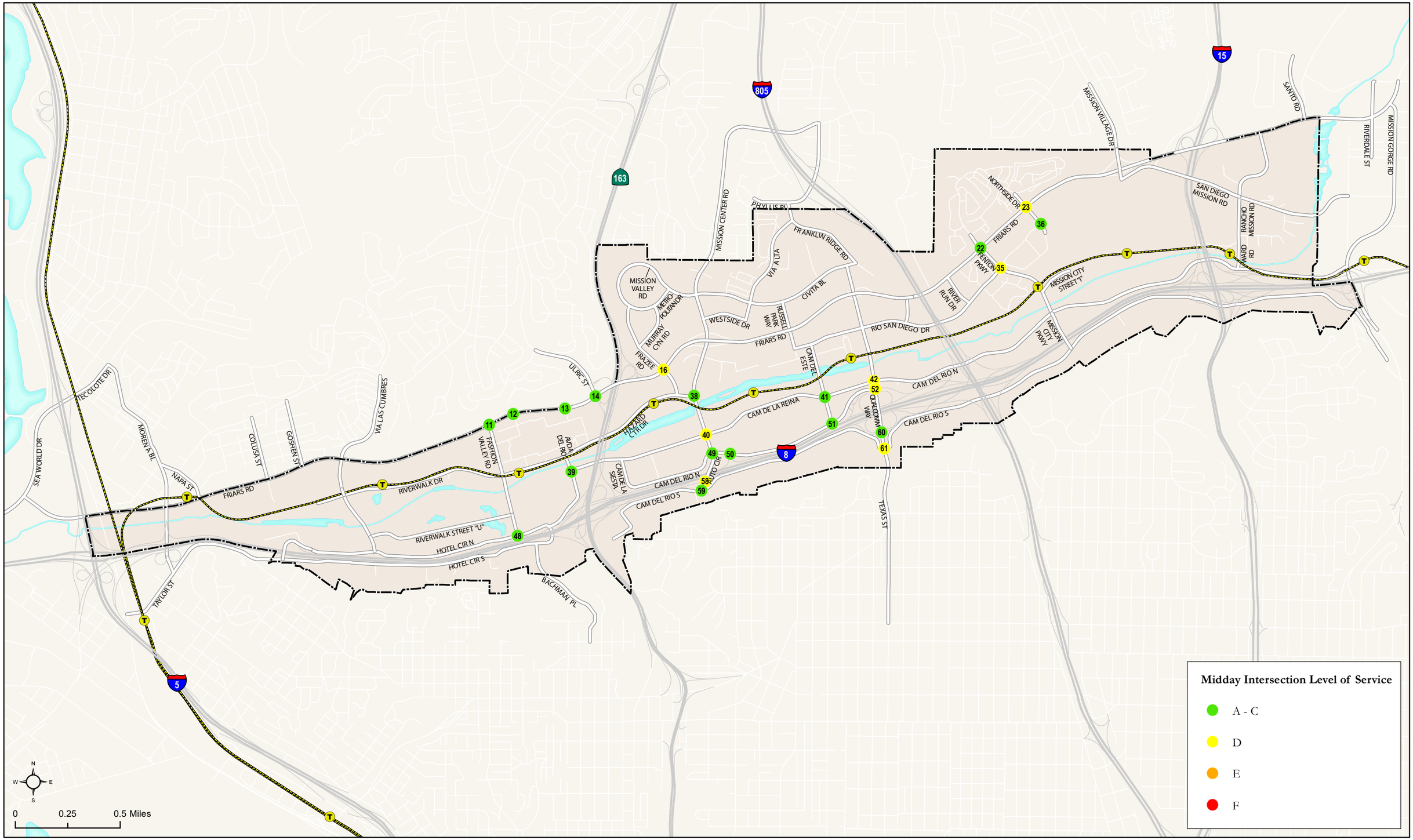
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Figure 5-5
Midday Peak Hour Intersection Volumes -
Four-Lane Via Las Cumbres Alternative (Intersections 58-61)



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Figure 5-6
AM/PM Peak Hour Intersection Level of Service - Four-Lane Via Las Cumbres Alternative



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Figure 5-7
Midday Intersection Level of Service - Four-Lane Via Las Cumbres Alternative

Table 5.4 Peak Hour Intersection LOS and Delay Results – Four-Lane Via Las Cumbres Alternative

Intersection	Control	Four-Lane Via Las Cumbres Alternative						Existing			SI ?
		AM Peak		PM Peak		Midday Peak		AM / PM / Midday	AM / PM / Midday	AM / PM / Midday	
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Δ Avg. Delay (sec.)	
1: I-5 SB Ramps / Sea World Drive	Signal	36.1	D	33.9	C	-	-	33.1 / 27.4 / -	C / C / -	3.0 / 6.5 / -	N
2: I-5 NB Ramps / Sea World Drive/Tecolote Road	Signal	59.6	**E**	46.0	D	-	-	58.6 / 44.3 / -	**E** / D / -	1.0 / 1.7 / -	N
3: I-805 SB Ramps / Phyllis Place	Signal	48.0	D	69.5	**E**	-	-	20.2 / 20.1 / -	C / C / -	27.8 / 49.4 / -	**Y**
4: I-805 NB Ramps / Phyllis Place	Signal	28.7	C	84.4	**F**	-	-	14.7 / 10.0 / -	B / B / -	14.0 / 74.4 / -	**Y**
5: Mission Center Road / Mission Valley Road/Civita Boulevard	Signal	53.2	D	45.1	D	-	-	31.1 / 78.9 / -	C / **E** / -	22.1 / -33.8 / -	N
6: Mission Center Road / Westside Drive	Signal	26.9	C	54.3	D	-	-	20.9 / 15.6 / -	C / B / -	6.0 / 38.7 / -	N
7: Sea World Drive / Friars Road	Signal	17.9	B	23.7	C	-	-	15.9 / 19.9 / -	B / B / -	2.0 / 3.8 / -	N
8: Napa Street / Friars Road	Signal	26.1	C	20.1	C	-	-	12.0 / 7.7 / -	B / A / -	14.1 / 12.4 / -	N
9: Colusa Street / Friars Road	Signal	32.3	C	21.2	C	-	-	15.0 / 16.3 / -	B / B / -	17.3 / 4.9 / -	N
10: Via Las Cumbres / Friars Road	Signal	54.6	D	52.6	D	-	-	16.5 / 20.8 / -	B / C / -	38.1 / 31.8 / -	N
11: Fashion Valley Road / Friars Road	Signal	16.0	B	50.6	D	25.3	C	22.0 / 51.3 / 12.0	C / D / B	-6.0 / -0.7 / 13.3	N
12: Via De La Moda / Friars Road	Signal	5.0	A	15.9	B	33.2	C	2.5 / 6.7 / 10.1	A / A / B	2.5 / 9.2 / 23.1	N
13: Avenida De Las Tiendas / Friars Road	Signal	19.6	B	19.7	B	31.2	C	5.4 / 28.0 / 12.0	A / C / B	14.2 / -8.3 / 19.2	N
14: Ulric Street/SR-163 SB Ramps / Friars Road	Signal	43.8	D	52.0	D	34.2	C	35.0 / 39.9 / 22.4	C / D / C	8.8 / 12.1 / 11.8	N
15: SR-163 NB Ramps / Friars Road	Signal	27.1	C	17.2	B	-	-	11.3 / 12.2 / -	B / B / -	15.8 / 5.0 / -	N
16: Frazee Road / Friars Road	Signal	46.3	D	40.5	D	39.5	D	37.1 / 66.5 / 38.4	D / **E** / D	9.2 / -26.0 / 1.1	N

Table 5.4 Peak Hour Intersection LOS and Delay Results – Four-Lane Via Las Cumbres Alternative

Intersection	Control	Four-Lane Via Las Cumbres Alternative						Existing			SI ?
		AM Peak		PM Peak		Midday Peak		AM / PM / Midday	AM / PM / Midday	AM / PM / Midday	
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Δ Avg. Delay (sec.)	
17: Mission Center Road / Friars Road WB Ramps	Signal	20.3	C	33.1	C	-	-	12.4 / 10.9 / -	B / B / -	7.9 / 22.2 / -	N
18: Mission Center Road / Friars Road EB Ramps	Signal	22.7	C	53.8	D	-	-	20.5 / 44.0 / -	C / D / -	2.2 / 9.8 / -	N
19: Qualcomm Way / Friars Road WB Ramps	Signal	46.3	D	31.5	C	-	-	12.4 / 13.1 / -	B / B / -	33.9 / 18.4 / -	N
20: Qualcomm Way / Friars Road EB Ramps	Signal	10.1	B	34.2	C	-	-	7.2 / 8.8 / -	A / A / -	2.9 / 25.4 / -	N
21: River Run Drive / Friars Road	Signal	46.6	D	47.5	D	-	-	18.6 / 21.0 / -	B / C / -	28.0 / 26.5 / -	N
22: Fenton Parkway / Friars Road	Signal	44.4	D	54.3	D	34.1	C	26.3 / 21.2 / 22.8	C / C / C	18.1 / 33.1 / 11.3	N
23: Northside Drive / Friars Road	Signal	31.5	C	56.4	**E**	44.1	D	29.2 / 55.5 / 42.2	C / **E** / D	2.3 / 0.9 / 1.9	N
24: Mission Village Drive / Friars Road WB Ramps	Signal	29.5	C	135.6	**F**	-	-	9.2 / 38.1 / -	A / D / -	20.3 / 97.5 / -	**Y**
25: Mission Village Drive / Friars Road EB Ramps	Signal	70.6	**E**	90.2	**F**	-	-	44.5 / 52.5 / -	D / D / -	26.1 / 37.7 / -	**Y**
26: I-15 SB Ramps / Friars Road	Signal	48.2	D	43.4	D	-	-	38.1 / 57.5 / -	D / **E** / -	10.1 / -14.1 / -	N
27: I-15 NB Ramps / Friars Road	Signal	49.9	D	88.3	**F**	-	-	5.2 / 4.8 / -	A / A / -	44.7 / 83.5 / -	**Y**
28: Rancho Mission Road / Friars Road	Signal	24.6	C	38.8	D	-	-	21.5 / 34.4 / -	C / C / -	3.1 / 4.4 / -	N
29: Santo Road / Friars Road	Signal	23.3	C	26.2	C	-	-	13.0 / 13.0 / -	B / B / -	10.3 / 13.2 / -	N
30: Riverdale Street / Friars Road	Signal	31.4	C	50.4	D	-	-	29.4 / 26.2 / -	C / C / -	2.0 / 24.2 / -	N
31: Mission Gorge Road / Friars Road	Signal	42.2	D	37.1	D	-	-	39.8 / 33.4 / -	D / C / -	2.4 / 3.7 / -	N

Table 5.4 Peak Hour Intersection LOS and Delay Results – Four-Lane Via Las Cumbres Alternative

Intersection	Control	Four-Lane Via Las Cumbres Alternative						Existing			SI?
		AM Peak		PM Peak		Midday Peak		AM / PM / Midday	AM / PM / Midday	AM / PM / Midday	
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Δ Avg. Delay (sec.)	
32: Mission Center Road / Mission Center Court	Signal	29.5	C	33.9	C	-	-	25.3 / 24.8 / -	C / C / -	4.2 / 9.1 / -	N
33: Qualcomm Way / Rio San Diego Drive	Signal	33.8	C	54.0	D	-	-	14.6 / 30.4 / -	B / C / -	19.2 / 23.6 / -	N
34: River Run Drive / Rio San Diego Drive	Roundabout	12.5	B	13.5	B	-	-	9.5 / 10.4 / -	A / B / -	3.0 / 3.1 / -	N
35: Fenton Parkway / Rio San Diego Drive	Signal	36.4	D	49.2	D	41.8	D	16.0 / 35.7 / 32.3	B / D / C	20.4 / 13.5 / 9.5	N
36: Northside Drive / Rio San Diego Drive	Signal	27.5	C	24.1	C	21.7	C	19.0 / 16.2 / 21.2	B / B / C	8.5 / 7.9 / 0.5	N
37: Rancho Mission Road / San Diego Mission Road	Signal	39.6	D	53.3	D	-	-	27.3 / 31.6 / -	C / C / -	12.3 / 21.7 / -	N
38: Mission Center Road / Hazard Center Drive	Signal	21.5	C	41.7	D	34.2	C	12.9 / 33.1 / 17.1	B / C / B	8.6 / 8.6 / 17.1	N
39: Avenida Del Rio / Camino De La Reina	Signal	14.8	B	29.4	C	19.5	B	7.5 / 11.2 / 9.8	A / B / A	7.3 / 18.2 / 9.7	N
40: Mission Center Road / Camino De La Reina	Signal	38.4	D	79.3	**E**	53.2	D	21.9 / 42.2 / 35.6	C / D / D	16.5 / 37.1 / 17.6	**Y**
41: Camino Del Este / Camino De La Reina	Signal	22.2	C	29.5	C	27.5	C	10.7 / 17.6 / 20.5	B / B / C	11.5 / 11.9 / 7.0	N
42: Qualcomm Way / Camino De La Reina	Signal	50.6	D	54.2	D	46.6	D	16.7 / 37.8 / 41.4	B / D / D	33.9 / 16.4 / 5.2	N
43: Mission City Parkway / Camino Del Rio North	Signal	51.9	D	50.8	D	-	-	13.3 / 9.4 / -	B / A / -	38.6 / 41.4 / -	N
44: Ward Road / Camino Del Rio North	Signal	19.2	B	44.6	D	-	-	12.0 / 14.6 / -	B / B / -	7.2 / 30.0 / -	N

Table 5.4 Peak Hour Intersection LOS and Delay Results – Four-Lane Via Las Cumbres Alternative

Intersection	Control	Four-Lane Via Las Cumbres Alternative						Existing			SI?
		AM Peak		PM Peak		Midday Peak		AM / PM / Midday	AM / PM / Midday	AM / PM / Midday	
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Δ Avg. Delay (sec.)	
45: Fairmount Avenue / Camino Del Rio North/I-8 WB Off-Ramp	Signal	51.8	D	85.2	**F**	-	-	51.4 / 72.7 / -	D / **E** / -	0.4 / 12.5 / -	**Y**
46: I-8 WB Ramps / Hotel Circle North (W)	Signal	1.3	A	3.7	A	-	-	6.6 / 6.6 / -	A / A / -	-5.3 / -2.9 / -	N
47: I-8 WB Ramps/Handlery Driveway / Hotel Circle North (E)		*Intersection removed*						36.6 / 41.0 / -	**E** / **E** / -	N/A	N
48: Fashion Valley Road / Hotel Circle North	Signal	35.1	D	27.0	C	20.8	C	10.0 / 16.2 / 11.5	A / B / B	25.1 / 10.8 / 9.3	N
49: Mission Center Road / Camino Del Rio North	Signal	33.7	C	51.6	D	29.9	C	16.3 / 43.1 / 21.0	B / D / C	17.4 / 8.5 / 8.9	N
50: I-8 WB Ramps/Mission Valley Mall Driveway / Camino Del Rio North	Signal	20.0	B	55.9	**E**	33.6	C	19.8 / 53.7 / 38.8	B / D / D	0.2 / 2.2 / -5.2	**Y**
51: Camino Del Este / Camino Del Rio North	Signal	38.7	D	34.1	C	29.6	C	18.5 / 33.8 / 29.1	B / C / C	20.2 / 0.3 / 0.5	N
52: Qualcomm Way / Camino Del Rio N/I-8 WB Ramps	Signal	58.5	**E**	93.9	**F**	45.2	D	12.4 / 17.7 / 15.7	B / B / B	46.1 / 76.2 / 29.5	**Y**
53: Morena Boulevard / Taylor Street	Signal	34.5	C	53.0	D	-	-	29.8 / 18.8 / -	C / B / -	4.7 / 34.2 / -	N
54: I-8 EB Ramps / Taylor Street		*Intersection removed*						20.3 / 39.4 / -	C / D / -	N/A	N
55: Hotel Circle North / Taylor Street/Hotel Circle South	AWSC	2.2	A	2.0	A	-	-	34.2 / 43.1 / -	D / **E** / -	-32.0 / -41.1 / -	N
56: I-8 EB Ramps / Hotel Circle South		*Intersection removed*						23.3 / 53.2 / -	C / **F** / -	N/A	N
57: Bachman Place / Hotel Circle South	Signal	6.7	A	8.7	A	-	-	22.9 / 19.5 / -	C / B / -	-16.2 / -10.8 / -	N
58: Mission Center Road / I-8 EB Ramps	Signal	34.4	C	66.8	**E**	54.4	D	17.5 / 60.5 / 51.1	B / **E** / D	16.9 / 6.3 / 3.3	**Y**

Table 5.4 Peak Hour Intersection LOS and Delay Results – Four-Lane Via Las Cumbres Alternative

Intersection	Control	Four-Lane Via Las Cumbres Alternative						Existing			SI?
		AM Peak		PM Peak		Midday Peak		AM / PM / Midday	AM / PM / Midday	AM / PM / Midday	
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Δ Avg. Delay (sec.)	
59: Mission Center Road / Camino Del Rio South	Signal	35.3	D	74.7	**E**	34.9	C	28.9 / 107.3 / 64.1	C / F / **E**	6.4 / -32.6 / -29.2	N
60: Qualcomm Way/Texas Street / I-8 EB Ramps	Signal	7.5	A	7.8	A	7.1	A	0.9 / 0.8 / 1.0	A / A / A	6.6 / 7.0 / 6.1	N
61: Texas Street / Camino Del Rio South	Signal	68.2	**E**	51.1	D	53.1	D	58.4 / 67.6 / 37.0	**E** / **E** / D	9.8 / -16.5 / 16.1	**Y**
62: Mission City Parkway / Camino Del Rio South	Signal	16.8	B	29.6	C	-	-	8.0 / 18.8 / -	A / B / -	8.8 / 10.8 / -	N
63: I-15 SB Off-Ramp / Camino Del Rio South	Signal	4.9	A	8.1	A	-	-	3.5 / 6.9 / -	A / A / -	1.4 / 1.2 / -	N
64: I-15 SB On-Ramp / Camino Del Rio South	Signal	2.8	A	4.3	A	-	-	1.3 / 3.2 / -	A / A / -	1.5 / 1.1 / -	N
65: I-15 NB Ramps / Camino Del Rio South	Signal	51.0	D	27.6	C	-	-	17.0 / 11.6 / -	B / B / -	34.0 / 16.0 / -	N
66: Mission Gorge Road/Fairmount Avenue / I-8 EB Off-Ramp	Signal	27.2	C	28.1	C	-	-	16.7 / 23.1 / -	B / C / -	10.5 / 5.0 / -	N
67: Texas Street / Madison Avenue	Signal	95.2	**F**	50.2	D	-	-	64.3 / 31.9 / -	**E** / C / -	30.9 / 18.3 / -	**Y**
68: Franklin Ridge Road & Phyllis Place	Signal	11.5	B	16.3	B	-	-	Does Not Exist		11.5 / 16.3 / -	N
69: Franklin Ridge Road & Via Alta	Signal	32.5	C	52.0	D	-	-	Does Not Exist		32.5 / 52.0 / -	N
70: Qualcomm Way & Civita Boulevard	Signal	42.3	D	33.3	C	-	-	Does Not Exist		42.3 / 33.3 / -	N
71: Franklin Ridge Road & Civita Boulevard	Signal	15.7	B	34.8	C	-	-	Does Not Exist		15.7 / 34.8 / -	N
72: Fenton Parkway & Street "I"	Signal	11.0	B	11.2	B	-	-	Does Not Exist		11.0 / 11.2 / -	N
73: Via Las Cumbres & Riverwalk Drive	Signal	9.2	A	16.6	B	-	-	Does Not Exist		9.2 / 16.6 / -	N

Table 5.4 Peak Hour Intersection LOS and Delay Results – Four-Lane Via Las Cumbres Alternative

Intersection	Control	Four-Lane Via Las Cumbres Alternative						Existing			SI ?
		AM Peak		PM Peak		Midday Peak		AM / PM / Midday	AM / PM / Midday	AM / PM / Midday	
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Δ Avg. Delay (sec.)	
74: Fashion Valley Road & Riverwalk Drive	Signal	34.3	C	95.0	**F**	-	-	Does Not Exist		34.3 / 95.0 / -	**Y**
75: Avenida Del Rio & Hazard Center Drive & Fashion Valley Mall	Signal	21.8	C	52.5	D	-	-	Does Not Exist		21.8 / 52.5 / -	N
76: Via Las Cumbres & ~~Levi Cushman Street "B"~~Riverwalk Street "U"	Signal	16.3	B	5.9	A	-	-	Does Not Exist		16.3 / 5.9 / -	N
77: Fashion Valley Road & ~~Levi Cushman Street "B"~~Riverwalk Street "U"	Signal	23.3	C	24.5	C	-	-	Does Not Exist		23.3 / 24.5 / -	N
78: Via Las Cumbres & Hotel Circle North	Signal	44.0	D	46.9	D	-	-	Does Not Exist		44.0 / 46.9 / -	N
79: Via Las Cumbres & Hotel Circle South	Signal	49.9	D	49.4	D	-	-	Does Not Exist		49.9 / 49.4 / -	N
80: Hotel Circle South & Camino De La Reina	Signal	3.3	A	3.4	A	-	-	Does Not Exist		3.3 / 3.4 / -	N
81: Hazard Center Drive & Frazee Road	Signal	8.5	A	15.2	B	-	-	Does Not Exist		8.5 / 15.2 / -	N

Notes:
Bold letter indicates substandard LOS E or F.
SI = Significant Impact.

As shown in Table 5.4, the following 16 intersections were found to operate at a substandard LOS E or F during the AM or PM peak hour through implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative conditions. Based on the significant impact criteria outlined in Section 2.3 implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative would result in a significant impact at the 13 intersections shown in **bold**:

- 2: I-5 NB Ramps / Sea World Drive/Tecolote Road (AM LOS E, Δ in Delay 1.0) – not impacted
- **3: I-805 SB Ramps / Phyllis Place (PM LOS E, Δ in Delay 49.4)**
- **4: I-805 NB Ramps / Phyllis Place (PM LOS F, Δ in Delay 74.4)**
- 23: Northside Drive / Friars Road (PM LOS E, Δ in Delay 0.9) – not impacted
- **24: Mission Village Drive / Friars Road WB Ramps (PM LOS F, Δ in Delay 97.5)**
- **25: Mission Village Drive / Friars Road EB Ramps (AM LOS E, Δ in Delay 26.1; PM LOS F, Δ in Delay 37.7)**
- **27: I-15 NB Ramps / Friars Road (PM LOS F, Δ in Delay 83.5)**
- **40: Mission Center Road / Camino De La Reina (PM LOS E, Δ in Delay 37.1)**
- **45: Fairmount Avenue / Camino Del Rio North/I-8 WB Off-Ramp (PM LOS F, Δ in Delay 12.5)**
- **50: I-8 WB Ramps/Mission Valley Mall Driveway / Camino Del Rio North (PM LOS E, Δ in Delay 2.2)**
- **52: Qualcomm Way / Camino Del Rio N/I-8 WB Ramps (AM LOS E, Δ in Delay 46.1; PM LOS F, Δ in Delay 76.2)**
- **58: Mission Center Road / I-8 EB Ramps (PM LOS E, Δ in Delay 6.3)**
- 59: Mission Center Road / Camino Del Rio South (PM LOS E, Δ in Delay -32.6) – not impacted
- **61: Texas Street / Camino Del Rio South (AM LOS E, Δ in Delay 9.8)**
- **67: Texas Street / Madison Avenue (AM LOS F, Δ in Delay 30.9)**
- **74: Fashion Valley Road & Riverwalk Drive (PM LOS F, Δ in Delay 95.0)**

5.3 Freeway Segment Analysis

Freeway Improvements

Freeway improvements within the Mission Valley study area are identified within this chapter. The improvements were derived from the Revenue Constrained scenario of SANDAG's *San Diego Forward: The Regional Plan* (2015), the currently adopted regional transportation plan, and are anticipated to be implemented by 2050.

SR-163/Friars Road Interchange

Phase I of this improvement will widen and improve Friars Road and the overcrossing from Avenida de las Tiendas to Mission Center Road, and reconstruct the interchange to include improvements to ramp intersections. Phase II will consist of the construction of new connector roadways and structures. Phase III will consist of the construction of auxiliary lanes along northbound and southbound SR-163. Phase I is anticipated to be implemented by 2020.

I-15, from I-8 to SR-163

Two managed lanes will be added to this segment of I-15, one in each direction. This segment will consist of eight freeway lanes and two managed lanes. This improvement is anticipated to be implemented by 2035.

I-5, from I-8 to La Jolla Village Drive
Two managed lanes will be added to this segment of I-5, one in each direction. This segment will consist of eight/ten freeway lanes and two managed lanes. This improvement is anticipated to be implemented by 2050.

I-5, from I-15 to I-8
Unspecified operational improvements are anticipated to be implemented along this segment of I-5 by 2050.

I-8, from I-5 to SR-125
Unspecified operational improvements are anticipated to be implemented along this segment of I-8 by 2050.

I-805, from SR-15 to SR-163
Four managed lanes will be added to this segment of I-805, two in each direction. This segment will consist of eight/ten freeway lanes and four managed lanes. This improvement is anticipated to be implemented by 2050.

Forecast freeway volumes were obtained from the Model. Tables 5.5a and 5.5b present the Four-Lane Via Las Cumbres Alternative and existing freeway segment LOS results for study segments during the AM and PM peak periods, respectively. These two tables also identify any potential traffic impacts associated with the Four-Lane Via Las Cumbres Alternative when comparing to the existing conditions. HCS freeway segment analysis worksheets are provided in Appendix J.

Table 5.5a Freeway Segment Level of Service Results – Four-Lane Via Las Cumbres Alternative AM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
I-8	Sunset Cliffs to Sports Arena Boulevard	EB	2M	44.4%	7.8%	1.0%	74,000	2,644	69.5	20.1	C	70.0	A	-0.5	N
		WB	2M	55.6%	7.2%	1.0%		2,894	68.7	22.3	C	70.0	A	-1.3	N
	Sports Arena Boulevard to I-5 Interchange	EB	3M+1A	44.2%	7.7%	1.2%	115,000	4,196	39.1	21.4	C	70.0	B	-30.9	N
		WB	3M+1A	55.8%	7.1%	1.2%		4,444	68.4	22.9	C	69.6	C	-1.2	N
	I-5 Interchange to Morena Boulevard	EB	3M	31.7%	7.8%	2.8%	178,000	6,141	58.7	37.3	**E**	70.0	B	-11.3	**Y**
		WB	4M	68.3%	6.8%	2.8%		7,114	64.3	29.5	D	69.6	C	-5.3	N
	Morena Boulevard to Taylor Street	EB	4M+1A	31.7%	7.8%	2.8%	231,000	7,965	60.0	35.4	**E**	70.0	B	-10.0	**Y**
		WB	5M	68.3%	6.8%	2.8%		9,228	63.1	31.3	D	68.2	C	-5.1	N
	Taylor Street to Hotel Circle	EB	4M	31.7%	7.8%	2.8%	205,000	7,078	64.5	29.3	D	70.0	B	-5.5	N
		WB	4M+1A	68.3%	6.8%	2.8%		8,199	58.6	37.4	**E**	61.3	D	-2.7	**Y**
	Hotel Circle to SR-163 Interchange	EB	4M+2A	31.7%	7.8%	2.8%	222,000	7,654	64.2	25.5	C	65.0	B	-0.8	N
		WB	5M	68.3%	6.8%	2.8%		8,866	61.5	30.8	D	63.4	D	-1.9	N
	SR-163 Interchange to Mission Center Road	EB	4M	31.7%	7.8%	3.2%	192,000	6,617	66.3	26.7	D	70.0	B	-3.7	N
		WB	3M+2A	68.3%	6.8%	3.2%		7,665	59.1	34.7	D	55.0	**E**	4.1	N
	Mission Center Road to Qualcomm Way / Texas Street	EB	4M+1A	31.7%	7.8%	3.2%	249,000	8,568	53.8	42.6	**E**	65.0	C	-11.2	**Y**
		WB	4M+1A	68.3%	6.8%	3.2%		9,926	42.8	61.9	**F**	50.9	**F**	-8.1	**Y**
	Qualcomm Way / Texas Street to I-805 Interchange	EB	4M+1A	43.0%	7.8%	3.2%	177,000	6,082	64.3	25.3	C	62.4	D	1.9	N
		WB	4M+1A	57.0%	6.8%	3.2%		7,046	61.7	30.5	D	57.6	**E**	4.1	N
	I-805 Interchange to I-15 Interchange	EB	4M+2A	31.7%	7.8%	3.0%	258,000	8,871	64.4	29.4	D	70.0	B	-5.6	N
		WB	4M+2A	68.3%	6.8%	3.0%		10,276	58.5	37.5	**E**	61.5	D	-3.0	**Y**
	I-15 Interchange to Fairmount Ave	EB	4M	32.0%	7.7%	3.5%	228,000	7,411	62.8	31.7	D	69.9	C	-7.1	N
		WB	4M+2A	68.0%	7.4%	3.5%		9,424	62.1	32.6	D	64.3	D	-2.2	N
I-5	Sea World Drive / Tecolote Road to I-8 Interchange	NB	5M+1A	54.0%	7.6%	3.4%	243,000	10,478	62.5	32.1	D	64.4	D	-1.9	N
		SB	4M+2A	46.0%	7.1%	3.4%		7,810	69.0	21.7	C	52.5	**F**	16.5	N
	I-8 Interchange to Old Town Avenue	NB	4M+1A	54.0%	7.6%	4.1%	245,000	10,564	39.0	72.8	**F**	54.6	**E**	-15.6	**Y**
		SB	5M	46.0%	7.1%	4.1%		7,874	67.2	25.2	C	52.8	**F**	14.4	N
SR-163	Genesee Avenue to Friars Road	NB	5M	57.0%	8.8%	3.7%	213,000	10,924	54.8	42.8	**E**	63.1	D	-8.3	**Y**
		SB	4M	43.0%	8.4%	3.7%		7,316	63.2	31.1	D	67.6	C	-4.4	N

Table 5.5a Freeway Segment Level of Service Results – Four-Lane Via Las Cumbres Alternative AM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
SR-163	Friars Road to I-8 Interchange	NB	3M	45.1%	7.9%	3.7%	180,000	7,098	49.2	51.7	**F**	65.3	D	-16.1	**Y**
		SB	4M+2A	54.9%	7.8%	3.7%		7,359	68.3	23.1	C	69.8	C	-1.5	N
	I-8 Interchange to 6th Avenue	NB	3M+1A	45.1%	7.9%	3.0%	192,000	7,554	44.2	60.8	**F**	63.7	D	-19.5	**Y**
		SB	3M+2A	54.9%	7.8%	3.0%		7,830	60.8	34.4	D	66.3	D	-5.5	N
	6th Avenue to Washington Street	NB	3M	45.1%	7.9%	3.0%	159,000	6,277	57.6	38.8	**E**	68.5	C	-10.9	**Y**
		SB	2M+1A	54.9%	7.8%	3.0%		6,507	9.9	350.8	**F**	39.1	**F**	-29.2	**Y**
I-805	Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place	NB	5M	69.9%	7.6%	6.5%	266,000	14,917	33.2	89.9	**F**	53.2	**F**	-20.0	**Y**
		SB	5M	30.1%	8.1%	6.5%		6,411	69.9	18.3	C	70.0	B	-0.1	N
	Murray Ridge Road / Phyllis Place to I-8 Interchange	NB	5M	74.6%	5.9%	6.5%	257,000	11,575	56.6	40.2	**E**	63.1	D	-6.5	**Y**
		SB	4M+2A	25.4%	8.4%	6.5%		5,255	70.0	14.8	B	70.0	B	0.0	N
	I-8 Interchange to Adams Avenue	NB	4M+1A	74.6%	5.9%	6.5%	254,000	11,418	40.3	69.4	**F**	50.0	**F**	-9.7	**Y**
		SB	6M	25.4%	8.4%	6.5%		5,184	70.0	12.1	B	70.0	A	0.0	N
	Adams Avenue to El Cajon Boulevard	NB	4M	74.6%	5.9%	6.5%	225,000	10,128	51.9	47.1	**F**	56.8	**E**	-4.9	**Y**
		SB	5M+1A	25.4%	8.4%	6.5%		4,598	70.0	12.7	B	70.0	B	0.0	N
I-15	Aero Drive to Friars Road	NB	4M+1A+2 ML	60.5%	7.7%	5.0%	258,000	12,374	26.1	120.7	**F**	42.3	**F**	-16.2	**Y**
		SB	5M+1A+2 ML	39.5%	7.5%	5.0%		8,086	67.7	24.3	C	69.4	C	-1.7	N
	Friars Road to I-8	NB	4M+2A+2 ML	51.5%	8.2%	2.2%	273,000	10,520	60.3	35.1	**E**	64.5	D	-4.2	**Y**
		SB	3M+3A+2 ML	48.5%	8.2%	2.2%		11,157	54.9	40.9	**E**	63.0	D	-8.1	**Y**
	I-8 to Adams Avenue	NB	3M+2A	51.5%	8.2%	2.2%	228,000	8,786	55.1	42.4	**E**	63.0	D	-7.9	**Y**
		SB	5M	48.5%	8.2%	2.2%		9,318	62.9	31.5	D	69.0	C	-6.1	N
	Adams Avenue to El Cajon Boulevard	NB	4M+1A	51.5%	8.2%	2.2%	218,000	8,374	57.8	38.5	**E**	64.2	D	-6.4	**Y**
		SB	5M+1A	48.5%	8.2%	2.2%		8,881	64.5	29.3	D	69.3	C	-4.8	N

Notes:
Bold letter indicates LOS E or F.
[1] M = Mainline; A = Auxiliary Lane.
[2] D = Directional Split.
[3] K = Peak Hour %.
[4] HVF = Heavy Vehicle Factor.

Table 5.5b Freeway Segment Level of Service Results – Four-Lane Via Las Cumbres Alternative PM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
I-8	Sunset Cliffs to Sports Arena Boulevard	EB	2M	55.6%	7.8%	1.0%	74,000	3,307	66.5	26.3	D	70.0	A	-3.5	N
		WB	2M	44.4%	7.2%	1.0%		2,314	70.0	17.5	C	70.0	A	0.0	N
	Sports Arena Boulevard to I-5 Interchange	EB	3M+1A	54.8%	7.7%	1.2%	115,000	5,079	65.9	27.2	D	68.3	C	-2.4	N
		WB	3M+1A	45.2%	7.1%	1.2%		3,671	69.9	18.5	C	70.0	B	-0.1	N
	I-5 Interchange to Morena Boulevard	EB	3M	57.0%	7.8%	2.8%	178,000	8,130	36.7	78.9	**F**	60.0	**E**	-23.3	**Y**
		WB	4M	43.0%	6.8%	2.8%		5,373	69.4	20.7	C	70.0	B	-0.6	N
	Morena Boulevard to Taylor Street	EB	4M+1A	57.0%	7.8%	2.8%	231,000	10,546	39.7	71.0	**F**	56.5	**F**	-16.8	**Y**
		WB	5M	43.0%	6.8%	2.8%		6,970	69.0	21.6	C	70.0	B	-1.0	N
	Taylor Street to Hotel Circle	EB	4M	57.0%	7.8%	2.8%	205,000	9,371	50.3	49.8	**F**	54.3	**E**	-4.0	**Y**
		WB	4M+1A	43.0%	6.8%	2.8%		6,193	67.6	24.5	C	68.5	C	-0.9	N
	Hotel Circle to SR-163 Interchange	EB	4M+2A	57.0%	7.8%	2.8%	222,000	10,133	56.7	38.2	**E**	60.1	D	-3.4	**Y**
		WB	5M	43.0%	6.8%	2.8%		6,697	65.0	22.0	C	65.0	C	0.0	N
	SR-163 Interchange to Mission Center Road	EB	4M	57.0%	7.8%	3.2%	192,000	8,760	54.9	42.6	**E**	48.6	**F**	6.3	N
		WB	3M+2A	43.0%	6.8%	3.2%		5,789	64.7	23.9	C	63.8	D	0.9	N
	Mission Center Road to Qualcomm Way / Texas Street	EB	4M+1A	57.0%	7.8%	3.2%	249,000	11,344	27.3	110.9	**F**	39.5	**F**	-12.2	**Y**
		WB	4M+1A	43.0%	6.8%	3.2%		7,497	59.9	33.4	D	62.2	D	-2.3	N
	Qualcomm Way / Texas Street to I-805 Interchange	EB	4M+1A	57.0%	7.8%	3.2%	177,000	8,053	57.0	37.7	**E**	50.1	**F**	6.9	N
		WB	4M+1A	43.0%	6.8%	3.2%		5,322	65.0	21.9	C	64.4	C	0.6	N
	I-805 Interchange to I-15 Interchange	EB	4M+2A	57.0%	7.8%	3.0%	258,000	11,744	50.1	50.1	**F**	54.7	**E**	-4.6	**Y**
		WB	4M+2A	43.0%	6.8%	3.0%		7,762	67.6	24.6	C	68.6	C	-1.0	N
	I-15 Interchange to Fairmount Ave	EB	4M	59.2%	7.7%	3.5%	228,000	10,771	36.8	78.5	**F**	43.5	**F**	-6.7	**Y**
		WB	4M+2A	40.8%	7.4%	3.5%		6,484	69.6	20.0	C	69.9	C	-0.3	N
I-5	Sea World Drive / Tecolote Road to I-8 Interchange	NB	5M+1A	40.5%	7.6%	3.4%	243,000	7,991	67.0	25.5	C	69.9	C	-2.9	N
		SB	4M+2A	59.5%	7.1%	3.4%		8,208	66.4	26.4	D	67.7	C	-1.3	N
	I-8 Interchange to Old Town Avenue	NB	4M+1A	40.5%	7.6%	4.1%	245,000	8,999	52.8	45.7	**F**	68.1	C	-15.3	**Y**
		SB	5M	59.5%	7.1%	4.1%		9,243	62.9	31.6	D	67.7	C	-4.8	N
SR-163	Genesee Avenue to Friars Road	NB	5M	48.4%	8.8%	3.7%	213,000	8,231	66.3	26.7	D	65.1	D	1.2	N
		SB	4M	51.6%	8.4%	3.7%		9,710	47.1	55.4	**F**	58.6	**E**	-11.5	**Y**

Table 5.5b Freeway Segment Level of Service Results – Four-Lane Via Las Cumbres Alternative PM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
SR-163	Friars Road to I-8 Interchange	NB	3M	50.9%	7.9%	3.7%	180,000	7,359	46.1	57.1	**F**	57.6	**E**	-11.5	**Y**
		SB	4M+2A	49.1%	7.8%	3.7%		7,098	68.8	22.2	C	69.9	C	-1.1	N
	I-8 Interchange to 6th Avenue	NB	3M+1A	50.9%	7.9%	3.0%	192,000	7,830	40.7	68.5	**F**	54.6	**E**	-13.9	**Y**
		SB	3M+2A	49.1%	7.8%	3.0%		7,554	62.2	32.4	D	67.1	C	-4.9	N
	6th Avenue to Washington Street	NB	3M	50.9%	7.9%	3.0%	159,000	6,507	55.5	41.7	**E**	64.5	D	-9.0	**Y**
		SB	2M+1A	49.1%	7.8%	3.0%		6,277	16.2	206.6	**F**	42.7	**F**	-26.5	**Y**
I-805	Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place	NB	5M	35.5%	7.6%	6.5%	266,000	5,882	69.9	18.3	C	69.8	C	0.1	N
		SB	5M	64.5%	8.1%	6.5%		13,686	33.2	89.9	**F**	53.2	**F**	-20.0	**Y**
	Murray Ridge Road / Phyllis Place to I-8 Interchange	NB	5M	37.3%	5.9%	6.5%	257,000	3,555	70.0	11.1	B	70.0	B	0.0	N
		SB	4M+2A	62.7%	8.4%	6.5%		13,921	31.0	97.8	**F**	46.3	**F**	-15.3	**Y**
	I-8 Interchange to Adams Avenue	NB	4M+1A	25.4%	5.9%	6.5%	254,000	3,499	70.0	13.6	B	70.0	B	0.0	N
		SB	6M	74.6%	8.4%	6.5%		13,703	50.8	49.0	**F**	57.6	**E**	-6.8	**Y**
	Adams Avenue to El Cajon Boulevard	NB	4M	37.3%	5.9%	6.5%	225,000	3,060	70.0	11.9	B	69.7	C	0.3	N
		SB	5M+1A	62.7%	8.4%	6.5%		11,983	46.9	55.7	**F**	52.8	**F**	-5.9	**Y**
I-15	Aero Drive to Friars Road	NB	4M+1A+2 ML	39.2%	7.7%	5.0%	258,000	7,622	61.5	33.4	D	66.2	D	-4.7	N
		SB	5M+1A+2 ML	60.8%	7.5%	5.0%		11,665	49.9	50.5	**F**	58.5	**E**	-8.6	**Y**
	Friars Road to I-8	NB	4M+2A+2 ML	51.5%	8.2%	2.2%	273,000	10,554	57.4	39.1	**E**	66.1	D	-8.7	**Y**
		SB	3M+3A+2 ML	48.5%	8.2%	2.2%		9,951	57.7	36.7	**E**	63.9	D	-6.2	**Y**
	I-8 to Adams Avenue	NB	3M+2A	51.5%	8.2%	2.2%	228,000	9,318	51.1	48.5	**F**	64.9	D	-13.8	**Y**
		SB	5M	48.5%	8.2%	2.2%		8,786	64.8	28.8	D	69.5	C	-4.7	N
	Adams Avenue to El Cajon Boulevard	NB	4M+1A	51.5%	8.2%	2.2%	218,000	8,881	54.4	43.4	**E**	65.8	D	-11.4	**Y**
		SB	5M+1A	48.5%	8.2%	2.2%		8,374	66.1	27.0	D	69.7	C	-3.6	N

Notes:
Bold letter indicates LOS E or F.
[1] M = Mainline; A = Auxiliary Lane.
[2] D = Directional Split.
[3] K = Peak Hour %.
[4] Heavy Vehicle Factor.

As shown in Tables 5.5a and 5.5b, the following 33 directional mainline freeway segments are projected to operate at LOS E or F under Four-Lane Via Las Cumbres Alternative conditions. Based on the significant impact criteria outlined in Chapter 2, implementation of the Four-Lane Via Las Cumbres Alternative would result in a significant impact on 31 of those directional segments presented in **bold**:

1. **I-8 EB, I-5 Interchange to Morena Boulevard (AM LOS E, Δ in Speed -11.3; PM LOS F, Δ in Speed -23.3)**
2. **I-8 EB, Morena Boulevard to Taylor Street (AM LOS E, Δ in Speed -10.0; PM LOS F, Δ in Speed -16.8)**
3. **I-8 EB, Taylor Street to Hotel Circle (PM LOS F, Δ in Speed -4.0)**
4. **I-8 WB, Taylor Street to Hotel Circle (AM LOS E, Δ in Speed -2.7)**
5. **I-8 EB, Hotel Circle to SR-163 Interchange (PM LOS E, Δ in Speed -3.4)**
6. I-8 EB, SR-163 Interchange to Mission Center Road (PM LOS E, Δ in Speed 6.3) – not impacted
7. **I-8 EB, Mission Center Road to Qualcomm Way / Texas Street (AM LOS E, Δ in Speed -11.2; PM LOS F, Δ in Speed -12.2)**
8. **I-8 WB, Mission Center Road to Qualcomm Way / Texas Street (AM LOS F, Δ in Speed -8.1)**
9. I-8 EB, Qualcomm Way/Texas Street to I-805 Interchange (PM LOS E, Δ in Speed 6.9) – not impacted
10. **I-8 EB, I-805 Interchange to I-15 Interchange (PM LOS F, Δ in Speed -4.6)**
11. **I-8 WB, I-805 Interchange to I-15 Interchange (AM LOS E, Δ in Speed -3.0)**
12. **I-8 EB, I-15 Interchange to Fairmount Ave (PM LOS F, Δ in Speed -6.7)**
13. **I-5 NB, I-8 Interchange to Old Town Avenue (AM LOS F, Δ in Speed -15.6; PM LOS F, Δ in Speed -15.3)**
14. **SR-163 NB, Genesee Avenue to Friars Road (AM LOS E, Δ in Speed -8.3)**
15. **SR-163 SB, Genesee Avenue to Friars Road (PM LOS F, Δ in Speed -11.5)**
16. **SR-163 NB, Friars Road to I-8 Interchange (AM LOS F, Δ in Speed -16.1; PM LOS F, Δ in Speed -11.5)**
17. **SR-163 NB, I-8 Interchange to 6th Avenue (AM LOS F, Δ in Speed -19.5; PM LOS F, Δ in Speed -13.9)**
18. **SR-163 NB, 6th Avenue to Washington Street (AM LOS E, Δ in Speed -10.9; PM LOS E, Δ in Speed -9.0)**
19. **SR-163 SB, 6th Avenue to Washington Street (AM LOS F, Δ in Speed -29.2; PM LOS F, Δ in Speed -26.5)**
20. **I-805 NB, Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place (AM LOS F, Δ in Speed -20.0)**
21. **I-805 SB, Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place (PM LOS F, Δ in Speed -20.0)**
22. **I-805 NB, Murray Ridge Road / Phyllis Place to I-8 Interchange (AM LOS E, Δ in Speed -6.5)**
23. **I-805 SB, Murray Ridge Road / Phyllis Place to I-8 Interchange (PM LOS F, Δ in Speed -15.3)**
24. **I-805 NB, I-8 Interchange to Adams Avenue (AM LOS F, Δ in Speed -9.7)**
25. **I-805 SB, I-8 Interchange to Adams Avenue (PM LOS F, Δ in Speed -6.8)**
26. **I-805 NB, Adams Avenue to El Cajon Boulevard (AM LOS F, Δ in Speed -4.9)**
27. **I-805 SB, Adams Avenue to El Cajon Boulevard (PM LOS F, Δ in Speed -5.9)**
28. **I-15 NB, Aero Drive to Friars Road (AM LOS F, Δ in Speed -16.2)**
29. **I-15 SB, Aero Drive to Friars Road (PM LOS F, Δ in Speed -8.6)**
30. **I-15 NB, Friars Road to I-8 (AM LOS E, Δ in Speed -4.2; PM LOS E, Δ in Speed -8.7)**
31. **I-15 SB, Friars Road to I-8 (AM LOS E, Δ in Speed -8.1; PM LOS E, Δ in Speed -6.2)**
32. **I-15 NB, I-8 to Adams Avenue (AM LOS E, Δ in Speed -7.9; PM LOS F, Δ in Speed -13.8)**
33. **I-15 NB, Adams Avenue to El Cajon Boulevard (AM LOS E, Δ in Speed -6.4; PM LOS E, Δ in Speed -11.4)**

5.4 Freeway Ramp Metering Analysis

Table 5.6 presents the Four-Lane Via Las Cumbres Alternative freeway ramp metering analysis results, as well as any potential traffic impacts associated with the Four-Lane Via Las Cumbres Alternative when comparing to the existing conditions. Existing ramp meter flow rates were assumed under Four-Lane Via Las Cumbres Alternative conditions.

Table 5.6 Freeway Ramp Metering Analysis – Four-Lane Via Las Cumbres Alternative

Ramp	Peak Hour	Total Demand[1] (veh/hr)	SOV Demand[2] (veh/hr)	SOV Demand per lane (veh/hr)	Meter Rate[3] (veh/hr)	Future Excess Demand[4] (veh/hr)	Future Delay[5] (min)	Future Queue[6] (ft)	Existing Delay[5] (min)	Δ Delay[5] (min)	SI?
I-5 NB On-Ramp @ Sea World Drive	AM	1730	1,730	865	965	0	0	0	0	0	N
	PM	1360	1,360	680	972	0	0	0	0	0	N
I-5 SB On-Ramp @ Sea World Drive	AM	455	455	455	444	11	1.49	325	0	1.49	N
	PM	460	460	460	444	16	2.16	475	0	2.16	N
I-805 NB On-Ramp @ Murray Ridge Road	AM	1035	1,035	1035	851	184	12.97	5,325	0	12.97	N
	PM	1480	1,480	1480	N/A[7]	0	0	0	0	0	N
I-805 SB On-Ramp @ Phyllis Place	AM	825	776	776	N/A[7]	0	0	0	0	0	N
	PM	930	735	735	691	44	3.82	1,275	0	3.82	N
I-15 NB On-Ramp @ Friars Road	AM	1810	1,539	769	558	211	22.69	6,125	0	22.69	**Y**
	PM	1570	1,397	699	529	170	19.28	4,925	0.11	19.17	**Y**
I-15 SB On-Ramp @ Friars Road (EB approach)	AM	845	845	845	N/A[7]	0	0	0	0	0	N
	PM	1190	1,190	1190	996	194	11.69	5,625	0	11.69	N
I-8 EB On-Ramp @ Texas Street (NB approach)	AM	490	490	490	N/A[7]	0	0	0	0	0	N
	PM	450	450	450	810	0	0	0	0	0	N
I-8 EB On-Ramp @ Texas Street (SB approach)	AM	850	850	850	N/A[7]	0	0	0	0	0	N
	PM	570	479	479	444	35	4.73	1,025	0	4.73	N
I-8 EB On-Ramp @ Fairmount Avenue (NB approach)	AM	725	725	725	N/A[7]	0	0	0	0	0	N
	PM	725	725	725	744.5	0	0	0	0	0	N
I-8 EB On-Ramp @ Fairmount Avenue (SB approach)	AM	270	270	270	N/A[7]	0	0	0	0	0	N
	PM	825	825	825	745	80	6.44	2,325	0	6.44	N

Notes:
SOV = Single Occupancy Vehicle. HOV = High Occupancy Vehicle. SI? = Significant Impact?
[1] Total Demand is the peak hour demand for both SOV and HOV lanes expected to use the on-ramp.
[2] SOV Demand = (Total Demand) – (HOV Demand).
[3] Meter Rate is the peak hour capacity expected to be processed through the ramp meter per lane. This value was obtained from Caltrans. The average between the "high" and "low" meter rate was used.
[4] Excess Demand = (Demand) – (Meter Rate) or zero, whichever is greater.
[5] Delay = (Excess Demand / Meter Rate) X 60 min/hr.
[6] Queue = (Excess Demand) X 29 ft/veh. SOV volumes were used in the calculation of Queue. A zero represents no excess queue. It is important to note the on-ramp queues could also occur as a result of freeway congestions as the lack of freeway capacity could limit the number of vehicles that can merge onto the freeway.
[7] Ramp not metered.
* HOV demand was obtained from Caltrans Performance Measurements System (PeMS).

As shown in Table 5.6, excess demand is anticipated at the following metered ramps:

- I-5 SB On-Ramp @ Sea World Drive (AM & PM)
- I-805 NB On-Ramp @ Murray Ridge Road (AM)
- I-805 SB On-Ramp @ Phyllis Place (PM)
- I-15 NB On-Ramp @ Friars Road (AM & PM)
- I-15 SB On-Ramp @ Friars Road – EB Approach (PM)
- I-8 EB On-Ramp @ Texas Street – SB Approach (PM)
- I-8 EB On-Ramp @ Fairmount Avenue – SB Approach (PM)

Based on the significant impact criteria outlined in Chapter 2.3, implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative would result in a significant impact at the following freeway ramp meter:

- I-15 NB On-Ramp @ Friars Road (AM & PM)

5.5 Significant Impacts and Mitigation Measures

This chapter identifies recommended mitigation measures for intersection and roadway facilities that would be significantly impacted through implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Mitigated intersection analysis worksheets are provided in Appendix K.

5.5.1 Roadway Mitigation Measures

Sea World Drive, Mission Bay Parkway to Friars Road (LOS F) - Adding a travel lane in each direction would increase the capacity of the roadway from a 4-Lane Major Arterial to a 6-Lane Major Arterial which would improve the operations to LOS D. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. In order to implement this mitigation, additional right of way acquisition would be required from a built-environment or the existing right of way would need to be repurposed at the expense of existing or planned active transportation facilities. This would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. In addition, the funding source for the implementation of this mitigation has not been determined. Therefore, this impact would remain significant and unavoidable.*

Friars Road, Avenida De Las Tiendas to Ulric Street/SR-163 SB Ramps (LOS F) - Widening the roadway from a 6-Lane Major Arterial to an 8-Lane Prime Arterial would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. All CPU Alternatives include a Class IV One-Way Cycle Track on both sides of the roadway; therefore, there is insufficient right-of-way on Friars Road to accommodate the additional lanes, maintain existing features, and provide proposed bicycle improvements. Such roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Friars Road, Mission Village Drive to I-15 SB Ramps (LOS F) - Widening the roadway from a 6-Lane Expressway to an 8-Lane Expressway would improve the operations to LOS D. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this

mitigation measure. *However, this mitigation measure is not recommended at this time because the City anticipates that the stadium site will be studied further in a specific plan effort. Because it is unknown whether this improvement would be compatible with anticipated future planning efforts for the stadium site, implementation of the improvement at this time could ultimately be obsolete. Therefore, this impact would remain significant and unavoidable.*

Friars Road, I-15 SB Ramps to I-15 NB Ramps (LOS F) - Widening the roadway from a 6-Lane Prime Arterial to an 8-Lane Prime Arterial would improve the operations to LOS D. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended at this time because the City anticipates that the stadium site will be studied further in a specific plan effort. Because it is unknown whether this improvement would be compatible with anticipated future planning efforts for the stadium site, implementation of the improvement at this time could ultimately be obsolete. Therefore, this impact would remain significant and unavoidable.*

Friars Road, I-15 NB Ramps to Rancho Mission Road (LOS F) - Widening the roadway from a 7-Lane Prime Arterial to an 8-Lane Prime Arterial would improve the operations to LOS D. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. All CPU Alternatives include a Class IV One-Way Cycle Track on both sides of the roadway; therefore, there is insufficient right-of-way on Friars Road to accommodate the additional lanes, maintain existing features, and provide proposed bicycle improvements. Such roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Friars Road, Santo Road to Riverdale Street (LOS F) - Widening the roadway from a 6-Lane Prime Arterial to an 8-Lane Prime Arterial would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. All CPU Alternatives includes a Class IV One-Way Cycle Track on both sides of the roadway; therefore, there is insufficient right-of-way on Friars Road to accommodate the additional lanes, maintain existing features, and provide proposed bicycle improvements. Such roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Rio San Diego Drive, River Run Drive to Fenton Parkway (LOS E) - Widening the roadway to maintain 4-Lane Collector with Two-Way Left-Turn Lane while providing the recommended Class II Bike Lanes would improve the operations to LOS B. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. All CPU Alternatives include a Class II Bike Lane on both sides of the segment through restriping; therefore, there is insufficient right-of-way on Rio San Diego Drive to accommodate the additional travel lanes, maintain existing features, and provide proposed bicycle improvements. Such roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Hotel Circle North, I-8 WB Off-Ramp to Via Las Cumbres (LOS F) – Widening the roadway from a 2-lane Collector (one-way) to a 4-lane Collector (one-way) would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. All CPU Alternatives include a Class IV Two-Way Cycle Track; therefore, there is insufficient right-of-way on Hotel Circle North to accommodate the additional lanes, maintain existing features, and provide proposed bicycle improvements. Such roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Camino De La Reina, Avenida Del Rio to Camino De La Siesta (LOS F) - Widening the roadway from a 2-Lane Collector without Two-Way Left-Turn Lane to a 2-Lane Collector with Two-Way Left-Turn Lane would improve the operations along this roadway segment. This roadway segment would continue to operate at LOS F, however this mitigation would improve the operation to pre-project conditions. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way available along this segment to accommodate a Two-Way Left-Turn Lane along Camino De La Reina. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Camino Del Rio North, 1800' west of Ward Road to Ward Road (LOS E) - Widening the roadway from a 2-Lane Collector without Two-Way Left-Turn Lane to a 2-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. All CPU Alternatives include a Class II Bike Lane on both sides of the segment through restriping of the existing Two-Way Left-Turn Lane; therefore, there is insufficient right-of-way on Camino Del Rio North to accommodate the additional lane, maintain existing features, and provide proposed bicycle improvements. Such roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Hotel Circle South, I-8 EB Off-Ramp to Via Las Cumbres (LOS E) - Widening the roadway from a 2-lane Collector (one-way) to a 3-lane Collector (one-way) would improve the operation to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. All CPU Alternatives includes a Class IV Two-Way Cycle Track; therefore, there is insufficient right-of-way on Hotel Circle South to accommodate the additional lanes, maintain existing features, and provide proposed bicycle improvements. Such roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Hotel Circle South, Via Las Cumbres to I-8 EB On-Ramp (LOS F) - Widening the roadway from a 2-lane Collector (one-way) to a 4-lane Collector (one-way) would improve the operation to LOS D. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation

of this mitigation measure. *However, this mitigation measure is not recommended. All CPU Alternatives include a Class IV Two-Way Cycle Track; therefore, there is insufficient right-of-way on Hotel Circle South to accommodate the additional lanes, maintain existing features, and provide proposed bicycle improvements. Such roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Camino Del Rio South, I-15 SB Ramps to I-15 NB Ramps (LOS F) - Widening the roadway from a 2-Lane Collector with Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. All CPU Alternatives include retaining the Class II Bike Lane on both sides of the segment; therefore, there is insufficient right-of-way on Camino Del Rio South to accommodate the additional lanes, maintain existing features, and provide proposed bicycle improvements. Such roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Morena Boulevard, Tecolote Road to West Morena Boulevard (LOS F) - Widening the roadway from a 2-Lane Collector with Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate two additional travel lanes. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Via Las Cumbres, Linda Vista Road to Friars Road (LOS F) - Widening the roadway from a 3-Lane Collector without Two-Way Left-Turn Lane to a 3-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate the additional Two-Way Left-Turn Lane. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Avenida Del Rio, Fashion Valley Parking Lot to Camino De La Reina (LOS F) - Widening the roadway from a 4-Lane Collector without Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate the additional Two-Way Left-Turn Lane. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Ulric Street, Fashion Hills Boulevard to 600' South of Fashion Hills Boulevard (LOS F) - Widening the roadway from a 2-Lane Collector with Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS E (better than pre-project conditions). The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate two additional travel lanes. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Ulric Street, 600' South of Fashion Hills Boulevard to Friars Road (LOS F) - Widening the roadway from a 3-Lane Collector with Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS E (better than pre-project conditions). The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate the additional Two-Way Left-Turn Lane. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Camino De La Siesta, Camino De La Reina to Camino Del Rio North (LOS F) - Widening the roadway from a 2-Lane Collector without Two-Way Left-Turn Lane to a 2-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate the additional Two-Way Left-Turn Lane. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Metropolitan Drive, Mission Valley Road to Murray Canyon Road (LOS F) - Widening the roadway from a 2-Lane Collector without Two-Way Left-Turn Lane (No Fronting Property) to a 2-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS D. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. All CPU Alternatives include retaining the Class II Bike Lane on both sides of the segment; therefore, there is insufficient right-of-way on Metropolitan Drive to accommodate the additional Two-Way Left-Turn Lane, maintain existing features, and provide proposed bicycle improvements. Such roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Mission Center Road, Murray Ridge Road to 1200' West of Murray Ridge Road (LOS F) - Widening the roadway from a 2-Lane Collector without Two-Way Left-Turn Lane to a 4-Lane Collector without Two-Way Left-Turn Lane would improve the operations to LOS E. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate two additional travel lanes. In addition, roadway widening would be inconsistent with City*

policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.

Mission Center Road, 1200' West of Murray Ridge Road to 950' North of Mission Valley Road (LOS F) – Widening the roadway from a 3-Lane Collector without Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate an additional travel lane. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Auto Circle, Camino Del Rio North to I-8 EB Ramps (LOS F) - Widening the roadway from a 4-Lane Major Arterial to a 6-Lane Major Arterial would improve the operations to LOS D. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate two additional travel lanes. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Murray Ridge Road, Mission Center Road to I-805 NB Ramps (LOS F) - Widening the roadway from a 2-Lane Collector with Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS D. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate two additional travel lanes. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Murray Ridge Road, I-805 NB Ramps to I-805 SB Ramps (LOS F) - Widening the roadway from a 2-Lane Collector with Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS D. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate two additional travel lanes. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Franklin Ridge Road, Via Alta to Civita Boulevard (LOS F) - Widening the roadway from a 2-Lane Collector with Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate two additional travel*

lanes. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.

Qualcomm Way, Camino Del Rio North to I-8 WB Ramps (LOS F) - Widening the roadway from a 5-Lane Major to a 6-Lane Major would improve the operation to LOS E. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate an additional travel lane. A detail project study report is needed to identified appropriate improvement to address impacts and accommodate auto, bicycle, pedestrian and transit along Qualcomm Way and Texas Street, between Camino de la Reina and Camino Del Rio South. Therefore, this impact would remain significant and unavoidable.*

Qualcomm Way, I-8 WB Ramps to I-8 EB Ramps (LOS F) - Widening the roadway from a 6-Lane Major to an 8-Lane Prime would improve the operation to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate two additional travel lanes. A detail project study report is needed to identified appropriate improvement to address impacts and accommodate auto, bicycle, pedestrian and transit along Qualcomm Way and Texas Street, between Camino de la Reina and Camino Del Rio South. Therefore, this impact would remain significant and unavoidable.*

Texas Street, 1400' North of Madison Avenue to Madison Avenue (LOS F) – Widening the roadway from a 3-Lane Collector with Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations along this roadway segment. This roadway segment would continue to operate at LOS F, however this mitigation would improve operations to pre-project conditions. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate an additional travel lane. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Texas Street, Madison Avenue to Meade Avenue (LOS F) - Widening the roadway from a 2-Lane Collector with Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS D. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate two additional travel lanes. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Texas Street, Meade Avenue to El Cajon Boulevard (LOS F) - Widening the roadway from a 2-Lane Collector with Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not*

recommended. There is insufficient right-of-way along this segment to accommodate two additional travel lanes. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.

Northside Drive, Fenton Marketplace Driveway to Lowes's Frontage Road (LOS E) - Widening the roadway from a 3-Lane Collector with Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate an additional travel lane. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Rancho Mission Road, Friars Road to San Diego Mission Road (LOS F) - Widening the roadway to provide a 4-Lane Collector with Two-Way Left-Turn Lane and provide the recommended Class IV cycle tracks would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended at this time because the City anticipates that the stadium site will be studied further in a specific plan effort. Because it is unknown whether this improvement would be compatible with anticipated future planning efforts for the stadium site, implementation of the improvement at this time could ultimately be obsolete. Therefore, this impact would remain significant and unavoidable.*

Rancho Mission Road/Ward Road, San Diego Mission Road to Camino Del Rio North (LOS F) - Widening the roadway to provide a 4-Lane Collector with Two-Way Left-Turn Lane and provide the recommended Class IV cycle tracks would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended at this time because the City anticipates that the stadium site will be studied further in a specific plan effort. Because it is unknown whether this improvement would be compatible with anticipated future planning efforts for the stadium site, implementation of the improvement at this time could ultimately be obsolete. Therefore, this impact would remain significant and unavoidable.*

Riverdale Street, Friars Road to Vandever Avenue (LOS F) - Widening the roadway from a 2-Lane Collector without Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS E. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate two additional travel lanes and a Two-Way Left-Turn Lane. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Fairmount Avenue, Camino Del Rio N/I-8 WB Off-Ramp to I-8 EB Off-Ramp (LOS F) – Widening the roadway from a 4-Lane Major Arterial to a 6-Lane Major Arterial would improve the operations along this roadway segment to LOS E. The identified significant traffic related impact to this roadway segment would be fully

mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate two additional travel lanes. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Fairmount Avenue, I-8 EB Off-Ramp to Camino Del Rio South (LOS F) – Widening the roadway from a 6-Lane Expressway to an 8-Lane Expressway would improve the operations along this roadway segment to LOS D. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate two additional travel lanes. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Riverwalk Drive, Fashion Valley Road to Avenida Del Rio (LOS F) - Widening the roadway from a 2-Lane Collector without Two-Way Left-Turn Lane to a 4-Lane Collector with Two-Way Left-Turn Lane would improve the operations to LOS C. The identified significant traffic related impact to this roadway segment would be fully mitigated with the implementation of this mitigation measure. *However, this mitigation measure is not recommended. There is insufficient right-of-way along this segment to accommodate the two additional travel lanes and Two-Way Left-Turn Lane. In addition, roadway widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

5.5.2 Intersection Mitigation Measures

3. *I-805 SB Ramps / Phyllis Place (LOS E: PM Peak Hour)* – The southbound right movement is projected to be over capacity and the eastbound through and westbound left movements are projected to be approaching capacity under the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative during the PM peak hour. Implementing the following improvement would allow the intersection to operate at LOS D or better during both peak hours.

    - Widen the southbound approach to add an additional southbound right-turn lane.

    The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of this improvement. *However, this mitigation measure is not recommended. There is insufficient right-of-way available along the southbound approach to accommodate the additional travel lanes. In addition, the widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

4. *I-805 NB Ramps / Phyllis Place (LOS F: PM Peak Hour)* – The eastbound left movement, westbound through, westbound right, northbound left, and northbound through movements are projected to be over capacity under the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Implementing the following improvement would allow the intersection to operate at LOS D or better during both peak hours.

- Widen the northbound approach to add an additional northbound left-turn lane.

The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of this improvement. *However, this mitigation measure is not recommended. There is insufficient right-of-way available along the northbound approach to accommodate the additional travel lanes. In addition, the widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

24. *Mission Village Drive / Friars Road WB Ramps (LOS F: PM Peak Hour*) – The westbound left, westbound through, northbound left, and the southbound through movements are projected to be over capacity and the southbound right movement is projected to be approaching capacity under the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Implementing the following improvement would allow the intersection to operate at LOS D or better during both peak hours.

    - Widen the westbound approach to add an additional westbound left-turn lane.

    The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of this improvement. *However, this mitigation measure is not recommended at this time because the City anticipates that the stadium site will be studied further in a specific plan effort. Because it is unknown whether this improvement would be compatible with anticipated future planning efforts for the stadium site, implementation of the improvement at this time could ultimately be obsolete. Therefore, this impact would remain significant and unavoidable.*

25. *Mission Village Drive / Friars Road EB Ramps (LOS E: AM Peak Hour & LOS F: PM Peak Hour)* – The southbound through and northbound right movements are projected to be over capacity, and all other movements are projected to approach capacity under the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Implementing the following improvements would allow the intersection to operate at LOS D or better during both peak hours.

    - Restripe the southbound approach to add a third southbound through lane.
    - Widen the northbound approach to add a second northbound right-turn lane.

    The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of these improvements. *However, this mitigation measure is not recommended at this time because the City anticipates that the stadium site will be studied further in a specific plan effort. Because it is unknown whether this improvement would be compatible with anticipated future planning efforts for the stadium site, implementation of the improvement at this time could ultimately be obsolete. Therefore, this impact would remain significant and unavoidable.*

27. *I-15 NB Ramps / Friars Road (LOS F: PM Peak Hour)* – The eastbound left movement is projected to be over capacity under the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Implementing the following improvement would allow the intersection to operate at LOS D or better during both peak hours.

    - Widen the eastbound approach to add a second eastbound left-turn lane.

    The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of this improvement. *However, this mitigation measure is not recommended*

at this time because the City anticipates that the stadium site will be studied further in a specific plan effort. Because it is unknown whether this improvement would be compatible with anticipated future planning efforts for the stadium site, implementation of the improvement at this time could ultimately be obsolete. Therefore, this impact would remain significant and unavoidable.

40. *Mission Center Road / Camino De La Reina (LOS E: PM Peak Hour)* – The northbound and southbound approaches are projected to be approaching capacity under the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Implementing the following improvements would allow the intersection to operate at LOS D or better during both peak hours.

    - Widen the northbound approach to add an exclusive right-turn lane.
    - Widen the westbound approach to add an exclusive right-turn lane.
    - Widen the eastbound approach to add an exclusive right-turn lane.
    - Convert all right-turn lanes to overlap phasing.

    The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of these improvements. *However, this mitigation measure is not recommended. There is insufficient right-of-way available along the northbound, westbound, and eastbound approaches to accommodate the additional travel lanes. In addition, the widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

45. *Fairmount Avenue / Camino Del Rio North/I-8 WB Off-Ramp (LOS F: PM Peak Hour)* – The northbound left, southbound through, and all of the eastbound movements are projected to be over capacity, and the westbound and southbound left movements are projected to be approaching capacity under the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Implementing the following improvements would allow the intersection to operate at LOS D or better than pre-project conditions, during the both peak hours.

    - Widen the southbound approach to add a third southbound through lane.

    The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of these improvements. *However, this mitigation measure is not recommended. There is insufficient right-of-way available along the southbound approach to accommodate the additional travel lane. In addition, the widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

50. *I-8 WB Ramps/Mission Valley Mall Driveway / Camino Del Rio North (LOS E: PM Peak Hour)* – The westbound left movement is projected to be over capacity and the northbound through movement is projected to be approaching capacity under the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Implementing the following improvements would allow the intersection to operate at LOS D of better during the both peak hours.

    - Widen the westbound approach to construct an additional westbound left-turn lane. Including widening of the I-8 westbound On-ramp to construct an additional lane.

    The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of these improvements. *However, this mitigation measure is not*

recommended. There is insufficient right-of-way available along the westbound approach and I-8 On-ramp to accommodate the additional travel lane. In addition, the widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.

52. *Qualcomm Way / Camino Del Rio N/I-8 WB Ramps (LOS E: AM Peak Hour & LOS F: PM Peak Hour)* – the northbound and southbound approaches are projected to be over capacity under the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Implementing the following improvements would allow the intersection to operate at LOS D of better during the both peak hours.

    - Widen the southbound approach to construct an additional two (2) southbound through lanes.
    - Widen the northbound approach to construct an additional northbound through lane.
    - Widen the westbound approach to construct an additional westbound left-turn lane, restripe the existing westbound left-through shared lane to a through lane.

    The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of these improvements. *However, this mitigation measure is not recommended. There is insufficient right-of-way available along the southbound, northbound, and westbound approach to accommodate the additional travel lanes. A detail project study report is needed to identified appropriate improvement to address impacts and accommodate auto, bicycle, pedestrian and transit along Qualcomm Way and Texas Street, between Camino de la Reina and Camino Del Rio South. Therefore, this impact would remain significant and unavoidable.*

58. *Mission Center Road / I-8 EB Ramps (LOS E: PM Peak Hour)* – The southbound left and through movements are projected to be over capacity and the northbound through movement is projected to be approaching capacity under the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Implementing the following improvement would allow the intersection to operate at pre-project condition or better during the both peak hours.

    - Widen the southbound approach to construct an addition southbound through lane.

    The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of this improvement. *However, this mitigation measure is not recommended. There is insufficient right-of-way available along the southbound approach to accommodate the additional travel lane. In addition, the widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

61. *Texas Street / Camino Del Rio South (LOS E: AM Peak Hour)* – The southbound left movement is projected to be over capacity and the northbound right and northbound through movements are projected to be approaching capacity during the AM peak hour with the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Implementing the following improvement would allow the intersection to operate at LOS D or better during both peak hours.

    - Widen the northbound approach to construct an additional northbound through lane.

The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of this improvement. *However, this mitigation measure is not recommended. There is insufficient right-of-way available along the northbound approach to accommodate the additional travel lane. A detail project study report is needed to identified appropriate improvement to address impacts and accommodate auto, bicycle, pedestrian and transit along Qualcomm Way and Texas Street, between Camino de la Reina and Camino Del Rio South. Therefore, this impact would remain significant and unavoidable.*

67. *Texas Street / Madison Avenue (LOS F: AM Peak Hour)* – The eastbound left movement, westbound right movement, northbound through movement, and the southbound left movement are projected to be over capacity and the northbound left movement is projected to be approaching capacity under the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Implementing the following improvement would allow the intersection to operate at LOS D or better during both peak hours.

    - Widen the northbound approach to construct an additional northbound through lane.

    The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of this improvement. *However, this mitigation measure is not recommended. There is insufficient right-of-way available along the northbound approach to accommodate the additional travel lane. In addition, the widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

74. *Fashion Valley Road & Riverwalk Drive (LOS F: PM Peak Hour)* – The eastbound left, northbound left, westbound left, and westbound through are projected to be over capacity under the implementation of the CPU land uses and Four-Lane Via Las Cumbres Alternative. Implementing the following improvement would allow the intersection to operate at LOS D or better during both peak hours.

    - Widen the westbound approach to construct an additional westbound through lane.

    The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of this improvement. *However, this mitigation measure is not recommended. There is insufficient right-of-way available along the westbound approach to accommodate the additional travel lane. In addition, the widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable.*

Table 5-8 provides a comparison of Four-Lane Via Las Cumbres Alternative operations at the impacted intersections, with and without mitigation measures.

Table 5-8 Impacted Intersection Level of Service with Mitigation Measures – Four-Lane Via Las Cumbres Alternative

			Mitigated Conditions				Four-Lane Via Las Cumbres Alternative			
			AM		PM		AM		PM	
No.	Intersection	Proposed Control	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
3	I-805 SB Ramps & Phyllis Place	Signal	19.3	B	31.2	C	48.0	D	69.5	**E**
4	I-805 NB Ramps & Phyllis Place	Signal	27.1	C	49.6	D	28.7	C	84.4	**F**
24	Mission Village Drive & Friars Road Westbound Ramps	Signal	21.3	C	53.0	D	29.5	C	135.6	**F**
25	Mission Village Drive & Friars Road Eastbound Ramps	Signal	33.5	C	29.5	C	70.6	**E**	90.2	**F**
27	I-15 Northbound Ramps & Friars Road	Signal	12.3	B	19.9	B	49.9	D	88.3	**F**
40	Mission Center Road & Camino De La Reina	Signal	29.6	C	39.3	D	38.4	D	79.3	**E**
45	I-8 Westbound Ramps/Mission Valley Mall Driveway & Camino Del Rio North	Signal	50.0	D	63.5	**E**	51.8	D	85.2	**F**
50	Fairmount Avenue & Camino Del Rio North/I-8 Westbound Off Ramp	Signal	17.1	B	44.6	D	20.0	B	55.9	**E**
52	Qualcomm Way & Camino Del Rio North/I-8 Westbound Ramps	Signal	44.6	D	52.1	D	58.5	**E**	93.9	**F**
58	Mission Center Road & I-8 Eastbound Ramps	Signal	33.4	C	58.5	**E**	34.4	C	66.8	**E**
61	Texas Street & Camino Del Rio South	Signal	54.3	D	40.0	D	68.2	**E**	51.1	D
67	Texas Street & Madison Avenue	Signal	49.1	D	49.1	D	95.2	**F**	50.2	D
74	Fashion Valley Road & Riverwalk Drive	Signal	32.5	C	52.1	D	34.3	C	94.5	**F**

Note: **Bold** letter indicates LOS E or F.

5.5.3 Freeway Segment Mitigation Measures

EB I-8, I-5 Interchange to Morena Boulevard (AM – LOS E; PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

EB I-8, Morena Boulevard to Taylor Street (AM – LOS E; PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more

accurately identify individual project-level impacts and provide the mechanism to mitigate them through fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

EB I-8, Taylor Street to Hotel Circle (PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

WB I-8, Taylor Street to Hotel Circle (AM – LOS E) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

EB I-8, Hotel Circle to SR-163 Interchange (PM – LOS E) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

EB I-8, Mission Center Road to Qualcomm Way / Texas Street (AM – LOS E; PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

WB I-8, Mission Center Road to Qualcomm Way / Texas Street (AM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

EB I-8, I-805 Interchange to I-15 Interchange (PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

WB I-8, I-805 Interchange to I-15 Interchange (AM – LOS E) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

EB I-8, I-15 Interchange to Fairmount Avenue (PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

NB I-5, I-8 Interchange to Old Town Avenue (AM & PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

NB SR-163, Genesee Avenue to Friars Road (AM – LOS E) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network does not identify~~ies operational~~ improvements along this segment. ~~These improvements are anticipated to be completed by Year 2050.~~ There is some uncertainty related to the actual development~~improvements~~ and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the Mission Valley IFS.~~Revenue Constrained Network.~~ *This impact would remain significant and unavoidable.*

SB SR-163, Genesee Avenue to Friars Road (PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network does not identify~~ies~~ ~~operational~~ improvements along this segment. ~~These improvements are anticipated to be completed by Year 2050.~~ There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the Mission Valley IFS~~Revenue Constrained Network~~. *This impact would remain significant and unavoidable.*

NB SR-163, Friars Road to I-8 Interchange (AM & PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network does not identifies ~~operational~~ improvements along this segment. ~~These improvements are anticipated to be completed by Year 2050.~~ There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures~~fair share contributions in addition to the funding identified in the Revenue Constrained Network~~. *This impact would remain significant and unavoidable.*

NB SR-163, I-8 Interchange to 6th Avenue (AM & PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network does not identify~~ies~~ ~~operational~~ improvements along this segment. ~~These improvements are anticipated to be completed by Year 2050.~~ There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures~~fair share contributions in addition to the funding identified in the Revenue Constrained Network~~. *This impact would remain significant and unavoidable.*

NB SR-163, 6th Avenue to Washington Street (AM & PM – LOS E) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network does not identify~~ies~~ ~~operational~~ improvements along this segment. ~~These improvements are anticipated to be completed by Year 2050.~~ There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures ~~fair share contributions in addition to the funding identified in the Revenue Constrained Network~~. *This impact would remain significant and unavoidable.*

SB SR-163, 6th Avenue to Washington Street (AM & PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network does not identify~~ies~~ ~~operational~~ improvements along this segment. ~~These improvements are anticipated to be completed by Year 2050.~~ There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures~~fair share contributions in addition to the~~

~~funding identified in the Revenue Constrained Network~~. *This impact would remain significant and unavoidable.*

NB I-805, Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place (AM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies four managed lanes will be added to this segment of I-805, two in each direction. This segment will consist of eight/ten freeway lanes and four managed lanes.~~operational improvements along this segment~~. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

SB I-805, Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place (PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies four managed lanes will be added to this segment of I-805, two in each direction. This segment will consist of eight/ten freeway lanes and four managed lanes.~~operational improvements along this segment~~. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

NB I-805, Murray Ridge Road / Phyllis Place to I-8 Interchange (AM – LOS E) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies four managed lanes will be added to this segment of I-805, two in each direction. This segment will consist of eight/ten freeway lanes and four managed lanes.~~operational improvements along this segment.~~ These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

SB I-805, Murray Ridge Road / Phyllis Place to I-8 Interchange (PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies four managed lanes will be added to this segment of I-805, two in each direction. This segment will consist of eight/ten freeway lanes and four managed lanes. ~~operational improvements along this segment.~~ These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

NB I-805, I-8 Interchange to Adams Avenue (AM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies four managed lanes will be added to this segment of I-805, two in each direction. This segment will consist of eight/ten freeway lanes and four managed lanes. ~~operational improvements along this segment.~~ These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

SB I-805, I-8 Interchange to Adams Avenue (PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies four managed lanes will be added to this segment of I-805, two in each direction. This segment will consist of eight/ten freeway lanes and four managed lanes. ~~identifies operational improvements along this segment.~~ These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

NB I-805, Adams Avenue to El Cajon Boulevard (AM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies four managed lanes will be added to this segment of I-805, two in each direction. This segment will consist of eight/ten freeway lanes and four managed lanes.~~operational improvements along this segment.~~ These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual development~~improvements~~ and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

SB I-805, Adams Avenue to El Cajon Boulevard (PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies four managed lanes will be added to this segment of I-805, two in each direction. This segment will consist of eight/ten freeway lanes and four managed lanes.~~operational improvements along this segment~~. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the ~~Revenue Constrained Network~~Regional Plan. *This impact would remain significant and unavoidable.*

NB I-15, Aero Drive to Friars Road (AM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies two~~four~~ managed lanes will be added to this segment of I-15~~805~~, one~~two~~ in each direction. This segment will consist of eight~~/ten~~

freeway lanes and twofour managed lanes.operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the Revenue Constrained NetworkRegional Plan. *This impact would remain significant and unavoidable.*

SB I-15, Aero Drive to Friars Road (PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies two managed lanes will be added to this segment of I-15, one in each direction. This segment will consist of eight freeway lanes and two managed lanes. This improvement is anticipated to be implemented by 2035.operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the Revenue Constrained NetworkRegional Plan. *This impact would remain significant and unavoidable.*

NB I-15, Friars Road to I-8 (AM & PM – LOS E) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies o two managed lanes will be added to this segment of I-15, one in each direction. This segment will consist of eight freeway lanes and two managed lanes. This improvement is anticipated to be implemented by 2035.perational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual developmentimprovements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the Revenue Constrained NetworkRegional Plan. *This impact would remain significant and unavoidable.*

SB I-15, Friars Road to I-8 (AM & PM – LOS E) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network identifies two managed lanes will be added to this segment of I-15, one in each direction. This segment will consist of eight freeway lanes and two managed lanes. This improvement is anticipated to be implemented by 2035.operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual developmentimprovements and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures and fair share contributions in addition to the funding identified in the Revenue Constrained NetworkRegional Plan. *This impact would remain significant and unavoidable.*

NB I-15, I-8 to Adams Avenue (AM – LOS E; PM – LOS F) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network does not identifyies operational improvements along this segment. These improvements are anticipated to be completed by Year 2050. There is some uncertainty related to the actual improvements development and associated traffic impacts

that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures.~~fair share contributions in addition to the funding identified in the Revenue Constrained Network.~~ *This impact would remain significant and unavoidable.*

NB I-15, Adams Avenue to El Cajon Boulevard (AM & PM – LOS E) - SANDAG's 2050 San Diego Forward: The Regional Plan (2015) Revenue Constrained Managed Lanes and Highway Network does not identify~~ies operational~~ improvements along this segment. ~~These improvements are anticipated to be completed by Year 2050.~~ There is some uncertainty related to the actual ~~improvements~~ development and associated traffic impacts that will materialize over time. Future development projects' transportation studies would be able to more accurately identify individual project-level impacts and provide the mechanism to mitigate them through transportation demand management measures.~~fair share contributions in addition to the funding identified in the Revenue Constrained Network.~~ *This impact would remain significant and unavoidable.*

5.5.4 Ramp Meter Mitigation Measures

I-15 NB On-Ramp @ Friars Road (AM &PM Peak Hour) – The City of San Diego shall coordinate with Caltrans to address ramp capacity at this impacted location. The proposed CPU already includes a variety of planned transit, pedestrian, and bicycle facilities that would help to reduce single-occupancy vehicle (SOV) travel and reduce ramp demand. Coordination with Caltrans shall include consideration of further measures that would include additional lanes, interchange reconfigurations, and transportation demand management (TDM) measures. However, specific capacity improvements are still undetermined as these are future improvements that must be defined more over time and implementation of freeway improvements in a timely manner is beyond the full control of the City of San Diego. *Therefore, this impact would remain significant and unavoidable.*

5.5.5 All Transportation Facilities Mitigation Measures

Future specific plan proposals shall conduct transportation studies and include coordination between the City of San Diego, Caltrans, SANDAG and MTS to identify needed transportation improvements.

The City of San Diego shall continue to coordinate with Caltrans and SANDAG on future improvements, as future project-level development proceeds, to potentially develop "fair share" mitigation strategies for freeway impacts, as appropriate.

6.0 Two-Lane Via Las Cumbres Alternative

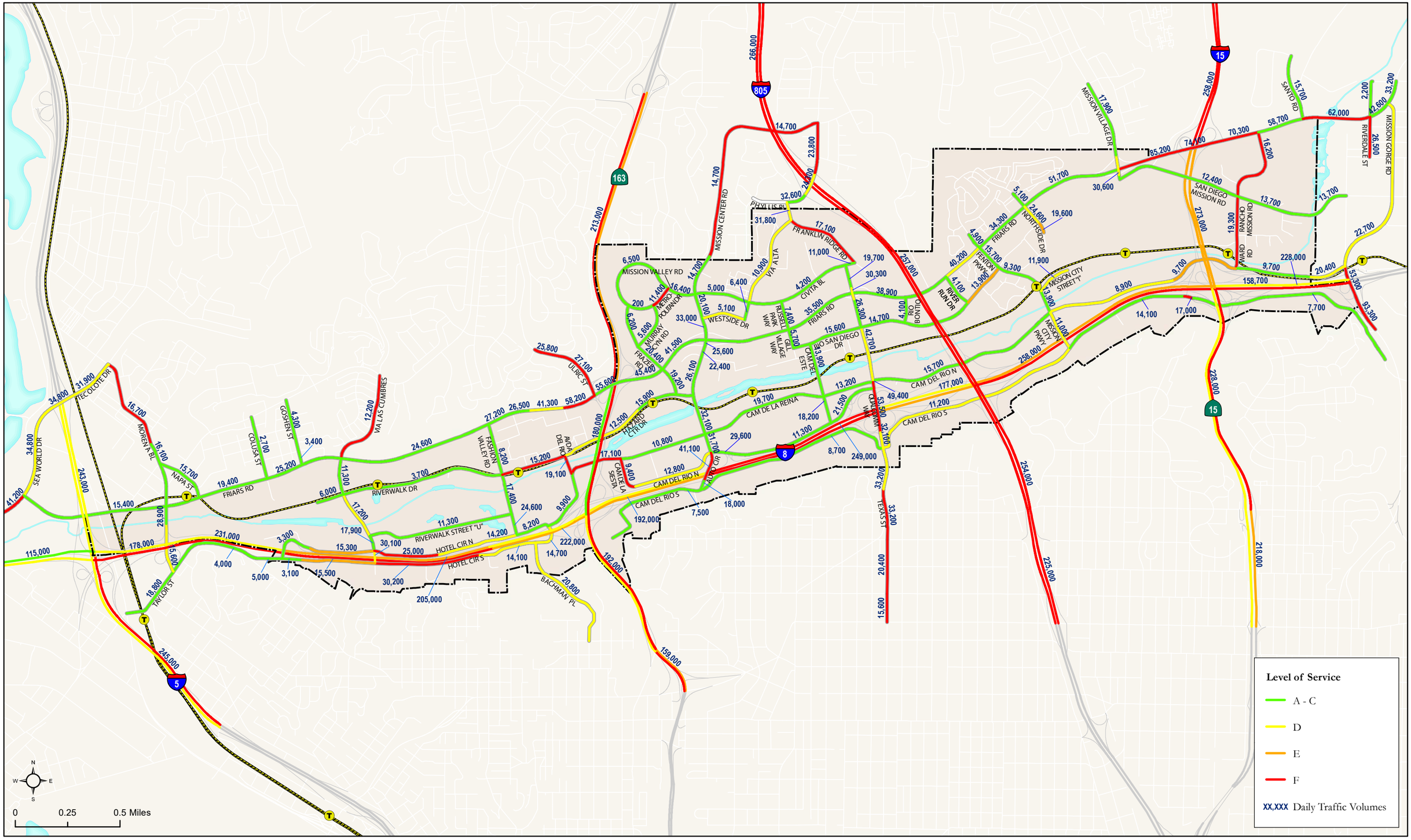
This chapter discusses the traffic operations under the Two-Lane Via Las Cumbres Alternative and assesses potential traffic impacts by comparing the Two-Lane Via Las Cumbres Alternative to existing conditions. Intersection analysis for those intersections that are influenced by the Via Las Cumbres connection are included in this chapter. Roadway segments, intersections influenced by the Via Las Cumbres connection, and freeway segments were evaluated in determining traffic impacts associated with the Two-Lane Via Las Cumbres Alternative. Mitigation measures for significant traffic impacts are identified, as necessary.

The Two-Lane Via Las Cumbres Alternative land uses and mobility network are similar to those analyzed under the Four-Lane Via Las Cumbres Alternative, with the following exception:

- The Via Las Cumbres connection between Friars Road and ~~Levi-Cushman Street "B"~~Riverwalk Street "U" is proposed to have two travel lanes, Class II buffered bicycle lanes and painted median from Friars Road to ~~Levi-Cushman Street "B"~~Riverwalk Street "U" (with additional lanes at intersections as needed), grade separated from the trolley and bridge over the San Diego River; plus enhancements to Fashion Valley Road to raise it to the 15-year flood level with Class IV two-way cycle track. Note that the Via Las Cumbres connection was assumed to be a Four-Lane Major Arterial with Class IV one-way cycle tracks in the Four-Lane Via Las Cumbres Alternative.

6.1 Roadway Segment Analysis

Roadway segment analysis was conducted for the Two-Lane Via Las Cumbres Alternative roadway classifications. Figure 6-1 and Table 6.1 display the projected ADT volumes and associated roadway LOS under Two-Lane Via Las Cumbres Alternative conditions. Table 6.1 also identifies any potential traffic impacts associated with the Two-Lane Via Las Cumbres Alternative when comparing to existing conditions.



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CHEN RYAN

Figure 6-1
Daily Roadway Segment Traffic Volumes and Level of Service - Two-Lane Via Las Cumbres Alternative

Table 6.1 Roadway Segment Analysis – Two-Lane Via Las Cumbres Alternative

		Two-Lane Via Las Cumbres Alternative					Existing					
Roadway	**Segment**	**Classification**	**Capacity**	**ADT**	**V/C**	**LOS**	**Functional Classification**	**ADT**	**V/C**	**LOS**	**Δ V/C**	**SI?**
Phyllis Place	Franklin Ridge Road to I-805 SB Ramps	5-Ln Major Arterial	45,000	32,600	0.724	C	2-Ln Collector w/o TWLTL	2,270	0.284	A	0.440	N
Sea World Drive	Mission Bay Parkway to Friars Road	4-Ln Major Arterial	40,000	41,200	1.030	**F**	4-Ln Major Arterial	34,200	0.855	D	0.175	**Y**
Sea World Drive	Friars Road to I-5 SB Ramps	4-Ln Major Arterial	40,000	34,800	0.870	D	4-Ln Major Arterial	29,490	0.737	C	0.133	N
Tecolote Road	I-5 SB Ramps and I-5 NB Ramps	4-Ln Major Arterial	40,000	34,800	0.870	D	4-Ln Major Arterial	30,470	0.762	D	0.108	N
Tecolote Road	I-5 NB Ramps to Morena Boulevard	4-Ln Major Arterial	40,000	31,900	0.798	D	4-Ln Major Arterial	22,410	0.560	C	0.238	N
Mission Valley Road	Frazee Road to Metropolitan Drive (clockwise)	2-Ln Collector w/o TWLTL (NFP)	10,000	6,500	0.650	C	2-Ln Collector w/ TWLTL	7,440	0.496	A	0.154	N
Mission Valley Road	Metropolitan Drive to Mission Center Road (east of loop)	4-Ln Major Arterial	40,000	16,400	0.410	B	4-Ln Major Arterial	7,440	0.186	A	0.224	N
Civita Boulevard	Mission Center Road to Via Alta	4-Ln ~~Major Arterial~~Collector w/ TWLTL	~~40,000~~30,000	5,000	0.167 ~~0.125~~	A	4-Ln Major Arterial	2,480	0.083 ~~0.062~~	A	0.084 ~~0.063~~	N
Civita Boulevard	Via Alta to Qualcomm Way	4-Ln Collector w/ TWLTL~~Major Arterial~~	30,000~~40,000~~	4,200	0.140 ~~0.105~~	A	4-Ln Major Arterial	2,480	0.083 ~~0.062~~	A	0.057 ~~0.043~~	N
Civita Boulevard	Qualcomm Way to Franklin Ridge Road	4-Ln Collector w/ TWLTL~~Major Arterial~~	30,000~~40,000~~	11,000	0.367 ~~0.275~~	~~A~~B	4-Ln Major Arterial	2,480	0.083 ~~0.062~~	A	0.284 ~~0.213~~	N
Westside Drive	Mission Center Road to Via Alta	2-Ln Collector w/o TWLTL	8,000	5,100	0.638	D	2-Ln Collector w/o TWLTL	4,070	0.508	C	0.130	N
Friars Road	Sea World Drive to Napa Street	4-Ln Major Arterial	40,000	15,400	0.385	B	4-Ln Major Arterial	13,650	0.341	A	0.044	N
Friars Road	Napa Street to Colusa Street	4-Ln Major Arterial	40,000	19,400	0.485	B	4-Ln Major Arterial	19,170	0.479	B	0.006	N
Friars Road	Colusa Street to Via Las Cumbres	4-Ln Major Arterial	40,000	25,200	0.630	C	4-Ln Major Arterial	19,200	0.480	B	0.150	N
Friars Road	Via Las Cumbres to Fashion Valley Road	4-Ln Major Arterial	40,000	24,600	0.615	C	4-Ln Major Arterial	22,270	0.557	C	0.058	N

Table 6.1 Roadway Segment Analysis – Two-Lane Via Las Cumbres Alternative

		Two-Lane Via Las Cumbres Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Friars Road	Fashion Valley Road to Via De La Moda	5-Ln Major Arterial (3 EB, 2 WB)	45,000	27,200	0.604	C	5-Ln Major Arterial (3 EB, 2 WB)	26,100	0.580	C	0.024	N
Friars Road	Via De La Moda to Fashion Valley Driveway	5-Ln Major Arterial (3 EB, 2 WB)	45,000	26,500	0.589	C	5-Ln Major Arterial (3 EB, 2 WB)	25,920	0.576	C	0.013	N
Friars Road	Fashion Valley Driveway to Avenida De Las Tiendas	6-Ln Major Arterial	50,000	41,300	0.826	D	6-Ln Major Arterial	26,830	0.537	B	0.289	N
Friars Road	Avenida De Las Tiendas to Ulric Street/SR-163 SB Ramps	6-Ln Major Arterial	50,000	58,200	1.164	**F**	6-Ln Major Arterial	40,510	0.810	D	0.354	**Y**
Friars Road	Ulric Street/SR-163 SB Ramps to SR-163 NB Ramps	8-Ln Prime Arterial	80,000	55,600	0.695	C	6-Ln Prime Arterial	53,170	0.886	D	-0.191	N
Friars Road	SR-163 NB Ramps to Frazee Road	8-Ln Prime Arterial	80,000	45,400	0.568	B	6-Ln Prime Arterial	54,150	0.902	D	-0.334	N
Friars Road	Frazee Road to Mission Center Road	8-Ln Prime Arterial	80,000	41,500	0.519	B	7-Ln Expressway	42,780	0.458	B	0.061	N
Friars Road	Mission Center Road to Qualcomm Way	6-Ln Expressway	80,000	35,500	0.444	B	6-Ln Expressway	37,050	0.463	B	-0.019	N
Friars Road	Qualcomm Way to River Run Drive	6-Ln Expressway	80,000	38,900	0.486	B	6-Ln Expressway	33,250	0.416	B	0.070	N
Friars Road	River Run Drive to Fenton Parkway	6-Ln Major Arterial	50,000	40,200	0.804	D	6-Ln Prime Arterial	22,080	0.368	A	0.436	N
Friars Road	Fenton Parkway to Northside Drive	6-Ln Major Arterial	50,000	34,300	0.686	C	6-Ln Prime Arterial	28,430	0.474	B	0.212	N
Friars Road	Northside Drive to Mission Village Drive	6-Ln Expressway	80,000	51,700	0.646	C	6-Ln Expressway	45,330	0.567	C	0.079	N
Friars Road	Mission Village Drive to I-15 SB Ramps	6-Ln Expressway	80,000	85,200	1.065	**F**	6-Ln Expressway	57,740	0.722	C	0.343	**Y**
Friars Road	I-15 SB Ramps to I-15 NB Ramps	6-Ln Prime Arterial	60,000	74,100	1.235	**F**	6-Ln Prime Arterial	46,570	0.776	C	0.459	**Y**
Friars Road	I-15 NB Ramps to Rancho Mission Road	7-Ln Prime Arterial[1]	70,000	70,300	1.004	**F**	7-Ln Prime Arterial	51,610	0.737	C	0.267	**Y**

Table 6.1 Roadway Segment Analysis – Two-Lane Via Las Cumbres Alternative

		Two-Lane Via Las Cumbres Alternative					Existing					
Roadway	**Segment**	**Classification**	**Capacity**	**ADT**	**V/C**	**LOS**	**Functional Classification**	**ADT**	**V/C**	**LOS**	**Δ V/C**	**SI?**
Friars Road	Rancho Mission Road to Santo Road	7-Ln Prime Arterial[1]	70,000	58,700	0.839	C	7-Ln Prime Arterial	39,430	0.563	B	0.276	N
Friars Road	Santo Road to Riverdale Street	6-Ln Prime Arterial	60,000	62,000	1.033	**F**	6-Ln Prime Arterial	43,380	0.723	C	0.310	**Y**
Friars Road	Riverdale Street to Mission Gorge Road	6-Ln Prime Arterial	60,000	42,600	0.710	C	6-Ln Prime Arterial	31,300	0.522	B	0.188	N
Mission Gorge Road	Friars Road to Zion Avenue	6-Ln Prime Arterial	60,000	33,200	0.553	B	6-Ln Prime Arterial	40,690	0.678	C	-0.125	N
Hazard Center Drive	Avenida Del Rio to Hazard Center W. Driveway	2-Ln Collector w/ TWLTL	15,000	12,500	0.833	D	Does Not Exist				0.833	N
Hazard Center Drive	Hazard Center W. Driveway to Mission Center Road	4-Ln Collector w/ TWLTL	30,000	15,900	0.530	C	4-Ln Collector w/ TWLTL	8,710	0.290	A	0.240	N
Rio San Diego Drive	Gill Village Way to Qualcomm Way	4-Ln Collector w/ TWLTL	30,000	15,600	0.520	C	4-Ln Collector w/ TWLTL	10,500	0.350	B	0.170	N
Rio San Diego Drive	Qualcomm Way to River Run Drive	4-Ln Major Arterial	40,000	14,700	0.368	A	4-Ln Major Arterial	11,280	0.282	A	0.086	N
Rio San Diego Drive	River Run Drive to Fenton Parkway	2-Ln Collector w/ TWLTL	15,000	13,900	0.927	**E**	4-Ln Collector w/ RM	9,090	0.303	A	0.624	**Y**
San Diego Mission Road	Friars Road EB Ramps to Rancho Mission Road	4-Ln Collector w/ TWLTL	30,000	12,400	0.413	B	4-Ln Collector w/o TWLTL	7,590	0.506	C	-0.093	N
San Diego Mission Road	Rancho Mission Road to 950' West of Fairmount Avenue	4-Ln Collector w/ TWLTL	30,000	13,700	0.457	B	2-Ln Collector w/ TWLTL	8,020	0.534	C	-0.077	N
San Diego Mission Road	950' West of Fairmount Avenue to Fairmount Avenue	4-Ln Collector w/ TWLTL	30,000	13,700	0.457	B	2-Ln Collector w/o TWLTL (NFP)	8,020	0.802	D	-0.345	N
Taylor Street	Pacific Highway to Morena Boulevard	5-Ln Major Arterial (3 EB, 2 WB)	45,000	18,800	0.418	B	5-Ln Major Arterial (3 EB, 2 WB)	19,060	0.423	B	-0.005	N
Taylor Street	Morena Boulevard to I-8 EB Ramps	2-Ln Collector w/ TWLTL	15,000	4,000	0.267	A	2-Ln Collector w/o TWLTL (NFP)	17,750	1.775	**F**	-1.508	N
Taylor Street	I-8 EB Ramps to Hotel Circle South	2-Ln Collector w/o TWLTL (NFP)	10,000	5,000	0.500	B	2-Ln Collector w/ TWLTL	14,410	0.961	**E**	-0.461	N

Table 6.1 Roadway Segment Analysis – Two-Lane Via Las Cumbres Alternative

		Two-Lane Via Las Cumbres Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Hotel Circle North	Hotel Circle South to Fashion Valley Road	2-Ln Collector (one-way)	17,500	8,200	0.469	B	2-Ln Collector w/ TWLTL	12,460	0.831	D	-0.362	N
Hotel Circle North	Fashion Valley Road to I-8 WB Off-Ramp	2-Ln Collector (one-way)	17,500	14,200	0.811	D	3-Ln Collector (2 EB, 1 WB)	15,510	1.410	**F**	-0.599	N
Hotel Circle North	I-8 WB Off-Ramp to Via Las Cumbres	2-Ln Collector (one-way)	17,500	25,000	1.429	**F**	2-Ln Collector w/ TWLTL	6,510	0.434	B	0.995	**Y**
Hotel Circle North	Via Las Cumbres to I-8 WB On-Ramp	2-Ln Collector (one-way)	17,500	15,300	0.874	**E**	2-Ln Collector w/o TWLTL (NFP)	15,340	1.534	**F**	-0.660	N
Hotel Circle North	I-8 WB On-Ramp to Hotel Circle South	2-Ln Collector (one-way)	17,500	3,300	0.189	A	2-Ln Collector w/o TWLTL (NFP)	15,340	1.534	**F**	-1.345	N
Camino De La Reina	Hotel Circle North to Avenida Del Rio	2-Ln Collector w/ TWLTL	15,000	9,900	0.660	C	2-Ln Collector w/ TWLTL	8,480	0.566	C	0.094	N
Camino De La Reina	Avenida Del Rio to Camino De La Siesta	2-Ln Collector w/o TWLTL (NFP)	10,000	17,100	1.710	**F**	2-Ln Collector w/o TWLTL (NFP)	13,360	1.336	**F**	0.374	**Y**
Camino De La Reina	Camino De La Siesta to Mission Center Road	4-Ln Major Arterial	40,000	10,800	0.270	A	4-Ln Major Arterial	10,730	0.268	A	0.002	N
Camino De La Reina	Mission Center Road to Camino Del Este	4-Ln Major Arterial	40,000	19,700	0.493	B	4-Ln Major Arterial	18,530	0.463	B	0.030	N
Camino De La Reina	Camino Del Este to Qualcomm Way	4-Ln Major Arterial	40,000	13,200	0.330	A	4-Ln Major Arterial	13,770	0.344	A	-0.014	N
Camino Del Rio North	Camino De La Siesta to Mission Center Road	2-Ln Collector w/ TWLTL	15,000	12,800	0.853	D	2-Ln Collector w/ TWLTL	5,430	0.362	B	0.491	N
Camino Del Rio North	Mission Center Road to I-8 WB Ramps	4-Ln Major Arterial	40,000	29,600	0.740	C	4-Ln Major Arterial	24,030	0.601	C	0.139	N
Camino Del Rio North	I-8 WB Ramps to Camino Del Este	3-Ln Collector w/ TWLTL (1 EB, 2 WB)	22,500	11,300	0.502	C	3-Ln Collector w/ RM (1 EB, 2 WB)	11,910	0.529	C	-0.027	N
Camino Del Rio North	Camino Del Este to Qualcomm Way	4-Ln Major Arterial	40,000	21,500	0.538	C	4-Ln Major Arterial	12,180	0.305	A	0.233	N
Camino Del Rio North	Qualcomm Way to Mission City Parkway	4-Ln Major Arterial	40,000	15,700	0.393	B	4-Ln Major Arterial	10,590	0.265	A	0.128	N
Camino Del Rio North	Mission City Parkway to 1800' West of Ward Rd	2-Ln Collector w/o TWLTL (NFP)	10,000	8,900	0.890	D	2-Ln Collector w/o TWLTL (NFP)	8,080	0.808	D	0.082	N

Table 6.1 Roadway Segment Analysis – Two-Lane Via Las Cumbres Alternative

		Two-Lane Via Las Cumbres Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Camino Del Rio North	1800' West of Ward Road to Ward Road	2-Ln Collector w/o TWLTL (NFP)	10,000	9,700	0.970	**E**	2-Ln Collector w/o TWLTL (NFP)	8,920	0.892	D	0.078	**Y**
Camino Del Rio North	Ward Road to 1000' West of Fairmount Avenue	4-Ln Major Arterial	40,000	9,700	0.243	A	4-Ln Major Arterial	11,830	0.296	A	-0.054	N
Camino Del Rio North	1000' West of Fairmount Avenue to Fairmount Avenue	4-Ln Collector w/ TWLTL	30,000	20,400	0.680	D	4-Ln Collector w/ TWLTL	13,470	0.449	B	0.231	N
Hotel Circle South	Taylor Street to I-8 EB Off-Ramp	2-Ln Collector (one-way)	17,500	3,100	0.177	A	2-Ln Collector w/o TWLTL (NFP)	12,010	1.201	**F**	-1.024	N
Hotel Circle South	I-8 EB Off-Ramp to Via Las Cumbres	2-Ln Collector (one-way)	17,500	15,500	0.886	**E**	2-Ln Collector w/ TWLTL	12,340	0.823	D	0.063	**Y**
Hotel Circle South	Via Las Cumbres to I-8 EB On-Ramp	2-Ln Collector (one-way)	17,500	30,200	1.726	**F**	2-Ln Collector w/ TWLTL	12,340	0.823	D	0.903	**Y**
Hotel Circle South	I-8 EB On-Ramp to Bachman Place	2-Ln Collector (one-way)	17,500	14,100	0.806	D	2-Ln Collector w/ TWLTL	17,200	1.146	**F**	-0.340	N
Hotel Circle South	Bachman Place to Hotel Circle North/Camino De La Reina	2-Ln Collector (one-way)	17,500	14,700	0.840	D	2-Ln Collector w/ TWLTL	15,580	1.038	**F**	-0.198	N
Camino Del Rio South	Western Terminus to Mission Center Road	2-Ln Collector w/ TWLTL	15,000	7,500	0.500	C	2-Ln Collector w/ w/o TWLTL	7,330	0.916	**E**	-0.416	N
Camino Del Rio South	Mission Center Road to Texas Street	2-Ln Collector w/ TWLTL	15,000	8,700	0.580	C	2-Ln Collector w/ w/o TWLTL	7,410	0.927	**E**	-0.347	N
Camino Del Rio South	Texas Street to Mission City Parkway	2-Ln Collector w/ TWLTL	15,000	11,200	0.747	D	2-Ln Collector w/ w/o TWLTL	8,140	1.018	**F**	-0.271	N
Camino Del Rio South	Mission City Parkway to I-15 SB Off-Ramp	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	22,500	14,100	0.627	C	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	11,750	0.522	C	0.105	N
Camino Del Rio South	I-15 SB Off-Ramp to I-15 NB On-Ramp	2-Ln Collector w/ TWLTL	15,000	17,000	1.133	**F**	4-Ln Collector w/ TWLTL	9,580	0.319	A	0.814	**Y**
Camino Del Rio South	I-15 NB On-Ramp to Fairmount Avenue	2-Ln Collector w/ TWLTL	15,000	7,700	0.513	C	2-Ln Collector w/ TWLTL	6,370	0.424	B	0.089	N
Morena Boulevard	Tecolote Road to West Morena Boulevard	2-Ln Collector w/ TWLTL	15,000	16,700	1.113	**F**	2-Ln Collector w/ TWLTL	16,180	1.079	**F**	0.034	**Y**

Table 6.1 Roadway Segment Analysis – Two-Lane Via Las Cumbres Alternative

		Two-Lane Via Las Cumbres Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Morena Boulevard	West Morena Boulevard to Linda Vista Road	4-Ln Major Arterial	40,000	16,100	0.403	B	4-Ln Major Arterial	17,740	0.443	B	-0.040	N
Morena Boulevard	Linda Vista Road to I-8 WB Off-Ramp	4-Ln Major Arterial	40,000	28,900	0.723	C	4-Ln Major Arterial	41,930	1.048	**F**	-0.325	N
Morena Boulevard	I-8 WB Off-Ramp to Taylor Street	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	22,500	15,600	0.693	D	3-Ln Collector w/ RM (2 NB, 1 SB)	11,570	0.514	C	0.179	N
Napa Street	Morena Boulevard to Friars Road	4-Ln Major Arterial	40,000	15,700	0.393	B	4-Ln Major Arterial	13,430	0.336	A	0.057	N
Colusa Street	Linda Vista Road to Friars Road	2-Ln Collector w/o TWLTL	8,000	2,700	0.338	B	2-Ln Collector w/o TWLTL	2,720	0.339	B	-0.001	N
Via Las Cumbres	Linda Vista Road to Friars Road	3-Ln Collector w/o TWLTL (2 NB, 1 SB)	11,000	12,200	1.109	**F**	3-Ln Collector (2 NB, 1 SB)	10,920	0.993	**E**	0.116	**Y**
Via Las Cumbres	Friars Road to Riverwalk Drive	4-Ln Major Arterial	40,000	11,300	0.283	A	Does Not Exist				0.283	N
Via Las Cumbres	Riverwalk Drive to ~~Levi-Cushman Street "B"~~Riverwalk Street "U"	2-Ln Major Arterial	20,000	17,200	0.860	D	Does Not Exist				0.860	N
Via Las Cumbres	~~Levi-Cushman Street "B"~~Riverwalk Street "U" to Hotel Circle North	4-Ln Major Arterial	40,000	17,900	0.448	B	Does Not Exist				0.448	N
Via Las Cumbres	Hotel Circle North to Hotel Circle South	4-Ln Major Arterial	40,000	30,100	0.753	D	Does Not Exist				-	-
Fashion Valley Road	Friars Road to Riverwalk Drive	4-Ln Major Arterial	40,000	8,200	0.205	A	4-Ln Collector w/o TWLTL	9,980	0.665	C	-0.460	N
Fashion Valley Road	Riverwalk Drive to ~~Levi-Cushman Street "B"~~Riverwalk Street "U"	4-Ln Major Arterial	40,000	17,400	0.435	B	4-Ln Collector w/o TWLTL	9,980	0.665	C	-0.230	N

Table 6.1 Roadway Segment Analysis – Two-Lane Via Las Cumbres Alternative

		Two-Lane Via Las Cumbres Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Fashion Valley Road	~~Levi-Cushman Street "B"~~Riverwalk Street "U" to Hotel Circle North	4-Ln Major Arterial	40,000	24,600	0.615	C	4-Ln Collector w/o TWLTL	9,980	0.665	C	-0.050	N
Bachman Place	Hotel Circle South to southern community boundary	4-Ln Collector w/ TWLTL	30,000	20,800	0.693	D	2-Ln Collector w/o TWLTL (NFP)	9,140	0.914	**E**	-0.221	N
Avenida Del Rio	Fashion Valley Parking Lot to Camino De La Reina	4-Ln Collector w/o TWLTL	15,000	19,100	1.273	**F**	4-Ln Collector w/o TWLTL	8,740	0.583	C	0.690	**Y**
Ulric Street	Fashion Hills Boulevard to 600' South of Fashion Hills Blvd	2-Ln Collector w/ TWLTL	15,000	25,800	1.720	**F**	2-Ln Collector w/ TWLTL	20,380	1.359	**F**	0.361	**Y**
Ulric Street	600' South of Fashion Hills Boulevard to Friars Road	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	22,500	27,100	1.204	**F**	3-Ln Collector w/ SM (1 NB 2 SB)	20,430	0.908	**E**	0.296	**Y**
Camino De La Siesta	Camino De La Reina to Camino Del Rio North	2-Ln Collector w/o TWLTL	8,000	9,400	1.175	**F**	2-Ln Collector w/ w/o TWLTL	5,150	0.643	D	0.532	**Y**
Metropolitan Drive	Mission Valley Road to Murray Canyon Road (clockwise)	2-Ln Collector w/o TWLTL (NFP)	10,000	11,400	1.140	**F**	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	3,840	0.171	A	0.969	**Y**
Metropolitan Drive	Murray Canyon Road to Frazee Road (clockwise)	2-Ln Collector w/o TWLTL (NFP)	10,000	200	0.020	A	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	3,840	0.171	A	-0.151	N
Murray Canyon Road	Metropolitan Drive to Frazee Road	2-Ln Collector w/o TWLTL (NFP)	10,000	5,600	0.560	B	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	7,400	0.329	A	0.231	N
Frazee Road	Metropolitan Drive to Murray Canyon Road	2-Ln Collector w/o TWLTL (NFP)	10,000	6,200	0.620	C	Does Not Exist				0.620	N
Frazee Road	Murray Canyon Road to Friars Road	4-Ln Major Arterial	40,000	20,400	0.510	B	4-Ln Major Arterial	14,670	0.367	A	0.143	N
Frazee Road	Friars Road to Hazard Center Drive	4-Ln Major Arterial	40,000	19,200	0.480	B	4-Ln Major Arterial	17,050	0.426	B	0.054	N

Table 6.1 Roadway Segment Analysis – Two-Lane Via Las Cumbres Alternative

		Two-Lane Via Las Cumbres Alternative					Existing					
Roadway	**Segment**	**Classification**	**Capacity**	**ADT**	**V/C**	**LOS**	**Functional Classification**	**ADT**	**V/C**	**LOS**	**Δ V/C**	**SI?**
Mission Center Road	Murray Ridge Road to 1200' West of Murray Ridge Road	2-Ln Collector w/o TWLTL	8,000	14,700	1.838	**F**	2-Ln Collector w/o TWLTL	10,970	1.097	**F**	0.741	**Y**
Mission Center Road	1200' W of Murray Ridge Rd to 950' N of Mission Valley Rd	3-Ln Collector w/o TWLTL (2 NB, 1 SB)	11,000	14,700	1.336	**F**	3-Ln Collector (2 NB, 1 SB)	10,720	0.975	**E**	0.361	**Y**
Mission Center Road	950' North of Mission Valley Road to Mission Valley Road	4-Ln Major Arterial	40,000	14,700	0.368	A	4-Ln Major Arterial	10,940	0.273	A	0.095	N
Mission Center Road	Mission Valley Road to Westside Drive	4-Ln Major Arterial	40,000	20,100	0.503	B	4-Ln Major Arterial	14,170	0.354	A	0.149	N
Mission Center Road	Westside Drive to Friars Road WB Ramps	5-Ln Major Arterial (3 NB, 2 SB)	45,000	33,000	0.733	C	5-Ln Major Arterial (3 NB, 2 SB)	26,020	0.578	C	0.155	N
Mission Center Road	Friars Road WB Ramps to Friars Road EB Ramps	4-Ln Major Arterial	40,000	25,600	0.640	C	4-Ln Major Arterial	22,830	0.571	C	0.069	N
Mission Center Road	Friars Road EB Ramps to Mission Center Court	4-Ln Major Arterial	40,000	22,400	0.560	C	4-Ln Major Arterial	19,470	0.487	B	0.073	N
Mission Center Road	Mission Center Court to Hazard Center Drive	5-Ln Major Arterial (2 NB, 3 SB)	45,000	26,100	0.580	C	5-Ln Major Arterial (2 NB, 3 SB)	19,450	0.432	B	0.148	N
Mission Center Road	Hazard Center Drive to Camino De La Reina	5-Ln Major Arterial (2 NB, 3 SB)	45,000	32,100	0.713	C	5-Ln Major Arterial (2 NB, 3 SB)	27,060	0.601	C	0.112	N
Mission Center Road	Camino De La Reina to Camino Del Rio North	5-Ln Major Arterial (3 NB, 2 SB)	45,000	31,700	0.704	C	5-Ln Major Arterial (3 NB, 2 SB)	23,280	0.517	B	0.187	N
Auto Circle	Camino Del Rio North to I-8 EB Ramps	4-Ln Major Arterial	40,000	41,100	1.028	**F**	4-Ln Major Arterial	34,100	0.852	D	0.176	**Y**
Auto Circle	I-8 EB Ramps to Camino Del Rio South	4-Ln Collector w/ TWLTL	30,000	18,000	0.600	C	4-Ln Collector w/ RM	20,980	0.699	D	-0.099	N
Via Alta	Franklin Ridge Road to Civita Boulevard	2-Ln Collector w/ TWLTL	15,000	10,900	0.727	D	Does Not Exist				0.727	N

Table 6.1 Roadway Segment Analysis – Two-Lane Via Las Cumbres Alternative

		Two-Lane Via Las Cumbres Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Via Alta	Civita Boulevard to Westside Drive	2-Ln Collector w/ TWLTL	15,000	6,400	0.427	B	2-Ln Collector w/ RM	1,340	0.089	A	0.338	N
Murray Ridge Road	Mission Center Road to I-805 NB Ramps	2-Ln Collector w/ TWLTL	15,000	23,800	1.587	**F**	2 Ln Collector w/ TWLTL	20,000	1.333	**F**	0.254	**Y**
Murray Ridge Road	I-805 NB Ramps to I-805 SB Ramps	2-Ln Collector w/ TWLTL	15,000	24,300	1.620	**F**	2-Ln Collector w/ TWLTL	11,700	0.780	D	0.840	**Y**
Russell Park Way	Civita Boulevard to Friars Road	2-Ln Collector w/ TWLTL	15,000	7,400	0.493	C	2-Ln Collector w/ RM	1,020	0.068	A	0.425	N
Camino Del Este	Rio San Diego Drive to Camino De La Reina	4-Ln Collector w/ TWLTL	30,000	13,900	0.463	B	4-Ln Collector w/ RM or TWLTL	8,450	0.282	A	0.181	N
Camino Del Este	Camino De La Reina to Camino Del Rio North	4-Ln Collector w/ TWLTL	30,000	18,200	0.607	C	4-Ln Collector w/ RM or TWLTL	9,880	0.329	A	0.278	N
Franklin Ridge Road	Phyllis Place to Via Alta	4-Ln Major Arterial	40,000	31,800	0.795	D	Does Not Exist				0.795	N
Franklin Ridge Road	Via Alta to Civita Boulevard	2-Ln Collector w/ TWLTL	15,000	17,100	1.140	**F**	Does Not Exist				1.140	**Y**
Qualcomm Way	Civita Boulevard to Friars Road WB Ramps	4-Ln Major Arterial	40,000	19,700	0.493	B	Does Not Exist				0.493	N
Qualcomm Way	Friars Road WB Ramps to Friars Road EB Ramps	4-Ln Major Arterial	40,000	30,300	0.758	D	2-Ln Collector w/ TWLTL	9,300	0.620	C	0.138	N
Qualcomm Way	Friars Road EB Ramps to Rio San Diego Drive	5-Ln Major Arterial (2 NB, 3 SB)	45,000	26,300	0.584	C	5-Ln Major Arterial (2NB, 3SB)	10,200	0.227	A	0.357	N
Qualcomm Way	Rio San Diego Drive to Camino Del Rio North	6-Ln Major Arterial	50,000	42,700	0.854	D	6-Ln Major Arterial	24,330	0.487	B	0.367	N
Qualcomm Way	Camino Del Rio North to I-8 WB Ramps	5-Ln Major Arterial (3 NB, 2 SB)	45,000	49,400	1.098	**F**	5-Ln Major Arterial (3 NB, 2 SB)	23,560	0.524	B	0.574	**Y**
Qualcomm Way	I-8 WB Ramps to I-8 EB Ramps	6-Ln Major Arterial	50,000	53,500	1.070	**F**	6-Ln Major Arterial	36,410	0.728	C	0.342	**Y**
Qualcomm Way	I-8 EB Ramps to Camino Del Rio South	4-Ln Major Arterial	40,000	32,100	0.803	D	4-Ln Major Arterial	25,830	0.646	C	0.157	N

Table 6.1 Roadway Segment Analysis – Two-Lane Via Las Cumbres Alternative

		Two-Lane Via Las Cumbres Alternative					Existing					
Roadway	**Segment**	**Classification**	**Capacity**	**ADT**	**V/C**	**LOS**	**Functional Classification**	**ADT**	**V/C**	**LOS**	**Δ V/C**	**SI?**
Texas Street	Camino Del Rio South to 1400' North of Madison Ave	4-Ln Major Arterial	40,000	33,200	0.830	D	4-Ln Major Arterial	29,050	0.726	C	0.104	N
Texas Street	1400' North of Madison Ave to Madison Avenue	3-Ln Collector w/ TWLTL (1 NB, 2 SB)	22,500	33,200	1.476	**F**	3-Ln Collector w/ TWLTL (1 NB, 2 SB)	29,240	1.300	**F**	0.176	**Y**
Texas Street	Madison Avenue to Meade Ave	2-Ln Collector w/ TWLTL	15,000	20,400	1.360	**F**	2-Ln Collector w/ TWLTL	17,090	1.139	**F**	0.221	**Y**
Texas Street	Meade Ave to El Cajon Boulevard	3-Ln Collector	11,000	15,600	1.418	**F**	3-Ln Collector	14,310	1.300	**F**	0.118	**Y**
River Run Drive	Friars Road to Rio San Diego Drive	2-Ln Collector w/o TWLTL	8,000	4,100	0.513	C	2-Ln Collector w/o TWLTL	4,030	0.504	C	0.009	N
Fenton Parkway	Portofino Driveway to Friars Road	4-Ln Major Arterial	40,000	4,900	0.123	A	4-Ln Major Arterial	4,120	0.514	C	-0.391	N
Fenton Parkway	Friars Road to Rio San Diego Drive	4-Ln Major Arterial	40,000	15,700	0.393	B	4-Ln Major Arterial	12,610	0.315	A	0.078	N
Fenton Parkway	Rio San Diego Drive to Del Rio Apartments Driveway	4-Ln Major Arterial	40,000	9,300	0.233	A	4-Ln Major Arterial	5,400	0.135	A	0.098	N
Fenton Parkway	Del Rio Apartments Driveway to ~~New Street "I"~~Mission City Street "I"	4-Ln Major Arterial	40,000	9,300	0.233	A	Does Not Exist				0.233	N
Fenton Parkway	~~New Street "I"~~Mission City Street "I" to Camino Del Rio North	4-Ln Collector w/ TWLTL	30,000	13,900	0.463	B	Does Not Exist				0.463	N
Mission City Parkway	Camino Del Rio North to Camino Del Rio South	2-Ln Collector w/ TWLTL	15,000	11,000	0.733	D	2-Ln Collector w/ TWLTL	6,430	0.643	B	0.090	N
Northside Drive	Portofino Driveway to Friars Road	4-Ln Collector w/ TWLTL	30,000	5,100	0.170	A	4-Ln Collector w/ RM	6,590	0.220	A	-0.050	N
Northside Drive	Friars Road to Fenton Marketplace Driveway	4-Ln Collector w/ TWLTL	30,000	24,600	0.820	D	4-Ln Collector w/ RM	20,310	0.677	C	0.143	N
Northside Drive	Fenton Marketplace Driveway to Lowe's Frontage Road	Shopping Center Driveway2	22,500	19,600	0.871	**E**	3-Ln Collector w/ RM (2 NB, 1 SB)	15,890	0.706	D	0.165	**Y**

Table 6.1 Roadway Segment Analysis – Two-Lane Via Las Cumbres Alternative

		Two-Lane Via Las Cumbres Alternative					Existing					
Roadway	**Segment**	**Classification**	**Capacity**	**ADT**	**V/C**	**LOS**	**Functional Classification**	**ADT**	**V/C**	**LOS**	**Δ V/C**	**SI?**
Mission Village Drive	Ronda Avenue to Friars Road WB Ramps	4-Ln Major Arterial	40,000	17,900	0.448	B	4-Ln Major Arterial	17,220	0.431	B	0.017	N
Mission Village Drive	Friars Road WB Ramps to Friars Road EB Ramps	4-Ln Major Arterial	40,000	30,600	0.765	D	4-Ln Major Arterial	13,660	0.342	A	0.423	N
Rancho Mission Road	Friars Road to San Diego Mission Road	2-Ln Collector w/ TWLTL	15,000	16,200	1.080	**F**	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	12,820	0.570	C	0.510	**Y**
Rancho Mission Road	San Diego Mission Road to Camino Del Rio North	2-Ln Collector w/ TWLTL	15,000	19,300	1.287	**F**	4-Ln Collector w/o TWLTL	9,580	0.639	C	0.648	**Y**
Santo Road	Northern Terminus to Friars Road	4-Ln Major Arterial	40,000	15,700	0.393	B	2-Ln Collector w/o TWLTL	6,360	0.796	D	-0.403	N
Riverdale Street	Zion Road to Friars Road	2-Ln Collector w/o TWLTL	8,000	2,200	0.275	A	2-Ln Collector w/ w/o TWLTL	2,770	0.346	B	-0.071	N
Riverdale Street	Friars Road to Vandever Avenue	2-Ln Collector w/o TWLTL	8,000	26,500	3.313	**F**	2-Ln Collector w/ w/o TWLTL	8,900	1.113	**F**	2.200	**Y**
Mission Gorge Road	Friars Road to Camino Del Rio North	4-Ln Collector w/ TWLTL	30,000	22,700	0.757	D	4-Ln Collector w/ TWLTL	14,710	0.490	C	0.267	N
Fairmount Avenue	Camino Del Rio North/I-8 WB Off-Ramp to I-8 EB Off-Ramp	4-Ln Major Arterial	40,000	53,300	1.333	**F**	4-Ln Major Arterial	40,210	1.005	**F**	0.328	**Y**
Fairmount Avenue	I-8 EB Off-Ramp to Camino Del Rio South	6-Ln Expressway	80,000	93,300	1.166	**F**	6-Ln Expressway	82,880	1.036	**F**	0.130	**Y**
Riverwalk Drive	West of Via Las Cumbres	2-Ln Collector w/ TWLTL	15,000	6,000	0.400	B	Does Not Exist				0.400	N
Riverwalk Drive	Via Las Cumbres to Fashion Valley Road	2-Ln Collector w/ TWLTL	15,000	3,700	0.247	A	Does Not Exist				0.247	N
Riverwalk Drive	Fashion Valley Road to Avenida Del Rio	2-Ln Collector w/o TWLTL	8,000	15,200	1.900	**F**	Does Not Exist				1.900	**Y**

Table 6.1 Roadway Segment Analysis – Two-Lane Via Las Cumbres Alternative

		Two-Lane Via Las Cumbres Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
~~Levi-Cushman Street "B"~~Riverwalk Street "U"	Via Las Cumbres to Fashion Valley Road	4-Ln Collector w/ TWLTL	30,000	11,300	0.377	B	Does Not Exist				0.377	N
Goshen St	Linda Vista Rd to Gaines St	2-Ln Collector w/o TWLTL	8,000	4,300	0.538	C	Not Analyzed				0.538	N
Goshen St	Gaines St to Friars Rd	2-Ln Collector w/o TWLTL	8,000	3,400	0.425	B	Not Analyzed				0.425	N
~~New Street "I"~~Mission City Street "I"	Mission City Parkway to Eastern End	2-Ln Collector w/ TWLTL	15,000	11,900	0.793	D	Does Not Exist				0.793	N
Gill Village Way	Friars Rd to Rio San Diego Dr	2-Ln Collector w/ TWLTL	15,000	5,700	0.380	B	Not Analyzed				0.380	N
Rio Bonito Way	Friars Rd to Rio San Diego Dr	2-Ln Collector w/ TWLTL	15,000	4,100	0.273	A	Not Analyzed				0.273	N

Notes:
Bold letter indicates substandard LOS E or F. RM = Raised Median. | SM = Striped Median. | TWLTL = Two-Way Left-Turn Lane. Turn pocket(s) may be considered in place of TWLTL. | NFP = No Fronting Property. | SI = Significant Impact.
[1] Capacity for a 7-Ln Prime Arterial is calculated assuming that each additional lane above a 6-Ln Arterial adds 5,000 ADT for LOS A, 7,500 ADT for LOS B and 10,000 ADT for LOS C, D, and E.
[2] Shopping Center Driveway was analyzed as a 3-Ln Collector w/ TWLTL.

As shown in Table 5.2, based on the criteria documented in Section 2.3, the CPU land uses and Two-Lane Via Las Cumbres Alternative will result in a LOS of E or F along the following 39 roadway segments, and have a significant traffic impact to the following 38 roadway segments in **bold**, when comparing to the existing conditions (Two-Lane Via Las Cumbres Alternative Plan-to-Ground):

- **Sea World Drive, Mission Bay Parkway to Friars Road (LOS F, Δ in V/C 0.175)**
- **Friars Road, Avenida De Las Tiendas to Ulric Street/SR-163 SB Ramps (LOS F, Δ in V/C 0.354)**
- **Friars Road, Mission Village Drive to I-15 SB Ramps (LOS F, Δ in V/C 0.343)**
- **Friars Road, I-15 SB Ramps to I-15 NB Ramps (LOS F, Δ in V/C 0.459)**
- **Friars Road, I-15 NB Ramps to Rancho Mission Road (LOS F, Δ in V/C 0.267)**
- **Friars Road, Santo Road to Riverdale Street (LOS F, Δ in V/C 0.31)**
- **Rio San Diego Drive, River Run Drive to Fenton Parkway (LOS E, Δ in V/C 0.624)**
- **Hotel Circle North, I-8 WB Off-Ramp to Via Las Cumbres (LOS F, Δ in V/C 0.995)**
- Hotel Circle North, Via Las Cumbres to I-8 WB Off-Ramp (LOS E, Δ in V/C -0.660) – not impacted
- **Camino De La Reina, Avenida Del Rio to Camino De La Siesta (LOS F, Δ in V/C 0.374)**
- **Camino Del Rio North, 1800' West of Ward Road to Ward Road (LOS E, Δ in V/C 0.078)**
- **Hotel Circle South, I-8 EB Off-Ramp to Via Las Cumbres (LOS E, Δ in V/C 0.063)**
- **Hotel Circle South, Via Las Cumbres to I-8 EB On-Ramp (LOS F, Δ in V/C 0.903)**
- **Camino Del Rio South, I-15 SB Off-Ramp to I-15 NB On-Ramp (LOS F, Δ in V/C 0.814)**
- **Morena Boulevard, Tecolote Road to West Morena Boulevard (LOS F, Δ in V/C 0.034)**
- **Via Las Cumbres, Linda Vista Road to Friars Road (LOS F, Δ in V/C 0.116)**
- **Avenida Del Rio, Fashion Valley Parking Lot to Camino De La Reina (LOS F, Δ in V/C 0.69)**
- **Ulric Street, Fashion Hills Boulevard to 600' South of Fashion Hills Blvd (LOS F, Δ in V/C 0.361)**
- **Ulric Street, 600' South of Fashion Hills Boulevard to Friars Road (LOS F, Δ in V/C 0.296)**
- **Camino De La Siesta, Camino De La Reina to Camino Del Rio North (LOS F, Δ in V/C 0.532)**
- **Metropolitan Drive, Mission Valley Road to Murray Canyon Road (clockwise) (LOS F, Δ in V/C 0.969)**
- **Mission Center Road, Murray Ridge Road to 1200' West of Murray Ridge Road (LOS F, Δ in V/C 0.741)**
- **Mission Center Road, 1200' W of Murray Ridge Rd to 950' N of Mission Valley Rd (LOS F, Δ in V/C 0.361)**
- **Auto Circle, Camino Del Rio North to I-8 EB Ramps (LOS F, Δ in V/C 0.176)**
- **Murray Ridge Road, Mission Center Road to I-805 NB Ramps (LOS F, Δ in V/C 0.254)**
- **Murray Ridge Road, I-805 NB Ramps and I-805 SB Ramps (LOS F, Δ in V/C 0.840)**
- **Franklin Ridge Road, Via Alta to Civita Boulevard (LOS F, Δ in V/C 1.140)**
- **Qualcomm Way, Camino Del Rio North to I-8 WB Ramps (LOS F, Δ in V/C 0.574)**
- **Qualcomm Way, I-8 WB Ramps to I-8 EB Ramps (LOS F, Δ in V/C 0.342)**
- **Texas Street, 1400' North of Madison Ave to Madison Avenue (LOS F, Δ in V/C 0.176)**
- **Texas Street, Madison Avenue to Meade Ave (LOS F, Δ in V/C 0.221)**
- **Texas Street, Meade Ave to El Cajon Boulevard (LOS F, Δ in V/C 0.118)**
- **Northside Drive, Fenton Marketplace Driveway to Lowe's Frontage Road (LOS E, Δ in V/C 0.165)**
- **Rancho Mission Road, Friars Road to San Diego Mission Road (LOS F, Δ in V/C 0.51)**
- **Rancho Mission Road, San Diego Mission Road to Camino Del Rio North (LOS F, Δ in V/C 0.648)**
- **Riverdale Street, Friars Road to Vandever Avenue (LOS F, Δ in V/C 2.2)**
- **Fairmount Avenue, Camino Del Rio North/I-8 WB Off-Ramp to I-8 EB Off-Ramp (LOS F, Δ in V/C 0.328)**
- **Fairmount Avenue, I-8 EB Off-Ramp to Camino Del Rio South (LOS F, Δ in V/C 0.13)**
- **Riverwalk Drive, Fashion Valley Road to Avenida Del Rio (LOS F, Δ in V/C 1.9)**

The asterisk (*) above identifies the one new roadway segment impact resulting from the Two-Lane Via Las Cumbres Alternative.

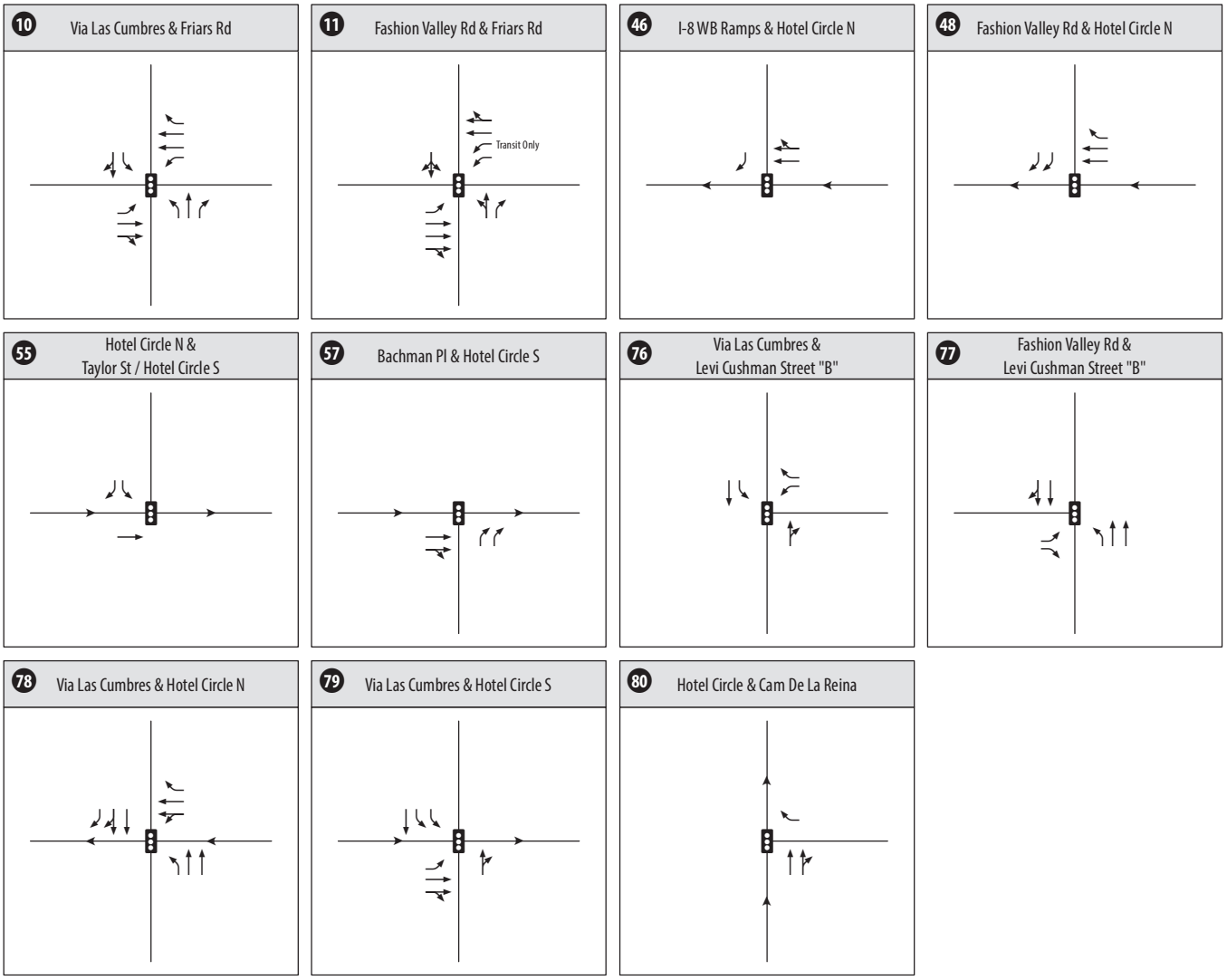
6.2 Intersection Analysis

This chapter provides a focused intersection analysis for 12 intersections in the vicinity of the Via Las Cumbres extension. Based on a comparison between the Four-Lane Via Las Cumbres Alternative roadway ADT in Table 5.2 and the Two-Lane Via Las Cumbres roadway ADT in Table 6.1, it was determined that the following intersections could be affected by the Two-Lane Via Las Cumbres Alternative:

- 10: Via Las Cumbres / Friars Road
- 11: Fashion Valley Road / Friars Road
- 46: I-8 WB Ramps / Hotel Circle North (W)
- 48: Fashion Valley Road / Hotel Circle North
- 55: Hotel Circle North / Taylor Street/Hotel Circle South
- 57: Bachman Place / Hotel Circle South
- 74: Fashion Valley Road / Riverwalk Drive
- 76: Via Las Cumbres & ~~Levi Cushman Street "B"~~Riverwalk Street “U”
- 77: Fashion Valley Road & ~~Levi Cushman Street "B"~~Riverwalk Street “U”
- 78: Via Las Cumbres & Hotel Circle North
- 79: Via Las Cumbres & Hotel Circle South
- 80: Hotel Circle South & Camino De La Reina

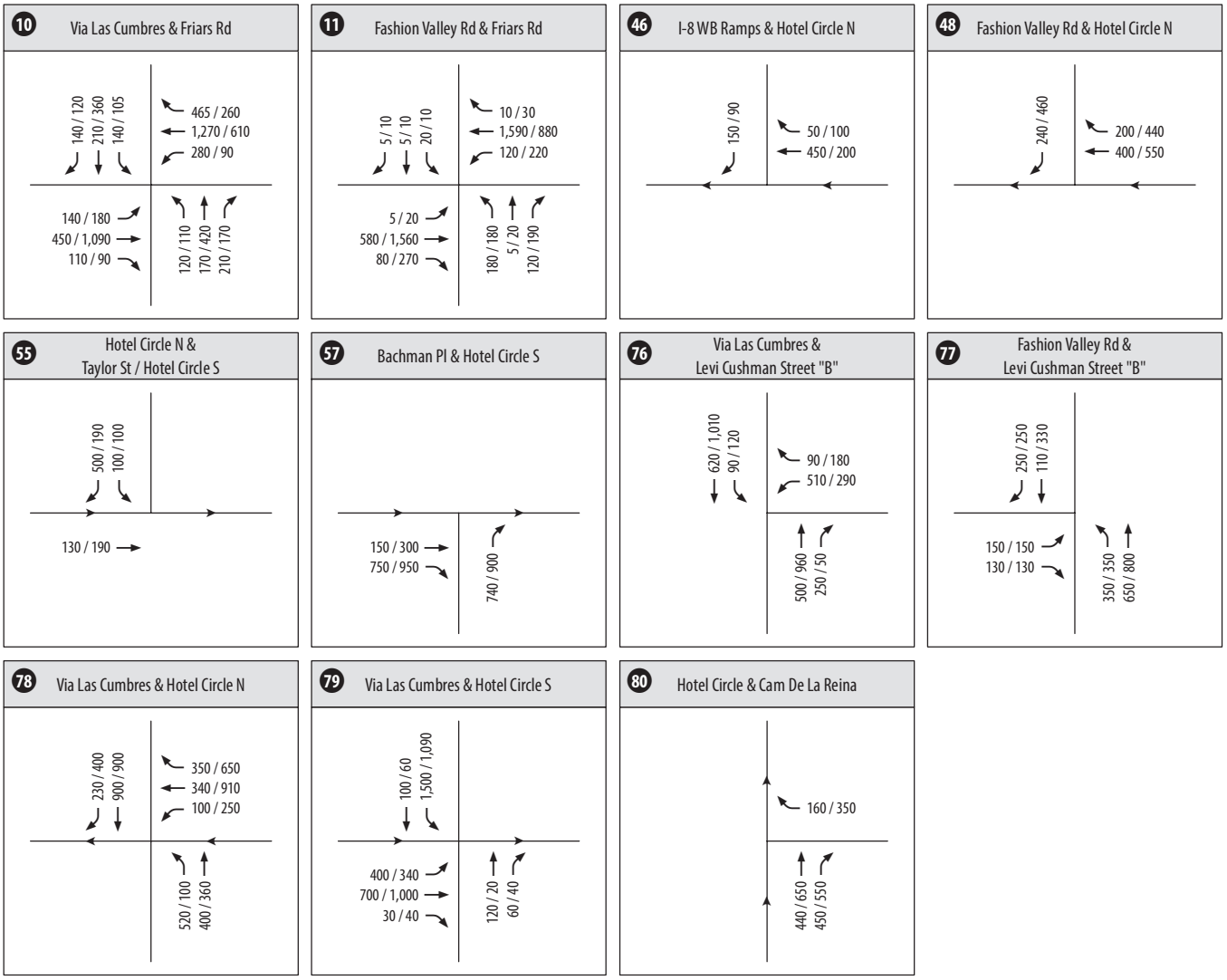
Two-Lane Via Las Cumbres Alternative intersection geometrics are presented in Figure 6-2, while forecast AM and PM peak hour turning movements are displayed in Figure 6-3, and midday turning movements in Figure 6-4.

AM and PM peak hour and midday LOS analysis results, as well as potential traffic impact associated with this alternative are provided in Table 6.2. Signal timing was assumed to be optimized under Two-Lane Via Las Cumbres Alternative conditions. Intersection LOS calculation worksheets are provided in Appendix L.



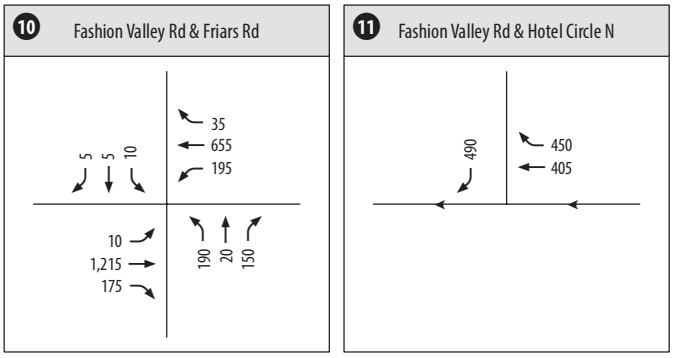
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Figure 6-2
Intersection Geometrics - Two-Lane Via Las Cumbres Alternative
(Intersections 10, 11, 46, 48, 55, 57 and 76-80)



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Figure 6-3
AM/PM Peak Hour Intersection Volumes -
Two-Lane Via Las Cumbres Alternative (Intersections 10, 11, 46, 48, 55, 57 and 76-80)



Legend

- X — Study Intersection
- Turn Movements
- MID — Peak Hour Volumes
- One-Way Roadway

*Names of North-South cross-streets always listed first

NORTH
NOT TO SCALE

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Figure 6-4
Midday Peak Hour Intersection Volumes - Two-Lane Via Las Cumbres Alternative (Intersections 11 and 48)

Table 7.2 Peak Hour Intersection LOS and Delay Results – Two-Lane Via Las Cumbres

Intersection	Control	Two-Lane Via Las Cumbres						Existing			
		AM Peak		PM Peak		Midday Peak		AM / PM / Midday	AM / PM / Midday	AM / PM / Midday	
		Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Δ Avg. Delay (sec.)	SI ?
10: Via Las Cumbres / Friars Road	Signal	49.7	D	50.1	D	-	-	16.5 / 20.8 / -	B / C / -	33.2 / 29.3 / -	N
11: Fashion Valley Road / Friars Road	Signal	30.0	C	60.1	**E**	29.9	C	22.0 / 51.3 / 12.0	C / D / B	8.0 / 8.8 / 17.9	**Y**
46: I-8 WB Ramps / Hotel Circle North (W)	Signal	1.3	A	3.7	A	-	-	6.6 / 6.6 / -	A / A / -	5.3 / 2.9 / -	N
48: Fashion Valley Road / Hotel Circle North	Signal	35.6	D	27.8	C	21.0	C	10.0 / 16.2 / 11.5	A / B / B	25.6 / 11.6 / 9.5	N
55: Hotel Circle North / Taylor Street/Hotel Circle South	AWSC	2.3	A	2.0	A	-	-	34.2 / 43.1 / -	D / E / -	-31.9 / -41.1 / -	N
57: Bachman Place / Hotel Circle South	Signal	7.4	A	10.2	B	-	-	22.9 / 19.5 / -	C / B / -	-15.5 / -9.3 / -	N
74: Fashion Valley Road / Riverwalk Drive	Signal	34.3	C	94.5	**F**	-	-		Does Not Exist		**Y**
76: Via Las Cumbres & ~~Levi Cushman Street "B"~~Riverwalk Street "U"	Signal	16.4	B	13.5	B	-	-		Does Not Exist		N
77: Fashion Valley Road & ~~Levi Cushman Street "B"~~Riverwalk Street "U"	Signal	23.7	C	22.1	C	-	-		Does Not Exist		N
78: Via Las Cumbres & Hotel Circle North	Signal	43.3	D	52.1	D	-	-		Does Not Exist		N
79: Via Las Cumbres & Hotel Circle South	Signal	50.7	D	49.3	D	-	-		Does Not Exist		N
80: Hotel Circle South & Camino De La Reina	Signal	3.4	A	3.4	A	-	-		Does Not Exist		N

As shown in the table and based on the significant impact criteria outlined in Chapter 2, implementation of the CPU land uses and Two-Lane Via Las Cumbres Alternative would result in operations at LOS E or F, and significant impacts to the following intersections for the 12 focused intersections, as noted in **bold**:

- **11: Fashion Valley Road / Friars Road (PM LOS E, Δ in Delay 8.8)**
- **74: Fashion Valley Road & Riverwalk Drive (PM LOS F, Δ in Delay 94.5)** – also impacted under the Four-Lane Via Las Cumbres Alternative in Chapter 5

The Four-Lane Via Las Cumbres Alternative and the Two-Lane Via Las Cumbres Alternative share very similar forecast traffic volumes outside of the 12 intersections presented in Table 6.2. Therefore, the following intersections identified as significantly impacted by the CPU land uses and Four-Lane Via Las Cumbres Alternative will also be impacted under this scenario:

- **3: I-805 SB Ramps / Phyllis Place**
- **4: I-805 NB Ramps / Phyllis Place**
- **24: Mission Village Drive / Friars Road WB Ramps**
- **25: Mission Village Drive / Friars Road EB Ramps**
- **27: I-15 NB Ramps / Friars Road**
- **40: Mission Center Road / Camino De La Reina**
- **45: Fairmount Avenue / Camino Del Rio North/I-8 WB Off-Ramp**
- **50: I-8 WB Ramps/Mission Valley Mall Driveway / Camino Del Rio North**
- **52: Qualcomm Way / Camino Del Rio N/I-8 WB Ramps**
- **58: Mission Center Road / I-8 EB Ramps**
- **61: Texas Street / Camino Del Rio South**
- **67: Texas Street / Madison Avenue**

Three additional intersections were identified as operating at LOS E under CPU land uses and Four-Lane Via Las Cumbres Alternative conditions, however, they were not identified as significantly impacted due to the minor changes in delay. These intersections will continue to operate at LOS E, yet not impacted, including:

- 2: I-5 NB Ramps / Sea World Drive / Tecolote Road
- 23: Northside Drive / Friars Road
- 59: Mission Center Road / Camino Del Rio South

6.3 Freeway Segment Analysis

The freeway analysis includes the freeway improvements identified in Chapter 4, derived from the Revenue Constrained scenario of SANDAG's *San Diego Forward: The Regional Plan* (2015), the currently adopted regional transportation plan, and are anticipated to be implemented 2050.

Table 6.3a and **Table 6.3b** present the Two-Lane Via Las Cumbres Alternative freeway segment LOS results for study segments during the AM and PM peak periods, respectively. These tables also identify the potential traffic impacts associated with the CPU land uses and Two-Lane Via Las Cumbres Alternative. HCS freeway segment analysis worksheets are provided in **Appendix M**.

Table 6.3a Freeway Segment Level of Service Results – Two-Lane Via Las Cumbres Alternative AM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
I-8	Sunset Cliffs to Sports Arena Boulevard	EB	2M	44.4%	7.8%	1.0%	74,000	2,644	69.5	20.1	C	70.0	A	-0.5	N
		WB	2M	55.6%	7.2%	1.0%		2,894	68.7	22.2	C	70.0	A	-1.3	N
	Sports Arena Boulevard to I-5 Interchange	EB	3M+1A	44.2%	7.7%	1.2%	115,000	4,196	69.1	21.4	C	70.0	B	-0.9	N
		WB	3M+1A	55.8%	7.1%	1.2%		4,444	68.4	22.9	C	69.6	C	-1.2	N
	I-5 Interchange to Morena Boulevard	EB	3M	31.7%	7.8%	2.8%	178,000	6,141	58.9	36.9	**E**	70.0	B	-11.1	**Y**
		WB	4M	68.3%	6.8%	2.8%		7,114	64.4	29.4	D	69.6	C	-5.2	N
	Morena Boulevard to Taylor Street	EB	4M+1A	31.7%	7.8%	2.8%	231,000	7,965	60.3	35.1	**E**	70.0	B	-9.7	**Y**
		WB	5M	68.3%	6.8%	2.8%		9,228	63.3	31.0	D	68.2	C	-4.9	N
	Taylor Street to Hotel Circle	EB	4M	31.7%	7.8%	2.8%	205,000	7,078	64.4	29.4	D	70.0	B	-5.6	N
		WB	4M+1A	68.3%	6.8%	2.8%		8,199	58.6	37.4	**E**	61.3	D	-2.7	**Y**
	Hotel Circle to SR-163 Interchange	EB	4M+2A	31.7%	7.8%	2.8%	222,000	7,654	64.2	25.4	C	65.0	B	-0.8	N
		WB	5M	68.3%	6.8%	2.8%		8,866	61.6	30.7	D	63.4	D	-1.8	N
	SR-163 Interchange to Mission Center Road	EB	4M	31.7%	7.8%	3.2%	192,000	6,617	66.3	26.5	D	70.0	B	-3.7	N
		WB	3M+2A	68.3%	6.8%	3.2%		7,665	59.2	34.5	D	55.0	**E**	4.2	N
	Mission Center Road to Qualcomm Way / Texas Street	EB	4M+1A	31.7%	7.8%	3.2%	249,000	8,568	54.2	41.9	**E**	65.0	C	-10.8	**Y**
		WB	4M+1A	68.3%	6.8%	3.2%		9,926	43.5	60.5	**F**	50.9	**F**	-7.4	**Y**
	Qualcomm Way / Texas Street to I-805 Interchange	EB	4M+1A	43.0%	7.8%	3.2%	177,000	6,082	64.4	24.9	C	62.4	D	2.0	N
		WB	4M+1A	57.0%	6.8%	3.2%		7,046	62.0	30.0	D	57.6	**E**	4.4	N
	I-805 Interchange to I-15 Interchange	EB	4M+2A	31.7%	7.8%	3.0%	258,000	8,871	64.0	30.0	D	70.0	B	-6.0	N
		WB	4M+2A	68.3%	6.8%	3.0%		10,276	57.8	38.5	**E**	61.5	D	-3.7	**Y**
	I-15 Interchange to Fairmount Ave	EB	4M	32.0%	7.7%	3.5%	228,000	7,411	62.8	31.7	D	69.9	C	-7.1	N
		WB	4M+2A	68.0%	7.4%	3.5%		9,424	62.1	32.6	D	64.3	D	-2.2	N
I-5	Sea World Drive / Tecolote Road to I-8 Interchange	NB	5M+1A	54.0%	7.6%	3.4%	243,000	10,478	62.6	31.9	D	64.4	D	-1.8	N
		SB	4M+2A	46.0%	7.1%	3.4%		7,810	69.0	21.6	C	52.5	**F**	16.5	N
	I-8 Interchange to Old Town Avenue	NB	4M+1A	54.0%	7.6%	4.1%	245,000	10,564	39.0	72.7	**F**	54.6	**E**	-15.6	**Y**
		SB	5M	46.0%	7.1%	4.1%		7,874	67.2	25.1	C	52.8	**F**	14.4	N
SR-163	Genesee Avenue to Friars Road	NB	5M	57.0%	8.8%	3.7%	213,000	10,924	54.6	43.2	**E**	63.1	D	-8.5	**Y**
		SB	4M	43.0%	8.4%	3.7%		7,316	63.1	31.2	D	67.6	C	-4.5	N

Table 6.3a Freeway Segment Level of Service Results – Two-Lane Via Las Cumbres Alternative AM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
SR-163	Friars Road to I-8 Interchange	NB	3M	45.1%	7.9%	3.7%	180,000	7,098	49.4	51.2	**F**	65.3	D	-15.9	**Y**
		SB	4M+2A	54.9%	7.8%	3.7%		7,359	68.4	23.0	C	69.8	C	-1.4	N
	I-8 Interchange to 6th Avenue	NB	3M+1A	45.1%	7.9%	3.0%	192,000	7,554	43.9	61.4	**F**	63.7	D	-19.8	**Y**
		SB	3M+2A	54.9%	7.8%	3.0%		7,830	60.6	34.6	D	66.3	D	-5.7	N
	6th Avenue to Washington Street	NB	3M	45.1%	7.9%	3.0%	159,000	6,277	57.5	39.0	**E**	68.5	C	-11.0	**Y**
		SB	2M+1A	54.9%	7.8%	3.0%		6,507	9.5	365.1	**F**	39.1	**F**	-29.6	**Y**
I-805	Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place	NB	5M	69.9%	7.6%	6.5%	266,000	14,917	33.5	88.7	**F**	53.2	**F**	-19.7	**Y**
		SB	5M	30.1%	8.1%	6.5%		6,411	69.9	18.3	C	70.0	B	-0.1	N
	Murray Ridge Road / Phyllis Place to I-8 Interchange	NB	5M	74.6%	5.9%	6.5%	257,000	11,575	56.7	40.0	**E**	63.1	D	-6.4	**Y**
		SB	4M+2A	25.4%	8.4%	6.5%		5,255	70.0	14.4	B	70.0	B	0.0	N
	I-8 Interchange to Adams Avenue	NB	4M+1A	74.6%	5.9%	6.5%	254,000	11,418	40.6	68.8	**F**	50.0	**F**	-9.4	**Y**
		SB	6M	25.4%	8.4%	6.5%		5,184	70.0	12.1	B	70.0	A	0.0	N
	Adams Avenue to El Cajon Boulevard	NB	4M	74.6%	5.9%	6.5%	225,000	10,128	40.6	68.8	**F**	56.8	**E**	-16.2	**Y**
		SB	5M+1A	25.4%	8.4%	6.5%		4,598	70.0	12.7	B	70.0	B	0.0	N
I-15	Aero Drive to Friars Road	NB	4M+1A+2ML	60.5%	7.7%	5.0%	258,000	12,374	26.3	119.4	**F**	42.3	**F**	-16.0	**Y**
		SB	5M+1A+2ML	39.5%	7.5%	5.0%		8,086	67.7	24.2	C	69.4	C	-1.7	N
	Friars Road to I-8	NB	4M+2A+2ML	51.5%	8.2%	2.2%	273,000	10,370	58.3	37.8	**E**	64.5	D	-6.2	**Y**
		SB	3M+3A+2ML	48.5%	8.2%	2.2%		11,157	55.3	40.3	**E**	63.0	D	-7.7	**Y**
	I-8 to Adams Avenue	NB	3M+2A	51.5%	8.2%	2.2%	228,000	8,786	55.2	42.2	**E**	63.0	D	-7.8	**Y**
		SB	5M	48.5%	8.2%	2.2%		9,318	63.0	31.4	D	69.0	C	-6.0	N
	Adams Avenue to El Cajon Boulevard	NB	4M+1A	51.5%	8.2%	2.2%	218,000	8,374	57.9	38.4	**E**	64.2	D	-6.3	**Y**
		SB	5M+1A	48.5%	8.2%	2.2%		8,881	64.5	29.2	D	69.3	C	-4.8	N

Notes:
Bold letter indicates LOS E or F.
[1] M = Mainline; A = Auxiliary Lane.
[2] D = Directional Split.
[3] K = Peak Hour %.
[4] HVF = Heavy Vehicle Factor.

Table 6.3b Freeway Segment Level of Service Results – Two-Lane Via Las Cumbres Alternative PM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
I-8	Sunset Cliffs to Sports Arena Boulevard	EB	2M	55.6%	7.8%	1.0%	74,000	3,307	66.5	26.3	D	70.0	A	-3.5	N
		WB	2M	44.4%	7.2%	1.0%		2,314	70.0	17.5	B	70.0	A	0.0	N
	Sports Arena Boulevard to I-5 Interchange	EB	3M+1A	54.8%	7.7%	1.2%	115,000	5,079	65.9	27.2	D	68.3	C	-2.4	N
		WB	3M+1A	45.2%	7.1%	1.2%		3,671	69.9	18.5	C	70.0	B	-0.1	N
	I-5 Interchange to Morena Boulevard	EB	3M	57.0%	7.8%	2.8%	178,000	8,130	37.1	77.6	**F**	60.0	**E**	-22.9	**Y**
		WB	4M	43.0%	6.8%	2.8%		5,373	69.4	20.6	C	70.0	B	-0.6	N
	Morena Boulevard to Taylor Street	EB	4M+1A	57.0%	7.8%	2.8%	231,000	10,546	40.3	69.6	**F**	56.5	**F**	-16.2	**Y**
		WB	5M	43.0%	6.8%	2.8%		6,970	69.1	21.4	C	70.0	B	-0.9	N
	Taylor Street to Hotel Circle	EB	4M	57.0%	7.8%	2.8%	205,000	9,371	50.2	49.9	**F**	54.3	**E**	-4.1	**Y**
		WB	4M+1A	43.0%	6.8%	2.8%		6,193	67.6	24.5	C	68.5	C	-0.9	N
	Hotel Circle to SR-163 Interchange	EB	4M+2A	57.0%	7.8%	2.8%	222,000	10,133	56.8	38.1	**E**	60.1	D	-3.3	**Y**
		WB	5M	43.0%	6.8%	2.8%		6,697	65.0	22.0	C	65.0	C	0.0	N
	SR-163 Interchange to Mission Center Road	EB	4M	57.0%	7.8%	3.2%	192,000	8,760	55.2	42.3	**E**	48.6	**F**	6.6	N
		WB	3M+2A	43.0%	6.8%	3.2%		5,789	64.7	23.8	C	63.8	D	0.9	N
	Mission Center Road to Qualcomm Way / Texas Street	EB	4M+1A	57.0%	7.8%	3.2%	249,000	11,344	28.4	105.7	**F**	39.5	**F**	-11.1	**Y**
		WB	4M+1A	43.0%	6.8%	3.2%		7,497	60.1	33.1	D	62.2	D	-2.1	N
	Qualcomm Way / Texas Street to I-805 Interchange	EB	4M+1A	57.0%	7.8%	3.2%	177,000	8,053	57.6	36.9	**E**	50.1	**F**	7.5	N
		WB	4M+1A	43.0%	6.8%	3.2%		5,322	65.0	21.6	C	64.4	C	0.6	N
	I-805 Interchange to I-15 Interchange	EB	4M+2A	57.0%	7.8%	3.0%	258,000	11,744	49.0	51.9	**F**	54.7	**E**	-5.7	**Y**
		WB	4M+2A	43.0%	6.8%	3.0%		7,762	67.3	25.0	C	68.6	C	-1.3	N
	I-15 Interchange to Fairmount Ave	EB	4M	59.2%	7.7%	3.5%	228,000	10,771	36.8	78.5	**F**	43.5	**F**	-6.7	**Y**
		WB	4M+2A	40.8%	7.4%	3.5%		6,484	69.6	20.0	C	69.9	C	-0.3	N
I-5	Sea World Drive / Tecolote Road to I-8 Interchange	NB	5M+1A	40.5%	7.6%	3.4%	243,000	8,926	67.1	25.4	C	69.9	C	-2.8	N
		SB	4M+2A	59.5%	7.1%	3.4%		9,169	66.5	26.3	D	67.7	C	-1.2	N
	I-8 Interchange to Old Town Avenue	NB	4M+1A	40.5%	7.6%	4.1%	245,000	8,999	52.9	45.6	**F**	68.1	C	-15.2	**Y**
		SB	5M	59.5%	7.1%	4.1%		9,243	62.9	31.6	D	67.7	C	-4.8	N
SR-163	Genesee Avenue to Friars Road	NB	5M	48.4%	8.8%	3.7%	213,000	8,231	66.2	26.8	D	65.1	D	1.1	N
		SB	4M	51.6%	8.4%	3.7%		9,710	46.7	56.0	**F**	58.6	**E**	-11.9	**Y**

Table 6.3b Freeway Segment Level of Service Results – Two-Lane Via Las Cumbres Alternative PM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
SR-163	Friars Road to I-8 Interchange	NB	3M	50.9%	7.9%	3.7%	180,000	7,359	46.5	56.4	**F**	57.6	**E**	-11.1	**Y**
		SB	4M+2A	49.1%	7.8%	3.7%		7,098	68.8	22.1	C	69.9	C	-1.1	N
	I-8 Interchange to 6th Avenue	NB	3M+1A	50.9%	7.9%	3.0%	192,000	7,830	40.4	69.3	**F**	54.6	**E**	-14.2	**Y**
		SB	3M+2A	49.1%	7.8%	3.0%		7,554	62.1	32.6	D	67.1	C	-5.0	N
	6th Avenue to Washington Street	NB	3M	50.9%	7.9%	3.0%	159,000	6,507	55.4	41.9	**E**	64.5	D	-9.1	**Y**
		SB	2M+1A	49.1%	7.8%	3.0%		6,277	15.9	211.6	**F**	42.7	**F**	-26.8	**Y**
I-805	Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place	NB	5M	35.5%	7.6%	6.5%	266,000	6,411	69.9	18.3	C	69.8	C	0.1	N
		SB	5M	64.5%	8.1%	6.5%		14,917	33.5	88.7	**F**	53.2	**F**	-19.7	**Y**
	Murray Ridge Road / Phyllis Place to I-8 Interchange	NB	5M	37.3%	5.9%	6.5%	257,000	3,941	70.0	11.0	B	70.0	B	0.0	N
		SB	4M+2A	62.7%	8.4%	6.5%		15,433	31.4	96.4	**F**	46.3	**F**	-14.9	**Y**
	I-8 Interchange to Adams Avenue	NB	4M+1A	25.4%	5.9%	6.5%	254,000	3,888	70.0	13.6	B	70.0	B	0.0	N
		SB	6M	74.6%	8.4%	6.5%		15,224	50.9	48.7	**F**	57.6	**E**	-6.7	**Y**
	Adams Avenue to El Cajon Boulevard	NB	4M	37.3%	5.9%	6.5%	225,000	3,448	70.0	11.9	B	69.7	C	0.3	N
		SB	5M+1A	62.7%	8.4%	6.5%		13,504	47.2	55.2	**F**	52.8	**F**	-5.6	**Y**
I-15	Aero Drive to Friars Road	NB	4M+1A+2ML	39.2%	7.7%	5.0%	258,000	8,086	61.6	33.3	D	66.2	D	-4.6	N
		SB	5M+1A+2ML	60.8%	7.5%	5.0%		12,374	50.0	50.3	**F**	58.5	**E**	-8.5	**Y**
	Friars Road to I-8	NB	4M+2A+2ML	51.5%	8.2%	2.2%	273,000	11,157	57.8	38.6	**E**	66.1	D	-8.3	**Y**
		SB	3M+3A+2ML	48.5%	8.2%	2.2%		10,520	58.1	36.2	**E**	63.9	D	-5.8	**Y**
	I-8 to Adams Avenue	NB	3M+2A	51.5%	8.2%	2.2%	228,000	9,318	51.3	48.2	**F**	64.9	D	-13.6	**Y**
		SB	5M	48.5%	8.2%	2.2%		8,786	64.9	28.7	D	69.5	C	-4.6	N
	Adams Avenue to El Cajon Boulevard	NB	4M+1A	51.5%	8.2%	2.2%	218,000	8,881	54.5	43.3	**E**	65.8	D	-11.3	**Y**
		SB	5M+1A	48.5%	8.2%	2.2%		8,374	66.1	26.9	D	69.7	C	-3.6	N

Notes:
Bold letter indicates LOS E or F.
[1] M = Mainline; A = Auxiliary Lane.
[2] D = Directional Split.
[3] K = Peak Hour %.
[4] HVF = Heavy Vehicle Factor.

As shown, the following 33 directional mainline freeway segments are projected to operate at LOS E or F under CPU land uses and Two-Lane Via Las Cumbres Alternative conditions. Based on the significant impact criteria outlined in Chapter 2, implementation of the CPU land uses and Two-Lane Via Las Cumbres Alternative would result in a significant impact on 32 of those directional segments, as noted in **bold**:

- **I-8 EB, I-5 Interchange to Morena Boulevard (AM LOS E, Δ in Speed -11.1; PM LOS F, Δ in Speed -22.9)**
- **I-8 EB, Morena Boulevard to Taylor Street (AM LOS E, Δ in Speed -9.7; PM LOS F, Δ in Speed -16.2)**
- **I-8 EB, Taylor Street to Hotel Circle (PM LOS F, Δ in Speed -4.1)**
- **I-8 WB, Taylor Street to Hotel Circle (AM LOS E, Δ in Speed -2.7)**
- **I-8 EB, Hotel Circle to SR-163 Interchange (PM LOS E, Δ in Speed -3.3)**
- I-8 EB, SR-163 Interchange to Mission Center Road (PM LOS E, Δ in Speed 6.6) – not impacted
- **I-8 EB, Mission Center Road to Qualcomm Way / Texas Street (AM LOS E, Δ in Speed -10.8; PM LOS F, Δ in Speed -11.1)**
- **I-8 WB, Mission Center Road to Qualcomm Way / Texas Street (AM LOS F, Δ in Speed -7.4)**
- **I-8 EB, Qualcomm Way / Texas Street to I-805 Interchange (PM LOS E, Δ in Speed 7.5) – not impacted**
- **I-8 EB, I-805 Interchange to I-15 Interchange (PM LOS F, Δ in Speed -5.7)**
- **I-8 WB, I-805 Interchange to I-15 Interchange (AM LOS E, Δ in Speed -3.7)**
- **I-8 EB, I-15 Interchange to Fairmount Ave (PM LOS F, Δ in Speed -6.7)**
- **I-5 NB, I-8 Interchange to Old Town Avenue (AM LOS F, Δ in Speed -15.6; PM LOS F, Δ in Speed -15.2)**
- **SR-163 NB, Genesee Avenue to Friars Road (AM LOS E, Δ in Speed -8.5)**
- **SR-163 SB, Genesee Avenue to Friars Road (PM LOS F, Δ in Speed -11.9)**
- **SR-163 NB, Friars Road to I-8 Interchange (AM LOS F, Δ in Speed -15.9; PM LOS F, Δ in Speed -11.1)**
- **SR-163 NB, I-8 Interchange to 6th Avenue (AM LOS F, Δ in Speed -19.8; PM LOS F, Δ in Speed -14.2)**
- **SR-163 NB, 6th Avenue to Washington Street (AM LOS E, Δ in Speed -11.0; PM LOS E, Δ in Speed -9.1)**
- **SR-163 SB, 6th Avenue to Washington Street (AM LOS F, Δ in Speed -29.6; PM LOS F, Δ in Speed -26.8)**
- **I-805 NB, Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place (AM LOS F, Δ in Speed -19.7)**
- **I-805 SB, Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place (PM LOS F, Δ in Speed -19.7)**
- **I-805 NB, Murray Ridge Road / Phyllis Place to I-8 Interchange (AM LOS E, Δ in Speed -6.4)**
- **I-805 SB, Murray Ridge Road / Phyllis Place to I-8 Interchange (PM LOS F, Δ in Speed -14.9)**
- **I-805 NB, I-8 Interchange to Adams Avenue (AM LOS F, Δ in Speed -9.4)**
- **I-805 SB, I-8 Interchange to Adams Avenue (PM LOS F, Δ in Speed -6.7)**
- **I-805 NB, Adams Avenue to El Cajon Boulevard (AM LOS F, Δ in Speed -16.2)**
- **I-805 SB, Adams Avenue to El Cajon Boulevard (PM LOS F, Δ in Speed -5.6)**
- **I-15 NB, Aero Drive to Friars Road (AM LOS F, Δ in Speed -16.0)**
- **I-15 SB, Aero Drive to Friars Road (PM LOS F, Δ in Speed -8.5)**
- **I-15 NB, Friars Road to I-8 (AM – LOS E, Δ in Speed -6.2, PM LOS E, Δ in Speed -8.3)**
- **I-15 SB, Friars Road to I-8 (AM LOS E, Δ in Speed -7.7; PM LOS E, Δ in Speed -5.8)**
- **I-15 NB, I-8 to Adams Avenue (AM LOS E, Δ in Speed -7.8; PM LOS F, Δ in Speed -13.6)**
- **I-15 NB, Adams Avenue to El Cajon Boulevard (AM LOS E, Δ in Speed -6.3; PM LOS E, Δ in Speed -11.3)**

6.4 Significant Impacts and Mitigation Measures

This chapter identifies recommended mitigation measures for intersection and roadway facilities that would be significantly impacted through implementation of the CPU land uses and Two-Lane Via Las Cumbres Alternative. Mitigated intersection analysis worksheets are provided in Appendix N.

6.4.1 Roadway Mitigation Measures

As noted at the beginning of this chapter, the Two-Lane Via Las Cumbres Alternative is similar to the Four-Lane Via Las Cumbres Alternative. As in the previous section, the impacts roadway segments and mitigations under this alternative will be identical to those disclosed in Chapter 5, the Four-Lane Via Las Cumbres Alternative.

6.4.2 Intersection Mitigation Measures

As stated in Section 6.2, the Two-lane Via Las Cumbres Alternative only evaluated 12intersections, which are located adjacent to the Via Las Cumbres extension. As such, the Two-lane Via Las Cumbres Alternative would be responsible for mitigation the mitigation identified below for the intersection of Fashion Valley Road / Friars Road, as well as those identified in Section 5.5.2 (Four-Lane Via Las Cumbres Alternative mitigation measures).

11. *Fashion Valley Road & Friars Road (LOS E: PM Peak Hour)* – The eastbound through, northbound left, westbound left, and westbound through are projected to be over capacity under the implementation of the CPU land uses and Two-lane Via Las Cumbres Alternative. Implementing the following improvement would allow the intersection to operate at LOS D or better during both peak hours.

    - Widen the eastbound approach to construct an additional eastbound through lane.

    The identified significant traffic related impact to this intersection would be fully mitigated with the implementation of this improvement. *However, this mitigation measure is not recommended. There is insufficient right-of-way available along the westbound approach to accommodate the additional travel lane. In addition, the widening would be inconsistent with City policies promoting active transportation and the City of Villages growth strategy, and would obstruct the City's efforts to achieve Climate Action Plan (CAP) active transportation mode share goals. Therefore, this impact would remain significant and unavoidable with the implementation of the Two-Lane Via Las Cumbres.*

6.4.3 Freeway Segment Mitigation Measures

The CPU land uses and Two-Lane Via Las Cumbres Alternative impact to freeway segments are the same as those identified in the Four-lane Via Las Cumbres Alternative. Therefore, mitigation measures identified in Chapter 5, the Four-lane Via Las Cumbres Alternative are applicable toward the Two-Lane Via Las Cumbres Alternative.

6.4.4 Ramp Meter Mitigation Measures

Since the Two-Lane Via Las Cumbres Alternative traffic volumes are similar to the Four-lane Via Las Cumbres Alternative, all significant impacts and mitigation measures identified in Chapter 5, the Four-lane Via Las Cumbres Alternative are applicable toward the Two-Lane Via Las Cumbres Alternative.

7.0 Cross-Valley Connection Alternative

This chapter discusses the traffic operations under the Cross-Valley Connection Alternative and assesses potential traffic impacts by comparing this alternative to existing conditions.

The Cross-Valley Connection Alternative land uses and mobility network are similar to those analyzed under the Four-Lane and Two-Lane Via Las Cumbres alternatives, with the following exceptions:

- A new road (~~Street "J"~~Riverwalk Street "J") will be constructed connecting Friars Road to Hotel Circle South in place of Via Las Cumbres. This new road will be constructed with two to four travel lanes, a painted median and Class II buffered bicycle lanes. This alternative provides for crossing under the MTS trolley tracks (in a manner similar to how Qualcomm Way and Mission Center Road cross under Friars Road), which eliminates the need for an elevated roadway within the core of the Mission Valley community. Like the Four-Lane and Two-Lane Via Las Cumbres alternatives, this alternative would require a bridge over the San Diego River, constructed to allow for the 100-year flood event.
- Designate Via Las Cumbres from Friars Road to the proposed southern terminus just north of the trolley tracks as a Two-Lane Collector – it is anticipated that this road would carry approximately 5,000 ADT.

Aside from road alignment of the new connection and engineering design, this alternative essentially is the same as the Two-Lane Via Las Cumbres Alternative from a traffic impact assessment perspective since both alternatives provide a single two-lane connection from Friars Road to Hotel Circle South. The only differences between these two alternatives are the two intersections at Friars Road, one at Via Las Cumbres and the other at ~~Street "J"~~Riverwalk Street "J". Traffic that utilizes the Via Las Cumbres and Friars Road intersection in the Two-Lane Via Las Cumbres Alternative would, in this Cross-Valley Connection Alternative, have the option to use one of two intersections to access destinations, thus reducing traffic volumes at the Via Las Cumbres intersection and maintaining or improving traffic operations at that intersection. The Via Las Cumbres and Friars Road intersection was project to operate at LOS D during the peak hours, based on engineering judgement and the understanding of traffic signal operations, it can be concluded the both Via Las Cumbres /Friars Road and ~~Street "J"~~Riverwalk Street "J" / Friars Road intersections would operate at LOS D or better under the Cross-Valley Connection Alternative.

7.1 Traffic Operations

Based on discussion above, traffic operations (roadway segment, intersection, freeway segment) under the Cross-Valley Connection Alternative would be the same as those presented under the Two-Lane Via Las Cumbres Alternative.

7.2 Significant Impacts and Mitigation Measures

Significant traffic impacts and mitigation measures identified in the Two-lane Via Las Cumbres Alternative are applicable toward the Cross-Valley Connection Alternative.

8.0 No-Connection Alternative

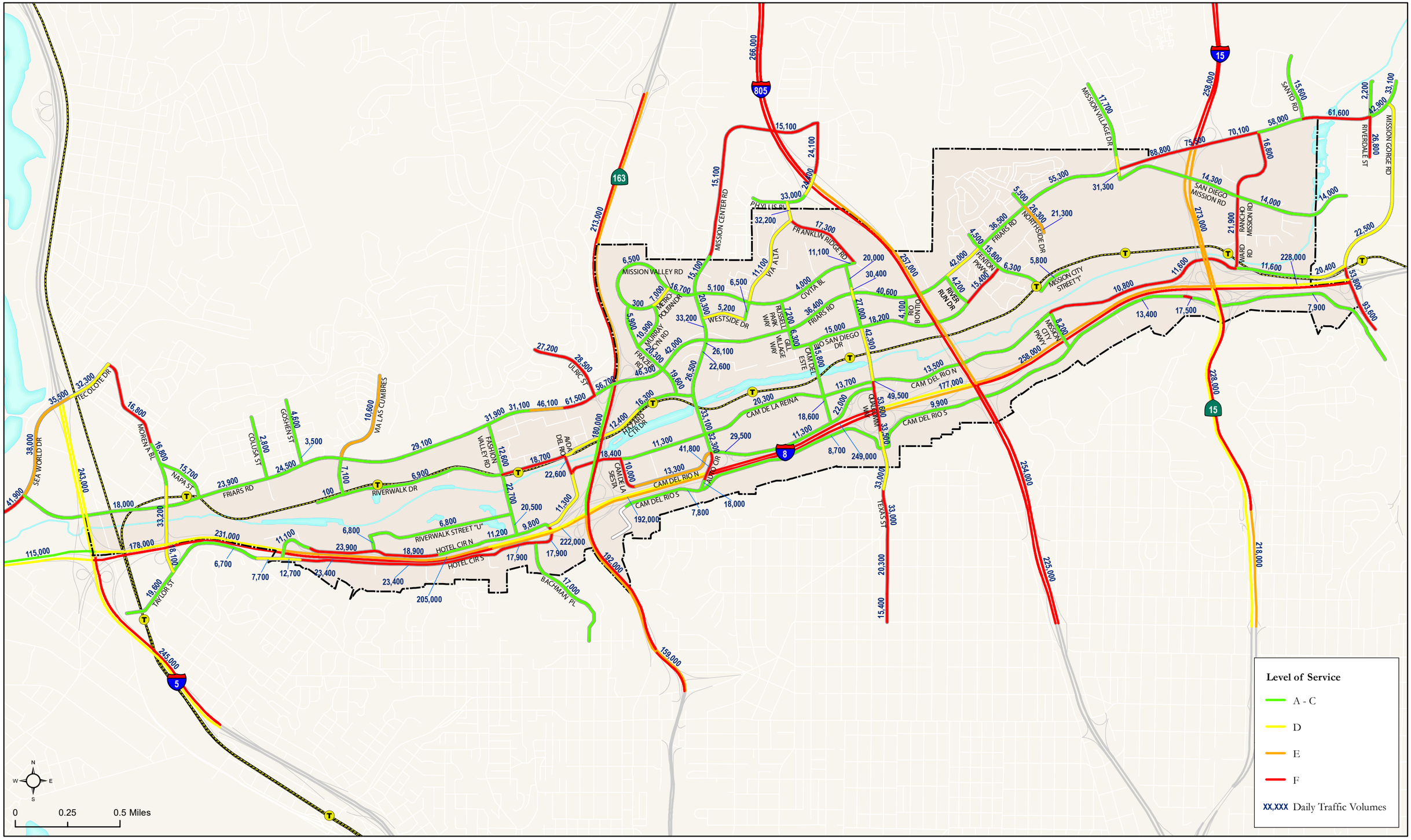
This chapter discusses the traffic operations under the No-Connection Alternative and assesses potential traffic impacts by comparing the No-Connection Alternative to the existing conditions. Roadway and freeway segments were evaluated in determining traffic impacts associated with the No-Connection Alternative. Since this is not an alternative for possible adoption, intersection-level analysis was not conducted and mitigation measures were also not provided.

The No-Connection Alternative land use and network are similar to the CPU land uses and Four-Lane Via Las Cumbres Alternative network with the following exceptions:

- No Via Las Cumbres or Cross Valley connection between Riverwalk Drive and ~~Levi Cushman Street "B"~~Riverwalk Street "U".
- Implementation of the I-8 Corridor Concept Alternative 3A Phase I only - construction of slip ramps and removal of existing ramps along Hotel Circle North and Hotel Circle South. No Via Las Cumbres bridge across I-8 between Hotel Circle North and Hotel Circle South.
- No Fenton Parkway connection between ~~New Street "I"~~Mission City Street "I" and Camino Del Rio North.

8.1 Roadway Segment Analysis

The roadway segment analysis was conducted for the No-Connection Alternative roadway classifications. Figure 8-1 and Table 8.1 display the projected ADT volumes and associated roadway LOS under No-Connection Alternative conditions. Table 8.1 also identifies any potential traffic impacts associated with the No-Connection Alternative when comparing to the existing conditions.



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Figure 8-1
Daily Roadway Segment Traffic Volumes and Level of Service - No Connection Alternative

Table 8.1 Roadway Segment Analysis – No Connection Alternative

		No Connection Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Phyllis Place	Franklin Ridge Road to I-805 SB Ramps	5-Ln Major Arterial	45,000	33,000	0.733	C	2-Ln Collector w/o TWLTL	2,270	0.284	A	0.449	N
Sea World Drive	Mission Bay Parkway to Friars Road	4-Ln Major Arterial	40,000	41,900	1.048	**F**	4-Ln Major Arterial	34,200	0.855	D	0.193	**Y**
Sea World Drive	Friars Road to I-5 SB Ramps	4-Ln Major Arterial	40,000	38,000	0.950	**E**	4-Ln Major Arterial	29,490	0.737	C	0.213	**Y**
Tecolote Road	I-5 SB Ramps and I-5 NB Ramps	4-Ln Major Arterial	40,000	35,500	0.888	**E**	4-Ln Major Arterial	30,470	0.762	D	0.126	Y
Tecolote Road	I-5 NB Ramps to Morena Boulevard	4-Ln Major Arterial	40,000	32,300	0.808	D	4-Ln Major Arterial	22,410	0.560	C	0.248	N
Mission Valley Road	Frazee Road to Metropolitan Drive (clockwise)	2-Ln Collector w/o TWLTL (NFP)	10,000	6,500	0.650	C	2-Ln Collector w/ TWLTL	7,440	0.496	A	0.154	N
Mission Valley Road	Metropolitan Drive to Mission Center Road (east of loop)	4-Ln Major Arterial	40,000	16,700	0.418	B	4-Ln Major Arterial	7,440	0.186	A	0.232	N
Civita Boulevard	Mission Center Road to Via Alta	4-Ln Collector w/ TWLTL~~Major Arterial~~	~~40,000~~30,000	5,100	0.170 ~~0.128~~	A	4-Ln Major Arterial	2,480	0.083 ~~0.062~~	A	0.087 ~~0.066~~	N
Civita Boulevard	Via Alta to Qualcomm Way	4-Ln Collector w/ TWLTL~~Major Arterial~~	30,000~~40,000~~	4,000	0.133 ~~0.100~~	A	4-Ln Major Arterial	2,480	0.083 ~~0.062~~	A	0.050 ~~10.038~~	N
Civita Boulevard	Qualcomm Way to Franklin Ridge Road	4-Ln Collector w/ TWLTL~~Major Arterial~~	30,000~~40,000~~	11,100	0.370 ~~0.278~~	~~AB~~	4-Ln Major Arterial	2,480	0.083 ~~0.062~~	A	0.287 ~~0.216~~	N
Westside Drive	Mission Center Road to Via Alta	2-Ln Collector w/o TWLTL	8,000	5,200	0.650	D	2-Ln Collector w/o TWLTL	4,070	0.508	C	0.142	N
Friars Road	Sea World Drive to Napa Street	4-Ln Major Arterial	40,000	18,000	0.450	B	4-Ln Major Arterial	13,650	0.341	A	0.109	N
Friars Road	Napa Street to Colusa Street	4-Ln Major Arterial	40,000	23,900	0.598	C	4-Ln Major Arterial	19,170	0.479	B	0.119	N
Friars Road	Colusa Street to Via Las Cumbres	4-Ln Major Arterial	40,000	24,500	0.613	C	4-Ln Major Arterial	19,200	0.480	B	0.133	N
Friars Road	Via Las Cumbres to Fashion Valley Road	4-Ln Major Arterial	40,000	29,100	0.728	C	4-Ln Major Arterial	22,270	0.557	C	0.171	N

Table 8.1 Roadway Segment Analysis – No Connection Alternative

		No Connection Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Friars Road	Fashion Valley Road to Via De La Moda	5-Ln Major Arterial (3 EB, 2 WB)	45,000	31,900	0.709	C	5-Ln Major Arterial (3 EB, 2 WB)	26,100	0.580	C	0.129	N
Friars Road	Via De La Moda to Fashion Valley Driveway	5-Ln Major Arterial (3 EB, 2 WB)	45,000	31,100	0.691	C	5-Ln Major Arterial (3 EB, 2 WB)	25,920	0.576	C	0.115	N
Friars Road	Fashion Valley Driveway to Avenida De Las Tiendas	6-Ln Major Arterial	50,000	46,100	0.922	E	6-Ln Major Arterial	26,830	0.537	B	0.385	**Y**
Friars Road	Avenida De Las Tiendas to Ulric Street/SR-163 SB Ramps	6-Ln Major Arterial	50,000	61,500	1.230	**F**	6-Ln Major Arterial	40,510	0.81	D	0.420	**Y**
Friars Road	Ulric Street/SR-163 SB Ramps to SR-163 NB Ramps	8-Ln Prime Arterial	80,000	56,700	0.709	C	6-Ln Prime Arterial	53,170	0.886	D	-0.177	N
Friars Road	SR-163 NB Ramps to Frazee Road	8-Ln Prime Arterial	80,000	46,300	0.579	B	6-Ln Prime Arterial	54,150	0.902	D	-0.323	N
Friars Road	Frazee Road to Mission Center Road	8-Ln Prime Arterial	80,000	42,000	0.525	B	7-Ln Expressway	42,780	0.458	B	0.067	N
Friars Road	Mission Center Road to Qualcomm Way	6-Ln Expressway	80,000	36,400	0.455	B	6-Ln Expressway	37,050	0.463	B	-0.008	N
Friars Road	Qualcomm Way to River Run Drive	6-Ln Expressway	80,000	40,600	0.508	B	6-Ln Expressway	33,250	0.416	B	0.092	N
Friars Road	River Run Drive to Fenton Parkway	6-Ln Major Arterial	50,000	42,000	0.840	D	6-Ln Prime Arterial	22,080	0.368	A	0.472	N
Friars Road	Fenton Parkway to Northside Drive	6-Ln Major Arterial	50,000	36,500	0.730	C	6-Ln Prime Arterial	28,430	0.474	B	0.256	N
Friars Road	Northside Drive to Mission Village Drive	6-Ln Expressway	80,000	55,300	0.691	C	6-Ln Expressway	45,330	0.567	C	0.124	N
Friars Road	Mission Village Drive to I-15 SB Ramps	6-Ln Expressway	80,000	88,800	1.110	**F**	6-Ln Expressway	57,740	0.722	C	0.388	**Y**
Friars Road	I-15 SB Ramps to I-15 NB Ramps	6-Ln Prime Arterial	60,000	75,500	1.258	**F**	6-Ln Prime Arterial	46,570	0.776	C	0.482	**Y**
Friars Road	I-15 NB Ramps to Rancho Mission Road	7-Ln Prime Arterial[1]	70,000	70,100	1.001	**F**	7-Ln Prime Arterial	51,610	0.737	C	0.264	**Y**

Table 8.1 Roadway Segment Analysis – No Connection Alternative

		No Connection Alternative					Existing					
Roadway	**Segment**	**Classification**	**Capacity**	**ADT**	**V/C**	**LOS**	**Functional Classification**	**ADT**	**V/C**	**LOS**	**Δ V/C**	**SI?**
Friars Road	Rancho Mission Road to Santo Road	7-Ln Prime Arterial[1]	70,000	58,000	0.829	C	7-Ln Prime Arterial	39,430	0.563	B	0.266	N
Friars Road	Santo Road to Riverdale Street	6-Ln Prime Arterial	60,000	61,600	1.027	**F**	6-Ln Prime Arterial	43,380	0.723	C	0.304	**Y**
Friars Road	Riverdale Street to Mission Gorge Road	6-Ln Prime Arterial	60,000	42,900	0.715	C	6-Ln Prime Arterial	31,300	0.522	B	0.193	N
Mission Gorge Road	Friars Road to Zion Avenue	6-Ln Prime Arterial	60,000	33,100	0.552	B	6-Ln Prime Arterial	40,690	0.678	C	-0.126	N
Hazard Center Drive	Avenida Del Rio to Hazard Center W. Driveway	2-Ln Collector w/ TWLTL	15,000	12,400	0.827	D	Does Not Exist				0.827	N
Hazard Center Drive	Hazard Center W. Driveway to Mission Center Road	4-Ln Collector w/ TWLTL	30,000	16,300	0.543	C	4-Ln Collector w/ TWLTL	8,710	0.29	A	0.253	N
Rio San Diego Drive	Gill Village Way to Qualcomm Way	4-Ln Collector w/ TWLTL	30,000	15,000	0.500	C	4-Ln Collector w/ TWLTL	10,500	0.35	B	0.150	N
Rio San Diego Drive	Qualcomm Way to River Run Drive	4-Ln Major Arterial	40,000	18,200	0.455	B	4-Ln Major Arterial	11,280	0.282	A	0.173	N
Rio San Diego Drive	River Run Drive to Fenton Parkway	2-Ln Collector w/ TWLTL	15,000	15,400	1.027	**F**	4-Ln Collector w/ RM	9,090	0.303	A	0.724	**Y**
San Diego Mission Road	Friars Road EB Ramps to Rancho Mission Road	4-Ln Collector w/ TWLTL	30,000	14,300	0.477	C	4-Ln Collector w/o TWLTL	7,590	0.506	C	-0.029	N
San Diego Mission Road	Rancho Mission Road to 950' West of Fairmount Avenue	4-Ln Collector w/ TWLTL	30,000	14,000	0.467	B	2-Ln Collector w/ TWLTL	8,020	0.534	C	-0.067	N
San Diego Mission Road	950' West of Fairmount Avenue to Fairmount Avenue	4-Ln Collector w/ TWLTL	30,000	14,000	0.467	B	2-Ln Collector w/o TWLTL (NFP)	8,020	0.802	D	-0.335	N
Taylor Street	Pacific Highway to Morena Boulevard	5-Ln Major Arterial (3 EB, 2 WB)	45,000	19,600	0.436	B	5-Ln Major Arterial (3 EB, 2 WB)	19,060	0.423	B	0.013	N
Taylor Street	Morena Boulevard to I-8 EB Ramps	2-Ln Collector w/ TWLTL	15,000	6,700	0.447	B	2-Ln Collector w/o TWLTL (NFP)	17,750	1.775	**F**	-1.328	N
Taylor Street	I-8 EB Ramps to Hotel Circle South	2-Ln Collector w/o TWLTL (NFP)	10,000	7,700	0.770	D	2-Ln Collector w/ TWLTL	14,410	0.961	**E**	-0.191	N

Table 8.1 Roadway Segment Analysis – No Connection Alternative

		No Connection Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Hotel Circle North	Hotel Circle South to Fashion Valley Road	2-Ln Collector (one-way)	17,500	9,800	0.560	C	2-Ln Collector w/ TWLTL	12,460	0.831	D	-0.271	N
Hotel Circle North	Fashion Valley Road to I-8 WB Off-Ramp	2-Ln Collector (one-way)	17,500	11,200	0.640	C	3-Ln Collector (2 EB, 1 WB)	15,510	1.41	**F**	-0.770	N
Hotel Circle North	I-8 WB Off-Ramp to Via Las Cumbres	2-Ln Collector (one-way)	17,500	18,900	1.080	**F**	2-Ln Collector w/ TWLTL	6,510	0.434	B	0.646	**Y**
Hotel Circle North	Via Las Cumbres to I-8 WB On-Ramp	2-Ln Collector (one-way)	17,500	23,900	1.366	**F**	2-Ln Collector w/o TWLTL (NFP)	15,340	1.534	**F**	-0.168	N
Hotel Circle North	I-8 WB On-Ramp to Hotel Circle South	2-Ln Collector (one-way)	17,500	11,100	0.634	C	2-Ln Collector w/o TWLTL (NFP)	15,340	1.534	**F**	-0.900	N
Camino De La Reina	Hotel Circle North to Avenida Del Rio	2-Ln Collector w/ TWLTL	15,000	11,300	0.753	D	2-Ln Collector w/ TWLTL	8,480	0.566	C	0.187	N
Camino De La Reina	Avenida Del Rio to Camino De La Siesta	2-Ln Collector w/o TWLTL (NFP)	10,000	18,400	1.840	**F**	2-Ln Collector w/o TWLTL (NFP)	13,360	1.336	**F**	0.504	**Y**
Camino De La Reina	Camino De La Siesta to Mission Center Road	4-Ln Major Arterial	40,000	11,300	0.283	A	4-Ln Major Arterial	10,730	0.268	A	0.015	N
Camino De La Reina	Mission Center Road to Camino Del Este	4-Ln Major Arterial	40,000	20,300	0.508	B	4-Ln Major Arterial	18,530	0.463	B	0.044	N
Camino De La Reina	Camino Del Este to Qualcomm Way	4-Ln Major Arterial	40,000	13,700	0.343	A	4-Ln Major Arterial	13,770	0.344	A	-0.001	N
Camino Del Rio North	Camino De La Siesta to Mission Center Road	2-Ln Collector w/ TWLTL	15,000	13,300	0.887	E	2-Ln Collector w/ TWLTL	5,430	0.362	B	0.525	**Y**
Camino Del Rio North	Mission Center Road to I-8 WB Ramps	4-Ln Major Arterial	40,000	29,500	0.738	C	4-Ln Major Arterial	24,030	0.601	C	0.137	N
Camino Del Rio North	I-8 WB Ramps to Camino Del Este	3-Ln Collector w/ TWLTL (1 EB, 2 WB)	22,500	11,300	0.502	C	3-Ln Collector w/ RM (1 EB, 2 WB)	11,910	0.529	C	-0.027	N
Camino Del Rio North	Camino Del Este to Qualcomm Way	4-Ln Major Arterial	40,000	22,000	0.550	C	4-Ln Major Arterial	12,180	0.305	A	0.245	N
Camino Del Rio North	Qualcomm Way to Mission City Parkway	4-Ln Major Arterial	40,000	13,500	0.338	A	4-Ln Major Arterial	10,590	0.265	A	0.073	N
Camino Del Rio North	Mission City Parkway to 1800' West of Ward Rd	2-Ln Collector w/o TWLTL (NFP)	10,000	10,800	1.080	**F**	2-Ln Collector w/o TWLTL (NFP)	8,080	0.808	D	0.272	**Y**

Table 8.1 Roadway Segment Analysis – No Connection Alternative

		No Connection Alternative					Existing					
Roadway	**Segment**	**Classification**	**Capacity**	**ADT**	**V/C**	**LOS**	**Functional Classification**	**ADT**	**V/C**	**LOS**	**Δ V/C**	**SI?**
Camino Del Rio North	1800' West of Ward Road to Ward Road	2-Ln Collector w/o TWLTL (NFP)	10,000	11,600	1.160	**F**	2-Ln Collector w/o TWLTL (NFP)	8,920	0.892	D	0.268	**Y**
Camino Del Rio North	Ward Road to 1000' West of Fairmount Avenue	4-Ln Major Arterial	40,000	11,600	0.290	A	4-Ln Major Arterial	11,830	0.296	A	-0.006	N
Camino Del Rio North	1000' West of Fairmount Avenue to Fairmount Avenue	4-Ln Collector w/ TWLTL	30,000	20,400	0.680	D	4-Ln Collector w/ TWLTL	13,470	0.449	B	0.231	N
Hotel Circle South	Taylor Street to I-8 EB Off-Ramp	2-Ln Collector (one-way)	17,500	12,700	0.726	D	2-Ln Collector w/o TWLTL (NFP)	12,010	1.201	**F**	-0.475	N
Hotel Circle South	I-8 EB Off-Ramp to Via Las Cumbres	2-Ln Collector (one-way)	17,500	23,400	1.337	**F**	2-Ln Collector w/ TWLTL	12,340	0.823	D	0.514	**Y**
Hotel Circle South	Via Las Cumbres to I-8 EB On-Ramp	2-Ln Collector (one-way)	17,500	23,400	1.337	**F**	2-Ln Collector w/ TWLTL	12,340	0.823	D	0.514	**Y**
Hotel Circle South	I-8 EB On-Ramp to Bachman Place	2-Ln Collector (one-way)	17,500	17,900	1.023	F	2-Ln Collector w/ TWLTL	17,200	1.146	**F**	-0.123	N
Hotel Circle South	Bachman Place to Hotel Circle North/Camino De La Reina	2-Ln Collector (one-way)	17,500	17,900	1.023	F	2-Ln Collector w/ TWLTL	15,580	1.038	**F**	-0.015	N
Camino Del Rio South	Western Terminus to Mission Center Road	2-Ln Collector w/ TWLTL	15,000	7,800	0.520	C	2-Ln Collector w/ w/o TWLTL	7,330	0.916	**E**	-0.396	N
Camino Del Rio South	Mission Center Road to Texas Street	2-Ln Collector w/ TWLTL	15,000	8,700	0.580	C	2-Ln Collector w/ w/o TWLTL	7,410	0.927	**E**	-0.347	N
Camino Del Rio South	Texas Street to Mission City Parkway	2-Ln Collector w/ TWLTL	15,000	9,900	0.660	C	2-Ln Collector w/ w/o TWLTL	8,140	1.018	**F**	-0.358	N
Camino Del Rio South	Mission City Parkway to I-15 SB Off-Ramp	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	22,500	13,400	0.596	C	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	11,750	0.522	C	0.074	N
Camino Del Rio South	I-15 SB Off-Ramp to I-15 NB On-Ramp	2-Ln Collector w/ TWLTL	15,000	17,500	1.167	**F**	4-Ln Collector w/ TWLTL	9,580	0.319	A	0.848	**Y**
Camino Del Rio South	I-15 NB On-Ramp to Fairmount Avenue	2-Ln Collector w/ TWLTL	15,000	7,900	0.527	C	2-Ln Collector w/ TWLTL	6,370	0.424	B	0.103	N
Morena Boulevard	Tecolote Road to West Morena Boulevard	2-Ln Collector w/ TWLTL	15,000	16,800	1.120	**F**	2-Ln Collector w/ TWLTL	16,180	1.079	**F**	0.041	**Y**

Table 8.1 Roadway Segment Analysis – No Connection Alternative

		No Connection Alternative					Existing					
Roadway	**Segment**	**Classification**	**Capacity**	**ADT**	**V/C**	**LOS**	**Functional Classification**	**ADT**	**V/C**	**LOS**	**Δ V/C**	**SI?**
Morena Boulevard	West Morena Boulevard to Linda Vista Road	4-Ln Major Arterial	40,000	16,800	0.420	B	4-Ln Major Arterial	17,740	0.443	B	-0.023	N
Morena Boulevard	Linda Vista Road to I-8 WB Off-Ramp	4-Ln Major Arterial	40,000	33,200	0.830	D	4-Ln Major Arterial	41,930	1.048	**F**	-0.218	N
Morena Boulevard	I-8 WB Off-Ramp to Taylor Street	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	22,500	18,100	0.804	D	3-Ln Collector w/ RM (2 NB, 1 SB)	11,570	0.514	C	0.290	N
Napa Street	Morena Boulevard to Friars Road	4-Ln Major Arterial	40,000	15,700	0.393	B	4-Ln Major Arterial	13,430	0.336	A	0.057	N
Colusa Street	Linda Vista Road to Friars Road	2-Ln Collector w/o TWLTL	8,000	2,800	0.350	B	2-Ln Collector w/o TWLTL	2,720	0.339	B	0.011	N
Via Las Cumbres	Linda Vista Road to Friars Road	3-Ln Collector w/o TWLTL (2 NB, 1 SB)	11,000	10,600	0.964	**E**	3-Ln Collector (2 NB, 1 SB)	10,920	0.993	**E**	-0.029	N
Via Las Cumbres	Friars Road to Riverwalk Drive	4-Ln Major Arterial	40,000	7,100	0.178	A	Does Not Exist				0.178	N
Via Las Cumbres	Riverwalk Drive to ~~Levi-Cushman Street "B"~~Riverwalk Street "U"	Does Not Exist					Does Not Exist				-	N
Via Las Cumbres	~~Levi-Cushman Street "B"~~Riverwalk Street "U" to Hotel Circle North	4-Ln Major Arterial	40,000	6,800	0.170	A	Does Not Exist				0.170	N
Via Las Cumbres	Hotel Circle North to Hotel Circle South	Does Not Exist					Does Not Exist				-	-
Fashion Valley Road	Friars Road to Riverwalk Drive	4-Ln Major Arterial	40,000	12,600	0.315	A	4-Ln Collector w/o TWLTL	9,980	0.665	C	-0.350	N
Fashion Valley Road	Riverwalk Drive to ~~Levi-Cushman Street "B"~~Riverwalk Street "U"	4-Ln Major Arterial	40,000	22,700	0.568	C	4-Ln Collector w/o TWLTL	9,980	0.665	C	-0.098	N

Table 8.1 Roadway Segment Analysis – No Connection Alternative

Roadway	Segment	No Connection Alternative					Existing				Δ V/C	SI?
		Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS		
Fashion Valley Road	~~Levi-Cushman Street "B"~~Riverwalk Street "U" to Hotel Circle North	4-Ln Major Arterial	40,000	20,500	0.513	B	4-Ln Collector w/o TWLTL	9,980	0.665	C	-0.153	N
Bachman Place	Hotel Circle South to southern community boundary	4-Ln Collector w/ TWLTL	30,000	17,000	0.567	C	2-Ln Collector w/o TWLTL (NFP)	9,140	0.914	**E**	-0.347	N
Avenida Del Rio	Fashion Valley Parking Lot to Camino De La Reina	4-Ln Collector w/o TWLTL	15,000	22,600	1.507	**F**	4-Ln Collector w/o TWLTL	8,740	0.583	C	0.924	**Y**
Ulric Street	Fashion Hills Boulevard to 600' South of Fashion Hills Blvd	2-Ln Collector w/ TWLTL	15,000	27,200	1.813	**F**	2-Ln Collector w/ TWLTL	20,380	1.359	**F**	0.454	**Y**
Ulric Street	600' South of Fashion Hills Boulevard to Friars Road	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	22,500	28,500	1.267	**F**	3-Ln Collector w/ SM (1 NB 2 SB)	20,430	0.908	**E**	0.359	**Y**
Camino De La Siesta	Camino De La Reina to Camino Del Rio North	2-Ln Collector w/o TWLTL	8,000	10,000	1.250	**F**	2-Ln Collector w/ w/o TWLTL	5,150	0.643	D	0.607	**Y**
Metropolitan Drive	Mission Valley Road to Murray Canyon Road (clockwise)	2-Ln Collector w/o TWLTL (NFP)	10,000	7,000	0.700	**D**	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	3,840	0.171	A	0.529	N
Metropolitan Drive	Murray Canyon Road to Frazee Road (clockwise)	2-Ln Collector w/o TWLTL (NFP)	10,000	300	0.030	A	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	3,840	0.171	A	-0.141	N
Murray Canyon Road	Metropolitan Drive to Frazee Road	2-Ln Collector w/o TWLTL (NFP)	10,000	10,900	1.090	**C**	3-Ln Collector w/ TWLTL (2 EB, 1 WB)	7,400	0.329	A	0.761	N
Frazee Road	Metropolitan Drive to Murray Canyon Road	2-Ln Collector w/o TWLTL (NFP)	10,000	5,900	0.590	C	Does Not Exist				0.590	N
Frazee Road	Murray Canyon Road to Friars Road	4-Ln Major Arterial	40,000	20,300	0.508	B	4-Ln Major Arterial	14,670	0.367	A	0.141	N
Frazee Road	Friars Road to Hazard Center Drive	4-Ln Major Arterial	40,000	19,600	0.490	B	4-Ln Major Arterial	17,050	0.426	B	0.064	N

Table 8.1 Roadway Segment Analysis – No Connection Alternative

		No Connection Alternative					Existing					
Roadway	**Segment**	**Classification**	**Capacity**	**ADT**	**V/C**	**LOS**	**Functional Classification**	**ADT**	**V/C**	**LOS**	**Δ V/C**	**SI?**
Mission Center Road	Murray Ridge Road to 1200' West of Murray Ridge Road	2-Ln Collector w/o TWLTL	8,000	15,100	1.888	**F**	2-Ln Collector w/o TWLTL	10,970	1.097	**F**	0.791	**Y**
Mission Center Road	1200' W of Murray Ridge Rd to 950' N of Mission Valley Rd	3-Ln Collector w/o TWLTL (2 NB, 1 SB)	11,000	15,100	1.373	**F**	3-Ln Collector (2 NB, 1 SB)	10,720	0.975	**E**	0.398	**Y**
Mission Center Road	950' North of Mission Valley Road to Mission Valley Road	4-Ln Major Arterial	40,000	15,100	0.378	B	4-Ln Major Arterial	10,940	0.273	A	0.105	N
Mission Center Road	Mission Valley Road to Westside Drive	4-Ln Major Arterial	40,000	20,300	0.508	B	4-Ln Major Arterial	14,170	0.354	A	0.154	N
Mission Center Road	Westside Drive to Friars Road WB Ramps	5-Ln Major Arterial (3 NB, 2 SB)	45,000	33,200	0.738	C	5-Ln Major Arterial (3 NB, 2 SB)	26,020	0.578	C	0.160	N
Mission Center Road	Friars Road WB Ramps to Friars Road EB Ramps	4-Ln Major Arterial	40,000	26,100	0.653	C	4-Ln Major Arterial	22,830	0.571	C	0.082	N
Mission Center Road	Friars Road EB Ramps to Mission Center Court	4-Ln Major Arterial	40,000	22,600	0.565	C	4-Ln Major Arterial	19,470	0.487	B	0.078	N
Mission Center Road	Mission Center Court to Hazard Center Drive	5-Ln Major Arterial (2 NB, 3 SB)	45,000	26,500	0.589	C	5-Ln Major Arterial (2 NB, 3 SB)	19,450	0.432	B	0.157	N
Mission Center Road	Hazard Center Drive to Camino De La Reina	5-Ln Major Arterial (2 NB, 3 SB)	45,000	33,100	0.736	C	5-Ln Major Arterial (2 NB, 3 SB)	27,060	0.601	C	0.135	N
Mission Center Road	Camino De La Reina to Camino Del Rio North	5-Ln Major Arterial (3 NB, 2 SB)	45,000	32,300	0.718	C	5-Ln Major Arterial (3 NB, 2 SB)	23,280	0.517	B	0.201	N
Auto Circle	Camino Del Rio North to I-8 EB Ramps	4-Ln Major Arterial	40,000	41,800	1.045	**F**	4-Ln Major Arterial	34,100	0.852	D	0.193	**Y**
Auto Circle	I-8 EB Ramps to Camino Del Rio South	4-Ln Collector w/ TWLTL	30,000	18,000	0.600	C	4-Ln Collector w/ RM	20,980	0.699	D	-0.099	N
Via Alta	Franklin Ridge Road to Civita Boulevard	2-Ln Collector w/ TWLTL	15,000	11,100	0.740	D	Does Not Exist				0.740	N

Table 8.1 Roadway Segment Analysis – No Connection Alternative

		No Connection Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Via Alta	Civita Boulevard to Westside Drive	2-Ln Collector w/ TWLTL	15,000	6,500	0.433	B	2-Ln Collector w/ RM	1,340	0.089	A	0.344	N
Murray Ridge Road	Mission Center Road to I-805 NB Ramps	2-Ln Collector w/ TWLTL	15,000	24,100	1.607	**F**	2 Ln Collector w/ TWLTL	20,000	1.333	**F**	0.274	**Y**
Murray Ridge Road	I-805 NB Ramps to I-805 SB Ramps	2-Ln Collector w/ TWLTL	15,000	24,400	1.627	**F**	2-Ln Collector w/ TWLTL	11,700	0.780	D	0.847	**Y**
Russell Park Way	Civita Boulevard to Friars Road	2-Ln Collector w/ TWLTL	15,000	7,200	0.480	C	2-Ln Collector w/ RM	1,020	0.068	A	0.412	N
Camino Del Este	Rio San Diego Drive to Camino De La Reina	4-Ln Collector w/ TWLTL	30,000	15,800	0.527	C	4-Ln Collector w/ RM or TWLTL	8,450	0.282	A	0.245	N
Camino Del Este	Camino De La Reina to Camino Del Rio North	4-Ln Collector w/ TWLTL	30,000	18,600	0.620	C	4-Ln Collector w/ RM or TWLTL	9,880	0.329	A	0.291	N
Franklin Ridge Road	Phyllis Place to Via Alta	4-Ln Major Arterial	40,000	32,200	0.805	D	Does Not Exist				0.805	N
Franklin Ridge Road	Via Alta to Civita Boulevard	2-Ln Collector w/ TWLTL	15,000	17,300	1.153	**F**	Does Not Exist				1.153	**Y**
Qualcomm Way	Civita Boulevard to Friars Road WB Ramps	4-Ln Major Arterial	40,000	20,000	0.500	B	Does Not Exist				0.500	N
Qualcomm Way	Friars Road WB Ramps to Friars Road EB Ramps	4-Ln Major Arterial	40,000	30,400	0.760	D	2-Ln Collector w/ TWLTL	9,300	0.62	C	0.140	N
Qualcomm Way	Friars Road EB Ramps to Rio San Diego Drive	5-Ln Major Arterial (2 NB, 3 SB)	45,000	27,000	0.600	C	5-Ln Major Arterial (2NB, 3SB)	10,200	0.227	A	0.373	N
Qualcomm Way	Rio San Diego Drive to Camino Del Rio North	6-Ln Major Arterial	50,000	42,300	0.846	D	6-Ln Major Arterial	24,330	0.487	B	0.359	N
Qualcomm Way	Camino Del Rio North to I-8 WB Ramps	5-Ln Major Arterial (3 NB, 2 SB)	45,000	49,500	1.100	**F**	5-Ln Major Arterial (3 NB, 2 SB)	23,560	0.524	B	0.576	**Y**
Qualcomm Way	I-8 WB Ramps to I-8 EB Ramps	6-Ln Major Arterial	50,000	53,600	1.072	**F**	6-Ln Major Arterial	36,410	0.728	C	0.344	**Y**
Qualcomm Way	I-8 EB Ramps to Camino Del Rio South	4-Ln Major Arterial	40,000	33,500	0.838	D	4-Ln Major Arterial	25,830	0.646	C	0.192	N

Table 8.1 Roadway Segment Analysis – No Connection Alternative

		No Connection Alternative					Existing					
Roadway	**Segment**	**Classification**	**Capacity**	**ADT**	**V/C**	**LOS**	**Functional Classification**	**ADT**	**V/C**	**LOS**	**Δ V/C**	**SI?**
Texas Street	Camino Del Rio South to 1400' North of Madison Ave	4-Ln Major Arterial	40,000	33,000	0.825	D	4-Ln Major Arterial	29,050	0.726	C	0.099	N
Texas Street	1400' North of Madison Ave to Madison Avenue	3-Ln Collector w/ TWLTL (1 NB, 2 SB)	22,500	33,000	1.467	**F**	3-Ln Collector w/ TWLTL (1 NB, 2 SB)	29,240	1.3	**F**	0.167	**Y**
Texas Street	Madison Avenue to Meade Ave	2-Ln Collector w/ TWLTL	15,000	20,300	1.353	**F**	2-Ln Collector w/ TWLTL	17,090	1.139	**F**	0.214	**Y**
Texas Street	Meade Ave to El Cajon Boulevard	3-Ln Collector	11,000	15,400	1.400	**F**	3-Ln Collector	14,310	1.300	**F**	0.100	**Y**
River Run Drive	Friars Road to Rio San Diego Drive	2-Ln Collector w/o TWLTL	8,000	4,200	0.525	C	2-Ln Collector w/o TWLTL	4,030	0.504	C	0.021	N
Fenton Parkway	Portofino Driveway to Friars Road	4-Ln Major Arterial	40,000	4,500	0.113	A	4-Ln Major Arterial	4,120	0.103	A	0.010	N
Fenton Parkway	Friars Road to Rio San Diego Drive	4-Ln Major Arterial	40,000	15,800	0.395	B	4-Ln Major Arterial	12,610	0.315	A	0.080	N
Fenton Parkway	Rio San Diego Drive to Del Rio Apartments Driveway	4-Ln Major Arterial	40,000	6,300	0.158	A	4-Ln Major Arterial	5,400	0.135	A	0.023	N
Fenton Parkway	Del Rio Apartments Driveway to ~~New Street "I"~~Mission City Street "I"	4-Ln Major Arterial	40,000	6,300	0.158	A	Does Not Exist				0.158	N
Fenton Parkway	~~New Street "I"~~Mission City Street "I" to Camino Del Rio North	Does Not Exist					Does Not Exist					
Mission City Parkway	Camino Del Rio North to Camino Del Rio South	2-Ln Collector w/ TWLTL	15,000	8,200	0.547	C	2-Ln Collector w/ TWLTL	6,430	0.643	C	-0.096	N
Northside Drive	Portofino Driveway to Friars Road	4-Ln Collector w/ TWLTL	30,000	5,500	0.183	A	4-Ln Collector w/ RM	6,590	0.22	A	-0.037	N
Northside Drive	Friars Road to Fenton Marketplace Driveway	4-Ln Collector w/ TWLTL	30,000	26,300	0.877	E	4-Ln Collector w/ RM	20,310	0.677	C	0.200	**Y**
Northside Drive	Fenton Marketplace Driveway to Lowe's Frontage Road	Shopping Center Driveway[2]	22,500	21,300	0.947	**E**	3-Ln Collector w/ RM (2 NB, 1 SB)	15,890	0.706	D	0.241	**Y**

Table 8.1 Roadway Segment Analysis – No Connection Alternative

		No Connection Alternative					Existing					
Roadway	Segment	Classification	Capacity	ADT	V/C	LOS	Functional Classification	ADT	V/C	LOS	Δ V/C	SI?
Mission Village Drive	Ronda Avenue to Friars Road WB Ramps	4-Ln Major Arterial	40,000	17,700	0.443	B	4-Ln Major Arterial	17,220	0.431	B	0.012	N
Mission Village Drive	Friars Road WB Ramps to Friars Road EB Ramps	4-Ln Major Arterial	40,000	31,300	0.783	D	4-Ln Major Arterial	13,660	0.342	A	0.441	N
Rancho Mission Road	Friars Road to San Diego Mission Road	2-Ln Collector w/ TWLTL	15,000	16,800	1.120	**F**	3-Ln Collector w/ TWLTL (2 NB, 1 SB)	12,820	0.57	C	0.550	**Y**
Rancho Mission Road	San Diego Mission Road to Camino Del Rio North	2-Ln Collector w/ TWLTL	15,000	21,900	1.460	**F**	4-Ln Collector w/o TWLTL	9,580	0.639	C	0.821	**Y**
Santo Road	Northern Terminus to Friars Road	4-Ln Major Arterial	40,000	15,600	0.390	B	2-Ln Collector w/o TWLTL	6,360	0.796	D	-0.406	N
Riverdale Street	Zion Road to Friars Road	2-Ln Collector w/o TWLTL	8,000	2,200	0.275	A	2-Ln Collector w/ w/o TWLTL	2,770	0.346	B	-0.071	N
Riverdale Street	Friars Road to Vandever Avenue	2-Ln Collector w/o TWLTL	8,000	26,800	3.350	**F**	2-Ln Collector w/ w/o TWLTL	8,900	1.113	**F**	2.237	**Y**
Mission Gorge Road	Friars Road to Camino Del Rio North	4-Ln Collector w/ TWLTL	30,000	22,500	0.750	D	4-Ln Collector w/ TWLTL	14,710	0.49	C	0.260	N
Fairmount Avenue	Camino Del Rio North/I-8 WB Off-Ramp to I-8 EB Off-Ramp	4-Ln Major Arterial	40,000	53,800	1.345	**F**	4-Ln Major Arterial	40,210	1.005	**F**	0.340	**Y**
Fairmount Avenue	I-8 EB Off-Ramp to Camino Del Rio South	6-Ln Expressway	80,000	93,600	1.170	**F**	6-Ln Expressway	82,880	1.036	**F**	0.134	**Y**
Riverwalk Drive	West of Via Las Cumbres	2-Ln Collector w/ TWLTL	15,000	100	0.007	A	Does Not Exist				0.007	N
Riverwalk Drive	Via Las Cumbres to Fashion Valley Road	2-Ln Collector w/ TWLTL	15,000	6,900	0.460	B	Does Not Exist				0.460	N
Riverwalk Drive	Fashion Valley Road to Avenida Del Rio	2-Ln Collector w/o TWLTL	8,000	18,700	2.338	**F**	Does Not Exist				2.338	**Y**

Table 8.1 Roadway Segment Analysis – No Connection Alternative

		No Connection Alternative					Existing					
Roadway	**Segment**	**Classification**	**Capacity**	**ADT**	**V/C**	**LOS**	**Functional Classification**	**ADT**	**V/C**	**LOS**	**Δ V/C**	**SI?**
~~Levi-Cushman Street "B"~~Riverwalk Street "U"	Via Las Cumbres to Fashion Valley Road	4-Ln Collector w/ TWLTL	30,000	6,800	0.227	A	Does Not Exist				0.227	N
Goshen St	Linda Vista Rd to Gaines St	2-Ln Collector w/o TWLTL	8,000	4,600	0.575	C	Not Analyzed				0.575	N
Goshen St	Gaines St to Friars Rd	2-Ln Collector w/o TWLTL	8,000	3,500	0.438	B	Not Analyzed				0.438	N
~~New Street "I"~~Mission City Street "I"	Mission City Parkway to Eastern End	2-Ln Collector w/ TWLTL	15,000	5,800	0.387	B	Does Not Exist				0.387	N
Gill Village Way	Friars Rd to Rio San Diego Dr	2-Ln Collector w/ TWLTL	15,000	6,300	0.420	B	Not Analyzed				0.420	N
Rio Bonito Way	Friars Rd to Rio San Diego Dr	2-Ln Collector w/ TWLTL	15,000	4,100	0.273	A	Not Analyzed				0.273	N

Notes:
Bold letter indicates substandard LOS E or F.
RM = Raised Median.
SM = Striped Median.
TWLTL = Two-Way Left-Turn Lane. Turn pocket(s) may be considered in place of TWLTL.
NFP = No Fronting Property.
SI = Significant Impact.
[1] Capacity for a 7-Ln Prime Arterial is calculated assuming that each additional lane above a 6-Ln Arterial adds 5,000 ADT for LOS A, 7,500 ADT for LOS B and 10,000 ADT for LOS C, D, and E.
[2] Shopping Center Driveway was analyzed as a 3-Ln Collector w/ TWLTL.

As shown in Table 8.1, based on the criteria documented in Section 2.3, the CPU land uses and No-Connection Alternative will result in a LOS of E or F along the following 45 roadway segments, and have a significant traffic impact to the following 41 roadway segments in **bold**, when comparing to the existing conditions (No Connection Alternative Plan-to-Ground):

- **Sea World Drive, Mission Bay Parkway to Friars Road (LOS F, Δ in V/C 0.193)**
- **Sea World Drive, Friars Road to I-5 SB Ramps (LOS E, Δ in V/C 0.213)**
- **Tecolote Road, I-5 SB Ramps and I-5 NB Ramps (LOS E, Δ in V/C 0.126)**
- **Friars Road, Fashion Valley Driveway to Avenida De Las Tiendas (LOS E, Δ in V/C 0.385)**
- **Friars Road, Avenida De Las Tiendas to Ulric Street/SR-163 SB Ramps (LOS F, Δ in V/C 0.42)**
- **Friars Road, Mission Village Drive to I-15 SB Ramps (LOS F, Δ in V/C 0.388)**
- **Friars Road, I-15 SB Ramps to I-15 NB Ramps (LOS F, Δ in V/C 0.482)**
- **Friars Road, I-15 NB Ramps to Rancho Mission Road (LOS F, Δ in V/C 0.264)**
- **Friars Road, Santo Road to Riverdale Street (LOS F, Δ in V/C 0.304)**
- **Rio San Diego Drive, River Run Drive to Fenton Parkway (LOS F, Δ in V/C 0.724)**
- **Hotel Circle North, I-8 WB Off-Ramp to Via Las Cumbres (LOS F, Δ in V/C 0.646)**
- Hotel Circle North, Via Las Cumbres to I-8 WB On-Ramp (LOS F, Δ in V/C -0.168) – not impacted
- **Camino De La Reina, Avenida Del Rio to Camino De La Siesta (LOS F, Δ in V/C 0.504)**
- **Camino Del Rio North, Camino De La Siesta to Mission Center Road (LOS E, Δ in V/C 0.525)**
- **Camino Del Rio North, Mission City Parkway to 1800' West of Ward Rd (LOS F, Δ in V/C 0.272)**
- **Camino Del Rio North, 1800' West of Ward Road to Ward Road (LOS F, Δ in V/C 0.268)**
- **Hotel Circle South, I-8 EB Off-Ramp to Via Las Cumbres (LOS F, Δ in V/C 0.514)**
- **Hotel Circle South, Via Las Cumbres to I-8 EB On-Ramp (LOS F, Δ in V/C 0.514)**
- Hotel Circle South, I-8 EB On-Ramp to Bachman Place (LOS F, Δ in V/C -0.123) – not impacted
- Hotel Circle South, Bachman Place to Hotel Circle North/Camino De La Reina (LOS F, Δ in V/C -0.019) - not impacted
- **Camino Del Rio South, I-15 SB Off-Ramp to I-15 NB On-Ramp (LOS F, Δ in V/C 0.847)**
- **Morena Boulevard, Tecolote Road to West Morena Boulevard (LOS F, Δ in V/C 0.041)**
- Via Las Cumbres, Linda Vista Road to Friars Road (LOS E, Δ in V/C -0.029) – not impacted
- **Avenida Del Rio, Fashion Valley Parking Lot to Camino De La Reina (LOS F, Δ in V/C 0.924)**
- **Ulric Street, Fashion Hills Boulevard to 600' South of Fashion Hills Blvd (LOS F, Δ in V/C 0.454)**
- **Ulric Street, 600' South of Fashion Hills Boulevard to Friars Road (LOS F, Δ in V/C 0.359)**
- **Camino De La Siesta, Camino De La Reina to Camino Del Rio North (LOS F, Δ in V/C 0.607)**
- **Mission Center Road, Murray Ridge Road to 1200' West of Murray Ridge Road (LOS F, Δ in V/C 0.791)**
- **Mission Center Road, 1200' W of Murray Ridge Rd to 950' N of Mission Valley Rd (LOS F, Δ in V/C 0.398)**
- **Auto Circle, Camino Del Rio North to I-8 EB Ramps (LOS F, Δ in V/C 0.193)**
- **Murray Ridge Road, Mission Center Road to I-805 NB Ramps (LOS F, Δ in V/C 0.274)**
- **Murray Ridge Road, I-805 NB Ramps to I-805 SB Ramps (LOS F, Δ in V/C 0.847)**
- **Franklin Ridge Road, Via Alta to Civita Boulevard (LOS F, Δ in V/C 01.153)**
- **Qualcomm Way, Camino Del Rio North to I-8 WB Ramps (LOS F, Δ in V/C 0.576)**
- **Qualcomm Way, I-8 WB Ramps to I-8 EB Ramps (LOS F, Δ in V/C 0.344)**
- **Texas Street, 1400' North of Madison Ave to Madison Avenue (LOS F, Δ in V/C 0.167)**
- **Texas Street, Madison Avenue to Meade Ave (LOS F, Δ in V/C 0.214)**
- **Texas Street, Meade Ave to El Cajon Boulevard (LOS F, Δ in V/C 0.100)**
- **Northside Drive, Friars Road to Fenton Marketplace Driveway (LOS E, Δ in V/C 0.2)**
- **Northside Drive, Fenton Marketplace Driveway to Lowe's Frontage Road (LOS E, Δ in V/C 0.241)**

- Rancho Mission Road, Friars Road to San Diego Mission Road (LOS F, Δ in V/C 0.55)
- Rancho Mission Road, San Diego Mission Road to Camino Del Rio North (LOS F, Δ in V/C 0.821)
- Riverdale Street, Friars Road to Vandever Avenue (LOS F, Δ in V/C 2.237)
- Fairmount Avenue, Camino Del Rio North/I-8 WB Off-Ramp to I-8 EB Off-Ramp (LOS F, Δ in V/C 0.34)
- Fairmount Avenue, I-8 EB Off-Ramp to Camino Del Rio South (LOS F, Δ in V/C 0.134)
- Riverwalk Drive, Fashion Valley Road to Avenida Del Rio (LOS F, Δ in V/C 2.338)

8.2 Freeway Segment Analysis

Freeway improvements within the Mission Valley study area under the Adopted Community Plan scenario are assumed to be the same as those identified in Chapter 4, derived from the Revenue Constrained scenario of SANDAG's *San Diego Forward: The Regional Plan* (2015), the currently adopted regional transportation plan, and are anticipated to be implemented by 2050.

Table 8.2a and Table 8.2b present the AM and PM peak hour freeway segment analysis results, respectively, as well as any potential traffic impacts associated with the CPU land uses and No-Connection Alternative when comparing to the existing conditions. HCS freeway segment analysis worksheets are provided in Appendix O.

Table 8.2a Freeway Segment Level of Service Results – No-Connection Alternative AM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
I-8	Sunset Cliffs to Sports Arena Boulevard	EB	2M	44.4%	7.8%	1.0%	74,000	2,644	69.6	20.1	C	70.0	A	-0.4	N
		WB	2M	55.6%	7.2%	1.0%		2,894	68.7	22.2	C	70.0	A	-1.3	N
	Sports Arena Boulevard to I-5 Interchange	EB	3M+1A	44.2%	7.7%	1.2%	115,000	4,196	69.1	21.4	C	70.0	B	-0.9	N
		WB	3M+1A	55.8%	7.1%	1.2%		4,444	68.5	22.9	C	69.6	C	-1.1	N
	I-5 Interchange to Morena Boulevard	EB	3M	31.7%	7.8%	2.8%	178,000	6,141	58.6	37.4	C	70.0	B	-11.4	N
		WB	4M	68.3%	6.8%	2.8%		7,114	64.3	29.6	D	69.6	C	-5.3	N
	Morena Boulevard to Taylor Street	EB	4M+1A	31.7%	7.8%	2.8%	231,000	7,965	60.3	35.1	**E**	70.0	B	-9.7	**Y**
		WB	5M	68.3%	6.8%	2.8%		9,228	63.3	31.0	D	68.2	C	-4.9	N
	Taylor Street to Hotel Circle	EB	4M	31.7%	7.8%	2.8%	205,000	7,078	64.3	29.6	D	70.0	B	-5.7	N
		WB	4M+1A	68.3%	6.8%	2.8%		8,199	58.4	37.7	**E**	61.3	D	-2.9	**Y**
	Hotel Circle to SR-163 Interchange	EB	4M+2A	31.7%	7.8%	2.8%	222,000	7,654	64.5	24.7	C	65.0	B	-0.5	N
		WB	5M	68.3%	6.8%	2.8%		8,866	62.2	29.6	D	63.4	D	-1.2	N
	SR-163 Interchange to Mission Center Road	EB	4M	31.7%	7.8%	3.2%	192,000	6,617	66.7	26.0	D	70.0	B	-3.3	N
		WB	3M+2A	68.3%	6.8%	3.2%		7,665	59.7	33.7	**D**	55.0	**E**	4.7	N
	Mission Center Road to Qualcomm Way / Texas Street	EB	4M+1A	31.7%	7.8%	3.2%	249,000	8,568	54.4	41.6	**E**	65.0	C	-10.6	**Y**
		WB	4M+1A	68.3%	6.8%	3.2%		9,926	43.9	59.8	**F**	50.9	**F**	-7.0	**Y**
	Qualcomm Way / Texas Street to I-805 Interchange	EB	4M+1A	43.0%	7.8%	3.2%	177,000	6,082	64.4	25.0	C	62.4	D	2.0	N
		WB	4M+1A	57.0%	6.8%	3.2%		7,046	62.0	30.0	**D**	57.6	**E**	4.4	N
	I-805 Interchange to I-15 Interchange	EB	4M+2A	31.7%	7.8%	3.0%	258,000	8,871	63.9	30.2	D	70.0	B	-6.1	N
		WB	4M+2A	68.3%	6.8%	3.0%		10,276	57.6	38.8	**E**	61.5	D	-3.9	**Y**
	I-15 Interchange to Fairmount Ave	EB	4M	32.0%	7.7%	3.5%	228,000	7,411	62.7	31.8	D	69.9	C	-7.2	N
		WB	4M+2A	68.0%	7.4%	3.5%		9,424	62.1	32.7	D	64.3	D	-2.2	N
I-5	Sea World Drive / Tecolote Road to I-8 Interchange	NB	5M+1A	54.0%	7.6%	3.4%	243,000	10,478	62.6	31.9	D	64.4	D	-1.8	N
		SB	4M+2A	46.0%	7.1%	3.4%		7,810	69.0	21.6	C	52.5	**F**	16.5	N
	I-8 Interchange to Old Town Avenue	NB	4M+1A	54.0%	7.6%	4.1%	245,000	10,564	38.5	74.0	**F**	54.6	**E**	-16.1	**Y**
		SB	5M	46.0%	7.1%	4.1%		7,874	67.1	25.3	**C**	52.8	**F**	14.3	N
SR-163	Genesee Avenue to Friars Road	NB	5M	57.0%	8.8%	3.7%	213,000	10,924	66.2	26.8	D	63.1	D	3.1	N
		SB	4M	43.0%	8.4%	3.7%		7,316	46.7	56.0	**F**	67.6	C	-20.9	**Y**

Table 8.2a Freeway Segment Level of Service Results – No-Connection Alternative AM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
SR-163	Friars Road to I-8 Interchange	NB	3M	45.1%	7.9%	3.7%	180,000	7,098	45.9	57.5	**F**	65.3	D	-19.4	**Y**
		SB	4M+2A	54.9%	7.8%	3.7%		7,359	68.8	22.2	C	69.8	C	-1.0	N
	I-8 Interchange to 6th Avenue	NB	3M+1A	45.1%	7.9%	3.0%	192,000	7,554	39.5	71.5	**F**	63.7	D	-24.2	**Y**
		SB	3M+2A	54.9%	7.8%	3.0%		7,830	31.8	33.1	D	66.3	D	-34.5	N
	6th Avenue to Washington Street	NB	3M	45.1%	7.9%	3.0%	159,000	6,277	54.8	42.8	**E**	68.5	C	-13.7	**Y**
		SB	2M+1A	54.9%	7.8%	3.0%		6,507	14.2	239.7	**F**	39.1	**F**	-24.9	**Y**
I-805	Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place	NB	5M	69.9%	7.6%	6.5%	266,000	14,917	33.2	89.9	**F**	53.2	**F**	-20.0	**Y**
		SB	5M	30.1%	8.1%	6.5%		6,411	69.9	18.3	C	70.0	B	-0.1	N
	Murray Ridge Road / Phyllis Place to I-8 Interchange	NB	5M	74.6%	5.9%	6.5%	257,000	11,575	56.6	40.2	**E**	63.1	D	-6.5	**Y**
		SB	4M+2A	25.4%	8.4%	6.5%		5,255	70.0	14.8	B	70.0	B	0.0	N
	I-8 Interchange to Adams Avenue	NB	4M+1A	74.6%	5.9%	6.5%	254,000	11,418	40.3	69.4	**F**	50.0	**F**	-9.7	**Y**
		SB	6M	25.4%	8.4%	6.5%		5,184	70.0	12.1	B	70.0	A	0.0	N
	Adams Avenue to El Cajon Boulevard	NB	4M	74.6%	5.9%	6.5%	225,000	10,128	52.0	47.0	**F**	56.8	**E**	-4.8	**Y**
		SB	5M+1A	25.4%	8.4%	6.5%		4,598	70.0	12.7	B	70.0	B	0.0	N
I-15	Aero Drive to Friars Road	NB	4M+1A+2ML	60.5%	7.7%	5.0%	258,000	12,374	26.1	120.4	**F**	42.3	**F**	-16.2	**Y**
		SB	5M+1A+2ML	39.5%	7.5%	5.0%		8,086	67.7	24.3	C	69.4	C	-1.7	N
	Friars Road to I-8	NB	4M+2A+2ML	51.5%	8.2%	2.2%	273,000	10,520	60.1	35.3	**E**	64.5	D	-4.4	**Y**
		SB	3M+3A+2ML	48.5%	8.2%	2.2%		11,157	54.7	41.1	**E**	63.0	D	-8.3	**Y**
	I-8 to Adams Avenue	NB	3M+2A	51.5%	8.2%	2.2%	228,000	8,786	55.1	42.4	**E**	63.0	D	-7.9	**Y**
		SB	5M	48.5%	8.2%	2.2%		9,318	62.9	31.5	D	69.0	C	-6.1	N
	Adams Avenue to El Cajon Boulevard	NB	4M+1A	51.5%	8.2%	2.2%	218,000	8,374	57.8	38.6	**E**	64.2	D	-6.4	**Y**
		SB	5M+1A	48.5%	8.2%	2.2%		8,881	64.5	29.3	D	69.3	C	-4.8	N

Notes:
Bold letter indicates LOS E or F.
[1] M = Mainline; A = Auxiliary Lane.
[2] D = Directional Split.
[3] K = Peak Hour %.
[4] HVF = Heavy Vehicle Factor.

Table 8.2b Freeway Segment Level of Service Results – No-Connection Alternative PM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
I-8	Sunset Cliffs to Sports Arena Boulevard	EB	2M	55.6%	7.8%	1.0%	74,000	3,307	66.5	26.3	D	70.0	A	-3.5	N
		WB	2M	44.4%	7.2%	1.0%		2,314	70.0	17.5	B	70.0	A	0.0	N
	Sports Arena Boulevard to I-5 Interchange	EB	3M+1A	54.8%	7.7%	1.2%	115,000	5,079	66.0	27.1	D	68.3	C	-2.3	N
		WB	3M+1A	45.2%	7.1%	1.2%		3,671	69.9	18.5	C	70.0	B	-0.1	N
	I-5 Interchange to Morena Boulevard	EB	3M	57.0%	7.8%	2.8%	178,000	8,130	36.4	79.6	**F**	60.0	**E**	-23.6	**Y**
		WB	4M	43.0%	6.8%	2.8%		5,373	69.3	20.7	C	70.0	B	-0.7	N
	Morena Boulevard to Taylor Street	EB	4M+1A	57.0%	7.8%	2.8%	231,000	10,546	40.3	69.6	**F**	56.5	**F**	-16.2	**Y**
		WB	5M	43.0%	6.8%	2.8%		6,970	69.1	21.4	C	70.0	B	-0.9	N
	Taylor Street to Hotel Circle	EB	4M	57.0%	7.8%	2.8%	205,000	9,371	49.9	50.5	**F**	54.3	**E**	-4.4	**Y**
		WB	4M+1A	43.0%	6.8%	2.8%		6,193	67.5	24.6	C	68.5	C	-1.0	N
	Hotel Circle to SR-163 Interchange	EB	4M+2A	57.0%	7.8%	2.8%	222,000	10,133	57.9	36.4	**E**	60.1	D	-2.2	**Y**
		WB	5M	43.0%	6.8%	2.8%		6,697	65.0	21.4	C	65.0	C	0.0	N
	SR-163 Interchange to Mission Center Road	EB	4M	57.0%	7.8%	3.2%	192,000	8,760	56.0	41.1	**E**	48.6	**F**	7.4	N
		WB	3M+2A	43.0%	6.8%	3.2%		5,789	64.8	23.5	C	63.8	D	1.0	N
	Mission Center Road to Qualcomm Way / Texas Street	EB	4M+1A	57.0%	7.8%	3.2%	249,000	11,344	28.9	103.7	**F**	39.5	**F**	-10.6	**Y**
		WB	4M+1A	43.0%	6.8%	3.2%		7,497	60.2	32.9	D	62.2	D	-2.0	N
	Qualcomm Way / Texas Street to I-805 Interchange	EB	4M+1A	57.0%	7.8%	3.2%	177,000	8,053	57.5	37.0	**E**	50.1	**F**	7.4	N
		WB	4M+1A	43.0%	6.8%	3.2%		5,322	65.0	21.6	C	64.4	C	0.6	N
	I-805 Interchange to I-15 Interchange	EB	4M+2A	57.0%	7.8%	3.0%	258,000	11,744	48.8	52.3	**F**	54.7	**E**	-5.9	**Y**
		WB	4M+2A	43.0%	6.8%	3.0%		7,762	67.2	25.1	C	68.6	C	-1.4	N
	I-15 Interchange to Fairmount Ave	EB	4M	59.2%	7.7%	3.5%	228,000	10,771	36.7	78.9	**F**	43.5	**F**	-6.8	**Y**
		WB	4M+2A	40.8%	7.4%	3.5%		6,484	69.6	20.1	C	69.9	C	-0.3	N
I-5	Sea World Drive / Tecolote Road to I-8 Interchange	NB	5M+1A	40.5%	7.6%	3.4%	243,000	8,926	67.1	25.4	C	69.9	C	-2.8	N
		SB	4M+2A	59.5%	7.1%	3.4%		9,169	66.5	26.3	D	67.7	C	-1.2	N
	I-8 Interchange to Old Town Avenue	NB	4M+1A	40.5%	7.6%	4.1%	245,000	8,999	52.6	46.2	**F**	68.1	C	-15.5	**Y**
		SB	5M	59.5%	7.1%	4.1%		9,243	62.7	31.8	D	67.7	C	-5.0	N
SR-163	Genesee Avenue to Friars Road	NB	5M	48.4%	8.8%	3.7%	213,000	8,231	54.5	43.2	**E**	65.1	D	-10.6	**Y**
		SB	4M	51.6%	8.4%	3.7%		9,710	63.1	31.3	D	58.6	**E**	4.5	N

Table 8.2b Freeway Segment Level of Service Results – No-Connection Alternative PM Peak Hour

Freeway	Segment	Dir	Lanes[1]	D[2]	K[3]	HVF[4]	ADT	Peak Hr Volume	Speed	Density	LOS	Existing Speed	Existing LOS	Δ Speed	SI?
SR-163	Friars Road to I-8 Interchange	NB	3M	50.9%	7.9%	3.7%	180,000	7,359	49.0	52.0	**F**	57.6	**E**	-8.6	**Y**
		SB	4M+2A	49.1%	7.8%	3.7%		7,098	68.3	23.2	C	69.9	C	-1.6	N
	I-8 Interchange to 6th Avenue	NB	3M+1A	50.9%	7.9%	3.0%	192,000	7,830	43.1	63.1	**F**	54.6	**E**	-11.5	**Y**
		SB	3M+2A	49.1%	7.8%	3.0%		7,554	60.2	35.1	**E**	67.1	C	-6.9	**Y**
	6th Avenue to Washington Street	NB	3M	50.9%	7.9%	3.0%	159,000	6,507	56.9	39.8	**E**	64.5	D	-7.6	**Y**
		SB	2M+1A	49.1%	7.8%	3.0%		6,277	7.7	458.6	**F**	42.7	**F**	-35.0	**Y**
I-805	Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place	NB	5M	35.5%	7.6%	6.5%	266,000	6,411	69.9	18.3	C	69.8	C	0.1	N
		SB	5M	64.5%	8.1%	6.5%		14,917	33.2	89.9	**F**	53.2	**F**	-20.0	**Y**
	Murray Ridge Road / Phyllis Place to I-8 Interchange	NB	5M	37.3%	5.9%	6.5%	257,000	3,941	70.0	11.1	B	70.0	B	0.0	N
		SB	4M+2A	62.7%	8.4%	6.5%		15,433	31.0	97.8	**F**	46.3	**F**	-15.3	**Y**
	I-8 Interchange to Adams Avenue	NB	4M+1A	25.4%	5.9%	6.5%	254,000	3,888	70.0	13.6	B	70.0	B	0.0	N
		SB	6M	74.6%	8.4%	6.5%		15,224	50.8	49.0	**F**	57.6	**E**	-6.8	**Y**
	Adams Avenue to El Cajon Boulevard	NB	4M	37.3%	5.9%	6.5%	225,000	3,448	70.0	11.9	B	69.7	C	0.3	N
		SB	5M+1A	62.7%	8.4%	6.5%		13,504	47.0	55.5	**F**	52.8	**F**	-5.8	**Y**
I-15	Aero Drive to Friars Road	NB	4M+1A+2ML	39.2%	7.7%	5.0%	258,000	8,086	61.5	33.4	D	66.2	D	-4.7	N
		SB	5M+1A+2ML	60.8%	7.5%	5.0%		12,374	49.9	50.4	**F**	58.5	**E**	-8.6	**Y**
	Friars Road to I-8	NB	4M+2A+2ML	51.5%	8.2%	2.2%	273,000	11,157	57.2	39.4	**E**	66.1	D	-8.9	**Y**
		SB	3M+3A+2ML	48.5%	8.2%	2.2%		10,520	57.6	36.9	**E**	63.9	D	-6.3	**Y**
	I-8 to Adams Avenue	NB	3M+2A	51.5%	8.2%	2.2%	228,000	9,318	51.1	48.5	**F**	64.9	D	-13.8	**Y**
		SB	5M	48.5%	8.2%	2.2%		8,786	64.8	28.8	D	69.5	C	-4.7	N
	Adams Avenue to El Cajon Boulevard	NB	4M+1A	51.5%	8.2%	2.2%	218,000	8,881	54.3	43.5	**E**	65.8	D	-11.5	**Y**
		SB	5M+1A	48.5%	8.2%	2.2%		8,374	66.1	27.0	D	69.7	C	-3.6	N

Notes:
Bold letter indicates LOS E or F.
[1] M = Mainline; A = Auxiliary Lane.
[2] D = Directional Split.
[3] K = Peak Hour %.
[4] HVF = Heavy Vehicle Factor.

As shown, the following 34directional mainline freeway segments are projected to operate at LOS E or F. Based on the significant impact criteria outlined in Chapter 2, implementation of the CPU land uses and No-Connection Alternative would result in a significant impact on 32 of those directional segments, as is depicted in **bold**:

- **I-8 EB, I-5 Interchange to Morena Boulevard (PM LOS F, Δ in Speed -23.6)**
- **I-8 EB, Morena Boulevard to Taylor Street (AM LOS E, Δ in Speed -9.7; PM LOS F, Δ in Speed -16.2)**
- **I-8 EB, Taylor Street to Hotel Circle (PM LOS F, Δ in Speed -4.4)**
- **I-8 WB, Taylor Street to Hotel Circle (AM LOS E, Δ in Speed -2.9)**
- **I-8 EB, Hotel Circle to SR-163 Interchange (PM LOS E, Δ in Speed -2.2)**
- I-8 EB, SR-163 Interchange to Mission Center Road (PM LOS E, Δ in Speed 7.4) – not impacted
- **I-8 EB, Mission Center Road to Qualcomm Way / Texas Street (AM LOS E, Δ in Speed -10.6; PM LOS F, Δ in Speed -10.6)**
- **I-8 WB, Mission Center Road to Qualcomm Way / Texas Street (AM LOS F, Δ in Speed -7.0)**
- I-8 EB, Qualcomm Way / Texas Street to I-805 Interchange (PM LOS E, Δ in Speed 7.4) – not impacted
- **I-8 EB, I-805 Interchange to I-15 Interchange (PM LOS F, Δ in Speed -5.9)**
- **I-8 WB, I-805 Interchange to I-15 Interchange (AM LOS E, Δ in Speed -3.9)**
- **I-8 EB, I-15 Interchange to Fairmount Ave (PM LOS F, Δ in Speed -6.8)**
- **I-5 NB, I-8 Interchange to Old Town Avenue (AM LOS F, Δ in Speed -16.1; PM LOS F, Δ in Speed -15.5)**
- **SR-163 NB, Genesee Avenue to Friars Road (PM LOS E, Δ in Speed -10.6)**
- **SR-163 SB, Genesee Avenue to Friars Road (AM LOS F, Δ in Speed -20.9)**
- **SR-163 NB, Friars Road to I-8 Interchange (AM LOS F, Δ in Speed -19.4; PM LOS F, Δ in Speed -8.6)**
- **SR-163 NB, I-8 Interchange to 6th Avenue (AM LOS F, Δ in Speed -24.2; PM LOS F, Δ in Speed -11.5)**
- **SR-163 SB, I-8 Interchange to 6th Avenue (PM LOS E, Δ in Speed -6.9)**
- **SR-163 NB, 6th Avenue to Washington Street (AM LOS E, Δ in Speed -13.7; PM LOS E, Δ in Speed -7.6)**
- **SR-163 SB, 6th Avenue to Washington Street (AM LOS F, Δ in Speed -24.9; PM LOS F, Δ in Speed -35.0)**
- **I-805 NB, Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place (AM LOS F, Δ in Speed -20.0)**
- **I-805 SB, Mesa College Drive / Kearny Villa Road to Murray Ridge Road / Phyllis Place (PM LOS F, Δ in Speed -20.0)**
- **I-805 NB, Murray Ridge Road / Phyllis Place to I-8 Interchange (AM LOS E, Δ in Speed -6.5)**
- **I-805 SB, Murray Ridge Road / Phyllis Place to I-8 Interchange (PM LOS F, Δ in Speed -15.3)**
- **I-805 NB, I-8 Interchange to Adams Avenue (AM LOS F, Δ in Speed -9.7)**
- **I-805 SB, I-8 Interchange to Adams Avenue (PM LOS F, Δ in Speed -6.8)**
- **I-805 NB, Adams Avenue to El Cajon Boulevard (AM LOS F, Δ in Speed -4.8)**
- **I-805 SB, Adams Avenue to El Cajon Boulevard (PM LOS F, Δ in Speed -5.8)**
- **I-15 NB, Aero Drive to Friars Road (AM LOS F, Δ in Speed -16.2)**
- **I-15 SB, Aero Drive to Friars Road (PM LOS F, Δ in Speed -8.6)**
- **I-15 NB, Friars Road to I-8 (AM LOS E, Δ in Speed -4.4; PM LOS E, Δ in Speed -8.9)**
- **I-15 SB, Friars Road to I-8 (AM LOS E, Δ in Speed -8.3; PM LOS E, Δ in Speed -6.3)**
- **I-15 NB, I-8 to Adams Avenue (AM LOS E, Δ in Speed -7.9; PM LOS F, Δ in Speed -13.8)**

- I-15 NB, Adams Avenue to El Cajon Boulevard (AM LOS E, Δ in Speed -6.4; PM LOS E, Δ in Speed -11.5)

Appendix A
Traffic Counts
Roadway, Intersection, Freeway

Roadway Traffic Counts

ID	Dir.	Roadway	From	To
1	E/W	Phyllis Place	Abbotshill Road	I-805 SB Ramps
2	E/W	Sea World Drive	Mission Bay Parkway	Friars Road
3	E/W	Sea World Drive	Friars Road	I-5 SB Ramps
4	E/W	Tecolote Road	I-5 SB Ramps	I-5 NB Ramps
5	E/W	Tecolote Road	I-5 NB Ramps	Morena Boulevard
6	E/W	Mission Valley Road	Metropolitan Drive	Mission Center Road
7	E/W	Civita Boulevard	Mission Center Road	Qualcomm Way
8	E/W	Westside Drive	Mission Center Road	Via Alta
9	E/W	Friars Road	Sea World Drive	Napa Street
10	E/W	Friars Road	Napa Street	Colusa Street
11	E/W	Friars Road	Colusa Street	Via Las Cumbres
12	E/W	Friars Road	Via Las Cumbres	Fashion Valley Road
13	E/W	Friars Road	Fashion Valley Road	Via De La Moda
14	E/W	Friars Road	Via De La Moda	Fashion Valley Driveway
15	E/W	Friars Road	Fashion Valley Driveway	Avenida De Las Tiendas
16	E/W	Friars Road	Avenida De Las Tiendas	Ulric Street/SR-163 SB Ramps
17	E/W	Friars Road	Ulric Street/SR-163 SB Ramps	SR-163 NB Ramps
18	E/W	Friars Road	SR-163 NB Ramps	Frazee Road

ID	Dir.	Roadway	From	To
19	E/W	Friars Road	Frazee Road	Mission Center Road
20	E/W	Friars Road	Mission Center Road	Qualcomm Way
21	E/W	Friars Road	Qualcomm Way	River Run Drive
22	E/W	Friars Road	River Run Drive	Fenton Parkway
23	E/W	Friars Road	Fenton Parkway	Northside Drive
24	E/W	Friars Road	Northside Drive	San Diego Mission Road
25	E/W	Friars Road	San Diego Mission Road	I-15 SB Ramps
26	E/W	Friars Road	I-15 SB Ramps	I-15 NB Ramps
27	E/W	Friars Road	I-15 NB Ramps	Rancho Mission Road
28	E/W	Friars Road	Rancho Mission Road	Santo Road
29	E/W	Friars Road	Santo Road	Riverdale Street
30	E/W	Friars Road	Riverdale Street	Mission Gorge Road
31	E/W	Mission Gorge Road	Friars Road	Zion Avenue
32	E/W	Hazard Center Drive	Western Terminus	Mission Center Road
33	E/W	Rio San Diego Drive	Gill Village Way	Qualcomm Way
34	E/W	Rio San Diego Drive	Qualcomm Way	River Run Drive
35	E/W	Rio San Diego Drive	River Run Drive	Fenton Parkway
36	E/W	San Diego Mission Road	Friars Road EB Ramps	Rancho Mission Road

ID	Dir.	Roadway	From	To
37	E/W	San Diego Mission Road	Rancho Mission Road	950 Feet West of Fairmount Avenue
38	E/W	San Diego Mission Road	950 Feet West of Fairmount Avenue	Fairmount Avenue
39	E/W	Taylor Street	Pacific Highway	Morena Boulevard
40	E/W	Taylor Street	Morena Boulevard	I-8 EB Ramps
41	E/W	Taylor Street	I-8 EB Ramps	Hotel Circle South
42	E/W	Hotel Circle North	Hotel Circle South	Hotel Circle Place
43	E/W	Hotel Circle North	Hotel Circle Place	I-8 WB Ramps
44	E/W	Hotel Circle North	I-8 WB Ramps	Fashion Valley Road
45	E/W	Hotel Circle North	Fashion Valley Road	Camino De La Reina
46	E/W	Camino De La Reina	Hotel Circle North	Avenida Del Rio
47	E/W	Camino De La Reina	Avenida Del Rio	Camino De La Siesta
48	E/W	Camino De La Reina	Camino De La Siesta	Mission Center Road
49	E/W	Camino De La Reina	Mission Center Road	Camino Del Este
50	E/W	Camino De La Reina	Camino Del Este	Qualcomm Way
51	E/W	Camino Del Rio North	Camino De La Siesta	Mission Center Road
52	E/W	Camino Del Rio North	Mission Center Road	I-8 WB Ramps
53	E/W	Camino Del Rio North	I-8 WB Ramps	Camino Del Este
54	E/W	Camino Del Rio North	Camino Del Este	Qualcomm Way

ID	Dir.	Roadway	From	To
55	E/W	Camino Del Rio North	Qualcomm Way	Mission City Parkway
56	E/W	Camino Del Rio North	Mission City Parkway	800 Feet East of Mission City Parkway
57	E/W	Camino Del Rio North	800 Feet East of Mission City Parkway	1800 Feet West of Ward Road
58	E/W	Camino Del Rio North	1800 Feet West of Ward Road	Ward Road
59	E/W	Camino Del Rio North	Ward Road	1000 Feet West of Fairmount Avenue
60	E/W	Camino Del Rio North	1000 Feet West of Fairmount Avenue	Fairmount Avenue
61	E/W	Hotel Circle South	Hotel Circle North	1200 Feet East of Hotel Circle North
62	E/W	Hotel Circle South	1200 Feet East of Hotel Circle North	I-8 EB Ramps
63	E/W	Hotel Circle South	I-8 EB Ramps	Bachman Place
64	E/W	Hotel Circle South	Bachman Place	Hotel Circle North
65	E/W	Camino Del Rio South	Western Terminus	1800 Feet west of Mission Center Road
66	E/W	Camino Del Rio South	1800 Feet west of Mission Center Road	Mission Center Road
67	E/W	Camino Del Rio South	Mission Center Road	Texas Street
68	E/W	Camino Del Rio South	Texas Street	Mission City Parkway
69	E/W	Camino Del Rio South	Mission City Parkway	I-15 SB Offramp
70	E/W	Camino Del Rio South	I-15 SB Offramp	I-15 SB Onramp
71	E/W	Camino Del Rio South	I-15 SB Onramp	Fairmount Avenue
72	N/S	Morena Boulevard	Tecolote Road	West Morena Boulevard

ID	Dir.	Roadway	From	To
73	N/S	Morena Boulevard	West Morena Boulevard	Linda Vista Road
74	N/S	Morena Boulevard	Linda Vista Road	I-8 WB Offramp
75	N/S	Morena Boulevard	I-8 EB Offramp	Taylor Street
76	N/S	Napa Street	Morena Boulevard	Friars Road
77	N/S	Colusa Street	Linda Vista Road	Friars Road
78	N/S	Via Las Cumbres	Linda Vista Road	Friars Road
79	N/S	Fashion Valley Road	Friars Road	Hotel Circle North
80	N/S	Bachman Place	Hotel Circle South	Lewis Street
81	N/S	Avenida Del Rio	Fashion Valley Parking Lot	Camino De La Reina
82	N/S	Ulric Street	Fashion Hills Boulevard	600 Feet South of Fashion Hills Boulevard
83	N/S	Ulric Street	600 Feet South of Fashion Hills Boulevard	Friars Road
84	N/S	Camino De La Siesta	Camino De La Reina	Camino Del Rio North
85	N/S	Metropolitan Drive	Mission Valley Road	Murray Canyon Road
86	N/S	Murray Canyon Road	Metropolitan Drive	Frazee Road
87	N/S	Frazee Road	Murray Canyon Road	Friars Road
88	N/S	Frazee Road	Friars Road	Hazard Center Drive
89	N/S	Mission Center Road	Murray Ridge Road	1200 Feet West of Murray Ridge Road
90	N/S	Mission Center Road	1200 Feet West of Murray Ridge Road	950 Feet North of Mission Valley Road

ID	Dir.	Roadway	From	To
91	N/S	Mission Center Road	950 Feet North of Mission Valley Road	Mission Valley Road
92	N/S	Mission Center Road	Mission Valley Road	Westside Drive
93	N/S	Mission Center Road	Westside Drive	Friars Road WB Ramps
94	N/S	Mission Center Road	Friars Road WB Ramps	Friars Road EB Ramps
95	N/S	Mission Center Road	Friars Road EB Ramps	Mission Center Court
96	N/S	Mission Center Road	Mission Center Court	Hazard Center Drive
97	N/S	Mission Center Road	Hazard Center Drive	Camino De La Reina
98	N/S	Mission Center Road	Camino De La Reina	Camino Del Rio North
99	N/S	Auto Circle	Camino Del Rio North	I-8 EB Ramps
100	N/S	Auto Circle	I-8 EB Ramps	Camino del Rio South
101	N/S	Via Alta	Westside Drive	Franklin Ridge Road
102	N/S	Murray Ridge Road	Mission Center Road	I-805 NB Ramps
103	N/S	Murray Ridge Road	I-805 NB Ramps	I-805 SB Ramps
104	N/S	Russell Park Way	Friars Road	Civita Boulevard
105	N/S	Camino Del Este	Rio San Diego Drive	Camino De La Reina
106	N/S	Camino Del Este	Camino De La Reina	Camino Del Rio North
107	N/S	Franklin Ridge Road	Civita Boulevard	Via Alta
108	N/S	Qualcomm Way	Civita Boulevard	Friars Road WB Ramps

ID	Dir.	Roadway	From	To
109	N/S	Qualcomm Way	Friars Road WB Ramps	Friars Road EB Ramps
110	N/S	Qualcomm Way	Friars Road EB Ramps	Rio San Diego Drive
111	N/S	Qualcomm Way	Rio San Diego Drive	Camino Del Rio North
112	N/S	Qualcomm Way	Camino Del Rio North	I-8 WB Ramps
113	N/S	Qualcomm Way	I-8 WB Ramps	I-8 EB Ramps
114	N/S	Qualcomm Way	I-8 EB Ramps	Camino Del Rio South
115	N/S	Texas Street	Camino Del Rio South	1400 Feet North of Madison Ave
116	N/S	Texas Street	1400 Feet North of Madison Ave	Madison Avenue
117	N/S	Texas Street	Madison Avenue	Meade Ave
118	N/S	Texas Street	Meade Ave	El Cajon Boulevard
119	N/S	River Run Drive	Friars Road	Rio San Diego Drive
120	N/S	Fenton Parkway	Portofino Driveway	Friars Road
121	N/S	Fenton Parkway	Friars Road	Rio San Diego Drive
122	N/S	Fenton Parkway	Rio San Diego Drive	Del Rio Apartments Driveway
123	N/S	Mission City Parkway	Camino Del Rio North	Camino Del Rio South
124	N/S	Northside Drive	Portofino Driveway	Friars Road
125	N/S	Northside Drive	Friars Road	Fenton Marketplace Driveway
126	N/S	Northside Drive	Fenton Marketplace Driveway	Lowe’s Frontage Road

ID	Dir.	Roadway	From	To
127	N/S	Mission Village Drive	Ronda Avenue	Friars Road WB Ramps
128	N/S	Mission Village Drive	Friars Road WB Ramps	Friars Road EB Ramps
129	N/S	Rancho Mission Road	Friars Road	San Diego Mission Road
130	N/S	Rancho Mission Road	San Diego Mission Road	Camino Del Rio North
131	N/S	Santo Road	Northern Terminus	Friars Road
132	N/S	Riverdale Street	Zion Road	Friars Road
133	N/S	Riverdale Street	Friars Road	Vandever Avenue
134	N/S	Mission Gorge Road	Friars Road	Camino Del Rio North
135	N/S	Fairmount Avenue	Camino Del Rio North/I-8 WB Offramp	I-8 EB Offramp
136	N/S	Fairmount Avenue	I-8 EB Offramp	Camino Del Rio South

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WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Phyllis Place, From I-805 SB Ramps to Abbotshill Rd

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			1		1			12:00			27		14		
00:15			1		1			12:15			24		22		
00:30			0		5			12:30			24		24		
00:45			5	7	2	9	16	12:45			14	89	18	78	167
01:00			0		0			13:00			17		11		
01:15			2		2			13:15			20		15		
01:30			0		1			13:30			17		25		
01:45			0	2	1	4	6	13:45			18	72	12	63	135
02:00			0		1			14:00			16		23		
02:15			0		1			14:15			17		16		
02:30			0		0			14:30			15		15		
02:45			0	0	2	4	4	14:45			22	70	21	75	145
03:00			2		2			15:00			14		14		
03:15			0		1			15:15			15		15		
03:30			0		0			15:30			22		26		
03:45			1	3	1	4	7	15:45			15	66	21	76	142
04:00			0		1			16:00			18		26		
04:15			2		1			16:15			10		18		
04:30			0		0			16:30			16		22		
04:45			1	3	0	2	5	16:45			18	62	38	104	166
05:00			1		3			17:00			18		36		
05:15			2		1			17:15			16		22		
05:30			4		0			17:30			15		31		
05:45			4	11	4	8	19	17:45			11	60	29	118	178
06:00			3		3			18:00			17		31		
06:15			11		1			18:15			14		33		
06:30			4		2			18:30			17		22		
06:45			7	25	3	9	34	18:45			9	57	33	119	176
07:00			24		8			19:00			17		22		
07:15			33		7			19:15			20		25		
07:30			25		10			19:30			15		18		
07:45			26	108	13	38	146	19:45			10	62	9	74	136
08:00			20		10			20:00			18		13		
08:15			21		18			20:15			25		14		
08:30			28		11			20:30			14		16		
08:45			33	102	12	51	153	20:45			6	63	11	54	117
09:00			26		7			21:00			5		15		
09:15			29		10			21:15			9		15		
09:30			16		12			21:30			6		9		
09:45			21	92	13	42	134	21:45			7	27	11	50	77
10:00			22		11			22:00			5		6		
10:15			12		9			22:15			4		13		
10:30			19		10			22:30			2		10		
10:45			11	64	16	46	110	22:45			3	14	6	35	49
11:00			19		15			23:00			2		5		
11:15			18		13			23:15			2		7		
11:30			16		24			23:30			1		6		
11:45			24	77	16	68	145	23:45			2	7	1	19	26
Total Vol.				494		285	**779**					649		865	**1514**

Daily Totals

NB	SB	EB	WB	Combined
		1143	1150	**2293**

	AM			PM		
Split %	63.4%	36.6%	**34.0%**	42.9%	57.1%	**66.0%**
Peak Hour	08:30	11:30	**11:45**	12:00	16:45	**16:45**
Volume	116	76	**175**	89	127	**194**
P.H.F.	0.88	0.79	**0.91**	0.82	0.84	**0.87**

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THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Phyllis Place, From I-805 SB Ramps to Abbotshill Rd

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			2		4			12:00			16		18		
00:15			1		1			12:15			17		21		
00:30			1		3			12:30			17		26		
00:45			0	4	0	8	12	12:45			9	59	22	87	146
01:00			1		1			13:00			17		19		
01:15			1		2			13:15			21		15		
01:30			0		1			13:30			20		20		
01:45			1	3	1	5	8	13:45			19	77	18	72	149
02:00			0		0			14:00			15		16		
02:15			1		0			14:15			17		20		
02:30			0		1			14:30			10		18		
02:45			1	2	1	2	4	14:45			12	54	20	74	128
03:00			1		0			15:00			22		19		
03:15			1		1			15:15			16		22		
03:30			0		0			15:30			18		32		
03:45			2	4	0	1	5	15:45			20	76	26	99	175
04:00			1		0			16:00			24		24		
04:15			1		1			16:15			11		33		
04:30			1		0			16:30			16		31		
04:45			1	4	1	2	6	16:45			16	67	20	108	175
05:00			1		0			17:00			18		23		
05:15			2		1			17:15			19		24		
05:30			3		2			17:30			22		26		
05:45			9	15	1	4	19	17:45			16	75	30	103	178
06:00			7		3			18:00			16		19		
06:15			2		2			18:15			10		19		
06:30			8		7			18:30			13		15		
06:45			16	33	9	21	54	18:45			13	52	21	74	126
07:00			21		12			19:00			21		24		
07:15			17		18			19:15			18		19		
07:30			26		15			19:30			15		14		
07:45			32	96	11	56	152	19:45			11	65	33	90	155
08:00			24		9			20:00			7		11		
08:15			26		10			20:15			11		13		
08:30			22		11			20:30			1		9		
08:45			19	91	16	46	137	20:45			3	22	12	45	67
09:00			20		18			21:00			8		10		
09:15			15		12			21:15			7		9		
09:30			17		12			21:30			4		11		
09:45			21	73	15	57	130	21:45			5	24	12	42	66
10:00			22		18			22:00			2		10		
10:15			22		19			22:15			3		8		
10:30			12		22			22:30			2		7		
10:45			16	72	21	80	152	22:45			0	7	8	33	40
11:00			21		16			23:00			1		8		
11:15			16		12			23:15			0		4		
11:30			16		18			23:30			3		3		
11:45			26	79	21	67	146	23:45			2	6	0	15	21
Total Vol.				476		349	**825**					584		842	**1426**

Daily Totals

NB	SB	EB	WB	Combined
		1060	1191	**2251**

	AM			PM		
Split %	57.7%	42.3%	**36.7%**	41.0%	59.0%	**63.3%**
Peak Hour	07:30	11:45	**11:45**	15:15	15:30	**15:30**
Volume	108	86	**162**	78	115	**188**
P.H.F.	0.84	0.83	**0.86**	0.81	0.87	**0.94**

2

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Sea World Drive From Mission Bay Parkway to Friars Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			20		24			12:00			245		262		
00:15			26		21			12:15			251		254		
00:30			20		18			12:30			268		251		
00:45			15	81	22	85	166	12:45			277	1041	242	1009	2050
01:00			18		16			13:00			242		222		
01:15			11		11			13:15			256		218		
01:30			12		15			13:30			242		213		
01:45			9	50	19	61	111	13:45			266	1006	214	867	1873
02:00			9		10			14:00			284		252		
02:15			10		5			14:15			251		266		
02:30			5		4			14:30			288		251		
02:45			4	28	6	25	53	14:45			313	1136	284	1053	2189
03:00			6		9			15:00			305		295		
03:15			7		5			15:15			284		316		
03:30			5		4			15:30			216		333		
03:45			4	22	8	26	48	15:45			322	1127	342	1286	2413
04:00			6		7			16:00			342		326		
04:15			9		9			16:15			449		352		
04:30			18		5			16:30			519		366		
04:45			20	53	10	31	84	16:45			488	1798	375	1419	3217
05:00			21		11			17:00			503		395		
05:15			44		33			17:15			404		345		
05:30			68		41			17:30			416		355		
05:45			70	203	55	140	343	17:45			402	1725	333	1428	3153
06:00			84		68			18:00			352		318		
06:15			121		111			18:15			362		321		
06:30			184		105			18:30			284		333		
06:45			229	618	161	445	1063	18:45			212	1210	318	1290	2500
07:00			335		184			19:00			184		282		
07:15			451		212			19:15			161		262		
07:30			405		218			19:30			121		181		
07:45			424	1615	251	865	2480	19:45			135	601	151	876	1477
08:00			384		289			20:00			101		141		
08:15			370		292			20:15			88		131		
08:30			316		315			20:30			95		111		
08:45			384	1454	333	1229	2683	20:45			70	354	111	494	848
09:00			351		191			21:00			65		126		
09:15			305		222			21:15			77		132		
09:30			288		216			21:30			54		108		
09:45			274	1218	203	832	2050	21:45			65	261	99	465	726
10:00			265		241			22:00			95		70		
10:15			218		222			22:15			65		65		
10:30			219		218			22:30			35		88		
10:45			222	924	241	922	1846	22:45			44	239	70	293	532
11:00			235		262			23:00			51		65		
11:15			242		251			23:15			40		44		
11:30			255		268			23:30			35		35		
11:45			235	967	274	1055	2022	23:45			28	154	28	172	326
Total Vol.			7233		5716		**12949**				10652		10652		**21304**

Daily Totals

NB	SB	EB	WB	Combined
		17885	16368	**34253**

	AM			PM		
Split %	55.9%	44.1%	**37.8%**	50.0%	50.0%	**62.2%**
Peak Hour	07:15	08:00	**08:00**	16:15	16:15	**16:15**
Volume	1664	1229	**2683**	1959	1488	**3447**
P.H.F.	0.92	0.92	**0.94**	0.94	0.94	**0.96**

2

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Sea World Drive From Mission Bay Parkway to Friars Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			21		28			12:00			245		284		
00:15			23		24			12:15			268		262		
00:30			18		25			12:30			285		242		
00:45			20	82	20	97	179	12:45			295	1093	235	1023	2116
01:00			16		19			13:00			255		242		
01:15			19		22			13:15			268		222		
01:30			11		16			13:30			242		295		
01:45			15	61	11	68	129	13:45			255	1020	262	1021	2041
02:00			11		8			14:00			313		242		
02:15			9		7			14:15			318		235		
02:30			5		9			14:30			305		244		
02:45			4	29	5	29	58	14:45			252	1188	289	1010	2198
03:00			8		4			15:00			269		312		
03:15			6		5			15:15			295		333		
03:30			8		8			15:30			298		385		
03:45			7	29	9	26	55	15:45			242	1104	362	1392	2496
04:00			9		9			16:00			315		387		
04:15			5		10			16:15			388		342		
04:30			4		11			16:30			398		399		
04:45			18	36	15	45	81	16:45			445	1546	422	1550	3096
05:00			20		18			17:00			484		404		
05:15			33		26			17:15			505		384		
05:30			45		35			17:30			464		342		
05:45			51	149	44	123	272	17:45			418	1871	316	1446	3317
06:00			68		51			18:00			389		333		
06:15			77		68			18:15			326		318		
06:30			151		121			18:30			284		305		
06:45			212	508	145	385	893	18:45			222	1221	284	1240	2461
07:00			295		212			19:00			170		270		
07:15			345		252			19:15			142		268		
07:30			444		268			19:30			111		208		
07:45			419	1503	277	1009	2512	19:45			98	521	184	930	1451
08:00			425		298			20:00			80		144		
08:15			365		305			20:15			70		152		
08:30			313		311			20:30			65		132		
08:45			305	1408	275	1189	2597	20:45			66	281	111	539	820
09:00			333		265			21:00			70		108		
09:15			316		219			21:15			54		99		
09:30			289		235			21:30			55		80		
09:45			299	1237	216	935	2172	21:45			46	225	70	357	582
10:00			235		222			22:00			42		84		
10:15			245		214			22:15			68		65		
10:30			222		235			22:30			70		45		
10:45			236	938	242	913	1851	22:45			54	234	35	229	463
11:00			268		252			23:00			22		41		
11:15			245		268			23:15			35		32		
11:30			245		275			23:30			40		22		
11:45			244	1002	254	1049	2051	23:45			28	125	28	123	248
Total Vol.			6982		5868		**12850**				10429		10860		**21289**

Daily Totals

NB	SB	EB	WB	Combined
		17411	16728	**34139**

	AM			PM		
Split %	54.3%	45.7%	**37.6%**	49.0%	51.0%	**62.4%**
Peak Hour	07:30	07:45	**07:30**	16:45	16:30	**16:45**
Volume	1653	1191	**2801**	1898	1609	**3450**
P.H.F.	0.93	0.96	**0.97**	0.94	0.95	**0.97**

3

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Sea World Drive From I-5 SB Ramps to Friars Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			15		20			12:00			210		198		
00:15			18		18			12:15			205		216		
00:30			21		11			12:30			218		205		
00:45			22	76	15	64	140	12:45			235	868	218	837	1705
01:00			16		19			13:00			222		222		
01:15			19		16			13:15			216		213		
01:30			10		11			13:30			205		205		
01:45			11	56	8	54	110	13:45			216	859	184	824	1683
02:00			15		9			14:00			222		195		
02:15			8		5			14:15			218		177		
02:30			9		4			14:30			226		212		
02:45			10	42	5	23	65	14:45			235	901	235	819	1720
03:00			5		6			15:00			242		284		
03:15			4		8			15:15			268		292		
03:30			6		9			15:30			277		312		
03:45			9	24	10	33	57	15:45			284	1071	318	1206	2277
04:00			12		11			16:00			262		333		
04:15			11		8			16:15			305		342		
04:30			18		9			16:30			311		352		
04:45			22	63	15	43	106	16:45			318	1196	388	1415	2611
05:00			28		18			17:00			352		410		
05:15			26		26			17:15			262		398		
05:30			51		33			17:30			275		362		
05:45			66	171	31	108	279	17:45			255	1144	350	1520	2664
06:00			91		45			18:00			266		312		
06:15			121		88			18:15			242		318		
06:30			215		121			18:30			222		305		
06:45			222	649	135	389	1038	18:45			205	935	295	1230	2165
07:00			269		168			19:00			180		288		
07:15			315		175			19:15			111		202		
07:30			336		191			19:30			105		188		
07:45			345	1265	184	718	1983	19:45			121	517	191	869	1386
08:00			368		222			20:00			103		141		
08:15			352		219			20:15			88		135		
08:30			342		205			20:30			95		111		
08:45			333	1395	184	830	2225	20:45			70	356	116	503	859
09:00			318		161			21:00			65		101		
09:15			284		177			21:15			70		116		
09:30			295		151			21:30			54		90		
09:45			205	1102	168	657	1759	21:45			66	255	84	391	646
10:00			212		184			22:00			66		70		
10:15			188		191			22:15			70		55		
10:30			191		215			22:30			54		68		
10:45			170	761	222	812	1573	22:45			55	245	70	263	508
11:00			155		235			23:00			51		54		
11:15			196		218			23:15			40		40		
11:30			177		242			23:30			32		32		
11:45			195	723	216	911	1634	23:45			21	144	22	148	292
Total Vol.				6327		4642	**10969**					8491		10025	**18516**

Daily Totals

NB	SB	EB	WB	Combined
		14818	14667	**29485**

	AM			PM		
Split %	57.7%	42.3%	**37.2%**	45.9%	54.1%	**62.8%**
Peak Hour	07:45	10:45	**07:45**	16:15	16:45	**16:30**
Volume	1407	917	**2237**	1286	1558	**2791**
P.H.F.	0.96	0.95	**0.95**	0.91	0.95	**0.92**

3

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Sea World Drive From I-5 SB Ramps to Friars Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			20		24			12:00			235		215		
00:15			22		21			12:15			215		208		
00:30			16		20			12:30			222		222		
00:45			11	69	16	81	150	12:45			219	891	213	858	1749
01:00			15		11			13:00			222		242		
01:15			19		15			13:15			242		262		
01:30			20		18			13:30			216		241		
01:45			11	65	20	64	129	13:45			189	869	221	966	1835
02:00			8		11			14:00			191		218		
02:15			7		9			14:15			189		208		
02:30			9		10			14:30			213		219		
02:45			5	29	5	35	64	14:45			214	807	235	880	1687
03:00			4		4			15:00			206		242		
03:15			6		6			15:15			235		318		
03:30			5		7			15:30			241		333		
03:45			7	22	8	25	47	15:45			288	970	326	1219	2189
04:00			9		9			16:00			262		342		
04:15			12		5			16:15			295		396		
04:30			18		8			16:30			305		398		
04:45			22	61	9	31	92	16:45			289	1151	405	1541	2692
05:00			35		9			17:00			299		391		
05:15			31		18			17:15			305		406		
05:30			44		28			17:30			288		411		
05:45			51	161	21	76	237	17:45			216	1108	365	1573	2681
06:00			84		35			18:00			242		319		
06:15			91		55			18:15			251		284		
06:30			184		89			18:30			219		292		
06:45			265	624	129	308	932	18:45			202	914	266	1161	2075
07:00			305		135			19:00			216		242		
07:15			351		168			19:15			184		244		
07:30			408		181			19:30			135		222		
07:45			340	1404	212	696	2100	19:45			140	675	174	882	1557
08:00			319		232			20:00			111		151		
08:15			342		222			20:15			90		105		
08:30			355		219			20:30			80		112		
08:45			312	1328	189	862	2190	20:45			70	351	135	503	854
09:00			305		188			21:00			65		88		
09:15			333		175			21:15			88		95		
09:30			284		162			21:30			81		70		
09:45			242	1164	151	676	1840	21:45			70	304	65	318	622
10:00			262		144			22:00			54		77		
10:15			222		184			22:15			42		54		
10:30			202		174			22:30			35		55		
10:45			184	870	213	715	1585	22:45			40	171	40	226	397
11:00			161		215			23:00			35		41		
11:15			151		208			23:15			22		44		
11:30			177		216			23:30			29		32		
11:45			184	673	222	861	1534	23:45			26	112	28	145	257
Total Vol.				6470		4430	**10900**					8323		10272	**18595**

Daily Totals

NB	SB	EB	WB	Combined
		14793	14702	**29495**

	AM			PM		
Split %	59.4%	40.6%	**37.0%**	44.8%	55.2%	**63.0%**
Peak Hour	07:15	07:45	**07:30**	16:30	16:45	**16:30**
Volume	1418	885	**2256**	1198	1613	**2798**
P.H.F.	0.87	0.95	**0.96**	0.98	0.98	**0.98**

4

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Tecolote Rd, from I-5 NB ramps to I-5 SB ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			35		3			12:00			295		126		
00:15			25		12			12:15			361		163		
00:30			23		2			12:30			275		133		
00:45			13	96	9	26	122	12:45			332	1263	150	572	1835
01:00			12		3			13:00			310		193		
01:15			10		10			13:15			334		160		
01:30			17		11			13:30			294		115		
01:45			14	53	12	36	89	13:45			307	1245	148	616	1861
02:00			12		10			14:00			313		124		
02:15			12		8			14:15			320		136		
02:30			16		8			14:30			324		140		
02:45			6	46	5	31	77	14:45			338	1295	188	588	1883
03:00			9		6			15:00			322		219		
03:15			7		5			15:15			310		146		
03:30			8		7			15:30			352		142		
03:45			11	35	7	25	60	15:45			336	1320	135	642	1962
04:00			10		10			16:00			330		155		
04:15			16		8			16:15			343		164		
04:30			28		27			16:30			353		158		
04:45			30	84	30	75	159	16:45			388	1414	174	651	2065
05:00			33		33			17:00			348		193		
05:15			69		57			17:15			375		158		
05:30			85		75			17:30			336		170		
05:45			91	278	81	246	524	17:45			369	1428	153	674	2102
06:00			104		88			18:00			288		151		
06:15			196		180			18:15			325		156		
06:30			237		229			18:30			314		124		
06:45			309	846	259	756	1602	18:45			255	1182	141	572	1754
07:00			332		312			19:00			249		117		
07:15			403		338			19:15			237		134		
07:30			460		364			19:30			234		121		
07:45			507	1702	330	1344	3046	19:45			264	984	133	505	1489
08:00			425		301			20:00			217		99		
08:15			450		303			20:15			206		107		
08:30			452		306			20:30			150		57		
08:45			368	1695	249	1159	2854	20:45			160	733	69	332	1065
09:00			308		265			21:00			121		86		
09:15			290		227			21:15			153		58		
09:30			337		250			21:30			142		82		
09:45			311	1246	227	969	2215	21:45			92	508	45	271	779
10:00			255		216			22:00			93		45		
10:15			287		207			22:15			89		35		
10:30			320		238			22:30			95		32		
10:45			304	1166	198	859	2025	22:45			60	337	20	132	469
11:00			275		170			23:00			65		17		
11:15			329		219			23:15			53		24		
11:30			323		231			23:30			40		14		
11:45			305	1232	120	740	1972	23:45			39	197	10	65	262
Total Vol.				8479		6266	**14745**					11906		5620	**17526**

Daily Totals

NB	SB	EB	WB	Combined
		20385	11886	**32271**

	AM			PM		
Split %	57.5%	42.5%	**45.7%**	67.9%	32.1%	**54.3%**
Peak Hour	07:30	07:00	**07:30**	16:30	14:45	**16:30**
Volume	1842	1344	**3140**	1464	695	**2147**
P.H.F.	0.91	0.92	**0.94**	0.94	0.79	**0.96**

4

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Tecolote Rd, from I-5 NB ramps to I-5 SB ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			29		10			12:00			318		142		
00:15			23		10			12:15			331		138		
00:30			24		3			12:30			314		131		
00:45			19	95	10	33	128	12:45			359	1322	132	543	1865
01:00			15		5			13:00			289		124		
01:15			16		7			13:15			319		157		
01:30			13		10			13:30			297		138		
01:45			11	55	6	28	83	13:45			297	1202	135	554	1756
02:00			13		8			14:00			358		123		
02:15			6		7			14:15			307		143		
02:30			15		9			14:30			312		126		
02:45			4	38	8	32	70	14:45			325	1302	185	577	1879
03:00			8		6			15:00			342		183		
03:15			7		2			15:15			337		152		
03:30			7		5			15:30			378		164		
03:45			20	42	10	23	65	15:45			353	1410	187	686	2096
04:00			13		4			16:00			333		177		
04:15			19		12			16:15			328		180		
04:30			29		20			16:30			342		186		
04:45			42	103	23	59	162	16:45			305	1308	208	751	2059
05:00			32		20			17:00			388		187		
05:15			48		24			17:15			365		183		
05:30			88		40			17:30			288		172		
05:45			118	286	42	126	412	17:45			361	1402	164	706	2108
06:00			109		58			18:00			278		153		
06:15			153		69			18:15			304		154		
06:30			257		82			18:30			278		151		
06:45			263	782	108	317	1099	18:45			247	1107	144	602	1709
07:00			344		99			19:00			223		133		
07:15			338		86			19:15			241		95		
07:30			441		103			19:30			260		73		
07:45			405	1528	146	434	1962	19:45			235	959	80	381	1340
08:00			361		187			20:00			161		96		
08:15			388		136			20:15			144		66		
08:30			366		130			20:30			143		73		
08:45			381	1496	154	607	2103	20:45			174	622	70	305	927
09:00			328		139			21:00			148		72		
09:15			324		144			21:15			141		57		
09:30			332		142			21:30			118		44		
09:45			294	1278	151	576	1854	21:45			114	521	47	220	741
10:00			293		141			22:00			111		32		
10:15			314		149			22:15			91		45		
10:30			267		141			22:30			84		32		
10:45			253	1127	133	564	1691	22:45			68	354	27	136	490
11:00			284		125			23:00			59		23		
11:15			310		147			23:15			56		17		
11:30			323		156			23:30			38		20		
11:45			308	1225	167	595	1820	23:45			31	184	12	72	256
Total Vol.				8055		3394	**11449**					11693		5533	**17226**

Daily Totals

NB	SB	EB	WB	Combined
		19748	8927	**28675**

	AM			PM		
Split %	70.4%	29.6%	**39.9%**	67.9%	32.1%	**60.1%**
Peak Hour	07:30	11:15	**07:30**	15:00	16:30	**16:30**
Volume	1595	612	**2167**	1410	764	**2164**
P.H.F.	0.90	0.92	**0.98**	0.93	0.92	**0.94**

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WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Tecolote Road From Morena Boulevard to I-5 NB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			21		20			12:00			165		142		
00:15			18		15			12:15			177		151		
00:30			20		18			12:30			184		162		
00:45			16	75	20	73	148	12:45			161	687	155	610	1297
01:00			11		15			13:00			135		174		
01:15			9		11			13:15			142		184		
01:30			10		9			13:30			151		165		
01:45			5	35	12	47	82	13:45			168	596	170	693	1289
02:00			4		16			14:00			178		154		
02:15			4		8			14:15			156		142		
02:30			2		9			14:30			184		161		
02:45			3	13	5	38	51	14:45			167	685	175	632	1317
03:00			5		4			15:00			184		161		
03:15			4		5			15:15			191		155		
03:30			5		6			15:30			212		184		
03:45			6	20	5	20	40	15:45			205	792	192	692	1484
04:00			4		6			16:00			235		205		
04:15			5		5			16:15			288		268		
04:30			6		11			16:30			262		251		
04:45			5	20	15	37	57	16:45			312	1097	235	959	2056
05:00			11		15			17:00			295		244		
05:15			16		16			17:15			262		262		
05:30			20		22			17:30			218		212		
05:45			15	62	32	85	147	17:45			222	997	218	936	1933
06:00			21		40			18:00			213		216		
06:15			35		84			18:15			222		205		
06:30			70		111			18:30			205		181		
06:45			88	214	161	396	610	18:45			181	821	191	793	1614
07:00			115		191			19:00			174		165		
07:15			128		218			19:15			165		141		
07:30			191		235			19:30			177		155		
07:45			288	722	262	906	1628	19:45			184	700	162	623	1323
08:00			188		288			20:00			105		135		
08:15			191		222			20:15			121		108		
08:30			216		218			20:30			130		111		
08:45			205	800	221	949	1749	20:45			118	474	88	442	916
09:00			206		218			21:00			94		90		
09:15			184		222			21:15			90		70		
09:30			135		206			21:30			88		65		
09:45			141	666	219	865	1531	21:45			70	342	55	280	622
10:00			121		203			22:00			65		40		
10:15			135		184			22:15			77		35		
10:30			142		126			22:30			54		22		
10:45			122	520	135	648	1168	22:45			35	231	22	119	350
11:00			135		141			23:00			22		28		
11:15			148		151			23:15			26		29		
11:30			156		126			23:30			20		20		
11:45			141	580	135	553	1133	23:45			19	87	18	95	182
Total Vol.			3727		4617		**8344**				7509		6874		**14383**

Daily Totals

NB	SB	EB	WB	Combined
		11236	11491	**22727**

	AM			PM		
Split %	44.7%	55.3%	**36.7%**	52.2%	47.8%	**63.7%**
Peak Hour	07:45	07:30	**07:45**	16:15	16:15	**16:15**
Volume	883	1007	**1873**	1157	998	**2155**
P.H.F.	0.77	0.87	**0.85**	0.93	0.93	**0.97**

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THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Tecolote Road From Morena Boulevard to I-5 NB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			20		28			12:00			141		158		
00:15			22		20			12:15			156		195		
00:30			16		19			12:30			161		170		
00:45			18	76	20	87	163	12:45			133	591	141	664	1255
01:00			20		16			13:00			149		151		
01:15			15		15			13:15			165		165		
01:30			11		18			13:30			170		135		
01:45			9	55	11	60	115	13:45			184	668	141	592	1260
02:00			5		9			14:00			151		188		
02:15			4		5			14:15			142		140		
02:30			6		4			14:30			135		133		
02:45			5	20	5	23	43	14:45			155	583	158	619	1202
03:00			4		9			15:00			151		199		
03:15			6		10			15:15			168		184		
03:30			5		5			15:30			177		170		
03:45			4	19	4	28	47	15:45			184	680	161	714	1394
04:00			9		6			16:00			262		205		
04:15			11		2			16:15			235		284		
04:30			12		6			16:30			284		251		
04:45			15	47	12	26	73	16:45			295	1076	262	1002	2078
05:00			12		18			17:00			316		242		
05:15			22		22			17:15			288		215		
05:30			36		28			17:30			284		232		
05:45			44	114	34	102	216	17:45			235	1123	205	894	2017
06:00			51		44			18:00			213		184		
06:15			68		68			18:15			242		191		
06:30			70		70			18:30			222		161		
06:45			98	287	121	303	590	18:45			219	896	144	680	1576
07:00			121		170			19:00			205		155		
07:15			135		212			19:15			170		141		
07:30			145		242			19:30			142		128		
07:45			189	590	266	890	1480	19:45			135	652	135	559	1211
08:00			191		242			20:00			111		118		
08:15			174		232			20:15			98		121		
08:30			195		222			20:30			70		106		
08:45			170	730	205	901	1631	20:45			88	367	77	422	789
09:00			161		219			21:00			70		84		
09:15			170		235			21:15			65		68		
09:30			151		242			21:30			66		77		
09:45			148	630	235	931	1561	21:45			50	251	80	309	560
10:00			156		205			22:00			40		54		
10:15			128		184			22:15			35		40		
10:30			122		162			22:30			33		35		
10:45			135	541	111	662	1203	22:45			28	136	28	157	293
11:00			142		135			23:00			21		22		
11:15			165		141			23:15			19		19		
11:30			150		120			23:30			20		20		
11:45			149	606	166	562	1168	23:45			22	82	23	84	166
Total Vol.			3715		4575		**8290**				7105		6696		**13801**

Daily Totals

NB	SB	EB	WB	Combined
		10820	11271	**22091**

	AM			PM		
Split %	44.8%	55.2%	**37.5%**	51.5%	48.5%	**62.5%**
Peak Hour	07:45	07:30	**07:45**	16:30	16:15	**16:15**
Volume	749	982	**1711**	1183	1039	**2169**
P.H.F.	0.96	0.92	**0.94**	0.94	0.91	**0.97**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Mission Valley Road, From Metropolitan Drive to Mission Center Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			3		6			12:00			80		43		
00:15			3		1			12:15			80		49		
00:30			0		0			12:30			88		99		
00:45			1	7	1	8	15	12:45			78	326	94	285	611
01:00			0		2			13:00			55		82		
01:15			1		0			13:15			39		97		
01:30			1		0			13:30			59		86		
01:45			0	2	1	3	5	13:45			41	194	71	336	530
02:00			0		1			14:00			62		46		
02:15			0		0			14:15			56		45		
02:30			1		1			14:30			83		53		
02:45			1	2	0	2	4	14:45			76	277	40	184	461
03:00			0		0			15:00			141		31		
03:15			1		1			15:15			88		33		
03:30			1		0			15:30			108		37		
03:45			1	3	4	5	8	15:45			95	432	30	131	563
04:00			1		4			16:00			141		20		
04:15			1		4			16:15			131		38		
04:30			5		4			16:30			184		25		
04:45			8	15	9	21	36	16:45			126	582	44	127	709
05:00			4		9			17:00			234		51		
05:15			0		8			17:15			110		56		
05:30			6		26			17:30			98		31		
05:45			3	13	46	89	102	17:45			88	530	44	182	712
06:00			7		49			18:00			73		26		
06:15			3		76			18:15			42		13		
06:30			10		72			18:30			32		13		
06:45			11	31	67	264	295	18:45			27	174	15	67	241
07:00			12		101			19:00			24		7		
07:15			11		115			19:15			18		12		
07:30			15		131			19:30			26		15		
07:45			26	64	218	565	629	19:45			29	97	14	48	145
08:00			33		188			20:00			18		16		
08:15			25		161			20:15			19		8		
08:30			35		130			20:30			14		4		
08:45			39	132	168	647	779	20:45			30	81	7	35	116
09:00			51		103			21:00			28		6		
09:15			38		64			21:15			6		6		
09:30			54		64			21:30			9		8		
09:45			34	177	82	313	490	21:45			15	58	19	39	97
10:00			40		56			22:00			6		4		
10:15			51		46			22:15			2		4		
10:30			52		41			22:30			8		6		
10:45			43	186	45	188	374	22:45			10	26	6	20	46
11:00			78		40			23:00			4		3		
11:15			71		59			23:15			0		2		
11:30			98		53			23:30			4		2		
11:45			123	370	67	219	589	23:45			5	13	0	7	20
Total Vol.				1002		2324	**3326**					2790		1461	**4251**

Daily Totals

NB	SB	EB	WB	Combined
		3792	3785	**7577**

	AM			PM		
Split %	30.1%	69.9%	**43.9%**	65.6%	34.4%	**56.1%**
Peak Hour	11:30	07:30	**07:45**	16:15	12:30	**16:15**
Volume	381	698	**816**	675	372	**833**
P.H.F.	0.77	0.80	**0.84**	0.72	0.94	**0.73**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Mission Valley Road, From Metropolitan Drive to Mission Center Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			0		2			12:00			121		57		
00:15			1		2			12:15			81		50		
00:30			3		1			12:30			83		66		
00:45			1	5	0	5	10	12:45			80	365	114	287	652
01:00			1		2			13:00			76		99		
01:15			2		0			13:15			53		98		
01:30			0		0			13:30			54		65		
01:45			0	3	4	6	9	13:45			58	241	77	339	580
02:00			0		1			14:00			55		61		
02:15			1		1			14:15			70		45		
02:30			1		0			14:30			59		44		
02:45			0	2	0	2	4	14:45			57	241	61	211	452
03:00			0		1			15:00			144		31		
03:15			1		1			15:15			101		41		
03:30			0		1			15:30			87		32		
03:45			2	3	4	7	10	15:45			79	411	38	142	553
04:00			1		4			16:00			137		28		
04:15			1		3			16:15			103		29		
04:30			2		5			16:30			151		27		
04:45			1	5	12	24	29	16:45			136	527	56	140	667
05:00			2		11			17:00			234		43		
05:15			4		11			17:15			142		51		
05:30			6		33			17:30			86		35		
05:45			10	22	36	91	113	17:45			72	534	35	164	698
06:00			7		47			18:00			55		26		
06:15			4		82			18:15			39		24		
06:30			13		75			18:30			31		13		
06:45			8	32	80	284	316	18:45			33	158	12	75	233
07:00			13		60			19:00			19		9		
07:15			17		91			19:15			19		7		
07:30			17		82			19:30			17		7		
07:45			19	66	154	387	453	19:45			17	72	9	32	104
08:00			23		145			20:00			19		10		
08:15			27		161			20:15			23		6		
08:30			29		140			20:30			20		9		
08:45			26	105	126	572	677	20:45			36	98	2	27	125
09:00			40		101			21:00			15		13		
09:15			32		87			21:15			13		7		
09:30			44		50			21:30			10		9		
09:45			47	163	69	307	470	21:45			9	47	10	39	86
10:00			36		57			22:00			9		4		
10:15			49		60			22:15			8		8		
10:30			41		67			22:30			3		4		
10:45			64	190	52	236	426	22:45			6	26	6	22	48
11:00			83		55			23:00			4		5		
11:15			73		48			23:15			3		3		
11:30			82		50			23:30			7		6		
11:45			106	344	56	209	553	23:45			1	15	1	15	30
Total Vol.				940		2130	**3070**					2735		1493	**4228**

Daily Totals

NB	SB	EB	WB	Combined
		3675	3623	**7298**

	AM			PM		
Split %	30.6%	69.4%	**42.1%**	64.7%	35.3%	**57.9%**
Peak Hour	11:45	07:45	**07:45**	16:30	12:30	**16:30**
Volume	391	600	**698**	663	377	**840**
P.H.F.	0.81	0.93	**0.93**	0.71	0.83	**0.76**

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WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Civita Boulevard, From Mission Center Road to Qualcomm Way

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			0		0			12:00			13		12		
00:15			1		0			12:15			14		9		
00:30			0		1			12:30			13		5		
00:45			1	2	2	3	5	12:45			20	60	11	37	97
01:00			0		0			13:00			12		16		
01:15			1		0			13:15			19		20		
01:30			2		0			13:30			22		16		
01:45			0	3	0	0	3	13:45			20	73	16	68	141
02:00			1		2			14:00			18		11		
02:15			0		0			14:15			15		15		
02:30			1		0			14:30			22		12		
02:45			1	3	0	2	5	14:45			16	71	15	53	124
03:00			0		0			15:00			21		21		
03:15			0		0			15:15			35		25		
03:30			1		0			15:30			22		44		
03:45			0	1	0	0	1	15:45			28	106	30	120	226
04:00			2		0			16:00			28		33		
04:15			0		0			16:15			20		31		
04:30			2		0			16:30			26		38		
04:45			1	5	0	0	5	16:45			33	107	35	137	244
05:00			1		2			17:00			42		40		
05:15			0		2			17:15			30		32		
05:30			2		4			17:30			28		33		
05:45			5	8	6	14	22	17:45			22	122	25	130	252
06:00			2		12			18:00			18		18		
06:15			8		14			18:15			20		26		
06:30			6		25			18:30			16		22		
06:45			10	26	34	85	111	18:45			19	73	30	96	169
07:00			31		55			19:00			15		25		
07:15			28		35			19:15			14		21		
07:30			25		41			19:30			9		19		
07:45			15	99	35	166	265	19:45			9	47	20	85	132
08:00			15		55			20:00			7		16		
08:15			13		56			20:15			7		11		
08:30			12		31			20:30			13		12		
08:45			20	60	33	175	235	20:45			8	35	11	50	85
09:00			9		28			21:00			8		8		
09:15			7		26			21:15			4		9		
09:30			13		20			21:30			5		13		
09:45			11	40	22	96	136	21:45			8	25	0	30	55
10:00			3		25			22:00			3		2		
10:15			8		20			22:15			4		0		
10:30			6		15			22:30			4		1		
10:45			7	24	11	71	95	22:45			4	15	0	3	18
11:00			8		9			23:00			5		1		
11:15			13		7			23:15			4		1		
11:30			8		12			23:30			3		1		
11:45			18	47	5	33	80	23:45			2	14	0	3	17
Total Vol.				318		645	**963**					748		812	**1560**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
			1066	1457	**2523**

	AM			**PM**		
Split %	33.0%	67.0%	**38.2%**	47.9%	52.1%	**61.8%**
Peak Hour	07:00	07:30	**07:00**	16:45	16:30	**16:30**
Volume	99	187	**265**	133	145	**276**
P.H.F.	0.80	0.83	**0.77**	0.79	0.91	**0.84**

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THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Civita Boulevard, From Mission Center Road to Qualcomm Way

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			5		0			12:00			5		15		
00:15			0		0			12:15			7		10		
00:30			0		0			12:30			15		14		
00:45			1	6	0	0	6	12:45			17	44	12	51	95
01:00			3		2			13:00			6		3		
01:15			0		0			13:15			11		5		
01:30			0		0			13:30			9		12		
01:45			1	4	1	3	7	13:45			6	32	12	32	64
02:00			0		0			14:00			20		16		
02:15			0		0			14:15			9		11		
02:30			1		1			14:30			6		15		
02:45			0	1	0	1	2	14:45			19	54	28	70	124
03:00			0		0			15:00			14		26		
03:15			0		0			15:15			22		11		
03:30			0		0			15:30			29		21		
03:45			0	0	1	1	1	15:45			16	81	28	86	167
04:00			0		0			16:00			28		33		
04:15			0		0			16:15			20		32		
04:30			0		0			16:30			26		28		
04:45			1	1	4	4	5	16:45			33	107	20	113	220
05:00			1		5			17:00			45		33		
05:15			1		7			17:15			51		34		
05:30			0		5			17:30			40		31		
05:45			2	4	4	21	25	17:45			33	169	25	123	292
06:00			3		8			18:00			25		22		
06:15			7		12			18:15			18		26		
06:30			7		33			18:30			20		20		
06:45			9	26	30	83	109	18:45			16	79	18	86	165
07:00			30		51			19:00			11		11		
07:15			25		40			19:15			15		9		
07:30			22		41			19:30			19		12		
07:45			16	93	33	165	258	19:45			20	65	5	37	102
08:00			18		58			20:00			16		6		
08:15			20		50			20:15			18		8		
08:30			15		42			20:30			11		9		
08:45			11	64	33	183	247	20:45			5	50	5	28	78
09:00			9		35			21:00			9		5		
09:15			12		21			21:15			10		4		
09:30			16		22			21:30			4		5		
09:45			11	48	18	96	144	21:45			10	33	0	14	47
10:00			10		20			22:00			7		2		
10:15			17		16			22:15			5		0		
10:30			11		19			22:30			4		1		
10:45			13	51	20	75	126	22:45			2	18	2	5	23
11:00			21		18			23:00			4		1		
11:15			11		20			23:15			0		2		
11:30			10		11			23:30			1		0		
11:45			12	54	16	65	119	23:45			0	5	1	4	9
Total Vol.				352		697	**1049**					737		649	**1386**

	AM			PM		
				Daily Totals		
	NB	SB	EB	WB	**Combined**	
			1089	1346	**2435**	
Split %	33.6%	66.4%	**43.1%**	53.2%	46.8%	**56.9%**
Peak Hour	07:00	07:45	**07:00**	16:45	17:00	**17:00**
Volume	93	183	**258**	169	123	**292**
P.H.F.	0.78	0.79	**0.80**	0.83	0.90	**0.86**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Westside Drive, From Mission Center Road to Via Alta

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			8		3			12:00			23		22		
00:15			9		1			12:15			38		29		
00:30			12		4			12:30			23		22		
00:45			17	46	3	11	57	12:45			29	113	30	103	216
01:00			4		1			13:00			25		17		
01:15			7		0			13:15			27		18		
01:30			5		0			13:30			24		10		
01:45			3	19	2	3	22	13:45			30	106	21	66	172
02:00			3		1			14:00			40		28		
02:15			2		0			14:15			33		23		
02:30			2		0			14:30			40		29		
02:45			4	11	3	4	15	14:45			41	154	20	100	254
03:00			3		3			15:00			32		20		
03:15			2		1			15:15			27		15		
03:30			0		0			15:30			37		17		
03:45			0	5	1	5	10	15:45			63	159	19	71	230
04:00			4		3			16:00			33		15		
04:15			1		5			16:15			30		20		
04:30			6		8			16:30			68		31		
04:45			6	17	11	27	44	16:45			41	172	28	94	266
05:00			3		4			17:00			35		31		
05:15			4		9			17:15			45		20		
05:30			6		5			17:30			41		31		
05:45			15	28	8	26	54	17:45			44	165	25	107	272
06:00			9		14			18:00			47		25		
06:15			14		15			18:15			60		20		
06:30			28		22			18:30			40		16		
06:45			31	82	23	74	156	18:45			57	204	16	77	281
07:00			15		31			19:00			52		17		
07:15			6		35			19:15			70		27		
07:30			12		51			19:30			61		17		
07:45			15	48	40	157	205	19:45			57	240	29	90	330
08:00			11		38			20:00			45		13		
08:15			8		44			20:15			62		16		
08:30			14		41			20:30			50		20		
08:45			20	53	40	163	216	20:45			34	191	15	64	255
09:00			29		27			21:00			34		18		
09:15			20		18			21:15			41		14		
09:30			27		32			21:30			45		15		
09:45			26	102	20	97	199	21:45			38	158	10	57	215
10:00			23		18			22:00			39		6		
10:15			33		18			22:15			23		15		
10:30			25		22			22:30			21		6		
10:45			29	110	16	74	184	22:45			19	102	3	30	132
11:00			25		23			23:00			22		5		
11:15			26		16			23:15			19		4		
11:30			25		18			23:30			5		6		
11:45			32	108	22	79	187	23:45			8	54	3	18	72
Total Vol.			629		720		**1349**				1818		877		**2695**

Daily Totals

NB	SB	EB	WB	Combined
		2447	1597	**4044**

	AM			PM		
Split %	46.6%	53.4%	**33.4%**	67.5%	32.5%	**66.6%**
Peak Hour	11:30	07:30	**08:15**	18:45	16:15	**19:00**
Volume	118	173	**223**	240	110	**330**
P.H.F.	0.78	0.85	**0.93**	0.86	0.89	**0.85**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Westside Drive, From Mission Center Road to Via Alta

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			3		3			12:00			43		18		
00:15			13		0			12:15			51		17		
00:30			11		0			12:30			38		17		
00:45			17	44	9	12	56	12:45			43	175	16	68	243
01:00			7		1			13:00			31		27		
01:15			6		1			13:15			30		23		
01:30			8		1			13:30			36		22		
01:45			10	31	2	5	36	13:45			27	124	15	87	211
02:00			10		1			14:00			36		23		
02:15			2		1			14:15			55		18		
02:30			5		0			14:30			56		16		
02:45			3	20	2	4	24	14:45			46	193	18	75	268
03:00			3		5			15:00			34		22		
03:15			5		0			15:15			45		12		
03:30			2		1			15:30			46		26		
03:45			0	10	0	6	16	15:45			51	176	19	79	255
04:00			0		1			16:00			41		25		
04:15			3		3			16:15			32		19		
04:30			6		8			16:30			47		8		
04:45			1	10	5	17	27	16:45			43	163	21	73	236
05:00			0		5			17:00			39		10		
05:15			2		9			17:15			48		18		
05:30			1		8			17:30			60		24		
05:45			11	14	15	37	51	17:45			51	198	19	71	269
06:00			6		7			18:00			58		18		
06:15			11		15			18:15			57		20		
06:30			18		22			18:30			59		20		
06:45			25	60	20	64	124	18:45			61	235	12	70	305
07:00			29		40			19:00			50		30		
07:15			22		39			19:15			55		20		
07:30			24		39			19:30			53		7		
07:45			21	96	31	149	245	19:45			33	191	13	70	261
08:00			34		45			20:00			47		14		
08:15			24		32			20:15			21		13		
08:30			36		34			20:30			41		15		
08:45			30	124	34	145	269	20:45			38	147	8	50	197
09:00			33		43			21:00			43		16		
09:15			29		29			21:15			40		17		
09:30			35		25			21:30			33		12		
09:45			19	116	13	110	226	21:45			26	142	6	51	193
10:00			26		14			22:00			23		10		
10:15			25		26			22:15			33		12		
10:30			26		23			22:30			24		12		
10:45			32	109	21	84	193	22:45			12	92	10	44	136
11:00			20		15			23:00			17		3		
11:15			34		12			23:15			12		2		
11:30			39		18			23:30			12		11		
11:45			25	118	14	59	177	23:45			12	53	3	19	72
Total Vol.				752		692	**1444**					1889		757	**2646**

Daily Totals

NB	SB	EB	WB	Combined
		2641	1449	**4090**

	AM			PM		
Split %	52.1%	47.9%	**35.3%**	71.4%	28.6%	**64.7%**
Peak Hour	11:30	07:15	**08:00**	18:00	15:30	**18:15**
Volume	158	154	**269**	235	89	**309**
P.H.F.	0.77	0.86	**0.85**	0.96	0.86	**0.97**

Segment ID: 9

Friars Rd from Sea World Dr to Napa St

AM Peak Period Heavy Vehicle Percentage: 4.55%

Noon Peak Period Heavy Vehicle Percentage: 4.95%

PM Period Heavy Vehicle Percentage: 3.10%

Average Daily Heavy Vehicle Percentage: 3.00%

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Sea World Dr & Napa St

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_009

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	62	6	0	2	0	0	0	0	0	0	0	0	70
01:00	0	22	3	0	1	0	0	0	0	0	0	0	0	26
02:00	1	15	1	0	2	0	0	0	0	0	0	0	0	19
03:00	0	17	3	0	2	0	0	0	0	0	0	0	0	22
04:00	0	43	2	0	2	0	0	0	0	0	0	0	0	47
05:00	1	148	17	0	11	1	0	0	0	0	0	0	0	178
06:00	3	337	42	1	16	4	0	0	0	0	0	0	0	403
07:00	6	775	62	1	32	6	1	1	0	0	0	0	0	884
08:00	12	824	78	1	27	6	1	1	0	0	0	0	0	950
09:00	3	538	52	1	15	2	0	1	1	0	0	0	0	613
10:00	6	498	49	1	25	2	0	2	0	0	0	0	0	583
11:00	5	585	50	1	16	3	0	0	0	0	0	0	0	660
12:00 PM	4	641	67	1	29	6	1	3	0	0	0	0	0	752
13:00	5	572	58	1	21	1	0	0	0	0	0	0	0	658
14:00	7	658	70	0	24	7	0	1	0	0	0	0	0	767
15:00	6	918	103	0	26	7	0	2	0	0	0	0	0	1062
16:00	6	1273	118	1	46	10	2	1	0	0	0	0	0	1457
17:00	9	1315	110	1	30	11	2	0	0	0	0	0	0	1478
18:00	7	869	59	0	20	10	0	0	0	0	0	0	0	965
19:00	5	635	63	0	19	2	0	0	1	0	0	0	0	725
20:00	6	466	41	0	11	0	0	0	0	0	0	0	0	524
21:00	1	306	22	0	12	1	0	0	0	0	0	0	0	342
22:00	3	200	10	1	6	0	0	0	0	0	0	0	0	220
23:00	0	109	11	0	3	0	0	0	0	0	0	0	0	123
Totals	96	11826	1097	11	398	79	7	12	2					13528
% of Totals	1%	87%	8%	0%	3%	1%	0%	0%	0%					100%

AM Volumes	37	3864	365	6	151	24	2	5	1	0	0	0	0	4455
% AM	0%	29%	3%	0%	1%	0%	0%	0%	0%					33%
AM Peak Hour	08:00	08:00	08:00	06:00	07:00	07:00	07:00	10:00	09:00					08:00
Volume	12	824	78	1	32	6	1	2	1					950
PM Volumes	59	7962	732	5	247	55	5	7	1	0	0	0	0	9073
% PM	0%	59%	5%	0%	2%	0%	0%	0%	0%					67%
PM Peak Hour	17:00	17:00	16:00	12:00	16:00	17:00	16:00	12:00	19:00					17:00
Volume	9	1315	118	1	46	11	2	3	1					1478

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	1834		14%	1410		10%	2935		22%	7349		54%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Friars Rd Bet. Sea World Dr & Napa St

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_009

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,572	5,956	13,528

AM Period	NB		SB		EB		WB		TOTAL	
00:00	0		0		13		14		27	
00:15	0		0		13		5		18	
00:30	0		0		9		6		15	
00:45	0		0		6	41	4	29	10	70
01:00	0		0		3		5		8	
01:15	0		0		5		1		6	
01:30	0		0		1		4		5	
01:45	0		0		6	15	1	11	7	26
02:00	0		0		0		4		4	
02:15	0		0		6		0		6	
02:30	0		0		2		1		3	
02:45	0		0		4	12	2	7	6	19
03:00	0		0		3		1		4	
03:15	0		0		5		2		7	
03:30	0		0		2		3		5	
03:45	0		0		4	14	2	8	6	22
04:00	0		0		5		4		9	
04:15	0		0		7		5		12	
04:30	0		0		9		7		16	
04:45	0		0		6	27	4	20	10	47
05:00	0		0		17		14		31	
05:15	0		0		20		21		41	
05:30	0		0		21		36		57	
05:45	0		0		22	80	27	98	49	178
06:00	0		0		19		30		49	
06:15	0		0		31		56		87	
06:30	0		0		37		81		118	
06:45	0		0		56	143	93	260	149	403
07:00	0		0		62		113		175	
07:15	0		0		105		118		223	
07:30	0		0		150		123		273	
07:45	0		0		104	421	109	463	213	884
08:00	0		0		141		100		241	
08:15	0		0		132		94		226	
08:30	0		0		149		114		263	
08:45	0		0		94	516	126	434	220	950
09:00	0		0		71		78		149	
09:15	0		0		93		50		143	
09:30	0		0		122		65		187	
09:45	0		0		72	358	62	255	134	613
10:00	0		0		83		64		147	
10:15	0		0		60		60		120	
10:30	0		0		87		73		160	
10:45	0		0		88	318	68	265	156	583
11:00	0		0		74		78		152	
11:15	0		0		84		64		148	
11:30	0		0		90		89		179	
11:45	0		0		92	340	89	320	181	660
TOTALS						2285		2170		4455
SPLIT %						51.3%		48.7%		32.9%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	0		0		108		85		193	
12:15	0		0		94		99		193	
12:30	0		0		119		86		205	
12:45	0		0		89	410	72	342	161	752
13:00	0		0		80		89		169	
13:15	0		0		67		76		143	
13:30	0		0		89		77		166	
13:45	0		0		103	339	77	319	180	658
14:00	0		0		76		85		161	
14:15	0		0		86		114		200	
14:30	0		0		96		90		186	
14:45	0		0		136	394	84	373	220	767
15:00	0		0		119		85		204	
15:15	0		0		185		98		283	
15:30	0		0		213		78		291	
15:45	0		0		186	703	98	359	284	1062
16:00	0		0		221		106		327	
16:15	0		0		257		113		370	
16:30	0		0		275		118		393	
16:45	0		0		267	1020	100	437	367	1457
17:00	0		0		258		103		361	
17:15	0		0		255		166		421	
17:30	0		0		256		140		396	
17:45	0		0		178	947	122	531	300	1478
18:00	0		0		133		111		244	
18:15	0		0		130		122		252	
18:30	0		0		141		125		266	
18:45	0		0		91	495	112	470	203	965
19:00	0		0		81		98		179	
19:15	0		0		83		71		154	
19:30	0		0		100		78		178	
19:45	0		0		130	394	84	331	214	725
20:00	0		0		95		85		180	
20:15	0		0		59		68		127	
20:30	0		0		60		60		120	
20:45	0		0		43	257	54	267	97	524
21:00	0		0		47		67		114	
21:15	0		0		45		44		89	
21:30	0		0		24		38		62	
21:45	0		0		37	153	40	189	77	342
22:00	0		0		37		43		80	
22:15	0		0		26		24		50	
22:30	0		0		22		21		43	
22:45	0		0		22	107	25	113	47	220
23:00	0		0		17		16		33	
23:15	0		0		18		18		36	
23:30	0		0		21		13		34	
23:45	0		0		12	68	8	55	20	123
TOTALS						5287		3786		9073
SPLIT %						58.3%		41.7%		67.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,572	5,956	13,528

AM Peak Hour			07:30	07:00	07:30
AM Pk Volume			527	463	953
Pk Hr Factor			0.878	0.941	0.873
7 - 9 Volume	0	0	937	897	1834
7 - 9 Peak Hour			07:30	07:00	07:30
7 - 9 Pk Volume	0	0	527	463	953
Pk Hr Factor	0.000	0.000	0.878	0.941	0.873

PM Peak Hour			16:15	17:15	16:45
PM Pk Volume			1036	539	1545
Pk Hr Factor			0.970	0.960	0.917
4 - 6 Volume	0	0	1967	968	2935
4 - 6 Peak Hour			16:15	17:00	16:45
4 - 6 Pk Volume	0	0	1057	531	1545
Pk Hr Factor	0.000	0.000	0.961	0.800	0.917

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Sea World Dr & Napa St

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_009

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	1	48	6	0	1	0	0	0	0	0	0	0	0	56
01:00	0	28	2	1	0	0	0	0	0	0	0	0	0	31
02:00	0	20	2	0	1	0	0	0	0	0	0	0	0	23
03:00	0	14	3	0	3	0	0	0	0	0	0	0	0	20
04:00	0	44	1	0	4	0	0	0	0	0	0	0	0	49
05:00	3	106	14	0	14	0	0	1	0	0	0	0	0	138
06:00	5	361	38	2	14	2	0	0	0	0	0	0	0	422
07:00	9	858	80	3	28	7	2	1	0	0	0	0	0	988
08:00	13	1145	119	3	48	7	1	1	0	0	0	0	0	1337
09:00	3	560	53	2	27	1	1	0	0	0	0	0	0	647
10:00	6	536	52	0	18	3	2	0	0	0	0	0	0	617
11:00	2	477	67	1	15	2	0	0	0	0	0	0	0	564
12:00 PM	4	588	65	1	24	5	1	1	0	0	0	0	0	689
13:00	3	619	44	0	17	3	1	1	0	0	0	0	0	688
14:00	10	652	73	1	19	5	1	0	0	0	0	0	0	761
15:00	3	905	102	1	28	8	1	0	0	0	0	0	0	1048
16:00	12	1339	123	1	65	13	1	2	0	0	0	0	0	1556
17:00	9	1235	118	0	36	5	1	1	0	0	0	0	0	1405
18:00	5	734	76	0	13	4	0	0	1	0	0	0	0	833
19:00	4	565	52	0	10	2	0	0	0	0	0	0	0	633
20:00	3	435	40	0	8	0	0	0	1	0	0	0	0	487
21:00	2	336	23	0	8	1	0	0	0	0	0	0	0	370
22:00	0	241	22	0	3	0	0	1	0	0	0	0	0	267
23:00	1	132	9	0	2	0	0	0	0	0	0	0	0	144
Totals	98	11978	1184	16	406	68	12	9	2					13773
% of Totals	1%	87%	9%	0%	3%	0%	0%	0%	0%					100%

AM Volumes	42	4197	437	12	173	22	6	3	0	0	0	0	0	4892
% AM	0%	30%	3%	0%	1%	0%	0%	0%						36%
AM Peak Hour	08:00	08:00	08:00	07:00	08:00	07:00	07:00	05:00						08:00
Volume	13	1145	119	3	48	7	2	1						1337
PM Volumes	56	7781	747	4	233	46	6	6	2	0	0	0	0	8881
% PM	0%	56%	5%	0%	2%	0%	0%	0%	0%					64%
PM Peak Hour	16:00	16:00	16:00	12:00	16:00	16:00	12:00	16:00	18:00					16:00
Volume	12	1339	123	1	65	13	1	2	1					1556

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	2325	↔	17%	1377	↔	10%	2961	↔	21%	7110	↔	52%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

9

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Friars Rd Bet. Sea World Dr & Napa St

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_009

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,415	6,358	13,773

AM Period	NB		SB		EB		WB		TOTAL	
00:00	0		0		9		7		16	
00:15	0		0		12		7		19	
00:30	0		0		10		2		12	
00:45	0		0		5	36	4	20	9	56
01:00	0		0		1		3		4	
01:15	0		0		5		4		9	
01:30	0		0		5		1		6	
01:45	0		0		11	22	1	9	12	31
02:00	0		0		2		1		3	
02:15	0		0		4		7		11	
02:30	0		0		4		3		7	
02:45	0		0		2	12	0	11	2	23
03:00	0		0		4		1		5	
03:15	0		0		2		1		3	
03:30	0		0		3		4		7	
03:45	0		0		1	10	4	10	5	20
04:00	0		0		3		2		5	
04:15	0		0		7		4		11	
04:30	0		0		4		7		11	
04:45	0		0		16	30	6	19	22	49
05:00	0		0		14		16		30	
05:15	0		0		21		19		40	
05:30	0		0		10		23		33	
05:45	0		0		14	59	21	79	35	138
06:00	0		0		27		42		69	
06:15	0		0		30		49		79	
06:30	0		0		43		79		122	
06:45	0		0		51	151	101	271	152	422
07:00	0		0		101		81		182	
07:15	0		0		192		120		312	
07:30	0		0		118		126		244	
07:45	0		0		129	540	121	448	250	988
08:00	0		0		94		196		290	
08:15	0		0		114		226		340	
08:30	0		0		167		220		387	
08:45	0		0		132	507	188	830	320	1337
09:00	0		0		73		102		175	
09:15	0		0		76		88		164	
09:30	0		0		93		63		156	
09:45	0		0		91	333	61	314	152	647
10:00	0		0		104		71		175	
10:15	0		0		91		60		151	
10:30	0		0		86		56		142	
10:45	0		0		70	351	79	266	149	617
11:00	0		0		80		48		128	
11:15	0		0		68		79		147	
11:30	0		0		64		46		110	
11:45	0		0		110	322	69	242	179	564
TOTALS						2373		2519		4892
SPLIT %						48.5%		51.5%		35.5%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	0		0		87		106		193	
12:15	0		0		67		98		165	
12:30	0		0		84		77		161	
12:45	0		0		80	318	90	371	170	689
13:00	0		0		76		71		147	
13:15	0		0		90		81		171	
13:30	0		0		100		90		190	
13:45	0		0		108	374	72	314	180	688
14:00	0		0		109		89		198	
14:15	0		0		86		88		174	
14:30	0		0		99		88		187	
14:45	0		0		109	403	93	358	202	761
15:00	0		0		147		87		234	
15:15	0		0		143		85		228	
15:30	0		0		184		107		291	
15:45	0		0		173	647	122	401	295	1048
16:00	0		0		233		132		365	
16:15	0		0		274		112		386	
16:30	0		0		303		112		415	
16:45	0		0		290	1100	100	456	390	1556
17:00	0		0		250		146		396	
17:15	0		0		262		161		423	
17:30	0		0		207		151		358	
17:45	0		0		123	842	105	563	228	1405
18:00	0		0		120		96		216	
18:15	0		0		102		108		210	
18:30	0		0		117		95		212	
18:45	0		0		87	426	108	407	195	833
19:00	0		0		97		93		190	
19:15	0		0		86		91		177	
19:30	0		0		80		69		149	
19:45	0		0		72	335	45	298	117	633
20:00	0		0		58		52		110	
20:15	0		0		56		67		123	
20:30	0		0		60		65		125	
20:45	0		0		64	238	65	249	129	487
21:00	0		0		52		57		109	
21:15	0		0		34		46		80	
21:30	0		0		38		49		87	
21:45	0		0		46	170	48	200	94	370
22:00	0		0		40		50		90	
22:15	0		0		29		37		66	
22:30	0		0		26		35		61	
22:45	0		0		24	119	26	148	50	267
23:00	0		0		29		32		61	
23:15	0		0		15		18		33	
23:30	0		0		16		14		30	
23:45	0		0		10	70	10	74	20	144
TOTALS						5042		3839		8881
SPLIT %						56.8%		43.2%		64.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,415	6,358	13,773

AM Peak Hour			07:00	08:00	08:00
AM Pk Volume			540	830	1337
Pk Hr Factor			0.703	0.918	0.864
7 - 9 Volume	0	0	1047	1278	2325
7 - 9 Peak Hour			07:00	08:00	08:00
7 - 9 Pk Volume	0	0	540	830	1337
Pk Hr Factor	0.000	0.000	0.703	0.918	0.864

PM Peak Hour			16:15	17:00	16:30
PM Pk Volume			1009	563	1624
Pk Hr Factor			0.870	0.762	0.960
4 - 6 Volume	0	0	1942	1019	2961
4 - 6 Peak Hour			16:15	17:00	16:30
4 - 6 Pk Volume	0	0	1117	563	1624
Pk Hr Factor	0.000	0.000	0.922	0.874	0.960

Segment ID: 10

Friars Rd from Napa St to Colusa St

AM Peak Period Heavy Vehicle Percentage: 2.85%

Noon Peak Period Heavy Vehicle Percentage: 2.30%

PM Period Heavy Vehicle Percentage: 1.3%

Average Daily Heavy Vehicle Percentage: 2.00%

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Napa St & Colusa St

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_010

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	2	67	3	0	0	0	0	0	0	0	0	0	0	72
01:00	0	35	1	0	1	0	0	0	0	0	0	0	0	37
02:00	0	21	2	0	1	0	0	0	0	0	0	0	0	24
03:00	0	37	3	0	0	0	0	0	0	0	0	0	0	40
04:00	0	98	7	0	2	0	0	0	0	0	0	0	0	107
05:00	1	261	19	1	3	3	0	1	0	0	0	0	0	289
06:00	3	619	45	1	19	0	0	0	0	0	0	0	0	687
07:00	6	1189	57	3	25	3	0	6	0	0	0	0	0	1289
08:00	12	1285	49	1	18	0	1	5	1	0	0	0	0	1372
09:00	2	866	46	0	12	2	0	2	2	0	0	0	0	932
10:00	5	795	53	0	14	0	0	2	0	0	0	0	0	869
11:00	5	957	57	2	15	0	0	2	0	0	0	0	0	1038
12:00 PM	2	953	62	0	22	2	0	0	0	0	0	0	0	1041
13:00	3	938	45	0	28	0	0	1	0	0	0	0	0	1015
14:00	5	996	69	0	13	1	0	0	0	0	0	0	0	1084
15:00	5	1341	86	0	21	0	0	1	0	0	0	0	0	1454
16:00	4	1780	108	0	32	1	0	1	0	0	0	0	0	1926
17:00	8	1858	86	3	13	0	0	1	0	0	0	0	0	1969
18:00	4	1258	51	0	14	0	0	0	0	0	0	0	0	1327
19:00	4	898	50	0	4	1	0	0	0	0	0	0	0	957
20:00	3	607	40	0	4	0	0	1	0	0	0	0	0	655
21:00	3	413	31	0	1	0	0	0	0	0	0	0	0	448
22:00	1	228	7	1	2	0	0	0	0	0	0	0	0	239
23:00	0	132	7	0	0	1	0	0	0	0	0	0	0	140
Totals	78	17632	984	12	264	14	1	23	3					19011
% of Totals	0%	93%	5%	0%	1%	0%	0%	0%	0%					100%

AM Volumes	36	6230	342	8	110	8	1	18	3	0	0	0	0	6756
% AM	0%	33%	2%	0%	1%	0%	0%	0%	0%					36%
AM Peak Hour	08:00	08:00	07:00	07:00	07:00	05:00	08:00	07:00	09:00					08:00
Volume	12	1285	57	3	25	3	1	6	2					1372
PM Volumes	42	11402	642	4	154	6	0	5	0	0	0	0	0	12255
% PM	0%	60%	3%	0%	1%	0%		0%						64%
PM Peak Hour	17:00	17:00	16:00	17:00	16:00	12:00		13:00						17:00
Volume	8	1858	108	3	32	2		1						1969

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	2661		14%	2056		11%	3895		20%	10399		55%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

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Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Friars Rd Bet. Napa St & Colusa St

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,064	8,947	19,011

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00	0	0	17		11		28		12:00	0	0	120		132		252	
00:15	0	0	10		11		21		12:15	0	0	137		145		282	
00:30	0	0	10		5		15		12:30	0	0	114		131		245	
00:45	0	0	4	41	4	31	8	72	12:45	0	0	142	513	120	528	262	1041
01:00	0	0	5		6		11		13:00	0	0	139		143		282	
01:15	0	0	3		4		7		13:15	0	0	123		130		253	
01:30	0	0	2		6		8		13:30	0	0	122		113		235	
01:45	0	0	8	18	3	19	11	37	13:45	0	0	130	514	115	501	245	1015
02:00	0	0	1		2		3		14:00	0	0	109		128		237	
02:15	0	0	6		3		9		14:15	0	0	122		130		252	
02:30	0	0	2		1		3		14:30	0	0	154		139		293	
02:45	0	0	7	16	2	8	9	24	14:45	0	0	184	569	118	515	302	1084
03:00	0	0	2		3		5		15:00	0	0	164		110		274	
03:15	0	0	7		2		9		15:15	0	0	207		142		349	
03:30	0	0	6		6		12		15:30	0	0	287		127		414	
03:45	0	0	11	26	3	14	14	40	15:45	0	0	280	938	137	516	417	1454
04:00	0	0	9		8		17		16:00	0	0	282		138		420	
04:15	0	0	16		7		23		16:15	0	0	345		148		493	
04:30	0	0	13		17		30		16:30	0	0	343		160		503	
04:45	0	0	21	59	16	48	37	107	16:45	0	0	351	1321	159	605	510	1926
05:00	0	0	39		21		60		17:00	0	0	344		166		510	
05:15	0	0	40		34		74		17:15	0	0	365		184		549	
05:30	0	0	35		48		83		17:30	0	0	334		146		480	
05:45	0	0	28	142	44	147	72	289	17:45	0	0	254	1297	176	672	430	1969
06:00	0	0	31		56		87		18:00	0	0	201		179		380	
06:15	0	0	59		99		158		18:15	0	0	196		159		355	
06:30	0	0	56		134		190		18:30	0	0	180		144		324	
06:45	0	0	76	222	176	465	252	687	18:45	0	0	150	727	118	600	268	1327
07:00	0	0	68		185		253		19:00	0	0	129		127		256	
07:15	0	0	100		247		347		19:15	0	0	128		92		220	
07:30	0	0	116		247		363		19:30	0	0	133		99		232	
07:45	0	0	127	411	199	878	326	1289	19:45	0	0	156	546	93	411	249	957
08:00	0	0	126		231		357		20:00	0	0	124		105		229	
08:15	0	0	142		206		348		20:15	0	0	88		65		153	
08:30	0	0	140		196		336		20:30	0	0	78		72		150	
08:45	0	0	127	535	204	837	331	1372	20:45	0	0	65	355	58	300	123	655
09:00	0	0	105		160		265		21:00	0	0	63		88		151	
09:15	0	0	105		109		214		21:15	0	0	57		55		112	
09:30	0	0	137		117		254		21:30	0	0	42		56		98	
09:45	0	0	98	445	101	487	199	932	21:45	0	0	43	205	44	243	87	448
10:00	0	0	120		108		228		22:00	0	0	54		33		87	
10:15	0	0	98		103		201		22:15	0	0	29		28		57	
10:30	0	0	115		123		238		22:30	0	0	33		23		56	
10:45	0	0	90	423	112	446	202	869	22:45	0	0	18	134	21	105	39	239
11:00	0	0	120		109		229		23:00	0	0	20		19		39	
11:15	0	0	134		128		262		23:15	0	0	24		20		44	
11:30	0	0	137		144		281		23:30	0	0	23		14		37	
11:45	0	0	136	527	130	511	266	1038	23:45	0	0	13	80	7	60	20	140
TOTALS				2865		3891		6756	TOTALS				7199		5056		12255
SPLIT %				42.4%		57.6%		35.5%	SPLIT %				58.7%		41.3%		64.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,064	8,947	19,011

AM Peak Hour			07:45	07:15	07:30	PM Peak Hour			16:30	17:15	16:30
AM Pk Volume			535	924	1394	PM Pk Volume			1297	685	2072
Pk Hr Factor			0.942	0.935	0.960	Pk Hr Factor			0.888	0.919	0.944
7 - 9 Volume	0	0	946	1715	2661	4 - 6 Volume	0	0	2618	1277	3895
7 - 9 Peak Hour			07:45	07:15	07:30	4 - 6 Peak Hour			16:30	17:00	16:30
7 - 9 Pk Volume	0	0	535	924	1394	4 - 6 Pk Volume	0	0	1403	672	2072
Pk Hr Factor	0.000	0.000	0.942	0.935	0.960	Pk Hr Factor	0.000	0.000	0.961	0.913	0.944

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Napa St & Colusa St

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_010

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	66	2	0	0	0	0	0	0	0	0	0	0	68
01:00	0	45	0	1	0	0	0	0	0	0	0	0	0	46
02:00	1	23	3	0	1	0	0	0	0	0	0	0	0	28
03:00	0	39	3	0	2	0	0	0	0	0	0	0	0	44
04:00	1	84	5	0	3	0	0	0	0	0	0	0	0	93
05:00	1	217	21	0	4	2	0	1	0	0	0	0	0	246
06:00	1	586	40	2	15	1	0	2	0	0	0	0	0	647
07:00	5	1335	72	5	27	1	0	0	2	0	0	0	0	1447
08:00	10	1436	98	8	23	5	4	2	3	0	0	0	0	1589
09:00	3	856	72	1	18	2	0	1	1	0	0	0	0	954
10:00	4	831	52	0	14	3	0	1	1	0	0	0	0	906
11:00	3	911	61	2	12	2	0	1	0	0	0	0	0	992
12:00 PM	4	964	65	1	13	0	0	0	1	0	0	0	0	1048
13:00	4	947	46	1	13	2	0	1	0	0	0	0	0	1014
14:00	7	960	67	3	8	0	0	1	0	0	0	0	0	1046
15:00	7	1342	99	0	22	1	0	1	0	0	0	0	0	1472
16:00	5	1885	129	0	33	2	0	1	2	0	0	0	0	2057
17:00	5	1751	86	2	22	1	0	4	0	0	0	0	0	1871
18:00	4	1163	58	0	6	0	0	0	1	0	0	0	0	1232
19:00	3	808	44	0	3	1	0	0	0	0	0	0	0	859
20:00	5	616	35	0	2	0	0	0	2	0	0	0	0	660
21:00	3	462	23	0	2	0	0	0	1	0	0	0	0	491
22:00	2	305	11	0	2	0	1	0	0	0	0	0	0	321
23:00	0	175	9	0	4	0	0	0	0	0	0	0	0	188
Totals	78	17807	1101	26	249	23	5	16	14					19319
% of Totals	0%	92%	6%	0%	1%	0%	0%	0%	0%					100%

AM Volumes	29	6429	429	19	119	16	4	8	7	0	0	0	0	7060
% AM	0%	33%	2%	0%	1%	0%	0%	0%	0%					37%
AM Peak Hour	08:00	08:00	08:00	08:00	07:00	08:00	08:00	06:00	08:00					08:00
Volume	10	1436	98	8	27	5	4	2	3					1589
PM Volumes	49	11378	672	7	130	7	1	8	7	0	0	0	0	12259
% PM	0%	59%	3%	0%	1%	0%	0%	0%	0%					63%
PM Peak Hour	14:00	16:00	16:00	14:00	16:00	13:00	22:00	17:00	16:00					16:00
Volume	7	1885	129	3	33	2	1	4	2					2057

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	3036		16%	2062		11%	3928		20%	10293		53%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

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Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Friars Rd Bet. Napa St & Colusa St

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,951	9,368	19,319

AM Period	NB		SB		EB		WB		TOTAL	
00:00	0		0		11		8		19	
00:15	0		0		14		7		21	
00:30	0		0		13		6		19	
00:45	0		0		4	42	5	26	9	68
01:00	0		0		2		4		6	
01:15	0		0		5		10		15	
01:30	0		0		7		6		13	
01:45	0		0		10	24	2	22	12	46
02:00	0		0		3		5		8	
02:15	0		0		3		7		10	
02:30	0		0		4		3		7	
02:45	0		0		3	13	0	15	3	28
03:00	0		0		5		4		9	
03:15	0		0		2		2		4	
03:30	0		0		8		7		15	
03:45	0		0		6	21	10	23	16	44
04:00	0		0		11		5		16	
04:15	0		0		13		9		22	
04:30	0		0		9		13		22	
04:45	0		0		26	59	7	34	33	93
05:00	0		0		26		26		52	
05:15	0		0		34		27		61	
05:30	0		0		25		46		71	
05:45	0		0		21	106	41	140	62	246
06:00	0		0		42		73		115	
06:15	0		0		42		85		127	
06:30	0		0		52		135		187	
06:45	0		0		61	197	157	450	218	647
07:00	0		0		105		172		277	
07:15	0		0		159		233		392	
07:30	0		0		139		245		384	
07:45	0		0		139	542	255	905	394	1447
08:00	0		0		113		364		477	
08:15	0		0		108		307		415	
08:30	0		0		129		187		316	
08:45	0		0		132	482	249	1107	381	1589
09:00	0		0		102		167		269	
09:15	0		0		98		128		226	
09:30	0		0		120		121		241	
09:45	0		0		119	439	99	515	218	954
10:00	0		0		131		117		248	
10:15	0		0		117		90		207	
10:30	0		0		125		103		228	
10:45	0		0		112	485	111	421	223	906
11:00	0		0		122		125		247	
11:15	0		0		126		136		262	
11:30	0		0		125		97		222	
11:45	0		0		130	503	131	489	261	992
TOTALS						2913		4147		7060
SPLIT %						41.3%		58.7%		36.5%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	0		0		126		152		278	
12:15	0		0		110		135		245	
12:30	0		0		133		128		261	
12:45	0		0		129	498	135	550	264	1048
13:00	0		0		118		116		234	
13:15	0		0		124		138		262	
13:30	0		0		135		147		282	
13:45	0		0		129	506	107	508	236	1014
14:00	0		0		138		120		258	
14:15	0		0		127		128		255	
14:30	0		0		155		106		261	
14:45	0		0		156	576	116	470	272	1046
15:00	0		0		173		132		305	
15:15	0		0		177		147		324	
15:30	0		0		248		163		411	
15:45	0		0		306	904	126	568	432	1472
16:00	0		0		309		148		457	
16:15	0		0		383		151		534	
16:30	0		0		382		150		532	
16:45	0		0		360	1434	174	623	534	2057
17:00	0		0		319		187		506	
17:15	0		0		367		183		550	
17:30	0		0		296		184		480	
17:45	0		0		205	1187	130	684	335	1871
18:00	0		0		204		147		351	
18:15	0		0		155		164		319	
18:30	0		0		171		137		308	
18:45	0		0		133	663	121	569	254	1232
19:00	0		0		127		109		236	
19:15	0		0		134		103		237	
19:30	0		0		110		98		208	
19:45	0		0		94	465	84	394	178	859
20:00	0		0		102		75		177	
20:15	0		0		77		74		151	
20:30	0		0		78		90		168	
20:45	0		0		87	344	77	316	164	660
21:00	0		0		77		74		151	
21:15	0		0		51		62		113	
21:30	0		0		45		59		104	
21:45	0		0		59	232	64	259	123	491
22:00	0		0		50		69		119	
22:15	0		0		37		39		76	
22:30	0		0		25		38		63	
22:45	0		0		22	134	41	187	63	321
23:00	0		0		36		30		66	
23:15	0		0		21		27		48	
23:30	0		0		25		25		50	
23:45	0		0		13	95	11	93	24	188
TOTALS						7038		5221		12259
SPLIT %						57.4%		42.6%		63.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,951	9,368	19,319

AM Peak Hour			07:15	07:30	07:30
AM Pk Volume			550	1171	1670
Pk Hr Factor			0.865	0.804	0.875
7 - 9 Volume	0	0	1024	2012	3036
7 - 9 Peak Hour			07:15	07:30	07:30
7 - 9 Pk Volume	0	0	550	1171	1670
Pk Hr Factor	0.000	0.000	0.865	0.804	0.875

PM Peak Hour			16:15	16:45	16:30
PM Pk Volume			1342	728	2122
Pk Hr Factor			0.914	0.875	0.965
4 - 6 Volume	0	0	2621	1307	3928
4 - 6 Peak Hour			16:15	16:45	16:30
4 - 6 Pk Volume	0	0	1444	728	2122
Pk Hr Factor	0.000	0.000	0.943	0.973	0.965

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Colusa St & Via Las Cumbres

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,724	9,289	19,013

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			8		13		21		12:00			135		116		251	
00:15			11		9		20		12:15			152		125		277	
00:30			8		8		16		12:30			147		126		273	
00:45			6	33	4	34	10	67	12:45			140	574	128	495	268	1069
01:00			9		8		17		13:00			147		115		262	
01:15			6		4		10		13:15			125		133		258	
01:30			8		4		12		13:30			114		128		242	
01:45			4	27	3	19	7	46	13:45			132	518	100	476	232	994
02:00			5		2		7		14:00			131		109		240	
02:15			2		4		6		14:15			131		124		255	
02:30			2		3		5		14:30			144		135		279	
02:45			3	12	1	10	4	22	14:45			145	551	112	480	257	1031
03:00			3		4		7		15:00			165		107		272	
03:15			1		1		2		15:15			176		134		310	
03:30			1		2		3		15:30			212		152		364	
03:45			2	7	5	12	7	19	15:45			237	790	128	521	365	1311
04:00			4		5		9		16:00			282		130		412	
04:15			5		10		15		16:15			302		155		457	
04:30			0		17		17		16:30			342		170		512	
04:45			12	21	19	51	31	72	16:45			344	1270	162	617	506	1887
05:00			11		21		32		17:00			351		155		506	
05:15			8		40		48		17:15			325		174		499	
05:30			18		39		57		17:30			348		168		516	
05:45			23	60	54	154	77	214	17:45			230	1254	154	651	384	1905
06:00			35		50		85		18:00			208		167		375	
06:15			39		77		116		18:15			152		176		328	
06:30			57		96		153		18:30			178		131		309	
06:45			83	214	139	362	222	576	18:45			150	688	129	603	279	1291
07:00			93		186		279		19:00			120		112		232	
07:15			127		207		334		19:15			131		102		233	
07:30			119		241		360		19:30			125		94		219	
07:45			129	468	251	885	380	1353	19:45			130	506	99	407	229	913
08:00			103		308		411		20:00			126		88		214	
08:15			106		399		505		20:15			91		93		184	
08:30			115		401		516		20:30			76		64		140	
08:45			126	450	317	1425	443	1875	20:45			66	359	73	318	139	677
09:00			87		198		285		21:00			78		66		144	
09:15			116		128		244		21:15			66		60		126	
09:30			138		96		234		21:30			54		71		125	
09:45			123	464	91	513	214	977	21:45			51	249	41	238	92	487
10:00			111		93		204		22:00			59		45		104	
10:15			146		98		244		22:15			43		33		76	
10:30			121		108		229		22:30			23		31		54	
10:45			116	494	88	387	204	881	22:45			31	156	17	126	48	282
11:00			127		97		224		23:00			18		19		37	
11:15			126		112		238		23:15			23		20		43	
11:30			98		116		214		23:30			25		17		42	
11:45			127	478	110	435	237	913	23:45			15	81	14	70	29	151
TOTALS				2728		4287		7015	TOTALS				6996		5002		11998
SPLIT %				38.9%		61.1%		36.9%	SPLIT %				58.3%		41.7%		63.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,724	9,289	19,013

AM Peak Hour			11:45	08:00	08:00	PM Peak Hour			16:45	17:30	16:45
AM Pk Volume			561	1425	1875	PM Pk Volume			1368	665	2027
Pk Hr Factor			0.923	0.888	0.908	Pk Hr Factor			0.974	0.945	0.982
7 - 9 Volume	0	0	918	2310	3228	4 - 6 Volume	0	0	2524	1268	3792
7 - 9 Peak Hour			07:15	08:00	08:00	4 - 6 Peak Hour			16:45	16:30	16:45
7 - 9 Pk Volume	0	0	478	1425	1875	4 - 6 Pk Volume	0	0	1368	661	2027
Pk Hr Factor	0.000	0.000	0.926	0.888	0.908	Pk Hr Factor	0.000	0.000	0.974	0.950	0.982

11

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Colusa St & Via Las Cumbres

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,926	9,457	19,383

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					12		8		20		12:00					148		129		277	
00:15					9		8		17		12:15					123		124		247	
00:30					10		9		19		12:30					135		141		276	
00:45					8	39	5	30	13	69	12:45					119	525	143	537	262	1062
01:00					4		4		8		13:00					144		140		284	
01:15					3		4		7		13:15					125		112		237	
01:30					4		10		14		13:30					128		151		279	
01:45					8	19	7	25	15	44	13:45					133	530	115	518	248	1048
02:00					5		3		8		14:00					136		122		258	
02:15					4		7		11		14:15					137		100		237	
02:30					3		5		8		14:30					128		128		256	
02:45					4	16	0	15	4	31	14:45					154	555	111	461	265	1016
03:00					3		3		6		15:00					155		127		282	
03:15					2		1		3		15:15					171		143		314	
03:30					3		7		10		15:30					186		142		328	
03:45					4	12	8	19	12	31	15:45					264	776	124	536	388	1312
04:00					4		8		12		16:00					289		131		420	
04:15					7		10		17		16:15					328		160		488	
04:30					1		18		19		16:30					367		151		518	
04:45					10	22	18	54	28	76	16:45					372	1356	166	608	538	1964
05:00					5		22		27		17:00					369		175		544	
05:15					6		29		35		17:15					341		171		512	
05:30					12		46		58		17:30					374		178		552	
05:45					20	43	38	135	58	178	17:45					234	1318	158	682	392	2000
06:00					26		55		81		18:00					184		164		348	
06:15					46		69		115		18:15					172		144		316	
06:30					53		89		142		18:30					177		129		306	
06:45					59	184	146	359	205	543	18:45					136	669	111	548	247	1217
07:00					71		162		233		19:00					143		123		266	
07:15					127		184		311		19:15					143		100		243	
07:30					144		237		381		19:30					140		100		240	
07:45					129	471	273	856	402	1327	19:45					107	533	94	417	201	950
08:00					103		323		426		20:00					132		62		194	
08:15					104		393		497		20:15					84		70		154	
08:30					112		423		535		20:30					99		88		187	
08:45					145	464	336	1475	481	1939	20:45					75	390	64	284	139	674
09:00					97		208		305		21:00					95		79		174	
09:15					103		127		230		21:15					80		72		152	
09:30					133		96		229		21:30					55		71		126	
09:45					139	472	120	551	259	1023	21:45					64	294	46	268	110	562
10:00					127		97		224		22:00					56		63		119	
10:15					126		91		217		22:15					48		48		96	
10:30					113		94		207		22:30					35		38		73	
10:45					131	497	88	370	219	867	22:45					22	161	26	175	48	336
11:00					125		116		241		23:00					21		15		36	
11:15					117		130		247		23:15					18		24		42	
11:30					120		96		216		23:30					21		19		40	
11:45					142	504	122	464	264	968	23:45					16	76	12	70	28	146
TOTALS						2743		4353		7096	TOTALS						7183		5104		12287
SPLIT %						38.7%		61.3%		36.6%	SPLIT %						58.5%		41.5%		63.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,926	9,457	19,383

AM Peak Hour			11:45	08:00	08:00	PM Peak Hour			16:45	16:45	16:45
AM Pk Volume			548	1475	1939	PM Pk Volume			1456	690	2146
Pk Hr Factor			0.926	0.872	0.906	Pk Hr Factor			0.973	0.969	0.972
7 - 9 Volume	0	0	935	2331	3266	4 - 6 Volume	0	0	2674	1290	3964
7 - 9 Peak Hour			07:15	08:00	08:00	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	503	1475	1939	4 - 6 Pk Volume	0	0	1456	690	2146
Pk Hr Factor	0.000	0.000	0.873	0.872	0.906	Pk Hr Factor	0.000	0.000	0.973	0.969	0.972

12

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Via Las Cumbres & Fashion Valley Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,154	11,223	21,377

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			16		19		35		12:00			221		146		367	
00:15			21		18		39		12:15			229		147		376	
00:30			9		10		19		12:30			196		182		378	
00:45			8	54	4	51	12	105	12:45			211	857	186	661	397	1518
01:00			9		11		20		13:00			202		140		342	
01:15			5		7		12		13:15			184		178		362	
01:30			7		5		12		13:30			167		158		325	
01:45			5	26	7	30	12	56	13:45			157	710	139	615	296	1325
02:00			3		5		8		14:00			150		168		318	
02:15			3		5		8		14:15			158		162		320	
02:30			2		3		5		14:30			161		157		318	
02:45			5	13	2	15	7	28	14:45			179	648	156	643	335	1291
03:00			3		6		9		15:00			160		150		310	
03:15			3		4		7		15:15			196		183		379	
03:30			4		6		10		15:30			250		200		450	
03:45			2	12	7	23	9	35	15:45			238	844	167	700	405	1544
04:00			5		6		11		16:00			331		168		499	
04:15			4		11		15		16:15			204		210		414	
04:30			4		11		15		16:30			186		201		387	
04:45			18	31	18	46	36	77	16:45			209	930	217	796	426	1726
05:00			21		18		39		17:00			248		194		442	
05:15			15		39		54		17:15			230		226		456	
05:30			33		39		72		17:30			192		206		398	
05:45			35	104	56	152	91	256	17:45			170	840	201	827	371	1667
06:00			45		50		95		18:00			151		212		363	
06:15			54		75		129		18:15			129		188		317	
06:30			92		106		198		18:30			134		171		305	
06:45			116	307	148	379	264	686	18:45			116	530	158	729	274	1259
07:00			142		203		345		19:00			99		147		246	
07:15			133		273		406		19:15			83		145		228	
07:30			173		298		471		19:30			61		116		177	
07:45			202	650	286	1060	488	1710	19:45			66	309	138	546	204	855
08:00			166		255		421		20:00			67		130		197	
08:15			161		289		450		20:15			57		123		180	
08:30			174		306		480		20:30			54		104		158	
08:45			181	682	252	1102	433	1784	20:45			54	232	107	464	161	696
09:00			144		204		348		21:00			43		110		153	
09:15			134		148		282		21:15			40		94		134	
09:30			191		140		331		21:30			42		97		139	
09:45			188	657	115	607	303	1264	21:45			42	167	87	388	129	555
10:00			170		127		297		22:00			32		68		100	
10:15			175		108		283		22:15			28		52		80	
10:30			202		140		342		22:30			21		53		74	
10:45			190	737	112	487	302	1224	22:45			18	99	26	199	44	298
11:00			153		143		296		23:00			14		26		40	
11:15			195		143		338		23:15			9		40		49	
11:30			152		155		307		23:30			9		29		38	
11:45			177	677	145	586	322	1263	23:45			6	38	22	117	28	155
TOTALS				3950		4538		**8488**	**TOTALS**				6204		6685		**12889**
SPLIT %				46.5%		53.5%		**39.7%**	**SPLIT %**				48.1%		51.9%		**60.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,154	11,223	21,377

AM Peak Hour			11:45	07:45	**07:45**	**PM Peak Hour**			15:30	17:15	**15:30**
AM Pk Volume			823	1136	**1839**	**PM Pk Volume**			1023	845	**1768**
Pk Hr Factor			0.898	0.928	**0.942**	**Pk Hr Factor**			0.773	0.935	**0.886**
7 - 9 Volume	0	0	1332	2162	**3494**	**4 - 6 Volume**	0	0	1770	1623	**3393**
7 - 9 Peak Hour			07:45	07:45	**07:45**	**4 - 6 Peak Hour**			16:00	16:45	**16:00**
7 - 9 Pk Volume	0	0	703	1136	**1839**	**4 - 6 Pk Volume**	0	0	930	843	**1726**
Pk Hr Factor	0.000	0.000	0.870	0.928	**0.942**	**Pk Hr Factor**	0.000	0.000	0.702	0.933	**0.865**

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Via Las Cumbres & Fashion Valley Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,933	12,233	23,166

AM Period	NB		SB		EB		WB		TOTAL	
00:00					15		18		33	
00:15					13		17		30	
00:30					10		17		27	
00:45					11	49	8	60	19	109
01:00					10		11		21	
01:15					12		13		25	
01:30					12		11		23	
01:45					4	38	7	42	11	80
02:00					5		7		12	
02:15					6		8		14	
02:30					4		7		11	
02:45					7	22	5	27	12	49
03:00					6		5		11	
03:15					4		2		6	
03:30					4		13		17	
03:45					6	20	6	26	12	46
04:00					6		6		12	
04:15					6		10		16	
04:30					2		12		14	
04:45					20	34	26	54	46	88
05:00					26		18		44	
05:15					19		34		53	
05:30					42		44		86	
05:45					39	126	36	132	75	258
06:00					44		60		104	
06:15					59		66		125	
06:30					91		99		190	
06:45					121	315	160	385	281	700
07:00					135		185		320	
07:15					133		284		417	
07:30					163		335		498	
07:45					236	667	337	1141	573	1808
08:00					158		415		573	
08:15					175		502		677	
08:30					183		483		666	
08:45					201	717	423	1823	624	2540
09:00					157		258		415	
09:15					160		170		330	
09:30					214		131		345	
09:45					192	723	113	672	305	1395
10:00					175		123		298	
10:15					204		128		332	
10:30					237		106		343	
10:45					187	803	127	484	314	1287
11:00					183		153		336	
11:15					193		137		330	
11:30					173		118		291	
11:45					196	745	167	575	363	1320
TOTALS						4259		5421		9680
SPLIT %						44.0%		56.0%		41.8%

PM Period	NB		SB		EB		WB		TOTAL	
12:00					225		166		391	
12:15					260		150		410	
12:30					219		108		327	
12:45					248	952	180	604	428	1556
13:00					234		165		399	
13:15					199		174		373	
13:30					176		184		360	
13:45					160	769	184	707	344	1476
14:00					176		165		341	
14:15					187		152		339	
14:30					193		145		338	
14:45					181	737	157	619	338	1356
15:00					197		175		372	
15:15					211		166		377	
15:30					246		206		452	
15:45					276	930	168	715	444	1645
16:00					337		180		517	
16:15					226		191		417	
16:30					196		187		383	
16:45					198	957	220	778	418	1735
17:00					227		210		437	
17:15					229		233		462	
17:30					207		225		432	
17:45					185	848	186	854	371	1702
18:00					144		208		352	
18:15					123		191		314	
18:30					144		167		311	
18:45					136	547	158	724	294	1271
19:00					110		153		263	
19:15					90		144		234	
19:30					95		148		243	
19:45					78	373	119	564	197	937
20:00					63		112		175	
20:15					62		112		174	
20:30					57		134		191	
20:45					64	246	106	464	170	710
21:00					43		129		172	
21:15					48		90		138	
21:30					46		104		150	
21:45					38	175	78	401	116	576
22:00					26		88		114	
22:15					32		56		88	
22:30					22		66		88	
22:45					16	96	54	264	70	360
23:00					17		43		60	
23:15					8		33		41	
23:30					12		25		37	
23:45					7	44	17	118	24	162
TOTALS						6674		6812		13486
SPLIT %						49.5%		50.5%		58.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,933	12,233	23,166

AM Peak Hour			11:45	08:00	08:00	PM Peak Hour			15:30	16:45	15:30
AM Pk Volume			900	1823	2540	PM Pk Volume			1085	888	1830
Pk Hr Factor			0.865	0.908	0.938	Pk Hr Factor			0.805	0.953	0.885
7 - 9 Volume	0	0	1384	2964	4348	4 - 6 Volume	0	0	1805	1632	3437
7 - 9 Peak Hour			07:45	08:00	08:00	4 - 6 Peak Hour			16:00	16:45	16:45
7 - 9 Pk Volume	0	0	752	1823	2540	4 - 6 Pk Volume	0	0	957	888	1749
Pk Hr Factor	0.000	0.000	0.797	0.908	0.938	Pk Hr Factor	0.000	0.000	0.710	0.953	0.946

Segment ID: 13

Friars Rd from Fashion Valley Rd to Via de la Moda

AM Peak Period Heavy Vehicle Percentage: 2.55%

Noon Peak Period Heavy Vehicle Percentage: 2.65%

PM Period Heavy Vehicle Percentage: 2.00%

Average Daily Heavy Vehicle Percentage: 2.00%

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Fashion Valley Rd & Via De La Moda

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_013

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	1	144	7	0	2	0	0	0	0	0	0	0	0	154
01:00	0	74	1	0	1	0	0	0	0	0	0	0	0	76
02:00	0	40	2	0	0	0	0	0	0	0	1	0	0	43
03:00	0	50	2	0	2	0	0	0	0	0	0	0	0	54
04:00	0	85	11	0	2	0	0	2	0	0	0	0	0	100
05:00	0	329	35	5	12	2	0	4	0	0	0	0	0	387
06:00	2	741	75	8	31	3	1	3	0	0	0	0	0	864
07:00	3	1512	102	7	24	2	0	3	1	0	0	0	0	1654
08:00	0	1544	97	10	24	1	0	3	0	0	0	0	0	1679
09:00	2	1104	64	9	18	1	0	4	2	0	0	0	0	1204
10:00	3	1161	67	5	23	0	1	4	1	0	0	0	0	1265
11:00	3	1315	77	10	26	1	0	3	1	0	0	0	0	1436
12:00 PM	0	1359	103	8	32	0	0	5	0	0	0	0	0	1507
13:00	3	1322	75	8	33	1	0	3	0	0	0	0	0	1445
14:00	3	1371	78	6	34	2	0	3	1	0	0	0	0	1498
15:00	5	1725	107	12	24	0	0	4	0	0	0	0	0	1877
16:00	6	2096	125	9	28	0	0	2	0	0	1	0	0	2267
17:00	4	2263	123	11	25	0	0	1	0	0	0	0	0	2427
18:00	2	1604	69	11	24	0	0	1	0	0	1	0	0	1712
19:00	3	1296	64	7	7	0	0	1	0	0	0	0	0	1378
20:00	2	1039	52	5	4	0	0	0	0	0	0	0	0	1102
21:00	2	748	29	6	4	0	0	0	0	0	0	0	0	789
22:00	0	437	19	3	1	0	0	1	0	0	0	0	0	461
23:00	0	245	16	0	0	0	0	0	0	0	0	0	0	261
Totals	44	23604	1400	140	381	13	2	47	6		3			25640
% of Totals	0%	92%	5%	1%	1%	0%	0%	0%	0%		0%			100%

AM Volumes	14	8099	540	54	165	10	2	26	5	0	1	0	0	8916
% AM	0%	32%	2%	0%	1%	0%	0%	0%	0%		0%			35%
AM Peak Hour	07:00	08:00	07:00	08:00	06:00	06:00	06:00	05:00	09:00		02:00			08:00
Volume	3	1544	102	10	31	3	1	4	2		1			1679
PM Volumes	30	15505	860	86	216	3	0	21	1	0	2	0	0	16724
% PM	0%	60%	3%	0%	1%	0%		0%	0%		0%			65%
PM Peak Hour	16:00	17:00	16:00	15:00	14:00	14:00		12:00	14:00		16:00			17:00
Volume	6	2263	125	12	34	2		5	1		1			2427

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	3333		13%	2952		12%	4694		18%	14661		57%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

13

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Friars Rd Bet. Fashion Valley Rd & Via De La Moda

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_013

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,917	11,723	25,640

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00	0	0	34		28		62		12:00	0	0	187		162		349	
00:15	0	0	22		22		44		12:15	0	0	218		171		389	
00:30	0	0	11		15		26		12:30	0	0	200		196		396	
00:45	0	0	8	75	14	79	22	154	12:45	0	0	205	810	168	697	373	1507
01:00	0	0	6		17		23		13:00	0	0	225		149		374	
01:15	0	0	15		10		25		13:15	0	0	201		183		384	
01:30	0	0	11		2		13		13:30	0	0	200		149		349	
01:45	0	0	7	39	8	37	15	76	13:45	0	0	185	811	153	634	338	1445
02:00	0	0	4		8		12		14:00	0	0	183		174		357	
02:15	0	0	4		4		8		14:15	0	0	212		145		357	
02:30	0	0	6		4		10		14:30	0	0	220		178		398	
02:45	0	0	7	21	6	22	13	43	14:45	0	0	216	831	170	667	386	1498
03:00	0	0	4		4		8		15:00	0	0	263		192		455	
03:15	0	0	7		7		14		15:15	0	0	258		185		443	
03:30	0	0	7		13		20		15:30	0	0	306		189		495	
03:45	0	0	3	21	9	33	12	54	15:45	0	0	315	1142	169	735	484	1877
04:00	0	0	6		7		13		16:00	0	0	344		183		527	
04:15	0	0	4		9		13		16:15	0	0	352		213		565	
04:30	0	0	9		18		27		16:30	0	0	378		211		589	
04:45	0	0	25	44	22	56	47	100	16:45	0	0	387	1461	199	806	586	2267
05:00	0	0	31		33		64		17:00	0	0	423		219		642	
05:15	0	0	38		46		84		17:15	0	0	402		226		628	
05:30	0	0	53		46		99		17:30	0	0	408		209		617	
05:45	0	0	57	179	83	208	140	387	17:45	0	0	310	1543	230	884	540	2427
06:00	0	0	67		73		140		18:00	0	0	289		187		476	
06:15	0	0	71		86		157		18:15	0	0	247		176		423	
06:30	0	0	124		114		238		18:30	0	0	241		188		429	
06:45	0	0	140	402	189	462	329	864	18:45	0	0	217	994	167	718	384	1712
07:00	0	0	126		214		340		19:00	0	0	208		152		360	
07:15	0	0	157		268		425		19:15	0	0	201		141		342	
07:30	0	0	182		281		463		19:30	0	0	199		130		329	
07:45	0	0	152	617	274	1037	426	1654	19:45	0	0	217	825	130	553	347	1378
08:00	0	0	154		305		459		20:00	0	0	175		132		307	
08:15	0	0	153		270		423		20:15	0	0	137		139		276	
08:30	0	0	166		278		444		20:30	0	0	137		128		265	
08:45	0	0	149	622	204	1057	353	1679	20:45	0	0	144	593	110	509	254	1102
09:00	0	0	115		176		291		21:00	0	0	110		107		217	
09:15	0	0	147		162		309		21:15	0	0	121		95		216	
09:30	0	0	162		152		314		21:30	0	0	71		95		166	
09:45	0	0	149	573	141	631	290	1204	21:45	0	0	90	392	100	397	190	789
10:00	0	0	163		123		286		22:00	0	0	102		63		165	
10:15	0	0	174		125		299		22:15	0	0	66		57		123	
10:30	0	0	199		146		345		22:30	0	0	46		38		84	
10:45	0	0	179	715	156	550	335	1265	22:45	0	0	43	257	46	204	89	461
11:00	0	0	190		163		353		23:00	0	0	35		38		73	
11:15	0	0	202		140		342		23:15	0	0	41		45		86	
11:30	0	0	201		163		364		23:30	0	0	32		17		49	
11:45	0	0	220	813	157	623	377	1436	23:45	0	0	29	137	24	124	53	261
TOTALS				4121		4795		8916	TOTALS				9796		6928		16724
SPLIT %				46.2%		53.8%		34.8%	SPLIT %				58.6%		41.4%		65.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,917	11,723	25,640

AM Peak Hour			11:30	07:30	07:15	PM Peak Hour			16:45	17:00	16:45
AM Pk Volume			826	1130	1773	PM Pk Volume			1409	884	2473
Pk Hr Factor			0.691	0.926	0.957	Pk Hr Factor			0.863	0.872	0.963
7 - 9 Volume	0	0	1239	2094	3333	4 - 6 Volume	0	0	3004	1690	4694
7 - 9 Peak Hour			07:15	07:30	07:15	4 - 6 Peak Hour			16:45	17:00	16:45
7 - 9 Pk Volume	0	0	645	1130	1773	4 - 6 Pk Volume	0	0	1620	884	2473
Pk Hr Factor	0.000	0.000	0.886	0.926	0.957	Pk Hr Factor	0.000	0.000	0.957	0.961	0.963

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Fashion Valley Rd & Via De La Moda

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_013

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	117	11	0	0	0	0	0	0	0	0	0	0	128
01:00	0	90	4	0	0	0	0	0	0	0	0	0	0	94
02:00	0	46	2	0	0	0	0	0	0	0	0	0	0	48
03:00	0	59	4	0	1	0	0	0	0	0	0	0	0	64
04:00	0	96	7	1	1	0	0	0	1	0	0	0	0	106
05:00	0	315	29	3	11	0	0	3	1	0	0	0	0	362
06:00	0	744	58	8	30	1	0	4	0	0	0	0	0	845
07:00	4	1679	105	9	32	4	0	6	1	0	0	0	0	1840
08:00	3	1845	122	12	35	3	0	4	2	0	0	0	0	2026
09:00	1	1217	83	5	33	4	0	4	1	0	0	0	0	1348
10:00	7	1158	78	8	29	0	0	2	0	0	0	0	0	1282
11:00	4	1227	90	7	27	0	0	3	0	0	0	0	0	1358
12:00 PM	6	1444	92	10	23	1	1	2	0	0	0	0	0	1579
13:00	4	1399	80	5	29	0	0	1	0	0	0	0	0	1518
14:00	4	1397	88	8	31	2	0	1	0	0	0	0	0	1531
15:00	2	1716	104	12	25	1	0	1	0	0	0	0	0	1861
16:00	6	2337	132	8	33	0	0	3	0	0	0	0	0	2519
17:00	6	2161	113	7	27	1	0	3	0	0	0	0	0	2318
18:00	3	1600	75	10	19	0	0	2	0	0	0	0	0	1709
19:00	4	1248	53	7	10	1	0	2	0	0	0	0	0	1325
20:00	0	1036	41	4	8	0	0	0	1	0	0	0	0	1090
21:00	4	775	34	4	6	0	0	0	1	0	0	0	0	824
22:00	1	485	21	2	0	0	0	0	0	0	0	0	0	509
23:00	0	247	14	1	3	0	0	0	0	0	0	0	0	265
Totals	**59**	**24438**	**1440**	**131**	**413**	**18**	**1**	**41**	**8**					**26549**
% of Totals	0%	92%	5%	0%	2%	0%	0%	0%	0%					100%

AM Volumes	19	8593	593	53	199	12	0	26	6	0	0	0	0	9501
% AM	0%	32%	2%	0%	1%	0%		0%	0%					36%
AM Peak Hour	10:00	08:00	08:00	08:00	08:00	07:00		07:00	08:00					08:00
Volume	7	1845	122	12	35	4		6	2					2026
PM Volumes	40	15845	847	78	214	6	1	15	2	0	0	0	0	17048
% PM	0%	60%	3%	0%	1%	0%	0%	0%	0%					64%
PM Peak Hour	12:00	16:00	16:00	15:00	16:00	14:00	12:00	16:00	20:00					16:00
Volume	6	2337	132	12	33	2	1	3	1					2519

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	3866		15%	3097		12%	4837		18%	14749		56%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

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Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Friars Rd Bet. Fashion Valley Rd & Via De La Moda

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_013

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,122	12,427	26,549

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00	0	0	18		20		38		12:00	0	0	226		170		396	
00:15	0	0	19		20		39		12:15	0	0	200		168		368	
00:30	0	0	9		21		30		12:30	0	0	230		171		401	
00:45	0	0	12	58	9	70	21	128	12:45	0	0	208	864	206	715	414	1579
01:00	0	0	14		16		30		13:00	0	0	235		149		384	
01:15	0	0	11		12		23		13:15	0	0	193		169		362	
01:30	0	0	10		15		25		13:30	0	0	206		192		398	
01:45	0	0	5	40	11	54	16	94	13:45	0	0	201	835	173	683	374	1518
02:00	0	0	10		9		19		14:00	0	0	224		179		403	
02:15	0	0	4		8		12		14:15	0	0	211		167		378	
02:30	0	0	4		5		9		14:30	0	0	205		145		350	
02:45	0	0	4	22	4	26	8	48	14:45	0	0	222	862	178	669	400	1531
03:00	0	0	4		4		8		15:00	0	0	241		188		429	
03:15	0	0	5		12		17		15:15	0	0	229		183		412	
03:30	0	0	11		11		22		15:30	0	0	330		183		513	
03:45	0	0	7	27	10	37	17	64	15:45	0	0	342	1142	165	719	507	1861
04:00	0	0	9		5		14		16:00	0	0	423		199		622	
04:15	0	0	7		11		18		16:15	0	0	433		201		634	
04:30	0	0	15		21		36		16:30	0	0	426		214		640	
04:45	0	0	19	50	19	56	38	106	16:45	0	0	403	1685	220	834	623	2519
05:00	0	0	27		36		63		17:00	0	0	404		235		639	
05:15	0	0	36		41		77		17:15	0	0	409		222		631	
05:30	0	0	55		42		97		17:30	0	0	381		202		583	
05:45	0	0	69	187	56	175	125	362	17:45	0	0	269	1463	196	855	465	2318
06:00	0	0	68		68		136		18:00	0	0	308		168		476	
06:15	0	0	65		93		158		18:15	0	0	223		215		438	
06:30	0	0	129		126		255		18:30	0	0	232		212		444	
06:45	0	0	102	364	194	481	296	845	18:45	0	0	183	946	168	763	351	1709
07:00	0	0	149		212		361		19:00	0	0	239		157		396	
07:15	0	0	154		302		456		19:15	0	0	181		137		318	
07:30	0	0	217		301		518		19:30	0	0	180		134		314	
07:45	0	0	175	695	330	1145	505	1840	19:45	0	0	143	743	154	582	297	1325
08:00	0	0	148		348		496		20:00	0	0	166		110		276	
08:15	0	0	151		387		538		20:15	0	0	136		118		254	
08:30	0	0	183		352		535		20:30	0	0	160		124		284	
08:45	0	0	144	626	313	1400	457	2026	20:45	0	0	160	622	116	468	276	1090
09:00	0	0	161		202		363		21:00	0	0	136		122		258	
09:15	0	0	180		158		338		21:15	0	0	101		105		206	
09:30	0	0	181		162		343		21:30	0	0	102		94		196	
09:45	0	0	153	675	151	673	304	1348	21:45	0	0	93	432	71	392	164	824
10:00	0	0	154		149		303		22:00	0	0	60		85		145	
10:15	0	0	176		140		316		22:15	0	0	67		69		136	
10:30	0	0	174		154		328		22:30	0	0	57		60		117	
10:45	0	0	182	686	153	596	335	1282	22:45	0	0	49	233	62	276	111	509
11:00	0	0	170		157		327		23:00	0	0	45		41		86	
11:15	0	0	190		137		327		23:15	0	0	26		42		68	
11:30	0	0	176		173		349		23:30	0	0	28		32		60	
11:45	0	0	206	742	149	616	355	1358	23:45	0	0	24	123	27	142	51	265
TOTALS				4172		5329		9501	TOTALS				9950		7098		17048
SPLIT %				43.9%		56.1%		35.8%	SPLIT %				58.4%		41.6%		64.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,122	12,427	26,549

AM Peak Hour			11:45	07:45	07:45	PM Peak Hour			16:00	16:30	16:15
AM Pk Volume			862	1417	2074	PM Pk Volume			1642	891	2536
Pk Hr Factor			0.478	0.915	0.964	Pk Hr Factor			0.964	0.910	0.991
7 - 9 Volume	0	0	1321	2545	3866	4 - 6 Volume	0	0	3148	1689	4837
7 - 9 Peak Hour			07:00	07:45	07:45	4 - 6 Peak Hour			16:00	16:30	16:15
7 - 9 Pk Volume	0	0	695	1417	2074	4 - 6 Pk Volume	0	0	1685	891	2536
Pk Hr Factor	0.000	0.000	0.801	0.915	0.964	Pk Hr Factor	0.000	0.000	0.973	0.948	0.991

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Via De La Moda & Fashion Valley Dwy

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_014

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,646	11,541	25,187

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			24		21		45		12:00			201		162		363	
00:15			37		24		61		12:15			209		166		375	
00:30			12		13		25		12:30			200		198		398	
00:45			5	78	11	69	16	147	12:45			199	809	193	719	392	1528
01:00			7		10		17		13:00			185		145		330	
01:15			11		7		18		13:15			215		165		380	
01:30			18		8		26		13:30			210		154		364	
01:45			6	42	6	31	12	73	13:45			190	800	140	604	330	1404
02:00			4		8		12		14:00			191		158		349	
02:15			2		6		8		14:15			195		144		339	
02:30			4		4		8		14:30			200		168		368	
02:45			9	19	6	24	15	43	14:45			220	806	163	633	383	1439
03:00			8		8		16		15:00			205		158		363	
03:15			4		5		9		15:15			281		184		465	
03:30			7		6		13		15:30			257		201		458	
03:45			7	26	10	29	17	55	15:45			305	1048	179	722	484	1770
04:00			2		9		11		16:00			337		168		505	
04:15			5		9		14		16:15			326		204		530	
04:30			6		11		17		16:30			388		220		608	
04:45			21	34	19	48	40	82	16:45			359	1410	201	793	560	2203
05:00			26		21		47		17:00			388		206		594	
05:15			34		41		75		17:15			414		223		637	
05:30			43		41		84		17:30			406		233		639	
05:45			57	160	70	173	127	333	17:45			352	1560	240	902	592	2462
06:00			61		58		119		18:00			277		215		492	
06:15			67		82		149		18:15			250		202		452	
06:30			94		110		204		18:30			245		158		403	
06:45			129	351	158	408	287	759	18:45			223	995	174	749	397	1744
07:00			136		177		313		19:00			207		147		354	
07:15			139		264		403		19:15			206		145		351	
07:30			164		265		429		19:30			195		136		331	
07:45			172	611	274	980	446	1591	19:45			196	804	129	557	325	1361
08:00			158		255		413		20:00			194		143		337	
08:15			153		245		398		20:15			165		134		299	
08:30			147		320		467		20:30			133		110		243	
08:45			162	620	236	1056	398	1676	20:45			129	621	120	507	249	1128
09:00			129		187		316		21:00			126		113		239	
09:15			129		157		286		21:15			114		97		211	
09:30			161		163		324		21:30			102		81		183	
09:45			157	576	142	649	299	1225	21:45			75	417	101	392	176	809
10:00			154		151		305		22:00			98		76		174	
10:15			156		124		280		22:15			80		58		138	
10:30			185		139		324		22:30			54		57		111	
10:45			179	674	140	554	319	1228	22:45			34	266	27	218	61	484
11:00			169		140		309		23:00			43		35		78	
11:15			218		157		375		23:15			38		44		82	
11:30			182		161		343		23:30			37		26		63	
11:45			207	776	134	592	341	1368	23:45			25	143	27	132	52	275
TOTALS				3967		4613		**8580**	**TOTALS**				9679		6928		**16607**
SPLIT %				46.2%		53.8%		**34.1%**	**SPLIT %**				58.3%		41.7%		**65.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,646	11,541	25,187

AM Peak Hour			11:45	07:45	**07:45**	**PM Peak Hour**			16:45	17:15	**17:00**
AM Pk Volume			817	1094	**1724**	**PM Pk Volume**			1567	911	**2462**
Pk Hr Factor			0.977	0.855	**0.923**	**Pk Hr Factor**			0.946	0.949	**0.963**
7 - 9 Volume	0	0	1231	2036	**3267**	**4 - 6 Volume**	0	0	2970	1695	**4665**
7 - 9 Peak Hour			07:30	07:45	**07:45**	**4 - 6 Peak Hour**			16:45	17:00	**17:00**
7 - 9 Pk Volume	0	0	647	1094	**1724**	**4 - 6 Pk Volume**	0	0	1567	902	**2462**
Pk Hr Factor	0.000	0.000	0.940	0.855	**0.923**	**Pk Hr Factor**	0.000	0.000	0.946	0.940	**0.963**

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Via De La Moda & Fashion Valley Dwy

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_014

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,950	12,696	26,646

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			21		35		56		12:00			220		187		407	
00:15			25		22		47		12:15			203		148		351	
00:30			10		19		29		12:30			217		175		392	
00:45			14	70	13	89	27	159	12:45			200	840	197	707	397	1547
01:00			12		15		27		13:00			223		164		387	
01:15			12		12		24		13:15			225		179		404	
01:30			10		12		22		13:30			199		159		358	
01:45			8	42	5	44	13	86	13:45			203	850	170	672	373	1522
02:00			8		12		20		14:00			214		178		392	
02:15			3		6		9		14:15			235		164		399	
02:30			2		8		10		14:30			207		153		360	
02:45			6	19	5	31	11	50	14:45			205	861	157	652	362	1513
03:00			3		9		12		15:00			234		181		415	
03:15			6		3		9		15:15			241		158		399	
03:30			8		12		20		15:30			243		208		451	
03:45			9	26	14	38	23	64	15:45			355	1073	182	729	537	1802
04:00			5		5		10		16:00			378		203		581	
04:15			11		12		23		16:15			386		218		604	
04:30			12		12		24		16:30			453		189		642	
04:45			20	48	26	55	46	103	16:45			386	1603	230	840	616	2443
05:00			25		22		47		17:00			399		231		630	
05:15			31		35		66		17:15			404		234		638	
05:30			44		46		90		17:30			377		228		605	
05:45			68	168	50	153	118	321	17:45			315	1495	191	884	506	2379
06:00			61		62		123		18:00			291		230		521	
06:15			76		83		159		18:15			259		195		454	
06:30			91		108		199		18:30			238		176		414	
06:45			127	355	157	410	284	765	18:45			175	963	149	750	324	1713
07:00			112		175		287		19:00			214		154		368	
07:15			153		271		424		19:15			209		134		343	
07:30			180		286		466		19:30			184		146		330	
07:45			201	646	313	1045	514	1691	19:45			151	758	135	569	286	1327
08:00			150		393		543		20:00			150		121		271	
08:15			146		435		581		20:15			155		123		278	
08:30			157		439		596		20:30			140		128		268	
08:45			181	634	416	1683	597	2317	20:45			160	605	118	490	278	1095
09:00			134		283		417		21:00			138		133		271	
09:15			166		185		351		21:15			127		103		230	
09:30			182		158		340		21:30			97		103		200	
09:45			157	639	142	768	299	1407	21:45			90	452	81	420	171	872
10:00			166		145		311		22:00			85		93		178	
10:15			158		135		293		22:15			70		79		149	
10:30			164		119		283		22:30			64		89		153	
10:45			187	675	163	562	350	1237	22:45			46	265	65	326	111	591
11:00			170		156		326		23:00			47		61		108	
11:15			182		139		321		23:15			42		57		99	
11:30			168		128		296		23:30			27		52		79	
11:45			197	717	168	591	365	1308	23:45			30	146	18	188	48	334
TOTALS				4039		5469		**9508**	**TOTALS**				9911		7227		**17138**
SPLIT %				42.5%		57.5%		**35.7%**	**SPLIT %**				57.8%		42.2%		**64.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,950	12,696	26,646

AM Peak Hour			11:45	08:00	**08:00**	**PM Peak Hour**			16:30	16:45	**16:30**
AM Pk Volume			837	1683	**2317**	**PM Pk Volume**			1642	923	**2526**
Pk Hr Factor			0.951	0.958	**0.970**	**Pk Hr Factor**			0.906	0.986	**0.984**
7 - 9 Volume	0	0	1280	2728	**4008**	**4 - 6 Volume**	0	0	3098	1724	**4822**
7 - 9 Peak Hour			07:15	08:00	**08:00**	**4 - 6 Peak Hour**			16:30	16:45	**16:30**
7 - 9 Pk Volume	0	0	684	1683	**2317**	**4 - 6 Pk Volume**	0	0	1642	923	**2526**
Pk Hr Factor	0.000	0.000	0.851	0.958	**0.970**	**Pk Hr Factor**	0.000	0.000	0.906	0.986	**0.984**

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Fashion Valley Dwy & Avenida De Las Tiendas

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_015

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,805	12,991	25,796

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			18		19		37		12:00			208		194		402	
00:15			17		20		37		12:15			238		240		478	
00:30			10		13		23		12:30			248		279		527	
00:45			3	48	9	61	12	109	12:45			234	928	237	950	471	1878
01:00			4		12		16		13:00			239		210		449	
01:15			4		9		13		13:15			250		221		471	
01:30			10		12		22		13:30			217		201		418	
01:45			3	21	7	40	10	61	13:45			218	924	198	830	416	1754
02:00			3		7		10		14:00			234		196		430	
02:15			0		5		5		14:15			253		198		451	
02:30			1		4		5		14:30			267		187		454	
02:45			3	7	7	23	10	30	14:45			237	991	196	777	433	1768
03:00			6		5		11		15:00			247		180		427	
03:15			2		7		9		15:15			230		201		431	
03:30			3		6		9		15:30			284		216		500	
03:45			4	15	12	30	16	45	15:45			309	1070	206	803	515	1873
04:00			2		11		13		16:00			341		186		527	
04:15			3		8		11		16:15			389		221		610	
04:30			7		11		18		16:30			282		220		502	
04:45			10	22	28	58	38	80	16:45			302	1314	220	847	522	2161
05:00			17		23		40		17:00			346		246		592	
05:15			25		47		72		17:15			366		250		616	
05:30			20		42		62		17:30			310		252		562	
05:45			37	99	73	185	110	284	17:45			285	1307	254	1002	539	2309
06:00			54		56		110		18:00			248		211		459	
06:15			69		81		150		18:15			210		199		409	
06:30			95		112		207		18:30			218		176		394	
06:45			124	342	149	398	273	740	18:45			179	855	178	764	357	1619
07:00			127		171		298		19:00			185		177		362	
07:15			139		231		370		19:15			179		149		328	
07:30			170		255		425		19:30			132		155		287	
07:45			190	626	273	930	463	1556	19:45			156	652	152	633	308	1285
08:00			135		265		400		20:00			131		144		275	
08:15			155		272		427		20:15			136		125		261	
08:30			148		313		461		20:30			100		108		208	
08:45			151	589	264	1114	415	1703	20:45			107	474	117	494	224	968
09:00			123		185		308		21:00			101		102		203	
09:15			123		171		294		21:15			92		80		172	
09:30			152		182		334		21:30			94		88		182	
09:45			146	544	203	741	349	1285	21:45			64	351	88	358	152	709
10:00			143		200		343		22:00			79		68		147	
10:15			159		185		344		22:15			41		51		92	
10:30			199		195		394		22:30			31		57		88	
10:45			159	660	187	767	346	1427	22:45			23	174	25	201	48	375
11:00			151		198		349		23:00			23		31		54	
11:15			183		240		423		23:15			12		37		49	
11:30			187		214		401		23:30			20		25		45	
11:45			203	724	207	859	410	1583	23:45			13	68	33	126	46	194
TOTALS				3697		5206		8903	TOTALS				9108		7785		16893
SPLIT %				41.5%		58.5%		34.5%	SPLIT %				53.9%		46.1%		65.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,805	12,991	25,796

AM Peak Hour			11:45	07:45	11:45	PM Peak Hour			16:45	17:00	17:00
AM Pk Volume			897	1123	1817	PM Pk Volume			1324	1002	2309
Pk Hr Factor			0.904	0.897	0.862	Pk Hr Factor			0.904	0.986	0.937
7 - 9 Volume	0	0	1215	2044	3259	4 - 6 Volume	0	0	2621	1849	4470
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			16:45	17:00	17:00
7 - 9 Pk Volume	0	0	650	1123	1751	4 - 6 Pk Volume	0	0	1324	1002	2309
Pk Hr Factor	0.000	0.000	0.855	0.897	0.945	Pk Hr Factor	0.000	0.000	0.904	0.986	0.937

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Fashion Valley Dwy & Avenida De Las Tiendas

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_015

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,570	14,287	27,857

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			12		35		47		12:00			243		249		492	
00:15			13		16		29		12:15			236		231		467	
00:30			9		17		26		12:30			275		251		526	
00:45			3	37	12	80	15	117	12:45			251	1005	247	978	498	1983
01:00			6		14		20		13:00			226		228		454	
01:15			6		15		21		13:15			272		228		500	
01:30			4		15		19		13:30			208		188		396	
01:45			3	19	6	50	9	69	13:45			243	949	202	846	445	1795
02:00			2		11		13		14:00			255		220		475	
02:15			2		7		9		14:15			286		212		498	
02:30			2		8		10		14:30			301		169		470	
02:45			2	8	6	32	8	40	14:45			263	1105	193	794	456	1899
03:00			4		8		12		15:00			218		197		415	
03:15			3		4		7		15:15			225		189		414	
03:30			5		14		19		15:30			307		215		522	
03:45			6	18	19	45	25	63	15:45			323	1073	217	818	540	1891
04:00			3		8		11		16:00			381		206		587	
04:15			4		10		14		16:15			382		247		629	
04:30			9		15		24		16:30			305		206		511	
04:45			13	29	30	63	43	92	16:45			306	1374	262	921	568	2295
05:00			22		23		45		17:00			342		259		601	
05:15			24		34		58		17:15			340		263		603	
05:30			16		54		70		17:30			367		282		649	
05:45			41	103	59	170	100	273	17:45			320	1369	225	1029	545	2398
06:00			50		70		120		18:00			282		233		515	
06:15			61		83		144		18:15			249		214		463	
06:30			97		103		200		18:30			192		210		402	
06:45			146	354	161	417	307	771	18:45			196	919	185	842	381	1761
07:00			116		171		287		19:00			206		175		381	
07:15			131		267		398		19:15			213		167		380	
07:30			186		286		472		19:30			138		162		300	
07:45			218	651	307	1031	525	1682	19:45			146	703	142	646	288	1349
08:00			141		360		501		20:00			147		129		276	
08:15			173		418		591		20:15			121		117		238	
08:30			150		442		592		20:30			92		126		218	
08:45			160	624	410	1630	570	2254	20:45			128	488	114	486	242	974
09:00			129		261		390		21:00			113		112		225	
09:15			146		219		365		21:15			106		89		195	
09:30			141		189		330		21:30			113		97		210	
09:45			174	590	212	881	386	1471	21:45			72	404	64	362	136	766
10:00			151		214		365		22:00			95		83		178	
10:15			160		177		337		22:15			50		87		137	
10:30			196		186		382		22:30			37		76		113	
10:45			176	683	232	809	408	1492	22:45			38	220	64	310	102	530
11:00			169		214		383		23:00			33		57		90	
11:15			212		211		423		23:15			15		58		73	
11:30			191		206		397		23:30			24		42		66	
11:45			186	758	229	860	415	1618	23:45			15	87	30	187	45	274
TOTALS				3874		6068		9942	TOTALS				9696		8219		17915
SPLIT %				39.0%		61.0%		35.7%	SPLIT %				54.1%		45.9%		64.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,570	14,287	27,857

AM Peak Hour			11:45	08:00	08:00	PM Peak Hour			15:30	16:45	16:45
AM Pk Volume			940	1630	2254	PM Pk Volume			1393	1066	2421
Pk Hr Factor			0.855	0.922	0.952	Pk Hr Factor			0.912	0.945	0.933
7 - 9 Volume	0	0	1275	2661	3936	4 - 6 Volume	0	0	2743	1950	4693
7 - 9 Peak Hour			07:30	08:00	08:00	4 - 6 Peak Hour			16:00	16:45	16:45
7 - 9 Pk Volume	0	0	718	1630	2254	4 - 6 Pk Volume	0	0	1374	1066	2421
Pk Hr Factor	0.000	0.000	0.823	0.922	0.952	Pk Hr Factor	0.000	0.000	0.899	0.945	0.933

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Friars Road, From Avenida De Las Tiendas to Ulric Street/SR-163 SB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			33		18			12:00			284		426		
00:15			28		20			12:15			318		418		
00:30			20		15			12:30			333		466		
00:45			18	99	19	72	171	12:45			325	1260	418	1728	2988
01:00			19		11			13:00			333		405		
01:15			11		16			13:15			305		384		
01:30			8		12			13:30			365		365		
01:45			9	47	8	47	94	13:45			384	1387	333	1487	2874
02:00			10		9			14:00			388		305		
02:15			5		10			14:15			366		299		
02:30			4		11			14:30			399		313		
02:45			6	25	8	38	63	14:45			406	1559	305	1222	2781
03:00			5		9			15:00			421		326		
03:15			9		10			15:15			444		333		
03:30			10		7			15:30			405		315		
03:45			5	29	15	41	70	15:45			415	1685	342	1316	3001
04:00			4		18			16:00			495		366		
04:15			9		22			16:15			556		375		
04:30			15		23			16:30			598		352		
04:45			22	50	44	107	157	16:45			515	2164	415	1508	3672
05:00			35		51			17:00			544		388		
05:15			40		68			17:15			605		412		
05:30			51		70			17:30			488		406		
05:45			68	194	84	273	467	17:45			468	2105	384	1590	3695
06:00			77		91			18:00			444		355		
06:15			84		121			18:15			404		342		
06:30			121		145			18:30			323		318		
06:45			135	417	222	579	996	18:45			318	1489	326	1341	2830
07:00			151		235			19:00			284		316		
07:15			184		315			19:15			299		305		
07:30			235		342			19:30			242		284		
07:45			219	789	375	1267	2056	19:45			222	1047	222	1127	2174
08:00			211		354			20:00			218		205		
08:15			205		318			20:15			205		161		
08:30			189		333			20:30			184		141		
08:45			191	796	305	1310	2106	20:45			161	768	108	615	1383
09:00			184		284			21:00			132		88		
09:15			122		262			21:15			141		70		
09:30			135		242			21:30			151		65		
09:45			141	582	251	1039	1621	21:45			166	590	77	300	890
10:00			168		284			22:00			122		54		
10:15			184		275			22:15			108		40		
10:30			195		312			22:30			88		35		
10:45			206	753	333	1204	1957	22:45			70	388	28	157	545
11:00			235		390			23:00			65		33		
11:15			254		377			23:15			44		31		
11:30			295		388			23:30			45		28		
11:45			265	1049	388	1543	2592	23:45			35	189	26	118	307
Total Vol.			4830		7520		**12350**				14631		12509		**27140**

Daily Totals

NB	SB	EB	WB	Combined
		19461	20029	**39490**

	AM			PM		
Split %	39.1%	60.9%	**31.3%**	53.9%	46.1%	**68.7%**
Peak Hour	11:45	11:45	**11:45**	16:30	12:00	**16:30**
Volume	1200	1698	**2898**	2262	1728	**3829**
P.H.F.	0.90	0.91	**0.91**	0.93	0.93	**0.94**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Friars Road, From Avenida De Las Tiendas to Ulric Street/SR-163 SB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			40		33			12:00			270		418		
00:15			22		28			12:15			315		435		
00:30			28		20			12:30			333		466		
00:45			20	110	19	100	210	12:45			341	1259	419	1738	2997
01:00			19		22			13:00			333		404		
01:15			22		28			13:15			305		388		
01:30			16		20			13:30			318		366		
01:45			11	68	15	85	153	13:45			326	1282	318	1476	2758
02:00			15		11			14:00			333		333		
02:15			9		9			14:15			305		313		
02:30			12		12			14:30			315		342		
02:45			8	44	16	48	92	14:45			366	1319	326	1314	2633
03:00			9		11			15:00			395		352		
03:15			11		11			15:15			384		368		
03:30			8		8			15:30			406		340		
03:45			4	32	9	39	71	15:45			425	1610	333	1393	3003
04:00			9		10			16:00			488		366		
04:15			11		35			16:15			529		384		
04:30			16		44			16:30			615		365		
04:45			28	64	51	140	204	16:45			503	2135	444	1559	3694
05:00			35		68			17:00			555		370		
05:15			44		70			17:15			569		415		
05:30			68		88			17:30			532		406		
05:45			84	231	99	325	556	17:45			550	2206	384	1575	3781
06:00			90		70			18:00			506		395		
06:15			91		118			18:15			444		362		
06:30			130		165			18:30			465		336		
06:45			148	459	242	595	1054	18:45			403	1818	348	1441	3259
07:00			131		222			19:00			362		312		
07:15			188		335			19:15			284		290		
07:30			215		341			19:30			262		270		
07:45			228	762	388	1286	2048	19:45			270	1178	252	1124	2302
08:00			178		465			20:00			262		222		
08:15			161		512			20:15			200		166		
08:30			184		541			20:30			213		168		
08:45			188	711	506	2024	2735	20:45			154	829	151	707	1536
09:00			181		448			21:00			140		108		
09:15			155		445			21:15			111		88		
09:30			145		352			21:30			126		95		
09:45			155	636	318	1563	2199	21:45			115	492	78	369	861
10:00			162		333			22:00			105		85		
10:15			131		284			22:15			88		60		
10:30			184		262			22:30			91		40		
10:45			222	699	318	1197	1896	22:45			70	354	32	217	571
11:00			244		399			23:00			66		22		
11:15			238		384			23:15			77		29		
11:30			266		365			23:30			54		20		
11:45			298	1046	395	1543	2589	23:45			33	230	32	103	333
Total Vol.				4862		8945	**13807**					14712		13016	**27728**

Daily Totals

NB	SB	EB	WB	Combined
		19574	21961	**41535**

	AM			PM		
Split %	35.2%	64.8%	**33.2%**	53.1%	46.9%	**66.8%**
Peak Hour	11:45	08:00	**11:45**	16:30	12:00	**16:30**
Volume	1216	2024	**2930**	2242	1738	**3836**
P.H.F.	0.91	0.94	**0.92**	0.91	0.93	**0.97**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Friars Road, From Ulric Street/SR-163 SB Ramps to SR-163 NB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			40		38			12:00			412		418		
00:15			30		40			12:15			444		435		
00:30			22		28			12:30			462		403		
00:45			20	112	21	127	239	12:45			451	1769	456	1712	3481
01:00			18		22			13:00			484		474		
01:15			20		19			13:15			474		435		
01:30			16		20			13:30			454		405		
01:45			19	73	16	77	150	13:45			444	1856	444	1758	3614
02:00			10		11			14:00			406		425		
02:15			11		15			14:15			416		408		
02:30			15		19			14:30			403		384		
02:45			18	54	11	56	110	14:45			421	1646	425	1642	3288
03:00			10		8			15:00			433		444		
03:15			9		9			15:15			451		415		
03:30			5		11			15:30			505		515		
03:45			4	28	18	46	74	15:45			519	1908	535	1909	3817
04:00			9		21			16:00			535		546		
04:15			22		16			16:15			666		515		
04:30			31		19			16:30			635		544		
04:45			25	87	44	100	187	16:45			718	2554	568	2173	4727
05:00			44		51			17:00			726		518		
05:15			50		68			17:15			655		535		
05:30			88		77			17:30			689		555		
05:45			121	303	91	287	590	17:45			622	2692	518	2126	4818
06:00			162		154			18:00			519		404		
06:15			229		168			18:15			544		421		
06:30			252		235			18:30			484		405		
06:45			284	927	319	876	1803	18:45			435	1982	384	1614	3596
07:00			313		305			19:00			435		388		
07:15			333		342			19:15			444		384		
07:30			356		451			19:30			318		291		
07:45			419	1421	505	1603	3024	19:45			365	1562	262	1325	2887
08:00			405		516			20:00			305		270		
08:15			384		518			20:15			284		284		
08:30			362		566			20:30			184		235		
08:45			342	1493	489	2089	3582	20:45			165	938	222	1011	1949
09:00			333		404			21:00			177		206		
09:15			342		323			21:15			191		213		
09:30			325		333			21:30			165		141		
09:45			319	1319	342	1402	2721	21:45			135	668	111	671	1339
10:00			305		333			22:00			105		105		
10:15			332		318			22:15			88		98		
10:30			368		365			22:30			90		105		
10:45			370	1375	388	1404	2779	22:45			70	353	84	392	745
11:00			355		419			23:00			65		70		
11:15			345		416			23:15			77		65		
11:30			405		444			23:30			54		44		
11:45			419	1524	435	1714	3238	23:45			42	238	35	214	452
Total Vol.				8716		9781	**18497**					18166		16547	**34713**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
			26882	26328	**53210**

	AM			PM		
Split %	47.1%	52.9%	**34.8%**	52.3%	47.7%	**65.2%**
Peak Hour	11:45	07:45	**07:45**	16:45	16:45	**16:45**
Volume	1737	2105	**3675**	2788	2176	**4964**
P.H.F.	0.94	0.93	**0.99**	0.96	0.96	**0.97**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Friars Road, From Ulric Street/SR-163 SB Ramps to SR-163 NB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			35		41			12:00			389		398		
00:15			28		40			12:15			416		415		
00:30			21		35			12:30			400		444		
00:45			19	103	33	149	252	12:45			414	1619	413	1670	3289
01:00			20		28			13:00			462		454		
01:15			22		20			13:15			435		456		
01:30			15		19			13:30			444		404		
01:45			18	75	20	87	162	13:45			405	1746	399	1713	3459
02:00			20		16			14:00			389		384		
02:15			13		18			14:15			388		388		
02:30			11		22			14:30			399		389		
02:45			15	59	13	69	128	14:45			349	1525	412	1573	3098
03:00			11		14			15:00			396		406		
03:15			16		10			15:15			419		428		
03:30			10		8			15:30			444		484		
03:45			8	45	9	41	86	15:45			511	1770	454	1772	3542
04:00			9		15			16:00			635		512		
04:15			15		18			16:15			684		621		
04:30			45		22			16:30			698		588		
04:45			51	120	35	90	210	16:45			715	2732	615	2336	5068
05:00			44		55			17:00			788		659		
05:15			68		70			17:15			715		592		
05:30			70		84			17:30			705		561		
05:45			109	291	99	308	599	17:45			598	2806	503	2315	5121
06:00			165		128			18:00			555		484		
06:15			210		141			18:15			505		444		
06:30			284		219			18:30			464		412		
06:45			319	978	235	723	1701	18:45			444	1968	382	1722	3690
07:00			305		362			19:00			404		355		
07:15			310		469			19:15			419		362		
07:30			416		484			19:30			318		333		
07:45			421	1452	515	1830	3282	19:45			306	1447	280	1330	2777
08:00			395		505			20:00			377		295		
08:15			399		568			20:15			295		212		
08:30			366		578			20:30			215		211		
08:45			352	1512	505	2156	3668	20:45			205	1092	205	923	2015
09:00			349		404			21:00			180		210		
09:15			363		384			21:15			174		184		
09:30			377		316			21:30			111		151		
09:45			326	1415	333	1437	2852	21:45			141	606	144	689	1295
10:00			309		318			22:00			135		101		
10:15			328		342			22:15			95		106		
10:30			316		355			22:30			77		84		
10:45			342	1295	362	1377	2672	22:45			68	375	70	361	736
11:00			362		380			23:00			51		40		
11:15			355		411			23:15			44		35		
11:30			384		400			23:30			40		42		
11:45			391	1492	416	1607	3099	23:45			38	173	31	148	321
Total Vol.			8837		9874		**18711**				17859		16552		**34411**

Daily Totals

NB	SB	EB	WB	Combined
		26696	26426	**53122**

	AM			PM		
Split %	47.2%	52.8%	**35.2%**	51.9%	48.1%	**64.8%**
Peak Hour	07:30	07:45	**07:45**	16:45	16:15	**16:30**
Volume	1631	2166	**3747**	2923	2483	**5370**
P.H.F.	0.97	0.94	**0.97**	0.93	0.94	**0.93**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Friars Road, From SR-163 NB Ramps to Frazee Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			55		40			12:00			354		338		
00:15			42		45			12:15			345		345		
00:30			35		50			12:30			362		395		
00:45			40	172	40	175	347	12:45			384	1445	404	1482	2927
01:00			28		35			13:00			333		419		
01:15			29		44			13:15			342		403		
01:30			20		41			13:30			384		416		
01:45			19	96	28	148	244	13:45			395	1454	365	1603	3057
02:00			20		21			14:00			419		377		
02:15			16		19			14:15			465		384		
02:30			11		20			14:30			444		395		
02:45			15	62	16	76	138	14:45			428	1756	384	1540	3296
03:00			16		18			15:00			495		410		
03:15			11		22			15:15			513		464		
03:30			18		19			15:30			542		444		
03:45			35	80	21	80	160	15:45			513	2063	451	1769	3832
04:00			44		35			16:00			618		484		
04:15			51		40			16:15			605		526		
04:30			68		44			16:30			666		555		
04:45			78	241	51	170	411	16:45			712	2601	562	2127	4728
05:00			81		90			17:00			745		598		
05:15			94		77			17:15			698		568		
05:30			111		126			17:30			642		542		
05:45			151	437	159	452	889	17:45			625	2710	509	2217	4927
06:00			184		219			18:00			626		444		
06:15			235		205			18:15			584		416		
06:30			222		222			18:30			505		406		
06:45			295	936	284	930	1866	18:45			484	2199	384	1650	3849
07:00			319		351			19:00			395		395		
07:15			421		428			19:15			384		384		
07:30			488		465			19:30			305		388		
07:45			461	1689	555	1799	3488	19:45			322	1406	352	1519	2925
08:00			568		518			20:00			284		313		
08:15			505		542			20:15			268		305		
08:30			518		506			20:30			222		284		
08:45			451	2042	513	2079	4121	20:45			248	1022	262	1164	2186
09:00			419		484			21:00			219		222		
09:15			405		405			21:15			180		216		
09:30			384		362			21:30			121		200		
09:45			352	1560	385	1636	3196	21:45			105	625	180	818	1443
10:00			333		333			22:00			111		165		
10:15			318		319			22:15			80		70		
10:30			305		326			22:30			70		54		
10:45			342	1298	333	1311	2609	22:45			54	315	44	333	648
11:00			316		315			23:00			55		40		
11:15			342		342			23:15			35		35		
11:30			313		348			23:30			42		40		
11:45			333	1304	326	1331	2635	23:45			38	170	44	159	329
Total Vol.			9917		10187		**20104**				17766		16381		**34147**

Daily Totals

NB	SB	EB	WB	Combined
		27683	26568	**54251**

	AM			PM		
Split %	49.3%	50.7%	**37.1%**	52.0%	48.0%	**62.9%**
Peak Hour	07:45	07:45	**07:45**	16:30	16:30	**16:30**
Volume	2052	2121	**4173**	2821	2283	**5104**
P.H.F.	0.90	0.96	**0.96**	0.95	0.95	**0.95**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Friars Road, From SR-163 NB Ramps to Frazee Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			44		50			12:00			368		384		
00:15			32		44			12:15			377		362		
00:30			34		51			12:30			384		374		
00:45			28	138	28	173	311	12:45			336	1465	385	1505	2970
01:00			22		21			13:00			315		391		
01:15			21		35			13:15			363		416		
01:30			23		33			13:30			315		444		
01:45			15	81	41	130	211	13:45			345	1338	405	1656	2994
02:00			19		28			14:00			395		384		
02:15			11		20			14:15			345		412		
02:30			11		16			14:30			384		406		
02:45			15	56	18	82	138	14:45			416	1540	418	1620	3160
03:00			18		20			15:00			405		409		
03:15			19		19			15:15			425		424		
03:30			15		15			15:30			456		468		
03:45			11	63	11	65	128	15:45			484	1770	474	1775	3545
04:00			19		31			16:00			615		525		
04:15			44		28			16:15			666		526		
04:30			35		41			16:30			681		566		
04:45			68	166	55	155	321	16:45			715	2677	603	2220	4897
05:00			70		68			17:00			542		574		
05:15			84		84			17:15			409		535		
05:30			91		111			17:30			689		541		
05:45			141	386	145	408	794	17:45			621	2261	513	2163	4424
06:00			162		235			18:00			584		484		
06:15			191		242			18:15			519		461		
06:30			235		252			18:30			506		444		
06:45			256	844	268	997	1841	18:45			516	2125	419	1808	3933
07:00			342		351			19:00			425		406		
07:15			428		444			19:15			404		385		
07:30			451		485			19:30			385		333		
07:45			513	1734	513	1793	3527	19:45			345	1559	346	1470	3029
08:00			568		562			20:00			318		319		
08:15			488		551			20:15			288		303		
08:30			492		589			20:30			265		316		
08:45			461	2009	477	2179	4188	20:45			248	1119	284	1222	2341
09:00			411		413			21:00			235		219		
09:15			408		444			21:15			222		235		
09:30			416		385			21:30			184		221		
09:45			404	1639	333	1575	3214	21:45			116	757	202	877	1634
10:00			358		345			22:00			97		155		
10:15			342		328			22:15			84		80		
10:30			333		306			22:30			88		91		
10:45			316	1349	345	1324	2673	22:45			70	339	54	380	719
11:00			305		355			23:00			54		40		
11:15			318		352			23:15			44		33		
11:30			363		368			23:30			48		42		
11:45			312	1298	345	1420	2718	23:45			35	181	32	147	328
Total Vol.			9763		10301		**20064**				17131		16843		**33974**

Daily Totals

NB	SB	EB	WB	Combined
		26894	27144	**54038**

	AM			PM		
Split %	48.7%	51.3%	**37.1%**	50.4%	49.6%	**62.9%**
Peak Hour	07:45	07:45	**07:45**	16:00	16:30	**16:00**
Volume	2061	2215	**4276**	2677	2278	**4897**
P.H.F.	0.91	0.94	**0.95**	0.94	0.94	**0.93**

Segment ID: 19

Friars Rd from Frazee Rd to Mission Center Rd

AM Peak Period Heavy Vehicle Percentage: 1.95%

Noon Peak Period Heavy Vehicle Percentage: 1.75%

PM Period Heavy Vehicle Percentage: 1.30%

Average Daily Heavy Vehicle Percentage: 1.50%

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Frazee Rd & Mission Center Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_019

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	174	6	0	0	0	0	0	0	0	0	0	0	180
01:00	0	95	10	0	0	0	0	0	0	0	0	0	0	105
02:00	0	70	4	0	2	0	0	0	1	0	0	0	0	77
03:00	0	75	3	0	2	0	0	0	3	0	0	0	0	83
04:00	0	164	10	0	1	0	0	0	1	0	0	0	0	176
05:00	0	471	38	0	7	0	0	0	5	0	0	0	0	521
06:00	0	1157	97	2	35	0	0	1	3	0	0	0	0	1295
07:00	2	2404	161	3	39	4	0	4	3	0	0	0	0	2620
08:00	2	2345	135	5	32	1	0	8	1	0	0	0	0	2529
09:00	4	1830	132	3	32	4	1	2	1	0	0	0	0	2009
10:00	4	1970	129	1	41	1	0	5	0	0	0	0	0	2151
11:00	3	2350	160	5	43	2	0	3	2	0	0	0	0	2568
12:00 PM	2	2638	178	0	39	6	0	2	0	0	0	0	0	2865
13:00	4	2478	155	1	39	5	0	0	2	0	0	0	0	2684
14:00	0	2459	148	2	51	1	1	5	0	0	0	0	0	2667
15:00	7	2943	179	2	27	1	0	1	1	0	0	0	0	3161
16:00	2	3322	188	0	46	0	0	2	3	0	0	0	0	3563
17:00	3	3413	179	1	43	2	1	0	1	0	0	0	0	3643
18:00	2	2724	143	2	23	2	0	0	0	0	0	0	0	2896
19:00	2	2206	111	0	17	0	0	0	0	0	0	0	0	2336
20:00	0	1554	78	0	11	1	0	0	0	0	0	0	0	1644
21:00	0	1173	58	0	9	0	0	0	0	0	0	0	0	1240
22:00	0	676	31	1	6	0	0	0	0	0	0	0	0	714
23:00	0	364	19	0	0	0	0	0	1	0	0	0	0	384
Totals	37	39055	2352	28	545	30	3	33	28					42111
% of Totals	0%	93%	6%	0%	1%	0%	0%	0%	0%					100%

AM Volumes	15	13105	885	19	234	12	1	23	20	0	0	0	0	14314
% AM	0%	31%	2%	0%	1%	0%	0%	0%	0%					34%
AM Peak Hour	09:00	07:00	07:00	08:00	11:00	07:00	09:00	08:00	05:00					07:00
Volume	4	2404	161	5	43	4	1	8	5					2620
PM Volumes	22	25950	1467	9	311	18	2	10	8	0	0	0	0	27797
% PM	0%	62%	3%	0%	1%	0%	0%	0%	0%					66%
PM Peak Hour	15:00	17:00	16:00	14:00	14:00	12:00	14:00	14:00	16:00					17:00
Volume	7	3413	188	2	51	6	1	5	3					3643

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	5149	⟷	12%	5549	⟷	13%	7206	⟷	17%	24207	⟷	57%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 >=4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

19

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Frazee Rd & Mission Center Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_019

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,226	19,885	42,111

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			47		18		65		12:00			353		342		695	
00:15			23		22		45		12:15			344		363		707	
00:30			19		17		36		12:30			388		396		784	
00:45			22	111	12	69	34	180	12:45			355	1440	324	1425	679	2865
01:00			18		14		32		13:00			380		317		697	
01:15			8		10		18		13:15			376		291		667	
01:30			20		12		32		13:30			359		314		673	
01:45			13	59	10	46	23	105	13:45			347	1462	300	1222	647	2684
02:00			13		9		22		14:00			331		313		644	
02:15			12		3		15		14:15			346		291		637	
02:30			13		6		19		14:30			360		310		670	
02:45			13	51	8	26	21	77	14:45			383	1420	333	1247	716	2667
03:00			13		7		20		15:00			400		318		718	
03:15			10		6		16		15:15			438		341		779	
03:30			11		7		18		15:30			539		311		850	
03:45			8	42	21	41	29	83	15:45			514	1891	300	1270	814	3161
04:00			10		19		29		16:00			561		343		904	
04:15			4		28		32		16:15			552		343		895	
04:30			12		42		54		16:30			506		323		829	
04:45			13	39	48	137	61	176	16:45			571	2190	364	1373	935	3563
05:00			18		63		81		17:00			575		373		948	
05:15			39		65		104		17:15			595		354		949	
05:30			53		91		144		17:30			563		348		911	
05:45			80	190	112	331	192	521	17:45			521	2254	314	1389	835	3643
06:00			69		132		201		18:00			545		283		828	
06:15			88		170		258		18:15			440		301		741	
06:30			125		266		391		18:30			403		289		692	
06:45			145	427	300	868	445	1295	18:45			382	1770	253	1126	635	2896
07:00			147		392		539		19:00			365		259		624	
07:15			220		427		647		19:15			333		252		585	
07:30			280		455		735		19:30			335		239		574	
07:45			270	917	429	1703	699	2620	19:45			313	1346	240	990	553	2336
08:00			232		435		667		20:00			252		198		450	
08:15			217		444		661		20:15			253		208		461	
08:30			253		366		619		20:30			193		185		378	
08:45			241	943	341	1586	582	2529	20:45			199	897	156	747	355	1644
09:00			225		256		481		21:00			214		134		348	
09:15			266		254		520		21:15			188		136		324	
09:30			231		268		499		21:30			154		166		320	
09:45			275	997	234	1012	509	2009	21:45			140	696	108	544	248	1240
10:00			228		237		465		22:00			136		95		231	
10:15			305		224		529		22:15			131		86		217	
10:30			312		284		596		22:30			83		47		130	
10:45			272	1117	289	1034	561	2151	22:45			90	440	46	274	136	714
11:00			305		287		592		23:00			75		46		121	
11:15			312		298		610		23:15			58		35		93	
11:30			342		330		672		23:30			50		44		94	
11:45			343	1302	351	1266	694	2568	23:45			42	225	34	159	76	384
TOTALS				6195		8119		14314	TOTALS				16031		11766		27797
SPLIT %				43.3%		56.7%		34.0%	SPLIT %				57.7%		42.3%		66.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,226	19,885	42,111

AM Peak Hour			11:45	07:30	11:45	PM Peak Hour			16:45	16:45	16:45
AM Pk Volume			1428	1763	2880	PM Pk Volume			2304	1439	3743
Pk Hr Factor			0.920	0.969	0.918	Pk Hr Factor			0.968	0.964	0.986
7 - 9 Volume	0	0	1860	3289	5149	4 - 6 Volume	0	0	4444	2762	7206
7 - 9 Peak Hour			07:15	07:30	07:30	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	1002	1763	2762	4 - 6 Pk Volume	0	0	2304	1439	3743
Pk Hr Factor	0.000	0.000	0.895	0.969	0.939	Pk Hr Factor	0.000	0.000	0.968	0.964	0.986

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Frazee Rd & Mission Center Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_019

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	239	12	0	0	0	0	0	0	0	0	0	0	251
01:00	0	174	18	0	0	0	0	0	0	0	0	0	0	192
02:00	0	97	6	0	1	0	0	0	0	0	0	0	0	104
03:00	0	73	7	0	1	0	0	0	1	0	0	0	0	82
04:00	0	160	15	0	2	0	0	0	0	0	0	0	0	177
05:00	0	427	35	0	5	0	0	1	5	0	0	0	0	473
06:00	0	1172	93	2	28	1	0	2	1	0	0	0	0	1299
07:00	9	2493	155	2	27	3	0	3	4	0	0	0	0	2696
08:00	12	2833	184	6	42	6	0	2	2	0	0	0	0	3087
09:00	2	1965	127	3	28	6	0	2	4	0	0	0	0	2137
10:00	2	2021	131	2	30	3	0	5	1	0	0	0	0	2195
11:00	3	2391	154	2	45	1	0	4	7	0	0	0	0	2607
12:00 PM	3	2634	193	2	32	1	0	6	3	0	0	0	0	2874
13:00	3	2629	164	2	34	6	0	3	2	0	0	0	0	2843
14:00	2	2598	155	3	46	0	0	5	1	0	0	0	0	2810
15:00	3	2970	179	1	32	3	0	6	3	0	0	0	0	3197
16:00	4	3476	186	0	34	2	0	4	5	0	0	0	0	3711
17:00	4	3439	173	0	40	2	0	4	1	0	0	0	0	3663
18:00	1	2523	129	2	16	3	0	0	0	0	0	0	0	2674
19:00	4	2049	100	0	15	0	0	0	0	0	0	0	0	2168
20:00	0	1581	75	0	11	1	0	0	0	0	0	0	0	1668
21:00	0	1097	44	0	15	0	0	0	0	0	0	0	0	1156
22:00	0	826	38	0	11	0	0	0	0	0	0	0	0	875
23:00	0	479	27	0	5	0	0	0	0	0	0	0	0	511
Totals	52	40346	2400	27	500	38		47	40					43450
% of Totals	0%	93%	6%	0%	1%	0%		0%	0%					100%

AM Volumes	28	14045	937	17	209	20	0	19	25	0	0	0	0	15300
% AM	0%	32%	2%	0%	0%	0%		0%	0%					35%
AM Peak Hour	08:00	08:00	08:00	08:00	11:00	08:00		10:00	11:00					08:00
Volume	12	2833	184	6	45	6		5	7					3087
PM Volumes	24	26301	1463	10	291	18	0	28	15	0	0	0	0	28150
% PM	0%	61%	3%	0%	1%	0%		0%	0%					65%
PM Peak Hour	16:00	16:00	12:00	14:00	14:00	13:00		12:00	16:00					16:00
Volume	4	3476	193	3	46	6		6	5					3711

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	5783	⟷	13%	5717	⟷	13%	7374	⟷	17%	24576	⟷	57%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Frazee Rd & Mission Center Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_019

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,677	20,773	43,450

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			38		28		66		12:00			307		332		639	
00:15			38		29		67		12:15			357		368		725	
00:30			37		29		66		12:30			378		349		727	
00:45			33	146	19	105	52	251	12:45			414	1456	369	1418	783	2874
01:00			25		25		50		13:00			424		335		759	
01:15			29		22		51		13:15			404		322		726	
01:30			18		28		46		13:30			343		339		682	
01:45			23	95	22	97	45	192	13:45			339	1510	337	1333	676	2843
02:00			20		20		40		14:00			365		353		718	
02:15			20		8		28		14:15			381		308		689	
02:30			11		6		17		14:30			375		345		720	
02:45			14	65	5	39	19	104	14:45			356	1477	327	1333	683	2810
03:00			10		7		17		15:00			426		372		798	
03:15			8		10		18		15:15			376		366		742	
03:30			11		14		25		15:30			460		371		831	
03:45			14	43	8	39	22	82	15:45			541	1803	285	1394	826	3197
04:00			6		17		23		16:00			563		331		894	
04:15			8		23		31		16:15			559		322		881	
04:30			10		44		54		16:30			621		362		983	
04:45			25	49	44	128	69	177	16:45			596	2339	357	1372	953	3711
05:00			15		54		69		17:00			579		365		944	
05:15			28		74		102		17:15			591		363		954	
05:30			50		88		138		17:30			631		323		954	
05:45			79	172	85	301	164	473	17:45			516	2317	295	1346	811	3663
06:00			76		127		203		18:00			484		308		792	
06:15			83		177		260		18:15			390		293		683	
06:30			146		242		388		18:30			372		260		632	
06:45			161	466	287	833	448	1299	18:45			321	1567	246	1107	567	2674
07:00			151		360		511		19:00			352		217		569	
07:15			198		453		651		19:15			304		227		531	
07:30			272		472		744		19:30			323		246		569	
07:45			308	929	482	1767	790	2696	19:45			275	1254	224	914	499	2168
08:00			223		539		762		20:00			269		207		476	
08:15			276		562		838		20:15			239		183		422	
08:30			256		506		762		20:30			207		191		398	
08:45			251	1006	474	2081	725	3087	20:45			199	914	173	754	372	1668
09:00			237		306		543		21:00			214		133		347	
09:15			264		291		555		21:15			162		122		284	
09:30			277		257		534		21:30			167		117		284	
09:45			254	1032	251	1105	505	2137	21:45			154	697	87	459	241	1156
10:00			278		232		510		22:00			160		120		280	
10:15			283		249		532		22:15			143		83		226	
10:30			277		291		568		22:30			124		72		196	
10:45			292	1130	293	1065	585	2195	22:45			117	544	56	331	173	875
11:00			331		312		643		23:00			110		51		161	
11:15			342		299		641		23:15			86		49		135	
11:30			349		310		659		23:30			92		38		130	
11:45			303	1325	361	1282	664	2607	23:45			53	341	32	170	85	511
TOTALS				6458		8842		15300	TOTALS				16219		11931		28150
SPLIT %				42.2%		57.8%		35.2%	SPLIT %				57.6%		42.4%		64.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,677	20,773	43,450

AM Peak Hour			11:45	07:45	07:45	PM Peak Hour			16:45	16:30	16:30
AM Pk Volume			1345	2089	3152	PM Pk Volume			2397	1447	3834
Pk Hr Factor			0.890	0.929	0.940	Pk Hr Factor			0.950	0.991	0.975
7 - 9 Volume	0	0	1935	3848	5783	4 - 6 Volume	0	0	4656	2718	7374
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			16:45	16:30	16:30
7 - 9 Pk Volume	0	0	1079	2089	3152	4 - 6 Pk Volume	0	0	2397	1447	3834
Pk Hr Factor	0.000	0.000	0.876	0.929	0.940	Pk Hr Factor	0.000	0.000	0.950	0.991	0.975

Segment ID: 20

Friars Rd from Mission Center Rd to Qualcomm Way

AM Peak Period Heavy Vehicle Percentage: 3.80%

Noon Peak Period Heavy Vehicle Percentage: 3.65%

PM Period Heavy Vehicle Percentage: 3.30%

Average Daily Heavy Vehicle Percentage: 3.00%

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Mission Center Rd & Qualcomm Wy

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_020

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	186	9	0	7	0	0	0	1	0	0	0	0	203
01:00	0	95	7	0	1	0	0	0	0	0	0	0	0	103
02:00	0	62	5	0	1	0	0	0	1	0	0	0	0	69
03:00	0	55	2	0	0	0	0	1	0	0	0	0	0	58
04:00	0	116	12	0	2	0	0	0	0	0	0	0	0	130
05:00	0	336	24	0	14	0	0	0	0	0	0	0	0	374
06:00	0	945	81	2	35	0	0	0	0	0	0	0	0	1063
07:00	2	2035	148	4	76	0	0	0	0	0	0	0	0	2265
08:00	6	1968	147	6	72	1	0	0	2	0	0	0	0	2202
09:00	2	1512	116	6	67	0	0	0	2	0	0	0	0	1705
10:00	5	1650	134	9	53	1	0	1	0	0	0	0	0	1853
11:00	4	2141	170	5	85	1	0	3	0	0	0	0	0	2409
12:00 PM	4	2347	171	6	90	1	0	1	1	0	0	0	0	2621
13:00	4	2286	158	6	64	0	0	0	0	0	0	0	0	2518
14:00	3	2198	166	5	68	0	0	0	1	0	0	0	0	2441
15:00	3	2464	173	8	92	1	0	0	0	0	0	0	0	2741
16:00	5	2963	182	7	92	0	0	0	0	0	0	0	0	3249
17:00	3	2953	184	8	96	0	0	0	0	0	0	0	0	3244
18:00	3	2273	149	4	73	0	0	0	0	0	0	0	0	2502
19:00	1	1718	98	2	52	0	0	0	0	0	0	0	0	1871
20:00	0	1289	72	1	34	0	0	0	0	0	0	0	0	1396
21:00	0	812	46	0	27	0	0	0	0	0	0	0	0	885
22:00	0	521	31	0	19	0	0	0	0	0	0	0	0	571
23:00	0	306	21	0	7	0	0	0	0	0	0	0	0	334
Totals	45	33231	2306	79	1127	5		6	8					36807
% of Totals	0%	90%	6%	0%	3%	0%		0%	0%					100%

AM Volumes	19	11101	855	32	413	3	0	5	6	0	0	0	0	12434
% AM	0%	30%	2%	0%	1%	0%		0%	0%					34%
AM Peak Hour	08:00	11:00	11:00	10:00	11:00	08:00		11:00	08:00					11:00
Volume	6	2141	170	9	85	1		3	2					2409
PM Volumes	26	22130	1451	47	714	2	0	1	2	0	0	0	0	24373
% PM	0%	60%	4%	0%	2%	0%		0%	0%					66%
PM Peak Hour	16:00	16:00	17:00	15:00	17:00	12:00		12:00	12:00					16:00
Volume	5	2963	184	8	96	1		1	1					3249

Directional Peak Periods All Classes	AM 7-9 Volume	↔	%	NOON 12-2 Volume	↔	%	PM 4-6 Volume	↔	%	Off Peak Volumes Volume	↔	%
	4467	↔	12%	5139	↔	14%	6493	↔	18%	20708	↔	56%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 >=4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

20

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Mission Center Rd & Qualcomm Wy

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_020

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,895	17,912	36,807

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			38		20		58		12:00			361		305		666	
00:15			31		21		52		12:15			348		310		658	
00:30			33		18		51		12:30			324		329		653	
00:45			29	131	13	72	42	203	12:45			318	1351	326	1270	644	2621
01:00			20		8		28		13:00			343		320		663	
01:15			17		13		30		13:15			332		269		601	
01:30			15		6		21		13:30			308		344		652	
01:45			19	71	5	32	24	103	13:45			327	1310	275	1208	602	2518
02:00			11		2		13		14:00			323		300		623	
02:15			12		10		22		14:15			320		262		582	
02:30			9		4		13		14:30			342		270		612	
02:45			11	43	10	26	21	69	14:45			359	1344	265	1097	624	2441
03:00			8		3		11		15:00			391		303		694	
03:15			7		8		15		15:15			329		299		628	
03:30			5		9		14		15:30			406		282		688	
03:45			5	25	13	33	18	58	15:45			459	1585	272	1156	731	2741
04:00			11		10		21		16:00			499		292		791	
04:15			9		12		21		16:15			440		313		753	
04:30			16		35		51		16:30			514		344		858	
04:45			10	46	27	84	37	130	16:45			505	1958	342	1291	847	3249
05:00			12		45		57		17:00			542		371		913	
05:15			19		56		75		17:15			478		334		812	
05:30			40		72		112		17:30			437		324		761	
05:45			49	120	81	254	130	374	17:45			469	1926	289	1318	758	3244
06:00			66		107		173		18:00			407		280		687	
06:15			69		149		218		18:15			427		271		698	
06:30			90		243		333		18:30			344		247		591	
06:45			94	319	245	744	339	1063	18:45			305	1483	221	1019	526	2502
07:00			110		338		448		19:00			290		210		500	
07:15			148		401		549		19:15			287		203		490	
07:30			167		448		615		19:30			255		182		437	
07:45			189	614	464	1651	653	2265	19:45			263	1095	181	776	444	1871
08:00			153		430		583		20:00			230		176		406	
08:15			163		414		577		20:15			203		159		362	
08:30			196		360		556		20:30			180		153		333	
08:45			174	686	312	1516	486	2202	20:45			176	789	119	607	295	1396
09:00			183		254		437		21:00			150		108		258	
09:15			185		210		395		21:15			145		85		230	
09:30			197		249		446		21:30			130		84		214	
09:45			214	779	213	926	427	1705	21:45			115	540	68	345	183	885
10:00			233		218		451		22:00			95		83		178	
10:15			204		217		421		22:15			76		52		128	
10:30			241		243		484		22:30			94		55		149	
10:45			254	932	243	921	497	1853	22:45			66	331	50	240	116	571
11:00			300		287		587		23:00			66		29		95	
11:15			283		280		563		23:15			52		33		85	
11:30			295		335		630		23:30			62		30		92	
11:45			318	1196	311	1213	629	2409	23:45			41	221	21	113	62	334
TOTALS				4962		7472		12434	TOTALS				13933		10440		24373
SPLIT %				39.9%		60.1%		33.8%	SPLIT %				57.2%		42.8%		66.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,895	17,912	36,807

AM Peak Hour			11:45	07:30	11:45	PM Peak Hour			16:30	16:30	16:30
AM Pk Volume			1351	1756	2606	PM Pk Volume			2039	1391	3430
Pk Hr Factor			0.936	0.946	0.978	Pk Hr Factor			0.940	0.937	0.939
7 - 9 Volume	0	0	1300	3167	4467	4 - 6 Volume	0	0	3884	2609	6493
7 - 9 Peak Hour			07:45	07:30	07:30	4 - 6 Peak Hour			16:30	16:30	16:30
7 - 9 Pk Volume	0	0	701	1756	2428	4 - 6 Pk Volume	0	0	2039	1391	3430
Pk Hr Factor	0.000	0.000	0.894	0.946	0.930	Pk Hr Factor	0.000	0.000	0.940	0.937	0.939

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Mission Center Rd & Qualcomm Wy

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_020

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	196	9	0	5	0	0	0	0	0	0	0	0	210
01:00	0	138	13	0	4	0	1	0	0	0	0	0	0	156
02:00	0	74	8	0	0	0	0	0	0	0	0	0	0	82
03:00	0	58	3	0	1	0	0	0	0	0	0	0	0	62
04:00	0	109	7	0	5	0	0	1	0	0	0	0	0	122
05:00	2	324	27	0	11	1	0	0	0	0	0	0	0	365
06:00	1	994	79	0	44	2	0	0	0	0	0	0	0	1120
07:00	3	2036	153	2	81	2	0	0	0	0	0	0	0	2277
08:00	1	2058	162	5	82	0	0	1	2	0	0	0	0	2311
09:00	5	1587	112	7	70	1	0	3	1	0	0	0	0	1786
10:00	4	1777	135	5	69	0	0	1	0	0	0	0	0	1991
11:00	4	2231	162	5	88	0	0	0	0	0	0	0	0	2490
12:00 PM	4	2393	177	7	81	4	0	0	0	0	0	0	0	2666
13:00	4	2257	173	5	73	0	0	0	0	0	0	0	0	2512
14:00	4	2180	160	7	78	0	0	0	1	0	0	0	0	2430
15:00	4	2526	194	10	97	0	0	0	0	0	0	0	0	2831
16:00	5	2847	194	6	111	0	0	1	0	0	0	0	0	3164
17:00	5	2829	189	8	92	0	0	1	0	0	0	0	0	3124
18:00	4	2257	153	10	75	0	0	0	1	0	0	0	0	2500
19:00	3	1722	105	4	63	0	0	0	0	0	0	0	0	1897
20:00	1	1300	89	4	46	0	1	0	1	0	0	0	0	1442
21:00	1	780	45	0	30	0	0	0	0	0	0	0	0	856
22:00	0	501	34	0	12	0	0	1	0	0	0	0	0	548
23:00	0	324	23	0	9	0	0	0	0	0	0	0	0	356
Totals	55	33498	2406	85	1227	10	2	9	6					37298
% of Totals	0%	90%	6%	0%	3%	0%	0%	0%	0%					100%

AM Volumes	20	11582	870	24	460	6	1	6	3	0	0	0	0	12972
% AM	0%	31%	2%	0%	1%	0%	0%	0%	0%					35%
AM Peak Hour	09:00	11:00	08:00	09:00	11:00	06:00	01:00	09:00	08:00					11:00
Volume	5	2231	162	7	88	2	1	3	2					2490
PM Volumes	35	21916	1536	61	767	4	1	3	3	0	0	0	0	24326
% PM	0%	59%	4%	0%	2%	0%	0%	0%	0%					65%
PM Peak Hour	16:00	16:00	15:00	15:00	16:00	12:00	20:00	16:00	14:00					16:00
Volume	5	2847	194	10	111	4	1	1	1					3164

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	4588	⟷	12%	5178	⟷	14%	6288	⟷	17%	21244	⟷	57%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Mission Center Rd & Qualcomm Wy

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_020

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,125	18,173	37,298

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			45		15		60		12:00			387		314		701	
00:15			29		22		51		12:15			320		320		640	
00:30			41		15		56		12:30			347		338		685	
00:45			25	140	18	70	43	210	12:45			316	1370	324	1296	640	2666
01:00			26		15		41		13:00			361		329		690	
01:15			26		9		35		13:15			351		305		656	
01:30			29		13		42		13:30			294		286		580	
01:45			24	105	14	51	38	156	13:45			307	1313	279	1199	586	2512
02:00			17		9		26		14:00			335		269		604	
02:15			13		8		21		14:15			329		274		603	
02:30			8		10		18		14:30			345		284		629	
02:45			11	49	6	33	17	82	14:45			321	1330	273	1100	594	2430
03:00			7		10		17		15:00			339		293		632	
03:15			15		6		21		15:15			383		293		676	
03:30			4		7		11		15:30			417		339		756	
03:45			7	33	6	29	13	62	15:45			472	1611	295	1220	767	2831
04:00			6		9		15		16:00			444		335		779	
04:15			5		22		27		16:15			522		274		796	
04:30			14		20		34		16:30			489		330		819	
04:45			9	34	37	88	46	122	16:45			459	1914	311	1250	770	3164
05:00			11		32		43		17:00			534		358		892	
05:15			28		43		71		17:15			472		291		763	
05:30			45		65		110		17:30			426		317		743	
05:45			55	139	86	226	141	365	17:45			445	1877	281	1247	726	3124
06:00			54		123		177		18:00			424		274		698	
06:15			75		165		240		18:15			409		234		643	
06:30			73		223		296		18:30			370		238		608	
06:45			96	298	311	822	407	1120	18:45			322	1525	229	975	551	2500
07:00			106		334		440		19:00			307		206		513	
07:15			139		405		544		19:15			271		226		497	
07:30			182		469		651		19:30			264		193		457	
07:45			167	594	475	1683	642	2277	19:45			273	1115	157	782	430	1897
08:00			166		409		575		20:00			247		170		417	
08:15			179		481		660		20:15			224		170		394	
08:30			158		419		577		20:30			173		139		312	
08:45			172	675	327	1636	499	2311	20:45			191	835	128	607	319	1442
09:00			159		271		430		21:00			133		97		230	
09:15			196		254		450		21:15			151		82		233	
09:30			230		247		477		21:30			123		88		211	
09:45			215	800	214	986	429	1786	21:45			98	505	84	351	182	856
10:00			241		218		459		22:00			98		71		169	
10:15			201		233		434		22:15			82		60		142	
10:30			277		253		530		22:30			100		38		138	
10:45			286	1005	282	986	568	1991	22:45			70	350	29	198	99	548
11:00			302		277		579		23:00			61		39		100	
11:15			298		299		597		23:15			58		36		94	
11:30			333		320		653		23:30			69		25		94	
11:45			343	1276	318	1214	661	2490	23:45			44	232	24	124	68	356
TOTALS				5148		7824		12972	TOTALS				13977		10349		24326
SPLIT %				39.7%		60.3%		34.8%	SPLIT %				57.5%		42.5%		65.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,125	18,173	37,298

AM Peak Hour			11:45	07:30	11:45	PM Peak Hour			16:15	12:15	16:15
AM Pk Volume			1397	1834	2687	PM Pk Volume			2004	1311	3277
Pk Hr Factor			0.902	0.953	0.958	Pk Hr Factor			0.938	0.970	0.918
7 - 9 Volume	0	0	1269	3319	4588	4 - 6 Volume	0	0	3791	2497	6288
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			16:15	16:30	16:15
7 - 9 Pk Volume	0	0	694	1834	2528	4 - 6 Pk Volume	0	0	2004	1290	3277
Pk Hr Factor	0.000	0.000	0.953	0.953	0.958	Pk Hr Factor	0.000	0.000	0.938	0.901	0.918

Segment ID: 21

Friars Rd from Qualcomm Way to River Run Dr

AM Peak Period Heavy Vehicle Percentage: 3.45%

Noon Peak Period Heavy Vehicle Percentage: 3.35%

PM Period Heavy Vehicle Percentage: 2.45%

Average Daily Heavy Vehicle Percentage: 2.00%

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Qualcomm Wy & River Run Dr

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_021

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	102	4	0	2	0	0	0	0	0	0	0	0	108
01:00	0	57	3	0	1	0	0	1	0	0	0	0	0	62
02:00	0	55	2	0	0	0	0	0	0	0	0	0	0	57
03:00	0	52	6	0	0	0	0	0	0	0	0	0	0	58
04:00	0	109	8	0	5	0	0	1	0	0	0	0	0	123
05:00	1	262	30	2	17	0	0	1	0	0	0	0	0	313
06:00	0	739	77	0	37	0	0	1	0	0	0	0	0	854
07:00	2	1525	135	2	49	2	0	0	0	0	0	0	0	1715
08:00	0	1647	146	5	54	1	0	1	0	0	0	0	0	1854
09:00	1	1338	126	6	50	3	0	1	1	0	0	0	0	1526
10:00	1	1568	139	3	45	5	0	2	0	0	0	0	0	1763
11:00	1	1804	155	3	63	2	0	2	1	0	0	0	0	2031
12:00 PM	2	2052	167	1	61	0	1	2	0	0	0	0	0	2286
13:00	1	2047	174	2	63	1	1	0	1	0	0	0	0	2290
14:00	0	2067	166	1	52	5	0	2	1	0	0	0	0	2294
15:00	2	2284	186	3	64	2	1	4	0	0	0	0	0	2546
16:00	2	2599	216	8	62	1	0	6	0	0	0	0	0	2894
17:00	1	2753	205	3	59	2	0	7	0	0	0	0	0	3030
18:00	0	2276	164	1	42	2	0	1	0	0	0	0	0	2486
19:00	0	1684	118	0	36	1	0	0	0	0	0	0	0	1839
20:00	0	1237	96	0	20	0	0	0	1	0	0	0	0	1354
21:00	0	816	58	2	17	0	0	1	0	0	0	0	0	894
22:00	0	462	34	0	12	0	0	0	0	0	0	0	0	508
23:00	0	259	18	0	5	0	0	0	0	0	0	0	0	282
Totals	14	29794	2433	42	816	27	3	33	5					33167
% of Totals	0%	90%	7%	0%	2%	0%	0%	0%	0%					100%

AM Volumes	6	9258	831	21	323	13	0	10	2	0	0	0	0	10464
% AM	0%	28%	3%	0%	1%	0%		0%	0%					32%
AM Peak Hour	07:00	11:00	11:00	09:00	11:00	10:00		10:00	09:00					11:00
Volume	2	1804	155	6	63	5		2	1					2031
PM Volumes	8	20536	1602	21	493	14	3	23	3	0	0	0	0	22703
% PM	0%	62%	5%	0%	1%	0%	0%	0%	0%					68%
PM Peak Hour	12:00	17:00	16:00	16:00	15:00	14:00	12:00	17:00	13:00					17:00
Volume	2	2753	216	8	64	5	1	7	1					3030

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	3569	⟷	11%	4576	⟷	14%	5924	⟷	18%	19098	⟷	58%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Qualcomm Wy & River Run Dr

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_021

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,346	13,821	33,167

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			20		15		35		12:00			358		239		597	
00:15			15		18		33		12:15			363		218		581	
00:30			10		10		20		12:30			326		219		545	
00:45			8	53	12	55	20	108	12:45			343	1390	220	896	563	2286
01:00			10		6		16		13:00			345		249		594	
01:15			6		10		16		13:15			322		239		561	
01:30			6		4		10		13:30			336		222		558	
01:45			14	36	6	26	20	62	13:45			337	1340	240	950	577	2290
02:00			12		3		15		14:00			327		210		537	
02:15			6		7		13		14:15			365		218		583	
02:30			8		7		15		14:30			366		255		621	
02:45			7	33	7	24	14	57	14:45			341	1399	212	895	553	2294
03:00			8		7		15		15:00			389		236		625	
03:15			5		5		10		15:15			391		222		613	
03:30			10		6		16		15:30			424		210		634	
03:45			8	31	9	27	17	58	15:45			437	1641	237	905	674	2546
04:00			12		10		22		16:00			503		226		729	
04:15			6		26		32		16:15			445		218		663	
04:30			11		19		30		16:30			505		269		774	
04:45			10	39	29	84	39	123	16:45			496	1949	232	945	728	2894
05:00			10		33		43		17:00			529		295		824	
05:15			22		35		57		17:15			500		259		759	
05:30			32		65		97		17:30			513		230		743	
05:45			36	100	80	213	116	313	17:45			470	2012	234	1018	704	3030
06:00			51		108		159		18:00			480		235		715	
06:15			60		112		172		18:15			421		204		625	
06:30			74		149		223		18:30			423		197		620	
06:45			113	298	187	556	300	854	18:45			331	1655	195	831	526	2486
07:00			120		245		365		19:00			331		170		501	
07:15			147		253		400		19:15			309		143		452	
07:30			174		290		464		19:30			303		175		478	
07:45			184	625	302	1090	486	1715	19:45			282	1225	126	614	408	1839
08:00			191		324		515		20:00			258		133		391	
08:15			161		311		472		20:15			253		119		372	
08:30			161		281		442		20:30			193		126		319	
08:45			199	712	226	1142	425	1854	20:45			164	868	108	486	272	1354
09:00			149		186		335		21:00			179		89		268	
09:15			155		215		370		21:15			157		77		234	
09:30			189		221		410		21:30			127		67		194	
09:45			208	701	203	825	411	1526	21:45			119	582	79	312	198	894
10:00			234		219		453		22:00			112		66		178	
10:15			250		192		442		22:15			79		51		130	
10:30			245		179		424		22:30			75		40		115	
10:45			257	986	187	777	444	1763	22:45			46	312	39	196	85	508
11:00			275		203		478		23:00			50		26		76	
11:15			269		216		485		23:15			52		15		67	
11:30			292		234		526		23:30			54		21		75	
11:45			322	1158	220	873	542	2031	23:45			45	201	19	81	64	282
TOTALS				4772		5692		**10464**	**TOTALS**				14574		8129		**22703**
SPLIT %				45.6%		54.4%		**31.5%**	**SPLIT %**				64.2%		35.8%		**68.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,346	13,821	33,167

AM Peak Hour			11:45	07:30	**11:45**	**PM Peak Hour**			16:45	16:30	**16:30**
AM Pk Volume			1369	1227	**2265**	**PM Pk Volume**			2038	1055	**3085**
Pk Hr Factor			0.943	0.947	**0.948**	**Pk Hr Factor**			0.963	0.894	**0.936**
7 - 9 Volume	0	0	1337	2232	**3569**	**4 - 6 Volume**	0	0	3961	1963	**5924**
7 - 9 Peak Hour			08:00	07:30	**07:30**	**4 - 6 Peak Hour**			16:45	16:30	**16:30**
7 - 9 Pk Volume	0	0	712	1227	**1937**	**4 - 6 Pk Volume**	0	0	2038	1055	**3085**
Pk Hr Factor	0.000	0.000	0.894	0.947	**0.940**	**Pk Hr Factor**	0.000	0.000	0.963	0.894	**0.936**

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Qualcomm Wy & River Run Dr

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_021

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	163	15	0	4	0	0	0	0	0	0	0	0	182
01:00	0	106	10	0	2	0	0	0	0	0	0	0	0	118
02:00	0	68	3	0	2	1	0	0	0	0	0	0	0	74
03:00	0	57	6	0	3	0	0	0	1	0	0	0	0	67
04:00	0	85	9	0	2	1	0	0	0	0	0	0	0	97
05:00	0	268	30	0	10	0	0	0	3	0	0	0	0	311
06:00	0	796	74	3	37	1	0	4	1	0	0	0	0	916
07:00	2	1556	135	1	46	4	0	1	1	0	0	0	0	1746
08:00	0	1558	133	3	55	3	0	1	1	0	0	0	0	1754
09:00	1	1322	113	3	46	3	0	2	1	0	0	0	0	1491
10:00	0	1631	147	5	54	2	0	0	1	0	0	0	0	1840
11:00	1	1964	167	2	60	5	0	2	1	0	0	0	0	2202
12:00 PM	1	2079	167	2	68	3	0	2	0	0	0	0	0	2322
13:00	1	1952	149	2	57	4	0	0	0	0	0	0	0	2165
14:00	0	2042	162	3	63	4	0	0	2	0	0	0	0	2276
15:00	1	2245	188	3	59	4	0	0	0	0	0	0	0	2500
16:00	1	2633	194	5	55	1	2	5	0	0	0	0	0	2896
17:00	1	2778	210	3	55	2	0	4	2	0	0	0	0	3055
18:00	1	2246	165	3	47	0	0	1	0	0	0	0	0	2463
19:00	0	1683	126	2	39	0	0	0	0	0	0	0	0	1850
20:00	0	1093	99	0	20	1	0	1	0	0	0	0	0	1214
21:00	0	815	67	1	19	1	0	0	0	0	0	0	0	903
22:00	0	505	35	1	10	0	0	0	0	0	0	0	0	551
23:00	0	304	26	0	4	0	0	0	0	0	0	0	0	334
Totals	10	29949	2430	42	817	40	2	23	14					33327
% of Totals	0%	90%	7%	0%	2%	0%	0%	0%	0%					100%

AM Volumes	4	9574	842	17	321	20	0	10	10	0	0	0	0	10798
% AM	0%	29%	3%	0%	1%	0%		0%	0%					32%
AM Peak Hour	07:00	11:00	11:00	10:00	11:00	11:00		06:00	05:00					11:00
Volume	2	1964	167	5	60	5		4	3					2202
PM Volumes	6	20375	1588	25	496	20	2	13	4	0	0	0	0	22529
% PM	0%	61%	5%	0%	1%	0%	0%	0%	0%					68%
PM Peak Hour	12:00	17:00	17:00	16:00	12:00	13:00	16:00	16:00	14:00					17:00
Volume	1	2778	210	5	68	4	2	5	2					3055

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	3500	⟷	11%	4487	⟷	13%	5951	⟷	18%	19389	⟷	58%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Qualcomm Wy & River Run Dr

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_021

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,264	14,063	33,327

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			42		13		55		12:00			337		250		587	
00:15			36		17		53		12:15			336		241		577	
00:30			34		10		44		12:30			337		244		581	
00:45			20	132	10	50	30	182	12:45			348	1358	229	964	577	2322
01:00			20		12		32		13:00			330		229		559	
01:15			17		8		25		13:15			313		219		532	
01:30			16		18		34		13:30			335		232		567	
01:45			21	74	6	44	27	118	13:45			306	1284	201	881	507	2165
02:00			20		8		28		14:00			319		222		541	
02:15			7		8		15		14:15			353		245		598	
02:30			16		6		22		14:30			368		231		599	
02:45			7	50	2	24	9	74	14:45			322	1362	216	914	538	2276
03:00			6		11		17		15:00			368		212		580	
03:15			8		3		11		15:15			382		238		620	
03:30			16		8		24		15:30			422		267		689	
03:45			9	39	6	28	15	67	15:45			381	1553	230	947	611	2500
04:00			7		11		18		16:00			470		246		716	
04:15			4		18		22		16:15			466		221		687	
04:30			10		16		26		16:30			458		276		734	
04:45			12	33	19	64	31	97	16:45			503	1897	256	999	759	2896
05:00			11		32		43		17:00			517		283		800	
05:15			20		32		52		17:15			486		276		762	
05:30			37		58		95		17:30			538		246		784	
05:45			44	112	77	199	121	311	17:45			483	2024	226	1031	709	3055
06:00			60		103		163		18:00			473		258		731	
06:15			65		131		196		18:15			425		218		643	
06:30			79		157		236		18:30			384		209		593	
06:45			112	316	209	600	321	916	18:45			320	1602	176	861	496	2463
07:00			109		244		353		19:00			320		183		503	
07:15			147		259		406		19:15			312		180		492	
07:30			153		306		459		19:30			280		147		427	
07:45			207	616	321	1130	528	1746	19:45			256	1168	172	682	428	1850
08:00			169		346		515		20:00			210		126		336	
08:15			170		295		465		20:15			215		111		326	
08:30			146		246		392		20:30			209		84		293	
08:45			156	641	226	1113	382	1754	20:45			177	811	82	403	259	1214
09:00			168		201		369		21:00			217		91		308	
09:15			167		198		365		21:15			147		68		215	
09:30			213		168		381		21:30			143		68		211	
09:45			197	745	179	746	376	1491	21:45			109	616	60	287	169	903
10:00			223		202		425		22:00			141		43		184	
10:15			228		202		430		22:15			106		47		153	
10:30			253		218		471		22:30			84		36		120	
10:45			268	972	246	868	514	1840	22:45			52	383	42	168	94	551
11:00			285		221		506		23:00			68		29		97	
11:15			302		202		504		23:15			66		33		99	
11:30			315		259		574		23:30			50		27		77	
11:45			341	1243	277	959	618	2202	23:45			49	233	12	101	61	334
TOTALS				4973		5825		**10798**	**TOTALS**				14291		8238		**22529**
SPLIT %				46.1%		53.9%		**32.4%**	**SPLIT %**				63.4%		36.6%		**67.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,264	14,063	33,327

AM Peak Hour			11:45	07:30	**11:45**	**PM Peak Hour**			16:45	16:30	**16:45**
AM Pk Volume			1351	1268	**2363**	**PM Pk Volume**			2044	1091	**3105**
Pk Hr Factor			0.990	0.916	**0.956**	**Pk Hr Factor**			0.950	0.964	**0.970**
7 - 9 Volume	0	0	1257	2243	**3500**	**4 - 6 Volume**	0	0	3921	2030	**5951**
7 - 9 Peak Hour			07:30	07:30	**07:30**	**4 - 6 Peak Hour**			16:45	16:30	**16:45**
7 - 9 Pk Volume	0	0	699	1268	**1967**	**4 - 6 Pk Volume**	0	0	2044	1091	**3105**
Pk Hr Factor	0.000	0.000	0.844	0.916	**0.931**	**Pk Hr Factor**	0.000	0.000	0.950	0.964	**0.970**

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. River Run Dr & Fenton Pkwy

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_022

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,930	10,039	21,969

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			31		5		36		12:00			186		174		360	
00:15			13		9		22		12:15			219		165		384	
00:30			12		8		20		12:30			173		175		348	
00:45			13	69	5	27	18	96	12:45			187	765	194	708	381	1473
01:00			8		5		13		13:00			217		157		374	
01:15			9		5		14		13:15			193		158		351	
01:30			6		8		14		13:30			222		135		357	
01:45			9	32	3	21	12	53	13:45			180	812	149	599	329	1411
02:00			8		7		15		14:00			186		168		354	
02:15			0		3		3		14:15			192		151		343	
02:30			5		4		9		14:30			218		144		362	
02:45			4	17	3	17	7	34	14:45			226	822	168	631	394	1453
03:00			6		3		9		15:00			260		169		429	
03:15			8		1		9		15:15			231		173		404	
03:30			2		7		9		15:30			298		150		448	
03:45			3	19	7	18	10	37	15:45			296	1085	154	646	450	1731
04:00			7		6		13		16:00			328		172		500	
04:15			5		8		13		16:15			327		161		488	
04:30			6		19		25		16:30			344		159		503	
04:45			8	26	24	57	32	83	16:45			303	1302	186	678	489	1980
05:00			15		20		35		17:00			409		184		593	
05:15			15		37		52		17:15			332		186		518	
05:30			12		33		45		17:30			353		169		522	
05:45			26	68	58	148	84	216	17:45			294	1388	178	717	472	2105
06:00			33		60		93		18:00			274		144		418	
06:15			30		79		109		18:15			242		152		394	
06:30			44		109		153		18:30			212		153		365	
06:45			65	172	150	398	215	570	18:45			218	946	147	596	365	1542
07:00			67		147		214		19:00			189		129		318	
07:15			91		244		335		19:15			187		129		316	
07:30			105		259		364		19:30			179		128		307	
07:45			120	383	243	893	363	1276	19:45			176	731	123	509	299	1240
08:00			121		241		362		20:00			156		120		276	
08:15			98		254		352		20:15			144		103		247	
08:30			92		235		327		20:30			138		91		229	
08:45			95	406	179	909	274	1315	20:45			106	544	88	402	194	946
09:00			93		128		221		21:00			118		69		187	
09:15			102		131		233		21:15			111		56		167	
09:30			120		131		251		21:30			85		69		154	
09:45			107	422	116	506	223	928	21:45			75	389	49	243	124	632
10:00			106		108		214		22:00			77		34		111	
10:15			115		113		228		22:15			56		40		96	
10:30			150		147		297		22:30			45		17		62	
10:45			127	498	149	517	276	1015	22:45			51	229	14	105	65	334
11:00			154		135		289		23:00			33		23		56	
11:15			171		146		317		23:15			34		19		53	
11:30			168		156		324		23:30			29		19		48	
11:45			186	679	186	623	372	1302	23:45			30	126	10	71	40	197
TOTALS				2791		4134		6925	TOTALS				9139		5905		15044
SPLIT %				40.3%		59.7%		31.5%	SPLIT %				60.7%		39.3%		68.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,930	10,039	21,969

AM Peak Hour			11:45	07:30	11:45	PM Peak Hour			16:45	16:45	16:45
AM Pk Volume			764	997	1464	PM Pk Volume			1397	725	2122
Pk Hr Factor			0.872	0.962	0.953	Pk Hr Factor			0.854	0.974	0.895
7 - 9 Volume	0	0	789	1802	2591	4 - 6 Volume	0	0	2690	1395	4085
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	444	997	1441	4 - 6 Pk Volume	0	0	1397	725	2122
Pk Hr Factor	0.000	0.000	0.917	0.962	0.990	Pk Hr Factor	0.000	0.000	0.854	0.974	0.895

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. River Run Dr & Fenton Pkwy

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_022

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,789	10,391	22,180

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					26		10		36		12:00					188		160		348	
00:15					21		7		28		12:15					174		183		357	
00:30					25		7		32		12:30					185		176		361	
00:45					17	89	12	36	29	125	12:45					209	756	174	693	383	1449
01:00					15		9		24		13:00					206		169		375	
01:15					15		5		20		13:15					220		166		386	
01:30					11		11		22		13:30					188		150		338	
01:45					12	53	5	30	17	83	13:45					190	804	170	655	360	1459
02:00					11		11		22		14:00					195		193		388	
02:15					9		3		12		14:15					213		150		363	
02:30					4		5		9		14:30					222		141		363	
02:45					4	28	0	19	4	47	14:45					192	822	177	661	369	1483
03:00					6		2		8		15:00					223		188		411	
03:15					4		5		9		15:15					220		169		389	
03:30					3		2		5		15:30					272		173		445	
03:45					3	16	6	15	9	31	15:45					264	979	165	695	429	1674
04:00					5		6		11		16:00					277		146		423	
04:15					2		6		8		16:15					324		171		495	
04:30					4		18		22		16:30					319		164		483	
04:45					9	20	24	54	33	74	16:45					338	1258	192	673	530	1931
05:00					17		22		39		17:00					365		202		567	
05:15					17		26		43		17:15					365		182		547	
05:30					13		32		45		17:30					366		193		559	
05:45					21	68	49	129	70	197	17:45					314	1410	151	728	465	2138
06:00					26		54		80		18:00					271		141		412	
06:15					38		88		126		18:15					259		145		404	
06:30					38		101		139		18:30					192		144		336	
06:45					62	164	149	392	211	556	18:45					175	897	126	556	301	1453
07:00					76		142		218		19:00					156		127		283	
07:15					90		202		292		19:15					165		126		291	
07:30					86		262		348		19:30					159		121		280	
07:45					122	374	270	876	392	1250	19:45					159	639	128	502	287	1141
08:00					118		278		396		20:00					153		112		265	
08:15					104		299		403		20:15					139		95		234	
08:30					99		291		390		20:30					125		98		223	
08:45					91	412	266	1134	357	1546	20:45					135	552	99	404	234	956
09:00					86		170		256		21:00					126		65		191	
09:15					87		142		229		21:15					99		56		155	
09:30					97		131		228		21:30					99		52		151	
09:45					115	385	122	565	237	950	21:45					79	403	34	207	113	610
10:00					124		138		262		22:00					65		44		109	
10:15					136		120		256		22:15					75		33		108	
10:30					152		140		292		22:30					51		32		83	
10:45					155	567	136	534	291	1101	22:45					51	242	27	136	78	378
11:00					147		130		277		23:00					42		22		64	
11:15					186		145		331		23:15					43		23		66	
11:30					167		177		344		23:30					44		16		60	
11:45					191	691	169	621	360	1312	23:45					31	160	15	76	46	236
TOTALS						2867		4405		7272	TOTALS						8922		5986		14908
SPLIT %						39.4%		60.6%		32.8%	SPLIT %						59.8%		40.2%		67.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,789	10,391	22,180

AM Peak Hour			11:45	07:45	07:45	PM Peak Hour			16:45	16:45	16:45
AM Pk Volume			738	1138	1581	PM Pk Volume			1434	769	2203
Pk Hr Factor			0.966	0.952	0.981	Pk Hr Factor			0.980	0.952	0.971
7 - 9 Volume	0	0	786	2010	2796	4 - 6 Volume	0	0	2668	1401	4069
7 - 9 Peak Hour			07:45	07:45	07:45	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	443	1138	1581	4 - 6 Pk Volume	0	0	1434	769	2203
Pk Hr Factor	0.000	0.000	0.908	0.952	0.981	Pk Hr Factor	0.000	0.000	0.980	0.952	0.971

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Fenton Pkwy & Northside Dr

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_023

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,471	15,923	28,394

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			22		9		31		12:00			179		254		433	
00:15			17		20		37		12:15			209		272		481	
00:30			12		13		25		12:30			176		280		456	
00:45			16	67	8	50	24	117	12:45			274	838	274	1080	548	1918
01:00			8		6		14		13:00			210		237		447	
01:15			10		12		22		13:15			236		259		495	
01:30			3		7		10		13:30			249		225		474	
01:45			7	28	6	31	13	59	13:45			228	923	227	948	455	1871
02:00			7		9		16		14:00			211		225		436	
02:15			1		4		5		14:15			196		242		438	
02:30			6		6		12		14:30			228		215		443	
02:45			2	16	6	25	8	41	14:45			227	862	267	949	494	1811
03:00			5		5		10		15:00			242		287		529	
03:15			7		4		11		15:15			261		257		518	
03:30			3		6		9		15:30			325		269		594	
03:45			3	18	11	26	14	44	15:45			258	1086	254	1067	512	2153
04:00			5		9		14		16:00			353		252		605	
04:15			8		6		14		16:15			326		264		590	
04:30			5		22		27		16:30			354		240		594	
04:45			8	26	26	63	34	89	16:45			344	1377	301	1057	645	2434
05:00			11		20		31		17:00			350		307		657	
05:15			19		44		63		17:15			368		312		680	
05:30			17		70		87		17:30			375		296		671	
05:45			39	86	121	255	160	341	17:45			339	1432	288	1203	627	2635
06:00			28		95		123		18:00			312		242		554	
06:15			45		146		191		18:15			327		254		581	
06:30			65		193		258		18:30			234		225		459	
06:45			72	210	253	687	325	897	18:45			251	1124	228	949	479	2073
07:00			77		249		326		19:00			189		212		401	
07:15			89		320		409		19:15			177		191		368	
07:30			112		382		494		19:30			175		194		369	
07:45			119	397	405	1356	524	1753	19:45			191	732	186	783	377	1515
08:00			121		381		502		20:00			159		158		317	
08:15			121		402		523		20:15			125		147		272	
08:30			105		340		445		20:30			120		123		243	
08:45			105	452	306	1429	411	1881	20:45			103	507	136	564	239	1071
09:00			81		241		322		21:00			106		90		196	
09:15			99		261		360		21:15			86		95		181	
09:30			113		229		342		21:30			82		105		187	
09:45			98	391	219	950	317	1341	21:45			77	351	62	352	139	703
10:00			104		217		321		22:00			60		55		115	
10:15			123		192		315		22:15			65		50		115	
10:30			141		211		352		22:30			59		30		89	
10:45			144	512	246	866	390	1378	22:45			37	221	21	156	58	377
11:00			154		212		366		23:00			31		37		68	
11:15			163		227		390		23:15			33		43		76	
11:30			174		228		402		23:30			26		34		60	
11:45			212	703	273	940	485	1643	23:45			22	112	23	137	45	249
TOTALS				2906		6678		9584	TOTALS				9565		9245		18810
SPLIT %				30.3%		69.7%		33.8%	SPLIT %				50.9%		49.1%		66.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,471	15,923	28,394

AM Peak Hour			11:45	07:30	07:30	PM Peak Hour			16:45	16:45	16:45
AM Pk Volume			776	1570	2043	PM Pk Volume			1437	1216	2653
Pk Hr Factor			0.915	0.969	0.975	Pk Hr Factor			0.958	0.974	0.975
7 - 9 Volume	0	0	849	2785	3634	4 - 6 Volume	0	0	2809	2260	5069
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	473	1570	2043	4 - 6 Pk Volume	0	0	1437	1216	2653
Pk Hr Factor	0.000	0.000	0.977	0.969	0.975	Pk Hr Factor	0.000	0.000	0.958	0.974	0.975

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Fenton Pkwy & Northside Dr

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_023

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,739	15,734	28,473

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			15		15		30		12:00			198		242		440	
00:15			21		16		37		12:15			223		288		511	
00:30			10		16		26		12:30			191		286		477	
00:45			13	59	17	64	30	123	12:45			266	878	279	1095	545	1973
01:00			9		15		24		13:00			230		228		458	
01:15			7		8		15		13:15			224		252		476	
01:30			5		14		19		13:30			262		242		504	
01:45			8	29	13	50	21	79	13:45			240	956	250	972	490	1928
02:00			3		16		19		14:00			199		219		418	
02:15			5		5		10		14:15			227		219		446	
02:30			5		9		14		14:30			240		216		456	
02:45			4	17	4	34	8	51	14:45			219	885	236	890	455	1775
03:00			7		6		13		15:00			259		235		494	
03:15			5		6		11		15:15			292		226		518	
03:30			4		7		11		15:30			359		246		605	
03:45			6	22	10	29	16	51	15:45			248	1158	266	973	514	2131
04:00			5		12		17		16:00			345		236		581	
04:15			2		11		13		16:15			355		261		616	
04:30			11		18		29		16:30			379		265		644	
04:45			10	28	36	77	46	105	16:45			326	1405	279	1041	605	2446
05:00			12		28		40		17:00			313		323		636	
05:15			19		42		61		17:15			395		293		688	
05:30			23		64		87		17:30			361		309		670	
05:45			24	78	115	249	139	327	17:45			307	1376	280	1205	587	2581
06:00			30		103		133		18:00			317		213		530	
06:15			45		130		175		18:15			334		211		545	
06:30			52		163		215		18:30			247		213		460	
06:45			71	198	259	655	330	853	18:45			229	1127	171	808	400	1935
07:00			87		246		333		19:00			201		208		409	
07:15			78		308		386		19:15			186		149		335	
07:30			106		397		503		19:30			167		167		334	
07:45			128	399	423	1374	551	1773	19:45			195	749	151	675	346	1424
08:00			114		416		530		20:00			149		153		302	
08:15			117		434		551		20:15			121		125		246	
08:30			115		436		551		20:30			114		114		228	
08:45			96	442	404	1690	500	2132	20:45			112	496	105	497	217	993
09:00			102		302		404		21:00			90		94		184	
09:15			105		233		338		21:15			94		82		176	
09:30			112		236		348		21:30			84		69		153	
09:45			99	418	203	974	302	1392	21:45			71	339	60	305	131	644
10:00			116		202		318		22:00			56		63		119	
10:15			120		194		314		22:15			70		51		121	
10:30			167		215		382		22:30			61		45		106	
10:45			178	581	213	824	391	1405	22:45			42	229	37	196	79	425
11:00			166		204		370		23:00			33		38		71	
11:15			186		236		422		23:15			25		32		57	
11:30			207		247		454		23:30			32		36		68	
11:45			204	763	232	919	436	1682	23:45			17	107	32	138	49	245
TOTALS				3034		6939		9973	TOTALS				9705		8795		18500
SPLIT %				30.4%		69.6%		35.0%	SPLIT %				52.5%		47.5%		65.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,739	15,734	28,473

AM Peak Hour			11:30	07:45	07:45	PM Peak Hour			16:30	17:00	16:45
AM Pk Volume			832	1709	2183	PM Pk Volume			1413	1205	2599
Pk Hr Factor			0.933	0.980	0.990	Pk Hr Factor			0.894	0.933	0.944
7 - 9 Volume	0	0	841	3064	3905	4 - 6 Volume	0	0	2781	2246	5027
7 - 9 Peak Hour			07:45	07:45	07:45	4 - 6 Peak Hour			16:30	17:00	16:45
7 - 9 Pk Volume	0	0	474	1709	2183	4 - 6 Pk Volume	0	0	1413	1205	2599
Pk Hr Factor	0.000	0.000	0.926	0.980	0.990	Pk Hr Factor	0.000	0.000	0.894	0.933	0.944

Segment ID: 24

Friars Rd from Northside Dr to San Diego Mission Rd

AM Peak Period Heavy Vehicle Percentage: 9.65%

Noon Peak Period Heavy Vehicle Percentage: 10.55%

PM Period Heavy Vehicle Percentage: 8.40%

Average Daily Heavy Vehicle Percentage: 9.00%

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Northside Dr & San Diego Mission Rd

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_024

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	119	19	0	19	0	0	0	0	0	0	0	0	157
01:00	0	68	9	0	14	0	0	0	0	0	0	0	0	91
02:00	0	68	10	0	12	0	0	0	0	0	0	0	0	90
03:00	0	57	10	0	8	0	0	0	0	0	0	0	0	75
04:00	0	129	20	0	19	0	0	0	0	0	0	0	0	168
05:00	0	435	63	1	70	0	0	0	2	0	0	0	0	571
06:00	1	1068	195	4	105	1	1	1	3	0	0	0	0	1379
07:00	5	1951	296	8	208	1	0	5	6	0	0	0	0	2480
08:00	4	2101	314	8	243	3	0	5	6	0	0	0	0	2684
09:00	7	1701	255	4	198	0	0	5	5	0	0	0	0	2175
10:00	4	1864	308	9	221	3	0	4	12	0	0	0	0	2425
11:00	7	2148	369	9	248	3	0	8	6	0	0	0	0	2798
12:00 PM	3	2414	358	8	271	4	0	7	9	0	0	0	0	3074
13:00	2	2463	399	9	324	3	0	5	5	0	0	0	0	3210
14:00	3	2474	386	5	326	0	0	3	6	0	0	0	0	3203
15:00	3	2610	443	6	305	0	0	4	4	0	0	0	0	3375
16:00	3	3245	473	10	349	4	0	7	11	0	0	0	0	4102
17:00	3	3281	449	7	299	3	0	3	7	0	0	0	0	4052
18:00	7	2675	358	8	239	0	0	0	7	0	0	0	0	3294
19:00	1	2168	282	4	213	0	0	0	4	0	0	0	0	2672
20:00	0	1494	194	3	171	0	0	0	1	0	0	0	0	1863
21:00	0	929	122	1	95	0	0	0	0	0	0	0	0	1147
22:00	0	524	59	0	49	0	0	0	0	0	0	0	0	632
23:00	0	274	36	0	30	0	0	0	0	0	0	0	0	340
Totals	53	36260	5427	104	4036	25	1	57	94					46057
% of Totals	0%	79%	12%	0%	9%	0%	0%	0%	0%					100%

AM Volumes	28	11709	1868	43	1365	11	1	28	40	0	0	0	0	15093
% AM	0%	25%	4%	0%	3%	0%	0%	0%	0%					33%
AM Peak Hour	09:00	11:00	11:00	10:00	11:00	08:00	06:00	11:00	10:00					11:00
Volume	7	2148	369	9	248	3	1	8	12					2798
PM Volumes	25	24551	3559	61	2671	14	0	29	54	0	0	0	0	30964
% PM	0%	53%	8%	0%	6%	0%		0%	0%					67%
PM Peak Hour	18:00	17:00	16:00	16:00	16:00	12:00		12:00	16:00					16:00
Volume	7	3281	473	10	349	4		7	11					4102

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	5164	⟷	11%	6284	⟷	14%	8154	⟷	18%	26455	⟷	57%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Northside Dr & San Diego Mission Rd

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_024

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	25,141	20,916	46,057

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			30		23		53		12:00			422		345		767	
00:15			25		22		47		12:15			413		354		767	
00:30			16		13		29		12:30			424		357		781	
00:45			14	85	14	72	28	157	12:45			410	1669	349	1405	759	3074
01:00			21		11		32		13:00			425		374		799	
01:15			13		12		25		13:15			475		365		840	
01:30			7		8		15		13:30			464		334		798	
01:45			6	47	13	44	19	91	13:45			470	1834	303	1376	773	3210
02:00			10		13		23		14:00			442		371		813	
02:15			7		19		26		14:15			406		329		735	
02:30			15		6		21		14:30			522		322		844	
02:45			10	42	10	48	20	90	14:45			463	1833	348	1370	811	3203
03:00			3		11		14		15:00			504		358		862	
03:15			6		9		15		15:15			476		335		811	
03:30			15		7		22		15:30			585		280		865	
03:45			9	33	15	42	24	75	15:45			515	2080	322	1295	837	3375
04:00			13		20		33		16:00			695		316		1011	
04:15			14		11		25		16:15			741		336		1077	
04:30			18		24		42		16:30			626		366		992	
04:45			27	72	41	96	68	168	16:45			691	2753	331	1349	1022	4102
05:00			31		40		71		17:00			673		406		1079	
05:15			50		57		107		17:15			713		373		1086	
05:30			70		87		157		17:30			614		352		966	
05:45			91	242	145	329	236	571	17:45			538	2538	383	1514	921	4052
06:00			105		140		245		18:00			524		360		884	
06:15			113		181		294		18:15			523		323		846	
06:30			150		236		386		18:30			473		316		789	
06:45			167	535	287	844	454	1379	18:45			469	1989	306	1305	775	3294
07:00			202		289		491		19:00			422		298		720	
07:15			219		367		586		19:15			359		300		659	
07:30			250		431		681		19:30			430		264		694	
07:45			227	898	495	1582	722	2480	19:45			352	1563	247	1109	599	2672
08:00			258		480		738		20:00			342		195		537	
08:15			237		427		664		20:15			321		202		523	
08:30			203		475		678		20:30			286		150		436	
08:45			250	948	354	1736	604	2684	20:45			230	1179	137	684	367	1863
09:00			211		370		581		21:00			222		126		348	
09:15			213		354		567		21:15			216		141		357	
09:30			198		309		507		21:30			162		74		236	
09:45			205	827	315	1348	520	2175	21:45			128	728	78	419	206	1147
10:00			274		299		573		22:00			132		89		221	
10:15			278		314		592		22:15			98		58		156	
10:30			289		320		609		22:30			78		60		138	
10:45			309	1150	342	1275	651	2425	22:45			69	377	48	255	117	632
11:00			348		336		684		23:00			72		35		107	
11:15			355		323		678		23:15			50		36		86	
11:30			404		301		705		23:30			53		33		86	
11:45			403	1510	328	1288	731	2798	23:45			34	209	27	131	61	340
TOTALS				6389		8704		15093	TOTALS				18752		12212		30964
SPLIT %				42.3%		57.7%		32.8%	SPLIT %				60.6%		39.4%		67.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	25,141	20,916	46,057

AM Peak Hour			11:45	07:45	11:45	PM Peak Hour			16:00	17:00	16:30
AM Pk Volume			1662	1877	3046	PM Pk Volume			2753	1514	4179
Pk Hr Factor			0.980	0.948	0.975	Pk Hr Factor			0.929	0.932	0.962
7 - 9 Volume	0	0	1846	3318	5164	4 - 6 Volume	0	0	5291	2863	8154
7 - 9 Peak Hour			07:30	07:45	07:30	4 - 6 Peak Hour			16:00	17:00	16:30
7 - 9 Pk Volume	0	0	972	1877	2805	4 - 6 Pk Volume	0	0	2753	1514	4179
Pk Hr Factor	0.000	0.000	0.942	0.948	0.950	Pk Hr Factor	0.000	0.000	0.929	0.932	0.962

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CLASSIFICATION

Friars Rd Bet. Northside Dr & San Diego Mission Rd

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_024

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	134	29	0	24	0	0	0	0	0	0	0	0	187
01:00	0	128	17	0	13	0	0	0	0	0	0	0	0	158
02:00	0	75	16	0	12	0	1	0	0	0	0	0	0	104
03:00	0	63	14	1	11	0	0	0	0	0	0	0	0	89
04:00	0	117	20	1	18	0	0	0	0	0	0	0	0	156
05:00	0	445	65	2	58	0	0	0	2	0	0	0	0	572
06:00	1	1068	193	6	113	0	1	1	3	0	0	0	0	1386
07:00	2	1931	296	7	204	3	0	5	6	0	0	0	0	2454
08:00	5	2033	303	5	222	3	0	5	7	0	0	0	0	2583
09:00	1	1615	270	7	205	1	0	3	8	0	0	0	0	2110
10:00	3	1765	282	7	230	3	0	2	7	0	0	0	0	2299
11:00	2	2166	366	9	268	3	1	7	5	0	0	0	0	2827
12:00 PM	5	2354	367	8	264	5	0	4	8	0	0	0	0	3015
13:00	6	2329	403	8	294	2	0	5	6	0	0	0	0	3053
14:00	4	2410	359	9	281	4	0	2	7	0	0	0	0	3076
15:00	7	2649	367	5	309	1	0	8	5	0	0	0	0	3351
16:00	6	3093	434	7	296	3	0	2	8	0	0	0	0	3849
17:00	3	3155	442	7	304	3	0	1	4	0	0	0	0	3919
18:00	4	2491	318	3	266	2	0	0	5	0	0	0	0	3089
19:00	4	1891	257	3	205	0	0	1	3	0	0	0	0	2364
20:00	2	1295	175	3	190	0	0	0	4	0	0	0	0	1669
21:00	0	972	102	1	113	0	0	0	0	0	0	0	0	1188
22:00	0	538	64	0	85	0	0	0	0	0	0	0	0	687
23:00	0	326	39	0	47	0	0	0	0	0	0	0	0	412
Totals	55	35043	5198	99	4032	33	3	46	88					44597
% of Totals	0%	79%	12%	0%	9%	0%	0%	0%	0%					100%

AM Volumes	14	11540	1871	45	1378	13	3	23	38	0	0	0	0	14925
% AM	0%	26%	4%	0%	3%	0%	0%	0%	0%					33%
AM Peak Hour	08:00	11:00	11:00	11:00	11:00	07:00	02:00	11:00	09:00					11:00
Volume	5	2166	366	9	268	3	1	7	8					2827
PM Volumes	41	23503	3327	54	2654	20	0	23	50	0	0	0	0	29672
% PM	0%	53%	7%	0%	6%	0%		0%	0%					67%
PM Peak Hour	15:00	17:00	17:00	14:00	15:00	12:00		15:00	12:00					17:00
Volume	7	3155	442	9	309	5		8	8					3919

Directional Peak Periods All Classes	AM 7-9 Volume	↔	%	NOON 12-2 Volume	↔	%	PM 4-6 Volume	↔	%	Off Peak Volumes Volume	↔	%
	5037	↔	11%	6068	↔	14%	7768	↔	17%	25724	↔	58%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 >=4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Northside Dr & San Diego Mission Rd

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_024

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	24,451	20,146	44,597

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			31		25		56		12:00			428		351		779	
00:15			31		21		52		12:15			381		334		715	
00:30			33		16		49		12:30			380		349		729	
00:45			18	113	12	74	30	187	12:45			443	1632	349	1383	792	3015
01:00			20		15		35		13:00			430		341		771	
01:15			18		15		33		13:15			430		332		762	
01:30			22		25		47		13:30			417		315		732	
01:45			22	82	21	76	43	158	13:45			459	1736	329	1317	788	3053
02:00			15		9		24		14:00			452		314		766	
02:15			14		15		29		14:15			438		318		756	
02:30			12		11		23		14:30			475		283		758	
02:45			11	52	17	52	28	104	14:45			470	1835	326	1241	796	3076
03:00			8		4		12		15:00			506		341		847	
03:15			9		7		16		15:15			493		271		764	
03:30			11		10		21		15:30			531		326		857	
03:45			17	45	23	44	40	89	15:45			516	2046	367	1305	883	3351
04:00			13		22		35		16:00			609		359		968	
04:15			12		9		21		16:15			639		332		971	
04:30			20		15		35		16:30			594		318		912	
04:45			24	69	41	87	65	156	16:45			659	2501	339	1348	998	3849
05:00			38		38		76		17:00			640		362		1002	
05:15			57		54		111		17:15			626		385		1011	
05:30			70		89		159		17:30			617		354		971	
05:45			84	249	142	323	226	572	17:45			567	2450	368	1469	935	3919
06:00			98		143		241		18:00			553		346		899	
06:15			107		157		264		18:15			503		272		775	
06:30			165		241		406		18:30			444		288		732	
06:45			193	563	282	823	475	1386	18:45			408	1908	275	1181	683	3089
07:00			195		282		477		19:00			380		266		646	
07:15			202		344		546		19:15			311		241		552	
07:30			262		455		717		19:30			338		274		612	
07:45			248	907	466	1547	714	2454	19:45			334	1363	220	1001	554	2364
08:00			251		476		727		20:00			281		210		491	
08:15			211		430		641		20:15			274		151		425	
08:30			224		399		623		20:30			271		142		413	
08:45			235	921	357	1662	592	2583	20:45			224	1050	116	619	340	1669
09:00			231		317		548		21:00			248		125		373	
09:15			214		277		491		21:15			215		115		330	
09:30			223		307		530		21:30			162		119		281	
09:45			229	897	312	1213	541	2110	21:45			124	749	80	439	204	1188
10:00			229		257		486		22:00			141		79		220	
10:15			246		279		525		22:15			118		79		197	
10:30			301		316		617		22:30			88		60		148	
10:45			333	1109	338	1190	671	2299	22:45			75	422	47	265	122	687
11:00			357		300		657		23:00			76		43		119	
11:15			387		363		750		23:15			74		43		117	
11:30			385		326		711		23:30			46		42		88	
11:45			381	1510	328	1317	709	2827	23:45			46	242	42	170	88	412
TOTALS				6517		8408		**14925**	**TOTALS**				17934		11738		**29672**
SPLIT %				43.7%		56.3%		**33.5%**	**SPLIT %**				60.4%		39.6%		**66.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	24,451	20,146	44,597

AM Peak Hour			11:15	07:30	**11:15**	**PM Peak Hour**			16:45	17:00	**16:45**
AM Pk Volume			1581	1827	**2949**	**PM Pk Volume**			2542	1469	**3982**
Pk Hr Factor			0.923	0.960	**0.946**	**Pk Hr Factor**			0.964	0.954	**0.985**
7 - 9 Volume	0	0	1828	3209	**5037**	**4 - 6 Volume**	0	0	4951	2817	**7768**
7 - 9 Peak Hour			07:30	07:30	**07:30**	**4 - 6 Peak Hour**			16:45	17:00	**16:45**
7 - 9 Pk Volume	0	0	972	1827	**2799**	**4 - 6 Pk Volume**	0	0	2542	1469	**3982**
Pk Hr Factor	0.000	0.000	0.927	0.960	**0.963**	**Pk Hr Factor**	0.000	0.000	0.964	0.954	**0.985**

Segment ID: 25

Friars Rd from San Diego Mission Rd to I-15 SB Ramps

AM Peak Period Heavy Vehicle Percentage: 7.10%

Noon Peak Period Heavy Vehicle Percentage: 6.70%

PM Period Heavy Vehicle Percentage: 4.7%

Average Daily Heavy Vehicle Percentage: 5.00%

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. San Diego Mission Rd & I-15 SB Ramps

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_025

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	272	28	0	12	0	0	1	5	0	0	0	0	318
01:00	0	212	23	0	12	0	0	1	7	0	0	0	0	255
02:00	0	188	19	0	11	0	0	3	5	0	0	0	0	226
03:00	0	200	36	0	9	0	0	0	1	0	0	0	0	246
04:00	0	453	64	2	34	0	0	1	0	0	0	0	0	554
05:00	0	1056	161	3	68	4	0	3	0	0	0	0	0	1295
06:00	2	2551	365	5	196	7	2	12	13	0	2	0	0	3155
07:00	4	2896	388	8	202	3	2	11	11	3	1	0	0	3529
08:00	4	3120	424	5	205	4	0	15	11	0	1	0	0	3789
09:00	0	2573	332	5	191	8	1	11	10	4	1	0	0	3136
10:00	0	2507	322	9	188	7	2	12	7	0	0	0	0	3054
11:00	4	2641	328	5	174	5	1	15	12	1	1	0	0	3187
12:00 PM	3	2744	370	4	185	4	0	16	11	0	2	0	0	3339
13:00	4	2923	391	6	200	8	0	13	16	0	2	0	0	3563
14:00	5	3293	478	9	223	8	1	12	13	1	1	0	0	4044
15:00	4	3438	459	12	173	8	1	15	15	0	0	0	0	4125
16:00	3	3871	414	11	164	8	0	16	11	1	0	0	0	4499
17:00	5	3784	397	12	165	10	0	12	9	0	0	0	0	4394
18:00	3	3172	349	8	139	6	1	6	9	0	0	0	0	3693
19:00	3	2223	220	4	94	6	1	9	5	0	0	0	0	2565
20:00	0	1576	161	1	62	4	0	4	5	0	0	0	0	1813
21:00	0	1158	117	0	39	0	0	1	0	0	0	0	0	1315
22:00	0	857	80	0	31	0	0	0	6	0	0	0	0	974
23:00	0	612	66	0	23	0	0	0	1	0	0	0	0	702
Totals	44	48320	5992	109	2800	100	12	189	183	10	11			57770
% of Totals	0%	84%	10%	0%	5%	0%	0%	0%	0%	0%	0%			100%

AM Volumes	14	18669	2490	42	1302	38	8	85	82	8	6	0	0	22744
% AM	0%	32%	4%	0%	2%	0%	0%	0%	0%	0%	0%			39%
AM Peak Hour	07:00	08:00	08:00	10:00	08:00	09:00	06:00	08:00	06:00	09:00	06:00			08:00
Volume	4	3120	424	9	205	8	2	15	13	4	2			3789
PM Volumes	30	29651	3502	67	1498	62	4	104	101	2	5	0	0	35026
% PM	0%	51%	6%	0%	3%	0%	0%	0%	0%	0%	0%			61%
PM Peak Hour	14:00	16:00	14:00	15:00	14:00	17:00	14:00	12:00	13:00	14:00	12:00			16:00
Volume	5	3871	478	12	223	10	1	16	16	1	2			4499

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	7318	⟷	13%	6902	⟷	12%	8893	⟷	15%	34657	⟷	60%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 >=4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

25

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. San Diego Mission Rd & I-15 SB Ramps

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_025

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	28,986	28,784	57,770

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			46		40		86		12:00			420		428		848	
00:15			60		38		98		12:15			403		416		819	
00:30			38		36		74		12:30			390		456		846	
00:45			27	171	33	147	60	318	12:45			418	1631	408	1708	826	3339
01:00			32		19		51		13:00			413		392		805	
01:15			43		33		76		13:15			483		444		927	
01:30			47		23		70		13:30			475		458		933	
01:45			39	161	19	94	58	255	13:45			488	1859	410	1704	898	3563
02:00			30		25		55		14:00			523		446		969	
02:15			35		19		54		14:15			576		487		1063	
02:30			37		23		60		14:30			562		498		1060	
02:45			35	137	22	89	57	226	14:45			490	2151	462	1893	952	4044
03:00			27		19		46		15:00			505		444		949	
03:15			26		41		67		15:15			539		431		970	
03:30			32		31		63		15:30			631		473		1104	
03:45			31	116	39	130	70	246	15:45			678	2353	424	1772	1102	4125
04:00			30		56		86		16:00			683		436		1119	
04:15			47		81		128		16:15			668		412		1080	
04:30			70		91		161		16:30			680		448		1128	
04:45			63	210	116	344	179	554	16:45			753	2784	419	1715	1172	4499
05:00			83		114		197		17:00			670		486		1156	
05:15			125		174		299		17:15			768		433		1201	
05:30			164		209		373		17:30			673		386		1059	
05:45			179	551	247	744	426	1295	17:45			617	2728	361	1666	978	4394
06:00			205		379		584		18:00			645		375		1020	
06:15			240		520		760		18:15			555		370		925	
06:30			297		643		940		18:30			547		337		884	
06:45			237	979	634	2176	871	3155	18:45			518	2265	346	1428	864	3693
07:00			224		605		829		19:00			449		299		748	
07:15			222		623		845		19:15			381		256		637	
07:30			278		653		931		19:30			362		290		652	
07:45			293	1017	631	2512	924	3529	19:45			288	1480	240	1085	528	2565
08:00			300		657		957		20:00			279		212		491	
08:15			289		662		951		20:15			252		206		458	
08:30			319		693		1012		20:30			240		185		425	
08:45			319	1227	550	2562	869	3789	20:45			275	1046	164	767	439	1813
09:00			322		448		770		21:00			217		151		368	
09:15			376		436		812		21:15			194		156		350	
09:30			335		439		774		21:30			173		136		309	
09:45			343	1376	437	1760	780	3136	21:45			173	757	115	558	288	1315
10:00			338		439		777		22:00			179		113		292	
10:15			364		394		758		22:15			140		110		250	
10:30			332		424		756		22:30			128		109		237	
10:45			397	1431	366	1623	763	3054	22:45			114	561	81	413	195	974
11:00			390		385		775		23:00			108		80		188	
11:15			374		361		735		23:15			114		84		198	
11:30			438		405		843		23:30			83		112		195	
11:45			425	1627	409	1560	834	3187	23:45			63	368	58	334	121	702
TOTALS				9003		13741		22744	TOTALS				19983		15043		35026
SPLIT %				39.6%		60.4%		39.4%	SPLIT %				57.1%		42.9%		60.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	28,986	28,784	57,770

AM Peak Hour			11:30	07:45	07:45	PM Peak Hour			16:30	14:00	16:30
AM Pk Volume			1686	2643	3844	PM Pk Volume			2871	1893	4657
Pk Hr Factor			0.962	0.953	0.950	Pk Hr Factor			0.935	0.950	0.969
7 - 9 Volume	0	0	2244	5074	7318	4 - 6 Volume	0	0	5512	3381	8893
7 - 9 Peak Hour			08:00	07:45	07:45	4 - 6 Peak Hour			16:30	16:30	16:30
7 - 9 Pk Volume	0	0	1227	2643	3844	4 - 6 Pk Volume	0	0	2871	1786	4657
Pk Hr Factor	0.000	0.000	0.962	0.953	0.950	Pk Hr Factor	0.000	0.000	0.935	0.919	0.969

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. San Diego Mission Rd & I-15 SB Ramps

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_025

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	1	294	29	0	15	0	0	0	3	0	0	0	0	342
01:00	0	226	25	0	19	0	0	0	4	0	0	0	0	274
02:00	0	209	22	1	8	0	0	0	5	0	0	0	0	245
03:00	0	228	47	0	20	0	0	2	3	0	0	0	0	300
04:00	0	468	83	2	39	0	0	0	0	0	0	0	0	592
05:00	0	1113	164	3	77	1	0	7	5	0	1	0	0	1371
06:00	2	2455	338	6	194	3	3	14	8	0	2	0	0	3025
07:00	7	2990	397	8	208	7	2	10	17	2	1	0	0	3649
08:00	4	3029	408	9	231	7	2	13	9	2	2	0	0	3716
09:00	3	2498	344	7	188	5	0	12	13	0	1	0	0	3071
10:00	4	2540	334	4	160	9	1	13	16	0	1	0	0	3082
11:00	5	2690	360	7	175	5	1	14	14	0	2	0	0	3273
12:00 PM	5	2923	373	6	191	9	0	7	7	0	0	0	0	3521
13:00	3	2974	402	3	194	7	0	16	11	0	2	0	0	3612
14:00	4	3293	470	9	219	13	0	17	9	0	1	0	0	4035
15:00	3	3521	436	11	179	8	0	13	16	0	0	0	0	4187
16:00	3	3810	402	12	167	8	0	11	15	0	0	0	0	4428
17:00	5	3645	371	9	161	7	0	12	9	0	0	0	0	4219
18:00	4	2892	302	7	120	4	0	9	8	0	0	0	0	3346
19:00	0	2237	218	4	94	3	0	8	7	0	0	0	0	2571
20:00	0	1597	169	2	72	0	0	7	4	0	0	0	0	1851
21:00	1	1197	122	1	44	0	0	3	5	0	0	0	0	1373
22:00	2	844	74	0	30	0	0	0	3	0	0	0	0	953
23:00	1	596	61	0	23	0	0	0	0	0	0	0	0	681
Totals	57	48269	5951	111	2828	96	9	188	191	4	13			57717
% of Totals	0%	84%	10%	0%	5%	0%	0%	0%	0%	0%	0%			100%

AM Volumes	26	18740	2551	47	1334	37	9	85	97	4	10	0	0	22940
% AM	0%	32%	4%	0%	2%	0%	0%	0%	0%	0%	0%			40%
AM Peak Hour	07:00	08:00	08:00	08:00	08:00	10:00	06:00	06:00	07:00	07:00	06:00			08:00
Volume	7	3029	408	9	231	9	3	14	17	2	2			3716
PM Volumes	31	29529	3400	64	1494	59	0	103	94	0	3	0	0	34777
% PM	0%	51%	6%	0%	3%	0%		0%	0%		0%			60%
PM Peak Hour	12:00	16:00	14:00	16:00	14:00	14:00		14:00	15:00		13:00			16:00
Volume	5	3810	470	12	219	13		17	16		2			4428

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	7365	⟷	13%	7133	⟷	12%	8647	⟷	15%	34572	⟷	60%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

25

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. San Diego Mission Rd & I-15 SB Ramps

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_025

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	28,983	28,734	57,717

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			60		52		112		12:00			433		444		877	
00:15			56		32		88		12:15			417		462		879	
00:30			47		28		75		12:30			456		420		876	
00:45			35	198	32	144	67	342	12:45			428	1734	461	1787	889	3521
01:00			40		35		75		13:00			437		429		866	
01:15			39		31		70		13:15			410		465		875	
01:30			33		23		56		13:30			467		453		920	
01:45			49	161	24	113	73	274	13:45			514	1828	437	1784	951	3612
02:00			38		24		62		14:00			532		448		980	
02:15			34		18		52		14:15			508		505		1013	
02:30			33		33		66		14:30			553		532		1085	
02:45			32	137	33	108	65	245	14:45			490	2083	467	1952	957	4035
03:00			39		32		71		15:00			522		462		984	
03:15			38		31		69		15:15			535		470		1005	
03:30			32		41		73		15:30			659		454		1113	
03:45			41	150	46	150	87	300	15:45			690	2406	395	1781	1085	4187
04:00			45		55		100		16:00			709		413		1122	
04:15			42		75		117		16:15			690		406		1096	
04:30			84		104		188		16:30			701		401		1102	
04:45			80	251	107	341	187	592	16:45			703	2803	405	1625	1108	4428
05:00			97		115		212		17:00			676		467		1143	
05:15			129		176		305		17:15			672		416		1088	
05:30			167		231		398		17:30			668		366		1034	
05:45			193	586	263	785	456	1371	17:45			612	2628	342	1591	954	4219
06:00			199		320		519		18:00			592		370		962	
06:15			260		448		708		18:15			522		319		841	
06:30			274		660		934		18:30			494		330		824	
06:45			218	951	646	2074	864	3025	18:45			418	2026	301	1320	719	3346
07:00			208		647		855		19:00			406		323		729	
07:15			243		609		852		19:15			366		304		670	
07:30			279		624		903		19:30			326		296		622	
07:45			328	1058	711	2591	1039	3649	19:45			307	1405	243	1166	550	2571
08:00			310		728		1038		20:00			261		249		510	
08:15			307		659		966		20:15			247		220		467	
08:30			323		576		899		20:30			235		216		451	
08:45			331	1271	482	2445	813	3716	20:45			224	967	199	884	423	1851
09:00			345		419		764		21:00			232		189		421	
09:15			328		422		750		21:15			206		134		340	
09:30			377		409		786		21:30			181		154		335	
09:45			400	1450	371	1621	771	3071	21:45			169	788	108	585	277	1373
10:00			362		370		732		22:00			157		118		275	
10:15			357		410		767		22:15			151		107		258	
10:30			410		409		819		22:30			143		93		236	
10:45			390	1519	374	1563	764	3082	22:45			111	562	73	391	184	953
11:00			367		396		763		23:00			113		79		192	
11:15			405		366		771		23:15			89		80		169	
11:30			433		419		852		23:30			83		101		184	
11:45			454	1659	433	1614	887	3273	23:45			77	362	59	319	136	681
TOTALS				9391		13549		22940	TOTALS				19592		15185		34777
SPLIT %				40.9%		59.1%		39.7%	SPLIT %				56.3%		43.7%		60.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	28,983	28,734	57,717

AM Peak Hour			11:45	07:30	07:30	PM Peak Hour			16:00	14:15	16:15
AM Pk Volume			1760	2722	3946	PM Pk Volume			2803	1966	4449
Pk Hr Factor			0.965	0.935	0.949	Pk Hr Factor			0.988	0.924	0.973
7 - 9 Volume	0	0	2329	5036	7365	4 - 6 Volume	0	0	5431	3216	8647
7 - 9 Peak Hour			08:00	07:30	07:30	4 - 6 Peak Hour			16:00	16:30	16:15
7 - 9 Pk Volume	0	0	1271	2722	3946	4 - 6 Pk Volume	0	0	2803	1689	4449
Pk Hr Factor	0.000	0.000	0.960	0.935	0.949	Pk Hr Factor	0.000	0.000	0.988	0.904	0.973

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Friars Road, From I-15 SB Ramps to I-15 NB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			31		38			12:00			318		314		
00:15			30		40			12:15			345		345		
00:30			28		28			12:30			384		319		
00:45			32	121	21	127	248	12:45			384	1431	309	1287	2718
01:00			28		22			13:00			374		312		
01:15			20		16			13:15			419		318		
01:30			15		18			13:30			405		305		
01:45			19	82	20	76	158	13:45			425	1623	284	1219	2842
02:00			20		15			14:00			384		295		
02:15			16		19			14:15			386		262		
02:30			11		11			14:30			395		284		
02:45			10	57	16	61	118	14:45			380	1545	312	1153	2698
03:00			12		12			15:00			444		305		
03:15			18		15			15:15			415		284		
03:30			16		18			15:30			452		295		
03:45			17	63	22	67	130	15:45			435	1746	312	1196	2942
04:00			21		28			16:00			612		418		
04:15			28		45			16:15			648		388		
04:30			44		51			16:30			716		425		
04:45			51	144	68	192	336	16:45			784	2760	406	1637	4397
05:00			68		95			17:00			651		451		
05:15			81		126			17:15			684		444		
05:30			94		145			17:30			691		406		
05:45			121	364	189	555	919	17:45			644	2670	421	1722	4392
06:00			135		216			18:00			589		384		
06:15			168		245			18:15			495		345		
06:30			191		295			18:30			412		342		
06:45			216	710	348	1104	1814	18:45			384	1880	352	1423	3303
07:00			254		441			19:00			362		318		
07:15			268		461			19:15			305		280		
07:30			313		551			19:30			284		221		
07:45			326	1161	542	1995	3156	19:45			295	1246	213	1032	2278
08:00			305		585			20:00			222		205		
08:15			291		612			20:15			216		162		
08:30			306		540			20:30			184		174		
08:45			331	1233	428	2165	3398	20:45			161	783	184	725	1508
09:00			319		484			21:00			170		111		
09:15			305		412			21:15			102		105		
09:30			284		406			21:30			103		84		
09:45			262	1170	384	1686	2856	21:45			88	463	95	395	858
10:00			242		385			22:00			70		65		
10:15			251		345			22:15			65		70		
10:30			241		345			22:30			70		54		
10:45			268	1002	333	1408	2410	22:45			55	260	35	224	484
11:00			298		306			23:00			58		44		
11:15			311		284			23:15			42		47		
11:30			305		266			23:30			35		41		
11:45			315	1229	295	1151	2380	23:45			28	163	32	164	327
Total Vol.			7336		10587		**17923**				16570		12177		**28747**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
			23906	22764	**46670**

	AM			PM		
Split %	40.9%	59.1%	**38.4%**	57.6%	42.4%	**61.6%**
Peak Hour	11:45	07:30	**07:30**	16:30	16:30	**16:30**
Volume	1362	2290	**3525**	2835	1726	**4561**
P.H.F.	0.89	0.94	**0.98**	0.90	0.96	**0.96**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Friars Road, From I-15 SB Ramps to I-15 NB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			38		44			12:00			328		331		
00:15			41		38			12:15			315		315		
00:30			28		31			12:30			315		328		
00:45			26	133	38	151	284	12:45			362	1320	316	1290	2610
01:00			20		28			13:00			370		305		
01:15			19		26			13:15			386		311		
01:30			20		20			13:30			452		342		
01:45			15	74	19	93	167	13:45			416	1624	316	1274	2898
02:00			18		20			14:00			405		305		
02:15			20		15			14:15			428		284		
02:30			16		11			14:30			412		296		
02:45			19	73	19	65	138	14:45			405	1650	266	1151	2801
03:00			11		11			15:00			384		333		
03:15			18		16			15:15			452		318		
03:30			21		20			15:30			444		305		
03:45			16	66	18	65	131	15:45			425	1705	342	1298	3003
04:00			26		17			16:00			612		418		
04:15			35		44			16:15			642		388		
04:30			48		35			16:30			695		412		
04:45			55	164	48	144	308	16:45			718	2667	425	1643	4310
05:00			70		68			17:00			707		444		
05:15			84		98			17:15			626		506		
05:30			105		128			17:30			606		418		
05:45			95	354	159	453	807	17:45			528	2467	369	1737	4204
06:00			141		195			18:00			505		396		
06:15			151		212			18:15			425		303		
06:30			189		258			18:30			442		325		
06:45			235	716	296	961	1677	18:45			359	1731	333	1357	3088
07:00			262		384			19:00			366		333		
07:15			284		445			19:15			328		258		
07:30			333		425			19:30			303		254		
07:45			305	1184	535	1789	2973	19:45			280	1277	202	1047	2324
08:00			342		568			20:00			213		219		
08:15			384		598			20:15			242		205		
08:30			313		525			20:30			203		180		
08:45			342	1381	505	2196	3577	20:45			180	838	151	755	1593
09:00			303		513			21:00			151		101		
09:15			285		425			21:15			111		88		
09:30			296		419			21:30			106		95		
09:45			312	1196	380	1737	2933	21:45			121	489	90	374	863
10:00			285		362			22:00			88		70		
10:15			226		375			22:15			70		54		
10:30			258		352			22:30			65		66		
10:45			269	1038	366	1455	2493	22:45			66	289	50	240	529
11:00			254		326			23:00			52		43		
11:15			289		306			23:15			52		41		
11:30			312		316			23:30			40		38		
11:45			305	1160	313	1261	2421	23:45			33	177	33	155	332
Total Vol.			7539		10370		**17909**				16234		12321		**28555**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
			23773	22691	**46464**

	AM			PM		
Split %	42.1%	57.9%	**38.5%**	56.9%	43.1%	**61.5%**
Peak Hour	08:00	07:45	**08:00**	16:15	16:45	**16:30**
Volume	1381	2226	**3577**	2762	1793	**4533**
P.H.F.	0.90	0.93	**0.91**	0.96	0.89	**0.98**

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. I-15 NB Ramps & Rancho Mission Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_027

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	24,693	27,449	52,142

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			46		42		88		12:00			373		350		723	
00:15			43		31		74		12:15			376		411		787	
00:30			38		32		70		12:30			394		400		794	
00:45			43	170	20	125	63	295	12:45			385	1528	429	1590	814	3118
01:00			33		26		59		13:00			369		388		757	
01:15			35		22		57		13:15			385		375		760	
01:30			23		35		58		13:30			396		426		822	
01:45			35	126	22	105	57	231	13:45			377	1527	396	1585	773	3112
02:00			25		20		45		14:00			388		401		789	
02:15			20		15		35		14:15			412		403		815	
02:30			18		22		40		14:30			435		481		916	
02:45			21	84	17	74	38	158	14:45			489	1724	582	1867	1071	3591
03:00			24		24		48		15:00			489		491		980	
03:15			33		19		52		15:15			497		485		982	
03:30			22		47		69		15:30			521		437		958	
03:45			29	108	44	134	73	242	15:45			547	2054	392	1805	939	3859
04:00			27		45		72		16:00			533		396		929	
04:15			34		58		92		16:15			573		442		1015	
04:30			50		96		146		16:30			594		387		981	
04:45			74	185	107	306	181	491	16:45			553	2253	416	1641	969	3894
05:00			84		106		190		17:00			567		407		974	
05:15			111		137		248		17:15			528		415		943	
05:30			133		191		324		17:30			556		412		968	
05:45			162	490	214	648	376	1138	17:45			516	2167	333	1567	849	3734
06:00			190		277		467		18:00			480		366		846	
06:15			206		412		618		18:15			501		351		852	
06:30			229		563		792		18:30			445		308		753	
06:45			246	871	564	1816	810	2687	18:45			428	1854	325	1350	753	3204
07:00			174		576		750		19:00			311		323		634	
07:15			186		675		861		19:15			311		270		581	
07:30			223		634		857		19:30			311		287		598	
07:45			257	840	626	2511	883	3351	19:45			280	1213	235	1115	515	2328
08:00			251		645		896		20:00			251		194		445	
08:15			293		703		996		20:15			264		214		478	
08:30			259		621		880		20:30			226		211		437	
08:45			293	1096	549	2518	842	3614	20:45			213	954	185	804	398	1758
09:00			276		429		705		21:00			212		193		405	
09:15			311		368		679		21:15			208		143		351	
09:30			292		402		694		21:30			182		139		321	
09:45			303	1182	373	1572	676	2754	21:45			176	778	114	589	290	1367
10:00			264		363		627		22:00			155		115		270	
10:15			291		356		647		22:15			146		108		254	
10:30			336		369		705		22:30			119		93		212	
10:45			336	1227	370	1458	706	2685	22:45			129	549	74	390	203	939
11:00			309		384		693		23:00			95		86		181	
11:15			343		398		741		23:15			87		72		159	
11:30			376		378		754		23:30			65		128		193	
11:45			372	1400	363	1523	735	2923	23:45			66	313	70	356	136	669
TOTALS				7779		12790		20569	TOTALS				16914		14659		31573
SPLIT %				37.8%		62.2%		39.4%	SPLIT %				53.6%		46.4%		60.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	24,693	27,449	52,142

AM Peak Hour			11:45	07:30	07:45	PM Peak Hour			16:15	14:30	14:45
AM Pk Volume			1515	2608	3655	PM Pk Volume			2287	2039	3991
Pk Hr Factor			0.961	0.927	0.917	Pk Hr Factor			0.963	0.876	0.932
7 - 9 Volume	0	0	1936	5029	6965	4 - 6 Volume	0	0	4420	3208	7628
7 - 9 Peak Hour			08:00	07:30	07:45	4 - 6 Peak Hour			16:15	16:15	16:15
7 - 9 Pk Volume	0	0	1096	2608	3655	4 - 6 Pk Volume	0	0	2287	1652	3939
Pk Hr Factor	0.000	0.000	0.935	0.927	0.917	Pk Hr Factor	0.000	0.000	0.963	0.934	0.970

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. I-15 NB Ramps & Rancho Mission Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_027

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	24,151	26,922	51,073

AM Period	NB		SB		EB		WB		TOTAL	
00:00					51		43		94	
00:15					46		43		89	
00:30					53		37		90	
00:45					49	199	25	148	74	347
01:00					38		21		59	
01:15					37		21		58	
01:30					30		34		64	
01:45					30	135	15	91	45	226
02:00					29		20		49	
02:15					36		20		56	
02:30					26		30		56	
02:45					22	113	15	85	37	198
03:00					32		31		63	
03:15					24		29		53	
03:30					47		45		92	
03:45					32	135	41	146	73	281
04:00					27		69		96	
04:15					33		67		100	
04:30					66		88		154	
04:45					83	209	114	338	197	547
05:00					67		103		170	
05:15					104		130		234	
05:30					128		185		313	
05:45					174	473	227	645	401	1118
06:00					159		273		432	
06:15					184		361		545	
06:30					228		524		752	
06:45					245	816	542	1700	787	2516
07:00					194		589		783	
07:15					184		636		820	
07:30					216		650		866	
07:45					275	869	606	2481	881	3350
08:00					254		652		906	
08:15					274		673		947	
08:30					286		641		927	
08:45					266	1080	556	2522	822	3602
09:00					273		511		784	
09:15					295		382		677	
09:30					284		404		688	
09:45					304	1156	394	1691	698	2847
10:00					290		330		620	
10:15					286		383		669	
10:30					329		362		691	
10:45					351	1256	343	1418	694	2674
11:00					333		339		672	
11:15					334		330		664	
11:30					329		427		756	
11:45					352	1348	359	1455	711	2803
TOTALS						7789		12720		**20509**
SPLIT %						38.0%		62.0%		**40.2%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00					352		398		750	
12:15					305		377		682	
12:30					370		395		765	
12:45					361	1388	445	1615	806	3003
13:00					379		408		787	
13:15					365		422		787	
13:30					380		414		794	
13:45					423	1547	392	1636	815	3183
14:00					406		378		784	
14:15					451		368		819	
14:30					432		467		899	
14:45					439	1728	467	1680	906	3408
15:00					437		476		913	
15:15					444		402		846	
15:30					442		433		875	
15:45					565	1888	362	1673	927	3561
16:00					537		365		902	
16:15					563		391		954	
16:30					585		401		986	
16:45					592	2277	411	1568	1003	3845
17:00					548		436		984	
17:15					575		406		981	
17:30					596		387		983	
17:45					577	2296	345	1574	922	3870
18:00					516		301		817	
18:15					480		326		806	
18:30					416		297		713	
18:45					388	1800	276	1200	664	3000
19:00					317		286		603	
19:15					276		257		533	
19:30					268		266		534	
19:45					290	1151	272	1081	562	2232
20:00					234		211		445	
20:15					226		211		437	
20:30					173		193		366	
20:45					186	819	192	807	378	1626
21:00					195		183		378	
21:15					203		168		371	
21:30					154		151		305	
21:45					138	690	120	622	258	1312
22:00					133		119		252	
22:15					138		97		235	
22:30					125		109		234	
22:45					104	500	85	410	189	910
23:00					82		68		150	
23:15					77		65		142	
23:30					57		123		180	
23:45					62	278	80	336	142	614
TOTALS						16362		14202		**30564**
SPLIT %						53.5%		46.5%		**59.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	24,151	26,922	51,073

AM Peak Hour				11:45	07:30	**07:45**	**PM Peak Hour**			16:45	14:30	**16:30**
AM Pk Volume				1379	2581	**3661**	**PM Pk Volume**			2311	1812	**3954**
Pk Hr Factor				0.932	0.959	**0.966**	**Pk Hr Factor**			0.969	0.952	**0.986**
7 - 9 Volume	0	0		1949	5003	**6952**	**4 - 6 Volume**	0	0	4573	3142	**7715**
7 - 9 Peak Hour				07:45	07:30	**07:45**	**4 - 6 Peak Hour**			16:45	16:30	**16:30**
7 - 9 Pk Volume	0	0		1089	2581	**3661**	**4 - 6 Pk Volume**	0	0	2311	1654	**3954**
Pk Hr Factor	0.000	0.000		0.952	0.959	**0.966**	**Pk Hr Factor**	0.000	0.000	0.969	0.948	**0.986**

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Rancho Mission Rd & Santo Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_028

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,075	20,940	40,015

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			27		36		63		12:00			290		282		572	
00:15			29		28		57		12:15			263		305		568	
00:30			19		22		41		12:30			263		326		589	
00:45			23	98	11	97	34	195	12:45			279	1095	296	1209	575	2304
01:00			21		23		44		13:00			258		291		549	
01:15			17		14		31		13:15			265		266		531	
01:30			15		24		39		13:30			262		281		543	
01:45			15	68	15	76	30	144	13:45			278	1063	285	1123	563	2186
02:00			17		9		26		14:00			268		308		576	
02:15			9		13		22		14:15			299		292		591	
02:30			21		19		40		14:30			334		397		731	
02:45			16	63	16	57	32	120	14:45			372	1273	433	1430	805	2703
03:00			17		22		39		15:00			411		371		782	
03:15			21		14		35		15:15			423		350		773	
03:30			19		38		57		15:30			404		346		750	
03:45			22	79	23	97	45	176	15:45			448	1686	290	1357	738	3043
04:00			17		18		35		16:00			443		341		784	
04:15			23		32		55		16:15			478		334		812	
04:30			32		66		98		16:30			561		349		910	
04:45			74	146	80	196	154	342	16:45			526	2008	325	1349	851	3357
05:00			63		69		132		17:00			558		316		874	
05:15			70		89		159		17:15			537		340		877	
05:30			101		122		223		17:30			544		296		840	
05:45			112	346	145	425	257	771	17:45			504	2143	260	1212	764	3355
06:00			149		193		342		18:00			431		252		683	
06:15			159		301		460		18:15			373		243		616	
06:30			168		430		598		18:30			383		197		580	
06:45			215	691	443	1367	658	2058	18:45			350	1537	238	930	588	2467
07:00			142		466		608		19:00			259		240		499	
07:15			156		593		749		19:15			235		194		429	
07:30			179		608		787		19:30			229		240		469	
07:45			165	642	614	2281	779	2923	19:45			226	949	172	846	398	1795
08:00			179		638		817		20:00			166		145		311	
08:15			191		538		729		20:15			177		169		346	
08:30			161		423		584		20:30			174		162		336	
08:45			184	715	374	1973	558	2688	20:45			152	669	136	612	288	1281
09:00			194		317		511		21:00			150		138		288	
09:15			216		276		492		21:15			117		103		220	
09:30			189		252		441		21:30			132		98		230	
09:45			234	833	268	1113	502	1946	21:45			97	496	85	424	182	920
10:00			172		268		440		22:00			113		69		182	
10:15			221		253		474		22:15			115		83		198	
10:30			230		270		500		22:30			76		62		138	
10:45			240	863	261	1052	501	1915	22:45			84	388	55	269	139	657
11:00			231		297		528		23:00			62		60		122	
11:15			238		298		536		23:15			57		57		114	
11:30			273		288		561		23:30			40		114		154	
11:45			280	1022	277	1160	557	2182	23:45			43	202	54	285	97	487
TOTALS				5566		9894		15460	TOTALS				13509		11046		24555
SPLIT %				36.0%		64.0%		38.6%	SPLIT %				55.0%		45.0%		61.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,075	20,940	40,015

AM Peak Hour			11:30	07:15	07:15	PM Peak Hour			16:30	14:30	16:30
AM Pk Volume			1106	2453	3132	PM Pk Volume			2182	1551	3512
Pk Hr Factor			0.953	0.961	0.958	Pk Hr Factor			0.972	0.895	0.965
7 - 9 Volume	0	0	1357	4254	5611	4 - 6 Volume	0	0	4151	2561	6712
7 - 9 Peak Hour			08:00	07:15	07:15	4 - 6 Peak Hour			16:30	16:00	16:30
7 - 9 Pk Volume	0	0	715	2453	3132	4 - 6 Pk Volume	0	0	2182	1349	3512
Pk Hr Factor	0.000	0.000	0.936	0.961	0.958	Pk Hr Factor	0.000	0.000	0.972	0.966	0.965

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Rancho Mission Rd & Santo Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_028

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,441	20,408	38,849

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			34		30		64		12:00			271		306		577	
00:15			26		28		54		12:15			235		286		521	
00:30			30		24		54		12:30			276		310		586	
00:45			26	116	22	104	48	220	12:45			284	1066	300	1202	584	2268
01:00			21		13		34		13:00			252		296		548	
01:15			17		16		33		13:15			287		287		574	
01:30			21		28		49		13:30			305		284		589	
01:45			17	76	12	69	29	145	13:45			314	1158	277	1144	591	2302
02:00			17		13		30		14:00			298		284		582	
02:15			19		19		38		14:15			335		299		634	
02:30			20		19		39		14:30			322		333		655	
02:45			18	74	13	64	31	138	14:45			342	1297	357	1273	699	2570
03:00			25		28		53		15:00			323		357		680	
03:15			12		21		33		15:15			365		311		676	
03:30			29		31		60		15:30			389		339		728	
03:45			30	96	21	101	51	197	15:45			441	1518	271	1278	712	2796
04:00			22		42		64		16:00			440		286		726	
04:15			21		41		62		16:15			488		293		781	
04:30			47		57		104		16:30			499		303		802	
04:45			68	158	74	214	142	372	16:45			514	1941	314	1196	828	3137
05:00			56		71		127		17:00			468		307		775	
05:15			73		79		152		17:15			501		295		796	
05:30			90		124		214		17:30			472		277		749	
05:45			120	339	155	429	275	768	17:45			518	1959	241	1120	759	3079
06:00			131		206		337		18:00			432		225		657	
06:15			142		249		391		18:15			379		237		616	
06:30			180		417		597		18:30			320		234		554	
06:45			185	638	454	1326	639	1964	18:45			313	1444	233	929	546	2373
07:00			146		484		630		19:00			217		196		413	
07:15			177		559		736		19:15			242		206		448	
07:30			161		615		776		19:30			193		189		382	
07:45			157	641	623	2281	780	2922	19:45			191	843	197	788	388	1631
08:00			169		578		747		20:00			174		174		348	
08:15			186		477		663		20:15			169		162		331	
08:30			176		455		631		20:30			171		119		290	
08:45			187	718	408	1918	595	2636	20:45			155	669	144	599	299	1268
09:00			183		404		587		21:00			139		142		281	
09:15			192		268		460		21:15			131		122		253	
09:30			213		278		491		21:30			108		104		212	
09:45			215	803	276	1226	491	2029	21:45			99	477	97	465	196	942
10:00			190		244		434		22:00			98		85		183	
10:15			205		280		485		22:15			77		66		143	
10:30			225		248		473		22:30			86		77		163	
10:45			237	857	271	1043	508	1900	22:45			114	375	63	291	177	666
11:00			227		262		489		23:00			53		49		102	
11:15			257		243		500		23:15			47		51		98	
11:30			246		312		558		23:30			45		116		161	
11:45			268	998	261	1078	529	2076	23:45			35	180	54	270	89	450
TOTALS				5514		9853		15367	TOTALS				12927		10555		23482
SPLIT %				35.9%		64.1%		39.6%	SPLIT %				55.1%		44.9%		60.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,441	20,408	38,849

AM Peak Hour			11:45	07:15	07:15	PM Peak Hour			16:30	14:45	16:30
AM Pk Volume			1050	2375	3039	PM Pk Volume			1982	1364	3201
Pk Hr Factor			0.951	0.953	0.974	Pk Hr Factor			0.964	0.955	0.966
7 - 9 Volume	0	0	1359	4199	5558	4 - 6 Volume	0	0	3900	2316	6216
7 - 9 Peak Hour			08:00	07:15	07:15	4 - 6 Peak Hour			16:30	16:30	16:30
7 - 9 Pk Volume	0	0	718	2375	3039	4 - 6 Pk Volume	0	0	1982	1219	3201
Pk Hr Factor	0.000	0.000	0.960	0.953	0.974	Pk Hr Factor	0.000	0.000	0.964	0.971	0.966

Segment ID: 29

Friars Rd from Santo Rd to Riverdale St

AM Peak Period Heavy Vehicle Percentage: 8.85%

Noon Peak Period Heavy Vehicle Percentage: 9.60%

PM Period Heavy Vehicle Percentage: 7.30%

Average Daily Heavy Vehicle Percentage: 7.00%

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Santo Rd & Riverdale St

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_029

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	118	21	0	7	0	1	0	2	0	1	0	0	150
01:00	0	79	11	0	9	0	0	2	3	0	0	0	0	104
02:00	0	134	16	0	15	0	0	2	4	0	0	0	0	171
03:00	0	132	15	0	15	0	0	4	3	0	0	0	0	169
04:00	1	275	49	0	48	0	0	7	2	0	0	0	0	382
05:00	0	734	121	8	82	0	0	7	2	0	1	0	0	955
06:00	2	2030	249	5	188	5	0	14	13	0	1	0	0	2507
07:00	6	2434	311	13	188	8	1	12	13	0	0	0	0	2986
08:00	1	2374	310	16	201	9	0	12	19	0	0	0	0	2942
09:00	5	1830	224	8	166	10	1	18	9	0	0	0	0	2271
10:00	2	1801	240	12	162	6	1	11	15	0	0	0	0	2250
11:00	3	1879	248	7	186	6	0	22	13	0	2	0	0	2366
12:00 PM	3	2004	298	9	158	11	0	14	18	0	0	0	0	2515
13:00	2	2002	276	7	177	11	0	11	17	0	3	0	0	2506
14:00	2	2419	354	7	244	10	0	18	16	0	0	0	0	3070
15:00	5	2452	312	5	206	6	0	13	10	0	2	0	0	3011
16:00	7	2782	333	9	211	8	0	11	20	0	0	0	0	3381
17:00	5	2711	333	8	181	9	0	14	16	0	1	0	0	3278
18:00	4	2210	270	7	143	3	0	18	7	0	0	0	0	2662
19:00	3	1578	185	5	101	3	0	10	9	0	0	0	0	1894
20:00	1	1107	131	1	76	0	0	5	2	0	0	0	0	1323
21:00	2	835	98	0	56	1	0	5	1	0	0	0	0	998
22:00	2	611	62	0	40	0	0	1	2	0	1	0	0	719
23:00	0	397	38	0	25	0	0	2	1	0	1	0	0	464
Totals	56	34928	4505	127	2885	106	4	233	217		13			43074
% of Totals	0%	81%	10%	0%	7%	0%	0%	1%	1%		0%			100%

AM Volumes	20	13820	1815	69	1267	44	4	111	98	0	5	0	0	17253
% AM	0%	32%	4%	0%	3%	0%	0%	0%	0%		0%			40%
AM Peak Hour	07:00	07:00	07:00	08:00	08:00	09:00		11:00	08:00		11:00			07:00
Volume	6	2434	311	16	201	10	1	22	19		2			2986
PM Volumes	36	21108	2690	58	1618	62	0	122	119	0	8	0	0	25821
% PM	0%	49%	6%	0%	4%	0%		0%	0%		0%			60%
PM Peak Hour	16:00	16:00	14:00	12:00	14:00	12:00		14:00	16:00		13:00			16:00
Volume	7	2782	354	9	244	11		18	20		3			3381

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	5928	⟷	14%	5021	⟷	12%	6659	⟷	15%	25466	⟷	59%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Santo Rd & Riverdale St

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_029

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,214	22,860	43,074

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			10		28		38		12:00			259		342		601	
00:15			15		27		42		12:15			304		333		637	
00:30			10		27		37		12:30			297		365		662	
00:45			8	43	25	107	33	150	12:45			297	1157	318	1358	615	2515
01:00			4		15		19		13:00			298		318		616	
01:15			2		24		26		13:15			301		336		637	
01:30			6		17		23		13:30			320		343		663	
01:45			18	30	18	74	36	104	13:45			308	1227	282	1279	590	2506
02:00			15		22		37		14:00			367		367		734	
02:15			28		18		46		14:15			361		397		758	
02:30			20		23		43		14:30			416		418		834	
02:45			25	88	20	83	45	171	14:45			405	1549	339	1521	744	3070
03:00			20		14		34		15:00			354		372		726	
03:15			23		28		51		15:15			390		323		713	
03:30			20		25		45		15:30			408		369		777	
03:45			22	85	17	84	39	169	15:45			444	1596	351	1415	795	3011
04:00			15		30		45		16:00			481		324		805	
04:15			38		51		89		16:15			502		324		826	
04:30			44		66		110		16:30			527		337		864	
04:45			62	159	76	223	138	382	16:45			540	2050	346	1331	886	3381
05:00			62		76		138		17:00			488		387		875	
05:15			100		113		213		17:15			536		284		820	
05:30			127		141		268		17:30			490		314		804	
05:45			150	439	186	516	336	955	17:45			519	2033	260	1245	779	3278
06:00			137		270		407		18:00			436		285		721	
06:15			170		409		579		18:15			409		266		675	
06:30			202		528		730		18:30			389		260		649	
06:45			226	735	565	1772	791	2507	18:45			341	1575	276	1087	617	2662
07:00			176		556		732		19:00			247		231		478	
07:15			177		537		714		19:15			255		225		480	
07:30			168		579		747		19:30			249		241		490	
07:45			258	779	535	2207	793	2986	19:45			238	989	208	905	446	1894
08:00			199		584		783		20:00			197		184		381	
08:15			233		585		818		20:15			159		180		339	
08:30			220		560		780		20:30			150		166		316	
08:45			210	862	351	2080	561	2942	20:45			148	654	139	669	287	1323
09:00			236		335		571		21:00			168		137		305	
09:15			234		334		568		21:15			118		143		261	
09:30			214		354		568		21:30			121		106		227	
09:45			231	915	333	1356	564	2271	21:45			114	521	91	477	205	998
10:00			240		361		601		22:00			107		100		207	
10:15			212		270		482		22:15			82		94		176	
10:30			286		333		619		22:30			97		82		179	
10:45			275	1013	273	1237	548	2250	22:45			89	375	68	344	157	719
11:00			267		309		576		23:00			48		55		103	
11:15			283		276		559		23:15			70		78		148	
11:30			273		313		586		23:30			43		99		142	
11:45			328	1151	317	1215	645	2366	23:45			28	189	43	275	71	464
TOTALS				6299		10954		17253	TOTALS				13915		11906		25821
SPLIT %				36.5%		63.5%		40.1%	SPLIT %				53.9%		46.1%		59.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,214	22,860	43,074

AM Peak Hour			11:45	07:30	07:45	PM Peak Hour			16:30	14:15	16:15
AM Pk Volume			1188	2283	3174	PM Pk Volume			2091	1526	3451
Pk Hr Factor			0.905	0.976	0.970	Pk Hr Factor			0.968	0.913	0.974
7 - 9 Volume	0	0	1641	4287	5928	4 - 6 Volume	0	0	4083	2576	6659
7 - 9 Peak Hour			07:45	07:30	07:45	4 - 6 Peak Hour			16:30	16:15	16:15
7 - 9 Pk Volume	0	0	910	2283	3174	4 - 6 Pk Volume	0	0	2091	1394	3451
Pk Hr Factor	0.000	0.000	0.882	0.976	0.970	Pk Hr Factor	0.000	0.000	0.968	0.901	0.974

Prepared by National Data & Surveying Services

CLASSIFICATION

Friars Rd Bet. Santo Rd & Riverdale St

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_029

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	1	206	30	2	17	0	0	0	2	0	0	0	0	258
01:00	0	156	16	0	9	0	0	1	2	0	1	0	0	185
02:00	0	158	23	0	11	1	0	2	4	0	0	0	0	199
03:00	0	168	26	0	12	0	0	1	2	0	0	0	0	209
04:00	0	303	52	1	44	0	0	3	2	0	1	0	0	406
05:00	0	750	122	6	100	0	0	6	4	0	0	0	0	988
06:00	2	1944	258	6	186	6	0	11	11	0	0	0	0	2424
07:00	4	2633	354	7	224	7	0	15	17	0	2	0	0	3263
08:00	2	2232	297	8	201	7	0	20	13	0	0	0	0	2780
09:00	4	1774	233	8	167	5	0	13	18	0	3	0	0	2225
10:00	7	1838	242	7	172	6	0	16	13	0	0	0	0	2301
11:00	6	1940	263	3	173	14	1	12	16	0	1	0	0	2429
12:00 PM	3	2084	261	12	172	10	2	17	16	0	0	0	0	2577
13:00	5	2116	279	6	226	9	1	16	13	0	2	0	0	2673
14:00	7	2492	351	11	243	14	0	19	16	1	2	0	0	3156
15:00	7	2464	328	8	199	8	0	15	10	1	1	0	0	3041
16:00	5	2738	311	9	205	5	1	16	16	0	1	0	0	3307
17:00	3	2727	303	8	201	10	0	13	15	0	1	0	0	3281
18:00	3	2191	228	12	143	4	0	13	8	0	0	0	0	2602
19:00	2	1569	168	7	96	9	0	10	9	0	0	0	0	1870
20:00	1	1115	135	5	71	1	1	4	5	0	0	0	0	1338
21:00	3	830	93	1	53	0	0	3	2	0	1	0	0	986
22:00	2	598	61	0	35	0	0	0	2	0	2	0	0	700
23:00	0	422	45	0	26	0	0	1	0	0	0	0	0	494
Totals	67	35448	4479	127	2986	116	6	227	216	2	18			43692
% of Totals	0%	81%	10%	0%	7%	0%	0%	1%	0%	0%	0%			100%

AM Volumes	26	14102	1916	48	1316	46	1	100	104	0	8	0	0	17667
% AM	0%	32%	4%	0%	3%	0%	0%	0%	0%		0%			40%
AM Peak Hour	10:00	07:00	07:00	08:00	07:00	11:00	11:00	08:00	09:00		09:00			07:00
Volume	7	2633	354	8	224	14	1	20	18		3			3263
PM Volumes	41	21346	2563	79	1670	70	5	127	112	2	10	0	0	26025
% PM	0%	49%	6%	0%	4%	0%	0%	0%	0%	0%	0%			60%
PM Peak Hour	14:00	16:00	14:00	12:00	14:00	14:00	12:00	14:00	12:00	14:00	13:00			16:00
Volume	7	2738	351	12	243	14	2	19	16	1	2			3307

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	6043	⟷	14%	5250	⟷	12%	6588	⟷	15%	25811	⟷	59%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Santo Rd & Riverdale St

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_029

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,067	22,625	43,692

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			43		50		93		12:00			279		357		636	
00:15			22		26		48		12:15			319		346		665	
00:30			38		27		65		12:30			294		313		607	
00:45			28	131	24	127	52	258	12:45			302	1194	367	1383	669	2577
01:00			32		24		56		13:00			319		318		637	
01:15			27		25		52		13:15			348		338		686	
01:30			25		14		39		13:30			329		352		681	
01:45			25	109	13	76	38	185	13:45			359	1355	310	1318	669	2673
02:00			32		18		50		14:00			466		386		852	
02:15			26		21		47		14:15			357		385		742	
02:30			20		26		46		14:30			382		445		827	
02:45			27	105	29	94	56	199	14:45			395	1600	340	1556	735	3156
03:00			17		28		45		15:00			388		384		772	
03:15			33		24		57		15:15			429		337		766	
03:30			15		35		50		15:30			402		360		762	
03:45			30	95	27	114	57	209	15:45			417	1636	324	1405	741	3041
04:00			38		34		72		16:00			495		299		794	
04:15			43		48		91		16:15			513		333		846	
04:30			41		64		105		16:30			506		333		839	
04:45			71	193	67	213	138	406	16:45			511	2025	317	1282	828	3307
05:00			61		77		138		17:00			517		390		907	
05:15			97		131		228		17:15			548		301		849	
05:30			113		163		276		17:30			511		286		797	
05:45			161	432	185	556	346	988	17:45			464	2040	264	1241	728	3281
06:00			135		229		364		18:00			462		261		723	
06:15			178		348		526		18:15			426		222		648	
06:30			191		544		735		18:30			388		251		639	
06:45			218	722	581	1702	799	2424	18:45			362	1638	230	964	592	2602
07:00			176		635		811		19:00			272		239		511	
07:15			171		618		789		19:15			259		238		497	
07:30			183		597		780		19:30			233		229		462	
07:45			247	777	636	2486	883	3263	19:45			195	959	205	911	400	1870
08:00			219		559		778		20:00			194		199		393	
08:15			223		469		692		20:15			157		163		320	
08:30			204		485		689		20:30			173		162		335	
08:45			261	907	360	1873	621	2780	20:45			135	659	155	679	290	1338
09:00			247		317		564		21:00			160		144		304	
09:15			279		313		592		21:15			140		103		243	
09:30			261		302		563		21:30			128		112		240	
09:45			227	1014	279	1211	506	2225	21:45			115	543	84	443	199	986
10:00			289		283		572		22:00			132		84		216	
10:15			259		302		561		22:15			102		78		180	
10:30			272		334		606		22:30			97		73		170	
10:45			273	1093	289	1208	562	2301	22:45			90	421	44	279	134	700
11:00			291		306		597		23:00			69		56		125	
11:15			293		274		567		23:15			70		78		148	
11:30			288		328		616		23:30			46		81		127	
11:45			313	1185	336	1244	649	2429	23:45			49	234	45	260	94	494
TOTALS				6763		10904		17667	TOTALS				14304		11721		26025
SPLIT %				38.3%		61.7%		40.4%	SPLIT %				55.0%		45.0%		59.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,067	22,625	43,692

AM Peak Hour			11:45	07:00	07:00	PM Peak Hour			16:45	14:00	16:30
AM Pk Volume			1205	2486	3263	PM Pk Volume			2087	1556	3423
Pk Hr Factor			0.944	0.977	0.924	Pk Hr Factor			0.952	0.874	0.943
7 - 9 Volume	0	0	1684	4359	6043	4 - 6 Volume	0	0	4065	2523	6588
7 - 9 Peak Hour			08:00	07:00	07:00	4 - 6 Peak Hour			16:45	16:15	16:30
7 - 9 Pk Volume	0	0	907	2486	3263	4 - 6 Pk Volume	0	0	2087	1373	3423
Pk Hr Factor	0.000	0.000	0.869	0.977	0.924	Pk Hr Factor	0.000	0.000	0.952	0.880	0.943

Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Riverdale St & Mission Gorge Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_030

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,497	13,279	31,776

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			29		26		55		12:00			283		161		444	
00:15			29		19		48		12:15			252		196		448	
00:30			18		19		37		12:30			256		207		463	
00:45			23	99	9	73	32	172	12:45			238	1029	186	750	424	1779
01:00			14		19		33		13:00			263		177		440	
01:15			22		15		37		13:15			254		159		413	
01:30			15		17		32		13:30			259		178		437	
01:45			20	71	11	62	31	133	13:45			265	1041	182	696	447	1737
02:00			19		7		26		14:00			241		181		422	
02:15			11		7		18		14:15			288		179		467	
02:30			22		16		38		14:30			313		268		581	
02:45			16	68	11	41	27	109	14:45			378	1220	273	901	651	2121
03:00			18		15		33		15:00			390		241		631	
03:15			21		8		29		15:15			424		212		636	
03:30			18		25		43		15:30			416		219		635	
03:45			17	74	17	65	34	139	15:45			454	1684	175	847	629	2531
04:00			14		10		24		16:00			447		214		661	
04:15			22		18		40		16:15			462		186		648	
04:30			31		41		72		16:30			556		199		755	
04:45			72	139	47	116	119	255	16:45			512	1977	195	794	707	2771
05:00			56		46		102		17:00			540		197		737	
05:15			61		62		123		17:15			554		194		748	
05:30			89		88		177		17:30			510		187		697	
05:45			114	320	100	296	214	616	17:45			494	2098	161	739	655	2837
06:00			146		123		269		18:00			394		165		559	
06:15			156		179		335		18:15			379		152		531	
06:30			156		290		446		18:30			339		126		465	
06:45			208	666	326	918	534	1584	18:45			330	1442	133	576	463	2018
07:00			128		315		443		19:00			243		152		395	
07:15			153		417		570		19:15			223		106		329	
07:30			161		417		578		19:30			223		162		385	
07:45			169	611	331	1480	500	2091	19:45			226	915	101	521	327	1436
08:00			179		384		563		20:00			168		87		255	
08:15			181		348		529		20:15			185		105		290	
08:30			151		289		440		20:30			170		99		269	
08:45			173	684	241	1262	414	1946	20:45			158	681	83	374	241	1055
09:00			184		215		399		21:00			139		68		207	
09:15			206		186		392		21:15			116		50		166	
09:30			195		179		374		21:30			138		69		207	
09:45			215	800	172	752	387	1552	21:45			94	487	48	235	142	722
10:00			160		156		316		22:00			119		46		165	
10:15			221		157		378		22:15			108		59		167	
10:30			200		155		355		22:30			81		44		125	
10:45			246	827	171	639	417	1466	22:45			84	392	42	191	126	583
11:00			214		189		403		23:00			64		39		103	
11:15			230		191		421		23:15			58		45		103	
11:30			257		169		426		23:30			39		100		139	
11:45			265	966	176	725	441	1691	23:45			45	206	42	226	87	432
TOTALS				5325		6429		11754	TOTALS				13172		6850		20022
SPLIT %				45.3%		54.7%		37.0%	SPLIT %				65.8%		34.2%		63.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,497	13,279	31,776

AM Peak Hour			11:30	07:15	07:15	PM Peak Hour			16:30	14:30	16:30
AM Pk Volume			1057	1549	2211	PM Pk Volume			2162	994	2947
Pk Hr Factor			0.934	0.929	0.956	Pk Hr Factor			0.972	0.910	0.976
7 - 9 Volume	0	0	1295	2742	4037	4 - 6 Volume	0	0	4075	1533	5608
7 - 9 Peak Hour			07:30	07:15	07:15	4 - 6 Peak Hour			16:30	16:00	16:30
7 - 9 Pk Volume	0	0	690	1549	2211	4 - 6 Pk Volume	0	0	2162	794	2947
Pk Hr Factor	0.000	0.000	0.953	0.929	0.956	Pk Hr Factor	0.000	0.000	0.972	0.928	0.976

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Prepared by NDS/ATD

VOLUME

Friars Rd Bet. Riverdale St & Mission Gorge Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_030

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,862	12,951	30,813

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			35		18		53		12:00			242		183		425	
00:15			24		21		45		12:15			225		177		402	
00:30			30		16		46		12:30			270		189		459	
00:45			25	114	10	65	35	179	12:45			243	980	194	743	437	1723
01:00			23		10		33		13:00			251		198		449	
01:15			15		13		28		13:15			275		169		444	
01:30			18		19		37		13:30			287		184		471	
01:45			25	81	13	55	38	136	13:45			326	1139	161	712	487	1851
02:00			19		12		31		14:00			277		176		453	
02:15			22		12		34		14:15			308		183		491	
02:30			19		20		39		14:30			297		219		516	
02:45			20	80	10	54	30	134	14:45			345	1227	207	785	552	2012
03:00			25		20		45		15:00			316		220		536	
03:15			12		18		30		15:15			376		197		573	
03:30			33		20		53		15:30			373		221		594	
03:45			29	99	16	74	45	173	15:45			408	1473	159	797	567	2270
04:00			21		28		49		16:00			463		142		605	
04:15			20		26		46		16:15			478		178		656	
04:30			44		41		85		16:30			514		182		696	
04:45			62	147	53	148	115	295	16:45			509	1964	195	697	704	2661
05:00			47		49		96		17:00			467		182		649	
05:15			78		58		136		17:15			524		185		709	
05:30			83		86		169		17:30			470		193		663	
05:45			106	314	107	300	213	614	17:45			503	1964	138	698	641	2662
06:00			119		136		255		18:00			407		151		558	
06:15			137		152		289		18:15			359		149		508	
06:30			177		256		433		18:30			295		141		436	
06:45			176	609	316	860	492	1469	18:45			286	1347	140	581	426	1928
07:00			129		332		461		19:00			228		135		363	
07:15			176		409		585		19:15			225		143		368	
07:30			136		339		475		19:30			180		126		306	
07:45			159	600	324	1404	483	2004	19:45			189	822	115	519	304	1341
08:00			172		364		536		20:00			168		110		278	
08:15			176		349		525		20:15			160		88		248	
08:30			148		335		483		20:30			171		68		239	
08:45			172	668	282	1330	454	1998	20:45			152	651	92	358	244	1009
09:00			189		255		444		21:00			147		76		223	
09:15			181		191		372		21:15			135		72		207	
09:30			212		180		392		21:30			102		66		168	
09:45			208	790	166	792	374	1582	21:45			107	491	66	280	173	771
10:00			185		159		344		22:00			91		48		139	
10:15			204		173		377		22:15			74		49		123	
10:30			203		146		349		22:30			90		50		140	
10:45			244	836	160	638	404	1474	22:45			108	363	44	191	152	554
11:00			216		161		377		23:00			61		39		100	
11:15			237		151		388		23:15			50		28		78	
11:30			224		190		414		23:30			42		107		149	
11:45			237	914	156	658	393	1572	23:45			36	189	38	212	74	401
TOTALS				5252		6378		11630	TOTALS				12610		6573		19183
SPLIT %				45.2%		54.8%		37.7%	SPLIT %				65.7%		34.3%		62.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,862	12,951	30,813

AM Peak Hour			11:45	07:15	07:15	PM Peak Hour			16:30	14:45	16:30
AM Pk Volume			974	1436	2079	PM Pk Volume			2014	845	2758
Pk Hr Factor			0.902	0.878	0.888	Pk Hr Factor			0.961	0.956	0.972
7 - 9 Volume	0	0	1268	2734	4002	4 - 6 Volume	0	0	3928	1395	5323
7 - 9 Peak Hour			08:00	07:15	07:15	4 - 6 Peak Hour			16:30	16:45	16:30
7 - 9 Pk Volume	0	0	668	1436	2079	4 - 6 Pk Volume	0	0	2014	755	2758
Pk Hr Factor	0.000	0.000	0.949	0.878	0.888	Pk Hr Factor	0.000	0.000	0.961	0.968	0.972

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Zion Rd & Friars Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_031

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,068	20,930	40,998

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			29		40		69		12:00			306		274		580	
00:15			32		21		53		12:15			317		293		610	
00:30			23		20		43		12:30			273		284		557	
00:45			22	106	26	107	48	213	12:45			294	1190	264	1115	558	2305
01:00			17		18		35		13:00			285		310		595	
01:15			17		28		45		13:15			294		288		582	
01:30			14		17		31		13:30			293		299		592	
01:45			20	68	18	81	38	149	13:45			288	1160	269	1166	557	2326
02:00			26		22		48		14:00			287		309		596	
02:15			16		16		32		14:15			324		324		648	
02:30			15		26		41		14:30			366		317		683	
02:45			16	73	23	87	39	160	14:45			376	1353	287	1237	663	2590
03:00			19		17		36		15:00			438		293		731	
03:15			21		26		47		15:15			457		292		749	
03:30			19		25		44		15:30			437		294		731	
03:45			18	77	16	84	34	161	15:45			479	1811	286	1165	765	2976
04:00			16		34		50		16:00			505		253		758	
04:15			28		60		88		16:15			498		273		771	
04:30			28		66		94		16:30			602		283		885	
04:45			62	134	81	241	143	375	16:45			503	2108	274	1083	777	3191
05:00			59		86		145		17:00			587		307		894	
05:15			51		117		168		17:15			594		251		845	
05:30			78		163		241		17:30			523		243		766	
05:45			110	298	182	548	292	846	17:45			488	2192	219	1020	707	3212
06:00			142		263		405		18:00			388		234		622	
06:15			158		375		533		18:15			402		233		635	
06:30			170		553		723		18:30			376		229		605	
06:45			211	681	610	1801	821	2482	18:45			347	1513	207	903	554	2416
07:00			168		691		859		19:00			277		236		513	
07:15			165		608		773		19:15			236		181		417	
07:30			184		628		812		19:30			253		181		434	
07:45			187	704	611	2538	798	3242	19:45			227	993	149	747	376	1740
08:00			200		634		834		20:00			190		142		332	
08:15			213		636		849		20:15			189		154		343	
08:30			199		464		663		20:30			179		132		311	
08:45			203	815	374	2108	577	2923	20:45			155	713	122	550	277	1263
09:00			237		329		566		21:00			165		115		280	
09:15			206		299		505		21:15			131		121		252	
09:30			229		309		538		21:30			133		101		234	
09:45			228	900	322	1259	550	2159	21:45			107	536	74	411	181	947
10:00			194		320		514		22:00			122		93		215	
10:15			231		285		516		22:15			105		75		180	
10:30			218		269		487		22:30			87		76		163	
10:45			262	905	247	1121	509	2026	22:45			78	392	53	297	131	689
11:00			250		247		497		23:00			56		49		105	
11:15			282		256		538		23:15			58		63		121	
11:30			287		257		544		23:30			42		50		92	
11:45			319	1138	305	1065	624	2203	23:45			52	208	34	196	86	404
TOTALS				5899		11040		**16939**	**TOTALS**				14169		9890		**24059**
SPLIT %				34.8%		65.2%		**41.3%**	**SPLIT %**				58.9%		41.1%		**58.7%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,068	20,930	40,998

AM Peak Hour			11:30	07:00	**07:30**	**PM Peak Hour**			16:30	14:00	**16:30**
AM Pk Volume			1229	2538	**3293**	**PM Pk Volume**			2286	1237	**3401**
Pk Hr Factor			0.963	0.918	**0.970**	**Pk Hr Factor**			0.949	0.954	**0.951**
7 - 9 Volume	0	0	1519	4646	**6165**	**4 - 6 Volume**	0	0	4300	2103	**6403**
7 - 9 Peak Hour			08:00	07:00	**07:30**	**4 - 6 Peak Hour**			16:30	16:15	**16:30**
7 - 9 Pk Volume	0	0	815	2538	**3293**	**4 - 6 Pk Volume**	0	0	2286	1137	**3401**
Pk Hr Factor	0.000	0.000	0.957	0.918	**0.970**	**Pk Hr Factor**	0.000	0.000	0.949	0.926	**0.951**

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Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Zion Rd & Friars Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_031

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,560	20,822	40,382

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			42		46		88		12:00			290		308		598	
00:15			31		25		56		12:15			249		281		530	
00:30			38		26		64		12:30			299		283		582	
00:45			25	136	21	118	46	254	12:45			300	1138	282	1154	582	2292
01:00			25		22		47		13:00			305		312		617	
01:15			14		23		37		13:15			308		277		585	
01:30			20		13		33		13:30			312		281		593	
01:45			24	83	13	71	37	154	13:45			380	1305	292	1162	672	2467
02:00			22		17		39		14:00			315		326		641	
02:15			20		17		37		14:15			326		305		631	
02:30			21		21		42		14:30			313		324		637	
02:45			26	89	30	85	56	174	14:45			366	1320	283	1238	649	2558
03:00			24		28		52		15:00			374		313		687	
03:15			12		13		25		15:15			392		316		708	
03:30			31		36		67		15:30			392		255		647	
03:45			32	99	31	108	63	207	15:45			429	1587	271	1155	700	2742
04:00			25		38		63		16:00			519		229		748	
04:15			24		60		84		16:15			514		243		757	
04:30			41		64		105		16:30			562		302		864	
04:45			52	142	76	238	128	380	16:45			563	2158	224	998	787	3156
05:00			42		95		137		17:00			565		294		859	
05:15			70		130		200		17:15			571		243		814	
05:30			82		163		245		17:30			498		221		719	
05:45			99	293	196	584	295	877	17:45			529	2163	241	999	770	3162
06:00			122		226		348		18:00			432		238		670	
06:15			157		338		495		18:15			403		246		649	
06:30			178		572		750		18:30			301		227		528	
06:45			173	630	584	1720	757	2350	18:45			323	1459	228	939	551	2398
07:00			155		707		862		19:00			227		207		434	
07:15			190		701		891		19:15			249		210		459	
07:30			153		658		811		19:30			193		180		373	
07:45			166	664	664	2730	830	3394	19:45			194	863	151	748	345	1611
08:00			196		591		787		20:00			170		157		327	
08:15			226		504		730		20:15			182		144		326	
08:30			181		461		642		20:30			171		148		319	
08:45			218	821	376	1932	594	2753	20:45			172	695	135	584	307	1279
09:00			207		320		527		21:00			150		116		266	
09:15			212		304		516		21:15			143		110		253	
09:30			243		283		526		21:30			120		104		224	
09:45			249	911	270	1177	519	2088	21:45			108	521	95	425	203	946
10:00			199		258		457		22:00			97		62		159	
10:15			233		257		490		22:15			81		68		149	
10:30			211		268		479		22:30			89		68		157	
10:45			262	905	264	1047	526	1952	22:45			81	348	53	251	134	599
11:00			243		261		504		23:00			60		58		118	
11:15			239		285		524		23:15			47		51		98	
11:30			262		320		582		23:30			55		45		100	
11:45			283	1027	295	1161	578	2188	23:45			41	203	44	198	85	401
TOTALS				5800		10971		16771	TOTALS				13760		9851		23611
SPLIT %				34.6%		65.4%		41.5%	SPLIT %				58.3%		41.7%		58.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,560	20,822	40,382

AM Peak Hour			11:45	07:00	07:00	PM Peak Hour			16:30	13:45	16:30
AM Pk Volume			1121	2730	3394	PM Pk Volume			2261	1247	3324
Pk Hr Factor			0.937	0.965	0.952	Pk Hr Factor			0.990	0.956	0.962
7 - 9 Volume	0	0	1485	4662	6147	4 - 6 Volume	0	0	4321	1997	6318
7 - 9 Peak Hour			08:00	07:00	07:00	4 - 6 Peak Hour			16:30	16:15	16:30
7 - 9 Pk Volume	0	0	821	2730	3394	4 - 6 Pk Volume	0	0	2261	1063	3324
Pk Hr Factor	0.000	0.000	0.908	0.965	0.952	Pk Hr Factor	0.000	0.000	0.990	0.880	0.962

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hazard Center Drive, From Western Terminus to Mission Center Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			5		4			12:00			98		68		
00:15			14		1			12:15			91		70		
00:30			10		0			12:30			77		84		
00:45			5	34	4	9	43	12:45			105	371	98	320	691
01:00			7		0			13:00			88		88		
01:15			2		0			13:15			94		70		
01:30			1		1			13:30			70		65		
01:45			1	11	1	2	13	13:45			65	317	70	293	610
02:00			2		1			14:00			77		55		
02:15			3		1			14:15			54		70		
02:30			1		0			14:30			51		74		
02:45			1	7	2	4	11	14:45			40	222	84	283	505
03:00			2		0			15:00			65		88		
03:15			1		3			15:15			77		81		
03:30			3		4			15:30			57		70		
03:45			2	8	4	11	19	15:45			91	290	65	304	594
04:00			2		5			16:00			105		71		
04:15			2		0			16:15			121		69		
04:30			4		4			16:30			165		84		
04:45			5	13	11	20	33	16:45			158	549	88	312	861
05:00			6		7			17:00			165		95		
05:15			6		6			17:15			128		70		
05:30			6		7			17:30			144		91		
05:45			7	25	17	37	62	17:45			151	588	98	354	942
06:00			6		12			18:00			121		84		
06:15			15		21			18:15			103		70		
06:30			13		25			18:30			111		65		
06:45			14	48	27	85	133	18:45			106	441	77	296	737
07:00			26		39			19:00			84		84		
07:15			44		47			19:15			70		51		
07:30			51		50			19:30			65		65		
07:45			40	161	81	217	378	19:45			55	274	77	277	551
08:00			51		97			20:00			40		54		
08:15			42		79			20:15			35		51		
08:30			70		67			20:30			28		40		
08:45			68	231	74	317	548	20:45			23	126	35	180	306
09:00			23		68			21:00			31		41		
09:15			36		39			21:15			25		28		
09:30			25		38			21:30			36		17		
09:45			23	107	26	171	278	21:45			21	113	12	98	211
10:00			34		31			22:00			29		15		
10:15			33		46			22:15			21		14		
10:30			22		22			22:30			16		16		
10:45			29	118	50	149	267	22:45			11	77	18	63	140
11:00			68		77			23:00			16		7		
11:15			70		51			23:15			8		15		
11:30			84		68			23:30			9		9		
11:45			88	310	89	285	595	23:45			7	40	5	36	76
Total Vol.				1073		1307	**2380**					3408		2816	**6224**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
			4481	4123	**8604**

	AM			**PM**		
Split %	45.1%	54.9%	**27.7%**	54.8%	45.2%	**72.3%**
Peak Hour	11:30	07:45	**11:45**	16:30	17:00	**16:30**
Volume	361	324	**665**	616	354	**953**
P.H.F.	0.92	0.84	**0.94**	0.93	0.90	**0.92**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hazard Center Drive, From Western Terminus to Mission Center Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			7		4			12:00			98		90		
00:15			6		3			12:15			105		84		
00:30			11		5			12:30			111		81		
00:45			14	38	4	16	54	12:45			91	405	95	350	755
01:00			2		4			13:00			84		77		
01:15			9		5			13:15			90		68		
01:30			3		3			13:30			77		70		
01:45			7	21	2	14	35	13:45			68	319	68	283	602
02:00			1		1			14:00			70		66		
02:15			6		2			14:15			54		70		
02:30			2		0			14:30			66		54		
02:45			0	9	2	5	14	14:45			70	260	84	274	534
03:00			0		1			15:00			88		55		
03:15			0		4			15:15			70		65		
03:30			2		2			15:30			65		35		
03:45			0	2	5	12	14	15:45			94	317	44	199	516
04:00			5		6			16:00			141		77		
04:15			3		2			16:15			128		51		
04:30			4		2			16:30			168		77		
04:45			1	13	5	15	28	16:45			151	588	84	289	877
05:00			4		3			17:00			188		99		
05:15			3		10			17:15			131		80		
05:30			3		12			17:30			141		88		
05:45			5	15	15	40	55	17:45			128	588	91	358	946
06:00			6		9			18:00			105		77		
06:15			8		20			18:15			111		68		
06:30			14		20			18:30			98		70		
06:45			16	44	36	85	129	18:45			70	384	54	269	653
07:00			33		48			19:00			65		88		
07:15			44		44			19:15			88		68		
07:30			41		50			19:30			70		70		
07:45			48	166	51	193	359	19:45			54	277	54	280	557
08:00			51		68			20:00			66		55		
08:15			33		77			20:15			40		40		
08:30			61		81			20:30			35		35		
08:45			60	205	69	295	500	20:45			44	185	22	152	337
09:00			42		53			21:00			32		32		
09:15			33		77			21:15			33		27		
09:30			36		84			21:30			33		21		
09:45			27	138	98	312	450	21:45			38	136	30	110	246
10:00			29		70			22:00			24		13		
10:15			25		54			22:15			10		13		
10:30			22		66			22:30			14		15		
10:45			35	111	54	244	355	22:45			16	64	15	56	120
11:00			66		70			23:00			11		7		
11:15			81		51			23:15			34		10		
11:30			80		66			23:30			15		8		
11:45			77	304	94	281	585	23:45			7	67	4	29	96
Total Vol.				1066		1512	**2578**					3590		2649	**6239**

Daily Totals

NB	SB	EB	WB	Combined
		4656	4161	**8817**

	AM			PM		
Split %	41.3%	58.7%	**29.2%**	57.5%	42.5%	**70.8%**
Peak Hour	11:45	11:45	**11:45**	16:30	17:00	**16:30**
Volume	391	349	**740**	638	358	**978**
P.H.F.	0.88	0.93	**0.96**	0.85	0.90	**0.85**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Rio San Diego Drive, From Gill Village Way to Qualcomm Way

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			12		12			12:00			131		108		
00:15			8		8			12:15			122		115		
00:30			9		9			12:30			106		121		
00:45			5	34	5	34	68	12:45			88	447	106	450	897
01:00			4		4			13:00			95		88		
01:15			4		6			13:15			70		95		
01:30			4		5			13:30			65		105		
01:45			4	16	2	17	33	13:45			88	318	106	394	712
02:00			3		1			14:00			95		98		
02:15			2		0			14:15			77		90		
02:30			1		2			14:30			65		70		
02:45			1	7	1	4	11	14:45			70	307	65	323	630
03:00			0		2			15:00			84		88		
03:15			1		3			15:15			90		70		
03:30			2		0			15:30			89		95		
03:45			1	4	1	6	10	15:45			115	378	101	354	732
04:00			2		2			16:00			121		108		
04:15			0		4			16:15			116		99		
04:30			1		6			16:30			105		126		
04:45			3	6	5	17	23	16:45			141	483	135	468	951
05:00			8		8			17:00			135		141		
05:15			15		5			17:15			128		144		
05:30			11		5			17:30			121		105		
05:45			16	50	9	27	77	17:45			131	515	106	496	1011
06:00			20		8			18:00			128		111		
06:15			19		11			18:15			116		121		
06:30			28		20			18:30			128		106		
06:45			40	107	18	57	164	18:45			105	477	88	426	903
07:00			50		22			19:00			88		95		
07:15			66		18			19:15			95		70		
07:30			61		29			19:30			70		65		
07:45			62	239	35	104	343	19:45			91	344	88	318	662
08:00			48		31			20:00			65		80		
08:15			51		44			20:15			54		70		
08:30			66		51			20:30			40		65		
08:45			68	233	50	176	409	20:45			36	195	55	270	465
09:00			51		60			21:00			54		40		
09:15			66		55			21:15			41		35		
09:30			70		65			21:30			32		28		
09:45			84	271	55	235	506	21:45			22	149	21	124	273
10:00			95		45			22:00			28		18		
10:15			105		65			22:15			21		10		
10:30			111		68			22:30			19		11		
10:45			105	416	77	255	671	22:45			20	88	14	53	141
11:00			126		84			23:00			18		11		
11:15			116		95			23:15			20		12		
11:30			105		70			23:30			16		8		
11:45			119	466	105	354	820	23:45			11	65	9	40	105
Total Vol.				1849		1286	**3135**					3766		3716	**7482**

Daily Totals

NB	SB	EB	WB	Combined
		5615	5002	**10617**

	AM			PM		
Split %	59.0%	41.0%	**29.5%**	50.3%	49.7%	**70.5%**
Peak Hour	11:45	11:45	**11:45**	16:45	16:30	**16:30**
Volume	478	449	**927**	525	546	**1055**
P.H.F.	0.91	0.93	**0.97**	0.93	0.95	**0.96**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Rio San Diego Drive, From Gill Village Way to Qualcomm Way

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			11		8			12:00			118		114		
00:15			8		9			12:15			126		126		
00:30			9		10			12:30			116		113		
00:45			10	38	5	32	70	12:45			105	465	104	457	922
01:00			5		4			13:00			88		111		
01:15			4		9			13:15			95		98		
01:30			6		11			13:30			96		91		
01:45			5	20	5	29	49	13:45			80	359	70	370	729
02:00			3		4			14:00			70		65		
02:15			5		6			14:15			65		77		
02:30			4		3			14:30			77		84		
02:45			2	14	2	15	29	14:45			54	266	55	281	547
03:00			1		1			15:00			88		68		
03:15			0		5			15:15			95		77		
03:30			2		4			15:30			105		84		
03:45			3	6	4	14	20	15:45			111	399	105	334	733
04:00			2		6			16:00			106		111		
04:15			4		1			16:15			121		106		
04:30			6		2			16:30			135		103		
04:45			0	12	0	9	21	16:45			141	503	114	434	937
05:00			4		1			17:00			116		121		
05:15			9		2			17:15			103		125		
05:30			12		6			17:30			88		103		
05:45			11	36	5	14	50	17:45			91	398	128	477	875
06:00			19		10			18:00			106		98		
06:15			26		9			18:15			115		105		
06:30			33		15			18:30			103		111		
06:45			35	113	22	56	169	18:45			84	408	91	405	813
07:00			51		28			19:00			95		80		
07:15			68		35			19:15			70		70		
07:30			88		28			19:30			65		77		
07:45			70	277	22	113	390	19:45			55	285	65	292	577
08:00			65		35			20:00			98		74		
08:15			55		28			20:15			70		84		
08:30			54		41			20:30			65		65		
08:45			42	216	35	139	355	20:45			40	273	55	278	551
09:00			35		44			21:00			35		68		
09:15			65		51			21:15			44		70		
09:30			65		68			21:30			41		40		
09:45			70	235	70	233	468	21:45			28	148	35	213	361
10:00			84		66			22:00			21		44		
10:15			94		54			22:15			19		25		
10:30			99		68			22:30			29		21		
10:45			111	388	70	258	646	22:45			16	85	19	109	194
11:00			106		65			23:00			18		20		
11:15			121		66			23:15			20		16		
11:30			103		84			23:30			15		18		
11:45			105	435	95	310	745	23:45			11	64	12	66	130
Total Vol.				1790		1222	**3012**					3653		3716	**7369**

Daily Totals

NB	SB	EB	WB	Combined
		5443	4938	**10381**

	AM			PM		
Split %	59.4%	40.6%	**29.0%**	49.6%	50.4%	**71.0%**
Peak Hour	11:45	11:45	**11:45**	16:15	17:00	**16:30**
Volume	465	448	**913**	513	477	**958**
P.H.F.	0.92	0.89	**0.91**	0.91	0.93	**0.94**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Rio San Diego Drive, From Qualcomm Way to River Run Drive

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			9		4			12:00			124		94		
00:15			8		5			12:15			82		101		
00:30			6		6			12:30			70		108		
00:45			5	28	6	21	49	12:45			99	375	146	449	824
01:00			6		2			13:00			105		140		
01:15			5		2			13:15			115		111		
01:30			4		1			13:30			121		139		
01:45			3	18	4	9	27	13:45			118	459	115	505	964
02:00			2		2			14:00			103		109		
02:15			1		5			14:15			111		97		
02:30			0		4			14:30			89		126		
02:45			2	5	1	12	17	14:45			91	394	95	427	821
03:00			2		2			15:00			99		120		
03:15			1		1			15:15			105		97		
03:30			1		3			15:30			89		94		
03:45			2	6	0	6	12	15:45			95	388	97	408	796
04:00			3		1			16:00			88		106		
04:15			5		4			16:15			70		91		
04:30			6		6			16:30			95		106		
04:45			7	21	13	24	45	16:45			105	358	110	413	771
05:00			18		7			17:00			111		107		
05:15			19		15			17:15			98		112		
05:30			19		31			17:30			106		106		
05:45			21	77	46	99	176	17:45			111	426	79	404	830
06:00			35		54			18:00			98		68		
06:15			41		51			18:15			87		83		
06:30			50		61			18:30			77		92		
06:45			65	191	105	271	462	18:45			89	351	93	336	687
07:00			80		56			19:00			84		78		
07:15			91		94			19:15			60		84		
07:30			105		93			19:30			55		92		
07:45			118	394	121	364	758	19:45			68	267	95	349	616
08:00			109		105			20:00			70		54		
08:15			115		93			20:15			45		51		
08:30			105		93			20:30			35		47		
08:45			94	423	77	368	791	20:45			33	183	45	197	380
09:00			77		75			21:00			28		47		
09:15			98		75			21:15			28		20		
09:30			94		78			21:30			20		27		
09:45			69	338	61	289	627	21:45			19	95	14	108	203
10:00			70		74			22:00			11		26		
10:15			88		74			22:15			10		16		
10:30			76		95			22:30			9		7		
10:45			85	319	95	338	657	22:45			8	38	8	57	95
11:00			71		90			23:00			9		11		
11:15			78		77			23:15			9		5		
11:30			101		95			23:30			5		8		
11:45			114	364	87	349	713	23:45			9	32	9	33	65
Total Vol.				2184		2150	**4334**					3366		3686	**7052**

Daily Totals

NB	SB	EB	WB	Combined
		5550	5836	**11386**

	AM			PM		
Split %	50.4%	49.6%	**38.1%**	47.7%	52.3%	**61.9%**
Peak Hour	07:30	07:15	**07:30**	13:00	12:45	**12:45**
Volume	447	413	**859**	459	536	**976**
P.H.F.	0.95	0.85	**0.90**	0.95	0.92	**0.94**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Rio San Diego Drive, From Qualcomm Way to River Run Drive

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			7		7			12:00			98		103		
00:15			8		6			12:15			103		122		
00:30			8		9			12:30			111		126		
00:45			9	32	3	25	57	12:45			100	412	160	511	923
01:00			5		2			13:00			95		125		
01:15			6		2			13:15			106		104		
01:30			8		3			13:30			114		103		
01:45			4	23	0	7	30	13:45			121	436	119	451	887
02:00			5		1			14:00			103		92		
02:15			3		2			14:15			118		92		
02:30			2		1			14:30			88		118		
02:45			2	12	2	6	18	14:45			99	408	99	401	809
03:00			1		2			15:00			105		96		
03:15			0		0			15:15			84		102		
03:30			0		0			15:30			95		94		
03:45			1	2	2	4	6	15:45			70	354	96	388	742
04:00			2		3			16:00			77		85		
04:15			6		2			16:15			95		86		
04:30			8		3			16:30			88		111		
04:45			7	23	9	17	40	16:45			97	357	87	369	726
05:00			9		9			17:00			94		100		
05:15			12		7			17:15			105		102		
05:30			18		33			17:30			121		98		
05:45			22	61	46	95	156	17:45			103	423	109	409	832
06:00			16		54			18:00			92		76		
06:15			35		64			18:15			98		85		
06:30			44		63			18:30			95		75		
06:45			68	163	87	268	431	18:45			70	355	74	310	665
07:00			70		67			19:00			84		88		
07:15			84		85			19:15			81		66		
07:30			94		102			19:30			66		73		
07:45			121	369	125	379	748	19:45			70	301	66	293	594
08:00			106		104			20:00			66		60		
08:15			135		110			20:15			31		53		
08:30			111		83			20:30			40		63		
08:45			105	457	93	390	847	20:45			42	179	40	216	395
09:00			94		83			21:00			21		34		
09:15			90		67			21:15			20		30		
09:30			89		68			21:30			18		28		
09:45			99	372	66	284	656	21:45			17	76	16	108	184
10:00			84		56			22:00			16		27		
10:15			70		79			22:15			11		17		
10:30			65		102			22:30			8		14		
10:45			55	274	87	324	598	22:45			8	43	7	65	108
11:00			88		91			23:00			9		13		
11:15			70		87			23:15			5		10		
11:30			68		98			23:30			6		4		
11:45			77	303	90	366	669	23:45			4	24	5	32	56
Total Vol.			2091		2165		**4256**				3368		3553		**6921**

Daily Totals

NB	SB	EB	WB	Combined
		5459	5718	**11177**

	AM			PM		
Split %	49.1%	50.9%	**38.1%**	48.7%	51.3%	**61.9%**
Peak Hour	07:45	07:30	**07:30**	13:30	12:15	**12:15**
Volume	473	441	**897**	456	533	**942**
P.H.F.	0.88	0.88	**0.91**	0.94	0.83	**0.91**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Rio San Diego Drive, From River Run Drive to Fenton Parkway

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			18		9			12:00			88		91		
00:15			10		12			12:15			95		77		
00:30			5		5			12:30			70		84		
00:45			4	37	8	34	71	12:45			65	318	95	347	665
01:00			6		9			13:00			84		84		
01:15			9		9			13:15			65		70		
01:30			5		4			13:30			88		65		
01:45			4	24	3	25	49	13:45			54	291	88	307	598
02:00			3		2			14:00			65		65		
02:15			2		0			14:15			40		75		
02:30			0		1			14:30			65		98		
02:45			4	9	2	5	14	14:45			65	235	65	303	538
03:00			5		0			15:00			66		70		
03:15			1		1			15:15			70		88		
03:30			2		0			15:30			80		84		
03:45			0	8	0	1	9	15:45			94	310	90	332	642
04:00			3		2			16:00			105		108		
04:15			2		1			16:15			106		88		
04:30			0		1			16:30			121		91		
04:45			1	6	1	5	11	16:45			103	435	105	392	827
05:00			4		2			17:00			114		121		
05:15			5		3			17:15			116		116		
05:30			6		5			17:30			106		91		
05:45			5	20	8	18	38	17:45			91	427	88	416	843
06:00			11		20			18:00			81		77		
06:15			16		28			18:15			91		95		
06:30			18		35			18:30			75		80		
06:45			12	57	44	127	184	18:45			84	331	70	322	653
07:00			22		51			19:00			65		65		
07:15			19		94			19:15			77		55		
07:30			31		88			19:30			65		54		
07:45			33	105	92	325	430	19:45			66	273	40	214	487
08:00			35		77			20:00			40		68		
08:15			31		84			20:15			66		51		
08:30			38		70			20:30			40		44		
08:45			44	148	61	292	440	20:45			35	181	35	198	379
09:00			45		66			21:00			33		28		
09:15			55		54			21:15			28		20		
09:30			65		68			21:30			26		19		
09:45			70	235	70	258	493	21:45			25	112	20	87	199
10:00			65		84			22:00			15		16		
10:15			45		88			22:15			18		11		
10:30			66		81			22:30			12		18		
10:45			84	260	78	331	591	22:45			16	61	19	64	125
11:00			91		85			23:00			11		11		
11:15			88		95			23:15			19		8		
11:30			95		88			23:30			11		9		
11:45			77	351	70	338	689	23:45			18	59	12	40	99
Total Vol.			1260		1759		**3019**				3033		3022		**6055**

Daily Totals

NB	SB	EB	WB	Combined
		4293	4781	**9074**

	AM			PM		
Split %	41.7%	58.3%	**33.3%**	50.1%	49.9%	**66.7%**
Peak Hour	10:45	07:15	**10:45**	16:30	16:30	**16:30**
Volume	358	351	**704**	454	433	**887**
P.H.F.	0.94	0.93	**0.96**	0.94	0.89	**0.94**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Rio San Diego Drive, From River Run Drive to Fenton Parkway

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			18		8			12:00			70		88		
00:15			8		7			12:15			84		95		
00:30			9		9			12:30			81		70		
00:45			5	40	6	30	70	12:45			77	312	84	337	649
01:00			4		5			13:00			84		65		
01:15			6		4			13:15			68		88		
01:30			5		3			13:30			70		78		
01:45			3	18	1	13	31	13:45			84	306	84	315	621
02:00			5		2			14:00			65		88		
02:15			4		0			14:15			77		95		
02:30			1		1			14:30			84		70		
02:45			2	12	2	5	17	14:45			96	322	65	318	640
03:00			1		1			15:00			88		77		
03:15			3		0			15:15			75		84		
03:30			2		1			15:30			81		95		
03:45			0	6	2	4	10	15:45			78	322	90	346	668
04:00			1		1			16:00			95		118		
04:15			5		1			16:15			121		126		
04:30			4		1			16:30			106		103		
04:45			1	11	6	9	20	16:45			113	435	84	431	866
05:00			0		5			17:00			141		116		
05:15			6		9			17:15			101		105		
05:30			4		8			17:30			89		99		
05:45			9	19	9	31	50	17:45			95	426	103	423	849
06:00			12		11			18:00			96		84		
06:15			18		18			18:15			88		80		
06:30			11		21			18:30			70		70		
06:45			19	60	33	83	143	18:45			54	308	95	329	637
07:00			26		45			19:00			66		88		
07:15			22		84			19:15			84		75		
07:30			35		95			19:30			70		65		
07:45			40	123	77	301	424	19:45			54	274	35	263	537
08:00			26		95			20:00			65		44		
08:15			28		84			20:15			40		51		
08:30			21		88			20:30			33		44		
08:45			45	120	84	351	471	20:45			38	176	31	170	346
09:00			51		65			21:00			31		21		
09:15			40		60			21:15			28		22		
09:30			66		77			21:30			20		26		
09:45			42	199	54	256	455	21:45			19	98	29	98	196
10:00			68		60			22:00			20		18		
10:15			70		77			22:15			16		20		
10:30			54		84			22:30			18		15		
10:45			68	260	68	289	549	22:45			11	65	11	64	129
11:00			95		77			23:00			15		8		
11:15			99		84			23:15			9		9		
11:30			84		70			23:30			12		5		
11:45			70	348	65	296	644	23:45			5	41	10	32	73
Total Vol.				1216		1668	**2884**					3085		3126	**6211**

Daily Totals

NB	SB	EB	WB	Combined
		4301	4794	**9095**

	AM			PM		
Split %	42.2%	57.8%	**31.7%**	49.7%	50.3%	**68.3%**
Peak Hour	11:00	07:15	**10:45**	16:15	15:45	**16:15**
Volume	348	351	**645**	481	437	**910**
P.H.F.	0.88	0.92	**0.88**	0.85	0.87	**0.89**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

San Diego Mission Road, From Friars Road EB Ramps to Rancho Mission Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			1		7			12:00			41		55		
00:15			8		7			12:15			53		58		
00:30			2		11			12:30			44		40		
00:45			1	12	1	26	38	12:45			42	180	45	198	378
01:00			6		12			13:00			40		44		
01:15			5		2			13:15			50		52		
01:30			4		2			13:30			45		67		
01:45			1	16	4	20	36	13:45			56	191	56	219	410
02:00			3		5			14:00			38		49		
02:15			2		4			14:15			39		51		
02:30			1		1			14:30			65		61		
02:45			3	9	8	18	27	14:45			42	184	56	217	401
03:00			0		3			15:00			56		56		
03:15			5		4			15:15			70		52		
03:30			3		10			15:30			64		71		
03:45			0	8	11	28	36	15:45			90	280	55	234	514
04:00			3		3			16:00			118		50		
04:15			6		5			16:15			168		41		
04:30			6		7			16:30			151		49		
04:45			6	21	8	23	44	16:45			216	653	51	191	844
05:00			0		10			17:00			183		65		
05:15			4		10			17:15			206		62		
05:30			7		25			17:30			158		57		
05:45			9	20	20	65	85	17:45			123	670	55	239	909
06:00			6		21			18:00			121		37		
06:15			15		32			18:15			87		29		
06:30			11		53			18:30			56		48		
06:45			18	50	72	178	228	18:45			56	320	22	136	456
07:00			35		73			19:00			32		36		
07:15			44		155			19:15			38		41		
07:30			51		187			19:30			39		44		
07:45			68	198	209	624	822	19:45			45	154	30	151	305
08:00			40		168			20:00			37		18		
08:15			41		133			20:15			28		21		
08:30			44		90			20:30			31		20		
08:45			58	183	84	475	658	20:45			33	129	16	75	204
09:00			33		45			21:00			36		18		
09:15			40		40			21:15			28		25		
09:30			28		53			21:30			37		15		
09:45			34	135	43	181	316	21:45			22	123	6	64	187
10:00			24		31			22:00			14		13		
10:15			40		37			22:15			20		16		
10:30			43		39			22:30			10		13		
10:45			26	133	46	153	286	22:45			17	61	8	50	111
11:00			38		44			23:00			7		8		
11:15			49		47			23:15			8		8		
11:30			38		59			23:30			8		5		
11:45			36	161	44	194	355	23:45			4	27	9	30	57
Total Vol.				946		1985	**2931**					2972		1804	**4776**

Daily Totals

NB	SB	EB	WB	Combined
		3918	3789	**7707**

	AM			PM		
Split %	32.3%	67.7%	**38.0%**	62.2%	37.8%	**62.0%**
Peak Hour	07:15	07:15	**07:15**	16:45	17:00	**16:45**
Volume	203	719	**922**	763	239	**998**
P.H.F.	0.75	0.86	**0.83**	0.88	0.92	**0.93**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

San Diego Mission Road, From Friars Road EB Ramps to Rancho Mission Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			5		6			12:00			49		57		
00:15			8		7			12:15			31		36		
00:30			5		6			12:30			47		54		
00:45			2	20	1	20	40	12:45			41	168	39	186	354
01:00			5		2			13:00			48		50		
01:15			5		10			13:15			38		45		
01:30			6		4			13:30			44		56		
01:45			1	17	3	19	36	13:45			47	177	45	196	373
02:00			2		4			14:00			45		45		
02:15			4		3			14:15			46		52		
02:30			3		5			14:30			48		49		
02:45			1	10	2	14	24	14:45			53	192	51	197	389
03:00			5		6			15:00			52		57		
03:15			0		4			15:15			56		59		
03:30			0		2			15:30			63		56		
03:45			1	6	14	26	32	15:45			89	260	54	226	486
04:00			5		5			16:00			121		68		
04:15			3		13			16:15			168		41		
04:30			7		3			16:30			156		55		
04:45			1	16	4	25	41	16:45			205	650	50	214	864
05:00			1		11			17:00			198		51		
05:15			3		12			17:15			227		68		
05:30			9		19			17:30			179		66		
05:45			6	19	12	54	73	17:45			121	725	51	236	961
06:00			14		26			18:00			124		33		
06:15			13		26			18:15			85		30		
06:30			11		53			18:30			88		31		
06:45			29	67	92	197	264	18:45			70	367	29	123	490
07:00			44		88			19:00			45		32		
07:15			46		126			19:15			40		35		
07:30			43		189			19:30			35		38		
07:45			66	199	194	597	796	19:45			30	150	19	124	274
08:00			40		151			20:00			41		17		
08:15			41		121			20:15			20		27		
08:30			44		88			20:30			25		25		
08:45			49	174	65	425	599	20:45			25	111	24	93	204
09:00			39		53			21:00			24		22		
09:15			33		43			21:15			23		18		
09:30			24		38			21:30			18		12		
09:45			29	125	33	167	292	21:45			16	81	7	59	140
10:00			37		33			22:00			14		10		
10:15			37		29			22:15			12		11		
10:30			34		44			22:30			8		7		
10:45			32	140	43	149	289	22:45			10	44	8	36	80
11:00			43		37			23:00			4		8		
11:15			27		38			23:15			13		4		
11:30			44		29			23:30			5		8		
11:45			55	169	36	140	309	23:45			5	27	12	32	59
Total Vol.				962		1833	**2795**					2952		1722	**4674**

Daily Totals

NB	SB	EB	WB	Combined
		3914	3555	**7469**

	AM			PM		
Split %	34.4%	65.6%	**37.4%**	63.2%	36.8%	**62.6%**
Peak Hour	07:00	07:15	**07:15**	16:45	15:15	**16:45**
Volume	199	660	**855**	809	237	**1044**
P.H.F.	0.75	0.85	**0.82**	0.89	0.87	**0.88**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

San Diego Mission Road, From Rancho Mission Road to 950 Feet West of Fairmount Avenue

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			4		6			12:00			91		38		
00:15			6		4			12:15			88		40		
00:30			1		7			12:30			87		31		
00:45			2	13	2	19	32	12:45			78	344	43	152	496
01:00			1		9			13:00			74		46		
01:15			0		3			13:15			85		52		
01:30			0		3			13:30			85		58		
01:45			0	1	0	15	16	13:45			86	330	34	190	520
02:00			1		4			14:00			91		32		
02:15			1		3			14:15			79		56		
02:30			1		5			14:30			90		60		
02:45			3	6	2	14	20	14:45			79	339	56	204	543
03:00			2		2			15:00			94		35		
03:15			4		0			15:15			86		49		
03:30			5		5			15:30			94		76		
03:45			2	13	3	10	23	15:45			84	358	42	202	560
04:00			1		2			16:00			79		88		
04:15			5		2			16:15			121		84		
04:30			8		3			16:30			104		77		
04:45			13	27	0	7	34	16:45			130	434	84	333	767
05:00			8		1			17:00			140		85		
05:15			12		2			17:15			159		78		
05:30			22		6			17:30			128		94		
05:45			22	64	7	16	80	17:45			101	528	84	341	869
06:00			18		7			18:00			107		68		
06:15			22		24			18:15			80		54		
06:30			23		43			18:30			64		40		
06:45			43	106	47	121	227	18:45			66	317	35	197	514
07:00			39		88			19:00			29		22		
07:15			47		128			19:15			43		31		
07:30			47		202			19:30			50		14		
07:45			68	201	219	637	838	19:45			31	153	14	81	234
08:00			57		166			20:00			35		8		
08:15			43		123			20:15			45		7		
08:30			45		81			20:30			31		7		
08:45			56	201	55	425	626	20:45			35	146	6	28	174
09:00			47		51			21:00			40		5		
09:15			56		46			21:15			24		9		
09:30			42		40			21:30			22		4		
09:45			56	201	42	179	380	21:45			16	102	3	21	123
10:00			70		27			22:00			17		9		
10:15			63		21			22:15			14		4		
10:30			78		16			22:30			10		3		
10:45			97	308	10	74	382	22:45			11	52	2	18	70
11:00			87		24			23:00			12		2		
11:15			100		29			23:15			13		2		
11:30			74		50			23:30			14		2		
11:45			69	330	34	137	467	23:45			8	47	0	6	53
Total Vol.				1471		1654	**3125**					3150		1773	**4923**

Daily Totals

NB	SB	EB	WB	Combined
		4621	3427	**8048**

	AM			PM		
Split %	47.1%	52.9%	**38.8%**	64.0%	36.0%	**61.2%**
Peak Hour	10:30	07:15	**07:15**	16:45	16:45	**16:45**
Volume	362	715	**934**	557	341	**898**
P.H.F.	0.91	0.82	**0.81**	0.88	0.91	**0.95**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

San Diego Mission Road, From Rancho Mission Road to 950 Feet West of Fairmount Avenue

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			6		1			12:00			75		42		
00:15			6		1			12:15			72		60		
00:30			9		3			12:30			65		69		
00:45			1	22	0	5	27	12:45			74	286	48	219	505
01:00			5		0			13:00			71		53		
01:15			11		6			13:15			64		39		
01:30			5		3			13:30			55		80		
01:45			4	25	1	10	35	13:45			65	255	58	230	485
02:00			6		4			14:00			71		59		
02:15			1		0			14:15			64		65		
02:30			4		2			14:30			57		97		
02:45			1	12	0	6	18	14:45			60	252	79	300	552
03:00			4		2			15:00			50		75		
03:15			1		0			15:15			54		89		
03:30			1		0			15:30			59		86		
03:45			2	8	3	5	13	15:45			60	223	74	324	547
04:00			2		1			16:00			88		91		
04:15			5		4			16:15			116		88		
04:30			8		0			16:30			105		80		
04:45			7	22	0	5	27	16:45			141	450	94	353	803
05:00			7		0			17:00			131		81		
05:15			14		4			17:15			160		77		
05:30			18		5			17:30			128		81		
05:45			21	60	5	14	74	17:45			82	501	66	305	806
06:00			30		15			18:00			79		68		
06:15			31		10			18:15			65		54		
06:30			44		25			18:30			57		40		
06:45			58	163	44	94	257	18:45			61	262	33	195	457
07:00			48		66			19:00			46		28		
07:15			41		152			19:15			28		43		
07:30			50		198			19:30			32		29		
07:45			68	207	215	631	838	19:45			18	124	28	128	252
08:00			60		142			20:00			26		27		
08:15			44		101			20:15			20		23		
08:30			58		90			20:30			16		31		
08:45			51	213	68	401	614	20:45			23	85	21	102	187
09:00			47		44			21:00			17		26		
09:15			50		51			21:15			18		14		
09:30			58		43			21:30			17		19		
09:45			56	211	36	174	385	21:45			18	70	8	67	137
10:00			60		36			22:00			8		14		
10:15			60		32			22:15			10		17		
10:30			56		29			22:30			9		10		
10:45			62	238	47	144	382	22:45			1	28	5	46	74
11:00			64		39			23:00			11		7		
11:15			75		34			23:15			16		3		
11:30			75		32			23:30			4		16		
11:45			85	299	40	145	444	23:45			6	37	4	30	67
Total Vol.				1480		1634	**3114**					2573		2299	**4872**

	AM			PM		
				Daily Totals		
	NB	SB	EB	WB		**Combined**
			4053	3933		**7986**
Split %	47.5%	52.5%	**39.0%**	52.8%	47.2%	**61.0%**
Peak Hour	11:15	07:15	**07:15**	16:45	16:00	**16:45**
Volume	310	707	**926**	560	353	**893**
P.H.F.	0.91	0.82	**0.82**	0.88	0.94	**0.94**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Taylor Street, From Morena Bouelvard to Pacific Highway

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			15		12			12:00			121		168		
00:15			9		11			12:15			160		142		
00:30			12		8			12:30			88		116		
00:45			7	43	9	40	83	12:45			172	541	121	547	1088
01:00			12		2			13:00			160		132		
01:15			5		3			13:15			150		108		
01:30			5		5			13:30			161		115		
01:45			4	26	0	10	36	13:45			122	593	68	423	1016
02:00			3		3			14:00			167		94		
02:15			4		1			14:15			134		89		
02:30			3		3			14:30			128		85		
02:45			1	11	1	8	19	14:45			166	595	60	328	923
03:00			4		3			15:00			178		83		
03:15			3		2			15:15			172		73		
03:30			3		1			15:30			267		95		
03:45			5	15	1	7	22	15:45			234	851	79	330	1181
04:00			2		6			16:00			301		108		
04:15			7		5			16:15			316		121		
04:30			5		7			16:30			305		151		
04:45			6	20	11	29	49	16:45			284	1206	168	548	1754
05:00			13		20			17:00			316		177		
05:15			10		22			17:15			315		184		
05:30			24		30			17:30			288		195		
05:45			30	77	55	127	204	17:45			295	1214	188	744	1958
06:00			28		53			18:00			226		168		
06:15			38		70			18:15			152		174		
06:30			41		76			18:30			149		151		
06:45			53	160	131	330	490	18:45			118	645	111	604	1249
07:00			55		189			19:00			132		106		
07:15			87		196			19:15			114		88		
07:30			121		226			19:30			88		68		
07:45			126	389	305	916	1305	19:45			96	430	77	339	769
08:00			89		288			20:00			112		84		
08:15			116		264			20:15			90		53		
08:30			121		219			20:30			88		50		
08:45			95	421	288	1059	1480	20:45			81	371	56	243	614
09:00			110		219			21:00			80		40		
09:15			108		203			21:15			71		39		
09:30			119		184			21:30			74		41		
09:45			96	433	184	790	1223	21:45			55	280	27	147	427
10:00			109		191			22:00			51		23		
10:15			116		165			22:15			52		30		
10:30			148		166			22:30			27		20		
10:45			131	504	178	700	1204	22:45			35	165	19	92	257
11:00			123		151			23:00			30		13		
11:15			119		168			23:15			24		13		
11:30			150		142			23:30			29		13		
11:45			143	535	151	612	1147	23:45			16	99	12	51	150
Total Vol.			2634		4628		**7262**				6990		4396		**11386**

Daily Totals

NB	SB	EB	WB	Combined
		9624	9024	**18648**

	AM			PM		
Split %	36.3%	63.7%	**38.9%**	61.4%	38.6%	**61.1%**
Peak Hour	11:30	07:30	**07:30**	16:15	17:00	**17:00**
Volume	574	1083	**1535**	1221	744	**1958**
P.H.F.	0.90	0.89	**0.89**	0.97	0.95	**0.98**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Taylor Street, From Morena Bouelvard to Pacific Highway

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			18		15			12:00			119		105		
00:15			9		12			12:15			174		92		
00:30			5		11			12:30			133		108		
00:45			3	35	16	54	89	12:45			198	624	101	406	1030
01:00			18		9			13:00			159		77		
01:15			10		3			13:15			161		90		
01:30			5		2			13:30			156		88		
01:45			6	39	0	14	53	13:45			135	611	48	303	914
02:00			4		2			14:00			155		87		
02:15			7		2			14:15			97		52		
02:30			4		4			14:30			210		72		
02:45			4	19	1	9	28	14:45			126	588	50	261	849
03:00			5		1			15:00			199		87		
03:15			2		1			15:15			158		67		
03:30			5		4			15:30			292		154		
03:45			6	18	2	8	26	15:45			259	908	92	400	1308
04:00			5		0			16:00			288		115		
04:15			7		7			16:15			321		121		
04:30			2		12			16:30			305		168		
04:45			16	30	10	29	59	16:45			318	1232	177	581	1813
05:00			13		13			17:00			268		165		
05:15			12		18			17:15			319		184		
05:30			16		31			17:30			305		191		
05:45			30	71	49	111	182	17:45			252	1144	188	728	1872
06:00			36		88			18:00			184		181		
06:15			27		116			18:15			195		195		
06:30			42		126			18:30			151		145		
06:45			36	141	184	514	655	18:45			162	692	151	672	1364
07:00			63		218			19:00			135		126		
07:15			86		235			19:15			142		135		
07:30			108		232			19:30			122		105		
07:45			91	348	318	1003	1351	19:45			116	515	111	477	992
08:00			111		325			20:00			121		89		
08:15			91		221			20:15			103		90		
08:30			109		248			20:30			88		70		
08:45			106	417	316	1110	1527	20:45			95	407	65	314	721
09:00			108		295			21:00			70		77		
09:15			112		262			21:15			65		84		
09:30			127		205			21:30			66		65		
09:45			117	464	181	943	1407	21:45			61	262	35	261	523
10:00			105		196			22:00			51		40		
10:15			121		184			22:15			50		32		
10:30			117		195			22:30			40		28		
10:45			99	442	161	736	1178	22:45			35	176	19	119	295
11:00			120		142			23:00			22		20		
11:15			124		135			23:15			18		16		
11:30			154		141			23:30			16		18		
11:45			155	553	126	544	1097	23:45			11	67	12	66	133
Total Vol.			2577		5075		**7652**				7226		4588		**11814**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
			9803	9663	**19466**

	AM			PM		
Split %	33.7%	66.3%	**39.3%**	61.2%	38.8%	**60.7%**
Peak Hour	11:30	08:30	**08:30**	16:00	17:30	**16:45**
Volume	602	1121	**1556**	1232	755	**1927**
P.H.F.	0.86	0.89	**0.92**	0.96	0.97	**0.96**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Taylor Street, From I-8 EB Ramps to Morena Boulevard

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			9		17			12:00			83		188		
00:15			9		14			12:15			97		165		
00:30			3		13			12:30			83		170		
00:45			11	32	18	62	94	12:45			106	369	151	674	1043
01:00			5		9			13:00			105		131		
01:15			2		8			13:15			128		128		
01:30			4		10			13:30			149		106		
01:45			4	15	7	34	49	13:45			99	481	88	453	934
02:00			2		5			14:00			131		95		
02:15			5		10			14:15			118		88		
02:30			3		5			14:30			186		95		
02:45			2	12	7	27	39	14:45			126	561	87	365	926
03:00			4		10			15:00			205		95		
03:15			2		7			15:15			210		77		
03:30			2		3			15:30			311		98		
03:45			2	10	4	24	34	15:45			227	953	91	361	1314
04:00			3		13			16:00			284		106		
04:15			5		16			16:15			262		99		
04:30			3		14			16:30			277		105		
04:45			3	14	25	68	82	16:45			208	1031	131	441	1472
05:00			3		30			17:00			191		108		
05:15			9		44			17:15			242		126		
05:30			10		56			17:30			238		120		
05:45			8	30	87	217	247	17:45			206	877	155	509	1386
06:00			18		104			18:00			198		121		
06:15			17		132			18:15			129		106		
06:30			24		155			18:30			104		131		
06:45			38	97	276	667	764	18:45			101	532	105	463	995
07:00			33		264			19:00			92		88		
07:15			55		313			19:15			102		70		
07:30			63		328			19:30			72		65		
07:45			73	224	300	1205	1429	19:45			73	339	88	311	650
08:00			85		265			20:00			101		70		
08:15			71		237			20:15			76		65		
08:30			58		306			20:30			62		35		
08:45			51	265	266	1074	1339	20:45			93	332	40	210	542
09:00			70		220			21:00			101		44		
09:15			76		196			21:15			61		41		
09:30			70		181			21:30			74		35		
09:45			64	280	196	793	1073	21:45			51	287	28	148	435
10:00			63		156			22:00			60		21		
10:15			76		168			22:15			53		33		
10:30			80		193			22:30			39		31		
10:45			69	288	183	700	988	22:45			13	165	28	113	278
11:00			99		197			23:00			30		22		
11:15			82		185			23:15			14		16		
11:30			85		197			23:30			20		18		
11:45			85	351	197	776	1127	23:45			14	78	20	76	154
Total Vol.			1618		5647		**7265**				6005		4124		**10129**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
			7623	9771	**17394**
	AM			**PM**	
Split %	22.3%	77.7%	**41.8%**	59.3%	40.7%	**58.2%**
Peak Hour	11:00	07:15	**07:15**	15:30	12:00	**15:30**
Volume	351	1206	**1482**	1084	674	**1478**
P.H.F.	0.89	0.92	**0.95**	0.87	0.90	**0.90**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Taylor Street, From I-8 EB Ramps to Morena Boulevard

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			12		20			12:00			103		178		
00:15			11		16			12:15			121		195		
00:30			15		11			12:30			106		184		
00:45			9	47	15	62	109	12:45			115	445	177	734	1179
01:00			7		11			13:00			128		165		
01:15			5		8			13:15			135		158		
01:30			9		9			13:30			141		111		
01:45			6	27	9	37	64	13:45			111	515	126	560	1075
02:00			5		12			14:00			128		135		
02:15			4		5			14:15			151		105		
02:30			8		6			14:30			165		88		
02:45			4	21	8	31	52	14:45			184	628	95	423	1051
03:00			9		4			15:00			191		99		
03:15			9		9			15:15			223		84		
03:30			5		8			15:30			298		106		
03:45			4	27	9	30	57	15:45			278	990	111	400	1390
04:00			3		10			16:00			251		116		
04:15			5		15			16:15			239		88		
04:30			8		18			16:30			251		116		
04:45			7	23	21	64	87	16:45			206	947	138	458	1405
05:00			9		33			17:00			184		105		
05:15			5		48			17:15			215		126		
05:30			8		51			17:30			232		128		
05:45			12	34	77	209	243	17:45			206	837	155	514	1351
06:00			18		121			18:00			195		121		
06:15			22		135			18:15			206		106		
06:30			21		142			18:30			181		111		
06:45			35	96	217	615	711	18:45			170	752	126	464	1216
07:00			44		238			19:00			154		105		
07:15			40		284			19:15			165		88		
07:30			68		281			19:30			106		98		
07:45			70	222	329	1132	1354	19:45			89	514	70	361	875
08:00			44		368			20:00			95		65		
08:15			51		284			20:15			96		77		
08:30			50		262			20:30			80		84		
08:45			49	194	315	1229	1423	20:45			70	341	70	296	637
09:00			61		219			21:00			65		65		
09:15			77		184			21:15			55		55		
09:30			84		186			21:30			40		40		
09:45			65	287	177	766	1053	21:45			35	195	35	195	390
10:00			70		151			22:00			33		28		
10:15			54		145			22:15			28		33		
10:30			88		162			22:30			20		31		
10:45			95	307	174	632	939	22:45			16	97	28	120	217
11:00			95		184			23:00			15		20		
11:15			78		155			23:15			25		16		
11:30			98		168			23:30			19		28		
11:45			91	362	191	698	1060	23:45			20	79	15	79	158
Total Vol.				1647		5505	**7152**					6340		4604	**10944**

Daily Totals

NB	SB	EB	WB	Combined
		7987	10109	**18096**

	AM			PM		
Split %	23.0%	77.0%	**39.5%**	57.9%	42.1%	**60.5%**
Peak Hour	11:45	07:15	**07:30**	15:30	12:00	**15:30**
Volume	421	1262	**1495**	1066	734	**1487**
P.H.F.	0.87	0.86	**0.91**	0.89	0.94	**0.92**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Taylor Street, From Hotel Circle South to I-8 EB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			14		7			12:00			124		75		
00:15			19		5			12:15			145		65		
00:30			12		14			12:30			121		83		
00:45			21	66	5	31	97	12:45			146	536	72	295	831
01:00			8		3			13:00			179		44		
01:15			14		4			13:15			141		66		
01:30			4		11			13:30			152		48		
01:45			8	34	1	19	53	13:45			151	623	46	204	827
02:00			9		4			14:00			89		54		
02:15			5		6			14:15			145		40		
02:30			5		3			14:30			179		43		
02:45			2	21	6	19	40	14:45			152	565	50	187	752
03:00			5		4			15:00			155		62		
03:15			8		5			15:15			219		43		
03:30			7		2			15:30			196		38		
03:45			6	26	3	14	40	15:45			181	751	49	192	943
04:00			2		11			16:00			234		40		
04:15			3		9			16:15			222		48		
04:30			7		12			16:30			223		53		
04:45			7	19	18	50	69	16:45			198	877	65	206	1083
05:00			5		22			17:00			229		79		
05:15			8		33			17:15			239		41		
05:30			11		48			17:30			236		46		
05:45			13	37	71	174	211	17:45			237	941	36	202	1143
06:00			32		85			18:00			214		44		
06:15			24		107			18:15			140		49		
06:30			32		133			18:30			111		60		
06:45			48	136	230	555	691	18:45			112	577	69	222	799
07:00			54		201			19:00			131		60		
07:15			66		242			19:15			86		48		
07:30			56		237			19:30			95		40		
07:45			96	272	179	859	1131	19:45			93	405	39	187	592
08:00			81		137			20:00			118		20		
08:15			77		139			20:15			100		29		
08:30			84		170			20:30			96		23		
08:45			94	336	143	589	925	20:45			74	388	25	97	485
09:00			88		121			21:00			79		27		
09:15			85		89			21:15			89		17		
09:30			86		78			21:30			78		15		
09:45			98	357	94	382	739	21:45			74	320	10	69	389
10:00			104		63			22:00			62		12		
10:15			95		70			22:15			47		16		
10:30			105		73			22:30			45		14		
10:45			108	412	79	285	697	22:45			39	193	3	45	238
11:00			121		66			23:00			48		12		
11:15			122		51			23:15			28		8		
11:30			115		70			23:30			30		14		
11:45			130	488	69	256	744	23:45			26	132	10	44	176
Total Vol.				2204		3233	**5437**					6308		1950	**8258**

Daily Totals

NB	SB	EB	WB	Combined
		8512	5183	**13695**

	AM			PM		
Split %	40.5%	59.5%	**39.7%**	76.4%	23.6%	**60.3%**
Peak Hour	11:45	06:45	**06:45**	17:00	12:00	**17:00**
Volume	520	910	**1134**	941	295	**1143**
P.H.F.	0.90	0.94	**0.92**	0.98	0.89	**0.93**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Taylor Street, From Hotel Circle South to I-8 EB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			23		2			12:00			137		100		
00:15			23		9			12:15			111		90		
00:30			11		10			12:30			129		66		
00:45			17	74	8	29	103	12:45			150	527	86	342	869
01:00			19		2			13:00			150		73		
01:15			11		1			13:15			147		66		
01:30			4		3			13:30			125		80		
01:45			11	45	5	11	56	13:45			127	549	42	261	810
02:00			3		3			14:00			127		57		
02:15			6		8			14:15			150		66		
02:30			8		4			14:30			183		65		
02:45			4	21	2	17	38	14:45			172	632	64	252	884
03:00			3		1			15:00			125		59		
03:15			2		1			15:15			199		58		
03:30			7		10			15:30			185		66		
03:45			8	20	1	13	33	15:45			260	769	23	206	975
04:00			4		5			16:00			212		44		
04:15			11		8			16:15			258		34		
04:30			6		18			16:30			197		76		
04:45			4	25	15	46	71	16:45			213	880	62	216	1096
05:00			12		20			17:00			176		93		
05:15			15		30			17:15			233		80		
05:30			9		51			17:30			259		55		
05:45			20	56	91	192	248	17:45			270	938	62	290	1228
06:00			24		73			18:00			209		63		
06:15			39		101			18:15			127		73		
06:30			42		121			18:30			103		88		
06:45			46	151	189	484	635	18:45			133	572	65	289	861
07:00			49		208			19:00			105		56		
07:15			51		231			19:15			130		44		
07:30			81		244			19:30			130		52		
07:45			75	256	329	1012	1268	19:45			98	463	37	189	652
08:00			83		340			20:00			128		32		
08:15			110		325			20:15			101		34		
08:30			112		272			20:30			104		23		
08:45			119	424	172	1109	1533	20:45			93	426	26	115	541
09:00			97		190			21:00			77		27		
09:15			75		123			21:15			65		24		
09:30			112		94			21:30			83		27		
09:45			84	368	102	509	877	21:45			56	281	35	113	394
10:00			101		94			22:00			58		16		
10:15			85		85			22:15			55		26		
10:30			96		63			22:30			52		8		
10:45			115	397	88	330	727	22:45			45	210	9	59	269
11:00			94		87			23:00			45		15		
11:15			115		90			23:15			48		3		
11:30			133		58			23:30			27		10		
11:45			124	466	76	311	777	23:45			25	145	6	34	179
Total Vol.				2303		4063	**6366**					6392		2366	**8758**

	AM			PM		
				Daily Totals		
	NB	SB	EB	WB	**Combined**	
			8695	6429	**15124**	
Split %	36.2%	63.8%	**42.1%**	73.0%	27.0%	**57.9%**
Peak Hour	11:15	07:45	**07:45**	17:15	12:00	**17:15**
Volume	509	1266	**1646**	971	342	**1231**
P.H.F.	0.93	0.93	**0.95**	0.90	0.86	**0.93**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle North, From Hotel Circle South to Hotel Circle Place

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	10		13					12:00	94		112				
00:15	12		9					12:15	96		113				
00:30	7		17					12:30	82		126				
00:45	11	40	8	47			87	12:45	95	367	118	469			836
01:00	5		5					13:00	98		112				
01:15	8		8					13:15	88		115				
01:30	4		15					13:30	87		93				
01:45	3	20	5	33			53	13:45	102	375	103	423			798
02:00	6		7					14:00	65		97				
02:15	3		8					14:15	88		93				
02:30	6		3					14:30	100		105				
02:45	3	18	9	27			45	14:45	88	341	108	403			744
03:00	3		5					15:00	90		101				
03:15	6		8					15:15	98		114				
03:30	4		2					15:30	87		107				
03:45	8	21	8	23			44	15:45	80	355	106	428			783
04:00	4		12					16:00	105		118				
04:15	4		11					16:15	96		129				
04:30	9		16					16:30	100		118				
04:45	8	25	23	62			87	16:45	98	399	141	506			905
05:00	15		21					17:00	121		154				
05:15	21		34					17:15	106		127				
05:30	33		51					17:30	102		123				
05:45	34	103	74	180			283	17:45	106	435	106	510			945
06:00	57		101					18:00	106		120				
06:15	69		122					18:15	89		98				
06:30	87		130					18:30	93		104				
06:45	100	313	263	616			929	18:45	89	377	112	434			811
07:00	120		226					19:00	93		94				
07:15	116		277					19:15	64		86				
07:30	123		267					19:30	73		64				
07:45	133	492	224	994			1486	19:45	56	286	67	311			597
08:00	113		161					20:00	65		56				
08:15	112		169					20:15	64		52				
08:30	115		197					20:30	56		64				
08:45	108	448	181	708			1156	20:45	57	242	48	220			462
09:00	108		164					21:00	52		52				
09:15	103		136					21:15	54		59				
09:30	100		116					21:30	44		37				
09:45	97	408	115	531			939	21:45	45	195	40	188			383
10:00	78		105					22:00	32		27				
10:15	84		101					22:15	26		24				
10:30	87		115					22:30	27		25				
10:45	78	327	106	427			754	22:45	19	104	17	93			197
11:00	75		97					23:00	30		33				
11:15	72		104					23:15	19		20				
11:30	87		100					23:30	21		14				
11:45	105	339	119	420			759	23:45	26	96	15	82			178
Total Vol.		2554		4068			**6622**			3572		4067			**7639**

Daily Totals

NB	SB	EB	WB	**Combined**
6126	8135			**14261**

	AM			**PM**		
Split %	38.6%	61.4%	**46.4%**	46.8%	53.2%	**53.6%**
Peak Hour	07:00	06:45	**06:45**	17:00	16:45	**16:45**
Volume	492	1033	**1492**	435	545	**972**
P.H.F.	0.92	0.93	**0.95**	0.89	0.88	**0.88**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle North, From Hotel Circle South to Hotel Circle Place

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	10		7					12:00	111		133				
00:15	14		11					12:15	103		131				
00:30	5		16					12:30	96		109				
00:45	10	39	14	48			87	12:45	120	430	142	515			945
01:00	11		9					13:00	104		137				
01:15	8		3					13:15	105		116				
01:30	6		6					13:30	81		116				
01:45	8	33	8	26			59	13:45	83	373	86	455			828
02:00	3		4					14:00	81		113				
02:15	10		8					14:15	104		108				
02:30	6		7					14:30	110		124				
02:45	7	26	6	25			51	14:45	95	390	139	484			874
03:00	3		7					15:00	81		110				
03:15	1		2					15:15	94		126				
03:30	4		9					15:30	112		128				
03:45	9	17	5	23			40	15:45	120	407	122	486			893
04:00	3		4					16:00	91		121				
04:15	10		9					16:15	117		121				
04:30	11		18					16:30	119		175				
04:45	6	30	18	49			79	16:45	111	438	155	572			1010
05:00	24		31					17:00	118		181				
05:15	16		28					17:15	136		167				
05:30	33		56					17:30	131		153				
05:45	54	127	93	208			335	17:45	142	527	162	663			1190
06:00	47		80					18:00	129		128				
06:15	75		118					18:15	113		125				
06:30	92		139					18:30	92		128				
06:45	117	331	206	543			874	18:45	102	436	108	489			925
07:00	125		213					19:00	99		107				
07:15	104		260					19:15	103		84				
07:30	107		293					19:30	101		93				
07:45	34	370	477	1243			1613	19:45	73	376	60	344			720
08:00	42		440					20:00	70		63				
08:15	57		430					20:15	76		74				
08:30	166		299					20:30	64		55				
08:45	126	391	216	1385			1776	20:45	60	270	51	243			513
09:00	129		229					21:00	63		59				
09:15	108		155					21:15	46		49				
09:30	89		125					21:30	61		58				
09:45	110	436	130	639			1075	21:45	55	225	55	221			446
10:00	112		122					22:00	38		39				
10:15	92		105					22:15	42		38				
10:30	86		98					22:30	34		18				
10:45	92	382	124	449			831	22:45	19	133	26	121			254
11:00	92		98					23:00	26		34				
11:15	108		116					23:15	24		18				
11:30	97		97					23:30	17		23				
11:45	105	402	115	426			828	23:45	26	93	12	87			180
Total Vol.		2584		5064			**7648**			4098		4680			**8778**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	6682	9744			**16426**

	AM			**PM**		
Split %	33.8%	66.2%	**46.6%**	46.7%	53.3%	**53.4%**
Peak Hour	08:30	07:45	**07:45**	17:15	16:30	**17:00**
Volume	529	1646	**1945**	538	678	**1190**
P.H.F.	0.80	0.86	**0.95**	0.97	0.94	**0.98**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle North, From Hotel Circle Place to I-8 WB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			4		11			12:00			49		60		
00:15			5		9			12:15			69		52		
00:30			4		6			12:30			41		58		
00:45			6	19	5	31	50	12:45			46	205	44	214	419
01:00			6		6			13:00			54		40		
01:15			3		5			13:15			48		58		
01:30			2		6			13:30			44		50		
01:45			2	13	2	19	32	13:45			42	188	41	189	377
02:00			2		4			14:00			54		39		
02:15			2		3			14:15			45		47		
02:30			0		2			14:30			62		36		
02:45			1	5	3	12	17	14:45			50	211	58	180	391
03:00			3		3			15:00			49		43		
03:15			3		1			15:15			71		39		
03:30			2		1			15:30			64		52		
03:45			2	10	3	8	18	15:45			62	246	53	187	433
04:00			0		2			16:00			66		46		
04:15			3		4			16:15			62		57		
04:30			6		4			16:30			68		54		
04:45			5	14	7	17	31	16:45			57	253	58	215	468
05:00			10		6			17:00			75		43		
05:15			3		2			17:15			66		56		
05:30			10		6			17:30			70		40		
05:45			11	34	10	24	58	17:45			56	267	54	193	460
06:00			16		10			18:00			74		47		
06:15			11		16			18:15			61		46		
06:30			11		24			18:30			49		44		
06:45			21	59	47	97	156	18:45			39	223	53	190	413
07:00			19		92			19:00			46		37		
07:15			27		119			19:15			26		38		
07:30			42		98			19:30			30		31		
07:45			37	125	100	409	534	19:45			23	125	29	135	260
08:00			26		84			20:00			19		31		
08:15			29		81			20:15			21		31		
08:30			26		75			20:30			12		26		
08:45			24	105	74	314	419	20:45			13	65	32	120	185
09:00			24		64			21:00			17		30		
09:15			25		39			21:15			8		34		
09:30			38		38			21:30			19		17		
09:45			34	121	52	193	314	21:45			18	62	19	100	162
10:00			40		44			22:00			11		15		
10:15			35		44			22:15			10		22		
10:30			38		45			22:30			10		14		
10:45			45	158	44	177	335	22:45			9	40	16	67	107
11:00			47		35			23:00			8		11		
11:15			43		49			23:15			11		2		
11:30			54		41			23:30			5		9		
11:45			74	218	44	169	387	23:45			7	31	10	32	63
Total Vol.				881		1470	**2351**					1916		1822	**3738**

Daily Totals

NB	SB	EB	WB	Combined
		2797	3292	**6089**

	AM			PM		
Split %	37.5%	62.5%	**38.6%**	51.3%	48.7%	**61.4%**
Peak Hour	11:30	07:00	**07:00**	16:45	16:00	**16:30**
Volume	246	409	**534**	268	215	**477**
P.H.F.	0.83	0.86	**0.91**	0.89	0.93	**0.98**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle North, From Hotel Circle Place to I-8 WB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			5		12			12:00			53		51		
00:15			9		4			12:15			55		47		
00:30			7		5			12:30			40		52		
00:45			4	25	5	26	51	12:45			63	211	61	211	422
01:00			3		5			13:00			48		59		
01:15			2		5			13:15			67		57		
01:30			1		5			13:30			61		36		
01:45			4	10	3	18	28	13:45			48	224	51	203	427
02:00			1		0			14:00			45		48		
02:15			5		4			14:15			43		40		
02:30			1		2			14:30			46		46		
02:45			5	12	5	11	23	14:45			44	178	46	180	358
03:00			2		5			15:00			52		47		
03:15			2		4			15:15			63		44		
03:30			2		1			15:30			65		65		
03:45			3	9	1	11	20	15:45			61	241	57	213	454
04:00			2		1			16:00			69		56		
04:15			5		5			16:15			71		49		
04:30			7		4			16:30			104		61		
04:45			2	16	5	15	31	16:45			64	308	61	227	535
05:00			6		5			17:00			88		68		
05:15			10		2			17:15			64		69		
05:30			11		8			17:30			70		88		
05:45			13	40	11	26	66	17:45			66	288	69	294	582
06:00			12		8			18:00			58		45		
06:15			20		10			18:15			46		44		
06:30			15		29			18:30			42		59		
06:45			21	68	65	112	180	18:45			42	188	38	186	374
07:00			18		83			19:00			45		56		
07:15			33		100			19:15			56		44		
07:30			31		128			19:30			31		40		
07:45			35	117	138	449	566	19:45			25	157	35	175	332
08:00			36		141			20:00			23		32		
08:15			28		144			20:15			30		40		
08:30			33		118			20:30			19		29		
08:45			34	131	130	533	664	20:45			19	91	26	127	218
09:00			30		121			21:00			26		33		
09:15			48		57			21:15			25		15		
09:30			22		44			21:30			20		31		
09:45			25	125	53	275	400	21:45			16	87	25	104	191
10:00			48		43			22:00			14		20		
10:15			45		46			22:15			18		21		
10:30			41		40			22:30			13		13		
10:45			46	180	41	170	350	22:45			13	58	12	66	124
11:00			44		42			23:00			17		13		
11:15			53		45			23:15			11		20		
11:30			57		49			23:30			8		16		
11:45			59	213	67	203	416	23:45			10	46	13	62	108
Total Vol.				946		1849	**2795**					2077		2048	**4125**

Daily Totals

NB	SB	EB	WB	Combined
		3023	3897	**6920**

	AM			PM		
Split %	33.8%	66.2%	**40.4%**	50.4%	49.6%	**59.6%**
Peak Hour	11:30	07:30	**07:30**	16:15	17:00	**17:00**
Volume	224	551	**681**	327	294	**582**
P.H.F.	0.95	0.96	**0.96**	0.79	0.84	**0.92**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle North, From I-8 WB Ramps to Fashion Valley Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			15		4			12:00			167		108		
00:15			16		15			12:15			197		85		
00:30			9		5			12:30			162		90		
00:45			19	59	4	28	87	12:45			203	729	76	359	1088
01:00			17		7			13:00			185		79		
01:15			18		7			13:15			179		100		
01:30			5		7			13:30			154		86		
01:45			7	47	4	25	72	13:45			157	675	85	350	1025
02:00			13		3			14:00			140		88		
02:15			9		2			14:15			154		81		
02:30			2		1			14:30			186		68		
02:45			5	29	4	10	39	14:45			158	638	86	323	961
03:00			8		2			15:00			151		84		
03:15			6		7			15:15			174		68		
03:30			10		4			15:30			184		73		
03:45			15	39	3	16	55	15:45			186	695	88	313	1008
04:00			6		4			16:00			173		83		
04:15			10		4			16:15			158		88		
04:30			17		11			16:30			198		93		
04:45			26	59	3	22	81	16:45			182	711	105	369	1080
05:00			28		6			17:00			182		91		
05:15			40		9			17:15			180		113		
05:30			54		14			17:30			180		108		
05:45			85	207	14	43	250	17:45			174	716	92	404	1120
06:00			78		18			18:00			180		99		
06:15			80		25			18:15			179		86		
06:30			116		45			18:30			175		70		
06:45			166	440	27	115	555	18:45			165	699	96	351	1050
07:00			140		31			19:00			137		71		
07:15			148		44			19:15			111		69		
07:30			173		45			19:30			112		62		
07:45			197	658	41	161	819	19:45			87	447	65	267	714
08:00			201		56			20:00			92		71		
08:15			178		46			20:15			110		59		
08:30			174		51			20:30			80		36		
08:45			180	733	51	204	937	20:45			71	353	37	203	556
09:00			162		51			21:00			69		54		
09:15			117		50			21:15			89		50		
09:30			136		56			21:30			64		49		
09:45			148	563	46	203	766	21:45			66	288	35	188	476
10:00			118		58			22:00			59		34		
10:15			143		59			22:15			51		19		
10:30			129		63			22:30			68		20		
10:45			166	556	75	255	811	22:45			54	232	17	90	322
11:00			152		70			23:00			34		11		
11:15			144		67			23:15			40		12		
11:30			174		68			23:30			30		7		
11:45			197	667	76	281	948	23:45			17	121	7	37	158
Total Vol.			4057		1363		**5420**				6304		3254		**9558**

Daily Totals

NB	SB	EB	WB	Combined
		10361	4617	**14978**

	AM			PM		
Split %	74.9%	25.1%	**36.2%**	66.0%	34.0%	**63.8%**
Peak Hour	07:45	11:45	**11:45**	12:15	16:45	**16:30**
Volume	750	359	**1082**	747	417	**1144**
P.H.F.	0.93	0.83	**0.96**	0.92	0.92	**0.98**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle North, From I-8 WB Ramps to Fashion Valley Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			19		11			12:00			173		67		
00:15			26		12			12:15			174		86		
00:30			20		8			12:30			162		81		
00:45			17	82	6	37	119	12:45			175	684	100	334	1018
01:00			10		7			13:00			181		95		
01:15			15		3			13:15			208		106		
01:30			13		4			13:30			180		86		
01:45			8	46	4	18	64	13:45			162	731	85	372	1103
02:00			14		4			14:00			145		78		
02:15			9		4			14:15			146		76		
02:30			6		7			14:30			165		89		
02:45			10	39	1	16	55	14:45			188	644	85	328	972
03:00			8		3			15:00			171		92		
03:15			9		7			15:15			189		74		
03:30			11		2			15:30			157		79		
03:45			18	46	3	15	61	15:45			201	718	87	332	1050
04:00			7		3			16:00			185		95		
04:15			15		5			16:15			201		111		
04:30			21		6			16:30			213		95		
04:45			25	68	11	25	93	16:45			242	841	122	423	1264
05:00			33		6			17:00			205		135		
05:15			43		5			17:15			188		137		
05:30			53		12			17:30			191		106		
05:45			91	220	16	39	259	17:45			198	782	114	492	1274
06:00			72		23			18:00			196		89		
06:15			99		21			18:15			182		95		
06:30			129		37			18:30			157		93		
06:45			166	466	22	103	569	18:45			161	696	89	366	1062
07:00			137		44			19:00			133		73		
07:15			153		51			19:15			139		87		
07:30			161		68			19:30			94		65		
07:45			227	678	60	223	901	19:45			89	455	64	289	744
08:00			203		70			20:00			93		59		
08:15			226		74			20:15			85		64		
08:30			195		71			20:30			84		62		
08:45			190	814	65	280	1094	20:45			72	334	57	242	576
09:00			191		95			21:00			73		56		
09:15			186		64			21:15			88		44		
09:30			147		56			21:30			74		39		
09:45			156	680	72	287	967	21:45			73	308	39	178	486
10:00			155		62			22:00			67		28		
10:15			124		58			22:15			59		37		
10:30			152		57			22:30			51		24		
10:45			169	600	48	225	825	22:45			43	220	20	109	329
11:00			146		61			23:00			41		21		
11:15			145		86			23:15			37		23		
11:30			152		69			23:30			24		22		
11:45			182	625	90	306	931	23:45			35	137	15	81	218
Total Vol.			4364		1574		**5938**				6550		3546		**10096**

Daily Totals

NB	SB	EB	WB	Combined
		10914	5120	**16034**

	AM			PM		
Split %	73.5%	26.5%	**37.0%**	64.9%	35.1%	**63.0%**
Peak Hour	07:45	11:45	**07:45**	16:15	16:45	**16:30**
Volume	851	324	**1126**	861	500	**1337**
P.H.F.	0.94	0.90	**0.94**	0.89	0.91	**0.92**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle North, From Fashion Valley Road to Camino De La Reina

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			7		9			12:00			108		80		
00:15			9		9			12:15			121		77		
00:30			5		5			12:30			116		84		
00:45			4	25	4	27	52	12:45			103	448	95	336	784
01:00			3		6			13:00			99		99		
01:15			3		5			13:15			91		105		
01:30			5		3			13:30			84		84		
01:45			4	15	2	16	31	13:45			88	362	77	365	727
02:00			2		2			14:00			94		84		
02:15			1		1			14:15			97		99		
02:30			0		0			14:30			95		95		
02:45			1	4	1	4	8	14:45			105	391	84	362	753
03:00			0		2			15:00			84		78		
03:15			0		1			15:15			81		88		
03:30			0		0			15:30			94		84		
03:45			1	1	0	3	4	15:45			121	380	70	320	700
04:00			2		3			16:00			135		68		
04:15			1		2			16:15			141		105		
04:30			3		4			16:30			195		111		
04:45			5	11	6	15	26	16:45			191	662	116	400	1062
05:00			4		9			17:00			205		128		
05:15			6		8			17:15			184		135		
05:30			9		9			17:30			170		105		
05:45			12	31	12	38	69	17:45			155	714	84	452	1166
06:00			28		8			18:00			149		99		
06:15			44		12			18:15			151		95		
06:30			51		18			18:30			140		101		
06:45			50	173	26	64	237	18:45			132	572	105	400	972
07:00			94		45			19:00			111		88		
07:15			126		51			19:15			116		70		
07:30			135		68			19:30			80		65		
07:45			148	503	77	241	744	19:45			95	402	88	311	713
08:00			185		51			20:00			70		75		
08:15			195		90			20:15			65		50		
08:30			168		99			20:30			88		46		
08:45			184	732	84	324	1056	20:45			70	293	65	236	529
09:00			162		84			21:00			70		33		
09:15			151		70			21:15			65		42		
09:30			144		77			21:30			33		28		
09:45			111	568	54	285	853	21:45			35	203	30	133	336
10:00			105		59			22:00			28		26		
10:15			90		55			22:15			21		18		
10:30			84		68			22:30			19		22		
10:45			70	349	70	252	601	22:45			20	88	20	86	174
11:00			88		77			23:00			15		19		
11:15			84		84			23:15			11		5		
11:30			84		54			23:30			8		11		
11:45			96	352	95	310	662	23:45			9	43	8	43	86
Total Vol.				2764		1579	**4343**					4558		3444	**8002**

Daily Totals

NB	SB	EB	WB	Combined
		7322	5023	**12345**

	AM			PM		
Split %	63.6%	36.4%	**35.2%**	57.0%	43.0%	**64.8%**
Peak Hour	08:00	08:15	**08:15**	16:30	16:30	**16:30**
Volume	732	357	**1066**	775	490	**1265**
P.H.F.	0.94	0.90	**0.94**	0.95	0.91	**0.95**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle North, From Fashion Valley Road to Camino De La Reina

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			8		7			12:00			121		81		
00:15			10		7			12:15			128		77		
00:30			4		6			12:30			106		89		
00:45			5	27	5	25	52	12:45			111	466	91	338	804
01:00			6		4			13:00			114		70		
01:15			4		5			13:15			103		84		
01:30			3		6			13:30			98		95		
01:45			2	15	6	21	36	13:45			91	406	88	337	743
02:00			5		2			14:00			90		70		
02:15			4		0			14:15			84		98		
02:30			0		1			14:30			95		78		
02:45			2	11	2	5	16	14:45			99	368	88	334	702
03:00			1		1			15:00			80		81		
03:15			5		0			15:15			98		98		
03:30			1		0			15:30			122		68		
03:45			0	7	1	2	9	15:45			135	435	70	317	752
04:00			3		2			16:00			151		88		
04:15			5		2			16:15			168		91		
04:30			6		1			16:30			189		105		
04:45			5	19	2	7	26	16:45			166	674	121	405	1079
05:00			10		3			17:00			192		106		
05:15			19		4			17:15			135		123		
05:30			21		5			17:30			168		101		
05:45			28	78	9	21	99	17:45			166	661	111	441	1102
06:00			40		15			18:00			141		108		
06:15			51		11			18:15			162		116		
06:30			65		19			18:30			135		111		
06:45			88	244	33	78	322	18:45			141	579	99	434	1013
07:00			121		50			19:00			106		91		
07:15			135		58			19:15			88		105		
07:30			141		66			19:30			95		84		
07:45			191	588	78	252	840	19:45			70	359	70	350	709
08:00			168		51			20:00			65		71		
08:15			166		115			20:15			66		77		
08:30			184		88			20:30			51		51		
08:45			166	684	74	328	1012	20:45			40	222	50	249	471
09:00			158		68			21:00			35		40		
09:15			162		70			21:15			32		33		
09:30			135		54			21:30			28		38		
09:45			114	569	66	258	827	21:45			20	115	54	165	280
10:00			108		68			22:00			19		40		
10:15			98		60			22:15			20		32		
10:30			91		84			22:30			16		28		
10:45			88	385	84	296	681	22:45			11	66	16	116	182
11:00			108		77			23:00			15		18		
11:15			91		80			23:15			8		11		
11:30			106		81			23:30			9		9		
11:45			111	416	82	320	736	23:45			12	44	5	43	87
Total Vol.				3043		1613	**4656**					4395		3529	**7924**

	AM			PM		
				Daily Totals		
	NB	SB	EB	WB	**Combined**	
			7438	5142	**12580**	
Split %	65.4%	34.6%	**37.0%**	55.5%	44.5%	**63.0%**
Peak Hour	07:45	08:15	**07:45**	16:15	16:30	**16:15**
Volume	709	345	**1041**	715	455	**1138**
P.H.F.	0.93	0.75	**0.93**	0.93	0.92	**0.95**

Prepared by NDS/ATD

VOLUME

Camino De La Reina Bet. Fashion Valley Rd & Avenida Del Rio

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_047

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,284	4,020	8,304

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			6		6		12		12:00			72		69		141	
00:15			4		6		10		12:15			99		70		169	
00:30			5		5		10		12:30			85		74		159	
00:45			2	17	3	20	5	37	12:45			77	333	79	292	156	625
01:00			1		5		6		13:00			89		72		161	
01:15			1		0		1		13:15			89		74		163	
01:30			2		1		3		13:30			77		64		141	
01:45			1	5	3	9	4	14	13:45			78	333	88	298	166	631
02:00			1		3		4		14:00			77		78		155	
02:15			1		1		2		14:15			78		81		159	
02:30			2		2		4		14:30			87		63		150	
02:45			2	6	0	6	2	12	14:45			66	308	66	288	132	596
03:00			1		0		1		15:00			78		79		157	
03:15			5		4		9		15:15			96		91		187	
03:30			2		5		7		15:30			78		63		141	
03:45			0	8	1	10	1	18	15:45			87	339	57	290	144	629
04:00			0		3		3		16:00			84		83		167	
04:15			2		2		4		16:15			65		87		152	
04:30			3		1		4		16:30			97		98		195	
04:45			1	6	2	8	3	14	16:45			94	340	106	374	200	714
05:00			6		0		6		17:00			118		111		229	
05:15			7		5		12		17:15			103		120		223	
05:30			2		5		7		17:30			100		105		205	
05:45			10	25	6	16	16	41	17:45			87	408	81	417	168	825
06:00			11		20		31		18:00			112		93		205	
06:15			20		15		35		18:15			78		81		159	
06:30			13		32		45		18:30			73		90		163	
06:45			24	68	29	96	53	164	18:45			62	325	67	331	129	656
07:00			34		40		74		19:00			66		70		136	
07:15			27		38		65		19:15			58		65		123	
07:30			49		54		103		19:30			51		55		106	
07:45			53	163	50	182	103	345	19:45			39	214	55	245	94	459
08:00			63		52		115		20:00			34		46		80	
08:15			78		60		138		20:15			49		52		101	
08:30			76		45		121		20:30			28		46		74	
08:45			61	278	43	200	104	478	20:45			17	128	39	183	56	311
09:00			67		42		109		21:00			19		40		59	
09:15			48		35		83		21:15			14		25		39	
09:30			58		28		86		21:30			10		32		42	
09:45			75	248	30	135	105	383	21:45			19	62	26	123	45	185
10:00			65		31		96		22:00			20		29		49	
10:15			67		36		103		22:15			12		14		26	
10:30			77		42		119		22:30			12		12		24	
10:45			78	287	45	154	123	441	22:45			8	52	17	72	25	124
11:00			77		46		123		23:00			10		8		18	
11:15			75		52		127		23:15			3		14		17	
11:30			81		59		140		23:30			6		7		13	
11:45			75	308	79	236	154	544	23:45			4	23	6	35	10	58
TOTALS				1419		1072		**2491**	**TOTALS**				2865		2948		**5813**
SPLIT %				57.0%		43.0%		**30.0%**	**SPLIT %**				49.3%		50.7%		**70.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,284	4,020	8,304

AM Peak Hour			11:45	11:45	**11:45**	**PM Peak Hour**			16:45	16:45	**16:45**
AM Pk Volume			331	292	**623**	**PM Pk Volume**			415	442	**857**
Pk Hr Factor			0.836	0.924	**0.922**	**Pk Hr Factor**			0.879	0.921	**0.936**
7 - 9 Volume	0	0	441	382	**823**	**4 - 6 Volume**	0	0	748	791	**1539**
7 - 9 Peak Hour			08:00	07:30	**08:00**	**4 - 6 Peak Hour**			16:45	16:45	**16:45**
7 - 9 Pk Volume	0	0	278	216	**478**	**4 - 6 Pk Volume**	0	0	415	442	**857**
Pk Hr Factor	0.000	0.000	0.891	0.900	**0.866**	**Pk Hr Factor**	0.000	0.000	0.879	0.921	**0.936**

Prepared by NDS/ATD

VOLUME

Camino De La Reina Bet. Fashion Valley Rd & Avenida Del Rio

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_047

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,450	4,213	8,663

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			7		7		14		12:00			87		67		154	
00:15			5		4		9		12:15			91		91		182	
00:30			6		3		9		12:30			83		95		178	
00:45			6	24	4	18	10	42	12:45			78	339	79	332	157	671
01:00			1		0		1		13:00			64		87		151	
01:15			1		3		4		13:15			100		95		195	
01:30			0		2		2		13:30			96		88		184	
01:45			0	2	1	6	1	8	13:45			85	345	69	339	154	684
02:00			3		4		7		14:00			78		86		164	
02:15			1		2		3		14:15			68		76		144	
02:30			0		0		0		14:30			68		65		133	
02:45			4	8	0	6	4	14	14:45			93	307	63	290	156	597
03:00			4		3		7		15:00			60		91		151	
03:15			5		4		9		15:15			92		83		175	
03:30			5		1		6		15:30			89		72		161	
03:45			1	15	2	10	3	25	15:45			95	336	79	325	174	661
04:00			2		2		4		16:00			93		87		180	
04:15			2		3		5		16:15			91		88		179	
04:30			5		3		8		16:30			107		87		194	
04:45			0	9	1	9	1	18	16:45			114	405	98	360	212	765
05:00			2		2		4		17:00			106		98		204	
05:15			2		4		6		17:15			111		93		204	
05:30			8		8		16		17:30			103		102		205	
05:45			8	20	13	27	21	47	17:45			112	432	100	393	212	825
06:00			19		18		37		18:00			89		95		184	
06:15			22		19		41		18:15			75		87		162	
06:30			14		23		37		18:30			66		77		143	
06:45			33	88	26	86	59	174	18:45			58	288	81	340	139	628
07:00			34		40		74		19:00			48		61		109	
07:15			26		47		73		19:15			44		51		95	
07:30			41		38		79		19:30			64		55		119	
07:45			56	157	58	183	114	340	19:45			41	197	55	222	96	419
08:00			93		36		129		20:00			48		52		100	
08:15			66		73		139		20:15			37		48		85	
08:30			78		54		132		20:30			39		48		87	
08:45			64	301	38	201	102	502	20:45			16	140	40	188	56	328
09:00			89		42		131		21:00			37		61		98	
09:15			59		31		90		21:15			24		57		81	
09:30			60		40		100		21:30			16		38		54	
09:45			64	272	40	153	104	425	21:45			12	89	32	188	44	277
10:00			83		39		122		22:00			8		19		27	
10:15			71		49		120		22:15			8		16		24	
10:30			51		46		97		22:30			17		26		43	
10:45			81	286	47	181	128	467	22:45			7	40	22	83	29	123
11:00			85		59		144		23:00			13		9		22	
11:15			80		58		138		23:15			9		11		20	
11:30			68		55		123		23:30			6		8		14	
11:45			80	313	61	233	141	546	23:45			9	37	12	40	21	77
TOTALS				1495		1113		**2608**	**TOTALS**				2955		3100		**6055**
SPLIT %				57.3%		42.7%		**30.1%**	**SPLIT %**				48.8%		51.2%		**69.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,450	4,213	8,663

AM Peak Hour			11:45	11:45	**11:45**	**PM Peak Hour**			16:30	17:00	**16:45**
AM Pk Volume			341	314	**655**	**PM Pk Volume**			438	393	**825**
Pk Hr Factor			0.937	0.826	**0.900**	**Pk Hr Factor**			0.961	0.963	**0.973**
7 - 9 Volume	0	0	458	384	**842**	**4 - 6 Volume**	0	0	837	753	**1590**
7 - 9 Peak Hour			08:00	07:45	**07:45**	**4 - 6 Peak Hour**			16:30	17:00	**16:45**
7 - 9 Pk Volume	0	0	301	221	**514**	**4 - 6 Pk Volume**	0	0	438	393	**825**
Pk Hr Factor	0.000	0.000	0.809	0.757	**0.924**	**Pk Hr Factor**	0.000	0.000	0.961	0.963	**0.973**

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Prepared by NDS/ATD

VOLUME

Camino De La Reina Bet. Avenida Del Rio & Camino De La Siesta

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_048

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,260	6,729	12,989

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			11		8		19		12:00			124		139		263	
00:15			5		5		10		12:15			124		142		266	
00:30			5		3		8		12:30			116		133		249	
00:45			2	23	5	21	7	44	12:45			89	453	165	579	254	1032
01:00			8		3		11		13:00			138		138		276	
01:15			2		5		7		13:15			127		139		266	
01:30			4		1		5		13:30			121		154		275	
01:45			1	15	0	9	1	24	13:45			109	495	131	562	240	1057
02:00			1		3		4		14:00			137		108		245	
02:15			1		2		3		14:15			125		105		230	
02:30			3		0		3		14:30			122		124		246	
02:45			2	7	1	6	3	13	14:45			99	483	119	456	218	939
03:00			1		0		1		15:00			121		101		222	
03:15			1		1		2		15:15			129		114		243	
03:30			1		0		1		15:30			115		123		238	
03:45			0	3	3	4	3	7	15:45			129	494	109	447	238	941
04:00			0		0		0		16:00			139		113		252	
04:15			1		2		3		16:15			132		125		257	
04:30			2		2		4		16:30			179		130		309	
04:45			3	6	8	12	11	18	16:45			148	598	135	503	283	1101
05:00			4		5		9		17:00			192		149		341	
05:15			3		13		16		17:15			181		148		329	
05:30			4		14		18		17:30			170		156		326	
05:45			6	17	27	59	33	76	17:45			159	702	139	592	298	1294
06:00			18		26		44		18:00			159		132		291	
06:15			18		23		41		18:15			132		104		236	
06:30			15		45		60		18:30			131		128		259	
06:45			22	73	69	163	91	236	18:45			115	537	132	496	247	1033
07:00			24		58		82		19:00			113		98		211	
07:15			22		77		99		19:15			100		108		208	
07:30			32		75		107		19:30			97		96		193	
07:45			46	124	95	305	141	429	19:45			83	393	87	389	170	782
08:00			54		74		128		20:00			81		75		156	
08:15			49		93		142		20:15			98		80		178	
08:30			55		88		143		20:30			85		72		157	
08:45			55	213	109	364	164	577	20:45			60	324	56	283	116	607
09:00			39		96		135		21:00			92		46		138	
09:15			54		91		145		21:15			74		32		106	
09:30			50		81		131		21:30			54		28		82	
09:45			67	210	97	365	164	575	21:45			44	264	26	132	70	396
10:00			65		79		144		22:00			33		34		67	
10:15			65		75		140		22:15			22		18		40	
10:30			75		102		177		22:30			22		14		36	
10:45			75	280	125	381	200	661	22:45			22	99	17	83	39	182
11:00			94		122		216		23:00			20		12		32	
11:15			99		119		218		23:15			11		7		18	
11:30			98		102		200		23:30			11		7		18	
11:45			106	397	144	487	250	884	23:45			8	50	5	31	13	81
TOTALS				1368		2176		3544	TOTALS				4892		4553		9445
SPLIT %				38.6%		61.4%		27.3%	SPLIT %				51.8%		48.2%		72.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,260	6,729	12,989

AM Peak Hour				11:45	11:45	11:45	PM Peak Hour				17:00	12:45	17:00
AM Pk Volume				470	558	1028	PM Pk Volume				702	596	1294
Pk Hr Factor				0.948	0.969	0.966	Pk Hr Factor				0.914	0.903	0.949
7 - 9 Volume	0	0		337	669	1006	4 - 6 Volume	0	0		1300	1095	2395
7 - 9 Peak Hour				08:00	08:00	08:00	4 - 6 Peak Hour				17:00	17:00	17:00
7 - 9 Pk Volume	0	0		213	364	577	4 - 6 Pk Volume	0	0		702	592	1294
Pk Hr Factor	0.000	0.000		0.968	0.835	0.880	Pk Hr Factor	0.000	0.000		0.914	0.949	0.949

Prepared by NDS/ATD

VOLUME

Camino De La Reina Bet. Avenida Del Rio & Camino De La Siesta

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_048

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,611	7,125	13,736

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			13		12		25		12:00			113		125		238	
00:15			15		7		22		12:15			135		140		275	
00:30			12		6		18		12:30			130		151		281	
00:45			6	46	7	32	13	78	12:45			134	512	153	569	287	1081
01:00			2		6		8		13:00			124		137		261	
01:15			1		4		5		13:15			125		157		282	
01:30			0		2		2		13:30			140		134		274	
01:45			1	4	0	12	1	16	13:45			118	507	126	554	244	1061
02:00			4		0		4		14:00			119		128		247	
02:15			2		3		5		14:15			136		123		259	
02:30			3		1		4		14:30			127		144		271	
02:45			3	12	3	7	6	19	14:45			117	499	126	521	243	1020
03:00			2		0		2		15:00			92		131		223	
03:15			1		4		5		15:15			142		106		248	
03:30			2		1		3		15:30			130		95		225	
03:45			2	7	3	8	5	15	15:45			140	504	125	457	265	961
04:00			1		1		2		16:00			151		118		269	
04:15			3		2		5		16:15			165		121		286	
04:30			1		4		5		16:30			175		130		305	
04:45			2	7	6	13	8	20	16:45			194	685	143	512	337	1197
05:00			3		5		8		17:00			202		159		361	
05:15			6		10		16		17:15			198		147		345	
05:30			5		15		20		17:30			195		129		324	
05:45			4	18	23	53	27	71	17:45			156	751	128	563	284	1314
06:00			19		23		42		18:00			147		127		274	
06:15			24		31		55		18:15			127		109		236	
06:30			15		45		60		18:30			119		104		223	
06:45			27	85	48	147	75	232	18:45			97	490	119	459	216	949
07:00			29		54		83		19:00			111		114		225	
07:15			22		70		92		19:15			102		108		210	
07:30			34		73		107		19:30			109		90		199	
07:45			34	119	101	298	135	417	19:45			86	408	89	401	175	809
08:00			69		128		197		20:00			106		83		189	
08:15			38		198		236		20:15			83		75		158	
08:30			59		196		255		20:30			75		54		129	
08:45			44	210	161	683	205	893	20:45			70	334	75	287	145	621
09:00			67		109		176		21:00			100		61		161	
09:15			53		113		166		21:15			73		36		109	
09:30			58		81		139		21:30			62		26		88	
09:45			68	246	93	396	161	642	21:45			51	286	34	157	85	443
10:00			77		74		151		22:00			33		20		53	
10:15			72		99		171		22:15			42		25		67	
10:30			74		100		174		22:30			29		16		45	
10:45			87	310	102	375	189	685	22:45			19	123	17	78	36	201
11:00			93		107		200		23:00			22		17		39	
11:15			99		134		233		23:15			25		15		40	
11:30			89		104		193		23:30			13		8		21	
11:45			98	379	147	492	245	871	23:45			9	69	11	51	20	120
TOTALS				1443		2516		3959	TOTALS				5168		4609		9777
SPLIT %				36.4%		63.6%		28.8%	SPLIT %				52.9%		47.1%		71.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,611	7,125	13,736

AM Peak Hour				11:45	08:00	11:45	PM Peak Hour				16:45	12:30	16:45
AM Pk Volume				476	683	1039	PM Pk Volume				789	598	1367
Pk Hr Factor				0.881	0.862	0.924	Pk Hr Factor				0.976	0.952	0.947
7 - 9 Volume	0	0		329	981	1310	4 - 6 Volume	0	0		1436	1075	2511
7 - 9 Peak Hour				08:00	08:00	08:00	4 - 6 Peak Hour				16:45	16:30	16:45
7 - 9 Pk Volume	0	0		210	683	893	4 - 6 Pk Volume	0	0		789	579	1367
Pk Hr Factor	0.000	0.000		0.761	0.862	0.875	Pk Hr Factor	0.000	0.000		0.976	0.910	0.947

Prepared by NDS/ATD

VOLUME

Camino De La Reina Bet. Camino De La Siesta & Mission Center Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_049

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,748	4,805	10,553

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			8		6		14		12:00			124		95		219	
00:15			4		5		9		12:15			124		94		218	
00:30			4		3		7		12:30			114		93		207	
00:45			2	18	5	19	7	37	12:45			85	447	110	392	195	839
01:00			6		2		8		13:00			132		102		234	
01:15			4		4		8		13:15			112		97		209	
01:30			4		1		5		13:30			114		108		222	
01:45			1	15	0	7	1	22	13:45			89	447	92	399	181	846
02:00			1		3		4		14:00			135		78		213	
02:15			1		2		3		14:15			114		72		186	
02:30			3		1		4		14:30			121		88		209	
02:45			0	5	2	8	2	13	14:45			104	474	84	322	188	796
03:00			1		1		2		15:00			108		62		170	
03:15			2		2		4		15:15			109		89		198	
03:30			1		0		1		15:30			111		82		193	
03:45			0	4	2	5	2	9	15:45			118	446	83	316	201	762
04:00			0		0		0		16:00			142		68		210	
04:15			1		1		2		16:15			119		68		187	
04:30			1		3		4		16:30			164		85		249	
04:45			5	7	6	10	11	17	16:45			134	559	88	309	222	868
05:00			2		3		5		17:00			181		85		266	
05:15			2		6		8		17:15			156		104		260	
05:30			5		12		17		17:30			164		93		257	
05:45			4	13	21	42	25	55	17:45			145	646	90	372	235	1018
06:00			14		23		37		18:00			146		76		222	
06:15			13		22		35		18:15			116		70		186	
06:30			16		31		47		18:30			124		80		204	
06:45			17	60	51	127	68	187	18:45			101	487	85	311	186	798
07:00			16		53		69		19:00			111		62		173	
07:15			23		65		88		19:15			91		73		164	
07:30			30		75		105		19:30			85		66		151	
07:45			29	98	82	275	111	373	19:45			63	350	51	252	114	602
08:00			37		56		93		20:00			74		53		127	
08:15			40		69		109		20:15			83		55		138	
08:30			41		68		109		20:30			73		54		127	
08:45			39	157	67	260	106	417	20:45			55	285	38	200	93	485
09:00			39		60		99		21:00			69		39		108	
09:15			45		56		101		21:15			51		31		82	
09:30			56		69		125		21:30			37		25		62	
09:45			66	206	73	258	139	464	21:45			36	193	25	120	61	313
10:00			72		75		147		22:00			27		29		56	
10:15			65		78		143		22:15			20		16		36	
10:30			81		77		158		22:30			19		16		35	
10:45			81	299	99	329	180	628	22:45			16	82	14	75	30	157
11:00			87		104		191		23:00			16		9		25	
11:15			105		84		189		23:15			12		7		19	
11:30			106		84		190		23:30			9		7		16	
11:45			109	407	97	369	206	776	23:45			6	43	5	28	11	71
TOTALS				1289		1709		2998	TOTALS				4459		3096		7555
SPLIT %				43.0%		57.0%		28.4%	SPLIT %				59.0%		41.0%		71.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,748	4,805	10,553

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			17:00	12:45	17:00
AM Pk Volume			471	379	850	PM Pk Volume			646	417	1018
Pk Hr Factor			0.950	0.977	0.970	Pk Hr Factor			0.892	0.948	0.957
7 - 9 Volume	0	0	255	535	790	4 - 6 Volume	0	0	1205	681	1886
7 - 9 Peak Hour			08:00	07:30	07:45	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	157	282	422	4 - 6 Pk Volume	0	0	646	372	1018
Pk Hr Factor	0.000	0.000	0.957	0.860	0.950	Pk Hr Factor	0.000	0.000	0.892	0.894	0.957

Prepared by NDS/ATD

VOLUME

Camino De La Reina Bet. Camino De La Siesta & Mission Center Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_049

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,894	5,012	10,906

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			9		9		18		12:00			123		82		205	
00:15			12		8		20		12:15			128		105		233	
00:30			6		5		11		12:30			117		106		223	
00:45			6	33	3	25	9	58	12:45			110	478	104	397	214	875
01:00			0		6		6		13:00			111		99		210	
01:15			2		5		7		13:15			120		94		214	
01:30			1		1		2		13:30			129		98		227	
01:45			0	3	2	14	2	17	13:45			110	470	91	382	201	852
02:00			8		1		9		14:00			109		95		204	
02:15			2		3		5		14:15			112		77		189	
02:30			2		1		3		14:30			112		95		207	
02:45			3	15	2	7	5	22	14:45			106	439	90	357	196	796
03:00			2		0		2		15:00			92		99		191	
03:15			2		2		4		15:15			124		80		204	
03:30			1		0		1		15:30			141		65		206	
03:45			3	8	1	3	4	11	15:45			124	481	78	322	202	803
04:00			1		1		2		16:00			119		71		190	
04:15			3		0		3		16:15			148		82		230	
04:30			1		3		4		16:30			157		86		243	
04:45			3	8	3	7	6	15	16:45			161	585	96	335	257	920
05:00			2		3		5		17:00			182		97		279	
05:15			5		7		12		17:15			180		126		306	
05:30			5		12		17		17:30			181		103		284	
05:45			2	14	15	37	17	51	17:45			141	684	70	396	211	1080
06:00			17		19		36		18:00			125		76		201	
06:15			20		24		44		18:15			112		73		185	
06:30			15		32		47		18:30			110		82		192	
06:45			22	74	33	108	55	182	18:45			81	428	83	314	164	742
07:00			27		43		70		19:00			104		87		191	
07:15			27		56		83		19:15			94		84		178	
07:30			28		74		102		19:30			90		67		157	
07:45			29	111	77	250	106	361	19:45			80	368	53	291	133	659
08:00			48		99		147		20:00			90		53		143	
08:15			35		120		155		20:15			74		49		123	
08:30			35		148		183		20:30			67		43		110	
08:45			33	151	107	474	140	625	20:45			60	291	59	204	119	495
09:00			50		83		133		21:00			86		47		133	
09:15			47		67		114		21:15			56		34		90	
09:30			45		53		98		21:30			43		24		67	
09:45			72	214	48	251	120	465	21:45			38	223	33	138	71	361
10:00			64		58		122		22:00			27		16		43	
10:15			77		80		157		22:15			17		24		41	
10:30			69		62		131		22:30			23		13		36	
10:45			84	294	64	264	148	558	22:45			11	78	14	67	25	145
11:00			98		79		177		23:00			19		15		34	
11:15			96		88		184		23:15			22		12		34	
11:30			92		61		153		23:30			10		7		17	
11:45			103	389	98	326	201	715	23:45			4	55	9	43	13	98
TOTALS				1314		1766		**3080**	**TOTALS**				4580		3246		**7826**
SPLIT %				42.7%		57.3%		**28.2%**	**SPLIT %**				58.5%		41.5%		**71.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,894	5,012	10,906

AM Peak Hour			11:45	08:00	**11:45**	**PM Peak Hour**			16:45	16:45	**16:45**
AM Pk Volume			471	474	**862**	**PM Pk Volume**			704	422	**1126**
Pk Hr Factor			0.920	0.801	**0.925**	**Pk Hr Factor**			0.967	0.837	**0.920**
7 - 9 Volume	0	0	262	724	**986**	**4 - 6 Volume**	0	0	1269	731	**2000**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			16:45	16:45	**16:45**
7 - 9 Pk Volume	0	0	151	474	**625**	**4 - 6 Pk Volume**	0	0	704	422	**1126**
Pk Hr Factor	0.000	0.000	0.786	0.801	**0.854**	**Pk Hr Factor**	0.000	0.000	0.967	0.837	**0.920**

Prepared by NDS/ATD

VOLUME

Camino De La Reina Bet. Mission Center Rd & Camino Del Este

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_050

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,595	8,613	18,208

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			9		3		12		12:00			245		198		443	
00:15			3		6		9		12:15			221		208		429	
00:30			5		3		8		12:30			219		193		412	
00:45			3	20	4	16	7	36	12:45			218	903	206	805	424	1708
01:00			4		9		13		13:00			217		222		439	
01:15			5		9		14		13:15			195		193		388	
01:30			2		2		4		13:30			214		180		394	
01:45			2	13	5	25	7	38	13:45			187	813	181	776	368	1589
02:00			0		3		3		14:00			200		164		364	
02:15			0		1		1		14:15			182		180		362	
02:30			2		2		4		14:30			171		163		334	
02:45			4	6	2	8	6	14	14:45			185	738	169	676	354	1414
03:00			3		4		7		15:00			184		145		329	
03:15			5		1		6		15:15			171		174		345	
03:30			2		0		2		15:30			178		152		330	
03:45			2	12	1	6	3	18	15:45			215	748	153	624	368	1372
04:00			5		3		8		16:00			195		162		357	
04:15			4		3		7		16:15			184		143		327	
04:30			4		5		9		16:30			196		159		355	
04:45			10	23	2	13	12	36	16:45			186	761	163	627	349	1388
05:00			6		3		9		17:00			240		155		395	
05:15			4		6		10		17:15			245		176		421	
05:30			17		21		38		17:30			238		198		436	
05:45			19	46	13	43	32	89	17:45			229	952	190	719	419	1671
06:00			25		13		38		18:00			240		154		394	
06:15			18		30		48		18:15			206		143		349	
06:30			25		24		49		18:30			221		136		357	
06:45			36	104	34	101	70	205	18:45			195	862	173	606	368	1468
07:00			27		51		78		19:00			168		137		305	
07:15			40		63		103		19:15			170		169		339	
07:30			44		68		112		19:30			168		124		292	
07:45			50	161	100	282	150	443	19:45			165	671	140	570	305	1241
08:00			37		89		126		20:00			148		115		263	
08:15			53		79		132		20:15			142		123		265	
08:30			54		81		135		20:30			134		129		263	
08:45			51	195	101	350	152	545	20:45			101	525	114	481	215	1006
09:00			63		69		132		21:00			84		103		187	
09:15			93		80		173		21:15			88		82		170	
09:30			112		86		198		21:30			53		69		122	
09:45			100	368	93	328	193	696	21:45			49	274	25	279	74	553
10:00			138		94		232		22:00			36		33		69	
10:15			131		109		240		22:15			38		36		74	
10:30			111		128		239		22:30			16		24		40	
10:45			148	528	119	450	267	978	22:45			26	116	22	115	48	231
11:00			161		136		297		23:00			17		16		33	
11:15			173		157		330		23:15			14		14		28	
11:30			178		171		349		23:30			10		9		19	
11:45			188	700	200	664	388	1364	23:45			15	56	10	49	25	105
TOTALS				2176		2286		4462	TOTALS				7419		6327		13746
SPLIT %				48.8%		51.2%		24.5%	SPLIT %				54.0%		46.0%		75.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,595	8,613	18,208

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			17:00	12:15	12:00
AM Pk Volume			873	799	1672	PM Pk Volume			952	829	1708
Pk Hr Factor			0.891	0.960	0.944	Pk Hr Factor			0.971	0.934	0.964
7 - 9 Volume	0	0	356	632	988	4 - 6 Volume	0	0	1713	1346	3059
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	195	350	545	4 - 6 Pk Volume	0	0	952	719	1671
Pk Hr Factor	0.000	0.000	0.903	0.866	0.896	Pk Hr Factor	0.000	0.000	0.971	0.908	0.958

Prepared by NDS/ATD

VOLUME

Camino De La Reina Bet. Mission Center Rd & Camino Del Este

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_050

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,787	9,060	18,847

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			6		16		22		12:00			209		205		414	
00:15			9		2		11		12:15			215		191		406	
00:30			8		8		16		12:30			233		201		434	
00:45			2	25	2	28	4	53	12:45			225	882	215	812	440	1694
01:00			6		4		10		13:00			215		205		420	
01:15			2		3		5		13:15			194		181		375	
01:30			2		5		7		13:30			235		180		415	
01:45			2	12	9	21	11	33	13:45			225	869	199	765	424	1634
02:00			4		2		6		14:00			182		183		365	
02:15			1		4		5		14:15			185		172		357	
02:30			3		3		6		14:30			190		179		369	
02:45			1	9	2	11	3	20	14:45			174	731	161	695	335	1426
03:00			2		4		6		15:00			192		142		334	
03:15			6		6		12		15:15			184		187		371	
03:30			6		1		7		15:30			199		166		365	
03:45			5	19	1	12	6	31	15:45			189	764	160	655	349	1419
04:00			2		2		4		16:00			196		150		346	
04:15			2		1		3		16:15			194		145		339	
04:30			3		3		6		16:30			212		151		363	
04:45			7	14	3	9	10	23	16:45			235	837	171	617	406	1454
05:00			2		5		7		17:00			247		168		415	
05:15			5		6		11		17:15			258		168		426	
05:30			14		12		26		17:30			229		179		408	
05:45			22	43	23	46	45	89	17:45			236	970	196	711	432	1681
06:00			20		19		39		18:00			202		171		373	
06:15			17		20		37		18:15			194		140		334	
06:30			18		15		33		18:30			162		165		327	
06:45			33	88	41	95	74	183	18:45			194	752	149	625	343	1377
07:00			45		51		96		19:00			169		135		304	
07:15			28		74		102		19:15			162		159		321	
07:30			41		77		118		19:30			189		121		310	
07:45			41	155	94	296	135	451	19:45			171	691	134	549	305	1240
08:00			50		137		187		20:00			153		110		263	
08:15			45		113		158		20:15			122		114		236	
08:30			72		138		210		20:30			131		128		259	
08:45			58	225	126	514	184	739	20:45			106	512	119	471	225	983
09:00			57		103		160		21:00			115		102		217	
09:15			83		90		173		21:15			72		80		152	
09:30			105		90		195		21:30			76		77		153	
09:45			124	369	107	390	231	759	21:45			60	323	39	298	99	621
10:00			118		100		218		22:00			41		37		78	
10:15			139		117		256		22:15			43		43		86	
10:30			141		115		256		22:30			18		43		61	
10:45			154	552	174	506	328	1058	22:45			25	127	22	145	47	272
11:00			158		156		314		23:00			30		18		48	
11:15			203		182		385		23:15			25		25		50	
11:30			174		167		341		23:30			10		11		21	
11:45			204	739	222	727	426	1466	23:45			14	79	8	62	22	141
TOTALS				2250		2655		4905	TOTALS				7537		6405		13942
SPLIT %				45.9%		54.1%		26.0%	SPLIT %				54.1%		45.9%		74.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,787	9,060	18,847

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			17:00	12:00	12:15
AM Pk Volume			861	819	1680	PM Pk Volume			970	812	1700
Pk Hr Factor			0.924	0.922	0.968	Pk Hr Factor			0.940	0.944	0.966
7 - 9 Volume	0	0	380	810	1190	4 - 6 Volume	0	0	1807	1328	3135
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	225	514	739	4 - 6 Pk Volume	0	0	970	711	1681
Pk Hr Factor	0.000	0.000	0.781	0.931	0.880	Pk Hr Factor	0.000	0.000	0.940	0.907	0.973

Prepared by NDS/ATD

VOLUME

Camino De La Reina Bet. Camino Del Este & Qualcomm Wy

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_051

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,672	5,850	13,522

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			13		6		19		12:00			158		153		311	
00:15			10		3		13		12:15			174		164		338	
00:30			7		1		8		12:30			162		114		276	
00:45			11	41	5	15	16	56	12:45			190	684	137	568	327	1252
01:00			4		7		11		13:00			183		125		308	
01:15			3		0		3		13:15			180		130		310	
01:30			3		2		5		13:30			153		107		260	
01:45			4	14	1	10	5	24	13:45			177	693	101	463	278	1156
02:00			2		3		5		14:00			168		112		280	
02:15			1		1		2		14:15			117		112		229	
02:30			2		0		2		14:30			147		95		242	
02:45			2	7	3	7	5	14	14:45			152	584	118	437	270	1021
03:00			1		2		3		15:00			146		103		249	
03:15			3		1		4		15:15			139		105		244	
03:30			0		1		1		15:30			158		104		262	
03:45			2	6	4	8	6	14	15:45			143	586	82	394	225	980
04:00			3		2		5		16:00			135		102		237	
04:15			1		1		2		16:15			148		105		253	
04:30			5		4		9		16:30			167		114		281	
04:45			5	14	3	10	8	24	16:45			159	609	110	431	269	1040
05:00			7		6		13		17:00			192		124		316	
05:15			8		7		15		17:15			212		130		342	
05:30			10		11		21		17:30			204		114		318	
05:45			9	34	14	38	23	72	17:45			181	789	106	474	287	1263
06:00			19		12		31		18:00			177		103		280	
06:15			12		20		32		18:15			147		97		244	
06:30			19		16		35		18:30			141		98		239	
06:45			27	77	44	92	71	169	18:45			170	635	97	395	267	1030
07:00			36		42		78		19:00			148		103		251	
07:15			35		55		90		19:15			133		85		218	
07:30			52		65		117		19:30			131		73		204	
07:45			43	166	97	259	140	425	19:45			134	546	82	343	216	889
08:00			41		70		111		20:00			147		58		205	
08:15			52		82		134		20:15			117		60		177	
08:30			49		86		135		20:30			131		54		185	
08:45			42	184	89	327	131	511	20:45			91	486	48	220	139	706
09:00			55		77		132		21:00			91		46		137	
09:15			58		78		136		21:15			80		35		115	
09:30			76		72		148		21:30			64		29		93	
09:45			57	246	86	313	143	559	21:45			67	302	19	129	86	431
10:00			66		79		145		22:00			36		24		60	
10:15			83		78		161		22:15			38		9		47	
10:30			96		89		185		22:30			33		11		44	
10:45			92	337	91	337	183	674	22:45			30	137	14	58	44	195
11:00			76		120		196		23:00			19		7		26	
11:15			103		119		222		23:15			18		19		37	
11:30			124		131		255		23:30			16		7		23	
11:45			128	431	116	486	244	917	23:45			11	64	3	36	14	100
TOTALS				1557		1902		3459	TOTALS				6115		3948		10063
SPLIT %				45.0%		55.0%		25.6%	SPLIT %				60.8%		39.2%		74.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,672	5,850	13,522

AM Peak Hour			11:45	11:30	11:45	PM Peak Hour			17:00	12:00	17:00
AM Pk Volume			622	564	1169	PM Pk Volume			789	568	1263
Pk Hr Factor			0.894	0.860	0.865	Pk Hr Factor			0.930	0.866	0.923
7 - 9 Volume	0	0	350	586	936	4 - 6 Volume	0	0	1398	905	2303
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			17:00	16:30	17:00
7 - 9 Pk Volume	0	0	188	335	520	4 - 6 Pk Volume	0	0	789	478	1263
Pk Hr Factor	0.000	0.000	0.904	0.863	0.929	Pk Hr Factor	0.000	0.000	0.930	0.919	0.923

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Prepared by NDS/ATD

VOLUME

Camino De La Reina Bet. Camino Del Este & Qualcomm Wy

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_051

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,921	6,091	14,012

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			15		15		30		12:00			167		157		324	
00:15			11		5		16		12:15			146		132		278	
00:30			8		5		13		12:30			181		143		324	
00:45			11	45	1	26	12	71	12:45			206	700	141	573	347	1273
01:00			2		3		5		13:00			189		131		320	
01:15			4		3		7		13:15			168		118		286	
01:30			2		2		4		13:30			178		109		287	
01:45			1	9	5	13	6	22	13:45			168	703	107	465	275	1168
02:00			0		6		6		14:00			155		96		251	
02:15			0		2		2		14:15			137		113		250	
02:30			4		1		5		14:30			155		90		245	
02:45			2	6	2	11	4	17	14:45			164	611	100	399	264	1010
03:00			2		4		6		15:00			148		88		236	
03:15			9		4		13		15:15			150		100		250	
03:30			2		1		3		15:30			150		96		246	
03:45			1	14	2	11	3	25	15:45			146	594	113	397	259	991
04:00			3		2		5		16:00			131		105		236	
04:15			5		1		6		16:15			161		103		264	
04:30			3		4		7		16:30			172		122		294	
04:45			2	13	4	11	6	24	16:45			171	635	117	447	288	1082
05:00			3		4		7		17:00			208		110		318	
05:15			8		6		14		17:15			231		118		349	
05:30			9		6		15		17:30			226		117		343	
05:45			14	34	25	41	39	75	17:45			191	856	120	465	311	1321
06:00			10		12		22		18:00			186		115		301	
06:15			18		21		39		18:15			162		96		258	
06:30			19		18		37		18:30			164		106		270	
06:45			22	69	43	94	65	163	18:45			176	688	96	413	272	1101
07:00			31		39		70		19:00			159		80		239	
07:15			41		74		115		19:15			151		91		242	
07:30			29		68		97		19:30			137		63		200	
07:45			43	144	94	275	137	419	19:45			127	574	70	304	197	878
08:00			45		98		143		20:00			153		63		216	
08:15			24		102		126		20:15			135		74		209	
08:30			36		118		154		20:30			141		56		197	
08:45			44	149	121	439	165	588	20:45			102	531	62	255	164	786
09:00			48		88		136		21:00			83		39		122	
09:15			63		67		130		21:15			73		37		110	
09:30			60		86		146		21:30			58		41		99	
09:45			71	242	93	334	164	576	21:45			62	276	27	144	89	420
10:00			70		79		149		22:00			39		24		63	
10:15			85		86		171		22:15			44		18		62	
10:30			90		90		180		22:30			37		18		55	
10:45			95	340	104	359	199	699	22:45			33	153	15	75	48	228
11:00			100		89		189		23:00			25		8		33	
11:15			115		133		248		23:15			22		15		37	
11:30			110		116		226		23:30			12		12		24	
11:45			136	461	162	500	298	961	23:45			15	74	5	40	20	114
TOTALS				1526		2114		**3640**	**TOTALS**				6395		3977		**10372**
SPLIT %				41.9%		58.1%		**26.0%**	**SPLIT %**				61.7%		38.3%		**74.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,921	6,091	14,012

AM Peak Hour			11:45	11:45	**11:45**	**PM Peak Hour**			17:00	12:00	**17:00**
AM Pk Volume			630	594	**1224**	**PM Pk Volume**			856	573	**1321**
Pk Hr Factor			0.870	0.917	**0.944**	**Pk Hr Factor**			0.926	0.912	**0.946**
7 - 9 Volume	0	0	293	714	**1007**	**4 - 6 Volume**	0	0	1491	912	**2403**
7 - 9 Peak Hour			07:15	08:00	**08:00**	**4 - 6 Peak Hour**			17:00	16:30	**17:00**
7 - 9 Pk Volume	0	0	158	439	**588**	**4 - 6 Pk Volume**	0	0	856	467	**1321**
Pk Hr Factor	0.000	0.000	0.878	0.907	**0.891**	**Pk Hr Factor**	0.000	0.000	0.926	0.957	**0.946**

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. Camino De La Siesta & Mission Center Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_052

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,293	2,995	5,288

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			5		2		7		12:00			44		53		97	
00:15			2		0		2		12:15			46		52		98	
00:30			5		1		6		12:30			39		55		94	
00:45			1	13	2	5	3	18	12:45			27	156	67	227	94	383
01:00			3		1		4		13:00			51		61		112	
01:15			0		1		1		13:15			39		56		95	
01:30			0		1		1		13:30			32		67		99	
01:45			1	4	1	4	2	8	13:45			35	157	59	243	94	400
02:00			1		2		3		14:00			53		55		108	
02:15			1		1		2		14:15			38		46		84	
02:30			0		7		7		14:30			32		53		85	
02:45			4	6	0	10	4	16	14:45			31	154	57	211	88	365
03:00			4		0		4		15:00			53		38		91	
03:15			1		0		1		15:15			51		50		101	
03:30			0		0		0		15:30			48		49		97	
03:45			1	6	1	1	2	7	15:45			31	183	40	177	71	360
04:00			2		0		2		16:00			64		59		123	
04:15			0		2		2		16:15			64		42		106	
04:30			1		2		3		16:30			70		49		119	
04:45			3	6	4	8	7	14	16:45			63	261	35	185	98	446
05:00			1		5		6		17:00			116		43		159	
05:15			1		5		6		17:15			73		49		122	
05:30			3		8		11		17:30			63		49		112	
05:45			0	5	12	30	12	35	17:45			58	310	40	181	98	491
06:00			5		22		27		18:00			57		37		94	
06:15			6		22		28		18:15			39		36		75	
06:30			12		22		34		18:30			43		33		76	
06:45			7	30	44	110	51	140	18:45			42	181	35	141	77	322
07:00			14		31		45		19:00			38		39		77	
07:15			15		39		54		19:15			21		28		49	
07:30			15		32		47		19:30			32		30		62	
07:45			10	54	81	183	91	237	19:45			27	118	36	133	63	251
08:00			19		70		89		20:00			29		21		50	
08:15			19		82		101		20:15			26		25		51	
08:30			31		66		97		20:30			16		17		33	
08:45			15	84	84	302	99	386	20:45			20	91	25	88	45	179
09:00			24		87		111		21:00			24		9		33	
09:15			27		71		98		21:15			32		12		44	
09:30			21		60		81		21:30			25		9		34	
09:45			17	89	52	270	69	359	21:45			14	95	8	38	22	133
10:00			16		52		68		22:00			13		9		22	
10:15			31		35		66		22:15			7		8		15	
10:30			26		54		80		22:30			5		5		10	
10:45			22	95	57	198	79	293	22:45			9	34	5	27	14	61
11:00			33		41		74		23:00			6		7		13	
11:15			35		60		95		23:15			10		2		12	
11:30			38		44		82		23:30			3		6		9	
11:45			31	137	62	207	93	344	23:45			5	24	1	16	6	40
TOTALS				529		1328		**1857**	**TOTALS**				1764		1667		**3431**
SPLIT %				28.5%		71.5%		**35.1%**	**SPLIT %**				51.4%		48.6%		**64.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,293	2,995	5,288

AM Peak Hour			11:45	08:15	**08:15**	**PM Peak Hour**			16:30	12:45	**16:30**
AM Pk Volume			160	319	**408**	**PM Pk Volume**			322	251	**498**
Pk Hr Factor			0.870	0.917	**0.919**	**Pk Hr Factor**			0.694	0.937	**0.783**
7 - 9 Volume	0	0	138	485	**623**	**4 - 6 Volume**	0	0	571	366	**937**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			16:30	16:00	**16:30**
7 - 9 Pk Volume	0	0	84	302	**386**	**4 - 6 Pk Volume**	0	0	322	185	**498**
Pk Hr Factor	0.000	0.000	0.677	0.899	**0.955**	**Pk Hr Factor**	0.000	0.000	0.694	0.784	**0.783**

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. Camino De La Siesta & Mission Center Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_052

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,403	3,168	5,571

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			6		4		10		12:00			48		52		100	
00:15			7		4		11		12:15			45		50		95	
00:30			5		2		7		12:30			44		72		116	
00:45			1	19	4	14	5	33	12:45			57	194	68	242	125	436
01:00			3		1		4		13:00			43		68		111	
01:15			0		1		1		13:15			40		65		105	
01:30			0		2		2		13:30			38		81		119	
01:45			4	7	3	7	7	14	13:45			43	164	46	260	89	424
02:00			1		3		4		14:00			41		61		102	
02:15			1		2		3		14:15			44		57		101	
02:30			0		1		1		14:30			53		76		129	
02:45			1	3	3	9	4	12	14:45			41	179	68	262	109	441
03:00			1		0		1		15:00			42		35		77	
03:15			2		2		4		15:15			30		47		77	
03:30			3		1		4		15:30			61		43		104	
03:45			1	7	2	5	3	12	15:45			45	178	47	172	92	350
04:00			2		0		2		16:00			70		42		112	
04:15			1		4		5		16:15			59		51		110	
04:30			0		2		2		16:30			86		46		132	
04:45			2	5	3	9	5	14	16:45			62	277	39	178	101	455
05:00			1		4		5		17:00			121		58		179	
05:15			3		1		4		17:15			92		57		149	
05:30			2		9		11		17:30			77		39		116	
05:45			4	10	10	24	14	34	17:45			57	347	40	194	97	541
06:00			4		15		19		18:00			59		35		94	
06:15			4		16		20		18:15			48		38		86	
06:30			7		31		38		18:30			35		31		66	
06:45			6	21	50	112	56	133	18:45			38	180	32	136	70	316
07:00			14		26		40		19:00			30		28		58	
07:15			15		37		52		19:15			30		29		59	
07:30			11		35		46		19:30			29		30		59	
07:45			15	55	83	181	98	236	19:45			22	111	37	124	59	235
08:00			20		87		107		20:00			30		33		63	
08:15			11		111		122		20:15			24		22		46	
08:30			22		91		113		20:30			20		16		36	
08:45			14	67	92	381	106	448	20:45			20	94	17	88	37	182
09:00			21		80		101		21:00			17		22		39	
09:15			18		78		96		21:15			29		11		40	
09:30			26		65		91		21:30			29		7		36	
09:45			19	84	75	298	94	382	21:45			19	94	7	47	26	141
10:00			30		44		74		22:00			11		10		21	
10:15			28		44		72		22:15			28		5		33	
10:30			28		47		75		22:30			10		12		22	
10:45			23	109	42	177	65	286	22:45			5	54	10	37	15	91
11:00			34		43		77		23:00			8		5		13	
11:15			22		51		73		23:15			8		5		13	
11:30			30		39		69		23:30			6		2		8	
11:45			28	114	63	196	91	310	23:45			8	30	3	15	11	45
TOTALS				501		1413		**1914**	**TOTALS**				1902		1755		**3657**
SPLIT %				26.2%		73.8%		**34.4%**	**SPLIT %**				52.0%		48.0%		**65.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,403	3,168	5,571

AM Peak Hour			11:45	08:00	**08:00**	**PM Peak Hour**			16:30	12:45	**16:30**
AM Pk Volume			165	381	**448**	**PM Pk Volume**			361	282	**561**
Pk Hr Factor			0.859	0.858	**0.918**	**Pk Hr Factor**			0.746	0.870	**0.784**
7 - 9 Volume	0	0	122	562	**684**	**4 - 6 Volume**	0	0	624	372	**996**
7 - 9 Peak Hour			07:45	08:00	**08:00**	**4 - 6 Peak Hour**			16:30	16:30	**16:30**
7 - 9 Pk Volume	0	0	68	381	**448**	**4 - 6 Pk Volume**	0	0	361	200	**561**
Pk Hr Factor	0.000	0.000	0.773	0.858	**0.918**	**Pk Hr Factor**	0.000	0.000	0.746	0.862	**0.784**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Camino Del Rio North, From Mission Center Road to I-8 WB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			31		35			12:00			220		241		
00:15			35		40			12:15			248		259		
00:30			28		25			12:30			244		262		
00:45			26	120	21	121	241	12:45			232	944	255	1017	1961
01:00			18		18			13:00			214		221		
01:15			20		20			13:15			205		205		
01:30			15		16			13:30			199		181		
01:45			19	72	11	65	137	13:45			190	808	177	784	1592
02:00			20		16			14:00			184		189		
02:15			16		11			14:15			196		189		
02:30			11		9			14:30			184		158		
02:45			16	63	5	41	104	14:45			205	769	195	731	1500
03:00			16		8			15:00			218		168		
03:15			9		9			15:15			199		177		
03:30			12		5			15:30			208		184		
03:45			11	48	11	33	81	15:45			216	841	205	734	1575
04:00			15		16			16:00			248		205		
04:15			12		12			16:15			230		240		
04:30			9		18			16:30			262		241		
04:45			11	47	21	67	114	16:45			258	998	248	934	1932
05:00			15		25			17:00			288		226		
05:15			11		40			17:15			262		220		
05:30			20		65			17:30			262		231		
05:45			19	65	80	210	275	17:45			231	1043	248	925	1968
06:00			28		126			18:00			216		241		
06:15			35		111			18:15			203		222		
06:30			42		141			18:30			218		209		
06:45			60	165	170	548	713	18:45			184	821	226	898	1719
07:00			81		198			19:00			165		203		
07:15			88		205			19:15			166		184		
07:30			94		216			19:30			184		161		
07:45			80	343	222	841	1184	19:45			152	667	144	692	1359
08:00			116		218			20:00			135		135		
08:15			121		251			20:15			105		128		
08:30			120		255			20:30			111		116		
08:45			116	473	242	966	1439	20:45			98	449	108	487	936
09:00			108		208			21:00			95		119		
09:15			121		195			21:15			99		105		
09:30			116		184			21:30			80		121		
09:45			135	480	195	782	1262	21:45			70	344	103	448	792
10:00			141		161			22:00			65		88		
10:15			128		177			22:15			77		95		
10:30			145		184			22:30			54		70		
10:45			152	566	212	734	1300	22:45			85	281	65	318	599
11:00			188		218			23:00			65		77		
11:15			216		262			23:15			33		54		
11:30			205		233			23:30			34		56		
11:45			252	861	218	931	1792	23:45			38	170	45	232	402
Total Vol.				3303		5339	**8642**					8135		8200	**16335**

Daily Totals

NB	SB	EB	WB	Combined
		11438	13539	**24977**

	AM			PM		
Split %	38.2%	61.8%	**34.6%**	49.8%	50.2%	**65.4%**
Peak Hour	11:45	11:45	**11:45**	16:30	12:00	**16:30**
Volume	964	980	**1944**	1070	1017	**2005**
P.H.F.	0.96	0.94	**0.96**	0.93	0.97	**0.98**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Camino Del Rio North, From Mission Center Road to I-8 WB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			26		28			12:00			208		205		
00:15			19		35			12:15			218		219		
00:30			20		31			12:30			235		235		
00:45			22	87	25	119	206	12:45			214	875	241	900	1775
01:00			21		20			13:00			194		222		
01:15			18		18			13:15			196		218		
01:30			20		12			13:30			184		202		
01:45			15	74	16	66	140	13:45			191	765	180	822	1587
02:00			11		11			14:00			188		155		
02:15			11		19			14:15			181		161		
02:30			19		10			14:30			196		135		
02:45			15	56	5	45	101	14:45			188	753	141	592	1345
03:00			10		4			15:00			170		144		
03:15			8		5			15:15			184		151		
03:30			9		6			15:30			196		168		
03:45			10	37	8	23	60	15:45			213	763	184	647	1410
04:00			5		9			16:00			242		215		
04:15			4		12			16:15			262		235		
04:30			9		11			16:30			268		262		
04:45			15	33	18	50	83	16:45			274	1046	255	967	2013
05:00			18		26			17:00			251		251		
05:15			21		35			17:15			288		242		
05:30			26		41			17:30			262		205		
05:45			21	86	88	190	276	17:45			233	1034	252	950	1984
06:00			28		91			18:00			218		222		
06:15			38		152			18:15			189		218		
06:30			41		145			18:30			188		203		
06:45			66	173	162	550	723	18:45			170	765	222	865	1630
07:00			91		184			19:00			151		184		
07:15			105		195			19:15			141		151		
07:30			84		235			19:30			116		140		
07:45			106	386	241	855	1241	19:45			125	533	122	597	1130
08:00			111		252			20:00			105		111		
08:15			125		222			20:15			88		105		
08:30			135		218			20:30			95		88		
08:45			104	475	262	954	1429	20:45			70	358	95	399	757
09:00			114		205			21:00			65		70		
09:15			108		181			21:15			88		65		
09:30			105		188			21:30			70		70		
09:45			116	443	174	748	1191	21:45			65	288	54	259	547
10:00			121		184			22:00			55		55		
10:15			135		165			22:15			51		41		
10:30			141		166			22:30			54		35		
10:45			116	513	184	699	1212	22:45			28	188	28	159	347
11:00			158		191			23:00			22		33		
11:15			222		235			23:15			26		40		
11:30			218		215			23:30			30		25		
11:45			205	803	222	863	1666	23:45			21	99	24	122	221
Total Vol.				3166		5162	**8328**					7467		7279	**14746**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
			10633	12441	**23074**

	AM			**PM**		
Split %	38.0%	62.0%	**36.1%**	50.6%	49.4%	**63.9%**
Peak Hour	11:45	08:00	**11:45**	16:30	16:30	**16:30**
Volume	866	954	**1747**	1081	1010	**2091**
P.H.F.	0.92	0.91	**0.93**	0.94	0.96	**0.99**

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. I-8 WB Ramps & Camino Del Este

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_054

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,975	5,564	11,539

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			22		15		37		12:00			123		99		222	
00:15			7		7		14		12:15			113		88		201	
00:30			12		12		24		12:30			130		107		237	
00:45			6	47	14	48	20	95	12:45			116	482	113	407	229	889
01:00			11		9		20		13:00			102		108		210	
01:15			5		8		13		13:15			114		99		213	
01:30			4		5		9		13:30			120		85		205	
01:45			3	23	6	28	9	51	13:45			122	458	87	379	209	837
02:00			2		8		10		14:00			100		90		190	
02:15			3		5		8		14:15			116		86		202	
02:30			1		5		6		14:30			107		93		200	
02:45			1	7	2	20	3	27	14:45			133	456	94	363	227	819
03:00			1		13		14		15:00			114		106		220	
03:15			3		2		5		15:15			99		76		175	
03:30			0		0		0		15:30			100		94		194	
03:45			0	4	6	21	6	25	15:45			103	416	103	379	206	795
04:00			1		3		4		16:00			97		84		181	
04:15			0		5		5		16:15			113		85		198	
04:30			3		1		4		16:30			120		101		221	
04:45			1	5	9	18	10	23	16:45			117	447	92	362	209	809
05:00			2		10		12		17:00			119		107		226	
05:15			6		13		19		17:15			126		97		223	
05:30			5		12		17		17:30			116		92		208	
05:45			16	29	11	46	27	75	17:45			114	475	118	414	232	889
06:00			12		10		22		18:00			121		124		245	
06:15			11		17		28		18:15			112		108		220	
06:30			14		11		25		18:30			114		84		198	
06:45			30	67	30	68	60	135	18:45			114	461	116	432	230	893
07:00			19		30		49		19:00			81		117		198	
07:15			20		35		55		19:15			100		103		203	
07:30			21		45		66		19:30			118		79		197	
07:45			32	92	71	181	103	273	19:45			100	399	76	375	176	774
08:00			36		44		80		20:00			99		90		189	
08:15			39		62		101		20:15			83		82		165	
08:30			48		79		127		20:30			73		79		152	
08:45			53	176	53	238	106	414	20:45			77	332	59	310	136	642
09:00			49		69		118		21:00			117		88		205	
09:15			62		51		113		21:15			99		76		175	
09:30			69		60		129		21:30			87		51		138	
09:45			68	248	76	256	144	504	21:45			66	369	45	260	111	629
10:00			83		74		157		22:00			45		58		103	
10:15			63		73		136		22:15			40		42		82	
10:30			79		66		145		22:30			45		34		79	
10:45			105	330	89	302	194	632	22:45			52	182	41	175	93	357
11:00			93		92		185		23:00			43		26		69	
11:15			94		111		205		23:15			37		22		59	
11:30			88		110		198		23:30			20		17		37	
11:45			79	354	95	408	174	762	23:45			16	116	9	74	25	190
TOTALS				1382		1634		**3016**	**TOTALS**				4593		3930		**8523**
SPLIT %				45.8%		54.2%		**26.1%**	**SPLIT %**				53.9%		46.1%		**73.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,975	5,564	11,539

AM Peak Hour			11:45	11:15	**11:45**	**PM Peak Hour**			12:00	17:30	**17:15**
AM Pk Volume			445	415	**834**	**PM Pk Volume**			482	442	**908**
Pk Hr Factor			0.856	0.935	**0.880**	**Pk Hr Factor**			0.927	0.891	**0.927**
7 - 9 Volume	0	0	268	419	**687**	**4 - 6 Volume**	0	0	922	776	**1698**
7 - 9 Peak Hour			08:00	07:45	**08:00**	**4 - 6 Peak Hour**			16:30	17:00	**17:00**
7 - 9 Pk Volume	0	0	176	256	**414**	**4 - 6 Pk Volume**	0	0	482	414	**889**
Pk Hr Factor	0.000	0.000	0.830	0.810	**0.815**	**Pk Hr Factor**	0.000	0.000	0.956	0.877	**0.958**

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. I-8 WB Ramps & Camino Del Este

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_054

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,143	6,133	12,276

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			19		17		36		12:00			108		91		199	
00:15			27		18		45		12:15			123		95		218	
00:30			11		19		30		12:30			111		118		229	
00:45			7	64	14	68	21	132	12:45			132	474	119	423	251	897
01:00			14		14		28		13:00			119		108		227	
01:15			8		19		27		13:15			116		119		235	
01:30			3		3		6		13:30			104		108		212	
01:45			1	26	5	41	6	67	13:45			92	431	104	439	196	870
02:00			2		1		3		14:00			101		84		185	
02:15			2		1		3		14:15			113		76		189	
02:30			1		2		3		14:30			113		73		186	
02:45			3	8	1	5	4	13	14:45			102	429	92	325	194	754
03:00			2		1		3		15:00			111		90		201	
03:15			1		2		3		15:15			98		82		180	
03:30			0		0		0		15:30			105		105		210	
03:45			1	4	2	5	3	9	15:45			101	415	92	369	193	784
04:00			0		3		3		16:00			108		90		198	
04:15			0		2		2		16:15			101		129		230	
04:30			6		2		8		16:30			109		95		204	
04:45			2	8	4	11	6	19	16:45			107	425	97	411	204	836
05:00			2		15		17		17:00			120		108		228	
05:15			7		11		18		17:15			144		122		266	
05:30			6		12		18		17:30			145		118		263	
05:45			13	28	11	49	24	77	17:45			126	535	120	468	246	1003
06:00			12		9		21		18:00			122		115		237	
06:15			11		13		24		18:15			121		104		225	
06:30			8		14		22		18:30			139		126		265	
06:45			28	59	19	55	47	114	18:45			124	506	137	482	261	988
07:00			26		28		54		19:00			111		101		212	
07:15			30		54		84		19:15			107		124		231	
07:30			34		59		93		19:30			96		102		198	
07:45			23	113	89	230	112	343	19:45			98	412	93	420	191	832
08:00			23		72		95		20:00			91		110		201	
08:15			34		121		155		20:15			80		97		177	
08:30			38		130		168		20:30			91		78		169	
08:45			49	144	106	429	155	573	20:45			158	420	104	389	262	809
09:00			68		52		120		21:00			113		101		214	
09:15			71		47		118		21:15			101		56		157	
09:30			61		61		122		21:30			72		66		138	
09:45			59	259	68	228	127	487	21:45			80	366	74	297	154	663
10:00			55		73		128		22:00			66		54		120	
10:15			65		69		134		22:15			55		42		97	
10:30			75		74		149		22:30			44		31		75	
10:45			95	290	84	300	179	590	22:45			43	208	44	171	87	379
11:00			108		88		196		23:00			39		33		72	
11:15			85		107		192		23:15			36		31		67	
11:30			97		103		200		23:30			30		21		51	
11:45			107	397	115	413	222	810	23:45			17	122	20	105	37	227
TOTALS				1400		1834		**3234**	**TOTALS**				4743		4299		**9042**
SPLIT %				43.3%		56.7%		**26.3%**	**SPLIT %**				52.5%		47.5%		**73.7%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,143	6,133	12,276

AM Peak Hour			11:45	08:00	**11:45**	**PM Peak Hour**			17:15	18:30	**17:15**
AM Pk Volume			449	429	**868**	**PM Pk Volume**			537	488	**1012**
Pk Hr Factor			0.913	0.825	**0.948**	**Pk Hr Factor**			0.926	0.891	**0.951**
7 - 9 Volume	0	0	257	659	**916**	**4 - 6 Volume**	0	0	960	879	**1839**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			17:00	17:00	**17:00**
7 - 9 Pk Volume	0	0	144	429	**573**	**4 - 6 Pk Volume**	0	0	535	468	**1003**
Pk Hr Factor	0.000	0.000	0.735	0.825	**0.853**	**Pk Hr Factor**	0.000	0.000	0.922	0.959	**0.943**

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. Camino Del Este & Qualcomm Wy

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_055

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,367	4,647	12,014

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			27		15		42		12:00			121		120		241	
00:15			14		6		20		12:15			131		95		226	
00:30			22		8		30		12:30			122		94		216	
00:45			6	69	4	33	10	102	12:45			133	507	107	416	240	923
01:00			15		5		20		13:00			139		98		237	
01:15			10		1		11		13:15			142		84		226	
01:30			11		3		14		13:30			145		95		240	
01:45			3	39	2	11	5	50	13:45			136	562	71	348	207	910
02:00			6		3		9		14:00			148		74		222	
02:15			5		1		6		14:15			155		95		250	
02:30			5		1		6		14:30			139		83		222	
02:45			1	17	3	8	4	25	14:45			136	578	65	317	201	895
03:00			4		2		6		15:00			132		85		217	
03:15			4		3		7		15:15			134		64		198	
03:30			3		0		3		15:30			132		84		216	
03:45			3	14	1	6	4	20	15:45			142	540	85	318	227	858
04:00			1		2		3		16:00			142		66		208	
04:15			7		1		8		16:15			149		77		226	
04:30			7		3		10		16:30			168		76		244	
04:45			7	22	12	18	19	40	16:45			157	616	61	280	218	896
05:00			15		5		20		17:00			189		81		270	
05:15			9		9		18		17:15			173		93		266	
05:30			17		13		30		17:30			172		84		256	
05:45			26	67	13	40	39	107	17:45			152	686	78	336	230	1022
06:00			34		15		49		18:00			154		90		244	
06:15			32		12		44		18:15			129		83		212	
06:30			37		9		46		18:30			131		70		201	
06:45			48	151	27	63	75	214	18:45			114	528	96	339	210	867
07:00			58		33		91		19:00			115		85		200	
07:15			39		31		70		19:15			133		70		203	
07:30			36		54		90		19:30			126		79		205	
07:45			42	175	58	176	100	351	19:45			123	497	65	299	188	796
08:00			65		67		132		20:00			110		51		161	
08:15			45		75		120		20:15			107		55		162	
08:30			70		55		125		20:30			114		40		154	
08:45			60	240	94	291	154	531	20:45			104	435	45	191	149	626
09:00			72		57		129		21:00			131		39		170	
09:15			49		59		108		21:15			76		20		96	
09:30			63		63		126		21:30			69		48		117	
09:45			59	243	73	252	132	495	21:45			69	345	32	139	101	484
10:00			62		69		131		22:00			56		18		74	
10:15			82		73		155		22:15			45		18		63	
10:30			80		74		154		22:30			48		13		61	
10:45			128	352	85	301	213	653	22:45			43	192	21	70	64	262
11:00			83		81		164		23:00			33		14		47	
11:15			92		86		178		23:15			29		15		44	
11:30			117		91		208		23:30			20		12		32	
11:45			96	388	84	342	180	730	23:45			22	104	12	53	34	157
TOTALS				1777		1541		3318	TOTALS				5590		3106		8696
SPLIT %				53.6%		46.4%		27.6%	SPLIT %				64.3%		35.7%		72.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,367	4,647	12,014

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			16:45	12:00	17:00
AM Pk Volume			470	393	863	PM Pk Volume			691	416	1022
Pk Hr Factor			0.897	0.819	0.895	Pk Hr Factor			0.914	0.867	0.946
7 - 9 Volume	0	0	415	467	882	4 - 6 Volume	0	0	1302	616	1918
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:45	17:00	17:00
7 - 9 Pk Volume	0	0	240	291	531	4 - 6 Pk Volume	0	0	691	336	1022
Pk Hr Factor	0.000	0.000	0.857	0.774	0.862	Pk Hr Factor	0.000	0.000	0.914	0.903	0.946

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. Camino Del Este & Qualcomm Wy

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_055

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,519	4,739	12,258

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			21		13		34		12:00			122		84		206	
00:15			13		7		20		12:15			117		112		229	
00:30			13		10		23		12:30			136		109		245	
00:45			10	57	7	37	17	94	12:45			152	527	99	404	251	931
01:00			13		2		15		13:00			130		90		220	
01:15			9		3		12		13:15			141		98		239	
01:30			2		5		7		13:30			167		119		286	
01:45			8	32	2	12	10	44	13:45			142	580	95	402	237	982
02:00			3		4		7		14:00			166		82		248	
02:15			3		0		3		14:15			130		67		197	
02:30			2		1		3		14:30			130		89		219	
02:45			1	9	1	6	2	15	14:45			134	560	80	318	214	878
03:00			0		2		2		15:00			150		65		215	
03:15			4		1		5		15:15			143		82		225	
03:30			1		0		1		15:30			117		76		193	
03:45			1	6	2	5	3	11	15:45			140	550	82	305	222	855
04:00			2		1		3		16:00			135		86		221	
04:15			2		3		5		16:15			150		72		222	
04:30			7		5		12		16:30			153		92		245	
04:45			6	17	8	17	14	34	16:45			136	574	86	336	222	910
05:00			12		8		20		17:00			164		81		245	
05:15			12		12		24		17:15			166		74		240	
05:30			16		12		28		17:30			151		87		238	
05:45			24	64	16	48	40	112	17:45			158	639	84	326	242	965
06:00			28		16		44		18:00			162		84		246	
06:15			35		7		42		18:15			144		77		221	
06:30			47		15		62		18:30			140		81		221	
06:45			46	156	20	58	66	214	18:45			164	610	90	332	254	942
07:00			50		22		72		19:00			137		91		228	
07:15			50		37		87		19:15			112		68		180	
07:30			40		47		87		19:30			102		73		175	
07:45			44	184	63	169	107	353	19:45			92	443	59	291	151	734
08:00			59		60		119		20:00			111		67		178	
08:15			60		70		130		20:15			126		50		176	
08:30			61		72		133		20:30			109		48		157	
08:45			68	248	81	283	149	531	20:45			115	461	38	203	153	664
09:00			62		61		123		21:00			109		34		143	
09:15			60		63		123		21:15			109		37		146	
09:30			57		82		139		21:30			97		30		127	
09:45			61	240	66	272	127	512	21:45			111	426	25	126	136	552
10:00			79		65		144		22:00			60		27		87	
10:15			90		65		155		22:15			72		22		94	
10:30			82		83		165		22:30			47		13		60	
10:45			80	331	95	308	175	639	22:45			49	228	12	74	61	302
11:00			106		101		207		23:00			62		19		81	
11:15			108		83		191		23:15			25		17		42	
11:30			98		81		179		23:30			27		8		35	
11:45			133	445	89	354	222	799	23:45			18	132	9	53	27	185
TOTALS				1789		1569		**3358**	**TOTALS**				5730		3170		**8900**
SPLIT %				53.3%		46.7%		**27.4%**	**SPLIT %**				64.4%		35.6%		**72.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,519	4,739	12,258

AM Peak Hour			11:45	11:45	**11:45**	**PM Peak Hour**			17:00	12:15	**13:15**
AM Pk Volume			508	394	**902**	**PM Pk Volume**			639	410	**1010**
Pk Hr Factor			0.934	0.879	**0.920**	**Pk Hr Factor**			0.962	0.915	**0.883**
7 - 9 Volume	0	0	432	452	**884**	**4 - 6 Volume**	0	0	1213	662	**1875**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			17:00	16:00	**17:00**
7 - 9 Pk Volume	0	0	248	283	**531**	**4 - 6 Pk Volume**	0	0	639	336	**965**
Pk Hr Factor	0.000	0.000	0.912	0.873	**0.891**	**Pk Hr Factor**	0.000	0.000	0.962	0.913	**0.985**

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. Qualcomm Wy & Mission City Pkwy

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_056

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,537	5,232	10,769

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			29		6		35		12:00			82		101		183	
00:15			22		4		26		12:15			64		87		151	
00:30			8		1		9		12:30			87		87		174	
00:45			6	65	1	12	7	77	12:45			117	350	92	367	209	717
01:00			5		1		6		13:00			114		80		194	
01:15			6		4		10		13:15			103		70		173	
01:30			2		1		3		13:30			93		78		171	
01:45			4	17	4	10	8	27	13:45			78	388	93	321	171	709
02:00			0		1		1		14:00			105		63		168	
02:15			6		1		7		14:15			93		59		152	
02:30			0		1		1		14:30			89		73		162	
02:45			2	8	2	5	4	13	14:45			107	394	62	257	169	651
03:00			1		1		2		15:00			111		58		169	
03:15			1		1		2		15:15			87		61		148	
03:30			2		0		2		15:30			112		61		173	
03:45			0	4	1	3	1	7	15:45			167	477	61	241	228	718
04:00			0		3		3		16:00			227		77		304	
04:15			2		2		4		16:15			203		80		283	
04:30			0		4		4		16:30			222		82		304	
04:45			6	8	30	39	36	47	16:45			177	829	96	335	273	1164
05:00			5		15		20		17:00			248		92		340	
05:15			3		29		32		17:15			209		86		295	
05:30			5		25		30		17:30			203		81		284	
05:45			7	20	30	99	37	119	17:45			150	810	71	330	221	1140
06:00			8		24		32		18:00			155		60		215	
06:15			8		41		49		18:15			102		38		140	
06:30			12		70		82		18:30			98		54		152	
06:45			23	51	106	241	129	292	18:45			73	428	39	191	112	619
07:00			28		121		149		19:00			64		31		95	
07:15			32		158		190		19:15			57		31		88	
07:30			45		205		250		19:30			46		35		81	
07:45			58	163	247	731	305	894	19:45			55	222	24	121	79	343
08:00			56		233		289		20:00			46		24		70	
08:15			71		200		271		20:15			54		19		73	
08:30			61		170		231		20:30			35		22		57	
08:45			63	251	181	784	244	1035	20:45			52	187	20	85	72	272
09:00			53		132		185		21:00			39		29		68	
09:15			49		99		148		21:15			48		18		66	
09:30			42		75		117		21:30			24		14		38	
09:45			42	186	82	388	124	574	21:45			29	140	19	80	48	220
10:00			44		52		96		22:00			14		21		35	
10:15			56		49		105		22:15			15		11		26	
10:30			35		56		91		22:30			14		10		24	
10:45			63	198	66	223	129	421	22:45			10	53	11	53	21	106
11:00			53		47		100		23:00			14		14		28	
11:15			57		84		141		23:15			5		14		19	
11:30			60		70		130		23:30			4		5		9	
11:45			85	255	72	273	157	528	23:45			10	33	10	43	20	76
TOTALS				1226		2808		**4034**	**TOTALS**				4311		2424		**6735**
SPLIT %				30.4%		69.6%		**37.5%**	**SPLIT %**				64.0%		36.0%		**62.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,537	5,232	10,769

AM Peak Hour			11:45	07:30	**07:30**	**PM Peak Hour**			16:30	12:00	**16:30**
AM Pk Volume			318	885	**1115**	**PM Pk Volume**			856	367	**1212**
Pk Hr Factor			0.914	0.896	**0.914**	**Pk Hr Factor**			0.863	0.908	**0.891**
7 - 9 Volume	0	0	414	1515	**1929**	**4 - 6 Volume**	0	0	1639	665	**2304**
7 - 9 Peak Hour			08:00	07:30	**07:30**	**4 - 6 Peak Hour**			16:30	16:30	**16:30**
7 - 9 Pk Volume	0	0	251	885	**1115**	**4 - 6 Pk Volume**	0	0	856	356	**1212**
Pk Hr Factor	0.000	0.000	0.884	0.896	**0.914**	**Pk Hr Factor**	0.000	0.000	0.863	0.927	**0.891**

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Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. Qualcomm Wy & Mission City Pkwy

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_056

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,309	5,098	10,407

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			20		5		25		12:00			90		87		177	
00:15			5		7		12		12:15			104		91		195	
00:30			7		5		12		12:30			87		90		177	
00:45			5	37	5	22	10	59	12:45			109	390	100	368	209	758
01:00			6		4		10		13:00			96		64		160	
01:15			3		4		7		13:15			108		86		194	
01:30			3		2		5		13:30			88		63		151	
01:45			3	15	2	12	5	27	13:45			77	369	58	271	135	640
02:00			2		4		6		14:00			97		51		148	
02:15			6		1		7		14:15			100		66		166	
02:30			1		3		4		14:30			96		61		157	
02:45			2	11	5	13	7	24	14:45			92	385	57	235	149	620
03:00			0		6		6		15:00			117		55		172	
03:15			1		4		5		15:15			83		55		138	
03:30			0		3		3		15:30			148		67		215	
03:45			0	1	3	16	3	17	15:45			95	443	58	235	153	678
04:00			1		7		8		16:00			136		69		205	
04:15			1		4		5		16:15			163		67		230	
04:30			1		6		7		16:30			193		77		270	
04:45			8	11	32	49	40	60	16:45			159	651	85	298	244	949
05:00			4		17		21		17:00			249		87		336	
05:15			7		30		37		17:15			230		81		311	
05:30			5		28		33		17:30			208		85		293	
05:45			4	20	29	104	33	124	17:45			159	846	63	316	222	1162
06:00			11		30		41		18:00			166		48		214	
06:15			9		40		49		18:15			121		36		157	
06:30			7		79		86		18:30			88		43		131	
06:45			15	42	131	280	146	322	18:45			70	445	42	169	112	614
07:00			29		112		141		19:00			58		31		89	
07:15			34		160		194		19:15			42		28		70	
07:30			41		222		263		19:30			57		18		75	
07:45			52	156	250	744	302	900	19:45			34	191	27	104	61	295
08:00			55		213		268		20:00			28		15		43	
08:15			48		210		258		20:15			50		21		71	
08:30			60		162		222		20:30			39		17		56	
08:45			62	225	146	731	208	956	20:45			32	149	19	72	51	221
09:00			55		118		173		21:00			59		16		75	
09:15			40		75		115		21:15			42		20		62	
09:30			35		67		102		21:30			32		18		50	
09:45			40	170	70	330	110	500	21:45			25	158	16	70	41	228
10:00			54		57		111		22:00			28		36		64	
10:15			44		57		101		22:15			20		22		42	
10:30			40		68		108		22:30			17		22		39	
10:45			57	195	60	242	117	437	22:45			13	78	14	94	27	172
11:00			52		67		119		23:00			26		16		42	
11:15			53		73		126		23:15			10		8		18	
11:30			76		62		138		23:30			8		16		24	
11:45			88	269	70	272	158	541	23:45			8	52	11	51	19	103
TOTALS				1152		2815		3967	TOTALS				4157		2283		6440
SPLIT %				29.0%		71.0%		38.1%	SPLIT %				64.5%		35.5%		61.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,309	5,098	10,407

AM Peak Hour			11:45	07:30	07:30	PM Peak Hour			16:45	12:00	16:45
AM Pk Volume			369	895	1091	PM Pk Volume			846	368	1184
Pk Hr Factor			0.887	0.895	0.903	Pk Hr Factor			0.849	0.920	0.881
7 - 9 Volume	0	0	381	1475	1856	4 - 6 Volume	0	0	1497	614	2111
7 - 9 Peak Hour			08:00	07:30	07:30	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	225	895	1091	4 - 6 Pk Volume	0	0	846	338	1184
Pk Hr Factor	0.000	0.000	0.907	0.895	0.903	Pk Hr Factor	0.000	0.000	0.849	0.971	0.881

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. Mission City Pkwy & 800 Ft E/O Mission City Pkwy

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_057

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,073	4,222	8,295

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			9		2		11		12:00			90		70		160	
00:15			12		4		16		12:15			73		82		155	
00:30			4		0		4		12:30			72		79		151	
00:45			2	27	0	6	2	33	12:45			90	325	95	326	185	651
01:00			4		1		5		13:00			81		71		152	
01:15			4		3		7		13:15			67		64		131	
01:30			2		1		3		13:30			53		65		118	
01:45			1	11	3	8	4	19	13:45			48	249	69	269	117	518
02:00			0		1		1		14:00			76		53		129	
02:15			1		1		2		14:15			72		60		132	
02:30			1		2		3		14:30			63		61		124	
02:45			2	4	2	6	4	10	14:45			61	272	56	230	117	502
03:00			0		1		1		15:00			79		58		137	
03:15			2		2		4		15:15			62		62		124	
03:30			1		1		2		15:30			90		51		141	
03:45			0	3	2	6	2	9	15:45			118	349	56	227	174	576
04:00			0		2		2		16:00			160		67		227	
04:15			2		2		4		16:15			158		74		232	
04:30			0		3		3		16:30			140		71		211	
04:45			2	4	11	18	13	22	16:45			135	593	87	299	222	892
05:00			2		9		11		17:00			191		86		277	
05:15			5		18		23		17:15			150		82		232	
05:30			3		11		14		17:30			147		72		219	
05:45			9	19	21	59	30	78	17:45			109	597	54	294	163	891
06:00			11		16		27		18:00			107		47		154	
06:15			7		22		29		18:15			72		36		108	
06:30			6		48		54		18:30			64		48		112	
06:45			21	45	76	162	97	207	18:45			55	298	42	173	97	471
07:00			24		82		106		19:00			44		33		77	
07:15			22		121		143		19:15			47		30		77	
07:30			35		152		187		19:30			42		34		76	
07:45			40	121	172	527	212	648	19:45			40	173	25	122	65	295
08:00			36		184		220		20:00			34		19		53	
08:15			47		165		212		20:15			41		17		58	
08:30			44		122		166		20:30			31		24		55	
08:45			38	165	139	610	177	775	20:45			31	137	20	80	51	217
09:00			43		99		142		21:00			31		21		52	
09:15			39		67		106		21:15			36		14		50	
09:30			30		61		91		21:30			17		9		26	
09:45			32	144	64	291	96	435	21:45			25	109	8	52	33	161
10:00			31		39		70		22:00			16		11		27	
10:15			37		46		83		22:15			11		4		15	
10:30			27		50		77		22:30			9		5		14	
10:45			53	148	59	194	112	342	22:45			10	46	4	24	14	70
11:00			43		37		80		23:00			10		7		17	
11:15			36		51		87		23:15			4		6		10	
11:30			51		61		112		23:30			3		1		4	
11:45			79	209	72	221	151	430	23:45			8	25	4	18	12	43
TOTALS				900		2108		3008	TOTALS				3173		2114		5287
SPLIT %				29.9%		70.1%		36.3%	SPLIT %				60.0%		40.0%		63.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,073	4,222	8,295

AM Peak Hour			11:45	07:30	07:30	PM Peak Hour			16:15	12:15	16:45
AM Pk Volume			314	673	831	PM Pk Volume			624	327	950
Pk Hr Factor			0.872	0.914	0.944	Pk Hr Factor			0.817	0.861	0.857
7 - 9 Volume	0	0	286	1137	1423	4 - 6 Volume	0	0	1190	593	1783
7 - 9 Peak Hour			07:45	07:30	07:30	4 - 6 Peak Hour			16:15	16:45	16:45
7 - 9 Pk Volume	0	0	167	673	831	4 - 6 Pk Volume	0	0	624	327	950
Pk Hr Factor	0.000	0.000	0.888	0.914	0.944	Pk Hr Factor	0.000	0.000	0.817	0.940	0.857

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. Mission City Pkwy & 800 Ft E/O Mission City Pkwy

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_057

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,865	4,002	7,867

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			9		3		12		12:00			64		74		138	
00:15			5		8		13		12:15			72		59		131	
00:30			7		3		10		12:30			65		74		139	
00:45			3	24	4	18	7	42	12:45			51	252	85	292	136	544
01:00			3		2		5		13:00			83		70		153	
01:15			2		3		5		13:15			74		67		141	
01:30			4		1		5		13:30			58		59		117	
01:45			1	10	2	8	3	18	13:45			64	279	52	248	116	527
02:00			1		4		5		14:00			65		36		101	
02:15			1		0		1		14:15			72		66		138	
02:30			2		1		3		14:30			68		60		128	
02:45			1	5	4	9	5	14	14:45			67	272	51	213	118	485
03:00			0		3		3		15:00			75		56		131	
03:15			2		3		5		15:15			69		48		117	
03:30			1		0		1		15:30			104		56		160	
03:45			0	3	0	6	0	9	15:45			73	321	48	208	121	529
04:00			1		1		2		16:00			106		57		163	
04:15			1		3		4		16:15			111		64		175	
04:30			1		4		5		16:30			120		74		194	
04:45			2	5	15	23	17	28	16:45			114	451	82	277	196	728
05:00			3		6		9		17:00			164		88		252	
05:15			4		14		18		17:15			159		86		245	
05:30			5		19		24		17:30			166		91		257	
05:45			9	21	17	56	26	77	17:45			119	608	65	330	184	938
06:00			13		19		32		18:00			130		46		176	
06:15			11		24		35		18:15			90		29		119	
06:30			5		50		55		18:30			69		35		104	
06:45			14	43	68	161	82	204	18:45			60	349	36	146	96	495
07:00			23		81		104		19:00			45		29		74	
07:15			29		107		136		19:15			29		28		57	
07:30			32		149		181		19:30			48		13		61	
07:45			38	122	178	515	216	637	19:45			23	145	21	91	44	236
08:00			37		144		181		20:00			25		13		38	
08:15			39		143		182		20:15			37		20		57	
08:30			43		123		166		20:30			33		16		49	
08:45			39	158	110	520	149	678	20:45			21	116	22	71	43	187
09:00			37		82		119		21:00			31		15		46	
09:15			29		70		99		21:15			36		16		52	
09:30			39		47		86		21:30			20		14		34	
09:45			31	136	57	256	88	392	21:45			22	109	11	56	33	165
10:00			42		52		94		22:00			18		13		31	
10:15			31		53		84		22:15			11		11		22	
10:30			26		52		78		22:30			12		13		25	
10:45			36	135	53	210	89	345	22:45			5	46	5	42	10	88
11:00			45		56		101		23:00			19		9		28	
11:15			42		55		97		23:15			9		5		14	
11:30			67		57		124		23:30			4		8		12	
11:45			63	217	54	222	117	439	23:45			6	38	2	24	8	62
TOTALS				879		2004		**2883**	**TOTALS**				2986		1998		**4984**
SPLIT %				30.5%		69.5%		**36.6%**	**SPLIT %**				59.9%		40.1%		**63.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,865	4,002	7,867

AM Peak Hour			11:30	07:30	**07:30**	**PM Peak Hour**			17:00	16:45	**16:45**
AM Pk Volume			266	614	**760**	**PM Pk Volume**			608	347	**950**
Pk Hr Factor			0.924	0.862	**0.880**	**Pk Hr Factor**			0.916	0.953	**0.924**
7 - 9 Volume	0	0	280	1035	**1315**	**4 - 6 Volume**	0	0	1059	607	**1666**
7 - 9 Peak Hour			08:00	07:30	**07:30**	**4 - 6 Peak Hour**			17:00	16:45	**16:45**
7 - 9 Pk Volume	0	0	158	614	**760**	**4 - 6 Pk Volume**	0	0	608	347	**950**
Pk Hr Factor	0.000	0.000	0.919	0.862	**0.880**	**Pk Hr Factor**	0.000	0.000	0.916	0.953	**0.924**

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. 800 Ft E/O Mission City Pkwy & 1800 Ft W/O Ward Rd

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_058

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,984	4,313	8,297

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			9		2		11		12:00			91		76		167	
00:15			12		4		16		12:15			77		82		159	
00:30			4		0		4		12:30			67		79		146	
00:45			2	27	0	6	2	33	12:45			89	324	86	323	175	647
01:00			4		2		6		13:00			77		75		152	
01:15			4		3		7		13:15			69		60		129	
01:30			2		1		3		13:30			63		72		135	
01:45			1	11	3	9	4	20	13:45			43	252	63	270	106	522
02:00			0		1		1		14:00			72		57		129	
02:15			1		1		2		14:15			74		66		140	
02:30			1		2		3		14:30			59		66		125	
02:45			2	4	2	6	4	10	14:45			63	268	57	246	120	514
03:00			0		1		1		15:00			76		56		132	
03:15			2		2		4		15:15			70		62		132	
03:30			1		1		2		15:30			83		50		133	
03:45			0	3	2	6	2	9	15:45			121	350	51	219	172	569
04:00			1		3		4		16:00			160		62		222	
04:15			2		2		4		16:15			160		72		232	
04:30			0		4		4		16:30			143		61		204	
04:45			2	5	12	21	14	26	16:45			134	597	73	268	207	865
05:00			1		9		10		17:00			189		74		263	
05:15			5		18		23		17:15			150		71		221	
05:30			3		15		18		17:30			157		58		215	
05:45			8	17	25	67	33	84	17:45			116	612	48	251	164	863
06:00			11		16		27		18:00			110		42		152	
06:15			6		23		29		18:15			70		36		106	
06:30			3		57		60		18:30			68		43		111	
06:45			20	40	81	177	101	217	18:45			50	298	41	162	91	460
07:00			21		99		120		19:00			43		33		76	
07:15			20		125		145		19:15			51		28		79	
07:30			32		162		194		19:30			41		35		76	
07:45			37	110	191	577	228	687	19:45			38	173	25	121	63	294
08:00			27		196		223		20:00			38		20		58	
08:15			34		170		204		20:15			38		14		52	
08:30			32		153		185		20:30			33		23		56	
08:45			28	121	144	663	172	784	20:45			29	138	17	74	46	212
09:00			34		108		142		21:00			30		20		50	
09:15			38		74		112		21:15			38		13		51	
09:30			32		75		107		21:30			16		9		25	
09:45			25	129	65	322	90	451	21:45			24	108	9	51	33	159
10:00			23		44		67		22:00			17		9		26	
10:15			33		47		80		22:15			11		6		17	
10:30			25		52		77		22:30			9		4		13	
10:45			49	130	56	199	105	329	22:45			9	46	4	23	13	69
11:00			40		40		80		23:00			10		6		16	
11:15			32		59		91		23:15			4		5		9	
11:30			56		58		114		23:30			3		1		4	
11:45			68	196	80	237	148	433	23:45			8	25	3	15	11	40
TOTALS				793		2290		**3083**	**TOTALS**				3191		2023		**5214**
SPLIT %				25.7%		74.3%		**37.2%**	**SPLIT %**				61.2%		38.8%		**62.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,984	4,313	8,297

AM Peak Hour			11:45	07:30	**07:30**	**PM Peak Hour**			16:45	12:00	**16:15**
AM Pk Volume			303	719	**849**	**PM Pk Volume**			630	323	**906**
Pk Hr Factor			0.832	0.917	**0.931**	**Pk Hr Factor**			0.833	0.939	**0.861**
7 - 9 Volume	0	0	231	1240	**1471**	**4 - 6 Volume**	0	0	1209	519	**1728**
7 - 9 Peak Hour			07:30	07:30	**07:30**	**4 - 6 Peak Hour**			16:45	16:15	**16:15**
7 - 9 Pk Volume	0	0	130	719	**849**	**4 - 6 Pk Volume**	0	0	630	280	**906**
Pk Hr Factor	0.000	0.000	0.878	0.917	**0.931**	**Pk Hr Factor**	0.000	0.000	0.833	0.946	**0.861**

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. 800 Ft E/O Mission City Pkwy & 1800 Ft W/O Ward Rd

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_058

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,761	4,060	7,821

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					8		4		12		12:00					68		71		139	
00:15					4		8		12		12:15					68		58		126	
00:30					7		4		11		12:30					61		76		137	
00:45					3	22	3	19	6	41	12:45					53	250	83	288	136	538
01:00					2		2		4		13:00					85		67		152	
01:15					2		2		4		13:15					70		62		132	
01:30					4		1		5		13:30					61		54		115	
01:45					1	9	2	7	3	16	13:45					56	272	59	242	115	514
02:00					1		4		5		14:00					65		45		110	
02:15					1		0		1		14:15					67		60		127	
02:30					2		3		5		14:30					69		61		130	
02:45					1	5	4	11	5	16	14:45					65	266	54	220	119	486
03:00					0		4		4		15:00					75		59		134	
03:15					2		2		4		15:15					75		44		119	
03:30					1		0		1		15:30					102		51		153	
03:45					0	3	0	6	0	9	15:45					78	330	50	204	128	534
04:00					1		1		2		16:00					108		43		151	
04:15					1		3		4		16:15					113		63		176	
04:30					1		4		5		16:30					119		71		190	
04:45					2	5	16	24	18	29	16:45					115	455	73	250	188	705
05:00					3		6		9		17:00					161		82		243	
05:15					4		16		20		17:15					166		80		246	
05:30					3		18		21		17:30					174		72		246	
05:45					7	17	25	65	32	82	17:45					117	618	62	296	179	914
06:00					10		23		33		18:00					126		39		165	
06:15					10		26		36		18:15					90		28		118	
06:30					5		51		56		18:30					69		33		102	
06:45					9	34	78	178	87	212	18:45					62	347	35	135	97	482
07:00					22		88		110		19:00					48		31		79	
07:15					24		117		141		19:15					30		23		53	
07:30					30		164		194		19:30					44		13		57	
07:45					32	108	190	559	222	667	19:45					26	148	22	89	48	237
08:00					28		166		194		20:00					27		10		37	
08:15					30		151		181		20:15					39		21		60	
08:30					35		144		179		20:30					33		12		45	
08:45					23	116	113	574	136	690	20:45					22	121	18	61	40	182
09:00					32		89		121		21:00					32		15		47	
09:15					26		76		102		21:15					28		12		40	
09:30					30		49		79		21:30					24		16		40	
09:45					34	122	66	280	100	402	21:45					23	107	7	50	30	157
10:00					38		55		93		22:00					18		13		31	
10:15					28		55		83		22:15					11		13		24	
10:30					22		56		78		22:30					12		11		23	
10:45					33	121	55	221	88	342	22:45					6	47	6	43	12	90
11:00					42		55		97		23:00					18		9		27	
11:15					40		53		93		23:15					10		6		16	
11:30					63		56		119		23:30					3		8		11	
11:45					57	202	50	214	107	416	23:45					5	36	1	24	6	60
TOTALS						764		2158		2922	TOTALS						2997		1902		4899
SPLIT %						26.1%		73.9%		37.4%	SPLIT %						61.2%		38.8%		62.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,761	4,060	7,821

AM Peak Hour			11:30	07:30	07:30	PM Peak Hour			17:00	16:45	16:45
AM Pk Volume			256	671	791	PM Pk Volume			618	307	923
Pk Hr Factor			0.941	0.883	0.891	Pk Hr Factor			0.888	0.936	0.938
7 - 9 Volume	0	0	224	1133	1357	4 - 6 Volume	0	0	1073	546	1619
7 - 9 Peak Hour			07:45	07:30	07:30	4 - 6 Peak Hour			17:00	16:45	16:45
7 - 9 Pk Volume	0	0	125	671	791	4 - 6 Pk Volume	0	0	618	307	923
Pk Hr Factor	0.000	0.000	0.893	0.883	0.891	Pk Hr Factor	0.000	0.000	0.888	0.936	0.938

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. 1800 Ft W/O Ward Rd & Ward Rd

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_059

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,304	4,872	9,176

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			13		2		15		12:00			102		89		191	
00:15			3		3		6		12:15			89		85		174	
00:30			5		1		6		12:30			76		85		161	
00:45			2	23	1	7	3	30	12:45			85	352	92	351	177	703
01:00			4		1		5		13:00			87		91		178	
01:15			3		3		6		13:15			72		60		132	
01:30			3		1		4		13:30			64		83		147	
01:45			3	13	3	8	6	21	13:45			47	270	70	304	117	574
02:00			0		1		1		14:00			80		62		142	
02:15			1		2		3		14:15			80		72		152	
02:30			0		1		1		14:30			74		76		150	
02:45			2	3	2	6	4	9	14:45			73	307	69	279	142	586
03:00			2		1		3		15:00			91		68		159	
03:15			3		4		7		15:15			88		70		158	
03:30			1		2		3		15:30			105		61		166	
03:45			0	6	1	8	1	14	15:45			121	405	72	271	193	676
04:00			1		3		4		16:00			182		72		254	
04:15			2		2		4		16:15			178		78		256	
04:30			0		4		4		16:30			158		74		232	
04:45			1	4	14	23	15	27	16:45			138	656	82	306	220	962
05:00			1		9		10		17:00			231		89		320	
05:15			4		24		28		17:15			165		88		253	
05:30			2		18		20		17:30			167		81		248	
05:45			4	11	27	78	31	89	17:45			130	693	58	316	188	1009
06:00			10		27		37		18:00			125		54		179	
06:15			5		30		35		18:15			81		46		127	
06:30			6		60		66		18:30			75		46		121	
06:45			16	37	95	212	111	249	18:45			54	335	47	193	101	528
07:00			22		107		129		19:00			52		32		84	
07:15			16		135		151		19:15			54		35		89	
07:30			23		180		203		19:30			46		31		77	
07:45			29	90	210	632	239	722	19:45			39	191	35	133	74	324
08:00			24		211		235		20:00			43		23		66	
08:15			20		181		201		20:15			40		24		64	
08:30			24		157		181		20:30			34		25		59	
08:45			21	89	166	715	187	804	20:45			29	146	19	91	48	237
09:00			28		124		152		21:00			31		25		56	
09:15			34		79		113		21:15			37		19		56	
09:30			34		82		116		21:30			20		11		31	
09:45			23	119	78	363	101	482	21:45			26	114	9	64	35	178
10:00			27		48		75		22:00			18		8		26	
10:15			37		50		87		22:15			13		6		19	
10:30			25		53		78		22:30			9		4		13	
10:45			49	138	64	215	113	353	22:45			8	48	6	24	14	72
11:00			48		53		101		23:00			13		6		19	
11:15			42		63		105		23:15			6		5		11	
11:30			67		58		125		23:30			3		2		5	
11:45			69	226	83	257	152	483	23:45			6	28	3	16	9	44
TOTALS				759		2524		3283	TOTALS				3545		2348		5893
SPLIT %				23.1%		76.9%		35.8%	SPLIT %				60.2%		39.8%		64.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,304	4,872	9,176

AM Peak Hour			11:45	07:30	07:30	PM Peak Hour			16:15	12:15	16:45
AM Pk Volume			336	782	878	PM Pk Volume			705	353	1041
Pk Hr Factor			0.824	0.927	0.918	Pk Hr Factor			0.763	0.959	0.813
7 - 9 Volume	0	0	179	1347	1526	4 - 6 Volume	0	0	1349	622	1971
7 - 9 Peak Hour			07:45	07:30	07:30	4 - 6 Peak Hour			16:15	16:45	16:45
7 - 9 Pk Volume	0	0	97	782	878	4 - 6 Pk Volume	0	0	705	340	1041
Pk Hr Factor	0.000	0.000	0.836	0.927	0.918	Pk Hr Factor	0.000	0.000	0.763	0.955	0.813

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. 1800 Ft W/O Ward Rd & Ward Rd

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_059

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,049	4,614	8,663

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			7		5		12		12:00			85		70		155	
00:15			7		6		13		12:15			68		73		141	
00:30			6		4		10		12:30			70		82		152	
00:45			4	24	3	18	7	42	12:45			58	281	94	319	152	600
01:00			3		2		5		13:00			85		79		164	
01:15			2		2		4		13:15			68		72		140	
01:30			3		2		5		13:30			61		65		126	
01:45			1	9	1	7	2	16	13:45			67	281	68	284	135	565
02:00			1		4		5		14:00			77		47		124	
02:15			1		0		1		14:15			71		74		145	
02:30			3		2		5		14:30			78		63		141	
02:45			3	8	4	10	7	18	14:45			72	298	62	246	134	544
03:00			0		3		3		15:00			94		77		171	
03:15			2		2		4		15:15			84		45		129	
03:30			1		0		1		15:30			121		64		185	
03:45			0	3	0	5	0	8	15:45			90	389	59	245	149	634
04:00			0		1		1		16:00			131		56		187	
04:15			0		3		3		16:15			129		79		208	
04:30			3		5		8		16:30			146		75		221	
04:45			2	5	17	26	19	31	16:45			123	529	86	296	209	825
05:00			4		8		12		17:00			192		94		286	
05:15			3		18		21		17:15			195		91		286	
05:30			2		20		22		17:30			172		94		266	
05:45			5	14	27	73	32	87	17:45			131	690	73	352	204	1042
06:00			7		31		38		18:00			145		47		192	
06:15			12		32		44		18:15			97		38		135	
06:30			5		58		63		18:30			84		36		120	
06:45			10	34	90	211	100	245	18:45			62	388	42	163	104	551
07:00			15		95		110		19:00			53		32		85	
07:15			21		124		145		19:15			34		28		62	
07:30			21		179		200		19:30			47		18		65	
07:45			27	84	217	615	244	699	19:45			26	160	27	105	53	265
08:00			18		178		196		20:00			29		10		39	
08:15			21		166		187		20:15			41		27		68	
08:30			24		146		170		20:30			30		12		42	
08:45			20	83	138	628	158	711	20:45			22	122	21	70	43	192
09:00			26		101		127		21:00			30		16		46	
09:15			26		90		116		21:15			31		17		48	
09:30			26		56		82		21:30			26		18		44	
09:45			35	113	71	318	106	431	21:45			24	111	9	60	33	171
10:00			36		67		103		22:00			18		14		32	
10:15			27		58		85		22:15			16		13		29	
10:30			18		58		76		22:30			14		15		29	
10:45			34	115	64	247	98	362	22:45			7	55	7	49	14	104
11:00			48		61		109		23:00			18		10		28	
11:15			47		59		106		23:15			11		7		18	
11:30			65		66		131		23:30			4		6		10	
11:45			56	216	57	243	113	459	23:45			4	37	1	24	5	61
TOTALS				708		2401		**3109**	**TOTALS**				3341		2213		**5554**
SPLIT %				22.8%		77.2%		**35.9%**	**SPLIT %**				60.2%		39.8%		**64.1%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,049	4,614	8,663

AM Peak Hour			11:45	07:30	**07:30**	**PM Peak Hour**			17:00	16:45	**16:45**
AM Pk Volume			279	740	**827**	**PM Pk Volume**			690	365	**1047**
Pk Hr Factor			0.821	0.853	**0.847**	**Pk Hr Factor**			0.885	0.971	**0.915**
7 - 9 Volume	0	0	167	1243	**1410**	**4 - 6 Volume**	0	0	1219	648	**1867**
7 - 9 Peak Hour			07:45	07:30	**07:30**	**4 - 6 Peak Hour**			17:00	16:45	**16:45**
7 - 9 Pk Volume	0	0	90	740	**827**	**4 - 6 Pk Volume**	0	0	690	365	**1047**
Pk Hr Factor	0.000	0.000	0.833	0.853	**0.847**	**Pk Hr Factor**	0.000	0.000	0.885	0.971	**0.915**

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Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. Ward Rd & 1000 Ft W/O Fairmount Ave

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_060

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,114	5,804	11,918

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			16		9		25		12:00			97		83		180	
00:15			10		9		19		12:15			112		93		205	
00:30			8		6		14		12:30			90		85		175	
00:45			8	42	6	30	14	72	12:45			94	393	94	355	188	748
01:00			9		8		17		13:00			93		89		182	
01:15			7		2		9		13:15			91		77		168	
01:30			9		6		15		13:30			90		77		167	
01:45			7	32	5	21	12	53	13:45			82	356	78	321	160	677
02:00			3		3		6		14:00			109		72		181	
02:15			4		3		7		14:15			105		79		184	
02:30			2		6		8		14:30			92		85		177	
02:45			3	12	3	15	6	27	14:45			107	413	80	316	187	729
03:00			5		3		8		15:00			117		87		204	
03:15			7		2		9		15:15			112		78		190	
03:30			5		6		11		15:30			133		54		187	
03:45			2	19	6	17	8	36	15:45			157	519	64	283	221	802
04:00			1		5		6		16:00			200		80		280	
04:15			5		4		9		16:15			210		90		300	
04:30			4		7		11		16:30			189		76		265	
04:45			10	20	20	36	30	56	16:45			185	784	79	325	264	1109
05:00			10		13		23		17:00			239		80		319	
05:15			11		27		38		17:15			223		78		301	
05:30			22		33		55		17:30			180		74		254	
05:45			16	59	42	115	58	174	17:45			163	805	61	293	224	1098
06:00			28		38		66		18:00			169		49		218	
06:15			30		52		82		18:15			129		69		198	
06:30			37		74		111		18:30			119		71		190	
06:45			57	152	143	307	200	459	18:45			76	493	61	250	137	743
07:00			56		126		182		19:00			82		74		156	
07:15			49		183		232		19:15			74		62		136	
07:30			72		205		277		19:30			76		58		134	
07:45			64	241	243	757	307	998	19:45			44	276	50	244	94	520
08:00			52		203		255		20:00			60		40		100	
08:15			58		178		236		20:15			48		51		99	
08:30			45		157		202		20:30			48		36		84	
08:45			47	202	186	724	233	926	20:45			40	196	38	165	78	361
09:00			55		145		200		21:00			40		26		66	
09:15			66		108		174		21:15			48		32		80	
09:30			55		88		143		21:30			36		30		66	
09:45			40	216	85	426	125	642	21:45			44	168	24	112	68	280
10:00			55		62		117		22:00			26		31		57	
10:15			65		59		124		22:15			22		21		43	
10:30			61		71		132		22:30			20		19		39	
10:45			71	252	89	281	160	533	22:45			18	86	17	88	35	174
11:00			71		68		139		23:00			18		16		34	
11:15			63		53		116		23:15			14		13		27	
11:30			96		71		167		23:30			15		9		24	
11:45			82	312	85	277	167	589	23:45			19	66	8	46	27	112
TOTALS				1559		3006		4565	TOTALS				4555		2798		7353
SPLIT %				34.2%		65.8%		38.3%	SPLIT %				61.9%		38.1%		61.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,114	5,804	11,918

AM Peak Hour			11:30	07:15	07:30	PM Peak Hour			16:30	12:15	16:30
AM Pk Volume			387	834	1075	PM Pk Volume			836	361	1149
Pk Hr Factor			0.864	0.858	0.875	Pk Hr Factor			0.874	0.960	0.900
7 - 9 Volume	0	0	443	1481	1924	4 - 6 Volume	0	0	1589	618	2207
7 - 9 Peak Hour			07:30	07:15	07:30	4 - 6 Peak Hour			16:30	16:00	16:30
7 - 9 Pk Volume	0	0	246	834	1075	4 - 6 Pk Volume	0	0	836	325	1149
Pk Hr Factor	0.000	0.000	0.854	0.858	0.875	Pk Hr Factor	0.000	0.000	0.874	0.903	0.900

Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. Ward Rd & 1000 Ft W/O Fairmount Ave

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_060

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,142	5,590	11,732

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			17		13		30		12:00			105		75		180	
00:15			12		11		23		12:15			97		85		182	
00:30			17		15		32		12:30			94		81		175	
00:45			5	51	5	44	10	95	12:45			64	360	84	325	148	685
01:00			5		4		9		13:00			101		72		173	
01:15			4		3		7		13:15			87		81		168	
01:30			6		3		9		13:30			91		86		177	
01:45			6	21	3	13	9	34	13:45			87	366	79	318	166	684
02:00			2		8		10		14:00			106		66		172	
02:15			3		1		4		14:15			85		73		158	
02:30			0		3		3		14:30			103		81		184	
02:45			9	14	5	17	14	31	14:45			114	408	76	296	190	704
03:00			1		8		9		15:00			111		55		166	
03:15			3		5		8		15:15			105		68		173	
03:30			3		2		5		15:30			151		78		229	
03:45			2	9	5	20	7	29	15:45			131	498	76	277	207	775
04:00			3		7		10		16:00			159		61		220	
04:15			6		7		13		16:15			168		72		240	
04:30			7		6		13		16:30			212		90		302	
04:45			10	26	20	40	30	66	16:45			193	732	77	300	270	1032
05:00			11		14		25		17:00			240		77		317	
05:15			16		21		37		17:15			241		93		334	
05:30			17		34		51		17:30			189		91		280	
05:45			18	62	41	110	59	172	17:45			179	849	68	329	247	1178
06:00			25		40		65		18:00			173		62		235	
06:15			32		46		78		18:15			148		61		209	
06:30			41		94		135		18:30			128		52		180	
06:45			45	143	157	337	202	480	18:45			82	531	48	223	130	754
07:00			66		137		203		19:00			63		48		111	
07:15			63		164		227		19:15			64		49		113	
07:30			75		204		279		19:30			76		46		122	
07:45			80	284	218	723	298	1007	19:45			41	244	43	186	84	430
08:00			67		191		258		20:00			50		47		97	
08:15			52		185		237		20:15			44		56		100	
08:30			66		150		216		20:30			40		30		70	
08:45			63	248	139	665	202	913	20:45			45	179	33	166	78	345
09:00			44		125		169		21:00			60		36		96	
09:15			52		98		150		21:15			42		25		67	
09:30			53		60		113		21:30			47		30		77	
09:45			70	219	84	367	154	586	21:45			38	187	28	119	66	306
10:00			63		73		136		22:00			32		30		62	
10:15			58		72		130		22:15			27		25		52	
10:30			42		67		109		22:30			28		24		52	
10:45			52	215	61	273	113	488	22:45			19	106	14	93	33	199
11:00			69		79		148		23:00			30		17		47	
11:15			70		66		136		23:15			22		24		46	
11:30			94		65		159		23:30			10		12		22	
11:45			84	317	69	279	153	596	23:45			11	73	17	70	28	143
TOTALS				1609		2888		**4497**	**TOTALS**				4533		2702		**7235**
SPLIT %				35.8%		64.2%		**38.3%**	**SPLIT %**				62.7%		37.3%		**61.7%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,142	5,590	11,732

AM Peak Hour			11:30	07:30	**07:30**	**PM Peak Hour**			16:30	16:45	**16:30**
AM Pk Volume			380	798	**1072**	**PM Pk Volume**			886	338	**1223**
Pk Hr Factor			0.905	0.915	**0.899**	**Pk Hr Factor**			0.919	0.909	**0.915**
7 - 9 Volume	0	0	532	1388	**1920**	**4 - 6 Volume**	0	0	1581	629	**2210**
7 - 9 Peak Hour			07:15	07:30	**07:30**	**4 - 6 Peak Hour**			16:30	16:45	**16:30**
7 - 9 Pk Volume	0	0	285	798	**1072**	**4 - 6 Pk Volume**	0	0	886	338	**1223**
Pk Hr Factor	0.000	0.000	0.891	0.915	**0.899**	**Pk Hr Factor**	0.000	0.000	0.919	0.909	**0.915**

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Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. 1000 Ft W/O Fairmount Ave & Fairmount Ave

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_061

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,866	5,529	13,395

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			17		9		26		12:00			145		84		229	
00:15			13		8		21		12:15			131		92		223	
00:30			15		16		31		12:30			113		87		200	
00:45			11	56	6	39	17	95	12:45			125	514	89	352	214	866
01:00			10		8		18		13:00			132		90		222	
01:15			8		3		11		13:15			140		79		219	
01:30			9		5		14		13:30			127		74		201	
01:45			7	34	5	21	12	55	13:45			101	500	81	324	182	824
02:00			5		3		8		14:00			135		70		205	
02:15			6		3		9		14:15			116		80		196	
02:30			2		5		7		14:30			131		85		216	
02:45			3	16	3	14	6	30	14:45			143	525	76	311	219	836
03:00			7		3		10		15:00			145		87		232	
03:15			8		2		10		15:15			170		80		250	
03:30			6		6		12		15:30			155		54		209	
03:45			6	27	6	17	12	44	15:45			184	654	62	283	246	937
04:00			5		5		10		16:00			205		78		283	
04:15			9		4		13		16:15			220		91		311	
04:30			8		8		16		16:30			197		76		273	
04:45			16	38	20	37	36	75	16:45			191	813	81	326	272	1139
05:00			19		12		31		17:00			239		78		317	
05:15			23		27		50		17:15			220		78		298	
05:30			35		33		68		17:30			205		74		279	
05:45			33	110	43	115	76	225	17:45			191	855	61	291	252	1146
06:00			45		37		82		18:00			193		47		240	
06:15			52		51		103		18:15			171		71		242	
06:30			59		77		136		18:30			139		70		209	
06:45			78	234	139	304	217	538	18:45			106	609	66	254	172	863
07:00			93		127		220		19:00			117		68		185	
07:15			65		189		254		19:15			105		63		168	
07:30			87		207		294		19:30			102		57		159	
07:45			81	326	234	757	315	1083	19:45			77	401	49	237	126	638
08:00			74		158		232		20:00			79		41		120	
08:15			89		120		209		20:15			71		52		123	
08:30			66		109		175		20:30			66		34		100	
08:45			68	297	139	526	207	823	20:45			54	270	39	166	93	436
09:00			78		99		177		21:00			56		25		81	
09:15			83		93		176		21:15			82		31		113	
09:30			97		89		186		21:30			59		32		91	
09:45			78	336	75	356	153	692	21:45			59	256	23	111	82	367
10:00			74		64		138		22:00			36		31		67	
10:15			105		56		161		22:15			31		21		52	
10:30			93		71		164		22:30			37		18		55	
10:45			99	371	89	280	188	651	22:45			29	133	17	87	46	220
11:00			96		66		162		23:00			32		16		48	
11:15			86		53		139		23:15			23		12		35	
11:30			102		70		172		23:30			19		9		28	
11:45			108	392	87	276	195	668	23:45			25	99	8	45	33	144
TOTALS				2237		2742		4979	TOTALS				5629		2787		8416
SPLIT %				44.9%		55.1%		37.2%	SPLIT %				66.9%		33.1%		62.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,866	5,529	13,395

AM Peak Hour			11:45	07:15	07:15	PM Peak Hour			16:45	12:15	16:15
AM Pk Volume			497	788	1095	PM Pk Volume			855	358	1173
Pk Hr Factor			0.857	0.842	0.869	Pk Hr Factor			0.894	0.973	0.925
7 - 9 Volume	0	0	623	1283	1906	4 - 6 Volume	0	0	1668	617	2285
7 - 9 Peak Hour			07:30	07:15	07:15	4 - 6 Peak Hour			16:45	16:00	16:15
7 - 9 Pk Volume	0	0	331	788	1095	4 - 6 Pk Volume	0	0	855	326	1173
Pk Hr Factor	0.000	0.000	0.930	0.842	0.869	Pk Hr Factor	0.000	0.000	0.894	0.896	0.925

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Prepared by NDS/ATD

VOLUME

Camino Del Rio North Bet. 1000 Ft W/O Fairmount Ave & Fairmount Ave

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_061

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,982	5,561	13,543

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			24		13		37		12:00			123		79		202	
00:15			11		11		22		12:15			126		81		207	
00:30			26		15		41		12:30			121		82		203	
00:45			11	72	5	44	16	116	12:45			101	471	84	326	185	797
01:00			10		4		14		13:00			131		73		204	
01:15			5		3		8		13:15			120		78		198	
01:30			5		3		8		13:30			129		86		215	
01:45			8	28	3	13	11	41	13:45			120	500	80	317	200	817
02:00			5		8		13		14:00			138		64		202	
02:15			4		1		5		14:15			123		80		203	
02:30			4		3		7		14:30			140		80		220	
02:45			9	22	4	16	13	38	14:45			128	529	78	302	206	831
03:00			5		7		12		15:00			147		50		197	
03:15			3		5		8		15:15			136		70		206	
03:30			5		3		8		15:30			177		81		258	
03:45			2	15	5	20	7	35	15:45			155	615	72	273	227	888
04:00			4		6		10		16:00			182		61		243	
04:15			12		8		20		16:15			199		71		270	
04:30			13		7		20		16:30			209		94		303	
04:45			18	47	18	39	36	86	16:45			211	801	75	301	286	1102
05:00			16		12		28		17:00			237		77		314	
05:15			19		21		40		17:15			237		93		330	
05:30			32		33		65		17:30			219		90		309	
05:45			28	95	40	106	68	201	17:45			216	909	66	326	282	1235
06:00			43		38		81		18:00			194		59		253	
06:15			53		45		98		18:15			173		64		237	
06:30			54		96		150		18:30			170		49		219	
06:45			77	227	149	328	226	555	18:45			129	666	49	221	178	887
07:00			83		140		223		19:00			96		53		149	
07:15			86		161		247		19:15			86		44		130	
07:30			92		202		294		19:30			94		46		140	
07:45			105	366	221	724	326	1090	19:45			84	360	42	185	126	545
08:00			94		192		286		20:00			91		45		136	
08:15			78		182		260		20:15			62		56		118	
08:30			89		149		238		20:30			68		30		98	
08:45			80	341	142	665	222	1006	20:45			65	286	32	163	97	449
09:00			65		121		186		21:00			85		36		121	
09:15			87		97		184		21:15			51		27		78	
09:30			99		63		162		21:30			62		29		91	
09:45			109	360	82	363	191	723	21:45			58	256	28	120	86	376
10:00			95		73		168		22:00			43		31		74	
10:15			103		71		174		22:15			35		24		59	
10:30			78		66		144		22:30			31		24		55	
10:45			74	350	61	271	135	621	22:45			21	130	14	93	35	223
11:00			95		78		173		23:00			49		17		66	
11:15			100		66		166		23:15			31		23		54	
11:30			110		64		174		23:30			19		13		32	
11:45			110	415	67	275	177	690	23:45			22	121	17	70	39	191
TOTALS				2338		2864		5202	TOTALS				5644		2697		8341
SPLIT %				44.9%		55.1%		38.4%	SPLIT %				67.7%		32.3%		61.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,982	5,561	13,543

AM Peak Hour			11:45	07:30	07:30	PM Peak Hour			17:00	16:30	16:45
AM Pk Volume			480	797	1166	PM Pk Volume			909	339	1239
Pk Hr Factor			0.952	0.902	0.894	Pk Hr Factor			0.959	0.902	0.939
7 - 9 Volume	0	0	707	1389	2096	4 - 6 Volume	0	0	1710	627	2337
7 - 9 Peak Hour			07:15	07:30	07:30	4 - 6 Peak Hour			17:00	16:30	16:45
7 - 9 Pk Volume	0	0	377	797	1166	4 - 6 Pk Volume	0	0	909	339	1239
Pk Hr Factor	0.000	0.000	0.898	0.902	0.894	Pk Hr Factor	0.000	0.000	0.959	0.902	0.939

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle South, From Hotel Circle North to 1200 Feet East of Hotel Circle North

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			13		5			12:00			55		77		
00:15			15		8			12:15			66		84		
00:30			11		4			12:30			59		98		
00:45			10	49	3	20	69	12:45			75	255	88	347	602
01:00			6		4			13:00			79		70		
01:15			10		7			13:15			77		65		
01:30			9		5			13:30			69		88		
01:45			9	34	2	18	52	13:45			63	288	95	318	606
02:00			5		2			14:00			57		70		
02:15			7		1			14:15			75		65		
02:30			2		4			14:30			83		66		
02:45			2	16	0	7	23	14:45			75	290	70	271	561
03:00			5		4			15:00			75		84		
03:15			6		4			15:15			111		98		
03:30			3		2			15:30			95		99		
03:45			4	18	2	12	30	15:45			96	377	121	402	779
04:00			4		5			16:00			124		168		
04:15			4		3			16:15			128		184		
04:30			8		8			16:30			124		215		
04:45			5	21	5	21	42	16:45			113	489	206	773	1262
05:00			4		9			17:00			131		177		
05:15			4		8			17:15			128		161		
05:30			7		8			17:30			137		155		
05:45			11	26	9	34	60	17:45			125	521	189	682	1203
06:00			21		16			18:00			125		177		
06:15			23		18			18:15			80		180		
06:30			19		28			18:30			59		111		
06:45			34	97	30	92	189	18:45			78	342	121	589	931
07:00			34		121			19:00			64		106		
07:15			40		165			19:15			53		88		
07:30			37		141			19:30			53		98		
07:45			48	159	198	625	784	19:45			59	229	77	369	598
08:00			98		181			20:00			67		84		
08:15			88		205			20:15			67		70		
08:30			68		222			20:30			64		65		
08:45			70	324	161	769	1093	20:45			52	250	66	285	535
09:00			54		155			21:00			54		51		
09:15			57		142			21:15			73		40		
09:30			47		135			21:30			49		35		
09:45			53	211	108	540	751	21:45			43	219	22	148	367
10:00			69		111			22:00			38		29		
10:15			59		88			22:15			32		20		
10:30			52		90			22:30			27		19		
10:45			57	237	80	369	606	22:45			28	125	22	90	215
11:00			63		70			23:00			33		19		
11:15			56		66			23:15			17		19		
11:30			55		70			23:30			16		14		
11:45			53	227	66	272	499	23:45			15	81	11	63	144
Total Vol.			1419		2779		**4198**				3466		4337		**7803**

Daily Totals

NB	SB	EB	WB	Combined
		4885	7116	**12001**

	AM			PM		
Split %	33.8%	66.2%	**35.0%**	44.4%	55.6%	**65.0%**
Peak Hour	08:00	07:45	**07:45**	17:00	16:15	**16:15**
Volume	324	806	**1108**	521	782	**1278**
P.H.F.	0.83	0.91	**0.95**	0.95	0.91	**0.94**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle South, From Hotel Circle North to 1200 Feet East of Hotel Circle North

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			15		5			12:00			60		77		
00:15			13		5			12:15			54		84		
00:30			12		8			12:30			63		81		
00:45			12	52	3	21	73	12:45			63	240	88	330	570
01:00			10		4			13:00			83		50		
01:15			5		6			13:15			72		95		
01:30			6		5			13:30			62		88		
01:45			6	27	5	20	47	13:45			62	279	84	317	596
02:00			3		3			14:00			60		66		
02:15			3		5			14:15			70		70		
02:30			5		3			14:30			73		95		
02:45			3	14	1	12	26	14:45			102	305	88	319	624
03:00			7		2			15:00			76		105		
03:15			3		4			15:15			116		121		
03:30			4		3			15:30			109		144		
03:45			6	20	7	16	36	15:45			139	440	135	505	945
04:00			2		3			16:00			114		168		
04:15			3		6			16:15			108		177		
04:30			6		12			16:30			121		215		
04:45			5	16	5	26	42	16:45			148	491	198	758	1249
05:00			7		15			17:00			126		162		
05:15			9		4			17:15			131		184		
05:30			9		13			17:30			141		188		
05:45			19	44	21	53	97	17:45			133	531	205	739	1270
06:00			21		16			18:00			116		184		
06:15			22		19			18:15			82		151		
06:30			23		34			18:30			59		105		
06:45			35	101	32	101	202	18:45			83	340	88	528	868
07:00			40		118			19:00			71		95		
07:15			40		150			19:15			71		70		
07:30			77		144			19:30			79		65		
07:45			78	235	198	610	845	19:45			58	279	66	296	575
08:00			61		168			20:00			80		44		
08:15			105		205			20:15			63		32		
08:30			60		241			20:30			58		35		
08:45			88	314	151	765	1079	20:45			54	255	29	140	395
09:00			67		165			21:00			61		30		
09:15			56		135			21:15			42		20		
09:30			65		144			21:30			53		21		
09:45			51	239	121	565	804	21:45			39	195	29	100	295
10:00			58		108			22:00			43		16		
10:15			42		88			22:15			43		26		
10:30			59		95			22:30			27		12		
10:45			55	214	77	368	582	22:45			37	150	6	60	210
11:00			44		65			23:00			39		14		
11:15			52		80			23:15			28		9		
11:30			53		55			23:30			18		7		
11:45			47	196	48	248	444	23:45			13	98	15	45	143
Total Vol.			1472		2805		**4277**				3603		4137		**7740**

	AM			PM		
				Daily Totals		
	NB	SB	EB	WB		**Combined**
			5075	6942		**12017**
Split %	34.4%	65.6%	**35.6%**	46.6%	53.4%	**64.4%**
Peak Hour	07:30	07:45	**07:45**	16:45	17:15	**16:30**
Volume	321	812	**1116**	546	761	**1285**
P.H.F.	0.76	0.84	**0.90**	0.92	0.93	**0.93**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle South, From 1200 Feet East of Hotel Circle North to I-8 EB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			14		8			12:00			59		45		
00:15			7		6			12:15			70		48		
00:30			6		4			12:30			70		34		
00:45			12	39	5	23	62	12:45			54	253	65	192	445
01:00			8		12			13:00			84		70		
01:15			5		7			13:15			85		88		
01:30			10		5			13:30			73		70		
01:45			7	30	6	30	60	13:45			75	317	68	296	613
02:00			4		8			14:00			63		55		
02:15			11		3			14:15			65		65		
02:30			4		2			14:30			82		70		
02:45			6	25	4	17	42	14:45			73	283	98	288	571
03:00			4		3			15:00			70		88		
03:15			7		2			15:15			105		105		
03:30			7		1			15:30			107		126		
03:45			4	22	4	10	32	15:45			106	388	144	463	851
04:00			9		3			16:00			91		189		
04:15			6		2			16:15			88		215		
04:30			7		3			16:30			70		222		
04:45			9	31	4	12	43	16:45			84	333	226	852	1185
05:00			9		3			17:00			121		205		
05:15			14		8			17:15			132		189		
05:30			8		8			17:30			105		215		
05:45			14	45	15	34	79	17:45			98	456	222	831	1287
06:00			20		8			18:00			106		184		
06:15			23		19			18:15			94		180		
06:30			39		18			18:30			67		144		
06:45			45	127	40	85	212	18:45			84	351	121	629	980
07:00			55		121			19:00			72		111		
07:15			51		138			19:15			63		98		
07:30			68		188			19:30			64		88		
07:45			111	285	174	621	906	19:45			53	252	70	367	619
08:00			95		162			20:00			60		65		
08:15			88		184			20:15			60		55		
08:30			60		212			20:30			44		41		
08:45			101	344	144	702	1046	20:45			49	213	36	197	410
09:00			74		128			21:00			61		56		
09:15			68		135			21:15			39		39		
09:30			63		108			21:30			40		44		
09:45			59	264	88	459	723	21:45			50	190	31	170	360
10:00			90		98			22:00			42		44		
10:15			69		70			22:15			39		27		
10:30			70		65			22:30			39		29		
10:45			63	292	88	321	613	22:45			20	140	19	119	259
11:00			75		87			23:00			43		17		
11:15			68		65			23:15			35		12		
11:30			73		44			23:30			20		20		
11:45			67	283	51	247	530	23:45			18	116	14	63	179
Total Vol.				1787		2561	**4348**					3292		4467	**7759**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
			5079	7028	**12107**

	AM			**PM**		
Split %	41.1%	58.9%	**35.9%**	42.4%	57.6%	**64.1%**
Peak Hour	07:30	07:45	**07:45**	17:00	16:15	**17:00**
Volume	362	732	**1086**	456	868	**1287**
P.H.F.	0.82	0.86	**0.95**	0.86	0.96	**0.99**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle South, From 1200 Feet East of Hotel Circle North to I-8 EB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			19		11			12:00			83		84		
00:15			10		11			12:15			72		66		
00:30			16		12			12:30			70		80		
00:45			10	55	10	44	99	12:45			85	310	84	314	624
01:00			8		5			13:00			84		84		
01:15			9		10			13:15			70		66		
01:30			10		4			13:30			65		84		
01:45			2	29	7	26	55	13:45			65	284	70	304	588
02:00			5		9			14:00			59		88		
02:15			4		2			14:15			65		65		
02:30			5		5			14:30			85		98		
02:45			4	18	2	18	36	14:45			89	298	88	339	637
03:00			4		3			15:00			86		103		
03:15			7		1			15:15			65		151		
03:30			2		4			15:30			65		177		
03:45			8	21	7	15	36	15:45			77	293	160	591	884
04:00			6		3			16:00			90		184		
04:15			4		2			16:15			88		215		
04:30			12		3			16:30			91		206		
04:45			5	27	2	10	37	16:45			88	357	223	828	1185
05:00			13		8			17:00			168		200		
05:15			13		7			17:15			95		189		
05:30			22		17			17:30			88		212		
05:45			19	67	19	51	118	17:45			105	456	206	807	1263
06:00			29		14			18:00			114		184		
06:15			39		15			18:15			70		161		
06:30			55		28			18:30			72		177		
06:45			39	162	31	88	250	18:45			87	343	184	706	1049
07:00			43		105			19:00			66		151		
07:15			70		131			19:15			68		106		
07:30			58		188			19:30			66		66		
07:45			105	276	165	589	865	19:45			60	260	88	411	671
08:00			80		184			20:00			85		81		
08:15			88		177			20:15			55		91		
08:30			65		205			20:30			65		65		
08:45			98	331	131	697	1028	20:45			46	251	55	292	543
09:00			63		111			21:00			64		40		
09:15			84		105			21:15			52		35		
09:30			69		88			21:30			46		44		
09:45			61	277	98	402	679	21:45			36	198	47	166	364
10:00			64		70			22:00			45		36		
10:15			47		65			22:15			39		25		
10:30			63		88			22:30			34		24		
10:45			62	236	70	293	529	22:45			39	157	21	106	263
11:00			67		54			23:00			28		21		
11:15			88		99			23:15			43		16		
11:30			63		68			23:30			22		17		
11:45			60	278	77	298	576	23:45			22	115	21	75	190
Total Vol.				1777		2531	**4308**					3322		4939	**8261**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
			5099	7470	**12569**

	AM			**PM**		
Split %	41.2%	58.8%	**34.3%**	40.2%	59.8%	**65.7%**
Peak Hour	07:45	07:45	**07:45**	17:00	16:15	**16:15**
Volume	338	731	**1069**	456	844	**1279**
P.H.F.	0.80	0.89	**0.99**	0.68	0.95	**0.87**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle South, From I-8 EB Ramps to Bachman Place

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			18		34			12:00			73		185		
00:15			9		32			12:15			101		156		
00:30			10		11			12:30			86		134		
00:45			11	48	20	97	145	12:45			88	348	165	640	988
01:00			6		25			13:00			109		172		
01:15			5		18			13:15			107		173		
01:30			6		12			13:30			92		165		
01:45			8	25	17	72	97	13:45			109	417	151	661	1078
02:00			5		14			14:00			70		191		
02:15			6		6			14:15			87		176		
02:30			2		5			14:30			87		191		
02:45			6	19	8	33	52	14:45			95	339	161	719	1058
03:00			5		11			15:00			83		207		
03:15			6		7			15:15			91		217		
03:30			6		13			15:30			67		227		
03:45			3	20	6	37	57	15:45			67	308	188	839	1147
04:00			8		12			16:00			87		257		
04:15			5		11			16:15			68		247		
04:30			6		15			16:30			84		258		
04:45			5	24	14	52	76	16:45			68	307	301	1063	1370
05:00			8		23			17:00			89		279		
05:15			14		27			17:15			91		290		
05:30			12		23			17:30			76		229		
05:45			29	63	49	122	185	17:45			102	358	226	1024	1382
06:00			18		50			18:00			97		248		
06:15			37		53			18:15			82		213		
06:30			56		78			18:30			79		194		
06:45			71	182	91	272	454	18:45			104	362	199	854	1216
07:00			57		147			19:00			67		190		
07:15			67		146			19:15			82		186		
07:30			66		192			19:30			73		233		
07:45			94	284	188	673	957	19:45			69	291	170	779	1070
08:00			79		163			20:00			68		162		
08:15			84		121			20:15			69		180		
08:30			71		150			20:30			45		118		
08:45			81	315	155	589	904	20:45			48	230	100	560	790
09:00			64		150			21:00			48		138		
09:15			61		112			21:15			42		132		
09:30			66		111			21:30			31		111		
09:45			74	265	122	495	760	21:45			39	160	107	488	648
10:00			99		114			22:00			60		124		
10:15			81		132			22:15			34		71		
10:30			84		102			22:30			22		78		
10:45			67	331	135	483	814	22:45			22	138	68	341	479
11:00			90		149			23:00			33		76		
11:15			90		131			23:15			27		62		
11:30			74		111			23:30			15		55		
11:45			88	342	137	528	870	23:45			13	88	33	226	314
Total Vol.			1918		3453		**5371**				3346		8194		**11540**

Daily Totals

NB	SB	EB	WB	Combined
		5264	11647	**16911**

	AM			PM		
Split %	35.7%	64.3%	**31.8%**	29.0%	71.0%	**68.2%**
Peak Hour	11:45	07:15	**07:15**	13:00	16:30	**16:30**
Volume	348	689	**995**	417	1128	**1460**
P.H.F.	0.86	0.90	**0.88**	0.96	0.94	**0.96**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle South, From I-8 EB Ramps to Bachman Place

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			18		35			12:00			100		172		
00:15			12		40			12:15			95		170		
00:30			14		29			12:30			104		162		
00:45			10	54	21	125	179	12:45			90	389	152	656	1045
01:00			8		23			13:00			92		196		
01:15			6		15			13:15			103		176		
01:30			8		17			13:30			104		178		
01:45			4	26	14	69	95	13:45			105	404	174	724	1128
02:00			6		15			14:00			76		208		
02:15			6		13			14:15			83		177		
02:30			4		8			14:30			80		238		
02:45			6	22	5	41	63	14:45			102	341	218	841	1182
03:00			5		13			15:00			83		203		
03:15			5		13			15:15			98		229		
03:30			2		6			15:30			84		238		
03:45			4	16	15	47	63	15:45			88	353	256	926	1279
04:00			4		9			16:00			80		231		
04:15			5		10			16:15			88		225		
04:30			5		18			16:30			70		298		
04:45			7	21	15	52	73	16:45			91	329	235	989	1318
05:00			13		23			17:00			98		205		
05:15			11		32			17:15			91		219		
05:30			16		46			17:30			98		202		
05:45			23	63	47	148	211	17:45			105	392	208	834	1226
06:00			30		58			18:00			112		216		
06:15			43		74			18:15			88		186		
06:30			49		81			18:30			98		215		
06:45			70	192	96	309	501	18:45			115	413	227	844	1257
07:00			58		90			19:00			60		192		
07:15			51		121			19:15			74		186		
07:30			77		168			19:30			73		204		
07:45			115	301	158	537	838	19:45			78	285	186	768	1053
08:00			81		151			20:00			72		157		
08:15			90		218			20:15			66		130		
08:30			80		209			20:30			61		117		
08:45			105	356	141	719	1075	20:45			47	246	133	537	783
09:00			86		143			21:00			60		125		
09:15			72		149			21:15			44		130		
09:30			70		138			21:30			65		134		
09:45			63	291	115	545	836	21:45			36	205	110	499	704
10:00			77		127			22:00			23		91		
10:15			71		147			22:15			39		102		
10:30			78		140			22:30			33		92		
10:45			83	309	136	550	859	22:45			29	124	75	360	484
11:00			75		126			23:00			33		74		
11:15			94		127			23:15			24		67		
11:30			81		130			23:30			19		67		
11:45			91	341	150	533	874	23:45			21	97	52	260	357
Total Vol.			1992		3675		**5667**				3578		8238		**11816**

Daily Totals

NB	SB	EB	WB	Combined
		5570	11913	**17483**

	AM			PM		
Split %	35.2%	64.8%	**32.4%**	30.3%	69.7%	**67.6%**
Peak Hour	11:45	07:45	**07:45**	18:00	15:45	**15:45**
Volume	390	736	**1102**	413	1010	**1336**
P.H.F.	0.94	0.84	**0.89**	0.90	0.85	**0.91**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle South, From Bachman Place to Hotel Circle North

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			12		28			12:00			70		141		
00:15			9		33			12:15			94		155		
00:30			12		12			12:30			94		135		
00:45			8	41	18	91	132	12:45			91	349	141	572	921
01:00			6		21			13:00			105		121		
01:15			8		20			13:15			111		165		
01:30			5		14			13:30			106		151		
01:45			4	23	16	71	94	13:45			98	420	148	585	1005
02:00			6		12			14:00			94		125		
02:15			5		8			14:15			81		151		
02:30			4		7			14:30			70		141		
02:45			6	21	7	34	55	14:45			84	329	128	545	874
03:00			2		10			15:00			88		131		
03:15			6		8			15:15			95		143		
03:30			5		11			15:30			66		151		
03:45			4	17	7	36	53	15:45			68	317	142	567	884
04:00			8		10			16:00			108		161		
04:15			7		12			16:15			111		184		
04:30			5		13			16:30			116		213		
04:45			6	26	15	50	76	16:45			148	483	205	763	1246
05:00			8		21			17:00			121		165		
05:15			12		28			17:15			138		184		
05:30			13		24			17:30			131		184		
05:45			22	55	44	117	172	17:45			142	532	206	739	1271
06:00			24		51			18:00			115		202		
06:15			31		55			18:15			126		184		
06:30			50		70			18:30			103		161		
06:45			66	171	99	275	446	18:45			121	465	184	731	1196
07:00			50		121			19:00			88		151		
07:15			48		162			19:15			95		162		
07:30			70		158			19:30			84		184		
07:45			78	246	191	632	878	19:45			91	358	151	648	1006
08:00			61		184			20:00			65		125		
08:15			105		206			20:15			77		135		
08:30			68		244			20:30			84		88		
08:45			81	315	160	794	1109	20:45			65	291	70	418	709
09:00			61		141			21:00			55		98		
09:15			60		128			21:15			54		105		
09:30			61		106			21:30			35		88		
09:45			88	270	121	496	766	21:45			42	186	70	361	547
10:00			91		115			22:00			88		65		
10:15			80		131			22:15			65		66		
10:30			77		118			22:30			45		42		
10:45			68	316	141	505	821	22:45			35	233	35	208	441
11:00			84		140			23:00			42		44		
11:15			81		128			23:15			21		51		
11:30			84		122			23:30			15		40		
11:45			81	330	131	521	851	23:45			19	97	28	163	260
Total Vol.			1831		3622		**5453**				4060		6300		**10360**

Daily Totals

NB	SB	EB	WB	Combined
		5891	9922	**15813**

	AM			PM		
Split %	33.6%	66.4%	**34.5%**	39.2%	60.8%	**65.5%**
Peak Hour	11:45	07:45	**07:45**	16:45	17:15	**17:15**
Volume	339	825	**1137**	538	776	**1302**
P.H.F.	0.90	0.85	**0.91**	0.91	0.94	**0.94**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Hotel Circle South, From Bachman Place to Hotel Circle North

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			11		21			12:00			81		131		
00:15			18		30			12:15			70		158		
00:30			9		15			12:30			66		125		
00:45			12	50	18	84	134	12:45			68	285	144	558	843
01:00			5		22			13:00			78		118		
01:15			6		26			13:15			95		141		
01:30			8		21			13:30			88		158		
01:45			7	26	18	87	113	13:45			95	356	165	582	938
02:00			9		20			14:00			105		114		
02:15			5		11			14:15			84		105		
02:30			4		8			14:30			70		125		
02:45			5	23	9	48	71	14:45			88	347	126	470	817
03:00			6		5			15:00			84		138		
03:15			9		4			15:15			95		128		
03:30			8		8			15:30			77		168		
03:45			9	32	9	26	58	15:45			84	340	151	585	925
04:00			5		10			16:00			105		188		
04:15			4		10			16:15			121		184		
04:30			6		11			16:30			116		216		
04:45			9	24	15	46	70	16:45			121	463	205	793	1256
05:00			10		18			17:00			142		223		
05:15			5		21			17:15			144		208		
05:30			15		25			17:30			151		184		
05:45			18	48	33	97	145	17:45			125	562	191	806	1368
06:00			22		45			18:00			115		165		
06:15			26		51			18:15			108		174		
06:30			41		88			18:30			98		178		
06:45			55	144	81	265	409	18:45			105	426	151	668	1094
07:00			51		114			19:00			111		124		
07:15			68		151			19:15			88		135		
07:30			70		168			19:30			70		145		
07:45			84	273	155	588	861	19:45			65	334	144	548	882
08:00			88		195			20:00			77		128		
08:15			105		215			20:15			84		105		
08:30			88		205			20:30			84		116		
08:45			70	351	195	810	1161	20:45			84	329	88	437	766
09:00			66		161			21:00			65		95		
09:15			54		151			21:15			40		70		
09:30			48		141			21:30			35		68		
09:45			88	256	111	564	820	21:45			33	173	77	310	483
10:00			70		105			22:00			32		84		
10:15			65		141			22:15			28		65		
10:30			77		125			22:30			26		35		
10:45			84	296	125	496	792	22:45			30	116	32	216	332
11:00			81		135			23:00			25		28		
11:15			98		111			23:15			20		21		
11:30			65		128			23:30			18		33		
11:45			77	321	114	488	809	23:45			15	78	32	114	192
Total Vol.				1844		3599	**5443**					3809		6087	**9896**

Daily Totals

NB	SB	EB	WB	Combined
		5653	9686	**15339**

	AM			PM		
Split %	33.9%	66.1%	**35.5%**	38.5%	61.5%	**64.5%**
Peak Hour	07:45	08:00	**08:00**	17:00	16:30	**16:45**
Volume	365	810	**1161**	562	852	**1378**
P.H.F.	0.87	0.94	**0.91**	0.93	0.96	**0.94**

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. Western Terminus & 1800 Ft W/O Mission Center Rd

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_066

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,551	3,461	7,012

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			8		7		15		12:00			62		53		115	
00:15			8		6		14		12:15			75		59		134	
00:30			6		6		12		12:30			55		50		105	
00:45			7	29	5	24	12	53	12:45			50	242	68	230	118	472
01:00			10		4		14		13:00			60		58		118	
01:15			7		7		14		13:15			67		64		131	
01:30			19		5		24		13:30			48		56		104	
01:45			5	41	2	18	7	59	13:45			48	223	54	232	102	455
02:00			5		0		5		14:00			58		57		115	
02:15			1		4		5		14:15			54		39		93	
02:30			3		2		5		14:30			54		54		108	
02:45			2	11	3	9	5	20	14:45			67	233	53	203	120	436
03:00			0		2		2		15:00			55		47		102	
03:15			2		4		6		15:15			82		55		137	
03:30			1		0		1		15:30			66		58		124	
03:45			2	5	2	8	4	13	15:45			69	272	65	225	134	497
04:00			1		2		3		16:00			89		45		134	
04:15			0		0		0		16:15			75		46		121	
04:30			2		5		7		16:30			82		65		147	
04:45			4	7	2	9	6	16	16:45			110	356	66	222	176	578
05:00			3		9		12		17:00			132		53		185	
05:15			3		10		13		17:15			71		56		127	
05:30			7		9		16		17:30			76		63		139	
05:45			14	27	14	42	28	69	17:45			65	344	60	232	125	576
06:00			14		30		44		18:00			68		43		111	
06:15			7		41		48		18:15			57		45		102	
06:30			15		40		55		18:30			51		58		109	
06:45			15	51	37	148	52	199	18:45			54	230	49	195	103	425
07:00			12		46		58		19:00			60		56		116	
07:15			20		66		86		19:15			57		37		94	
07:30			18		93		111		19:30			36		41		77	
07:45			28	78	110	315	138	393	19:45			52	205	43	177	95	382
08:00			34		82		116		20:00			56		44		100	
08:15			39		62		101		20:15			26		29		55	
08:30			46		53		99		20:30			29		30		59	
08:45			29	148	61	258	90	406	20:45			27	138	22	125	49	263
09:00			37		40		77		21:00			37		22		59	
09:15			47		56		103		21:15			30		23		53	
09:30			43		33		76		21:30			26		23		49	
09:45			36	163	53	182	89	345	21:45			21	114	25	93	46	207
10:00			39		40		79		22:00			27		28		55	
10:15			49		45		94		22:15			26		15		41	
10:30			43		58		101		22:30			32		12		44	
10:45			65	196	54	197	119	393	22:45			27	112	23	78	50	190
11:00			60		35		95		23:00			11		17		28	
11:15			57		49		106		23:15			17		9		26	
11:30			62		54		116		23:30			20		14		34	
11:45			85	264	52	190	137	454	23:45			14	62	9	49	23	111
TOTALS				1020		1400		**2420**	**TOTALS**				2531		2061		**4592**
SPLIT %				42.1%		57.9%		**34.5%**	**SPLIT %**				55.1%		44.9%		**65.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,551	3,461	7,012

AM Peak Hour			11:30	07:15	**11:30**	**PM Peak Hour**			16:15	12:45	**16:30**
AM Pk Volume			284	351	**502**	**PM Pk Volume**			399	246	**635**
Pk Hr Factor			0.835	0.798	**0.916**	**Pk Hr Factor**			0.756	0.904	**0.858**
7 - 9 Volume	0	0	226	573	**799**	**4 - 6 Volume**	0	0	700	454	**1154**
7 - 9 Peak Hour			08:00	07:15	**07:30**	**4 - 6 Peak Hour**			16:15	16:30	**16:30**
7 - 9 Pk Volume	0	0	148	351	**466**	**4 - 6 Pk Volume**	0	0	399	240	**635**
Pk Hr Factor	0.000	0.000	0.804	0.798	**0.844**	**Pk Hr Factor**	0.000	0.000	0.756	0.909	**0.858**

65

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. Western Terminus & 1800 Ft W/O Mission Center Rd

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_066

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,957	3,693	7,650

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			12		5		17		12:00			56		61		117	
00:15			11		3		14		12:15			82		84		166	
00:30			10		4		14		12:30			81		61		142	
00:45			6	39	3	15	9	54	12:45			59	278	50	256	109	534
01:00			11		5		16		13:00			74		66		140	
01:15			4		6		10		13:15			76		56		132	
01:30			2		2		4		13:30			60		52		112	
01:45			4	21	4	17	8	38	13:45			69	279	51	225	120	504
02:00			6		1		7		14:00			72		60		132	
02:15			2		0		2		14:15			66		60		126	
02:30			2		5		7		14:30			64		71		135	
02:45			4	14	1	7	5	21	14:45			88	290	60	251	148	541
03:00			3		5		8		15:00			73		50		123	
03:15			3		3		6		15:15			83		46		129	
03:30			3		3		6		15:30			81		64		145	
03:45			2	11	3	14	5	25	15:45			77	314	62	222	139	536
04:00			1		4		5		16:00			86		53		139	
04:15			2		0		2		16:15			82		70		152	
04:30			2		7		9		16:30			85		56		141	
04:45			5	10	2	13	7	23	16:45			115	368	59	238	174	606
05:00			2		4		6		17:00			130		65		195	
05:15			4		8		12		17:15			94		49		143	
05:30			10		8		18		17:30			72		75		147	
05:45			15	31	25	45	40	76	17:45			82	378	56	245	138	623
06:00			16		26		42		18:00			70		56		126	
06:15			14		43		57		18:15			52		57		109	
06:30			23		40		63		18:30			68		55		123	
06:45			22	75	64	173	86	248	18:45			50	240	54	222	104	462
07:00			18		54		72		19:00			46		41		87	
07:15			27		47		74		19:15			41		33		74	
07:30			27		94		121		19:30			39		42		81	
07:45			35	107	111	306	146	413	19:45			46	172	43	159	89	331
08:00			33		90		123		20:00			51		39		90	
08:15			35		61		96		20:15			58		43		101	
08:30			51		65		116		20:30			52		37		89	
08:45			44	163	69	285	113	448	20:45			45	206	35	154	80	360
09:00			48		41		89		21:00			47		29		76	
09:15			56		59		115		21:15			23		32		55	
09:30			48		57		105		21:30			35		25		60	
09:45			48	200	51	208	99	408	21:45			33	138	17	103	50	241
10:00			67		45		112		22:00			22		25		47	
10:15			48		53		101		22:15			20		16		36	
10:30			46		61		107		22:30			27		17		44	
10:45			51	212	51	210	102	422	22:45			36	105	7	65	43	170
11:00			50		37		87		23:00			24		25		49	
11:15			40		47		87		23:15			16		22		38	
11:30			75		52		127		23:30			13		7		20	
11:45			77	242	65	201	142	443	23:45			11	64	5	59	16	123
TOTALS				1125		1494		2619	TOTALS				2832		2199		5031
SPLIT %				43.0%		57.0%		34.2%	SPLIT %				56.3%		43.7%		65.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,957	3,693	7,650

AM Peak Hour			11:45	07:30	11:45	PM Peak Hour			16:30	12:15	16:15
AM Pk Volume			296	356	567	PM Pk Volume			424	261	662
Pk Hr Factor			0.902	0.802	0.854	Pk Hr Factor			0.815	0.777	0.849
7 - 9 Volume	0	0	270	591	861	4 - 6 Volume	0	0	746	483	1229
7 - 9 Peak Hour			08:00	07:30	07:30	4 - 6 Peak Hour			16:30	16:15	16:15
7 - 9 Pk Volume	0	0	163	356	486	4 - 6 Pk Volume	0	0	424	250	662
Pk Hr Factor	0.000	0.000	0.799	0.802	0.832	Pk Hr Factor	0.000	0.000	0.815	0.893	0.849

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. 1800 Ft W/O Mission Center Rd & Mission Center Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_067

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,822	2,864	6,686

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			4		1		5		12:00			52		45		97	
00:15			0		1		1		12:15			54		64		118	
00:30			4		0		4		12:30			74		71		145	
00:45			0	8	2	4	2	12	12:45			52	232	64	244	116	476
01:00			1		1		2		13:00			75		47		122	
01:15			3		0		3		13:15			63		44		107	
01:30			2		2		4		13:30			54		52		106	
01:45			1	7	0	3	1	10	13:45			59	251	47	190	106	441
02:00			0		0		0		14:00			61		41		102	
02:15			0		0		0		14:15			67		44		111	
02:30			1		0		1		14:30			66		45		111	
02:45			1	2	0		1	2	14:45			78	272	56	186	134	458
03:00			1		2		3		15:00			74		47		121	
03:15			0		1		1		15:15			76		43		119	
03:30			2		0		2		15:30			103		72		175	
03:45			0	3	2	5	2	8	15:45			124	377	49	211	173	588
04:00			0		0		0		16:00			116		56		172	
04:15			3		1		4		16:15			99		41		140	
04:30			2		3		5		16:30			154		68		222	
04:45			0	5	4	8	4	13	16:45			146	515	51	216	197	731
05:00			2		8		10		17:00			124		53		177	
05:15			0		6		6		17:15			162		57		219	
05:30			2		9		11		17:30			144		45		189	
05:45			5	9	13	36	18	45	17:45			94	524	57	212	151	736
06:00			7		15		22		18:00			86		43		129	
06:15			10		17		27		18:15			67		31		98	
06:30			18		25		43		18:30			76		26		102	
06:45			26	61	39	96	65	157	18:45			55	284	43	143	98	427
07:00			31		41		72		19:00			43		22		65	
07:15			33		65		98		19:15			43		34		77	
07:30			34		71		105		19:30			31		27		58	
07:45			40	138	70	247	110	385	19:45			36	153	10	93	46	246
08:00			31		72		103		20:00			33		13		46	
08:15			57		65		122		20:15			22		15		37	
08:30			35		80		115		20:30			19		19		38	
08:45			36	159	73	290	109	449	20:45			30	104	20	67	50	171
09:00			43		59		102		21:00			24		25		49	
09:15			49		52		101		21:15			17		12		29	
09:30			43		37		80		21:30			17		8		25	
09:45			38	173	52	200	90	373	21:45			13	71	3	48	16	119
10:00			33		34		67		22:00			12		7		19	
10:15			43		35		78		22:15			11		7		18	
10:30			61		50		111		22:30			10		4		14	
10:45			41	178	29	148	70	326	22:45			5	38	5	23	10	61
11:00			40		44		84		23:00			9		1		10	
11:15			61		44		105		23:15			7		0		7	
11:30			69		43		112		23:30			2		1		3	
11:45			65	235	57	188	122	423	23:45			5	23	4	6	9	29
TOTALS				978		1225		2203	TOTALS				2844		1639		4483
SPLIT %				44.4%		55.6%		32.9%	SPLIT %				63.4%		36.6%		67.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,822	2,864	6,686

AM Peak Hour			11:15	08:00	11:45	PM Peak Hour			16:30	12:15	16:30
AM Pk Volume			247	290	482	PM Pk Volume			586	246	815
Pk Hr Factor			0.895	0.906	0.831	Pk Hr Factor			0.904	0.866	0.918
7 - 9 Volume	0	0	297	537	834	4 - 6 Volume	0	0	1039	428	1467
7 - 9 Peak Hour			07:45	08:00	07:45	4 - 6 Peak Hour			16:30	16:30	16:30
7 - 9 Pk Volume	0	0	163	290	450	4 - 6 Pk Volume	0	0	586	229	815
Pk Hr Factor	0.000	0.000	0.715	0.906	0.922	Pk Hr Factor	0.000	0.000	0.904	0.842	0.918

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. 1800 Ft W/O Mission Center Rd & Mission Center Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_067

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,936	3,111	7,047

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		5		6		12:00			66		59		125	
00:15			3		1		4		12:15			71		71		142	
00:30			8		0		8		12:30			85		54		139	
00:45			4	16	7	13	11	29	12:45			82	304	43	227	125	531
01:00			1		1		2		13:00			78		48		126	
01:15			2		2		4		13:15			74		47		121	
01:30			1		0		1		13:30			89		49		138	
01:45			1	5	0	3	1	8	13:45			101	342	61	205	162	547
02:00			1		2		3		14:00			76		43		119	
02:15			1		1		2		14:15			67		52		119	
02:30			1		1		2		14:30			60		48		108	
02:45			2	5	1	5	3	10	14:45			87	290	49	192	136	482
03:00			1		0		1		15:00			91		47		138	
03:15			1		2		3		15:15			79		67		146	
03:30			0		0		0		15:30			69		51		120	
03:45			0	2	1	3	1	5	15:45			95	334	57	222	152	556
04:00			0		0		0		16:00			76		61		137	
04:15			1		1		2		16:15			110		41		151	
04:30			3		7		10		16:30			104		56		160	
04:45			5	9	3	11	8	20	16:45			128	418	59	217	187	635
05:00			8		4		12		17:00			111		64		175	
05:15			5		9		14		17:15			109		50		159	
05:30			1		7		8		17:30			139		38		177	
05:45			3	17	15	35	18	52	17:45			99	458	42	194	141	652
06:00			5		15		20		18:00			82		31		113	
06:15			4		17		21		18:15			73		32		105	
06:30			17		21		38		18:30			58		29		87	
06:45			27	53	49	102	76	155	18:45			50	263	20	112	70	375
07:00			39		49		88		19:00			37		33		70	
07:15			38		58		96		19:15			40		24		64	
07:30			30		61		91		19:30			26		26		52	
07:45			47	154	64	232	111	386	19:45			33	136	34	117	67	253
08:00			46		64		110		20:00			23		26		49	
08:15			46		75		121		20:15			35		23		58	
08:30			41		86		127		20:30			29		12		41	
08:45			54	187	86	311	140	498	20:45			12	99	11	72	23	171
09:00			45		77		122		21:00			30		16		46	
09:15			41		55		96		21:15			21		18		39	
09:30			39		62		101		21:30			25		8		33	
09:45			46	171	81	275	127	446	21:45			22	98	13	55	35	153
10:00			51		65		116		22:00			8		12		20	
10:15			41		62		103		22:15			13		9		22	
10:30			58		46		104		22:30			12		5		17	
10:45			62	212	49	222	111	434	22:45			13	46	8	34	21	80
11:00			48		45		93		23:00			13		2		15	
11:15			73		54		127		23:15			7		7		14	
11:30			87		72		159		23:30			9		7		16	
11:45			71	279	61	232	132	511	23:45			9	38	4	20	13	58
TOTALS				1110		1444		2554	TOTALS				2826		1667		4493
SPLIT %				43.5%		56.5%		36.2%	SPLIT %				62.9%		37.1%		63.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,936	3,111	7,047

AM Peak Hour			11:15	08:15	11:30	PM Peak Hour			16:45	15:15	16:45
AM Pk Volume			297	324	558	PM Pk Volume			487	236	698
Pk Hr Factor			0.853	0.942	0.877	Pk Hr Factor			0.876	0.881	0.933
7 - 9 Volume	0	0	341	543	884	4 - 6 Volume	0	0	876	411	1287
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:45	16:30	16:45
7 - 9 Pk Volume	0	0	187	311	498	4 - 6 Pk Volume	0	0	487	229	698
Pk Hr Factor	0.000	0.000	0.866	0.904	0.889	Pk Hr Factor	0.000	0.000	0.876	0.895	0.933

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. Mission Center Rd & Texas St

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_068

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,305	3,297	7,602

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			4		2		6		12:00			71		48		119	
00:15			3		2		5		12:15			65		58		123	
00:30			1		5		6		12:30			65		53		118	
00:45			3	11	1	10	4	21	12:45			67	268	62	221	129	489
01:00			5		3		8		13:00			84		56		140	
01:15			3		3		6		13:15			61		55		116	
01:30			2		0		2		13:30			59		58		117	
01:45			1	11	0	6	1	17	13:45			62	266	72	241	134	507
02:00			0		0		0		14:00			71		48		119	
02:15			0		2		2		14:15			85		69		154	
02:30			0		0		0		14:30			100		50		150	
02:45			1	1	1	3	2	4	14:45			54	310	44	211	98	521
03:00			0		0		0		15:00			68		55		123	
03:15			1		1		2		15:15			75		39		114	
03:30			0		1		1		15:30			103		44		147	
03:45			0	1	0	2	0	3	15:45			180	426	49	187	229	613
04:00			1		2		3		16:00			177		45		222	
04:15			1		4		5		16:15			179		42		221	
04:30			0		2		2		16:30			172		52		224	
04:45			2	4	5	13	7	17	16:45			136	664	64	203	200	867
05:00			0		7		7		17:00			155		82		237	
05:15			1		5		6		17:15			123		68		191	
05:30			4		6		10		17:30			104		60		164	
05:45			9	14	11	29	20	43	17:45			128	510	61	271	189	781
06:00			4		11		15		18:00			106		46		152	
06:15			6		18		24		18:15			85		36		121	
06:30			5		26		31		18:30			60		41		101	
06:45			9	24	42	97	51	121	18:45			45	296	35	158	80	454
07:00			17		39		56		19:00			36		24		60	
07:15			17		60		77		19:15			57		20		77	
07:30			26		90		116		19:30			48		24		72	
07:45			28	88	96	285	124	373	19:45			39	180	25	93	64	273
08:00			27		95		122		20:00			86		19		105	
08:15			43		100		143		20:15			56		15		71	
08:30			77		101		178		20:30			26		16		42	
08:45			57	204	97	393	154	597	20:45			27	195	15	65	42	260
09:00			35		58		93		21:00			23		9		32	
09:15			44		76		120		21:15			27		12		39	
09:30			41		51		92		21:30			17		9		26	
09:45			48	168	66	251	114	419	21:45			19	86	15	45	34	131
10:00			42		44		86		22:00			10		12		22	
10:15			55		68		123		22:15			19		5		24	
10:30			54		57		111		22:30			10		8		18	
10:45			49	200	69	238	118	438	22:45			8	47	7	32	15	79
11:00			75		51		126		23:00			10		2		12	
11:15			62		51		113		23:15			13		4		17	
11:30			89		52		141		23:30			12		3		15	
11:45			66	292	78	232	144	524	23:45			4	39	2	11	6	50
TOTALS				1018		1559		**2577**	**TOTALS**				3287		1738		**5025**
SPLIT %				39.5%		60.5%		**33.9%**	**SPLIT %**				65.4%		34.6%		**66.1%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,305	3,297	7,602

AM Peak Hour			11:00	08:00	**08:00**	**PM Peak Hour**			15:45	16:45	**15:45**
AM Pk Volume			292	393	**597**	**PM Pk Volume**			708	274	**896**
Pk Hr Factor			0.820	0.973	**0.838**	**Pk Hr Factor**			0.983	0.835	**0.978**
7 - 9 Volume	0	0	292	678	**970**	**4 - 6 Volume**	0	0	1174	474	**1648**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			16:00	16:45	**16:15**
7 - 9 Pk Volume	0	0	204	393	**597**	**4 - 6 Pk Volume**	0	0	664	274	**882**
Pk Hr Factor	0.000	0.000	0.662	0.973	**0.838**	**Pk Hr Factor**	0.000	0.000	0.927	0.835	**0.930**

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. Mission Center Rd & Texas St

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_068

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,134	3,087	7,221

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			9		5		14		12:00			60		46		106	
00:15			1		2		3		12:15			81		67		148	
00:30			1		4		5		12:30			52		58		110	
00:45			1	12	0	11	1	23	12:45			66	259	54	225	120	484
01:00			0		0		0		13:00			71		47		118	
01:15			1		0		1		13:15			57		38		95	
01:30			2		2		4		13:30			57		44		101	
01:45			4	7	2	4	6	11	13:45			62	247	70	199	132	446
02:00			0		3		3		14:00			52		56		108	
02:15			2		0		2		14:15			110		51		161	
02:30			0		3		3		14:30			81		58		139	
02:45			1	3	1	7	2	10	14:45			71	314	51	216	122	530
03:00			0		1		1		15:00			66		46		112	
03:15			1		2		3		15:15			73		52		125	
03:30			0		1		1		15:30			89		40		129	
03:45			0	1	0	4	0	5	15:45			82	310	45	183	127	493
04:00			1		1		2		16:00			115		34		149	
04:15			2		4		6		16:15			111		41		152	
04:30			1		3		4		16:30			102		53		155	
04:45			2	6	7	15	9	21	16:45			119	447	47	175	166	622
05:00			2		11		13		17:00			154		45		199	
05:15			2		14		16		17:15			173		50		223	
05:30			4		4		8		17:30			166		61		227	
05:45			5	13	13	42	18	55	17:45			166	659	63	219	229	878
06:00			13		12		25		18:00			160		52		212	
06:15			9		16		25		18:15			95		36		131	
06:30			9		22		31		18:30			72		42		114	
06:45			12	43	53	103	65	146	18:45			55	382	49	179	104	561
07:00			15		54		69		19:00			81		26		107	
07:15			22		70		92		19:15			62		20		82	
07:30			19		71		90		19:30			50		21		71	
07:45			36	92	92	287	128	379	19:45			53	246	17	84	70	330
08:00			34		88		122		20:00			34		19		53	
08:15			31		114		145		20:15			42		15		57	
08:30			75		78		153		20:30			50		14		64	
08:45			49	189	89	369	138	558	20:45			21	147	15	63	36	210
09:00			38		60		98		21:00			24		13		37	
09:15			30		55		85		21:15			22		14		36	
09:30			42		43		85		21:30			20		11		31	
09:45			61	171	63	221	124	392	21:45			16	82	16	54	32	136
10:00			41		32		73		22:00			23		18		41	
10:15			42		33		75		22:15			17		9		26	
10:30			37		52		89		22:30			14		10		24	
10:45			38	158	45	162	83	320	22:45			17	71	11	48	28	119
11:00			55		35		90		23:00			8		6		14	
11:15			57		53		110		23:15			8		6		14	
11:30			61		65		126		23:30			12		2		14	
11:45			61	234	49	202	110	436	23:45			13	41	1	15	14	56
TOTALS				929		1427		**2356**	**TOTALS**				3205		1660		**4865**
SPLIT %				39.4%		60.6%		**32.6%**	**SPLIT %**				65.9%		34.1%		**67.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,134	3,087	7,221

AM Peak Hour			11:30	07:45	**08:00**	**PM Peak Hour**			17:15	13:45	**17:15**
AM Pk Volume			263	372	**558**	**PM Pk Volume**			665	235	**891**
Pk Hr Factor			0.812	0.816	**0.912**	**Pk Hr Factor**			0.961	0.839	**0.973**
7 - 9 Volume	0	0	281	656	**937**	**4 - 6 Volume**	0	0	1106	394	**1500**
7 - 9 Peak Hour			08:00	07:45	**08:00**	**4 - 6 Peak Hour**			17:00	17:00	**17:00**
7 - 9 Pk Volume	0	0	189	372	**558**	**4 - 6 Pk Volume**	0	0	659	219	**878**
Pk Hr Factor	0.000	0.000	0.630	0.816	**0.912**	**Pk Hr Factor**	0.000	0.000	0.952	0.869	**0.959**

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. Texas St & Mission City Pkwy

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_069

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,098	4,285	8,383

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			5		15		20		12:00			78		79		157	
00:15			2		10		12		12:15			74		62		136	
00:30			3		8		11		12:30			69		59		128	
00:45			2	12	8	41	10	53	12:45			82	303	79	279	161	582
01:00			1		6		7		13:00			78		82		160	
01:15			3		3		6		13:15			63		73		136	
01:30			2		3		5		13:30			62		64		126	
01:45			1	7	3	15	4	22	13:45			59	262	73	292	132	554
02:00			1		1		2		14:00			71		62		133	
02:15			0		3		3		14:15			69		70		139	
02:30			0		2		2		14:30			68		71		139	
02:45			1	2	0	6	1	8	14:45			63	271	71	274	134	545
03:00			0		1		1		15:00			104		67		171	
03:15			0		2		2		15:15			70		60		130	
03:30			0		1		1		15:30			98		58		156	
03:45			0		1	5	1	5	15:45			137	409	66	251	203	660
04:00			2		2		4		16:00			164		78		242	
04:15			0		0		0		16:15			167		82		249	
04:30			0		1		1		16:30			179		83		262	
04:45			1	3	2	5	3	8	16:45			130	640	76	319	206	959
05:00			0		4		4		17:00			197		80		277	
05:15			3		1		4		17:15			116		76		192	
05:30			4		6		10		17:30			114		73		187	
05:45			5	12	15	26	20	38	17:45			106	533	49	278	155	811
06:00			6		22		28		18:00			109		37		146	
06:15			5		19		24		18:15			92		32		124	
06:30			11		39		50		18:30			60		36		96	
06:45			25	47	40	120	65	167	18:45			32	293	39	144	71	437
07:00			17		60		77		19:00			35		27		62	
07:15			21		70		91		19:15			31		22		53	
07:30			28		80		108		19:30			33		22		55	
07:45			55	121	94	304	149	425	19:45			20	119	19	90	39	209
08:00			58		108		166		20:00			28		23		51	
08:15			48		131		179		20:15			25		18		43	
08:30			57		122		179		20:30			24		12		36	
08:45			54	217	143	504	197	721	20:45			12	89	15	68	27	157
09:00			52		114		166		21:00			21		14		35	
09:15			49		94		143		21:15			16		3		19	
09:30			49		63		112		21:30			13		12		25	
09:45			53	203	82	353	135	556	21:45			14	64	59	88	73	152
10:00			39		63		102		22:00			14		67		81	
10:15			48		54		102		22:15			8		51		59	
10:30			42		64		106		22:30			11		41		52	
10:45			46	175	65	246	111	421	22:45			7	40	31	190	38	230
11:00			55		68		123		23:00			6		23		29	
11:15			56		77		133		23:15			4		17		21	
11:30			64		79		143		23:30			4		25		29	
11:45			80	255	83	307	163	562	23:45			7	21	15	80	22	101
TOTALS				1054		1932		2986	TOTALS				3044		2353		5397
SPLIT %				35.3%		64.7%		35.6%	SPLIT %				56.4%		43.6%		64.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,098	4,285	8,383

AM Peak Hour			11:45	08:15	08:00	PM Peak Hour			16:15	16:15	16:15
AM Pk Volume			301	510	721	PM Pk Volume			673	321	994
Pk Hr Factor			0.941	0.892	0.915	Pk Hr Factor			0.854	0.967	0.897
7 - 9 Volume	0	0	338	808	1146	4 - 6 Volume	0	0	1173	597	1770
7 - 9 Peak Hour			07:45	08:00	08:00	4 - 6 Peak Hour			16:15	16:15	16:15
7 - 9 Pk Volume	0	0	218	504	721	4 - 6 Pk Volume	0	0	673	321	994
Pk Hr Factor	0.000	0.000	0.940	0.881	0.915	Pk Hr Factor	0.000	0.000	0.854	0.967	0.897

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. Texas St & Mission City Pkwy

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_069

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,886	4,013	7,899

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			4		21		25		12:00			60		79		139	
00:15			6		14		20		12:15			66		58		124	
00:30			2		15		17		12:30			72		51		123	
00:45			1	13	14	64	15	77	12:45			68	266	76	264	144	530
01:00			3		8		11		13:00			70		73		143	
01:15			2		4		6		13:15			61		61		122	
01:30			0		5		5		13:30			59		54		113	
01:45			3	8	6	23	9	31	13:45			71	261	65	253	136	514
02:00			0		7		7		14:00			63		52		115	
02:15			0		5		5		14:15			59		73		132	
02:30			2		9		11		14:30			70		78		148	
02:45			0	2	4	25	4	27	14:45			68	260	64	267	132	527
03:00			0		7		7		15:00			90		75		165	
03:15			0		5		5		15:15			73		61		134	
03:30			0		1		1		15:30			102		61		163	
03:45			1	1	0	13	1	14	15:45			97	362	59	256	156	618
04:00			0		2		2		16:00			130		63		193	
04:15			0		0		0		16:15			100		85		185	
04:30			0		1		1		16:30			115		67		182	
04:45			1	1	1	4	2	5	16:45			103	448	85	300	188	748
05:00			1		6		7		17:00			182		72		254	
05:15			1		0		1		17:15			160		77		237	
05:30			5		5		10		17:30			154		61		215	
05:45			1	8	17	28	18	36	17:45			135	631	48	258	183	889
06:00			6		22		28		18:00			141		29		170	
06:15			4		18		22		18:15			118		31		149	
06:30			13		27		40		18:30			59		30		89	
06:45			21	44	34	101	55	145	18:45			30	348	28	118	58	466
07:00			22		52		74		19:00			35		25		60	
07:15			22		64		86		19:15			25		16		41	
07:30			28		71		99		19:30			31		23		54	
07:45			49	121	98	285	147	406	19:45			16	107	25	89	41	196
08:00			54		87		141		20:00			20		21		41	
08:15			60		137		197		20:15			25		20		45	
08:30			53		127		180		20:30			21		11		32	
08:45			50	217	116	467	166	684	20:45			23	89	12	64	35	153
09:00			49		101		150		21:00			34		17		51	
09:15			37		86		123		21:15			19		6		25	
09:30			41		71		112		21:30			5		16		21	
09:45			63	190	67	325	130	515	21:45			10	68	48	87	58	155
10:00			57		52		109		22:00			13		56		69	
10:15			38		45		83		22:15			5		43		48	
10:30			32		68		100		22:30			9		32		41	
10:45			39	166	56	221	95	387	22:45			5	32	21	152	26	184
11:00			52		68		120		23:00			3		20		23	
11:15			39		72		111		23:15			10		15		25	
11:30			50		67		117		23:30			7		16		23	
11:45			78	219	82	289	160	508	23:45			4	24	9	60	13	84
TOTALS				990		1845		**2835**	**TOTALS**				2896		2168		**5064**
SPLIT %				34.9%		65.1%		**35.9%**	**SPLIT %**				57.2%		42.8%		**64.1%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,886	4,013	7,899

AM Peak Hour			11:45	08:15	**08:15**	**PM Peak Hour**			17:00	16:15	**16:45**
AM Pk Volume			276	481	**693**	**PM Pk Volume**			631	309	**894**
Pk Hr Factor			0.885	0.878	**0.879**	**Pk Hr Factor**			0.867	0.909	**0.880**
7 - 9 Volume	0	0	338	752	**1090**	**4 - 6 Volume**	0	0	1079	558	**1637**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			17:00	16:15	**16:45**
7 - 9 Pk Volume	0	0	217	467	**684**	**4 - 6 Pk Volume**	0	0	631	309	**894**
Pk Hr Factor	0.000	0.000	0.904	0.852	**0.868**	**Pk Hr Factor**	0.000	0.000	0.867	0.909	**0.880**

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. Mission City Pkwy & I-15 SB Off Ramp

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_070

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,246	5,662	11,908

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			10		16		26		12:00			100		137		237	
00:15			11		10		21		12:15			95		86		181	
00:30			6		13		19		12:30			94		88		182	
00:45			6	33	11	50	17	83	12:45			122	411	90	401	212	812
01:00			4		7		11		13:00			115		96		211	
01:15			3		5		8		13:15			94		82		176	
01:30			5		3		8		13:30			101		85		186	
01:45			4	16	3	18	7	34	13:45			83	393	93	356	176	749
02:00			1		1		2		14:00			121		71		192	
02:15			5		0		5		14:15			95		73		168	
02:30			1		3		4		14:30			117		67		184	
02:45			0	7	0	4	0	11	14:45			128	461	70	281	198	742
03:00			1		1		2		15:00			156		68		224	
03:15			2		2		4		15:15			112		61		173	
03:30			1		0		1		15:30			158		66		224	
03:45			0	4	1	4	1	8	15:45			187	613	67	262	254	875
04:00			2		2		4		16:00			278		78		356	
04:15			1		3		4		16:15			251		85		336	
04:30			0		2		2		16:30			296		83		379	
04:45			3	6	18	25	21	31	16:45			236	1061	96	342	332	1403
05:00			2		11		13		17:00			309		91		400	
05:15			1		14		15		17:15			227		83		310	
05:30			5		18		23		17:30			220		75		295	
05:45			4	12	27	70	31	82	17:45			173	929	61	310	234	1239
06:00			3		33		36		18:00			206		50		256	
06:15			6		44		50		18:15			134		30		164	
06:30			11		63		74		18:30			109		40		149	
06:45			14	34	97	237	111	271	18:45			67	516	37	157	104	673
07:00			21		111		132		19:00			74		25		99	
07:15			32		132		164		19:15			54		21		75	
07:30			28		150		178		19:30			48		24		72	
07:45			52	133	191	584	243	717	19:45			40	216	18	88	58	304
08:00			74		178		252		20:00			43		25		68	
08:15			53		194		247		20:15			38		20		58	
08:30			69		205		274		20:30			37		11		48	
08:45			61	257	208	785	269	1042	20:45			35	153	14	70	49	223
09:00			58		179		237		21:00			29		25		54	
09:15			53		128		181		21:15			31		6		37	
09:30			68		90		158		21:30			20		18		38	
09:45			55	234	106	503	161	737	21:45			23	103	71	120	94	223
10:00			57		81		138		22:00			18		79		97	
10:15			66		67		133		22:15			14		59		73	
10:30			50		74		124		22:30			19		50		69	
10:45			55	228	72	294	127	522	22:45			11	62	37	225	48	287
11:00			75		90		165		23:00			17		30		47	
11:15			73		91		164		23:15			5		27		32	
11:30			81		92		173		23:30			8		31		39	
11:45			94	323	93	366	187	689	23:45			11	41	22	110	33	151
TOTALS				1287		2940		4227	TOTALS				4959		2722		7681
SPLIT %				30.4%		69.6%		35.5%	SPLIT %				64.6%		35.4%		64.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,246	5,662	11,908

AM Peak Hour			11:45	08:15	08:00	PM Peak Hour			16:15	12:00	16:15
AM Pk Volume			383	786	1042	PM Pk Volume			1092	401	1447
Pk Hr Factor			0.958	0.945	0.951	Pk Hr Factor			0.883	0.732	0.904
7 - 9 Volume	0	0	390	1369	1759	4 - 6 Volume	0	0	1990	652	2642
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	16:15	16:15
7 - 9 Pk Volume	0	0	257	785	1042	4 - 6 Pk Volume	0	0	1092	355	1447
Pk Hr Factor	0.000	0.000	0.868	0.944	0.951	Pk Hr Factor	0.000	0.000	0.883	0.924	0.904

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. Mission City Pkwy & I-15 SB Off Ramp

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_070

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,985	5,604	11,589

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			15		25		40		12:00			82		98		180	
00:15			8		14		22		12:15			95		102		197	
00:30			4		18		22		12:30			100		87		187	
00:45			2	29	16	73	18	102	12:45			111	388	85	372	196	760
01:00			6		10		16		13:00			95		90		185	
01:15			5		7		12		13:15			89		77		166	
01:30			0		6		6		13:30			92		74		166	
01:45			4	15	6	29	10	44	13:45			102	378	85	326	187	704
02:00			2		8		10		14:00			125		65		190	
02:15			5		6		11		14:15			97		59		156	
02:30			2		12		14		14:30			109		58		167	
02:45			1	10	4	30	5	40	14:45			98	429	68	250	166	679
03:00			1		10		11		15:00			151		64		215	
03:15			0		7		7		15:15			108		52		160	
03:30			0		14		14		15:30			171		59		230	
03:45			1	2	11	42	12	44	15:45			146	576	71	246	217	822
04:00			0		15		15		16:00			210		76		286	
04:15			0		1		1		16:15			181		62		243	
04:30			0		5		5		16:30			231		82		313	
04:45			2	2	23	44	25	46	16:45			221	843	77	297	298	1140
05:00			0		12		12		17:00			326		88		414	
05:15			3		19		22		17:15			267		61		328	
05:30			5		18		23		17:30			267		60		327	
05:45			1	9	26	75	27	84	17:45			217	1077	58	267	275	1344
06:00			4		32		36		18:00			215		49		264	
06:15			5		44		49		18:15			179		42		221	
06:30			10		74		84		18:30			106		44		150	
06:45			15	34	122	272	137	306	18:45			54	554	38	173	92	727
07:00			15		104		119		19:00			59		27		86	
07:15			17		131		148		19:15			45		20		65	
07:30			28		162		190		19:30			46		16		62	
07:45			38	98	187	584	225	682	19:45			36	186	27	90	63	276
08:00			65		202		267		20:00			30		21		51	
08:15			63		222		285		20:15			41		20		61	
08:30			67		182		249		20:30			26		16		42	
08:45			54	249	180	786	234	1035	20:45			43	140	10	67	53	207
09:00			65		149		214		21:00			63		6		69	
09:15			41		110		151		21:15			26		10		36	
09:30			47		94		141		21:30			20		13		33	
09:45			60	213	102	455	162	668	21:45			12	121	76	105	88	226
10:00			70		67		137		22:00			26		90		116	
10:15			47		66		113		22:15			17		56		73	
10:30			49		68		117		22:30			14		44		58	
10:45			56	222	78	279	134	501	22:45			14	71	49	239	63	310
11:00			65		77		142		23:00			18		35		53	
11:15			60		99		159		23:15			12		22		34	
11:30			69		102		171		23:30			10		40		50	
11:45			96	290	97	375	193	665	23:45			9	49	31	128	40	177
TOTALS				1173		3044		4217	TOTALS				4812		2560		7372
SPLIT %				27.8%		72.2%		36.4%	SPLIT %				65.3%		34.7%		63.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,985	5,604	11,589

AM Peak Hour			11:45	07:45	08:00	PM Peak Hour			16:45	12:00	16:45
AM Pk Volume			373	793	1035	PM Pk Volume			1081	372	1367
Pk Hr Factor			0.933	0.893	0.908	Pk Hr Factor			0.829	0.912	0.825
7 - 9 Volume	0	0	347	1370	1717	4 - 6 Volume	0	0	1920	564	2484
7 - 9 Peak Hour			08:00	07:45	08:00	4 - 6 Peak Hour			16:45	16:15	16:45
7 - 9 Pk Volume	0	0	249	793	1035	4 - 6 Pk Volume	0	0	1081	309	1367
Pk Hr Factor	0.000	0.000	0.929	0.893	0.908	Pk Hr Factor	0.000	0.000	0.829	0.878	0.825

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. I-15 SB Off Ramp & I-15 SB On Ramp

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_071

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,365	4,011	9,376

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			7		3		10		12:00			85		58		143	
00:15			4		2		6		12:15			70		55		125	
00:30			4		2		6		12:30			66		61		127	
00:45			2	17	1	8	3	25	12:45			61	282	72	246	133	528
01:00			2		1		3		13:00			74		68		142	
01:15			2		0		2		13:15			69		75		144	
01:30			1		0		1		13:30			74		64		138	
01:45			3	8	1	2	4	10	13:45			57	274	60	267	117	541
02:00			1		1		2		14:00			67		60		127	
02:15			0		1		1		14:15			65		55		120	
02:30			0		2		2		14:30			65		42		107	
02:45			0	1	0	4	0	5	14:45			98	295	44	201	142	496
03:00			2		0		2		15:00			112		64		176	
03:15			1		2		3		15:15			111		46		157	
03:30			0		0		0		15:30			151		49		200	
03:45			0	3	0	2	0	5	15:45			201	575	52	211	253	786
04:00			2		0		2		16:00			218		57		275	
04:15			0		3		3		16:15			229		40		269	
04:30			0		2		2		16:30			297		45		342	
04:45			3	5	12	17	15	22	16:45			275	1019	54	196	329	1215
05:00			1		8		9		17:00			326		50		376	
05:15			1		11		12		17:15			284		46		330	
05:30			4		13		17		17:30			233		44		277	
05:45			3	9	20	52	23	61	17:45			212	1055	46	186	258	1241
06:00			4		19		23		18:00			218		28		246	
06:15			3		30		33		18:15			168		21		189	
06:30			2		35		37		18:30			106		28		134	
06:45			10	19	69	153	79	172	18:45			59	551	28	105	87	656
07:00			14		83		97		19:00			59		19		78	
07:15			22		112		134		19:15			46		23		69	
07:30			19		121		140		19:30			43		27		70	
07:45			24	79	167	483	191	562	19:45			27	175	12	81	39	256
08:00			24		179		203		20:00			28		17		45	
08:15			41		174		215		20:15			26		12		38	
08:30			32		171		203		20:30			27		14		41	
08:45			26	123	191	715	217	838	20:45			26	107	8	51	34	158
09:00			21		156		177		21:00			20		20		40	
09:15			44		104		148		21:15			25		6		31	
09:30			34		62		96		21:30			15		17		32	
09:45			40	139	89	411	129	550	21:45			18	78	4	47	22	125
10:00			51		76		127		22:00			16		4		20	
10:15			44		62		106		22:15			20		5		25	
10:30			45		67		112		22:30			12		1		13	
10:45			41	181	75	280	116	461	22:45			9	57	4	14	13	71
11:00			66		80		146		23:00			10		3		13	
11:15			68		63		131		23:15			5		2		7	
11:30			78		68		146		23:30			11		1		12	
11:45			69	281	60	271	129	552	23:45			6	32	2	8	8	40
TOTALS				865		2398		3263	TOTALS				4500		1613		6113
SPLIT %				26.5%		73.5%		34.8%	SPLIT %				73.6%		26.4%		65.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,365	4,011	9,376

AM Peak Hour			11:30	08:00	08:00	PM Peak Hour			16:30	12:45	16:30
AM Pk Volume			302	715	838	PM Pk Volume			1182	279	1377
Pk Hr Factor			0.888	0.936	0.965	Pk Hr Factor			0.906	0.930	0.916
7 - 9 Volume	0	0	202	1198	1400	4 - 6 Volume	0	0	2074	382	2456
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	16:00	16:30
7 - 9 Pk Volume	0	0	123	715	838	4 - 6 Pk Volume	0	0	1182	196	1377
Pk Hr Factor	0.000	0.000	0.750	0.936	0.965	Pk Hr Factor	0.000	0.000	0.906	0.860	0.916

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. I-15 SB Off Ramp & I-15 SB On Ramp

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_071

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,607	4,170	9,777

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			13		4		17		12:00			90		53		143	
00:15			3		1		4		12:15			72		63		135	
00:30			6		2		8		12:30			62		53		115	
00:45			3	25	1	8	4	33	12:45			67	291	77	246	144	537
01:00			5		2		7		13:00			86		76		162	
01:15			4		0		4		13:15			76		72		148	
01:30			3		1		4		13:30			70		71		141	
01:45			3	15	2	5	5	20	13:45			61	293	67	286	128	579
02:00			3		0		3		14:00			87		43		130	
02:15			0		1		1		14:15			77		67		144	
02:30			1		1		2		14:30			74		48		122	
02:45			1	5	1	3	2	8	14:45			73	311	50	208	123	519
03:00			0		1		1		15:00			127		54		181	
03:15			2		0		2		15:15			89		45		134	
03:30			4		1		5		15:30			187		40		227	
03:45			0	6	0	2	0	8	15:45			199	602	56	195	255	797
04:00			2		0		2		16:00			254		64		318	
04:15			1		3		4		16:15			246		32		278	
04:30			0		2		2		16:30			258		48		306	
04:45			3	6	13	18	16	24	16:45			269	1027	53	197	322	1224
05:00			1		9		10		17:00			320		53		373	
05:15			1		14		15		17:15			339		40		379	
05:30			1		13		14		17:30			253		49		302	
05:45			3	6	21	57	24	63	17:45			241	1153	43	185	284	1338
06:00			0		24		24		18:00			229		30		259	
06:15			4		32		36		18:15			194		41		235	
06:30			10		46		56		18:30			118		35		153	
06:45			9	23	84	186	93	209	18:45			62	603	28	134	90	737
07:00			15		88		103		19:00			55		16		71	
07:15			20		125		145		19:15			42		15		57	
07:30			18		143		161		19:30			37		10		47	
07:45			39	92	175	531	214	623	19:45			34	168	13	54	47	222
08:00			36		204		240		20:00			27		18		45	
08:15			33		195		228		20:15			29		34		63	
08:30			33		193		226		20:30			22		9		31	
08:45			37	139	192	784	229	923	20:45			27	105	6	67	33	172
09:00			32		138		170		21:00			38		8		46	
09:15			31		88		119		21:15			17		11		28	
09:30			42		93		135		21:30			20		8		28	
09:45			36	141	91	410	127	551	21:45			9	84	2	29	11	113
10:00			41		75		116		22:00			22		1		23	
10:15			51		82		133		22:15			14		0		14	
10:30			36		59		95		22:30			17		5		22	
10:45			51	179	65	281	116	460	22:45			11	64	7	13	18	77
11:00			48		59		107		23:00			9		4		13	
11:15			56		78		134		23:15			7		5		12	
11:30			63		55		118		23:30			10		2		12	
11:45			70	237	64	256	134	493	23:45			6	32	4	15	10	47
TOTALS				874		2541		3415	TOTALS				4733		1629		6362
SPLIT %				25.6%		74.4%		34.9%	SPLIT %				74.4%		25.6%		65.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,607	4,170	9,777

AM Peak Hour			11:30	08:00	08:00	PM Peak Hour			16:30	12:45	16:30
AM Pk Volume			295	784	923	PM Pk Volume			1186	296	1380
Pk Hr Factor			0.819	0.961	0.961	Pk Hr Factor			0.875	0.961	0.910
7 - 9 Volume	0	0	231	1315	1546	4 - 6 Volume	0	0	2180	382	2562
7 - 9 Peak Hour			07:45	08:00	08:00	4 - 6 Peak Hour			16:30	16:00	16:30
7 - 9 Pk Volume	0	0	141	784	923	4 - 6 Pk Volume	0	0	1186	197	1380
Pk Hr Factor	0.000	0.000	0.904	0.961	0.961	Pk Hr Factor	0.000	0.000	0.875	0.770	0.910

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. I-15 SB On Ramp & Fairmount Ave

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_072

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,328	1,860	6,188

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			6		3		9		12:00			42		26		68	
00:15			4		1		5		12:15			50		29		79	
00:30			2		1		3		12:30			52		39		91	
00:45			3	15	4	9	7	24	12:45			58	202	46	140	104	342
01:00			1		0		1		13:00			40		45		85	
01:15			2		2		4		13:15			67		39		106	
01:30			2		2		4		13:30			51		36		87	
01:45			3	8	2	6	5	14	13:45			53	211	40	160	93	371
02:00			2		2		4		14:00			43		31		74	
02:15			1		3		4		14:15			42		30		72	
02:30			0		2		2		14:30			45		22		67	
02:45			0	3	0	7	0	10	14:45			74	204	22	105	96	309
03:00			0		0		0		15:00			96		30		126	
03:15			1		0		1		15:15			111		22		133	
03:30			1		1		2		15:30			121		23		144	
03:45			0	2	1	2	1	4	15:45			168	496	22	97	190	593
04:00			4		2		6		16:00			220		28		248	
04:15			4		4		8		16:15			181		24		205	
04:30			0		0		0		16:30			232		15		247	
04:45			3	11	4	10	7	21	16:45			236	869	24	91	260	960
05:00			0		1		1		17:00			251		15		266	
05:15			0		0		0		17:15			235		17		252	
05:30			6		4		10		17:30			187		17		204	
05:45			5	11	5	10	10	21	17:45			190	863	14	63	204	926
06:00			3		6		9		18:00			175		16		191	
06:15			4		16		20		18:15			138		8		146	
06:30			4		14		18		18:30			87		9		96	
06:45			11	22	23	59	34	81	18:45			46	446	8	41	54	487
07:00			15		33		48		19:00			41		8		49	
07:15			13		53		66		19:15			52		7		59	
07:30			9		66		75		19:30			37		8		45	
07:45			11	48	77	229	88	277	19:45			22	152	5	28	27	180
08:00			19		85		104		20:00			25		6		31	
08:15			19		78		97		20:15			25		9		34	
08:30			33		86		119		20:30			21		0		21	
08:45			33	104	66	315	99	419	20:45			25	96	5	20	30	116
09:00			16		64		80		21:00			17		6		23	
09:15			31		43		74		21:15			22		5		27	
09:30			33		34		67		21:30			24		4		28	
09:45			33	113	34	175	67	288	21:45			14	77	2	17	16	94
10:00			41		31		72		22:00			13		4		17	
10:15			28		40		68		22:15			10		4		14	
10:30			41		29		70		22:30			7		5		12	
10:45			33	143	35	135	68	278	22:45			13	43	3	16	16	59
11:00			35		29		64		23:00			9		2		11	
11:15			32		23		55		23:15			7		1		8	
11:30			50		36		86		23:30			5		1		6	
11:45			48	165	33	121	81	286	23:45			3	24	0	4	3	28
TOTALS				645		1078		**1723**	**TOTALS**				3683		782		**4465**
SPLIT %				37.4%		62.6%		**27.8%**	**SPLIT %**				82.5%		17.5%		**72.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,328	1,860	6,188

AM Peak Hour			11:45	07:45	**08:00**	**PM Peak Hour**			16:30	12:30	**16:30**
AM Pk Volume			192	326	**419**	**PM Pk Volume**			954	169	**1025**
Pk Hr Factor			0.923	0.948	**0.880**	**Pk Hr Factor**			0.950	0.918	**0.963**
7 - 9 Volume	0	0	152	544	**696**	**4 - 6 Volume**	0	0	1732	154	**1886**
7 - 9 Peak Hour			08:00	07:45	**08:00**	**4 - 6 Peak Hour**			16:30	16:00	**16:30**
7 - 9 Pk Volume	0	0	104	326	**419**	**4 - 6 Pk Volume**	0	0	954	91	**1025**
Pk Hr Factor	0.000	0.000	0.788	0.948	**0.880**	**Pk Hr Factor**	0.000	0.000	0.950	0.813	**0.963**

Prepared by NDS/ATD

VOLUME

Camino Del Rio South Bet. I-15 SB On Ramp & Fairmount Ave

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_072

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,666	1,880	6,546

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					10		1		11		12:00					60		22		82	
00:15					4		2		6		12:15					48		27		75	
00:30					5		0		5		12:30					44		31		75	
00:45					3	22	2	5	5	27	12:45					48	200	28	108	76	308
01:00					1		0		1		13:00					46		42		88	
01:15					3		0		3		13:15					55		37		92	
01:30					2		1		3		13:30					69		34		103	
01:45					1	7	0	1	1	8	13:45					53	223	33	146	86	369
02:00					2		0		2		14:00					41		24		65	
02:15					0		0		0		14:15					55		35		90	
02:30					3		1		4		14:30					56		33		89	
02:45					0	5	0	1	0	6	14:45					55	207	26	118	81	325
03:00					0		0		0		15:00					83		21		104	
03:15					2		0		2		15:15					81		19		100	
03:30					3		2		5		15:30					169		25		194	
03:45					0	5	1	3	1	8	15:45					186	519	35	100	221	619
04:00					1		0		1		16:00					232		28		260	
04:15					1		1		2		16:15					223		29		252	
04:30					4		2		6		16:30					193		12		205	
04:45					1	7	4	7	5	14	16:45					231	879	14	83	245	962
05:00					0		2		2		17:00					255		13		268	
05:15					2		1		3		17:15					270		20		290	
05:30					3		2		5		17:30					229		12		241	
05:45					5	10	3	8	8	18	17:45					216	970	10	55	226	1025
06:00					3		8		11		18:00					212		14		226	
06:15					6		8		14		18:15					179		12		191	
06:30					7		14		21		18:30					111		13		124	
06:45					11	27	33	63	44	90	18:45					63	565	18	57	81	622
07:00					7		37		44		19:00					55		8		63	
07:15					14		57		71		19:15					31		7		38	
07:30					9		90		99		19:30					26		9		35	
07:45					25	55	86	270	111	325	19:45					32	144	6	30	38	174
08:00					23		100		123		20:00					34		8		42	
08:15					30		98		128		20:15					40		6		46	
08:30					29		87		116		20:30					24		3		27	
08:45					35	117	70	355	105	472	20:45					21	119	4	21	25	140
09:00					36		60		96		21:00					23		7		30	
09:15					32		43		75		21:15					15		9		24	
09:30					26		57		83		21:30					18		4		22	
09:45					32	126	33	193	65	319	21:45					9	65	1	21	10	86
10:00					40		30		70		22:00					12		2		14	
10:15					32		32		64		22:15					7		2		9	
10:30					26		34		60		22:30					14		6		20	
10:45					46	144	23	119	69	263	22:45					7	40	2	12	9	52
11:00					48		21		69		23:00					9		1		10	
11:15					34		36		70		23:15					7		3		10	
11:30					43		15		58		23:30					9		0		9	
11:45					52	177	27	99	79	276	23:45					8	33	1	5	9	38
TOTALS						702		1124		1826	TOTALS						3964		756		4720
SPLIT %						38.4%		61.6%		27.9%	SPLIT %						84.0%		16.0%		72.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,666	1,880	6,546

AM Peak Hour			11:45	07:30	07:45	PM Peak Hour			16:45	13:00	16:45
AM Pk Volume			204	374	478	PM Pk Volume			985	146	1044
Pk Hr Factor			0.850	0.935	0.934	Pk Hr Factor			0.912	0.869	0.900
7 - 9 Volume	0	0	172	625	797	4 - 6 Volume	0	0	1849	138	1987
7 - 9 Peak Hour			08:00	07:30	07:45	4 - 6 Peak Hour			16:45	16:00	16:45
7 - 9 Pk Volume	0	0	117	374	478	4 - 6 Pk Volume	0	0	985	83	1044
Pk Hr Factor	0.000	0.000	0.836	0.935	0.934	Pk Hr Factor	0.000	0.000	0.912	0.716	0.900

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Morena Boulevard, From Tecolote Road to West Morena Boulevard

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	13		12					12:00	124		127				
00:15	17		15					12:15	152		150				
00:30	11		6					12:30	125		115				
00:45	6	47	5	38			85	12:45	135	536	134	526			1062
01:00	2		4					13:00	140		144				
01:15	3		7					13:15	138		153				
01:30	8		18					13:30	135		122				
01:45	2	15	6	35			50	13:45	108	521	111	530			1051
02:00	5		2					14:00	98		115				
02:15	4		4					14:15	124		112				
02:30	2		5					14:30	139		124				
02:45	2	13	2	13			26	14:45	135	496	140	491			987
03:00	1		6					15:00	135		136				
03:15	6		2					15:15	128		171				
03:30	3		2					15:30	148		176				
03:45	6	16	1	11			27	15:45	157	568	163	646			1214
04:00	1		5					16:00	157		156				
04:15	16		6					16:15	116		143				
04:30	6		5					16:30	133		184				
04:45	9	32	8	24			56	16:45	148	554	201	684			1238
05:00	12		9					17:00	143		202				
05:15	17		17					17:15	150		166				
05:30	20		24					17:30	132		150				
05:45	29	78	20	70			148	17:45	137	562	134	652			1214
06:00	33		25					18:00	131		132				
06:15	57		38					18:15	134		131				
06:30	89		44					18:30	118		126				
06:45	110	289	54	161			450	18:45	162	545	107	496			1041
07:00	119		76					19:00	146		110				
07:15	144		86					19:15	122		92				
07:30	180		94					19:30	108		79				
07:45	209	652	129	385			1037	19:45	68	444	86	367			811
08:00	178		134					20:00	74		91				
08:15	171		147					20:15	69		69				
08:30	205		131					20:30	66		50				
08:45	201	755	124	536			1291	20:45	99	308	57	267			575
09:00	137		99					21:00	76		42				
09:15	133		95					21:15	82		42				
09:30	119		100					21:30	67		36				
09:45	100	489	108	402			891	21:45	47	272	40	160			432
10:00	127		118					22:00	52		32				
10:15	106		88					22:15	38		41				
10:30	91		124					22:30	21		42				
10:45	91	415	115	445			860	22:45	40	151	21	136			287
11:00	104		103					23:00	19		32				
11:15	128		113					23:15	11		18				
11:30	134		138					23:30	15		15				
11:45	119	485	128	482			967	23:45	11	56	11	76			132
Total Vol.		3286		2602			**5888**			5013		5031			**10044**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	8299	7633			**15932**

	AM			PM		
Split %	55.8%	44.2%	**37.0%**	49.9%	50.1%	**63.0%**
Peak Hour	07:45	11:30	**07:45**	15:15	16:30	**16:30**
Volume	763	543	**1304**	590	753	**1327**
P.H.F.	0.91	0.91	**0.96**	0.94	0.93	**0.95**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Morena Boulevard, From Tecolote Road to West Morena Boulevard

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	12		11					12:00	163		152				
00:15	7		14					12:15	152		151				
00:30	7		8					12:30	140		150				
00:45	1	27	12	45			72	12:45	156	611	149	602			1213
01:00	5		5					13:00	124		125				
01:15	4		5					13:15	121		132				
01:30	7		6					13:30	127		124				
01:45	7	23	3	19			42	13:45	127	499	127	508			1007
02:00	7		8					14:00	132		140				
02:15	3		8					14:15	151		119				
02:30	4		2					14:30	128		135				
02:45	2	16	4	22			38	14:45	125	536	139	533			1069
03:00	4		8					15:00	122		157				
03:15	3		4					15:15	157		156				
03:30	4		3					15:30	139		174				
03:45	8	19	3	18			37	15:45	139	557	190	677			1234
04:00	4		7					16:00	162		165				
04:15	8		10					16:15	133		189				
04:30	6		5					16:30	134		199				
04:45	8	26	7	29			55	16:45	135	564	229	782			1346
05:00	13		8					17:00	153		213				
05:15	21		16					17:15	183		217				
05:30	24		14					17:30	150		170				
05:45	35	93	24	62			155	17:45	142	628	159	759			1387
06:00	31		35					18:00	126		137				
06:15	56		28					18:15	115		108				
06:30	82		47					18:30	120		124				
06:45	108	277	53	163			440	18:45	126	487	102	471			958
07:00	134		82					19:00	127		97				
07:15	174		120					19:15	109		95				
07:30	164		107					19:30	103		104				
07:45	168	640	102	411			1051	19:45	95	434	79	375			809
08:00	155		102					20:00	87		61				
08:15	184		99					20:15	80		56				
08:30	197		107					20:30	62		56				
08:45	182	718	139	447			1165	20:45	86	315	73	246			561
09:00	185		109					21:00	86		51				
09:15	136		102					21:15	84		48				
09:30	111		96					21:30	52		48				
09:45	115	547	102	409			956	21:45	58	280	46	193			473
10:00	113		113					22:00	52		49				
10:15	103		129					22:15	46		45				
10:30	103		106					22:30	34		42				
10:45	120	439	104	452			891	22:45	25	157	25	161			318
11:00	98		110					23:00	28		16				
11:15	120		144					23:15	32		30				
11:30	109		120					23:30	14		21				
11:45	132	459	141	515			974	23:45	18	92	14	81			173
Total Vol.		3284		2592			**5876**			5160		5388			**10548**

Daily Totals

NB	SB	EB	WB	**Combined**
8444	7980			**16424**

	AM			PM		
Split %	55.9%	44.1%	**35.8%**	48.9%	51.1%	**64.2%**
Peak Hour	08:15	11:45	**08:15**	17:00	16:30	**16:30**
Volume	748	594	**1202**	628	858	**1463**
P.H.F.	0.95	0.98	**0.94**	0.87	0.94	**0.91**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Morena Boulevard, From West Morena Boulevard to Linda Vista Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	10		10					12:00	151		157				
00:15	15		8					12:15	154		160				
00:30	7		7					12:30	139		139				
00:45	6	38	11	36			74	12:45	150	594	153	609			1203
01:00	6		7					13:00	142		164				
01:15	5		7					13:15	127		172				
01:30	6		15					13:30	153		164				
01:45	13	30	5	34			64	13:45	128	550	160	660			1210
02:00	3		3					14:00	125		146				
02:15	5		1					14:15	122		155				
02:30	1		5					14:30	119		135				
02:45	5	14	3	12			26	14:45	126	492	169	605			1097
03:00	4		7					15:00	137		158				
03:15	6		4					15:15	123		173				
03:30	6		3					15:30	119		196				
03:45	8	24	5	19			43	15:45	124	503	203	730			1233
04:00	2		5					16:00	107		225				
04:15	17		5					16:15	110		206				
04:30	9		8					16:30	96		264				
04:45	22	50	14	32			82	16:45	125	438	201	896			1334
05:00	16		16					17:00	124		263				
05:15	35		22					17:15	94		230				
05:30	30		25					17:30	90		236				
05:45	48	129	30	93			222	17:45	111	419	214	943			1362
06:00	60		28					18:00	85		195				
06:15	70		34					18:15	103		151				
06:30	130		56					18:30	100		152				
06:45	180	440	53	171			611	18:45	104	392	116	614			1006
07:00	200		60					19:00	97		140				
07:15	251		76					19:15	67		85				
07:30	274		89					19:30	66		88				
07:45	345	1070	102	327			1397	19:45	46	276	91	404			680
08:00	320		108					20:00	53		73				
08:15	261		108					20:15	43		62				
08:30	252		96					20:30	58		78				
08:45	251	1084	118	430			1514	20:45	52	206	74	287			493
09:00	197		122					21:00	31		63				
09:15	172		119					21:15	55		53				
09:30	154		107					21:30	38		47				
09:45	128	651	107	455			1106	21:45	29	153	42	205			358
10:00	136		115					22:00	50		37				
10:15	151		110					22:15	28		37				
10:30	134		143					22:30	18		50				
10:45	134	555	126	494			1049	22:45	20	116	32	156			272
11:00	118		131					23:00	20		52				
11:15	145		139					23:15	9		23				
11:30	124		148					23:30	13		20				
11:45	146	533	130	548			1081	23:45	11	53	9	104			157
Total Vol.		4618		2651			**7269**			4192		6213			**10405**

Daily Totals

NB	SB	EB	WB	**Combined**
8810	8864			**17674**

	AM			PM		
Split %	63.5%	36.5%	**41.1%**	40.3%	59.7%	**58.9%**
Peak Hour	07:30	11:30	**07:30**	12:00	16:30	**16:30**
Volume	1200	595	**1607**	594	958	**1397**
P.H.F.	0.87	0.93	**0.90**	0.95	0.91	**0.90**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Morena Boulevard, From West Morena Boulevard to Linda Vista Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	17		19					12:00	142		162				
00:15	9		16					12:15	149		165				
00:30	8		8					12:30	132		171				
00:45	6	40	14	57			97	12:45	147	570	159	657			1227
01:00	3		14					13:00	144		161				
01:15	8		8					13:15	136		157				
01:30	7		13					13:30	144		121				
01:45	5	23	5	40			63	13:45	145	569	142	581			1150
02:00	9		5					14:00	143		148				
02:15	3		10					14:15	132		138				
02:30	2		2					14:30	115		178				
02:45	5	19	6	23			42	14:45	144	534	173	637			1171
03:00	5		7					15:00	126		180				
03:15	4		6					15:15	134		164				
03:30	9		4					15:30	115		256				
03:45	6	24	3	20			44	15:45	119	494	205	805			1299
04:00	5		6					16:00	112		237				
04:15	12		12					16:15	95		204				
04:30	14		9					16:30	96		263				
04:45	17	48	9	36			84	16:45	133	436	231	935			1371
05:00	15		13					17:00	117		286				
05:15	26		22					17:15	112		268				
05:30	32		25					17:30	90		240				
05:45	45	118	28	88			206	17:45	113	432	215	1009			1441
06:00	71		39					18:00	87		208				
06:15	80		31					18:15	110		160				
06:30	110		46					18:30	85		146				
06:45	196	457	50	166			623	18:45	87	369	102	616			985
07:00	208		75					19:00	70		153				
07:15	240		78					19:15	79		104				
07:30	239		85					19:30	68		98				
07:45	222	909	105	343			1252	19:45	62	279	74	429			708
08:00	208		96					20:00	63		70				
08:15	202		99					20:15	60		55				
08:30	244		88					20:30	55		58				
08:45	283	937	128	411			1348	20:45	47	225	69	252			477
09:00	241		140					21:00	44		70				
09:15	185		139					21:15	34		46				
09:30	152		120					21:30	28		46				
09:45	152	730	116	515			1245	21:45	58	164	46	208			372
10:00	145		124					22:00	39		47				
10:15	126		128					22:15	28		49				
10:30	112		126					22:30	24		34				
10:45	112	495	153	531			1026	22:45	15	106	29	159			265
11:00	118		146					23:00	23		26				
11:15	144		148					23:15	17		37				
11:30	127		152					23:30	16		16				
11:45	154	543	141	587			1130	23:45	20	76	19	98			174
Total Vol.		4343		2817			**7160**			4254		6386			**10640**

Daily Totals

NB	SB	EB	WB	**Combined**
8597	9203			**17800**

	AM			**PM**		
Split %	60.7%	39.3%	**40.2%**	40.0%	60.0%	**59.8%**
Peak Hour	08:15	11:45	**08:30**	12:15	16:30	**16:30**
Volume	970	639	**1448**	572	1048	**1506**
P.H.F.	0.86	0.93	**0.88**	0.96	0.92	**0.93**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Morena Boulevard, From Linda Vista Road to I-8 WB Offramp

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	28		36					12:00	281		355				
00:15	30		27					12:15	318		383				
00:30	24		23					12:30	306		318				
00:45	16	98	20	106			204	12:45	324	1229	311	1367			2596
01:00	21		20					13:00	317		349				
01:15	13		20					13:15	291		356				
01:30	19		30					13:30	330		350				
01:45	21	74	16	86			160	13:45	254	1192	320	1375			2567
02:00	9		14					14:00	285		295				
02:15	7		7					14:15	249		382				
02:30	12		22					14:30	282		372				
02:45	9	37	11	54			91	14:45	299	1115	392	1441			2556
03:00	7		16					15:00	317		406				
03:15	10		13					15:15	346		394				
03:30	17		11					15:30	329		425				
03:45	16	50	16	56			106	15:45	317	1309	457	1682			2991
04:00	15		12					16:00	326		497				
04:15	34		17					16:15	311		448				
04:30	26		37					16:30	281		479				
04:45	58	133	53	119			252	16:45	321	1239	463	1887			3126
05:00	55		45					17:00	360		546				
05:15	86		65					17:15	343		477				
05:30	111		68					17:30	258		531				
05:45	129	381	100	278			659	17:45	305	1266	525	2079			3345
06:00	148		122					18:00	248		447				
06:15	154		123					18:15	248		369				
06:30	209		181					18:30	252		391				
06:45	278	789	223	649			1438	18:45	253	1001	326	1533			2534
07:00	309		226					19:00	218		391				
07:15	385		283					19:15	209		327				
07:30	441		304					19:30	185		277				
07:45	544	1679	316	1129			2808	19:45	167	779	220	1215			1994
08:00	499		322					20:00	144		222				
08:15	444		332					20:15	157		223				
08:30	506		320					20:30	174		248				
08:45	499	1948	326	1300			3248	20:45	178	653	241	934			1587
09:00	349		302					21:00	130		226				
09:15	338		261					21:15	145		161				
09:30	343		238					21:30	127		160				
09:45	300	1330	251	1052			2382	21:45	118	520	119	666			1186
10:00	249		254					22:00	120		123				
10:15	261		250					22:15	95		100				
10:30	283		297					22:30	70		103				
10:45	254	1047	262	1063			2110	22:45	86	371	116	442			813
11:00	244		284					23:00	77		103				
11:15	266		324					23:15	62		64				
11:30	288		302					23:30	44		60				
11:45	317	1115	279	1189			2304	23:45	44	227	45	272			499
Total Vol.		8681		7081			**15762**			10901		14893			**25794**

Daily Totals

NB	SB	EB	WB	**Combined**
19582	21974			**41556**

	AM			**PM**		
Split %	55.1%	44.9%	**37.9%**	42.3%	57.7%	**62.1%**
Peak Hour	07:45	11:45	**07:45**	15:15	17:00	**17:00**
Volume	1993	1335	**3283**	1318	2079	**3345**
P.H.F.	0.92	0.87	**0.95**	0.95	0.95	**0.92**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Morena Boulevard, From Linda Vista Road to I-8 WB Offramp

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	38		36					12:00	298		405				
00:15	27		44					12:15	336		429				
00:30	28		25					12:30	301		410				
00:45	22	115	33	138			253	12:45	346	1281	354	1598			2879
01:00	26		22					13:00	328		332				
01:15	16		21					13:15	316		334				
01:30	14		21					13:30	317		336				
01:45	15	71	19	83			154	13:45	337	1298	326	1328			2626
02:00	22		22					14:00	329		324				
02:15	10		18					14:15	302		361				
02:30	9		27					14:30	280		410				
02:45	9	50	12	79			129	14:45	337	1248	328	1423			2671
03:00	12		11					15:00	294		446				
03:15	10		10					15:15	326		378				
03:30	16		13					15:30	307		486				
03:45	15	53	10	44			97	15:45	287	1214	388	1698			2912
04:00	13		18					16:00	324		490				
04:15	28		33					16:15	303		467				
04:30	35		28					16:30	288		492				
04:45	63	139	33	112			251	16:45	364	1279	466	1915			3194
05:00	63		51					17:00	336		563				
05:15	81		68					17:15	370		556				
05:30	86		73					17:30	300		563				
05:45	141	371	100	292			663	17:45	337	1343	492	2174			3517
06:00	151		130					18:00	257		470				
06:15	151		143					18:15	301		353				
06:30	195		157					18:30	235		352				
06:45	302	799	212	642			1441	18:45	246	1039	338	1513			2552
07:00	325		243					19:00	181		397				
07:15	429		289					19:15	220		318				
07:30	466		346					19:30	198		323				
07:45	370	1590	397	1275			2865	19:45	211	810	222	1260			2070
08:00	353		301					20:00	187		236				
08:15	367		303					20:15	152		201				
08:30	422		359					20:30	173		177				
08:45	491	1633	326	1289			2922	20:45	127	639	201	815			1454
09:00	426		323					21:00	157		248				
09:15	338		309					21:15	114		202				
09:30	299		255					21:30	125		153				
09:45	299	1362	272	1159			2521	21:45	123	519	158	761			1280
10:00	285		244					22:00	118		144				
10:15	270		269					22:15	100		133				
10:30	249		280					22:30	90		86				
10:45	260	1064	313	1106			2170	22:45	72	380	80	443			823
11:00	250		280					23:00	79		90				
11:15	284		291					23:15	78		83				
11:30	267		313					23:30	54		63				
11:45	295	1096	323	1207			2303	23:45	49	260	65	301			561
Total Vol.		8343		7426			**15769**			11310		15229			**26539**

Daily Totals

NB	SB	EB	WB	**Combined**
19653	22655			**42308**

	AM			**PM**		
Split %	52.9%	47.1%	**37.3%**	42.6%	57.4%	**62.7%**
Peak Hour	08:15	11:45	**08:15**	16:45	17:00	**16:45**
Volume	1706	1567	**3017**	1370	2174	**3518**
P.H.F.	0.87	0.91	**0.92**	0.97	0.97	**0.95**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Morena Boulevard, From I-8 WB Offramp to Taylor St

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	8		3					12:00	88		56				
00:15	9		2					12:15	136		78				
00:30	12		2					12:30	97		58				
00:45	3	32	2	9			41	12:45	109	430	72	264			694
01:00	10		0					13:00	127		72				
01:15	4		3					13:15	108		53				
01:30	9		2					13:30	117		63				
01:45	4	27	4	9			36	13:45	99	451	55	243			694
02:00	0		2					14:00	116		48				
02:15	1		0					14:15	94		78				
02:30	1		1					14:30	107		62				
02:45	2	4	1	4			8	14:45	109	426	64	252			678
03:00	2		1					15:00	131		61				
03:15	6		1					15:15	120		75				
03:30	4		0					15:30	142		74				
03:45	3	15	2	4			19	15:45	140	533	96	306			839
04:00	4		1					16:00	146		91				
04:15	8		3					16:15	137		108				
04:30	3		6					16:30	155		105				
04:45	9	24	11	21			45	16:45	166	604	107	411			1015
05:00	10		7					17:00	179		119				
05:15	13		8					17:15	171		151				
05:30	13		10					17:30	123		138				
05:45	14	50	19	44			94	17:45	147	620	145	553			1173
06:00	18		18					18:00	111		86				
06:15	29		26					18:15	108		72				
06:30	30		28					18:30	102		60				
06:45	64	141	39	111			252	18:45	85	406	54	272			678
07:00	84		40					19:00	85		54				
07:15	127		47					19:15	78		37				
07:30	166		69					19:30	63		38				
07:45	168	545	68	224			769	19:45	60	286	26	155			441
08:00	150		67					20:00	74		28				
08:15	155		69					20:15	68		21				
08:30	194		61					20:30	79		41				
08:45	117	616	65	262			878	20:45	84	305	27	117			422
09:00	88		57					21:00	56		31				
09:15	100		42					21:15	62		27				
09:30	95		34					21:30	63		23				
09:45	67	350	44	177			527	21:45	60	241	13	94			335
10:00	76		41					22:00	51		24				
10:15	81		48					22:15	41		23				
10:30	99		67					22:30	35		26				
10:45	83	339	52	208			547	22:45	35	162	16	89			251
11:00	87		46					23:00	39		31				
11:15	93		55					23:15	27		17				
11:30	108		65					23:30	20		7				
11:45	101	389	54	220			609	23:45	13	99	7	62			161
Total Vol.		2532		1293			**3825**			4563		2818			**7381**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	7095	4111			**11206**

	AM			PM		
Split %	66.2%	33.8%	**34.1%**	61.8%	38.2%	**65.9%**
Peak Hour	07:45	07:30	**07:45**	16:30	17:00	**17:00**
Volume	667	273	**932**	671	553	**1173**
P.H.F.	0.86	0.99	**0.91**	0.95	0.92	**0.91**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Morena Boulevard, From I-8 WB Offramp to Taylor St

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	21		11					12:00	108		71				
00:15	10		6					12:15	136		80				
00:30	8		2					12:30	107		85				
00:45	5	44	6	25			69	12:45	111	462	74	310			772
01:00	10		9					13:00	142		67				
01:15	10		3					13:15	116		56				
01:30	8		10					13:30	126		69				
01:45	4	32	2	24			56	13:45	103	487	55	247			734
02:00	10		9					14:00	127		50				
02:15	4		4					14:15	92		55				
02:30	0		2					14:30	113		56				
02:45	2	16	1	16			32	14:45	120	452	61	222			674
03:00	6		2					15:00	120		78				
03:15	1		0					15:15	138		73				
03:30	2		1					15:30	135		83				
03:45	5	14	1	4			18	15:45	110	503	68	302			805
04:00	4		0					16:00	150		93				
04:15	7		6					16:15	172		111				
04:30	5		7					16:30	142		138				
04:45	13	29	6	19			48	16:45	174	638	98	440			1078
05:00	10		8					17:00	158		146				
05:15	13		12					17:15	189		157				
05:30	11		14					17:30	149		150				
05:45	19	53	20	54			107	17:45	147	643	133	586			1229
06:00	11		23					18:00	118		91				
06:15	24		21					18:15	117		84				
06:30	35		36					18:30	77		68				
06:45	78	148	35	115			263	18:45	109	421	67	310			731
07:00	67		33					19:00	60		57				
07:15	144		51					19:15	91		59				
07:30	195		94					19:30	89		40				
07:45	188	594	101	279			873	19:45	110	350	36	192			542
08:00	189		68					20:00	77		27				
08:15	173		54					20:15	78		27				
08:30	152		64					20:30	71		20				
08:45	144	658	74	260			918	20:45	56	282	26	100			382
09:00	114		80					21:00	70		28				
09:15	101		66					21:15	53		23				
09:30	102		58					21:30	57		21				
09:45	88	405	50	254			659	21:45	59	239	24	96			335
10:00	91		46					22:00	60		22				
10:15	93		54					22:15	43		32				
10:30	88		58					22:30	44		12				
10:45	65	337	61	219			556	22:45	40	187	23	89			276
11:00	78		42					23:00	40		18				
11:15	100		56					23:15	36		22				
11:30	88		49					23:30	32		14				
11:45	107	373	59	206			579	23:45	16	124	10	64			188
Total Vol.		2703		1475			**4178**			4788		2958			**7746**

Daily Totals

NB	SB	EB	WB	**Combined**
7491	4433			**11924**

	AM			**PM**		
Split %	64.7%	35.3%	**35.0%**	61.8%	38.2%	**65.0%**
Peak Hour	07:30	07:30	**07:30**	16:45	17:00	**17:00**
Volume	745	317	**1062**	670	586	**1229**
P.H.F.	0.96	0.78	**0.92**	0.94	0.93	**0.89**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Napa Street, From Morena Boulevard to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	8		10					12:00	106		80				
00:15	5		7					12:15	121		107				
00:30	13		7					12:30	108		63				
00:45	5	31	6	30			61	12:45	89	424	116	366			790
01:00	10		6					13:00	90		94				
01:15	2		3					13:15	84		91				
01:30	6		2					13:30	86		111				
01:45	6	24	4	15			39	13:45	66	326	83	379			705
02:00	4		3					14:00	80		99				
02:15	4		2					14:15	70		75				
02:30	4		0					14:30	105		99				
02:45	2	14	4	9			23	14:45	111	366	133	406			772
03:00	4		4					15:00	90		116				
03:15	5		0					15:15	70		116				
03:30	6		11					15:30	65		128				
03:45	6	21	3	18			39	15:45	77	302	160	520			822
04:00	1		11					16:00	88		141				
04:15	7		10					16:15	90		184				
04:30	17		6					16:30	105		188				
04:45	23	48	18	45			93	16:45	121	404	151	664			1068
05:00	15		21					17:00	135		195				
05:15	32		31					17:15	106		206				
05:30	35		37					17:30	121		193				
05:45	36	118	19	108			226	17:45	88	450	159	753			1203
06:00	63		28					18:00	98		136				
06:15	72		40					18:15	103		124				
06:30	114		46					18:30	88		130				
06:45	160	409	36	150			559	18:45	70	359	124	514			873
07:00	105		51					19:00	65		131				
07:15	166		43					19:15	70		97				
07:30	189		48					19:30	54		83				
07:45	215	675	66	208			883	19:45	88	277	67	378			655
08:00	222		61					20:00	65		80				
08:15	242		72					20:15	70		79				
08:30	265		80					20:30	54		71				
08:45	251	980	85	298			1278	20:45	55	244	73	303			547
09:00	182		64					21:00	40		64				
09:15	157		65					21:15	35		49				
09:30	157		66					21:30	28		34				
09:45	121	617	77	272			889	21:45	29	132	40	187			319
10:00	108		81					22:00	30		40				
10:15	88		78					22:15	26		38				
10:30	98		69					22:30	22		21				
10:45	77	371	61	289			660	22:45	18	96	22	121			217
11:00	84		80					23:00	20		21				
11:15	98		102					23:15	15		19				
11:30	103		104					23:30	19		23				
11:45	111	396	86	372			768	23:45	16	70	10	73			143
Total Vol.		3704		1814			**5518**			3450		4664			**8114**

Daily Totals

NB	SB	EB	WB	**Combined**
7154	6478			**13632**

	AM			**PM**		
Split %	67.1%	32.9%	**40.5%**	42.5%	57.5%	**59.5%**
Peak Hour	08:00	11:30	**08:00**	16:45	17:00	**16:45**
Volume	980	377	**1278**	483	753	**1228**
P.H.F.	0.92	0.88	**0.93**	0.87	0.91	**0.93**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Napa Street, From Morena Boulevard to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	7		7					12:00	102		118				
00:15	6		11					12:15	106		93				
00:30	12		4					12:30	111		115				
00:45	6	31	3	25			56	12:45	98	417	101	427			844
01:00	2		5					13:00	88		100				
01:15	3		2					13:15	103		90				
01:30	12		2					13:30	84		70				
01:45	11	28	4	13			41	13:45	66	341	92	352			693
02:00	5		3					14:00	91		90				
02:15	8		2					14:15	84		112				
02:30	2		3					14:30	70		92				
02:45	1	16	2	10			26	14:45	65	310	105	399			709
03:00	6		2					15:00	77		107				
03:15	5		1					15:15	90		99				
03:30	6		5					15:30	88		111				
03:45	5	22	6	14			36	15:45	90	345	169	486			831
04:00	12		11					16:00	88		141				
04:15	6		13					16:15	90		168				
04:30	8		8					16:30	121		177				
04:45	9	35	15	47			82	16:45	144	443	151	637			1080
05:00	10		19					17:00	126		188				
05:15	12		26					17:15	115		198				
05:30	32		23					17:30	126		88				
05:45	40	94	20	88			182	17:45	88	455	128	602			1057
06:00	55		33					18:00	90		121				
06:15	65		29					18:15	88		128				
06:30	70		35					18:30	80		125				
06:45	88	278	45	142			420	18:45	70	328	95	469			797
07:00	115		38					19:00	65		129				
07:15	168		41					19:15	88		99				
07:30	188		57					19:30	70		85				
07:45	205	676	65	201			877	19:45	65	288	80	393			681
08:00	222		77					20:00	55		60				
08:15	251		76					20:15	65		93				
08:30	266		72					20:30	54		60				
08:45	268	1007	71	296			1303	20:45	66	240	47	260			500
09:00	181		79					21:00	40		66				
09:15	121		70					21:15	35		51				
09:30	106		73					21:30	28		31				
09:45	111	519	65	287			806	21:45	23	126	35	183			309
10:00	121		77					22:00	22		48				
10:15	106		92					22:15	40		30				
10:30	88		82					22:30	32		36				
10:45	90	405	97	348			753	22:45	25	119	27	141			260
11:00	80		72					23:00	15		18				
11:15	106		100					23:15	18		20				
11:30	111		71					23:30	20		19				
11:45	105	402	110	353			755	23:45	14	67	6	63			130
Total Vol.		3513		1824			**5337**			3479		4412			**7891**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	6992	6236			**13228**

	AM			**PM**		
Split %	65.8%	34.2%	**40.3%**	44.1%	55.9%	**59.7%**
Peak Hour	08:00	11:45	**08:00**	16:45	16:30	**16:30**
Volume	1007	436	**1303**	511	714	**1220**
P.H.F.	0.94	0.92	**0.96**	0.87	0.90	**0.97**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Colusa Street, From Linda Vista Road to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	0		1					12:00	25		18				
00:15	0		0					12:15	21		28				
00:30	1		0					12:30	20		32				
00:45	0	1	0	1			2	12:45	19	85	33	111			196
01:00	1		1					13:00	26		32				
01:15	2		0					13:15	22		25				
01:30	0		0					13:30	28		25				
01:45	0	3	1	2			5	13:45	28	104	16	98			202
02:00	0		0					14:00	30		20				
02:15	1		0					14:15	25		16				
02:30	1		0					14:30	28		11				
02:45	0	2	1	1			3	14:45	22	105	15	62			167
03:00	2		1					15:00	26		8				
03:15	0		0					15:15	12		18				
03:30	0		1					15:30	18		19				
03:45	3	5	1	3			8	15:45	11	67	22	67			134
04:00	0		0					16:00	19		25				
04:15	2		0					16:15	25		35				
04:30	1		2					16:30	24		31				
04:45	0	3	2	4			7	16:45	21	89	28	119			208
05:00	2		3					17:00	28		35				
05:15	6		0					17:15	33		66				
05:30	5		2					17:30	32		51				
05:45	4	17	0	5			22	17:45	25	118	50	202			320
06:00	6		0					18:00	26		40				
06:15	9		1					18:15	11		28				
06:30	8		6					18:30	18		22				
06:45	12	35	9	16			51	18:45	20	75	33	123			198
07:00	18		12					19:00	15		28				
07:15	25		30					19:15	11		18				
07:30	20		29					19:30	9		18				
07:45	33	96	42	113			209	19:45	10	45	12	76			121
08:00	31		22					20:00	5		11				
08:15	40		28					20:15	4		8				
08:30	25		30					20:30	6		12				
08:45	33	129	26	106			235	20:45	5	20	5	36			56
09:00	28		22					21:00	1		9				
09:15	20		28					21:15	3		11				
09:30	19		21					21:30	2		8				
09:45	20	87	19	90			177	21:45	0	6	6	34			40
10:00	11		20					22:00	1		5				
10:15	11		18					22:15	1		4				
10:30	16		22					22:30	0		3				
10:45	18	56	26	86			142	22:45	0	2	0	12			14
11:00	20		15					23:00	1		1				
11:15	19		22					23:15	0		1				
11:30	25		21					23:30	1		0				
11:45	28	92	28	86			178	23:45	0	2	0	2			4
Total Vol.		526		513			**1039**			718		942			**1660**

Daily Totals

NB	SB	EB	WB	**Combined**
1244	1455			**2699**

	AM			**PM**		
Split %	50.6%	49.4%	**38.5%**	43.3%	56.7%	**61.5%**
Peak Hour	07:45	07:15	**07:45**	17:00	17:15	**17:15**
Volume	129	123	**251**	118	207	**323**
P.H.F.	0.81	0.73	**0.84**	0.95	0.78	**0.82**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Colusa Street, From Linda Vista Road to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	2		0					12:00	28		33				
00:15	0		0					12:15	22		35				
00:30	1		1					12:30	19		32				
00:45	2	5	2	3			8	12:45	20	89	28	128			217
01:00	0		1					13:00	26		21				
01:15	0		2					13:15	25		19				
01:30	0		0					13:30	30		20				
01:45	1	1	0	3			4	13:45	25	106	16	76			182
02:00	2		0					14:00	22		11				
02:15	0		0					14:15	19		15				
02:30	1		1					14:30	20		19				
02:45	2	5	1	2			7	14:45	18	79	25	70			149
03:00	1		0					15:00	22		25				
03:15	3		0					15:15	19		21				
03:30	2		0					15:30	18		22				
03:45	2	8	1	1			9	15:45	15	74	28	96			170
04:00	0		0					16:00	18		31				
04:15	0		0					16:15	21		33				
04:30	1		1					16:30	20		30				
04:45	1	2	2	3			5	16:45	33	92	31	125			217
05:00	2		1					17:00	30		44				
05:15	3		0					17:15	25		51				
05:30	4		2					17:30	21		68				
05:45	5	14	3	6			20	17:45	20	96	33	196			292
06:00	9		5					18:00	18		31				
06:15	8		8					18:15	22		28				
06:30	12		11					18:30	26		20				
06:45	18	47	12	36			83	18:45	15	81	19	98			179
07:00	20		15					19:00	11		28				
07:15	22		28					19:15	9		21				
07:30	21		31					19:30	12		16				
07:45	28	91	33	107			198	19:45	8	40	11	76			116
08:00	30		25					20:00	5		15				
08:15	33		20					20:15	4		9				
08:30	31		24					20:30	6		12				
08:45	35	129	22	91			220	20:45	5	20	8	44			64
09:00	33		18					21:00	4		9				
09:15	28		20					21:15	5		5				
09:30	21		19					21:30	6		4				
09:45	19	101	22	79			180	21:45	3	18	6	24			42
10:00	20		21					22:00	2		3				
10:15	16		18					22:15	1		2				
10:30	18		20					22:30	0		4				
10:45	22	76	26	85			161	22:45	1	4	4	13			17
11:00	16		19					23:00	2		2				
11:15	23		20					23:15	0		1				
11:30	35		18					23:30	1		0				
11:45	31	105	22	79			184	23:45	0	3	1	4			7
Total Vol.		584		495			**1079**			702		950			**1652**

Daily Totals

NB	SB	EB	WB	**Combined**
1286	1445			**2731**

	AM			**PM**		
Split %	54.1%	45.9%	**39.5%**	42.5%	57.5%	**60.5%**
Peak Hour	08:15	11:45	**07:45**	16:45	17:00	**16:45**
Volume	132	122	**224**	109	196	**303**
P.H.F.	0.94	0.87	**0.92**	0.86	0.72	**0.85**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Via Las Cumbres, From Linda Vista Road to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	10		8					12:00	88		105				
00:15	7		9					12:15	81		91				
00:30	6		4					12:30	94		102				
00:45	5	28	6	27			55	12:45	91	354	84	382			736
01:00	5		5					13:00	100		84				
01:15	4		4					13:15	88		70				
01:30	2		2					13:30	81		65				
01:45	1	12	1	12			24	13:45	96	365	88	307			672
02:00	0		0					14:00	66		70				
02:15	1		1					14:15	67		74				
02:30	2		2					14:30	74		84				
02:45	1	4	0	3			7	14:45	84	291	98	326			617
03:00	0		1					15:00	80		95				
03:15	3		2					15:15	75		88				
03:30	2		1					15:30	65		79				
03:45	1	6	1	5			11	15:45	68	288	105	367			655
04:00	1		2					16:00	84		121				
04:15	6		0					16:15	78		135				
04:30	9		0					16:30	84		141				
04:45	10	26	3	5			31	16:45	95	341	121	518			859
05:00	8		8					17:00	99		135				
05:15	12		9					17:15	101		111				
05:30	11		10					17:30	84		108				
05:45	19	50	8	35			85	17:45	95	379	105	459			838
06:00	21		12					18:00	77		89				
06:15	42		18					18:15	68		95				
06:30	51		22					18:30	84		70				
06:45	68	182	35	87			269	18:45	70	299	80	334			633
07:00	108		45					19:00	66		77				
07:15	165		90					19:15	54		65				
07:30	177		95					19:30	55		84				
07:45	141	591	101	331			922	19:45	40	215	54	280			495
08:00	158		88					20:00	62		41				
08:15	161		70					20:15	70		32				
08:30	108		65					20:30	54		28				
08:45	142	569	55	278			847	20:45	35	221	33	134			355
09:00	121		68					21:00	22		32				
09:15	128		70					21:15	19		25				
09:30	114		54					21:30	15		20				
09:45	98	461	84	276			737	21:45	15	71	19	96			167
10:00	88		66					22:00	11		15				
10:15	81		68					22:15	9		12				
10:30	94		99					22:30	10		11				
10:45	105	368	84	317			685	22:45	8	38	12	50			88
11:00	111		70					23:00	9		8				
11:15	114		98					23:15	5		9				
11:30	105		111					23:30	6		10				
11:45	97	427	108	387			814	23:45	4	24	5	32			56
Total Vol.		2724		1763			**4487**			2886		3285			**6171**

Daily Totals

NB	SB	EB	WB	**Combined**
5610	5048			**10658**

	AM			PM		
Split %	60.7%	39.3%	**42.1%**	46.8%	53.2%	**57.9%**
Peak Hour	07:15	11:15	**07:15**	16:30	16:15	**16:15**
Volume	641	422	**1015**	379	532	**888**
P.H.F.	0.91	0.95	**0.93**	0.95	0.94	**0.95**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Via Las Cumbres, From Linda Vista Road to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	7		10					12:00	84		108				
00:15	7		5					12:15	91		88				
00:30	4		8					12:30	105		95				
00:45	6	24	6	29			53	12:45	111	391	70	361			752
01:00	2		6					13:00	84		105				
01:15	2		5					13:15	95		84				
01:30	1		4					13:30	70		95				
01:45	1	6	5	20			26	13:45	66	315	77	361			676
02:00	1		2					14:00	68		84				
02:15	2		3					14:15	84		95				
02:30	1		1					14:30	70		105				
02:45	0	4	0	6			10	14:45	65	287	88	372			659
03:00	0		2					15:00	44		95				
03:15	1		1					15:15	54		98				
03:30	1		0					15:30	55		103				
03:45	2	4	2	5			9	15:45	65	218	121	417			635
04:00	3		3					16:00	71		151				
04:15	5		4					16:15	84		132				
04:30	9		5					16:30	77		128				
04:45	15	32	9	21			53	16:45	105	337	91	502			839
05:00	11		8					17:00	108		141				
05:15	12		15					17:15	111		133				
05:30	18		12					17:30	116		132				
05:45	21	62	13	48			110	17:45	91	426	101	507			933
06:00	35		26					18:00	101		91				
06:15	61		15					18:15	88		105				
06:30	74		21					18:30	84		89				
06:45	80	250	40	102			352	18:45	95	368	95	380			748
07:00	105		66					19:00	65		70				
07:15	184		81					19:15	70		65				
07:30	191		94					19:30	65		55				
07:45	142	622	91	332			954	19:45	51	251	40	230			481
08:00	131		68					20:00	66		35				
08:15	145		77					20:15	65		28				
08:30	133		51					20:30	40		33				
08:45	141	550	88	284			834	20:45	35	206	45	141			347
09:00	138		80					21:00	28		51				
09:15	125		70					21:15	20		40				
09:30	126		65					21:30	19		26				
09:45	105	494	66	281			775	21:45	12	79	18	135			214
10:00	111		98					22:00	11		20				
10:15	105		84					22:15	12		16				
10:30	121		77					22:30	8		11				
10:45	88	425	84	343			768	22:45	9	40	8	55			95
11:00	95		95					23:00	5		9				
11:15	105		105					23:15	7		5				
11:30	89		111					23:30	9		7				
11:45	94	383	115	426			809	23:45	5	26	8	29			55
Total Vol.		2856		1897			**4753**			2944		3490			**6434**

Daily Totals

NB	SB	EB	WB	**Combined**
5800	5387			**11187**

	AM			**PM**		
Split %	60.1%	39.9%	**42.5%**	45.8%	54.2%	**57.5%**
Peak Hour	07:15	11:15	**07:15**	16:45	15:45	**16:45**
Volume	648	439	**982**	440	532	**937**
P.H.F.	0.85	0.95	**0.86**	0.98	0.88	**0.94**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Fashion Valley Road, From Friars Road to Hotel Circle North

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	12		8					12:00	101		88				
00:15	8		9					12:15	97		70				
00:30	6		9					12:30	116		65				
00:45	5	31	5	31			62	12:45	121	435	55	278			713
01:00	4		4					13:00	103		40				
01:15	3		1					13:15	141		68				
01:30	2		1					13:30	106		70				
01:45	1	10	0	6			16	13:45	84	434	84	262			696
02:00	0		0					14:00	99		88				
02:15	1		0					14:15	91		95				
02:30	2		1					14:30	77		99				
02:45	0	3	2	3			6	14:45	84	351	90	372			723
03:00	1		0					15:00	105		80				
03:15	2		0					15:15	114		77				
03:30	0		1					15:30	103		65				
03:45	0	3	2	3			6	15:45	88	410	88	310			720
04:00	0		1					16:00	121		81				
04:15	1		2					16:15	135		105				
04:30	1		6					16:30	151		84				
04:45	2	4	0	9			13	16:45	144	551	111	381			932
05:00	6		0					17:00	145		116				
05:15	5		1					17:15	128		108				
05:30	10		6					17:30	108		121				
05:45	8	29	10	17			46	17:45	111	492	103	448			940
06:00	12		18					18:00	90		84				
06:15	18		22					18:15	101		95				
06:30	22		31					18:30	88		105				
06:45	51	103	25	96			199	18:45	98	377	111	395			772
07:00	68		35					19:00	70		84				
07:15	66		45					19:15	54		90				
07:30	62		51					19:30	66		70				
07:45	84	280	40	171			451	19:45	54	244	77	321			565
08:00	95		65					20:00	40		54				
08:15	111		66					20:15	32		40				
08:30	108		68					20:30	22		22				
08:45	105	419	51	250			669	20:45	28	122	28	144			266
09:00	95		40					21:00	21		23				
09:15	94		55					21:15	30		18				
09:30	84		51					21:30	25		26				
09:45	88	361	65	211			572	21:45	15	91	22	89			180
10:00	81		41					22:00	11		15				
10:15	70		33					22:15	8		9				
10:30	65		51					22:30	9		12				
10:45	55	271	48	173			444	22:45	12	40	8	44			84
11:00	98		64					23:00	5		9				
11:15	77		68					23:15	8		6				
11:30	91		70					23:30	9		5				
11:45	111	377	55	257			634	23:45	5	27	4	24			51
Total Vol.		1891		1227			**3118**			3574		3068			**6642**

Daily Totals

NB	SB	EB	WB	**Combined**
5465	4295			**9760**

	AM			**PM**		
Split %	60.6%	39.4%	**31.9%**	53.8%	46.2%	**68.1%**
Peak Hour	11:45	11:30	**11:45**	16:15	16:45	**16:15**
Volume	425	283	**703**	575	456	**991**
P.H.F.	0.92	0.80	**0.93**	0.95	0.94	**0.95**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Fashion Valley Road, From Friars Road to Hotel Circle North

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	7		9					12:00	108		70				
00:15	5		12					12:15	115		61				
00:30	4		5					12:30	115		66				
00:45	5	21	4	30			51	12:45	131	469	84	281			750
01:00	6		3					13:00	114		88				
01:15	8		2					13:15	108		91				
01:30	6		1					13:30	111		66				
01:45	5	25	0	6			31	13:45	106	439	68	313			752
02:00	3		1					14:00	84		94				
02:15	2		2					14:15	95		84				
02:30	1		2					14:30	133		81				
02:45	0	6	3	8			14	14:45	104	416	95	354			770
03:00	1		0					15:00	121		68				
03:15	2		2					15:15	111		77				
03:30	1		0					15:30	98		84				
03:45	0	4	1	3			7	15:45	106	436	91	320			756
04:00	2		2					16:00	115		91				
04:15	2		5					16:15	116		98				
04:30	6		4					16:30	168		90				
04:45	2	12	6	17			29	16:45	141	540	88	367			907
05:00	8		9					17:00	108		126				
05:15	9		6					17:15	115		105				
05:30	11		6					17:30	126		108				
05:45	16	44	5	26			70	17:45	103	452	111	450			902
06:00	21		11					18:00	109		91				
06:15	18		16					18:15	115		105				
06:30	23		20					18:30	103		111				
06:45	44	106	18	65			171	18:45	87	414	95	402			816
07:00	51		35					19:00	91		84				
07:15	66		28					19:15	66		95				
07:30	52		31					19:30	54		65				
07:45	94	263	45	139			402	19:45	70	281	44	288			569
08:00	98		55					20:00	84		51				
08:15	115		51					20:15	66		62				
08:30	94		62					20:30	54		35				
08:45	81	388	48	216			604	20:45	40	244	32	180			424
09:00	88		60					21:00	32		41				
09:15	95		55					21:15	33		20				
09:30	84		62					21:30	21		11				
09:45	81	348	78	255			603	21:45	19	105	15	87			192
10:00	96		65					22:00	15		19				
10:15	77		35					22:15	18		20				
10:30	84		44					22:30	10		11				
10:45	94	351	51	195			546	22:45	11	54	16	66			120
11:00	105		51					23:00	9		8				
11:15	91		66					23:15	10		9				
11:30	115		58					23:30	5		5				
11:45	121	432	53	228			660	23:45	4	28	8	30			58
Total Vol.		2000		1188			**3188**			3878		3138			**7016**

Daily Totals

NB	SB	EB	WB	**Combined**
5878	4326			**10204**

	AM			**PM**		
Split %	62.7%	37.3%	**31.2%**	55.3%	44.7%	**68.8%**
Peak Hour	11:30	09:15	**11:45**	16:00	17:00	**16:30**
Volume	459	260	**709**	540	450	**941**
P.H.F.	0.95	0.83	**0.98**	0.84	0.89	**0.91**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Bachman Place, From Hotel Circle South to Lewis Street

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	9		4					12:00	78		48				
00:15	13		3					12:15	55		52				
00:30	3		3					12:30	75		69				
00:45	8	33	3	13			46	12:45	53	261	59	228			489
01:00	5		2					13:00	70		66				
01:15	4		5					13:15	69		60				
01:30	13		3					13:30	65		58				
01:45	2	24	3	13			37	13:45	56	260	74	258			518
02:00	0		2					14:00	86		48				
02:15	1		2					14:15	73		41				
02:30	1		0					14:30	87		54				
02:45	3	5	1	5			10	14:45	68	314	60	203			517
03:00	1		3					15:00	110		49				
03:15	2		1					15:15	112		49				
03:30	4		4					15:30	126		52				
03:45	1	8	4	12			20	15:45	103	451	58	208			659
04:00	3		4					16:00	138		62				
04:15	4		2					16:15	121		49				
04:30	4		3					16:30	165		53				
04:45	5	16	8	17			33	16:45	146	570	75	239			809
05:00	7		11					17:00	139		78				
05:15	9		17					17:15	109		105				
05:30	5		24					17:30	124		83				
05:45	17	38	44	96			134	17:45	93	465	90	356			821
06:00	21		35					18:00	92		93				
06:15	21		66					18:15	91		78				
06:30	27		108					18:30	68		88				
06:45	22	91	171	380			471	18:45	69	320	87	346			666
07:00	44		92					19:00	70		42				
07:15	54		122					19:15	68		43				
07:30	123		113					19:30	133		39				
07:45	77	298	149	476			774	19:45	69	340	33	157			497
08:00	69		128					20:00	45		25				
08:15	47		101					20:15	39		36				
08:30	64		89					20:30	35		33				
08:45	61	241	99	417			658	20:45	23	142	24	118			260
09:00	59		74					21:00	39		29				
09:15	41		50					21:15	29		29				
09:30	36		48					21:30	29		23				
09:45	39	175	50	222			397	21:45	23	120	21	102			222
10:00	53		59					22:00	8		14				
10:15	43		49					22:15	14		19				
10:30	37		51					22:30	18		15				
10:45	48	181	38	197			378	22:45	15	55	11	59			114
11:00	67		51					23:00	19		5				
11:15	58		45					23:15	17		11				
11:30	50		28					23:30	22		11				
11:45	64	239	52	176			415	23:45	10	68	7	34			102
Total Vol.		1349		2024			**3373**			3366		2308			**5674**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	4715	4332			**9047**

	AM			PM		
Split %	40.0%	60.0%	**37.3%**	59.3%	40.7%	**62.7%**
Peak Hour	07:15	07:15	**07:15**	16:15	17:15	**16:30**
Volume	323	512	**835**	571	371	**870**
P.H.F.	0.66	0.86	**0.88**	0.88	0.88	**0.98**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Bachman Place, From Hotel Circle South to Lewis Street

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	14		9					12:00	64		49				
00:15	8		1					12:15	76		63				
00:30	5		2					12:30	54		63				
00:45	13	40	2	14			54	12:45	57	251	59	234			485
01:00	6		0					13:00	61		55				
01:15	0		6					13:15	56		43				
01:30	3		4					13:30	57		63				
01:45	6	15	2	12			27	13:45	62	236	46	207			443
02:00	3		2					14:00	79		52				
02:15	7		3					14:15	81		65				
02:30	2		3					14:30	96		55				
02:45	2	14	1	9			23	14:45	79	335	64	236			571
03:00	1		0					15:00	88		49				
03:15	1		1					15:15	91		53				
03:30	2		2					15:30	132		46				
03:45	1	5	4	7			12	15:45	123	434	39	187			621
04:00	2		1					16:00	144		48				
04:15	3		5					16:15	138		69				
04:30	4		2					16:30	154		61				
04:45	8	17	8	16			33	16:45	158	594	77	255			849
05:00	7		16					17:00	126		72				
05:15	9		15					17:15	139		72				
05:30	11		19					17:30	137		87				
05:45	14	41	44	94			135	17:45	111	513	79	310			823
06:00	18		44					18:00	82		83				
06:15	21		74					18:15	79		72				
06:30	21		122					18:30	79		82				
06:45	14	74	128	368			442	18:45	72	312	100	337			649
07:00	50		93					19:00	54		55				
07:15	60		100					19:15	67		47				
07:30	131		111					19:30	108		46				
07:45	88	329	169	473			802	19:45	82	311	37	185			496
08:00	65		111					20:00	58		44				
08:15	121		105					20:15	33		34				
08:30	84		109					20:30	43		21				
08:45	66	336	128	453			789	20:45	30	164	34	133			297
09:00	45		72					21:00	38		26				
09:15	45		62					21:15	24		28				
09:30	53		48					21:30	28		30				
09:45	51	194	45	227			421	21:45	15	105	18	102			207
10:00	50		46					22:00	18		14				
10:15	50		37					22:15	15		26				
10:30	37		64					22:30	20		13				
10:45	46	183	46	193			376	22:45	16	69	17	70			139
11:00	54		37					23:00	23		17				
11:15	40		56					23:15	27		12				
11:30	52		44					23:30	26		12				
11:45	61	207	51	188			395	23:45	12	88	5	46			134
Total Vol.		1455		2054			**3509**			3412		2302			**5714**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	4867	4356			**9223**

	AM			**PM**		
Split %	41.5%	58.5%	**38.0%**	59.7%	40.3%	**62.0%**
Peak Hour	07:30	07:30	**07:30**	16:00	18:00	**16:45**
Volume	405	496	**901**	594	337	**868**
P.H.F.	0.77	0.73	**0.88**	0.96	0.84	**0.92**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Avenida Del Rio, From Fashion Valley Parking Lot to Camino De La Reina

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	3		5					12:00	114		70				
00:15	3		3					12:15	110		58				
00:30	2		1					12:30	114		69				
00:45	1	9	2	11			20	12:45	127	465	58	255			720
01:00	1		6					13:00	99		86				
01:15	2		1					13:15	112		74				
01:30	1		0					13:30	110		82				
01:45	0	4	0	7			11	13:45	110	431	69	311			742
02:00	2		0					14:00	78		99				
02:15	2		0					14:15	76		83				
02:30	0		1					14:30	85		78				
02:45	1	5	2	3			8	14:45	83	322	64	324			646
03:00	0		0					15:00	77		85				
03:15	0		0					15:15	94		78				
03:30	0		0					15:30	86		62				
03:45	2	2	0	0			2	15:45	86	343	72	297			640
04:00	0		0					16:00	74		75				
04:15	0		2					16:15	97		90				
04:30	1		0					16:30	87		94				
04:45	6	7	2	4			11	16:45	91	349	93	352			701
05:00	6		0					17:00	108		106				
05:15	8		4					17:15	87		111				
05:30	9		1					17:30	106		99				
05:45	20	43	3	8			51	17:45	101	402	96	412			814
06:00	7		9					18:00	103		101				
06:15	7		5					18:15	75		79				
06:30	18		6					18:30	103		82				
06:45	32	64	9	29			93	18:45	110	391	84	346			737
07:00	24		2					19:00	70		88				
07:15	33		10					19:15	89		78				
07:30	31		8					19:30	70		66				
07:45	36	124	16	36			160	19:45	57	286	65	297			583
08:00	32		25					20:00	40		71				
08:15	32		21					20:15	45		79				
08:30	41		15					20:30	40		74				
08:45	54	159	13	74			233	20:45	34	159	62	286			445
09:00	58		16					21:00	16		91				
09:15	69		21					21:15	15		73				
09:30	61		23					21:30	11		61				
09:45	78	266	21	81			347	21:45	11	53	26	251			304
10:00	75		19					22:00	19		28				
10:15	68		36					22:15	11		15				
10:30	83		28					22:30	7		13				
10:45	104	330	42	125			455	22:45	5	42	17	73			115
11:00	95		43					23:00	7		9				
11:15	101		46					23:15	2		11				
11:30	95		60					23:30	3		4				
11:45	113	404	59	208			612	23:45	3	15	7	31			46
Total Vol.		1417		586			**2003**			3258		3235			**6493**

Daily Totals

NB	SB	EB	WB	**Combined**
4675	3821			**8496**

	AM			PM		
Split %	70.7%	29.3%	**23.6%**	50.2%	49.8%	**76.4%**
Peak Hour	11:45	11:45	**11:45**	12:00	17:00	**17:00**
Volume	451	256	**707**	465	412	**814**
P.H.F.	0.99	0.91	**0.96**	0.99	0.93	**0.95**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Avenida Del Rio, From Fashion Valley Parking Lot to Camino De La Reina

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	4		5					12:00	107		60				
00:15	2		14					12:15	132		62				
00:30	1		3					12:30	111		76				
00:45	3	10	0	22			32	12:45	125	475	87	285			760
01:00	1		1					13:00	83		82				
01:15	0		2					13:15	134		78				
01:30	0		1					13:30	99		94				
01:45	1	2	0	4			6	13:45	110	426	100	354			780
02:00	0		1					14:00	100		80				
02:15	1		0					14:15	94		94				
02:30	0		2					14:30	101		91				
02:45	4	5	2	5			10	14:45	95	390	66	331			721
03:00	1		0					15:00	97		70				
03:15	1		0					15:15	75		88				
03:30	1		0					15:30	78		82				
03:45	2	5	1	1			6	15:45	97	347	72	312			659
04:00	1		0					16:00	77		106				
04:15	1		0					16:15	82		84				
04:30	4		0					16:30	110		97				
04:45	4	10	2	2			12	16:45	91	360	106	393			753
05:00	4		1					17:00	112		116				
05:15	6		5					17:15	96		119				
05:30	9		2					17:30	104		105				
05:45	16	35	1	9			44	17:45	114	426	89	429			855
06:00	12		5					18:00	106		92				
06:15	17		4					18:15	78		87				
06:30	16		5					18:30	96		85				
06:45	28	73	6	20			93	18:45	98	378	71	335			713
07:00	20		9					19:00	75		95				
07:15	23		7					19:15	82		89				
07:30	31		15					19:30	72		80				
07:45	33	107	25	56			163	19:45	59	288	68	332			620
08:00	49		16					20:00	44		82				
08:15	64		18					20:15	49		61				
08:30	41		23					20:30	38		56				
08:45	69	223	19	76			299	20:45	28	159	67	266			425
09:00	58		21					21:00	33		82				
09:15	74		19					21:15	28		67				
09:30	74		23					21:30	13		65				
09:45	80	286	33	96			382	21:45	14	88	50	264			352
10:00	75		29					22:00	10		38				
10:15	86		20					22:15	12		39				
10:30	79		47					22:30	13		20				
10:45	97	337	36	132			469	22:45	9	44	13	110			154
11:00	92		49					23:00	4		14				
11:15	114		52					23:15	7		21				
11:30	94		51					23:30	0		10				
11:45	114	414	55	207			621	23:45	6	17	1	46			63
Total Vol.		1507		630			**2137**			3398		3457			**6855**

Daily Totals

NB	SB	EB	WB	**Combined**
4905	4087			**8992**

	AM			PM		
Split %	70.5%	29.5%	**23.8%**	49.6%	50.4%	**76.2%**
Peak Hour	11:45	11:45	**11:45**	12:00	16:45	**17:00**
Volume	464	253	**717**	475	446	**855**
P.H.F.	0.88	0.83	**0.92**	0.87	0.94	**0.94**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Ulric Street, From Fashion Hills Boulevard to 600 Feet South of Fashion Hills Boulevard

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	22		12					12:00	277		81				
00:15	16		11					12:15	262		65				
00:30	18		15					12:30	268		77				
00:45	20	76	9	47			123	12:45	284	1091	81	304			1395
01:00	15		10					13:00	252		90				
01:15	11		5					13:15	268		84				
01:30	9		4					13:30	278		70				
01:45	12	47	6	25			72	13:45	285	1083	65	309			1392
02:00	5		8					14:00	265		88				
02:15	9		9					14:15	270		70				
02:30	9		5					14:30	265		84				
02:45	10	33	4	26			59	14:45	254	1054	85	327			1381
03:00	6		5					15:00	288		95				
03:15	5		5					15:15	295		77				
03:30	11		6					15:30	305		84				
03:45	16	38	5	21			59	15:45	322	1210	95	351			1561
04:00	20		5					16:00	318		105				
04:15	15		4					16:15	352		121				
04:30	21		11					16:30	362		118				
04:45	22	78	9	29			107	16:45	335	1367	105	449			1816
05:00	40		8					17:00	342		121				
05:15	65		11					17:15	340		88				
05:30	70		15					17:30	362		141				
05:45	84	259	22	56			315	17:45	266	1310	95	445			1755
06:00	105		32					18:00	215		88				
06:15	111		40					18:15	226		95				
06:30	151		50					18:30	205		70				
06:45	184	551	60	182			733	18:45	218	864	105	358			1222
07:00	251		88					19:00	184		88				
07:15	245		81					19:15	161		70				
07:30	262		95					19:30	151		65				
07:45	268	1026	115	379			1405	19:45	165	661	75	298			959
08:00	235		105					20:00	102		45				
08:15	242		88					20:15	111		65				
08:30	218		95					20:30	121		35				
08:45	205	900	99	387			1287	20:45	105	439	40	185			624
09:00	205		70					21:00	88		41				
09:15	218		84					21:15	90		35				
09:30	203		88					21:30	70		28				
09:45	222	848	70	312			1160	21:45	65	313	20	124			437
10:00	214		65					22:00	70		12				
10:15	215		77					22:15	54		19				
10:30	222		84					22:30	22		12				
10:45	235	886	95	321			1207	22:45	35	181	18	61			242
11:00	262		88					23:00	41		20				
11:15	235		70					23:15	35		15				
11:30	242		65					23:30	28		19				
11:45	269	1008	77	300			1308	23:45	21	125	20	74			199
Total Vol.		5750		2085			**7835**			9698		3285			**12983**

Daily Totals

NB	SB	EB	WB	**Combined**
15448	5370			**20818**

	AM			**PM**		
Split %	73.4%	26.6%	**37.6%**	74.7%	25.3%	**62.4%**
Peak Hour	11:45	07:30	**07:30**	16:15	16:15	**16:15**
Volume	1076	403	**1410**	1391	465	**1856**
P.H.F.	0.97	0.88	**0.92**	0.96	0.96	**0.97**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Ulric Street, From Fashion Hills Boulevard to 600 Feet South of Fashion Hills Boulevard

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	18		19					12:00	235		70				
00:15	20		20					12:15	242		66				
00:30	16		16					12:30	222		70				
00:45	11	65	11	66			131	12:45	218	917	71	277			1194
01:00	15		15					13:00	242		88				
01:15	19		9					13:15	235		95				
01:30	12		12					13:30	215		90				
01:45	8	54	8	44			98	13:45	262	954	80	353			1307
02:00	9		9					14:00	244		88				
02:15	10		7					14:15	251		70				
02:30	5		5					14:30	235		88				
02:45	4	28	6	27			55	14:45	242	972	95	341			1313
03:00	9		8					15:00	284		99				
03:15	5		5					15:15	265		95				
03:30	4		4					15:30	277		70				
03:45	6	24	5	22			46	15:45	289	1115	81	345			1460
04:00	9		1					16:00	305		95				
04:15	10		6					16:15	318		141				
04:30	18		5					16:30	335		121				
04:45	20	57	12	24			81	16:45	355	1313	135	492			1805
05:00	16		18					17:00	362		111				
05:15	33		20					17:15	333		105				
05:30	45		16					17:30	318		101				
05:45	68	162	26	80			242	17:45	305	1318	88	405			1723
06:00	70		44					18:00	288		95				
06:15	84		51					18:15	295		70				
06:30	121		68					18:30	222		77				
06:45	145	420	88	251			671	18:45	213	1018	84	326			1344
07:00	184		95					19:00	205		95				
07:15	191		70					19:15	184		70				
07:30	226		84					19:30	151		65				
07:45	235	836	121	370			1206	19:45	140	680	66	296			976
08:00	265		111					20:00	111		68				
08:15	251		115					20:15	106		70				
08:30	242		103					20:30	88		54				
08:45	216	974	95	424			1398	20:45	95	400	40	232			632
09:00	222		106					21:00	70		32				
09:15	215		111					21:15	65		33				
09:30	184		84					21:30	88		35				
09:45	191	812	95	396			1208	21:45	50	273	28	128			401
10:00	165		70					22:00	40		20				
10:15	174		65					22:15	44		22				
10:30	184		77					22:30	41		16				
10:45	225	748	84	296			1044	22:45	38	163	18	76			239
11:00	205		75					23:00	25		20				
11:15	213		84					23:15	30		15				
11:30	226		70					23:30	32		19				
11:45	242	886	65	294			1180	23:45	25	112	20	74			186
Total Vol.		5066		2294			**7360**			9235		3345			**12580**

Daily Totals

NB	SB	EB	WB	**Combined**
14301	5639			**19940**

	AM			**PM**		
Split %	68.8%	31.2%	**36.9%**	73.4%	26.6%	**63.1%**
Peak Hour	07:45	07:45	**07:45**	16:30	16:15	**16:15**
Volume	993	450	**1443**	1385	508	**1878**
P.H.F.	0.94	0.93	**0.96**	0.98	0.90	**0.96**

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Ulric Street, From 600 Feet South of Fashion Hills Boulevard to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	27		17					12:00	125		125				
00:15	29		15					12:15	115		134				
00:30	27		12					12:30	139		140				
00:45	22	105	7	51			156	12:45	113	492	145	544			1036
01:00	16		9					13:00	124		140				
01:15	17		6					13:15	130		157				
01:30	10		5					13:30	130		120				
01:45	13	56	6	26			82	13:45	132	516	125	542			1058
02:00	11		6					14:00	144		129				
02:15	10		7					14:15	171		128				
02:30	13		9					14:30	149		166				
02:45	8	42	7	29			71	14:45	166	630	145	568			1198
03:00	7		6					15:00	207		177				
03:15	5		6					15:15	196		210				
03:30	9		15					15:30	159		181				
03:45	1	22	13	40			62	15:45	188	750	178	746			1496
04:00	3		10					16:00	179		225				
04:15	7		14					16:15	181		217				
04:30	16		34					16:30	180		206				
04:45	5	31	36	94			125	16:45	185	725	265	913			1638
05:00	12		38					17:00	186		229				
05:15	18		37					17:15	181		244				
05:30	21		59					17:30	185		253				
05:45	40	91	73	207			298	17:45	170	722	248	974			1696
06:00	35		88					18:00	164		235				
06:15	51		103					18:15	186		200				
06:30	62		165					18:30	173		186				
06:45	96	244	163	519			763	18:45	152	675	205	826			1501
07:00	89		160					19:00	163		158				
07:15	114		194					19:15	158		132				
07:30	121		206					19:30	159		119				
07:45	148	472	209	769			1241	19:45	163	643	100	509			1152
08:00	151		193					20:00	155		127				
08:15	121		224					20:15	146		95				
08:30	143		207					20:30	124		85				
08:45	95	510	211	835			1345	20:45	136	561	71	378			939
09:00	102		151					21:00	145		84				
09:15	126		167					21:15	136		83				
09:30	87		135					21:30	112		64				
09:45	106	421	131	584			1005	21:45	96	489	47	278			767
10:00	89		139					22:00	118		53				
10:15	95		125					22:15	89		51				
10:30	101		155					22:30	70		36				
10:45	113	398	156	575			973	22:45	65	342	36	176			518
11:00	125		152					23:00	47		24				
11:15	125		120					23:15	49		37				
11:30	133		126					23:30	41		17				
11:45	145	528	124	522			1050	23:45	32	169	20	98			267
Total Vol.		2920		4251			**7171**			6714		6552			**13266**

Daily Totals

NB	SB	EB	WB	**Combined**
9634	10803			**20437**

	AM			**PM**		
Split %	40.7%	59.3%	**35.1%**	50.6%	49.4%	**64.9%**
Peak Hour	07:45	08:00	**07:45**	15:00	16:45	**16:45**
Volume	563	835	**1396**	750	991	**1728**
P.H.F.	0.93	0.93	**0.98**	0.87	0.93	**0.96**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Ulric Street, From 600 Feet South of Fashion Hills Boulevard to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	41		16					12:00	145		145				
00:15	27		20					12:15	129		144				
00:30	24		7					12:30	123		133				
00:45	22	114	9	52			166	12:45	152	549	146	568			1117
01:00	17		6					13:00	142		128				
01:15	14		9					13:15	145		139				
01:30	20		6					13:30	135		127				
01:45	14	65	5	26			91	13:45	144	566	128	522			1088
02:00	11		5					14:00	176		123				
02:15	15		5					14:15	158		149				
02:30	7		1					14:30	177		170				
02:45	7	40	7	18			58	14:45	194	705	136	578			1283
03:00	5		4					15:00	199		150				
03:15	8		11					15:15	190		202				
03:30	10		15					15:30	177		165				
03:45	4	27	12	42			69	15:45	195	761	200	717			1478
04:00	3		9					16:00	175		195				
04:15	7		17					16:15	185		221				
04:30	8		31					16:30	200		230				
04:45	10	28	36	93			121	16:45	202	762	242	888			1650
05:00	10		36					17:00	172		255				
05:15	17		46					17:15	222		229				
05:30	18		54					17:30	215		261				
05:45	35	80	69	205			285	17:45	177	786	209	954			1740
06:00	26		80					18:00	127		204				
06:15	56		113					18:15	192		180				
06:30	47		155					18:30	152		138				
06:45	91	220	163	511			731	18:45	163	634	163	685			1319
07:00	91		162					19:00	155		137				
07:15	127		193					19:15	163		125				
07:30	167		215					19:30	157		148				
07:45	150	535	246	816			1351	19:45	151	626	103	513			1139
08:00	135		202					20:00	130		89				
08:15	119		185					20:15	106		95				
08:30	95		204					20:30	137		71				
08:45	127	476	197	788			1264	20:45	130	503	82	337			840
09:00	78		159					21:00	132		66				
09:15	109		155					21:15	135		84				
09:30	98		171					21:30	121		68				
09:45	75	360	163	648			1008	21:45	91	479	70	288			767
10:00	94		128					22:00	103		66				
10:15	97		136					22:15	94		47				
10:30	94		150					22:30	85		35				
10:45	116	401	127	541			942	22:45	59	341	35	183			524
11:00	134		151					23:00	72		41				
11:15	114		145					23:15	68		28				
11:30	105		134					23:30	44		38				
11:45	123	476	131	561			1037	23:45	37	221	18	125			346
Total Vol.		2822		4301			**7123**			6933		6358			**13291**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	9755	10659			**20414**

	AM			**PM**		
Split %	39.6%	60.4%	**34.9%**	52.2%	47.8%	**65.1%**
Peak Hour	07:15	07:15	**07:15**	16:45	16:45	**16:45**
Volume	579	856	**1435**	811	987	**1798**
P.H.F.	0.87	0.87	**0.91**	0.92	0.95	**0.94**

Prepared by NDS/ATD

VOLUME

Camino De La Siesta Bet. Camino De La Reina & Camino Del Rio North

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_085

DAILY TOTALS	NB	SB	EB	WB	Total
	2,671	2,407	0	0	5,078

AM Period	NB		SB		EB		WB		TOTAL	
00:00	2		3						5	
00:15	2		2						4	
00:30	1		1						2	
00:45	0	5	0	6					0	11
01:00	2		1						3	
01:15	3		1						4	
01:30	3		5						8	
01:45	2	10	0	7					2	17
02:00	1		3						4	
02:15	3		2						5	
02:30	2		0						2	
02:45	2	8	2	7					4	15
03:00	0		1						1	
03:15	1		3						4	
03:30	1		0						1	
03:45	1	3	0	4					1	7
04:00	1		2						3	
04:15	3		0						3	
04:30	1		0						1	
04:45	1	6	3	5					4	11
05:00	2		1						3	
05:15	5		4						9	
05:30	5		1						6	
05:45	14	26	4	10					18	36
06:00	14		1						15	
06:15	7		9						16	
06:30	12		7						19	
06:45	21	54	12	29					33	83
07:00	25		11						36	
07:15	17		12						29	
07:30	29		13						42	
07:45	38	109	14	50					52	159
08:00	38		19						57	
08:15	51		23						74	
08:30	51		22						73	
08:45	40	180	18	82					58	262
09:00	53		22						75	
09:15	31		21						52	
09:30	48		22						70	
09:45	42	174	26	91					68	265
10:00	25		24						49	
10:15	35		31						66	
10:30	41		27						68	
10:45	46	147	31	113					77	260
11:00	47		33						80	
11:15	48		30						78	
11:30	44		49						93	
11:45	56	195	36	148					92	343
TOTALS		917		552						**1469**
SPLIT %		62.4%		37.6%						**28.9%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	63		42						105	
12:15	70		35						105	
12:30	53		46						99	
12:45	67	253	40	163					107	416
13:00	61		44						105	
13:15	55		43						98	
13:30	49		35						84	
13:45	55	220	37	159					92	379
14:00	57		46						103	
14:15	50		42						92	
14:30	49		49						98	
14:45	62	218	39	176					101	394
15:00	46		42						88	
15:15	56		52						108	
15:30	57		49						106	
15:45	44	203	44	187					88	390
16:00	51		78						129	
16:15	46		58						104	
16:30	66		79						145	
16:45	55	218	69	284					124	502
17:00	58		102						160	
17:15	49		70						119	
17:30	43		76						119	
17:45	42	192	60	308					102	500
18:00	48		62						110	
18:15	33		52						85	
18:30	46		50						96	
18:45	26	153	35	199					61	352
19:00	38		41						79	
19:15	35		31						66	
19:30	35		26						61	
19:45	18	126	35	133					53	259
20:00	14		32						46	
20:15	26		21						47	
20:30	24		23						47	
20:45	11	75	19	95					30	170
21:00	14		34						48	
21:15	8		30						38	
21:30	15		14						29	
21:45	14	51	17	95					31	146
22:00	11		15						26	
22:15	8		7						15	
22:30	5		3						8	
22:45	1	25	6	31					7	56
23:00	4		16						20	
23:15	6		3						9	
23:30	4		4						8	
23:45	6	20	2	25					8	45
TOTALS		1754		1855						**3609**
SPLIT %		48.6%		51.4%						**71.1%**

DAILY TOTALS	NB	SB	EB	WB	Total
	2,671	2,407	0	0	5,078

AM Peak Hour	11:45	11:30			11:45
AM Pk Volume	242	162			401
Pk Hr Factor	0.864	0.827			0.955
7 - 9 Volume	289	132	0	0	421
7 - 9 Peak Hour	08:00	08:00			08:00
7 - 9 Pk Volume	180	82	0	0	262
Pk Hr Factor	0.882	0.891	0.000	0.000	0.885

PM Peak Hour	12:00	16:30			16:30
PM Pk Volume	253	320			548
Pk Hr Factor	0.904	0.784			0.856
4 - 6 Volume	410	592	0	0	1002
4 - 6 Peak Hour	16:30	16:30			16:30
4 - 6 Pk Volume	228	320	0	0	548
Pk Hr Factor	0.864	0.784	0.000	0.000	0.856

Prepared by NDS/ATD

VOLUME

Camino De La Siesta Bet. Camino De La Reina & Camino Del Rio North

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_085

DAILY TOTALS	NB	SB	EB	WB	Total
	2,747	2,465	0	0	5,212

AM Period	NB		SB		EB		WB		TOTAL	
00:00	2		4						6	
00:15	2		3						5	
00:30	1		4						5	
00:45	2	7	0	11					2	18
01:00	2		0						2	
01:15	1		0						1	
01:30	1		3						4	
01:45	0	4	0	3					0	7
02:00	2		3						5	
02:15	1		0						1	
02:30	1		0						1	
02:45	4	8	0	3					4	11
03:00	3		5						8	
03:15	0		4						4	
03:30	1		2						3	
03:45	2	6	0	11					2	17
04:00	0		3						3	
04:15	0		1						1	
04:30	0		2						2	
04:45	4	4	3	9					7	13
05:00	1		1						2	
05:15	7		2						9	
05:30	7		2						9	
05:45	5	20	2	7					7	27
06:00	6		1						7	
06:15	10		4						14	
06:30	8		7						15	
06:45	10	34	6	18					16	52
07:00	10		15						25	
07:15	17		7						24	
07:30	28		18						46	
07:45	43	98	8	48					51	146
08:00	34		6						40	
08:15	49		20						69	
08:30	35		22						57	
08:45	46	164	20	68					66	232
09:00	50		16						66	
09:15	50		24						74	
09:30	32		23						55	
09:45	45	177	18	81					63	258
10:00	42		26						68	
10:15	52		30						82	
10:30	37		29						66	
10:45	46	177	27	112					73	289
11:00	53		37						90	
11:15	55		34						89	
11:30	54		42						96	
11:45	68	230	44	157					112	387
TOTALS		929		528						1457
SPLIT %		63.8%		36.2%						28.0%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	61		48						109	
12:15	74		40						114	
12:30	73		38						111	
12:45	63	271	38	164					101	435
13:00	59		44						103	
13:15	47		52						99	
13:30	77		43						120	
13:45	62	245	37	176					99	421
14:00	55		50						105	
14:15	54		42						96	
14:30	51		43						94	
14:45	47	207	49	184					96	391
15:00	48		49						97	
15:15	55		42						97	
15:30	58		53						111	
15:45	52	213	53	197					105	410
16:00	47		71						118	
16:15	46		66						112	
16:30	54		75						129	
16:45	69	216	93	305					162	521
17:00	60		103						163	
17:15	56		69						125	
17:30	52		70						122	
17:45	43	211	45	287					88	498
18:00	44		53						97	
18:15	42		66						108	
18:30	46		49						95	
18:45	32	164	30	198					62	362
19:00	28		31						59	
19:15	34		32						66	
19:30	29		26						55	
19:45	26	117	27	116					53	233
20:00	18		23						41	
20:15	28		22						50	
20:30	12		23						35	
20:45	14	72	26	94					40	166
21:00	17		42						59	
21:15	16		43						59	
21:30	10		18						28	
21:45	15	58	28	131					43	189
22:00	6		19						25	
22:15	2		16						18	
22:30	11		13						24	
22:45	7	26	9	57					16	83
23:00	6		11						17	
23:15	4		8						12	
23:30	3		5						8	
23:45	5	18	4	28					9	46
TOTALS		1818		1937						3755
SPLIT %		48.4%		51.6%						72.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,747	2,465	0	0	5,212

AM Peak Hour	11:45	11:30			11:45	PM Peak Hour	12:00	16:30			16:30
AM Pk Volume	276	174			446	PM Pk Volume	271	340			579
Pk Hr Factor	0.932	0.906			0.978	Pk Hr Factor	0.916	0.825			0.888
7 - 9 Volume	262	116	0	0	378	4 - 6 Volume	427	592	0	0	1019
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:30	16:30			16:30
7 - 9 Pk Volume	164	68	0	0	232	4 - 6 Pk Volume	239	340	0	0	579
Pk Hr Factor	0.837	0.773	0.000	0.000	0.841	Pk Hr Factor	0.866	0.825	0.000	0.000	0.888

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Metropolitan Drive, From Mission Valley Road to Murray Canyon Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	2		3					12:00	44		20				
00:15	2		0					12:15	51		27				
00:30	0		1					12:30	58		43				
00:45	0	4	0	4			8	12:45	72	225	45	135			360
01:00	0		0					13:00	39		40				
01:15	1		0					13:15	28		47				
01:30	1		0					13:30	39		50				
01:45	0	2	1	1			3	13:45	42	148	21	158			306
02:00	0		0					14:00	77		0				
02:15	0		0					14:15	51		14				
02:30	0		1					14:30	59		30				
02:45	1	1	0	1			2	14:45	51	238	22	66			304
03:00	0		0					15:00	44		17				
03:15	0		1					15:15	56		3				
03:30	1		0					15:30	83		2				
03:45	0	1	1	2			3	15:45	56	239	14	36			275
04:00	1		2					16:00	68		15				
04:15	1		2					16:15	68		20				
04:30	1		0					16:30	100		18				
04:45	3	6	2	6			12	16:45	69	305	13	66			371
05:00	0		2					17:00	125		17				
05:15	2		1					17:15	64		22				
05:30	8		4					17:30	48		15				
05:45	8	18	8	15			33	17:45	55	292	14	68			360
06:00	9		7					18:00	42		16				
06:15	4		12					18:15	25		9				
06:30	3		16					18:30	20		9				
06:45	9	25	16	51			76	18:45	15	102	10	44			146
07:00	6		23					19:00	16		4				
07:15	21		27					19:15	12		8				
07:30	52		4					19:30	17		5				
07:45	69	148	20	74			222	19:45	14	59	6	23			82
08:00	28		77					20:00	9		10				
08:15	28		68					20:15	15		4				
08:30	24		54					20:30	6		2				
08:45	29	109	75	274			383	20:45	21	51	1	17			68
09:00	62		14					21:00	19		4				
09:15	44		3					21:15	5		3				
09:30	51		1					21:30	6		4				
09:45	46	203	8	26			229	21:45	5	35	4	15			50
10:00	21		29					22:00	0		2				
10:15	22		25					22:15	1		2				
10:30	38		24					22:30	3		3				
10:45	22	103	33	111			214	22:45	4	8	4	11			19
11:00	37		25					23:00	1		2				
11:15	46		27					23:15	1		0				
11:30	67		27					23:30	1		1				
11:45	75	225	38	117			342	23:45	1	4	1	4			8
Total Vol.		845		682			**1527**			1706		643			**2349**

Daily Totals

NB	SB	EB	WB	**Combined**
2551	1325			**3876**

	AM			**PM**		
Split %	55.3%	44.7%	**39.4%**	72.6%	27.4%	**60.6%**
Peak Hour	11:30	08:00	**08:00**	16:15	12:45	**16:15**
Volume	237	274	**383**	362	182	**430**
P.H.F.	0.79	0.89	**0.91**	0.77	0.91	**0.76**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Metropolitan Drive, From Mission Valley Road to Murray Canyon Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	1		0					12:00	67		25				
00:15	1		1					12:15	44		29				
00:30	1		1					12:30	58		31				
00:45	0	3	0	2			5	12:45	65	234	45	130			364
01:00	1		3					13:00	46		54				
01:15	1		0					13:15	30		49				
01:30	1		0					13:30	36		38				
01:45	0	3	3	6			9	13:45	38	150	31	172			322
02:00	1		0					14:00	33		40				
02:15	1		1					14:15	37		30				
02:30	0		0					14:30	32		37				
02:45	0	2	0	1			3	14:45	39	141	22	129			270
03:00	0		0					15:00	43		20				
03:15	1		1					15:15	54		21				
03:30	1		0					15:30	40		20				
03:45	0	2	1	2			4	15:45	41	178	26	87			265
04:00	0		1					16:00	75		24				
04:15	0		1					16:15	54		14				
04:30	1		0					16:30	81		18				
04:45	3	4	3	5			9	16:45	84	294	31	87			381
05:00	0		4					17:00	82		38				
05:15	5		0					17:15	84		25				
05:30	8		3					17:30	51		25				
05:45	4	17	9	16			33	17:45	42	259	19	107			366
06:00	9		6					18:00	35		16				
06:15	2		12					18:15	28		12				
06:30	5		22					18:30	16		9				
06:45	7	23	24	64			87	18:45	26	105	6	43			148
07:00	12		24					19:00	15		5				
07:15	7		37					19:15	10		4				
07:30	12		43					19:30	13		4				
07:45	19	50	74	178			228	19:45	14	52	2	15			67
08:00	25		79					20:00	10		5				
08:15	19		77					20:15	12		3				
08:30	24		74					20:30	13		3				
08:45	27	95	57	287			382	20:45	22	57	2	13			70
09:00	29		49					21:00	12		4				
09:15	26		41					21:15	7		2				
09:30	24		20					21:30	6		0				
09:45	25	104	24	134			238	21:45	7	32	3	9			41
10:00	22		32					22:00	6		0				
10:15	31		36					22:15	7		2				
10:30	20		20					22:30	2		2				
10:45	23	96	25	113			209	22:45	1	16	4	8			24
11:00	30		24					23:00	3		3				
11:15	43		17					23:15	2		0				
11:30	48		24					23:30	2		2				
11:45	61	182	24	89			271	23:45	2	9	0	5			14
Total Vol.		581		897			**1478**			1527		805			**2332**

Daily Totals

NB	SB	EB	WB	**Combined**
2108	1702			**3810**

	AM			**PM**		
Split %	39.3%	60.7%	**38.8%**	65.5%	34.5%	**61.2%**
Peak Hour	11:45	07:45	**07:45**	16:30	12:45	**16:30**
Volume	230	304	**391**	331	186	**443**
P.H.F.	0.86	0.96	**0.94**	0.98	0.86	**0.92**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Murray Canyon Road, From Metropolitan Drive to Frazee Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			5		8			12:00			44		68		
00:15			8		9			12:15			48		51		
00:30			4		5			12:30			51		66		
00:45			5	22	4	26	48	12:45			44	187	70	255	442
01:00			6		3			13:00			58		65		
01:15			2		2			13:15			55		48		
01:30			3		1			13:30			62		51		
01:45			1	12	3	9	21	13:45			40	215	40	204	419
02:00			2		2			14:00			35		51		
02:15			1		2			14:15			44		44		
02:30			0		1			14:30			51		46		
02:45			1	4	0	5	9	14:45			68	198	68	209	407
03:00			2		0			15:00			44		77		
03:15			3		0			15:15			51		84		
03:30			1		4			15:30			65		91		
03:45			2	8	0	4	12	15:45			70	230	106	358	588
04:00			1		1			16:00			88		115		
04:15			0		0			16:15			70		135		
04:30			2		2			16:30			65		116		
04:45			3	6	3	6	12	16:45			51	274	105	471	745
05:00			4		2			17:00			84		121		
05:15			5		6			17:15			65		116		
05:30			6		5			17:30			77		103		
05:45			11	26	8	21	47	17:45			54	280	97	437	717
06:00			15		8			18:00			62		91		
06:15			20		12			18:15			35		89		
06:30			32		15			18:30			28		65		
06:45			50	117	21	56	173	18:45			33	158	66	311	469
07:00			88		32			19:00			35		40		
07:15			121		42			19:15			40		25		
07:30			135		66			19:30			35		22		
07:45			145	489	54	194	683	19:45			22	132	35	122	254
08:00			111		70			20:00			26		15		
08:15			102		65			20:15			28		18		
08:30			95		51			20:30			30		21		
08:45			88	396	44	230	626	20:45			33	117	22	76	193
09:00			53		26			21:00			25		26		
09:15			66		32			21:15			16		16		
09:30			66		38			21:30			18		19		
09:45			26	211	33	129	340	21:45			20	79	18	79	158
10:00			35		54			22:00			22		22		
10:15			38		43			22:15			16		16		
10:30			50		40			22:30			15		11		
10:45			49	172	38	175	347	22:45			11	64	10	59	123
11:00			45		48			23:00			5		16		
11:15			55		53			23:15			9		8		
11:30			55		57			23:30			12		9		
11:45			39	194	53	211	405	23:45			5	31	8	41	72
Total Vol.			1657		1066		**2723**				1965		2622		**4587**

	NB	SB	EB	WB	Combined
Daily Totals			3622	3688	**7310**

	AM			PM		
Split %	60.9%	39.1%	**37.3%**	42.8%	57.2%	**62.7%**
Peak Hour	07:15	07:30	**07:30**	15:30	16:15	**15:45**
Volume	512	255	**748**	293	477	**765**
P.H.F.	0.88	0.91	**0.93**	0.83	0.88	**0.93**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Murray Canyon Road, From Metropolitan Drive to Frazee Road

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			6		7			12:00			50		50		
00:15			7		9			12:15			55		68		
00:30			7		5			12:30			65		77		
00:45			8	28	4	25	53	12:45			61	231	84	279	510
01:00			4		6			13:00			54		65		
01:15			9		6			13:15			42		55		
01:30			5		4			13:30			62		50		
01:45			6	24	2	18	42	13:45			55	213	40	210	423
02:00			4		3			14:00			45		58		
02:15			3		2			14:15			45		65		
02:30			2		1			14:30			51		70		
02:45			1	10	0	6	16	14:45			66	207	56	249	456
03:00			2		1			15:00			60		69		
03:15			2		2			15:15			68		61		
03:30			0		1			15:30			54		77		
03:45			0	4	3	7	11	15:45			44	226	84	291	517
04:00			1		0			16:00			79		121		
04:15			2		1			16:15			84		135		
04:30			3		2			16:30			65		141		
04:45			0	6	6	9	15	16:45			55	283	128	525	808
05:00			0		8			17:00			54		116		
05:15			4		9			17:15			62		105		
05:30			6		10			17:30			48		135		
05:45			9	19	8	35	54	17:45			65	229	104	460	689
06:00			12		9			18:00			51		88		
06:15			18		11			18:15			55		91		
06:30			44		17			18:30			40		69		
06:45			51	125	16	53	178	18:45			35	181	77	325	506
07:00			68		18			19:00			41		51		
07:15			91		44			19:15			32		44		
07:30			121		55			19:30			33		33		
07:45			141	421	56	173	594	19:45			29	135	28	156	291
08:00			116		62			20:00			30		31		
08:15			123		70			20:15			33		25		
08:30			105		54			20:30			34		18		
08:45			94	438	66	252	690	20:45			20	117	20	94	211
09:00			70		42			21:00			21		16		
09:15			65		42			21:15			9		19		
09:30			55		40			21:30			8		11		
09:45			40	230	35	159	389	21:45			10	48	15	61	109
10:00			30		41			22:00			11		9		
10:15			28		46			22:15			5		12		
10:30			35		33			22:30			10		5		
10:45			41	134	48	168	302	22:45			9	35	8	34	69
11:00			62		51			23:00			11		6		
11:15			44		65			23:15			15		8		
11:30			65		70			23:30			8		6		
11:45			60	231	65	251	482	23:45			9	43	5	25	68
Total Vol.				1670		1156	**2826**					1948		2709	**4657**

Daily Totals

NB	SB	EB	WB	Combined
		3618	3865	**7483**

	AM			PM		
Split %	59.1%	40.9%	**37.8%**	41.8%	58.2%	**62.2%**
Peak Hour	07:30	11:45	**07:30**	16:00	16:00	**16:00**
Volume	501	260	**744**	283	525	**808**
P.H.F.	0.89	0.84	**0.94**	0.84	0.93	**0.92**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Frazee Road, From Murray Canyon Road to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	19		8					12:00	148		161				
00:15	15		9					12:15	152		141				
00:30	11		4					12:30	131		184				
00:45	19	64	5	26			90	12:45	116	547	142	628			1175
01:00	12		4					13:00	105		144				
01:15	4		6					13:15	121		135				
01:30	6		3					13:30	106		126				
01:45	5	27	4	17			44	13:45	88	420	141	546			966
02:00	4		5					14:00	95		135				
02:15	3		8					14:15	106		105				
02:30	6		9					14:30	84		121				
02:45	4	17	5	27			44	14:45	95	380	145	506			886
03:00	5		6					15:00	77		151				
03:15	6		5					15:15	84		166				
03:30	8		5					15:30	98		161				
03:45	3	22	4	20			42	15:45	99	358	174	652			1010
04:00	4		3					16:00	108		184				
04:15	6		6					16:15	116		199				
04:30	5		4					16:30	126		222				
04:45	9	24	5	18			42	16:45	116	466	213	818			1284
05:00	10		9					17:00	135		205				
05:15	16		6					17:15	130		151				
05:30	22		11					17:30	115		168				
05:45	35	83	16	42			125	17:45	126	506	141	665			1171
06:00	42		21					18:00	104		121				
06:15	60		16					18:15	121		106				
06:30	88		20					18:30	106		114				
06:45	106	296	44	101			397	18:45	111	442	126	467			909
07:00	138		51					19:00	88		88				
07:15	148		50					19:15	70		94				
07:30	161		68					19:30	68		77				
07:45	189	636	52	221			857	19:45	77	303	54	313			616
08:00	222		88					20:00	54		68				
08:15	205		70					20:15	65		70				
08:30	184		68					20:30	44		55				
08:45	216	827	94	320			1147	20:45	41	204	51	244			448
09:00	189		106					21:00	35		40				
09:15	151		89					21:15	28		32				
09:30	142		121					21:30	20		28				
09:45	135	617	135	451			1068	21:45	19	102	21	121			223
10:00	126		141					22:00	20		11				
10:15	111		116					22:15	16		19				
10:30	135		135					22:30	11		20				
10:45	114	486	141	533			1019	22:45	15	62	15	65			127
11:00	118		161					23:00	18		8				
11:15	126		148					23:15	9		9				
11:30	135		151					23:30	12		12				
11:45	114	493	168	628			1121	23:45	15	54	10	39			93
Total Vol.		3592		2404			**5996**			3844		5064			**8908**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	7436	7468			**14904**

	AM			**PM**		
Split %	59.9%	40.1%	**40.2%**	43.2%	56.8%	**59.8%**
Peak Hour	08:00	11:45	**11:45**	12:00	16:15	**16:15**
Volume	827	654	**1199**	547	839	**1332**
P.H.F.	0.93	0.89	**0.95**	0.92	0.94	**0.96**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Frazee Road, From Murray Canyon Road to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	18		15					12:00	128		124				
00:15	20		10					12:15	145		145				
00:30	16		5					12:30	162		155				
00:45	11	65	4	34			99	12:45	121	556	162	586			1142
01:00	12		9					13:00	111		131				
01:15	11		10					13:15	108		141				
01:30	5		5					13:30	99		148				
01:45	4	32	4	28			60	13:45	91	409	151	571			980
02:00	6		6					14:00	84		122				
02:15	9		3					14:15	77		111				
02:30	5		5					14:30	95		106				
02:45	4	24	4	18			42	14:45	68	324	124	463			787
03:00	6		6					15:00	74		135				
03:15	5		5					15:15	84		128				
03:30	3		4					15:30	91		151				
03:45	6	20	5	20			40	15:45	77	326	148	562			888
04:00	5		1					16:00	126		174				
04:15	4		4					16:15	135		184				
04:30	5		4					16:30	126		198				
04:45	4	18	5	14			32	16:45	141	528	191	747			1275
05:00	8		5					17:00	122		216				
05:15	12		8					17:15	141		203				
05:30	18		11					17:30	114		165				
05:45	26	64	18	42			106	17:45	106	483	154	738			1221
06:00	35		19					18:00	116		104				
06:15	55		22					18:15	94		111				
06:30	70		26					18:30	105		103				
06:45	84	244	38	105			349	18:45	84	399	88	406			805
07:00	121		44					19:00	91		99				
07:15	145		62					19:15	77		94				
07:30	168		77					19:30	68		98				
07:45	174	608	54	237			845	19:45	74	310	65	356			666
08:00	184		68					20:00	84		70				
08:15	266		74					20:15	65		54				
08:30	206		65					20:30	44		55				
08:45	184	840	74	281			1121	20:45	51	244	44	223			467
09:00	191		94					21:00	40		48				
09:15	142		75					21:15	35		54				
09:30	152		91					21:30	28		32				
09:45	129	614	118	378			992	21:45	21	124	28	162			286
10:00	132		106					22:00	19		33				
10:15	115		126					22:15	20		16				
10:30	126		135					22:30	16		20				
10:45	108	481	145	512			993	22:45	11	66	15	84			150
11:00	126		111					23:00	9		18				
11:15	115		111					23:15	12		20				
11:30	135		135					23:30	10		16				
11:45	104	480	142	499			979	23:45	11	42	19	73			115
Total Vol.		3490		2168			**5658**			3811		4971			**8782**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	7301	7139			**14440**

	AM			**PM**		
Split %	61.7%	38.3%	**39.2%**	43.4%	56.6%	**60.8%**
Peak Hour	08:15	11:45	**08:15**	12:00	16:30	**16:30**
Volume	847	566	**1154**	556	808	**1338**
P.H.F.	0.80	0.91	**0.85**	0.92	0.94	**0.97**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Frazee Road, From Friars Road to Hazard Center Drive

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	21		24					12:00	142		151				
00:15	24		25					12:15	133		166				
00:30	16		21					12:30	128		184				
00:45	18	79	16	86			165	12:45	162	565	195	696			1261
01:00	20		20					13:00	145		167				
01:15	16		9					13:15	151		166				
01:30	11		10					13:30	111		170				
01:45	16	63	18	57			120	13:45	126	533	154	657			1190
02:00	9		16					14:00	135		162				
02:15	12		8					14:15	141		142				
02:30	5		9					14:30	128		155				
02:45	10	36	12	45			81	14:45	141	545	141	600			1145
03:00	5		5					15:00	126		165				
03:15	4		4					15:15	133		184				
03:30	6		9					15:30	145		174				
03:45	3	18	5	23			41	15:45	151	555	182	705			1260
04:00	5		10					16:00	158		218				
04:15	5		9					16:15	144		235				
04:30	6		8					16:30	184		245				
04:45	12	28	11	38			66	16:45	195	681	222	920			1601
05:00	11		20					17:00	162		206				
05:15	15		16					17:15	199		219				
05:30	20		28					17:30	168		205				
05:45	16	62	33	97			159	17:45	144	673	213	843			1516
06:00	21		31					18:00	126		222				
06:15	28		40					18:15	131		218				
06:30	35		51					18:30	125		184				
06:45	41	125	70	192			317	18:45	105	487	195	819			1306
07:00	50		88					19:00	84		162				
07:15	46		91					19:15	95		151				
07:30	51		90					19:30	106		142				
07:45	66	213	151	420			633	19:45	111	396	135	590			986
08:00	70		142					20:00	95		145				
08:15	68		162					20:15	87		156				
08:30	74		135					20:30	70		122				
08:45	66	278	144	583			861	20:45	65	317	106	529			846
09:00	61		116					21:00	70		88				
09:15	66		126					21:15	54		95				
09:30	51		131					21:30	55		70				
09:45	68	246	105	478			724	21:45	62	241	65	318			559
10:00	77		116					22:00	62		84				
10:15	84		108					22:15	40		55				
10:30	95		126					22:30	32		51				
10:45	65	321	142	492			813	22:45	28	162	40	230			392
11:00	84		168					23:00	22		35				
11:15	91		177					23:15	16		42				
11:30	121		184					23:30	19		25				
11:45	106	402	195	724			1126	23:45	20	77	22	124			201
Total Vol.		1871		3235			**5106**			5232		7031			**12263**

Daily Totals

NB	SB	EB	WB	**Combined**
7103	10266			**17369**

	AM			**PM**		
Split %	36.6%	63.4%	**29.4%**	42.7%	57.3%	**70.6%**
Peak Hour	11:45	11:00	**11:45**	16:30	16:00	**16:30**
Volume	509	724	**1205**	740	920	**1632**
P.H.F.	0.90	0.93	**0.97**	0.90	0.94	**0.95**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Frazee Road, From Friars Road to Hazard Center Drive

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	18		21					12:00	148		142				
00:15	26		28					12:15	151		174				
00:30	20		20					12:30	126		177				
00:45	24	88	19	88			176	12:45	144	569	151	644			1213
01:00	16		20					13:00	162		166				
01:15	11		15					13:15	135		184				
01:30	15		18					13:30	128		155				
01:45	19	61	21	74			135	13:45	121	546	142	647			1193
02:00	10		16					14:00	141		135				
02:15	8		11					14:15	144		144				
02:30	4		15					14:30	162		151				
02:45	9	31	19	61			92	14:45	177	624	128	558			1182
03:00	10		10					15:00	165		141				
03:15	5		5					15:15	142		162				
03:30	4		4					15:30	168		184				
03:45	6	25	9	28			53	15:45	174	649	177	664			1313
04:00	9		5					16:00	161		189				
04:15	9		4					16:15	188		191				
04:30	5		9					16:30	174		216				
04:45	4	27	8	26			53	16:45	189	712	235	831			1543
05:00	18		15					17:00	203		214				
05:15	25		22					17:15	165		222				
05:30	26		26					17:30	177		219				
05:45	22	91	33	96			187	17:45	154	699	184	839			1538
06:00	19		48					18:00	135		196				
06:15	25		55					18:15	104		162				
06:30	35		56					18:30	116		177				
06:45	45	124	68	227			351	18:45	111	466	184	719			1185
07:00	51		70					19:00	104		162				
07:15	66		84					19:15	98		135				
07:30	70		121					19:30	91		141				
07:45	65	252	111	386			638	19:45	70	363	111	549			912
08:00	88		145					20:00	65		108				
08:15	84		151					20:15	66		116				
08:30	70		133					20:30	70		104				
08:45	71	313	121	550			863	20:45	54	255	88	416			671
09:00	55		105					21:00	55		90				
09:15	40		135					21:15	62		75				
09:30	35		111					21:30	35		51				
09:45	41	171	105	456			627	21:45	41	193	40	256			449
10:00	68		94					22:00	25		44				
10:15	77		116					22:15	33		65				
10:30	84		132					22:30	31		35				
10:45	111	340	114	456			796	22:45	20	109	28	172			281
11:00	108		142					23:00	18		26				
11:15	130		135					23:15	19		32				
11:30	121		168					23:30	20		22				
11:45	111	470	174	619			1089	23:45	16	73	28	108			181
Total Vol.		1993		3067			**5060**			5258		6403			**11661**

Daily Totals

NB	SB	EB	WB	**Combined**
7251	9470			**16721**

	AM			PM		
Split %	39.4%	60.6%	**30.3%**	45.1%	54.9%	**69.7%**
Peak Hour	11:45	11:45	**11:45**	16:15	16:45	**16:45**
Volume	536	667	**1203**	754	890	**1624**
P.H.F.	0.89	0.94	**0.93**	0.98	0.95	**0.96**

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Murray Ridge Rd & 1200 Ft W/O Murray Ridge Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_090

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,272	5,707	10,979

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			2		7		9		12:00			89		103		192	
00:15			6		8		14		12:15			96		87		183	
00:30			3		6		9		12:30			93		77		170	
00:45			1	12	1	22	2	34	12:45			101	379	75	342	176	721
01:00			0		3		3		13:00			96		62		158	
01:15			0		2		2		13:15			77		73		150	
01:30			5		2		7		13:30			71		86		157	
01:45			4	9	5	12	9	21	13:45			68	312	80	301	148	613
02:00			0		2		2		14:00			70		93		163	
02:15			0		1		1		14:15			76		76		152	
02:30			3		2		5		14:30			76		131		207	
02:45			2	5	0	5	2	10	14:45			68	290	91	391	159	681
03:00			0		2		2		15:00			70		134		204	
03:15			2		1		3		15:15			60		137		197	
03:30			3		0		3		15:30			74		162		236	
03:45			2	7	2	5	4	12	15:45			82	286	138	571	220	857
04:00			3		3		6		16:00			75		160		235	
04:15			2		2		4		16:15			74		167		241	
04:30			9		4		13		16:30			114		200		314	
04:45			9	23	2	11	11	34	16:45			119	382	176	703	295	1085
05:00			14		7		21		17:00			96		225		321	
05:15			16		4		20		17:15			130		181		311	
05:30			23		15		38		17:30			114		176		290	
05:45			50	103	16	42	66	145	17:45			116	456	137	719	253	1175
06:00			53		26		79		18:00			90		129		219	
06:15			71		20		91		18:15			87		101		188	
06:30			94		28		122		18:30			70		98		168	
06:45			85	303	40	114	125	417	18:45			62	309	69	397	131	706
07:00			99		61		160		19:00			48		72		120	
07:15			105		68		173		19:15			59		70		129	
07:30			120		62		182		19:30			62		56		118	
07:45			138	462	70	261	208	723	19:45			51	220	66	264	117	484
08:00			154		60		214		20:00			32		69		101	
08:15			142		43		185		20:15			30		58		88	
08:30			114		64		178		20:30			29		58		87	
08:45			121	531	47	214	168	745	20:45			32	123	50	235	82	358
09:00			108		52		160		21:00			21		52		73	
09:15			83		55		138		21:15			35		46		81	
09:30			76		46		122		21:30			17		56		73	
09:45			83	350	51	204	134	554	21:45			13	86	31	185	44	271
10:00			61		38		99		22:00			18		40		58	
10:15			58		69		127		22:15			10		22		32	
10:30			68		59		127		22:30			16		18		34	
10:45			70	257	61	227	131	484	22:45			10	54	13	93	23	147
11:00			68		75		143		23:00			13		10		23	
11:15			52		66		118		23:15			9		13		22	
11:30			58		117		175		23:30			5		15		20	
11:45			103	281	82	340	185	621	23:45			5	32	11	49	16	81
TOTALS				2343		1457		3800	TOTALS				2929		4250		7179
SPLIT %				61.7%		38.3%		34.6%	SPLIT %				40.8%		59.2%		65.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,272	5,707	10,979

AM Peak Hour			07:30	11:30	07:30	PM Peak Hour			16:30	16:30	16:30
AM Pk Volume			554	389	789	PM Pk Volume			459	782	1241
Pk Hr Factor			0.899	0.831	0.922	Pk Hr Factor			0.883	0.869	0.967
7 - 9 Volume	0	0	993	475	1468	4 - 6 Volume	0	0	838	1422	2260
7 - 9 Peak Hour			07:30	07:00	07:30	4 - 6 Peak Hour			16:30	16:30	16:30
7 - 9 Pk Volume	0	0	554	261	789	4 - 6 Pk Volume	0	0	459	782	1241
Pk Hr Factor	0.000	0.000	0.899	0.932	0.922	Pk Hr Factor	0.000	0.000	0.883	0.869	0.967

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Murray Ridge Rd & 1200 Ft W/O Murray Ridge Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_090

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,285	5,680	10,965

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			5		13		18		12:00			81		98		179	
00:15			4		11		15		12:15			78		87		165	
00:30			6		4		10		12:30			90		87		177	
00:45			6	21	2	30	8	51	12:45			111	360	83	355	194	715
01:00			1		5		6		13:00			86		77		163	
01:15			1		4		5		13:15			72		68		140	
01:30			2		2		4		13:30			54		83		137	
01:45			2	6	4	15	6	21	13:45			61	273	95	323	156	596
02:00			1		7		8		14:00			86		97		183	
02:15			0		0		0		14:15			78		79		157	
02:30			3		3		6		14:30			60		121		181	
02:45			0	4	1	11	1	15	14:45			66	290	113	410	179	700
03:00			0		1		1		15:00			81		146		227	
03:15			4		1		5		15:15			65		164		229	
03:30			0		4		4		15:30			69		157		226	
03:45			3	7	3	9	6	16	15:45			76	291	140	607	216	898
04:00			6		2		8		16:00			87		188		275	
04:15			4		2		6		16:15			90		151		241	
04:30			9		3		12		16:30			92		169		261	
04:45			14	33	5	12	19	45	16:45			105	374	179	687	284	1061
05:00			8		8		16		17:00			104		225		329	
05:15			13		5		18		17:15			153		232		385	
05:30			29		8		37		17:30			105		157		262	
05:45			48	98	13	34	61	132	17:45			98	460	121	735	219	1195
06:00			66		19		85		18:00			84		114		198	
06:15			82		32		114		18:15			82		103		185	
06:30			83		30		113		18:30			69		83		152	
06:45			80	311	30	111	110	422	18:45			59	294	72	372	131	666
07:00			97		77		174		19:00			60		62		122	
07:15			93		72		165		19:15			44		55		99	
07:30			148		68		216		19:30			44		64		108	
07:45			154	492	49	266	203	758	19:45			47	195	64	245	111	440
08:00			160		54		214		20:00			41		61		102	
08:15			162		57		219		20:15			35		46		81	
08:30			149		60		209		20:30			23		64		87	
08:45			167	638	58	229	225	867	20:45			30	129	65	236	95	365
09:00			99		55		154		21:00			23		48		71	
09:15			88		40		128		21:15			24		33		57	
09:30			56		50		106		21:30			24		50		74	
09:45			75	318	45	190	120	508	21:45			18	89	39	170	57	259
10:00			65		40		105		22:00			19		36		55	
10:15			65		54		119		22:15			14		33		47	
10:30			59		62		121		22:30			8		18		26	
10:45			73	262	63	219	136	481	22:45			6	47	19	106	25	153
11:00			66		54		120		23:00			17		13		30	
11:15			63		54		117		23:15			4		5		9	
11:30			66		68		134		23:30			3		4		7	
11:45			68	263	100	276	168	539	23:45			6	30	10	32	16	62
TOTALS				2453		1402		3855	TOTALS				2832		4278		7110
SPLIT %				63.6%		36.4%		35.2%	SPLIT %				39.8%		60.2%		64.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,285	5,680	10,965

AM Peak Hour			08:00	11:45	08:00	PM Peak Hour			16:45	16:30	16:45
AM Pk Volume			638	372	867	PM Pk Volume			467	805	1260
Pk Hr Factor			0.955	0.930	0.963	Pk Hr Factor			0.763	0.867	0.818
7 - 9 Volume	0	0	1130	495	1625	4 - 6 Volume	0	0	834	1422	2256
7 - 9 Peak Hour			08:00	07:00	08:00	4 - 6 Peak Hour			16:45	16:30	16:45
7 - 9 Pk Volume	0	0	638	266	867	4 - 6 Pk Volume	0	0	467	805	1260
Pk Hr Factor	0.000	0.000	0.955	0.864	0.963	Pk Hr Factor	0.000	0.000	0.763	0.867	0.818

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. 1200 Ft W/O Murray Ridge Rd & 950 Ft N/O Mission Valley Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_091

DAILY TOTALS	NB	SB	EB	WB	Total
	5,518	5,207	0	0	10,725

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	7		3						10		12:00	97		102						199	
00:15	7		5						12		12:15	89		90						179	
00:30	6		3						9		12:30	74		94						168	
00:45	1	21	0	11					1	32	12:45	71	331	103	389					174	720
01:00	3		0						3		13:00	59		95						154	
01:15	2		3						5		13:15	72		75						147	
01:30	2		4						6		13:30	85		59						144	
01:45	5	12	2	9					7	21	13:45	77	293	70	299					147	592
02:00	2		0						2		14:00	89		73						162	
02:15	1		1						2		14:15	75		74						149	
02:30	1		2						3		14:30	131		70						201	
02:45	0	4	2	5					2	9	14:45	87	382	69	286					156	668
03:00	2		0						2		15:00	137		71						208	
03:15	1		2						3		15:15	122		59						181	
03:30	0		2						2		15:30	161		72						233	
03:45	2	5	2	6					4	11	15:45	133	553	79	281					212	834
04:00	2		4						6		16:00	155		76						231	
04:15	2		1						3		16:15	157		75						232	
04:30	3		9						12		16:30	201		112						313	
04:45	4	11	12	26					16	37	16:45	154	667	122	385					276	1052
05:00	5		10						15		17:00	225		91						316	
05:15	4		21						25		17:15	168		120						288	
05:30	15		31						46		17:30	167		120						287	
05:45	17	41	47	109					64	150	17:45	131	691	109	440					240	1131
06:00	24		58						82		18:00	130		88						218	
06:15	18		78						96		18:15	92		75						167	
06:30	27		96						123		18:30	95		71						166	
06:45	42	111	90	322					132	433	18:45	64	381	66	300					130	681
07:00	57		95						152		19:00	71		42						113	
07:15	65		95						160		19:15	68		63						131	
07:30	61		132						193		19:30	53		57						110	
07:45	65	248	143	465					208	713	19:45	65	257	44	206					109	463
08:00	61		154						215		20:00	71		36						107	
08:15	39		130						169		20:15	57		28						85	
08:30	65		114						179		20:30	57		30						87	
08:45	45	210	117	515					162	725	20:45	50	235	25	119					75	354
09:00	52		99						151		21:00	52		24						76	
09:15	50		80						130		21:15	46		30						76	
09:30	44		79						123		21:30	51		18						69	
09:45	49	195	77	335					126	530	21:45	30	179	12	84					42	263
10:00	38		60						98		22:00	40		18						58	
10:15	68		60						128		22:15	24		17						41	
10:30	57		63						120		22:30	15		10						25	
10:45	62	225	73	256					135	481	22:45	12	91	7	52					19	143
11:00	68		60						128		23:00	10		17						27	
11:15	67		52						119		23:15	13		4						17	
11:30	114		66						180		23:30	15		6						21	
11:45	77	326	96	274					173	600	23:45	11	49	6	33					17	82
TOTALS		1409		2333						3742	TOTALS		4109		2874						6983
SPLIT %		37.7%		62.3%						34.9%	SPLIT %		58.8%		41.2%						65.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	5,518	5,207	0	0	10,725

AM Peak Hour	11:30	07:30			07:30	PM Peak Hour	16:30	16:45			16:30
AM Pk Volume	377	559			785	PM Pk Volume	748	453			1193
Pk Hr Factor	0.827	0.907			0.913	Pk Hr Factor	0.831	0.928			0.944
7 - 9 Volume	458	980	0	0	1438	4 - 6 Volume	1358	825	0	0	2183
7 - 9 Peak Hour	07:15	07:30			07:30	4 - 6 Peak Hour	16:30	16:45			16:30
7 - 9 Pk Volume	252	559	0	0	785	4 - 6 Pk Volume	748	453	0	0	1193
Pk Hr Factor	0.969	0.907	0.000	0.000	0.913	Pk Hr Factor	0.831	0.928	0.000	0.000	0.944

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. 1200 Ft W/O Murray Ridge Rd & 950 Ft N/O Mission Valley Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_091

DAILY TOTALS	NB	SB	EB	WB	Total
	5,492	5,224	0	0	10,716

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	14		4						18		12:00	90		70						160	
00:15	9		6						15		12:15	88		86						174	
00:30	4		4						8		12:30	87		90						177	
00:45	1	28	5	19					6	47	12:45	76	341	107	353					183	694
01:00	5		1						6		13:00	73		82						155	
01:15	4		0						4		13:15	65		68						133	
01:30	3		2						5		13:30	80		57						137	
01:45	4	16	2	5					6	21	13:45	95	313	59	266					154	579
02:00	6		1						7		14:00	95		93						188	
02:15	1		1						2		14:15	71		67						138	
02:30	2		2						4		14:30	118		65						183	
02:45	1	10	0	4					1	14	14:45	109	393	61	286					170	679
03:00	1		1						2		15:00	145		76						221	
03:15	2		2						4		15:15	149		68						217	
03:30	3		1						4		15:30	145		64						209	
03:45	3	9	4	8					7	17	15:45	143	582	78	286					221	868
04:00	2		5						7		16:00	178		85						263	
04:15	3		3						6		16:15	139		87						226	
04:30	2		13						15		16:30	171		90						261	
04:45	6	13	10	31					16	44	16:45	161	649	114	376					275	1025
05:00	7		8						15		17:00	248		97						345	
05:15	6		18						24		17:15	187		153						340	
05:30	7		30						37		17:30	155		98						253	
05:45	14	34	56	112					70	146	17:45	111	701	104	452					215	1153
06:00	19		68						87		18:00	114		71						185	
06:15	28		83						111		18:15	98		71						169	
06:30	31		83						114		18:30	79		69						148	
06:45	28	106	83	317					111	423	18:45	68	359	61	272					129	631
07:00	75		87						162		19:00	60		50						110	
07:15	73		111						184		19:15	53		49						102	
07:30	66		146						212		19:30	65		39						104	
07:45	48	262	162	506					210	768	19:45	60	238	46	184					106	422
08:00	50		168						218		20:00	55		46						101	
08:15	58		159						217		20:15	50		28						78	
08:30	59		134						193		20:30	59		24						83	
08:45	53	220	154	615					207	835	20:45	66	230	30	128					96	358
09:00	52		100						152		21:00	50		20						70	
09:15	39		79						118		21:15	29		26						55	
09:30	48		59						107		21:30	48		18						66	
09:45	45	184	80	318					125	502	21:45	38	165	19	83					57	248
10:00	36		60						96		22:00	36		17						53	
10:15	59		58						117		22:15	30		10						40	
10:30	54		57						111		22:30	17		10						27	
10:45	61	210	75	250					136	460	22:45	18	101	9	46					27	147
11:00	54		65						119		23:00	8		14						22	
11:15	53		64						117		23:15	20		10						30	
11:30	69		58						127		23:30	14		8						22	
11:45	99	275	81	268					180	543	23:45	11	53	7	39					18	92
TOTALS		1367		2453						3820	TOTALS		4125		2771						6896
SPLIT %		35.8%		64.2%						35.6%	SPLIT %		59.8%		40.2%						64.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	5,492	5,224	0	0	10,716

AM Peak Hour	11:45	07:30			07:30	PM Peak Hour	16:30	16:45			16:30
AM Pk Volume	364	635			857	PM Pk Volume	767	462			1221
Pk Hr Factor	0.919	0.945			0.983	Pk Hr Factor	0.773	0.755			0.885
7 - 9 Volume	482	1121	0	0	1603	4 - 6 Volume	1350	828	0	0	2178
7 - 9 Peak Hour	07:00	07:30			07:30	4 - 6 Peak Hour	16:30	16:45			16:30
7 - 9 Pk Volume	262	635	0	0	857	4 - 6 Pk Volume	767	462	0	0	1221
Pk Hr Factor	0.873	0.945	0.000	0.000	0.983	Pk Hr Factor	0.773	0.755	0.000	0.000	0.885

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. 950 Ft N/O Mission Valley Rd & Mission Valley Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_092

DAILY TOTALS	NB	SB	EB	WB	Total
	5,649	5,271	0	0	10,920

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	8		1						9		12:00	99		92						191	
00:15	8		3						11		12:15	84		100						184	
00:30	6		3						9		12:30	80		89						169	
00:45	1	23	1	8					2	31	12:45	73	336	102	383					175	719
01:00	3		0						3		13:00	62		102						164	
01:15	2		1						3		13:15	78		76						154	
01:30	2		4						6		13:30	85		68						153	
01:45	5	12	3	8					8	20	13:45	81	306	69	315					150	621
02:00	2		0						2		14:00	90		72						162	
02:15	1		0						1		14:15	81		75						156	
02:30	1		2						3		14:30	128		75						203	
02:45	0	4	2	4					2	8	14:45	88	387	69	291					157	678
03:00	3		1						4		15:00	142		69						211	
03:15	1		1						2		15:15	128		60						188	
03:30	0		3						3		15:30	166		69						235	
03:45	2	6	2	7					4	13	15:45	138	574	84	282					222	856
04:00	2		2						4		16:00	160		72						232	
04:15	1		3						4		16:15	163		83						246	
04:30	3		7						10		16:30	199		104						303	
04:45	5	11	11	23					16	34	16:45	152	674	106	365					258	1039
05:00	5		15						20		17:00	230		98						328	
05:15	5		15						20		17:15	174		130						304	
05:30	15		21						36		17:30	170		114						284	
05:45	16	41	53	104					69	145	17:45	141	715	119	461					260	1176
06:00	22		52						74		18:00	130		88						218	
06:15	20		69						89		18:15	96		90						186	
06:30	28		92						120		18:30	100		68						168	
06:45	40	110	84	297					124	407	18:45	64	390	57	303					121	693
07:00	57		103						160		19:00	79		54						133	
07:15	62		92						154		19:15	74		64						138	
07:30	58		117						175		19:30	57		60						117	
07:45	63	240	148	460					211	700	19:45	68	278	50	228					118	506
08:00	59		155						214		20:00	71		28						99	
08:15	37		135						172		20:15	65		34						99	
08:30	65		126						191		20:30	55		29						84	
08:45	48	209	118	534					166	743	20:45	51	242	32	123					83	365
09:00	49		109						158		21:00	54		20						74	
09:15	46		83						129		21:15	51		35						86	
09:30	45		79						124		21:30	50		21						71	
09:45	50	190	85	356					135	546	21:45	31	186	13	89					44	275
10:00	38		65						103		22:00	41		17						58	
10:15	71		59						130		22:15	30		13						43	
10:30	57		66						123		22:30	19		17						36	
10:45	61	227	69	259					130	486	22:45	12	102	11	58					23	160
11:00	63		73						136		23:00	12		10						22	
11:15	70		51						121		23:15	13		10						23	
11:30	124		58						182		23:30	14		5						19	
11:45	79	336	100	282					179	618	23:45	11	50	6	31					17	81
TOTALS		1409		2342						3751	TOTALS		4240		2929						7169
SPLIT %		37.6%		62.4%						34.3%	SPLIT %		59.1%		40.9%						65.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	5,649	5,271	0	0	10,920

AM Peak Hour	11:30	07:45			07:45	PM Peak Hour	16:30	17:00			16:30
AM Pk Volume	386	564			788	PM Pk Volume	755	461			1193
Pk Hr Factor	0.778	0.910			0.921	Pk Hr Factor	0.821	0.887			0.909
7 - 9 Volume	449	994	0	0	1443	4 - 6 Volume	1389	826	0	0	2215
7 - 9 Peak Hour	07:15	07:45			07:45	4 - 6 Peak Hour	16:30	17:00			16:30
7 - 9 Pk Volume	242	564	0	0	788	4 - 6 Pk Volume	755	461	0	0	1193
Pk Hr Factor	0.960	0.910	0.000	0.000	0.921	Pk Hr Factor	0.821	0.887	0.000	0.000	0.909

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. 950 Ft N/O Mission Valley Rd & Mission Valley Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_092

DAILY TOTALS	NB	SB	EB	WB	Total
	5,652	5,306	0	0	10,958

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	14		4						18		12:00	93		84						177	
00:15	9		2						11		12:15	88		72						160	
00:30	4		6						10		12:30	84		92						176	
00:45	2	29	4	16					6	45	12:45	85	350	113	361					198	711
01:00	5		2						7		13:00	79		89						168	
01:15	4		1						5		13:15	65		71						136	
01:30	4		3						7		13:30	78		57						135	
01:45	5	18	2	8					7	26	13:45	101	323	65	282					166	605
02:00	6		1						7		14:00	101		83						184	
02:15	1		0						1		14:15	72		81						153	
02:30	2		2						4		14:30	116		65						181	
02:45	1	10	1	4					2	14	14:45	114	403	58	287					172	690
03:00	1		0						1		15:00	150		84						234	
03:15	3		4						7		15:15	157		62						219	
03:30	3		1						4		15:30	154		74						228	
03:45	3	10	3	8					6	18	15:45	152	613	75	295					227	908
04:00	2		6						8		16:00	172		83						255	
04:15	2		3						5		16:15	143		89						232	
04:30	2		9						11		16:30	178		84						262	
04:45	6	12	13	31					19	43	16:45	172	665	106	362					278	1027
05:00	7		10						17		17:00	256		98						354	
05:15	6		12						18		17:15	186		139						325	
05:30	6		27						33		17:30	155		112						267	
05:45	15	34	48	97					63	131	17:45	115	712	101	450					216	1162
06:00	15		62						77		18:00	122		83						205	
06:15	27		77						104		18:15	104		81						185	
06:30	30		89						119		18:30	82		62						144	
06:45	27	99	83	311					110	410	18:45	71	379	68	294					139	673
07:00	76		95						171		19:00	64		55						119	
07:15	73		92						165		19:15	54		44						98	
07:30	62		132						194		19:30	68		49						117	
07:45	47	258	156	475					203	733	19:45	61	247	47	195					108	442
08:00	49		165						214		20:00	70		41						111	
08:15	55		176						231		20:15	46		32						78	
08:30	64		157						221		20:30	60		25						85	
08:45	55	223	151	649					206	872	20:45	66	242	33	131					99	373
09:00	55		112						167		21:00	53		19						72	
09:15	38		92						130		21:15	31		22						53	
09:30	52		50						102		21:30	50		27						77	
09:45	44	189	85	339					129	528	21:45	37	171	14	82					51	253
10:00	38		67						105		22:00	39		22						61	
10:15	61		62						123		22:15	36		15						51	
10:30	55		64						119		22:30	19		9						28	
10:45	67	221	65	258					132	479	22:45	21	115	10	56					31	171
11:00	56		68						124		23:00	8		9						17	
11:15	53		66						119		23:15	15		20						35	
11:30	72		63						135		23:30	12		8						20	
11:45	104	285	70	267					174	552	23:45	9	44	11	48					20	92
TOTALS		1388		2463						3851	TOTALS		4264		2843						7107
SPLIT %		36.0%		64.0%						35.1%	SPLIT %		60.0%		40.0%						64.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	5,652	5,306	0	0	10,958

AM Peak Hour	11:45	07:45			08:00	PM Peak Hour	16:30	16:45			16:45
AM Pk Volume	369	654			872	PM Pk Volume	792	455			1224
Pk Hr Factor	0.887	0.929			0.944	Pk Hr Factor	0.773	0.818			0.864
7 - 9 Volume	481	1124	0	0	1605	4 - 6 Volume	1377	812	0	0	2189
7 - 9 Peak Hour	07:00	07:45			08:00	4 - 6 Peak Hour	16:30	16:45			16:45
7 - 9 Pk Volume	258	654	0	0	872	4 - 6 Pk Volume	792	455	0	0	1224
Pk Hr Factor	0.849	0.929	0.000	0.000	0.944	Pk Hr Factor	0.773	0.818	0.000	0.000	0.864

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Mission Valley Rd & Westside Dr

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_093

DAILY TOTALS	NB	SB	EB	WB	Total
	6,879	7,278	0	0	14,157

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	7		13						20		12:00	104		155						259	
00:15	9		8						17		12:15	128		167						295	
00:30	7		4						11		12:30	130		140						270	
00:45	4	27	8	33					12	60	12:45	141	503	110	572					251	1075
01:00	5		1						6		13:00	117		138						255	
01:15	4		3						7		13:15	128		106						234	
01:30	4		4						8		13:30	122		103						225	
01:45	7	20	2	10					9	30	13:45	127	494	93	440					220	934
02:00	4		2						6		14:00	115		99						214	
02:15	5		2						7		14:15	103		114						217	
02:30	0		1						1		14:30	114		127						241	
02:45	2	11	3	8					5	19	14:45	103	435	125	465					228	900
03:00	3		2						5		15:00	108		115						223	
03:15	3		4						7		15:15	105		130						235	
03:30	2		3						5		15:30	120		145						265	
03:45	0	8	6	15					6	23	15:45	114	447	131	521					245	968
04:00	3		1						4		16:00	112		152						264	
04:15	4		2						6		16:15	128		191						319	
04:30	2		7						9		16:30	131		182						313	
04:45	6	15	11	21					17	36	16:45	119	490	163	688					282	1178
05:00	10		12						22		17:00	131		253						384	
05:15	8		11						19		17:15	146		214						360	
05:30	22		17						39		17:30	178		164						342	
05:45	35	75	30	70					65	145	17:45	145	600	155	786					300	1386
06:00	49		34						83		18:00	107		131						238	
06:15	55		27						82		18:15	105		133						238	
06:30	68		52						120		18:30	98		109						207	
06:45	100	272	64	177					164	449	18:45	81	391	95	468					176	859
07:00	109		67						176		19:00	80		76						156	
07:15	117		86						203		19:15	75		85						160	
07:30	140		114						254		19:30	73		81						154	
07:45	157	523	110	377					267	900	19:45	85	313	69	311					154	624
08:00	178		106						284		20:00	77		61						138	
08:15	121		101						222		20:15	67		66						133	
08:30	130		87						217		20:30	50		45						95	
08:45	111	540	91	385					202	925	20:45	66	260	62	234					128	494
09:00	79		101						180		21:00	60		50						110	
09:15	88		87						175		21:15	71		44						115	
09:30	83		88						171		21:30	54		35						89	
09:45	76	326	110	386					186	712	21:45	37	222	24	153					61	375
10:00	66		103						169		22:00	37		38						75	
10:15	77		102						179		22:15	29		27						56	
10:30	86		111						197		22:30	26		20						46	
10:45	81	310	109	425					190	735	22:45	23	115	18	103					41	218
11:00	68		133						201		23:00	23		15						38	
11:15	104		110						214		23:15	23		19						42	
11:30	126		171						297		23:30	15		4						19	
11:45	106	404	164	578					270	982	23:45	17	78	14	52					31	130
TOTALS		2531		2485						5016	TOTALS		4348		4793						9141
SPLIT %		50.5%		49.5%						35.4%	SPLIT %		47.6%		52.4%						64.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	6,879	7,278	0	0	14,157

AM Peak Hour	07:30	11:30			11:30	PM Peak Hour	17:00	16:30			17:00
AM Pk Volume	596	657			1121	PM Pk Volume	600	812			1386
Pk Hr Factor	0.837	0.961			0.944	Pk Hr Factor	0.843	0.802			0.902
7 - 9 Volume	1063	762	0	0	1825	4 - 6 Volume	1090	1474	0	0	2564
7 - 9 Peak Hour	07:30	07:30			07:30	4 - 6 Peak Hour	17:00	16:30			17:00
7 - 9 Pk Volume	596	431	0	0	1027	4 - 6 Pk Volume	600	812	0	0	1386
Pk Hr Factor	0.837	0.945	0.000	0.000	0.904	Pk Hr Factor	0.843	0.802	0.000	0.000	0.902

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Mission Valley Rd & Westside Dr

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_093

DAILY TOTALS	NB	SB	EB	WB	Total
	6,899	7,273	0	0	14,172

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	13		6						19		12:00	98		184						282	
00:15	14		7						21		12:15	129		133						262	
00:30	9		5						14		12:30	138		136						274	
00:45	3	39	4	22					7	61	12:45	165	530	115	568					280	1098
01:00	6		5						11		13:00	128		130						258	
01:15	9		5						14		13:15	152		103						255	
01:30	1		6						7		13:30	122		104						226	
01:45	6	22	3	19					9	41	13:45	124	526	86	423					210	949
02:00	9		4						13		14:00	124		136						260	
02:15	3		3						6		14:15	95		129						224	
02:30	2		2						4		14:30	93		108						201	
02:45	1	15	1	10					2	25	14:45	124	436	108	481					232	917
03:00	1		1						2		15:00	116		146						262	
03:15	1		3						4		15:15	106		123						229	
03:30	4		3						7		15:30	104		151						255	
03:45	2	8	4	11					6	19	15:45	129	455	136	556					265	1011
04:00	1		0						1		16:00	131		165						296	
04:15	1		3						4		16:15	116		166						282	
04:30	4		8						12		16:30	147		188						335	
04:45	7	13	12	23					19	36	16:45	126	520	160	679					286	1199
05:00	7		6						13		17:00	135		243						378	
05:15	11		17						28		17:15	151		215						366	
05:30	20		27						47		17:30	138		155						293	
05:45	42	80	27	77					69	157	17:45	127	551	143	756					270	1307
06:00	44		36						80		18:00	112		130						242	
06:15	63		28						91		18:15	106		107						213	
06:30	60		57						117		18:30	85		90						175	
06:45	97	264	63	184					160	448	18:45	78	381	74	401					152	782
07:00	115		65						180		19:00	83		82						165	
07:15	133		76						209		19:15	76		59						135	
07:30	121		109						230		19:30	63		62						125	
07:45	154	523	107	357					261	880	19:45	67	289	73	276					140	565
08:00	151		112						263		20:00	89		59						148	
08:15	112		120						232		20:15	45		68						113	
08:30	124		121						245		20:30	59		67						126	
08:45	143	530	114	467					257	997	20:45	66	259	47	241					113	500
09:00	121		116						237		21:00	64		32						96	
09:15	92		108						200		21:15	38		37						75	
09:30	85		82						167		21:30	47		61						108	
09:45	80	378	107	413					187	791	21:45	39	188	28	158					67	346
10:00	73		118						191		22:00	41		45						86	
10:15	98		92						190		22:15	38		31						69	
10:30	71		98						169		22:30	30		19						49	
10:45	91	333	93	401					184	734	22:45	22	131	26	121					48	252
11:00	76		152						228		23:00	15		13						28	
11:15	99		133						232		23:15	21		22						43	
11:30	86		148						234		23:30	13		12						25	
11:45	109	370	141	574					250	944	23:45	9	58	8	55					17	113
TOTALS		2575		2558						5133	TOTALS		4324		4715						9039
SPLIT %		50.2%		49.8%						36.2%	SPLIT %		47.8%		52.2%						63.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	6,899	7,273	0	0	14,172

AM Peak Hour	07:15	11:15			11:45	PM Peak Hour	12:30	16:30			16:30
AM Pk Volume	559	606			1068	PM Pk Volume	583	806			1365
Pk Hr Factor	0.907	0.823			0.947	Pk Hr Factor	0.883	0.829			0.903
7 - 9 Volume	1053	824	0	0	1877	4 - 6 Volume	1071	1435	0	0	2506
7 - 9 Peak Hour	07:15	08:00			07:45	4 - 6 Peak Hour	16:30	16:30			16:30
7 - 9 Pk Volume	559	467	0	0	1001	4 - 6 Pk Volume	559	806	0	0	1365
Pk Hr Factor	0.907	0.965	0.000	0.000	0.952	Pk Hr Factor	0.925	0.829	0.000	0.000	0.903

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Westside Dr & Friars Rd WB Ramps

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_094

DAILY TOTALS	NB	SB	EB	WB	Total
	12,580	13,347	0	0	25,927

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	26		17						43		12:00	240		276						516	
00:15	29		16						45		12:15	253		258						511	
00:30	21		11						32		12:30	256		246						502	
00:45	11	87	14	58					25	145	12:45	279	1028	249	1029					528	2057
01:00	17		11						28		13:00	250		221						471	
01:15	17		3						20		13:15	245		243						488	
01:30	8		2						10		13:30	221		236						457	
01:45	4	46	8	24					12	70	13:45	210	926	221	921					431	1847
02:00	4		4						8		14:00	190		232						422	
02:15	8		2						10		14:15	211		244						455	
02:30	9		9						18		14:30	198		221						419	
02:45	7	28	1	16					8	44	14:45	190	789	202	899					392	1688
03:00	4		1						5		15:00	196		227						423	
03:15	6		6						12		15:15	196		264						460	
03:30	9		7						16		15:30	218		273						491	
03:45	7	26	9	23					16	49	15:45	213	823	243	1007					456	1830
04:00	6		6						12		16:00	209		290						499	
04:15	6		8						14		16:15	218		299						517	
04:30	15		22						37		16:30	225		372						597	
04:45	16	43	27	63					43	106	16:45	236	888	338	1299					574	2187
05:00	20		24						44		17:00	229		362						591	
05:15	26		35						61		17:15	256		297						553	
05:30	41		48						89		17:30	260		292						552	
05:45	74	161	62	169					136	330	17:45	288	1033	289	1240					577	2273
06:00	92		51						143		18:00	236		283						519	
06:15	138		79						217		18:15	199		235						434	
06:30	146		81						227		18:30	170		204						374	
06:45	172	548	116	327					288	875	18:45	159	764	177	899					336	1663
07:00	160		131						291		19:00	158		175						333	
07:15	205		148						353		19:15	146		150						296	
07:30	225		185						410		19:30	139		164						303	
07:45	268	858	171	635					439	1493	19:45	120	563	155	644					275	1207
08:00	220		163						383		20:00	132		133						265	
08:15	206		168						374		20:15	115		123						238	
08:30	186		162						348		20:30	128		97						225	
08:45	189	801	156	649					345	1450	20:45	124	499	109	462					233	961
09:00	146		163						309		21:00	95		110						205	
09:15	148		162						310		21:15	95		78						173	
09:30	152		167						319		21:30	81		82						163	
09:45	131	577	157	649					288	1226	21:45	79	350	78	348					157	698
10:00	140		156						296		22:00	76		87						163	
10:15	146		164						310		22:15	46		56						102	
10:30	143		208						351		22:30	46		41						87	
10:45	174	603	184	712					358	1315	22:45	38	206	39	223					77	429
11:00	209		213						422		23:00	39		17						56	
11:15	182		249						431		23:15	32		27						59	
11:30	201		245						446		23:30	45		22						67	
11:45	200	792	252	959					452	1751	23:45	25	141	26	92					51	233
TOTALS		4570		4284						8854	TOTALS		8010		9063						17073
SPLIT %		51.6%		48.4%						34.1%	SPLIT %		46.9%		53.1%						65.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,580	13,347	0	0	25,927

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	17:15	16:15			16:30
AM Pk Volume	949	1032			1981	PM Pk Volume	1040	1371			2315
Pk Hr Factor	0.927	0.935			0.960	Pk Hr Factor	0.903	0.921			0.969
7 - 9 Volume	1659	1284	0	0	2943	4 - 6 Volume	1921	2539	0	0	4460
7 - 9 Peak Hour	07:30	07:30			07:30	4 - 6 Peak Hour	17:00	16:15			16:30
7 - 9 Pk Volume	919	687	0	0	1606	4 - 6 Pk Volume	1033	1371	0	0	2315
Pk Hr Factor	0.857	0.928	0.000	0.000	0.915	Pk Hr Factor	0.897	0.921	0.000	0.000	0.969

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Westside Dr & Friars Rd WB Ramps

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_094

DAILY TOTALS	NB	SB	EB	WB	Total
	12,975	13,134	0	0	26,109

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	32		9						41		12:00	238		293						531	
00:15	18		24						42		12:15	267		283						550	
00:30	25		15						40		12:30	294		230						524	
00:45	21	96	15	63					36	159	12:45	303	1102	226	1032					529	2134
01:00	11		10						21		13:00	279		235						514	
01:15	21		8						29		13:15	233		235						468	
01:30	13		0						13		13:30	205		208						413	
01:45	8	53	5	23					13	76	13:45	212	929	215	893					427	1822
02:00	20		6						26		14:00	212		232						444	
02:15	6		3						9		14:15	194		195						389	
02:30	9		6						15		14:30	263		185						448	
02:45	6	41	11	26					17	67	14:45	154	823	251	863					405	1686
03:00	11		8						19		15:00	217		237						454	
03:15	4		5						9		15:15	203		223						426	
03:30	3		3						6		15:30	243		262						505	
03:45	5	23	5	21					10	44	15:45	240	903	235	957					475	1860
04:00	10		9						19		16:00	232		266						498	
04:15	9		9						18		16:15	220		273						493	
04:30	19		21						40		16:30	236		303						539	
04:45	23	61	21	60					44	121	16:45	222	910	362	1204					584	2114
05:00	19		28						47		17:00	235		316						551	
05:15	31		30						61		17:15	242		328						570	
05:30	43		48						91		17:30	247		285						532	
05:45	82	175	52	158					134	333	17:45	187	911	278	1207					465	2118
06:00	94		56						150		18:00	219		245						464	
06:15	154		83						237		18:15	163		227						390	
06:30	169		110						279		18:30	169		207						376	
06:45	189	606	103	352					292	958	18:45	165	716	179	858					344	1574
07:00	173		117						290		19:00	133		159						292	
07:15	185		146						331		19:15	160		156						316	
07:30	249		175						424		19:30	133		143						276	
07:45	285	892	164	602					449	1494	19:45	142	568	129	587					271	1155
08:00	211		166						377		20:00	140		154						294	
08:15	195		157						352		20:15	134		120						254	
08:30	217		160						377		20:30	88		133						221	
08:45	204	827	185	668					389	1495	20:45	119	481	110	517					229	998
09:00	122		167						289		21:00	114		119						233	
09:15	177		159						336		21:15	111		89						200	
09:30	140		186						326		21:30	84		91						175	
09:45	130	569	175	687					305	1256	21:45	87	396	73	372					160	768
10:00	145		155						300		22:00	53		49						102	
10:15	165		157						322		22:15	47		65						112	
10:30	183		218						401		22:30	64		56						120	
10:45	170	663	181	711					351	1374	22:45	57	221	32	202					89	423
11:00	188		198						386		23:00	45		48						93	
11:15	202		207						409		23:15	38		35						73	
11:30	254		270						524		23:30	21		22						43	
11:45	235	879	269	944					504	1823	23:45	26	130	22	127					48	257
TOTALS		4885		4315						9200	TOTALS		8090		8819						16909
SPLIT %		53.1%		46.9%						35.2%	SPLIT %		47.8%		52.2%						64.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,975	13,134	0	0	26,109

AM Peak Hour	11:45	11:30			11:30	PM Peak Hour	12:15	16:30			16:30
AM Pk Volume	1034	1115			2109	PM Pk Volume	1143	1309			2244
Pk Hr Factor	0.879	0.951			0.959	Pk Hr Factor	0.943	0.904			0.961
7 - 9 Volume	1719	1270	0	0	2989	4 - 6 Volume	1821	2411	0	0	4232
7 - 9 Peak Hour	07:30	08:00			07:30	4 - 6 Peak Hour	16:45	16:30			16:30
7 - 9 Pk Volume	940	668	0	0	1602	4 - 6 Pk Volume	946	1309	0	0	2244
Pk Hr Factor	0.825	0.903	0.000	0.000	0.892	Pk Hr Factor	0.957	0.904	0.000	0.000	0.961

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Friars Rd WB Ramps & Friars Rd EB Ramps

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_095

DAILY TOTALS	NB	SB	EB	WB	Total
	11,346	11,037	0	0	22,383

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	27		18						45		12:00	227		228						455	
00:15	27		18						45		12:15	247		216						463	
00:30	24		16						40		12:30	241		202						443	
00:45	9	87	16	68					25	155	12:45	256	971	192	838					448	1809
01:00	9		2						11		13:00	235		222						457	
01:15	17		8						25		13:15	213		200						413	
01:30	8		1						9		13:30	198		203						401	
01:45	5	39	5	16					10	55	13:45	195	841	179	804					374	1645
02:00	6		2						8		14:00	175		172						347	
02:15	12		5						17		14:15	183		176						359	
02:30	8		6						14		14:30	189		190						379	
02:45	4	30	4	17					8	47	14:45	173	720	204	742					377	1462
03:00	7		4						11		15:00	164		206						370	
03:15	8		8						16		15:15	186		230						416	
03:30	7		2						9		15:30	183		219						402	
03:45	4	26	3	17					7	43	15:45	223	756	267	922					490	1678
04:00	7		3						10		16:00	185		222						407	
04:15	5		6						11		16:15	200		251						451	
04:30	15		8						23		16:30	194		237						431	
04:45	15	42	9	26					24	68	16:45	215	794	298	1008					513	1802
05:00	27		8						35		17:00	187		375						562	
05:15	27		17						44		17:15	226		265						491	
05:30	50		21						71		17:30	200		228						428	
05:45	68	172	22	68					90	240	17:45	242	855	262	1130					504	1985
06:00	78		36						114		18:00	213		196						409	
06:15	106		46						152		18:15	203		203						406	
06:30	123		73						196		18:30	165		203						368	
06:45	149	456	71	226					220	682	18:45	161	742	189	791					350	1533
07:00	121		84						205		19:00	172		148						320	
07:15	146		86						232		19:15	159		123						282	
07:30	139		106						245		19:30	148		116						264	
07:45	179	585	116	392					295	977	19:45	127	606	123	510					250	1116
08:00	149		115						264		20:00	132		136						268	
08:15	163		135						298		20:15	101		111						212	
08:30	154		134						288		20:30	125		83						208	
08:45	155	621	151	535					306	1156	20:45	130	488	112	442					242	930
09:00	116		122						238		21:00	115		78						193	
09:15	138		117						255		21:15	110		65						175	
09:30	113		136						249		21:30	90		58						148	
09:45	117	484	150	525					267	1009	21:45	99	414	71	272					170	686
10:00	140		111						251		22:00	72		43						115	
10:15	117		140						257		22:15	70		40						110	
10:30	149		173						322		22:30	51		35						86	
10:45	140	546	166	590					306	1136	22:45	50	243	29	147					79	390
11:00	181		183						364		23:00	45		26						71	
11:15	147		200						347		23:15	50		20						70	
11:30	148		208						356		23:30	50		25						75	
11:45	173	649	255	846					428	1495	23:45	34	179	34	105					68	284
TOTALS		3737		3326						7063	TOTALS		7609		7711						15320
SPLIT %		52.9%		47.1%						31.6%	SPLIT %		49.7%		50.3%						68.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	11,346	11,037	0	0	22,383

AM Peak Hour	11:45	11:30			11:45	PM Peak Hour	12:15	16:30			16:30
AM Pk Volume	888	907			1789	PM Pk Volume	979	1175			1997
Pk Hr Factor	0.899	0.889			0.966	Pk Hr Factor	0.956	0.783			0.888
7 - 9 Volume	1206	927	0	0	2133	4 - 6 Volume	1649	2138	0	0	3787
7 - 9 Peak Hour	07:45	08:00			08:00	4 - 6 Peak Hour	17:00	16:30			16:30
7 - 9 Pk Volume	645	535	0	0	1156	4 - 6 Pk Volume	855	1175	0	0	1997
Pk Hr Factor	0.901	0.886	0.000	0.000	0.944	Pk Hr Factor	0.883	0.783	0.000	0.000	0.888

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Friars Rd WB Ramps & Friars Rd EB Ramps

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_095

DAILY TOTALS	NB	SB	EB	WB	Total
	11,803	11,466	0	0	23,269

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	35		18						53		12:00	189		241						430	
00:15	22		17						39		12:15	228		214						442	
00:30	30		17						47		12:30	244		230						474	
00:45	30	117	14	66					44	183	12:45	248	909	178	863					426	1772
01:00	34		14						48		13:00	233		226						459	
01:15	30		9						39		13:15	191		192						383	
01:30	26		12						38		13:30	218		177						395	
01:45	22	112	18	53					40	165	13:45	198	840	179	774					377	1614
02:00	23		5						28		14:00	226		192						418	
02:15	9		8						17		14:15	181		188						369	
02:30	9		6						15		14:30	242		183						425	
02:45	9	50	5	24					14	74	14:45	144	793	209	772					353	1565
03:00	12		2						14		15:00	242		220						462	
03:15	12		4						16		15:15	157		226						383	
03:30	3		2						5		15:30	219		258						477	
03:45	5	32	4	12					9	44	15:45	219	837	234	938					453	1775
04:00	11		6						17		16:00	211		261						472	
04:15	10		3						13		16:15	169		258						427	
04:30	21		8						29		16:30	202		271						473	
04:45	21	63	11	28					32	91	16:45	182	764	272	1062					454	1826
05:00	25		14						39		17:00	189		336						525	
05:15	37		22						59		17:15	241		268						509	
05:30	44		20						64		17:30	210		293						503	
05:45	64	170	36	92					100	262	17:45	183	823	253	1150					436	1973
06:00	72		38						110		18:00	176		232						408	
06:15	127		56						183		18:15	179		203						382	
06:30	151		67						218		18:30	185		215						400	
06:45	139	489	61	222					200	711	18:45	174	714	169	819					343	1533
07:00	139		78						217		19:00	161		156						317	
07:15	135		98						233		19:15	148		155						303	
07:30	183		119						302		19:30	143		130						273	
07:45	169	626	132	427					301	1053	19:45	140	592	114	555					254	1147
08:00	149		116						265		20:00	136		118						254	
08:15	154		141						295		20:15	136		111						247	
08:30	158		130						288		20:30	101		97						198	
08:45	152	613	157	544					309	1157	20:45	138	511	98	424					236	935
09:00	112		119						231		21:00	133		82						215	
09:15	157		135						292		21:15	116		88						204	
09:30	134		145						279		21:30	111		62						173	
09:45	120	523	148	547					268	1070	21:45	94	454	55	287					149	741
10:00	137		157						294		22:00	64		60						124	
10:15	142		157						299		22:15	55		30						85	
10:30	174		152						326		22:30	70		24						94	
10:45	143	596	219	685					362	1281	22:45	69	258	36	150					105	408
11:00	168		177						345		23:00	49		25						74	
11:15	171		209						380		23:15	34		20						54	
11:30	205		252						457		23:30	26		18						44	
11:45	226	770	255	893					481	1663	23:45	38	147	16	79					54	226
TOTALS		4161		3593						7754	TOTALS		7642		7873						15515
SPLIT %		53.7%		46.3%						33.3%	SPLIT %		49.3%		50.7%						66.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	11,803	11,466	0	0	23,269

AM Peak Hour	11:45	11:30			11:45	PM Peak Hour	12:15	16:45			16:45
AM Pk Volume	887	962			1827	PM Pk Volume	953	1169			1991
Pk Hr Factor	0.909	0.943			0.950	Pk Hr Factor	0.961	0.870			0.948
7 - 9 Volume	1239	971	0	0	2210	4 - 6 Volume	1587	2212	0	0	3799
7 - 9 Peak Hour	07:30	08:00			07:30	4 - 6 Peak Hour	17:00	16:45			16:45
7 - 9 Pk Volume	655	544	0	0	1163	4 - 6 Pk Volume	823	1169	0	0	1991
Pk Hr Factor	0.895	0.866	0.000	0.000	0.963	Pk Hr Factor	0.854	0.870	0.000	0.000	0.948

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Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Friars Rd EB Ramps & Mission Center Ct

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_096

DAILY TOTALS	NB	SB	EB	WB	Total
	10,230	8,844	0	0	19,074

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	26		17						43		12:00	207		190						397	
00:15	20		10						30		12:15	231		165						396	
00:30	21		14						35		12:30	222		171						393	
00:45	14	81	7	48					21	129	12:45	234	894	163	689					397	1583
01:00	6		4						10		13:00	214		182						396	
01:15	11		5						16		13:15	186		164						350	
01:30	7		3						10		13:30	203		179						382	
01:45	7	31	1	13					8	44	13:45	208	811	144	669					352	1480
02:00	4		4						8		14:00	176		131						307	
02:15	12		5						17		14:15	163		157						320	
02:30	6		7						13		14:30	187		160						347	
02:45	4	26	3	19					7	45	14:45	167	693	156	604					323	1297
03:00	3		4						7		15:00	160		165						325	
03:15	6		7						13		15:15	183		179						362	
03:30	3		2						5		15:30	159		168						327	
03:45	2	14	1	14					3	28	15:45	187	689	182	694					369	1383
04:00	7		6						13		16:00	180		179						359	
04:15	7		7						14		16:15	190		195						385	
04:30	11		6						17		16:30	179		175						354	
04:45	12	37	14	33					26	70	16:45	221	770	172	721					393	1491
05:00	26		8						34		17:00	214		237						451	
05:15	18		14						32		17:15	229		194						423	
05:30	46		24						70		17:30	193		165						358	
05:45	54	144	18	64					72	208	17:45	179	815	198	794					377	1609
06:00	62		22						84		18:00	162		163						325	
06:15	78		27						105		18:15	176		160						336	
06:30	98		60						158		18:30	150		134						284	
06:45	113	351	54	163					167	514	18:45	159	647	146	603					305	1250
07:00	110		57						167		19:00	156		145						301	
07:15	127		74						201		19:15	133		92						225	
07:30	120		86						206		19:30	142		101						243	
07:45	122	479	113	330					235	809	19:45	123	554	96	434					219	988
08:00	110		97						207		20:00	132		93						225	
08:15	126		116						242		20:15	95		87						182	
08:30	133		139						272		20:30	102		60						162	
08:45	118	487	131	483					249	970	20:45	101	430	83	323					184	753
09:00	98		113						211		21:00	100		64						164	
09:15	105		106						211		21:15	93		57						150	
09:30	98		130						228		21:30	75		50						125	
09:45	116	417	126	475					242	892	21:45	79	347	53	224					132	571
10:00	116		99						215		22:00	58		40						98	
10:15	124		116						240		22:15	51		44						95	
10:30	138		152						290		22:30	46		35						81	
10:45	153	531	140	507					293	1038	22:45	44	199	31	150					75	349
11:00	160		151						311		23:00	39		25						64	
11:15	142		167						309		23:15	40		27						67	
11:30	152		165						317		23:30	47		24						71	
11:45	170	624	196	679					366	1303	23:45	33	159	35	111					68	270
TOTALS		3222		2828						6050	TOTALS		7008		6016						13024
SPLIT %		53.3%		46.7%						31.7%	SPLIT %		53.8%		46.2%						68.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	10,230	8,844	0	0	19,074

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:15	17:00			16:45
AM Pk Volume	830	722			1552	PM Pk Volume	901	794			1625
Pk Hr Factor	0.898	0.921			0.977	Pk Hr Factor	0.963	0.838			0.901
7 - 9 Volume	966	813	0	0	1779	4 - 6 Volume	1585	1515	0	0	3100
7 - 9 Peak Hour	07:45	08:00			08:00	4 - 6 Peak Hour	16:45	17:00			16:45
7 - 9 Pk Volume	491	483	0	0	970	4 - 6 Pk Volume	857	794	0	0	1625
Pk Hr Factor	0.923	0.869	0.000	0.000	0.892	Pk Hr Factor	0.936	0.838	0.000	0.000	0.901

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Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Friars Rd EB Ramps & Mission Center Ct

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_096

DAILY TOTALS	NB	SB	EB	WB	Total
	10,576	9,290	0	0	19,866

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	33		19						52		12:00	198		181						379	
00:15	21		15						36		12:15	217		170						387	
00:30	33		20						53		12:30	208		186						394	
00:45	29	116	10	64					39	180	12:45	224	847	155	692					379	1539
01:00	37		15						52		13:00	208		190						398	
01:15	27		16						43		13:15	210		174						384	
01:30	33		15						48		13:30	195		156						351	
01:45	25	122	11	57					36	179	13:45	203	816	154	674					357	1490
02:00	19		6						25		14:00	203		160						363	
02:15	11		11						22		14:15	190		164						354	
02:30	5		3						8		14:30	209		142						351	
02:45	6	41	3	23					9	64	14:45	151	753	158	624					309	1377
03:00	3		4						7		15:00	197		180						377	
03:15	13		6						19		15:15	161		162						323	
03:30	4		0						4		15:30	200		173						373	
03:45	5	25	4	14					9	39	15:45	181	739	194	709					375	1448
04:00	4		4						8		16:00	180		197						377	
04:15	9		2						11		16:15	171		179						350	
04:30	13		5						18		16:30	191		200						391	
04:45	13	39	11	22					24	61	16:45	210	752	196	772					406	1524
05:00	25		8						33		17:00	217		218						435	
05:15	25		13						38		17:15	236		189						425	
05:30	41		25						66		17:30	179		177						356	
05:45	56	147	27	73					83	220	17:45	190	822	179	763					369	1585
06:00	54		28						82		18:00	157		172						329	
06:15	77		34						111		18:15	144		180						324	
06:30	101		61						162		18:30	161		183						344	
06:45	124	356	55	178					179	534	18:45	150	612	148	683					298	1295
07:00	103		65						168		19:00	154		137						291	
07:15	117		86						203		19:15	131		129						260	
07:30	120		107						227		19:30	134		103						237	
07:45	115	455	121	379					236	834	19:45	124	543	95	464					219	1007
08:00	116		105						221		20:00	104		101						205	
08:15	123		123						246		20:15	120		98						218	
08:30	138		118						256		20:30	103		85						188	
08:45	125	502	138	484					263	986	20:45	101	428	78	362					179	790
09:00	103		100						203		21:00	105		80						185	
09:15	133		119						252		21:15	77		76						153	
09:30	114		117						231		21:30	103		63						166	
09:45	104	454	129	465					233	919	21:45	69	354	53	272					122	626
10:00	146		132						278		22:00	56		43						99	
10:15	149		133						282		22:15	51		45						96	
10:30	152		123						275		22:30	47		35						82	
10:45	148	595	177	565					325	1160	22:45	43	197	29	152					72	349
11:00	178		149						327		23:00	36		19						55	
11:15	160		174						334		23:15	25		19						44	
11:30	185		201						386		23:30	32		16						48	
11:45	222	745	204	728					426	1473	23:45	23	116	17	71					40	187
TOTALS		3597		3052						**6649**	**TOTALS**		6979		6238						**13217**
SPLIT %		54.1%		45.9%						**33.5%**	**SPLIT %**		52.8%		47.2%						**66.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	10,576	9,290	0	0	19,866

AM Peak Hour	11:45	11:15			**11:45**	**PM Peak Hour**	12:15	16:30			**16:30**
AM Pk Volume	845	760			**1586**	**PM Pk Volume**	857	803			**1657**
Pk Hr Factor	0.952	0.931			**0.931**	**Pk Hr Factor**	0.956	0.921			**0.952**
7 - 9 Volume	957	863	0	0	**1820**	**4 - 6 Volume**	1574	1535	0	0	**3109**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:30	16:30			**16:30**
7 - 9 Pk Volume	502	484	0	0	**986**	**4 - 6 Pk Volume**	854	803	0	0	**1657**
Pk Hr Factor	0.909	0.877	0.000	0.000	**0.937**	**Pk Hr Factor**	0.905	0.921	0.000	0.000	**0.952**

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Mission Center Ct & Hazard Center Dr

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_097

DAILY TOTALS	NB	SB	EB	WB	Total
	10,561	8,752	0	0	19,313

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	20		18				38		12:00	183		196				379	
00:15	9		12				21		12:15	210		186				396	
00:30	13		5				18		12:30	220		177				397	
00:45	7	49	7	42			14	91	12:45	231	844	179	738			410	1582
01:00	7		12				19		13:00	181		161				342	
01:15	7		9				16		13:15	232		179				411	
01:30	9		3				12		13:30	186		152				338	
01:45	7	30	2	26			9	56	13:45	177	776	145	637			322	1413
02:00	8		1				9		14:00	219		150				369	
02:15	3		4				7		14:15	189		150				339	
02:30	1		4				5		14:30	175		156				331	
02:45	6	18	3	12			9	30	14:45	159	742	179	635			338	1377
03:00	9		4				13		15:00	182		150				332	
03:15	1		3				4		15:15	181		176				357	
03:30	4		2				6		15:30	188		172				360	
03:45	6	20	7	16			13	36	15:45	175	726	159	657			334	1383
04:00	5		1				6		16:00	206		194				400	
04:15	6		6				12		16:15	186		190				376	
04:30	10		9				19		16:30	183		160				343	
04:45	11	32	11	27			22	59	16:45	211	786	175	719			386	1505
05:00	14		8				22		17:00	163		269				432	
05:15	15		12				27		17:15	214		213				427	
05:30	35		15				50		17:30	208		193				401	
05:45	36	100	25	60			61	160	17:45	162	747	176	851			338	1598
06:00	38		24				62		18:00	160		169				329	
06:15	57		21				78		18:15	179		154				333	
06:30	68		46				114		18:30	166		148				314	
06:45	88	251	42	133			130	384	18:45	141	646	143	614			284	1260
07:00	107		66				173		19:00	171		106				277	
07:15	96		61				157		19:15	151		123				274	
07:30	129		72				201		19:30	143		121				264	
07:45	129	461	108	307			237	768	19:45	159	624	94	444			253	1068
08:00	150		88				238		20:00	129		116				245	
08:15	124		101				225		20:15	136		93				229	
08:30	130		110				240		20:30	147		87				234	
08:45	149	553	112	411			261	964	20:45	113	525	64	360			177	885
09:00	146		87				233		21:00	119		71				190	
09:15	140		97				237		21:15	126		65				191	
09:30	114		100				214		21:30	98		59				157	
09:45	144	544	109	393			253	937	21:45	80	423	38	233			118	656
10:00	113		125				238		22:00	71		44				115	
10:15	128		117				245		22:15	67		38				105	
10:30	132		150				282		22:30	64		28				92	
10:45	177	550	153	545			330	1095	22:45	43	245	35	145			78	390
11:00	157		153				310		23:00	38		27				65	
11:15	175		130				305		23:15	43		33				76	
11:30	199		162				361		23:30	36		26				62	
11:45	187	718	192	637			379	1355	23:45	34	151	24	110			58	261
TOTALS		3326		2609				5935	TOTALS		7235		6143				13378
SPLIT %		56.0%		44.0%				30.7%	SPLIT %		54.1%		45.9%				69.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	10,561	8,752	0	0	19,313

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:30	17:00			16:45
AM Pk Volume	800	751			1551	PM Pk Volume	864	851			1646
Pk Hr Factor	0.909	0.958			0.977	Pk Hr Factor	0.931	0.791			0.953
7 - 9 Volume	1014	718	0	0	1732	4 - 6 Volume	1533	1570	0	0	3103
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:45	17:00			16:45
7 - 9 Pk Volume	553	411	0	0	964	4 - 6 Pk Volume	796	851	0	0	1646
Pk Hr Factor	0.922	0.917	0.000	0.000	0.923	Pk Hr Factor	0.930	0.791	0.000	0.000	0.953

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Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Mission Center Ct & Hazard Center Dr

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_097

DAILY TOTALS	NB	SB	EB	WB	Total
	10,689	8,888	0	0	19,577

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	35		24						59		12:00	175		209						384	
00:15	22		10						32		12:15	212		170						382	
00:30	15		18						33		12:30	218		172						390	
00:45	21	93	21	73					42	166	12:45	249	854	153	704					402	1558
01:00	13		17						30		13:00	229		176						405	
01:15	13		14						27		13:15	216		145						361	
01:30	16		18						34		13:30	212		158						370	
01:45	19	61	29	78					48	139	13:45	169	826	119	598					288	1424
02:00	10		13						23		14:00	208		142						350	
02:15	7		9						16		14:15	189		142						331	
02:30	7		6						13		14:30	175		166						341	
02:45	6	30	7	35					13	65	14:45	184	756	139	589					323	1345
03:00	4		2						6		15:00	163		179						342	
03:15	2		4						6		15:15	171		143						314	
03:30	5		7						12		15:30	190		201						391	
03:45	7	18	4	17					11	35	15:45	208	732	193	716					401	1448
04:00	3		2						5		16:00	212		188						400	
04:15	4		2						6		16:15	195		196						391	
04:30	4		9						13		16:30	175		200						375	
04:45	10	21	8	21					18	42	16:45	199	781	220	804					419	1585
05:00	9		5						14		17:00	187		262						449	
05:15	22		5						27		17:15	218		236						454	
05:30	24		13						37		17:30	208		184						392	
05:45	33	88	27	50					60	138	17:45	204	817	176	858					380	1675
06:00	59		21						80		18:00	175		159						334	
06:15	59		34						93		18:15	194		153						347	
06:30	77		48						125		18:30	160		127						287	
06:45	97	292	42	145					139	437	18:45	156	685	119	558					275	1243
07:00	103		56						159		19:00	131		118						249	
07:15	118		66						184		19:15	124		103						227	
07:30	114		83						197		19:30	155		89						244	
07:45	138	473	83	288					221	761	19:45	145	555	111	421					256	976
08:00	132		90						222		20:00	136		85						221	
08:15	155		100						255		20:15	110		95						205	
08:30	135		143						278		20:30	138		76						214	
08:45	161	583	144	477					305	1060	20:45	126	510	84	340					210	850
09:00	159		92						251		21:00	115		70						185	
09:15	120		100						220		21:15	83		66						149	
09:30	124		115						239		21:30	107		78						185	
09:45	132	535	116	423					248	958	21:45	69	374	51	265					120	639
10:00	137		129						266		22:00	71		54						125	
10:15	146		121						267		22:15	55		58						113	
10:30	138		122						260		22:30	48		51						99	
10:45	155	576	122	494					277	1070	22:45	40	214	41	204					81	418
11:00	169		137						306		23:00	38		41						79	
11:15	150		138						288		23:15	42		30						72	
11:30	154		179						333		23:30	33		20						53	
11:45	201	674	168	622					369	1296	23:45	28	141	17	108					45	249
TOTALS		3444		2723						6167	TOTALS		7245		6165						13410
SPLIT %		55.8%		44.2%						31.5%	SPLIT %		54.0%		46.0%						68.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	10,689	8,888	0	0	19,577

AM Peak Hour	11:45	11:30			11:45	PM Peak Hour	12:30	16:30			16:45
AM Pk Volume	806	726			1525	PM Pk Volume	912	918			1714
Pk Hr Factor	0.924	0.868			0.978	Pk Hr Factor	0.916	0.876			0.944
7 - 9 Volume	1056	765	0	0	1821	4 - 6 Volume	1598	1662	0	0	3260
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	17:00	16:30			16:45
7 - 9 Pk Volume	583	477	0	0	1060	4 - 6 Pk Volume	817	918	0	0	1714
Pk Hr Factor	0.905	0.828	0.000	0.000	0.869	Pk Hr Factor	0.937	0.876	0.000	0.000	0.944

Segment ID: 97

Mission Center Rd from Hazard Center Dr to Camino de la Reina

AM Peak Period Heavy Vehicle Percentage: 2.00%

Noon Peak Period Heavy Vehicle Percentage: 1.55%

PM Period Heavy Vehicle Percentage: 1.05%

Average Daily Heavy Vehicle Percentage: 1.00%

Prepared by National Data & Surveying Services

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CLASSIFICATION

Mission Center Rd Bet. Hazard Center Dr & Camino De La Reina

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_098

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	212	23	0	1	0	0	0	0	0	0	0	0	236
01:00	0	99	11	0	0	0	0	1	0	0	0	0	0	111
02:00	0	55	7	0	0	0	0	0	0	0	0	0	0	62
03:00	0	48	4	0	0	0	0	0	0	0	0	0	0	52
04:00	1	61	9	0	1	2	0	0	0	0	0	0	0	74
05:00	0	169	27	0	2	0	0	0	0	0	0	0	0	198
06:00	4	439	72	0	8	2	0	1	1	0	0	0	0	527
07:00	4	952	126	1	14	0	0	0	2	0	0	0	0	1099
08:00	7	1070	134	1	17	4	0	1	0	0	0	0	0	1234
09:00	2	1159	149	0	29	1	0	1	1	0	0	0	0	1342
10:00	4	1242	178	2	8	0	0	0	0	0	0	0	0	1434
11:00	3	1634	190	5	27	3	0	0	1	0	0	0	0	1863
12:00 PM	4	1821	227	3	28	0	0	0	0	0	0	0	0	2083
13:00	3	1794	234	0	12	0	0	0	0	0	0	0	0	2043
14:00	3	1595	177	0	27	0	0	0	0	0	0	0	0	1802
15:00	7	1764	198	0	27	0	0	0	0	0	0	0	0	1996
16:00	7	1890	208	0	29	0	0	0	0	0	0	0	0	2134
17:00	8	2010	222	1	23	0	0	0	0	0	0	0	0	2264
18:00	3	1559	185	0	12	0	0	0	0	0	0	0	0	1759
19:00	3	1454	153	0	12	0	0	0	0	0	0	0	0	1622
20:00	4	1174	135	1	11	0	0	0	0	0	0	0	0	1325
21:00	0	872	89	0	6	0	0	0	1	0	0	0	0	968
22:00	0	507	58	0	4	0	0	0	0	0	0	0	0	569
23:00	0	275	32	0	1	0	0	0	0	0	0	0	0	308
Totals	67	23855	2848	14	299	12		4	6					27105
% of Totals	0%	88%	11%	0%	1%	0%		0%	0%					100%

AM Volumes	25	7140	930	9	107	12	0	4	5	0	0	0	0	8232
% AM	0%	26%	3%	0%	0%	0%		0%	0%					30%
AM Peak Hour	08:00	11:00	11:00	11:00	09:00	08:00		01:00	07:00					11:00
Volume	7	1634	190	5	29	4		1	2					1863
PM Volumes	42	16715	1918	5	192	0	0	0	1	0	0	0	0	18873
% PM	0%	62%	7%	0%	1%				0%					70%
PM Peak Hour	17:00	17:00	13:00	12:00	16:00				21:00					17:00
Volume	8	2010	234	3	29				1					2264

Directional Peak Periods All Classes	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	2333	9%	4126	15%	4398	16%	16248	60%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Hazard Center Dr & Camino De La Riena

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_098

DAILY TOTALS	NB	SB	EB	WB	Total
	15,871	11,234	0	0	27,105

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	29		45				74		12:00	302		203				505	
00:15	20		33				53		12:15	337		204				541	
00:30	24		33				57		12:30	312		201				513	
00:45	25	98	27	138			52	236	12:45	322	1273	202	810			524	2083
01:00	11		18				29		13:00	342		207				549	
01:15	16		16				32		13:15	315		189				504	
01:30	2		17				19		13:30	318		196				514	
01:45	11	40	20	71			31	111	13:45	302	1277	174	766			476	2043
02:00	5		15				20		14:00	299		192				491	
02:15	6		10				16		14:15	278		184				462	
02:30	3		8				11		14:30	225		176				401	
02:45	7	21	8	41			15	62	14:45	273	1075	175	727			448	1802
03:00	2		7				9		15:00	264		222				486	
03:15	9		10				19		15:15	269		194				463	
03:30	9		5				14		15:30	296		243				539	
03:45	6	26	4	26			10	52	15:45	283	1112	225	884			508	1996
04:00	9		4				13		16:00	285		226				511	
04:15	5		6				11		16:15	297		210				507	
04:30	15		7				22		16:30	302		258				560	
04:45	18	47	10	27			28	74	16:45	311	1195	245	939			556	2134
05:00	23		8				31		17:00	289		312				601	
05:15	27		12				39		17:15	323		240				563	
05:30	28		15				43		17:30	295		259				554	
05:45	63	141	22	57			85	198	17:45	297	1204	249	1060			546	2264
06:00	56		28				84		18:00	238		213				451	
06:15	72		31				103		18:15	279		211				490	
06:30	102		54				156		18:30	222		176				398	
06:45	120	350	64	177			184	527	18:45	231	970	189	789			420	1759
07:00	145		90				235		19:00	243		165				408	
07:15	129		82				211		19:15	253		172				425	
07:30	199		109				308		19:30	234		149				383	
07:45	201	674	144	425			345	1099	19:45	227	957	179	665			406	1622
08:00	198		104				302		20:00	209		140				349	
08:15	204		101				305		20:15	213		137				350	
08:30	189		123				312		20:30	213		115				328	
08:45	200	791	115	443			315	1234	20:45	175	810	123	515			298	1325
09:00	194		107				301		21:00	156		153				309	
09:15	221		110				331		21:15	134		108				242	
09:30	225		125				350		21:30	116		121				237	
09:45	211	851	149	491			360	1342	21:45	115	521	65	447			180	968
10:00	180		150				330		22:00	100		84				184	
10:15	221		162				383		22:15	90		70				160	
10:30	206		134				340		22:30	59		62				121	
10:45	252	859	129	575			381	1434	22:45	54	303	50	266			104	569
11:00	248		192				440		23:00	51		40				91	
11:15	284		171				455		23:15	42		37				79	
11:30	277		188				465		23:30	28		36				64	
11:45	307	1116	196	747			503	1863	23:45	39	160	35	148			74	308
TOTALS		5014		3218				8232	TOTALS		10857		8016				18873
SPLIT %		60.9%		39.1%				30.4%	SPLIT %		57.5%		42.5%				69.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	15,871	11,234	0	0	27,105

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:15	17:00		16:30
AM Pk Volume	1258	804			2062	PM Pk Volume	1313	1060		2280
Pk Hr Factor	0.933	0.985			0.953	Pk Hr Factor	0.960	0.849		0.948
7 - 9 Volume	1465	868	0	0	2333	4 - 6 Volume	2399	1999	0	0	4398
7 - 9 Peak Hour	07:30	07:45			07:45	4 - 6 Peak Hour	16:30	17:00			16:30
7 - 9 Pk Volume	802	472	0	0	1264	4 - 6 Pk Volume	1225	1060	0	0	2280
Pk Hr Factor	0.983	0.819	0.000	0.000	0.916	Pk Hr Factor	0.948	0.849	0.000	0.000	0.948

Prepared by National Data & Surveying Services

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CLASSIFICATION

Mission Center Rd Bet. Hazard Center Dr & Camino De La Reina

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_098

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	204	20	0	3	0	0	0	0	0	0	0	0	227
01:00	0	165	10	0	0	0	0	0	0	0	0	0	0	175
02:00	0	86	8	0	1	0	0	1	0	0	0	0	0	96
03:00	0	56	8	0	0	0	0	0	2	0	0	0	0	66
04:00	0	65	10	0	0	0	0	0	0	0	0	0	0	75
05:00	0	185	23	2	2	2	0	0	1	0	0	0	0	215
06:00	2	508	88	1	8	2	0	1	1	0	0	0	0	611
07:00	4	976	118	1	21	1	0	0	0	0	0	0	0	1121
08:00	5	1085	158	1	23	2	0	1	0	0	0	0	0	1275
09:00	4	1161	158	1	18	0	0	1	0	0	0	0	0	1343
10:00	2	1307	198	2	24	0	0	1	0	0	0	0	0	1534
11:00	5	1481	216	0	33	1	0	2	0	0	0	0	0	1738
12:00 PM	5	1882	266	0	31	0	0	1	2	0	0	0	0	2187
13:00	3	1787	254	1	23	0	0	1	1	0	0	0	0	2070
14:00	7	1528	198	1	25	0	0	0	0	0	0	0	0	1759
15:00	7	1657	205	1	22	0	0	0	0	0	0	0	0	1892
16:00	5	1701	199	0	16	0	0	0	0	0	0	0	0	1921
17:00	10	1950	225	0	21	0	0	0	0	0	0	0	0	2206
18:00	5	1668	198	0	16	0	0	0	0	0	0	0	0	1887
19:00	2	1357	149	0	19	0	0	0	0	0	0	0	0	1527
20:00	3	1106	135	0	10	0	0	1	0	0	0	0	0	1255
21:00	3	856	98	0	9	0	0	0	0	0	0	0	0	966
22:00	1	480	53	0	4	0	0	0	0	0	0	0	0	538
23:00	0	296	36	1	3	0	0	0	0	0	0	0	0	336
Totals	73	23547	3031	12	332	8		10	7					27020
% of Totals	0%	87%	11%	0%	1%	0%		0%	0%					100%

AM Volumes	22	7279	1015	8	133	8	0	7	4	0	0	0	0	8476
% AM	0%	27%	4%	0%	0%	0%		0%	0%					31%
AM Peak Hour	08:00	11:00	11:00	05:00	11:00	05:00		11:00	03:00					11:00
Volume	5	1481	216	2	33	2		2	2					1738
PM Volumes	51	16268	2016	4	199	0	0	3	3	0	0	0	0	18544
% PM	0%	60%	7%	0%	1%			0%	0%					69%
PM Peak Hour	17:00	17:00	12:00	13:00	12:00			12:00	12:00					17:00
Volume	10	1950	266	1	31			1	2					2206

Directional Peak Periods All Classes	AM 7-9 Volume	↔	%	NOON 12-2 Volume	↔	%	PM 4-6 Volume	↔	%	Off Peak Volumes Volume	↔	%
	2396	↔	9%	4257	↔	16%	4127	↔	15%	16240	↔	60%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

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Prepared by NDS/ATD

VOLUME

Mission Center Rd Bet. Hazard Center Dr & Camino De La Riena

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_098

DAILY TOTALS	NB	SB	EB	WB	Total
	15,722	11,298	0	0	27,020

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	37		27						64		12:00	349		195						544	
00:15	25		36						61		12:15	318		198						516	
00:30	33		19						52		12:30	357		214						571	
00:45	23	118	27	109					50	227	12:45	362	1386	194	801					556	2187
01:00	12		22						34		13:00	342		196						538	
01:15	16		21						37		13:15	325		182						507	
01:30	19		30						49		13:30	315		199						514	
01:45	21	68	34	107					55	175	13:45	321	1303	190	767					511	2070
02:00	19		22						41		14:00	248		176						424	
02:15	1		18						19		14:15	276		178						454	
02:30	4		13						17		14:30	254		177						431	
02:45	10	34	9	62					19	96	14:45	262	1040	188	719					450	1759
03:00	7		5						12		15:00	261		202						463	
03:15	9		12						21		15:15	276		198						474	
03:30	9		10						19		15:30	243		235						478	
03:45	9	34	5	32					14	66	15:45	250	1030	227	862					477	1892
04:00	3		7						10		16:00	262		231						493	
04:15	10		4						14		16:15	243		204						447	
04:30	7		10						17		16:30	236		251						487	
04:45	21	41	13	34					34	75	16:45	261	1002	233	919					494	1921
05:00	27		10						37		17:00	270		296						566	
05:15	28		17						45		17:15	289		268						557	
05:30	27		13						40		17:30	314		274						588	
05:45	63	145	30	70					93	215	17:45	288	1161	207	1045					495	2206
06:00	62		32						94		18:00	256		220						476	
06:15	79		38						117		18:15	303		212						515	
06:30	131		68						199		18:30	274		202						476	
06:45	143	415	58	196					201	611	18:45	230	1063	190	824					420	1887
07:00	140		86						226		19:00	254		177						431	
07:15	184		83						267		19:15	234		159						393	
07:30	152		99						251		19:30	190		138						328	
07:45	249	725	128	396					377	1121	19:45	214	892	161	635					375	1527
08:00	203		97						300		20:00	229		144						373	
08:15	210		115						325		20:15	192		122						314	
08:30	207		102						309		20:30	155		115						270	
08:45	222	842	119	433					341	1275	20:45	158	734	140	521					298	1255
09:00	243		119						362		21:00	139		149						288	
09:15	183		119						302		21:15	146		128						274	
09:30	188		127						315		21:30	120		113						233	
09:45	236	850	128	493					364	1343	21:45	90	495	81	471					171	966
10:00	185		139						324		22:00	79		100						179	
10:15	207		152						359		22:15	61		71						132	
10:30	282		149						431		22:30	66		59						125	
10:45	251	925	169	609					420	1534	22:45	44	250	58	288					102	538
11:00	227		159						386		23:00	28		62						90	
11:15	225		179						404		23:15	50		41						91	
11:30	269		178						447		23:30	34		31						65	
11:45	301	1022	200	716					501	1738	23:45	35	147	55	189					90	336
TOTALS		5219		3257						8476	TOTALS		10503		8041						18544
SPLIT %		61.6%		38.4%						31.4%	SPLIT %		56.6%		43.4%						68.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	15,722	11,298	0	0	27,020

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:00	16:45			17:00
AM Pk Volume	1325	807			2132	PM Pk Volume	1386	1071			2206
Pk Hr Factor	0.928	0.943			0.933	Pk Hr Factor	0.957	0.905			0.938
7 - 9 Volume	1567	829	0	0	2396	4 - 6 Volume	2163	1964	0	0	4127
7 - 9 Peak Hour	07:45	07:45			07:45	4 - 6 Peak Hour	17:00	16:45			17:00
7 - 9 Pk Volume	869	442	0	0	1311	4 - 6 Pk Volume	1161	1071	0	0	2206
Pk Hr Factor	0.872	0.863	0.000	0.000	0.869	Pk Hr Factor	0.924	0.905	0.000	0.000	0.938

WEDNESDAY - SEPTEMBER 9, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Mission Center Road, From Camino De La Reina to Camino Del Rio North

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	40		28					12:00	208		203				
00:15	35		21					12:15	219		245				
00:30	28		22					12:30	222		251				
00:45	21	124	16	87			211	12:45	218	867	262	961			1828
01:00	22		24					13:00	205		235				
01:15	26		20					13:15	213		244				
01:30	20		18					13:30	242		252				
01:45	25	93	20	82			175	13:45	206	866	222	953			1819
02:00	24		15					14:00	184		219				
02:15	22		11					14:15	166		205				
02:30	11		11					14:30	154		188				
02:45	16	73	16	53			126	14:45	135	639	191	803			1442
03:00	18		10					15:00	144		165				
03:15	11		14					15:15	168		174				
03:30	16		18					15:30	174		184				
03:45	18	63	19	61			124	15:45	164	650	212	735			1385
04:00	10		22					16:00	177		206				
04:15	15		26					16:15	189		235				
04:30	22		24					16:30	191		319				
04:45	26	73	21	93			166	16:45	211	768	305	1065			1833
05:00	35		25					17:00	206		319				
05:15	44		33					17:15	214		284				
05:30	54		31					17:30	205		295				
05:45	51	184	28	117			301	17:45	184	809	312	1210			2019
06:00	68		34					18:00	165		305				
06:15	70		51					18:15	174		298				
06:30	84		68					18:30	154		242				
06:45	105	327	84	237			564	18:45	121	614	251	1096			1710
07:00	121		81					19:00	103		222				
07:15	135		99					19:15	114		184				
07:30	145		94					19:30	119		126				
07:45	175	576	105	379			955	19:45	106	442	135	667			1109
08:00	161		111					20:00	88		141				
08:15	194		103					20:15	95		111				
08:30	181		125					20:30	103		108				
08:45	177	713	114	453			1166	20:45	84	370	95	455			825
09:00	165		105					21:00	94		70				
09:15	174		109					21:15	65		65				
09:30	151		121					21:30	77		88				
09:45	162	652	142	477			1129	21:45	54	290	84	307			597
10:00	174		135					22:00	65		70				
10:15	165		162					22:15	40		65				
10:30	194		174					22:30	35		40				
10:45	184	717	184	655			1372	22:45	41	181	35	210			391
11:00	162		219					23:00	22		33				
11:15	195		205					23:15	28		28				
11:30	213		216					23:30	30		21				
11:45	222	792	203	843			1635	23:45	31	111	29	111			222
Total Vol.		4387		3537			**7924**			6607		8573			**15180**

Daily Totals

NB	SB	EB	WB	**Combined**
10994	12110			**23104**

	AM			**PM**		
Split %	55.4%	44.6%	**34.3%**	43.5%	56.5%	**65.7%**
Peak Hour	11:45	11:45	**11:45**	12:45	16:30	**16:30**
Volume	871	902	**1773**	878	1227	**2049**
P.H.F.	0.98	0.90	**0.94**	0.97	0.96	**0.98**

THURSDAY - SEPTEMBER 10, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Mission Center Road, From Camino De La Reina to Camino Del Rio North

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	33		21					12:00	241		280				
00:15	41		18					12:15	202		233				
00:30	28		22					12:30	235		265				
00:45	26	128	28	89			217	12:45	231	909	274	1052			1961
01:00	30		24					13:00	216		262				
01:15	22		21					13:15	205		254				
01:30	16		16					13:30	184		242				
01:45	18	86	12	73			159	13:45	195	800	205	963			1763
02:00	20		11					14:00	165		184				
02:15	15		15					14:15	142		196				
02:30	19		9					14:30	151		166				
02:45	20	74	12	47			121	14:45	162	620	184	730			1350
03:00	11		16					15:00	177		196				
03:15	12		11					15:15	154		212				
03:30	18		18					15:30	149		223				
03:45	22	63	11	56			119	15:45	162	642	242	873			1515
04:00	26		19					16:00	184		270				
04:15	35		15					16:15	191		278				
04:30	33		20					16:30	162		294				
04:45	29	123	18	72			195	16:45	189	726	312	1154			1880
05:00	31		22					17:00	215		342				
05:15	33		19					17:15	203		331				
05:30	45		21					17:30	199		348				
05:45	51	160	25	87			247	17:45	178	795	306	1327			2122
06:00	40		32					18:00	184		294				
06:15	68		44					18:15	162		316				
06:30	77		70					18:30	151		262				
06:45	98	283	66	212			495	18:45	111	608	241	1113			1721
07:00	120		91					19:00	126		203				
07:15	108		80					19:15	135		184				
07:30	162		96					19:30	126		161				
07:45	189	579	84	351			930	19:45	105	492	142	690			1182
08:00	198		121					20:00	141		121				
08:15	216		101					20:15	116		111				
08:30	194		111					20:30	108		97				
08:45	188	796	135	468			1264	20:45	98	463	105	434			897
09:00	178		122					21:00	70		116				
09:15	194		123					21:15	84		84				
09:30	165		105					21:30	65		70				
09:45	166	703	123	473			1176	21:45	35	254	65	335			589
10:00	174		135					22:00	40		44				
10:15	154		154					22:15	42		35				
10:30	168		162					22:30	35		40				
10:45	184	680	177	628			1308	22:45	44	161	28	147			308
11:00	206		194					23:00	28		40				
11:15	242		216					23:15	35		33				
11:30	235		241					23:30	26		22				
11:45	231	914	222	873			1787	23:45	30	119	26	121			240
Total Vol.		4589		3429			**8018**			6589		8939			**15528**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	11178	12368			**23546**

	AM			PM		
Split %	57.2%	42.8%	**34.1%**	42.4%	57.6%	**65.9%**
Peak Hour	11:15	11:45	**11:45**	12:00	16:45	**16:45**
Volume	949	1000	**1909**	909	1333	**2139**
P.H.F.	0.98	0.89	**0.92**	0.95	0.96	**0.96**

2-Day Segment Counts Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

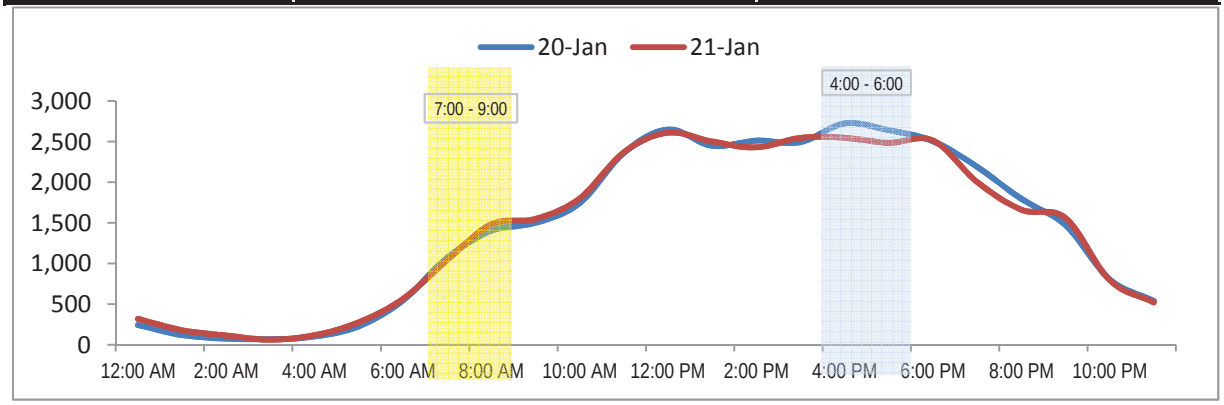
CHEN RYAN

AVC

Location: 1) Mission Center Rd/Auto Circle between Camino Del Rio North and the I-8 EB Ramps
Orientation: *North-South*
Day 1 *Wednesday, January 20, 2016*
Day 2 *Thursday, January 21, 2016*
AVC Proj. No: *16-0468*

Average Daily Traffic	***34,141***
Highest Daily Traffic	***34,230***

Time	Hourly Volume	
	20-Jan	21-Jan
12:00 AM - 1:00 AM	243	320
1:00 AM - 2:00 AM	120	179
2:00 AM - 3:00 AM	76	114
3:00 AM - 4:00 AM	69	63
4:00 AM - 5:00 AM	102	118
5:00 AM - 6:00 AM	228	276
6:00 AM - 7:00 AM	544	565
7:00 AM - 8:00 AM	1,070	1,042
8:00 AM - 9:00 AM	1,403	1,483
9:00 AM - 10:00 AM	1,501	1,548
10:00 AM - 11:00 AM	1,742	1,801
11:00 AM - 12:00 PM	2,360	2,368
12:00 PM - 1:00 PM	2,649	2,610
1:00 PM - 2:00 PM	2,448	2,501
2:00 PM - 3:00 PM	2,512	2,429
3:00 PM - 4:00 PM	2,494	2,547
4:00 PM - 5:00 PM	2,724	2,547
5:00 PM - 6:00 PM	2,640	2,485
6:00 PM - 7:00 PM	2,505	2,514
7:00 PM - 8:00 PM	2,190	2,003
8:00 PM - 9:00 PM	1,795	1,662
9:00 PM - 10:00 PM	1,471	1,560
10:00 PM - 11:00 PM	805	795
11:00 PM - 12:00 AM	539	522
Total	**34,230**	**34,052**



24 Hour Segment Count

CHEN RYAN

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: 1) Mission Center Rd/Auto Circle between Camino Del Rio North and the I-8 EB Ramps

Orientation: *North-South*

Date of Count: *Wednesday, January 20, 2016*

Analysts: *DASH*

Weather: *Sunny*

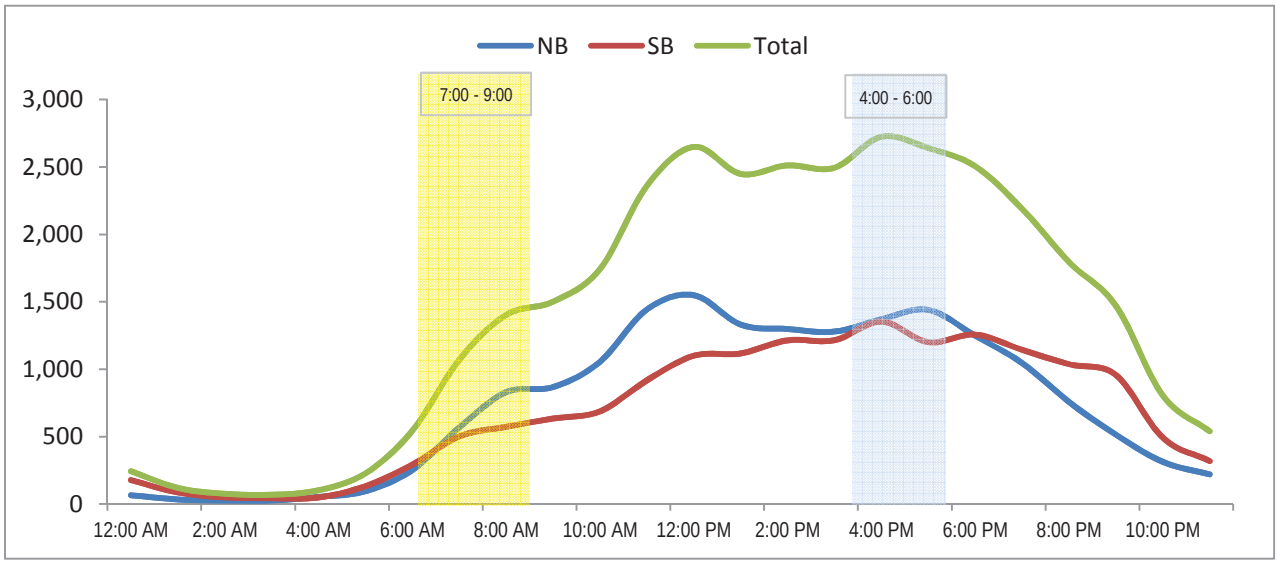
AVC Proj. No: *16-0468*

24 Hour Segment Volume			34,230

Time	Hourly Volume		
	NB	SB	Total
12:00 AM - 1:00 AM	65	178	243
1:00 AM - 2:00 AM	34	86	120
2:00 AM - 3:00 AM	26	50	76
3:00 AM - 4:00 AM	26	43	69
4:00 AM - 5:00 AM	53	49	102
5:00 AM - 6:00 AM	95	133	228
6:00 AM - 7:00 AM	252	292	544
7:00 AM - 8:00 AM	568	502	1,070
8:00 AM - 9:00 AM	830	573	1,403
9:00 AM - 10:00 AM	867	634	1,501
10:00 AM - 11:00 AM	1,055	687	1,742
11:00 AM - 12:00 PM	1,443	917	2360
Total	**5,314**	**4,144**	**9,458**

Time	Hourly Volume		
	NB	SB	Total
12:00 PM - 1:00 PM	1,549	1,100	2,649
1:00 PM - 2:00 PM	1,331	1,117	2,448
2:00 PM - 3:00 PM	1,298	1,214	2,512
3:00 PM - 4:00 PM	1,279	1,215	2,494
4:00 PM - 5:00 PM	1,371	1,353	2,724
5:00 PM - 6:00 PM	1,440	1,200	2,640
6:00 PM - 7:00 PM	1,248	1,257	2,505
7:00 PM - 8:00 PM	1,046	1,144	2,190
8:00 PM - 9:00 PM	758	1,037	1,795
9:00 PM - 10:00 PM	514	957	1,471
10:00 PM - 11:00 PM	313	492	805
11:00 PM - 12:00 AM	220	319	539
Total	**12,367**	**12,405**	**24,772**

24-Hour NB Volume	17,681	24-Hour SB Volume	16,549



24 Hour Segment Count

Accurate Video Counts Inc
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(619) 987-5136

CHEN RYAN

Location: 1) Mission Center Rd/Auto Circle between Camino Del Rio North and the I-8 EB Ramps

Orientation: *North-South*

Date of Count: *Thursday, January 21, 2016*

Analysts: *DASH*

Weather: *Sunny*

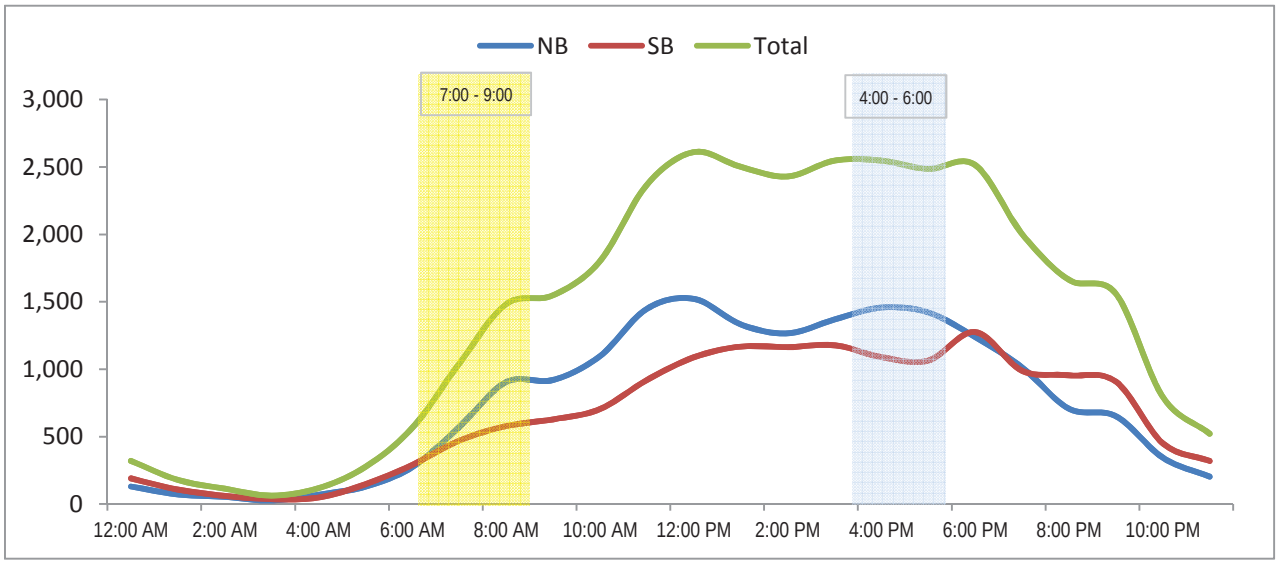
AVC Proj. No: *16-0468*

24 Hour Segment Volume			34,052

Time	Hourly Volume		
	NB	SB	Total
12:00 AM - 1:00 AM	130	190	320
1:00 AM - 2:00 AM	72	107	179
2:00 AM - 3:00 AM	53	61	114
3:00 AM - 4:00 AM	27	36	63
4:00 AM - 5:00 AM	70	48	118
5:00 AM - 6:00 AM	129	147	276
6:00 AM - 7:00 AM	274	291	565
7:00 AM - 8:00 AM	572	470	1,042
8:00 AM - 9:00 AM	905	578	1,483
9:00 AM - 10:00 AM	920	628	1,548
10:00 AM - 11:00 AM	1,097	704	1,801
11:00 AM - 12:00 PM	1,448	920	2368
Total	**5,697**	**4,180**	**9,877**

Time	Hourly Volume		
	NB	SB	Total
12:00 PM - 1:00 PM	1,522	1,088	2,610
1:00 PM - 2:00 PM	1,333	1,168	2,501
2:00 PM - 3:00 PM	1,266	1,163	2,429
3:00 PM - 4:00 PM	1,369	1,178	2,547
4:00 PM - 5:00 PM	1,457	1,090	2,547
5:00 PM - 6:00 PM	1,421	1,064	2,485
6:00 PM - 7:00 PM	1,238	1,276	2,514
7:00 PM - 8:00 PM	1,014	989	2,003
8:00 PM - 9:00 PM	707	955	1,662
9:00 PM - 10:00 PM	652	908	1,560
10:00 PM - 11:00 PM	344	451	795
11:00 PM - 12:00 AM	203	319	522
Total	**12,526**	**11,649**	**24,175**

24-Hour NB Volume	18,223	24-Hour SB Volume	15,829



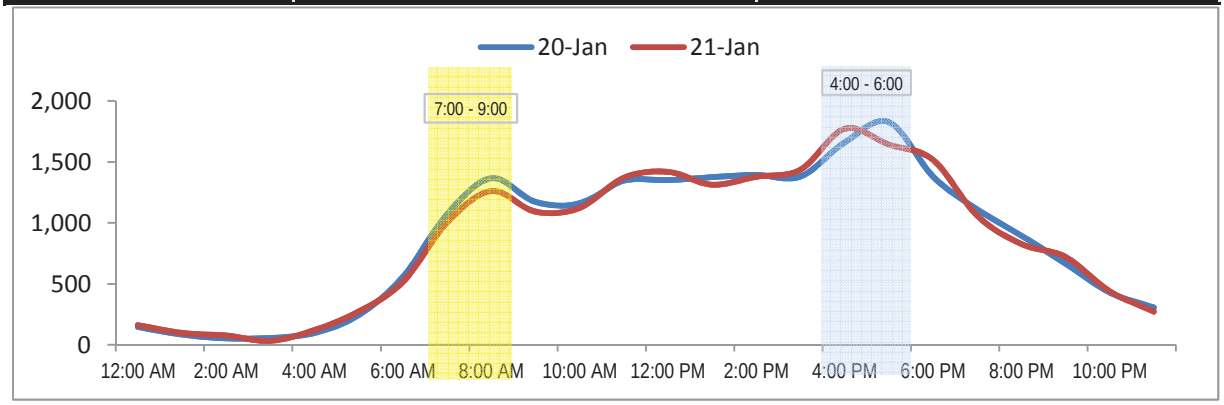
2-Day Segment Counts Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: 2) Mission Center Rd/Aurto Circle between the I-8 EB Ramps and Camino Del Rio South
Orientation: *North-South*
Day 1 *Wednesday, January 20, 2016*
Day 2 *Thursday, January 21, 2016*
AVC Proj. No: *16-0468*

Average Daily Traffic	***21,026***
Highest Daily Traffic	***21,127***

Time	Hourly Volume	
	20-Jan	21-Jan
12:00 AM - 1:00 AM	146	161
1:00 AM - 2:00 AM	84	97
2:00 AM - 3:00 AM	53	76
3:00 AM - 4:00 AM	56	33
4:00 AM - 5:00 AM	98	121
5:00 AM - 6:00 AM	244	273
6:00 AM - 7:00 AM	557	516
7:00 AM - 8:00 AM	1,071	1,003
8:00 AM - 9:00 AM	1,366	1,261
9:00 AM - 10:00 AM	1,172	1,092
10:00 AM - 11:00 AM	1,160	1,123
11:00 AM - 12:00 PM	1,346	1,370
12:00 PM - 1:00 PM	1,351	1,419
1:00 PM - 2:00 PM	1,375	1,313
2:00 PM - 3:00 PM	1,393	1,379
3:00 PM - 4:00 PM	1,381	1,437
4:00 PM - 5:00 PM	1,660	1,772
5:00 PM - 6:00 PM	1,827	1,643
6:00 PM - 7:00 PM	1,380	1,517
7:00 PM - 8:00 PM	1,111	1,059
8:00 PM - 9:00 PM	896	827
9:00 PM - 10:00 PM	666	721
10:00 PM - 11:00 PM	429	440
11:00 PM - 12:00 AM	305	272
Total	**21,127**	**20,925**



24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

CHEN RYAN

Location: 2) Mission Center Rd/Aurto Circle between the I-8 EB Ramps and Camino Del Rio South

Orientation: *North-South*

Date of Count: *Wednesday, January 20, 2016*

Analysts: *DASH*

Weather: *Sunny*

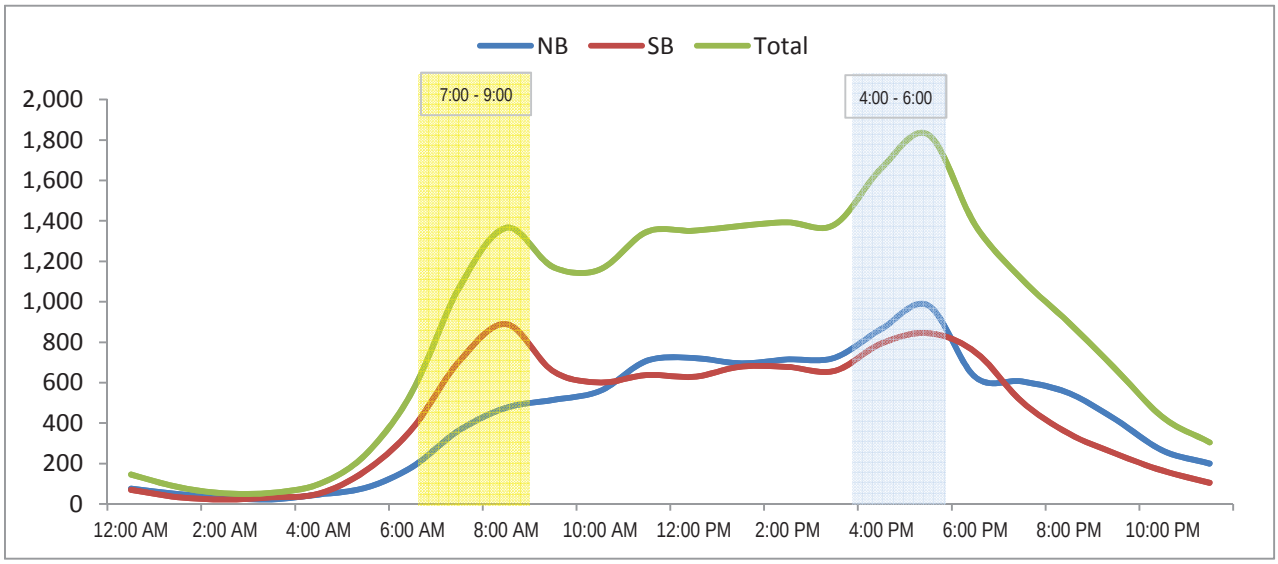
AVC Proj. No: *16-0468*

24 Hour Segment Volume			21,127

Time	Hourly Volume		
	NB	SB	Total
12:00 AM - 1:00 AM	76	70	146
1:00 AM - 2:00 AM	50	34	84
2:00 AM - 3:00 AM	31	22	53
3:00 AM - 4:00 AM	23	33	56
4:00 AM - 5:00 AM	47	51	98
5:00 AM - 6:00 AM	80	164	244
6:00 AM - 7:00 AM	184	373	557
7:00 AM - 8:00 AM	365	706	1,071
8:00 AM - 9:00 AM	476	890	1,366
9:00 AM - 10:00 AM	515	657	1,172
10:00 AM - 11:00 AM	559	601	1,160
11:00 AM - 12:00 PM	708	638	1346
Total	**3,114**	**4,239**	**7,353**

Time	Hourly Volume		
	NB	SB	Total
12:00 PM - 1:00 PM	722	629	1,351
1:00 PM - 2:00 PM	696	679	1,375
2:00 PM - 3:00 PM	715	678	1,393
3:00 PM - 4:00 PM	723	658	1,381
4:00 PM - 5:00 PM	866	794	1,660
5:00 PM - 6:00 PM	982	845	1,827
6:00 PM - 7:00 PM	628	752	1,380
7:00 PM - 8:00 PM	606	505	1,111
8:00 PM - 9:00 PM	548	348	896
9:00 PM - 10:00 PM	417	249	666
10:00 PM - 11:00 PM	264	165	429
11:00 PM - 12:00 AM	200	105	305
Total	**7,367**	**6,407**	**13,774**

24-Hour NB Volume	10,481	24-Hour SB Volume	10,646



100

CHEN RYAN

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: 2) Mission Center Rd/Aurto Circle between the I-8 EB Ramps and Camino Del Rio South

Orientation: *North-South*

Date of Count: *Thursday, January 21, 2016*

Analysts: *DASH*

Weather: *Sunny*

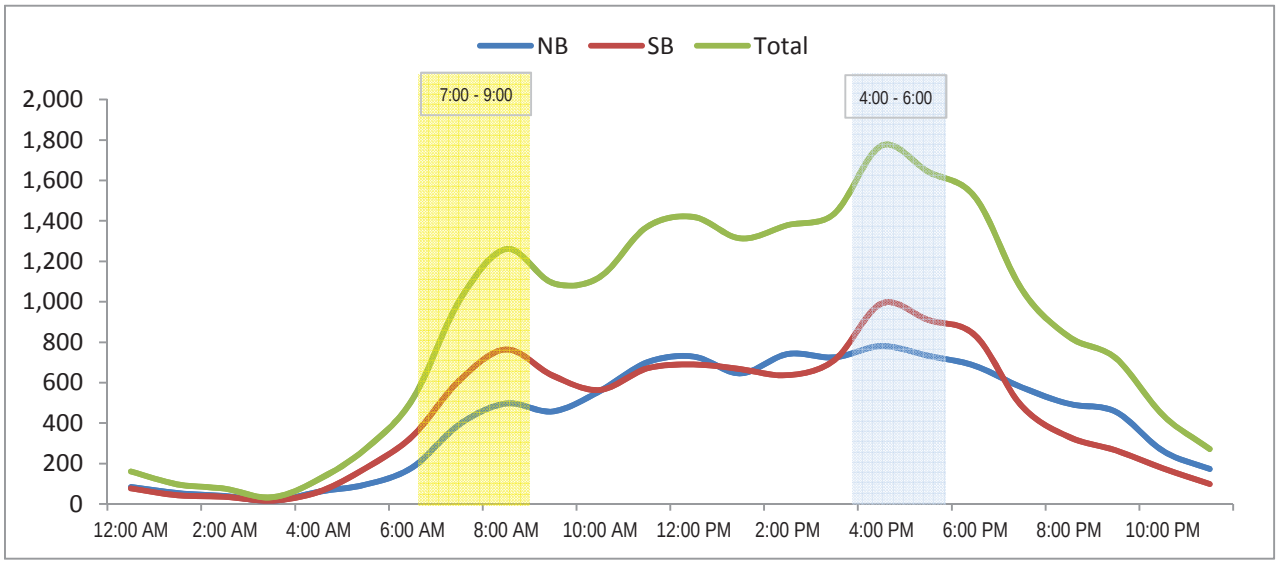
AVC Proj. No: *16-0468*

24 Hour Segment Volume			*20,925*

Time	Hourly Volume		
	NB	SB	Total
12:00 AM - 1:00 AM	84	77	161
1:00 AM - 2:00 AM	54	43	97
2:00 AM - 3:00 AM	40	36	76
3:00 AM - 4:00 AM	16	17	33
4:00 AM - 5:00 AM	61	60	121
5:00 AM - 6:00 AM	96	177	273
6:00 AM - 7:00 AM	181	335	516
7:00 AM - 8:00 AM	393	610	1,003
8:00 AM - 9:00 AM	497	764	1,261
9:00 AM - 10:00 AM	458	634	1,092
10:00 AM - 11:00 AM	559	564	1,123
11:00 AM - 12:00 PM	700	670	1370
Total	**3,139**	**3,987**	**7,126**

Time	Hourly Volume		
	NB	SB	Total
12:00 PM - 1:00 PM	729	690	1,419
1:00 PM - 2:00 PM	646	667	1,313
2:00 PM - 3:00 PM	742	637	1,379
3:00 PM - 4:00 PM	725	712	1,437
4:00 PM - 5:00 PM	781	991	1,772
5:00 PM - 6:00 PM	733	910	1,643
6:00 PM - 7:00 PM	683	834	1,517
7:00 PM - 8:00 PM	576	483	1,059
8:00 PM - 9:00 PM	495	332	827
9:00 PM - 10:00 PM	456	265	721
10:00 PM - 11:00 PM	263	177	440
11:00 PM - 12:00 AM	173	99	272
Total	**7,002**	**6,797**	**13,799**

24-Hour	*NB*	*Volume*	*10,141*	*24-Hour*	*SB*	*Volume*	*10,784*



WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Via Alta, From Westside Drive to Franklin Ridge Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	2		0					12:00	12		8				
00:15	0		0					12:15	11		10				
00:30	1		1					12:30	15		14				
00:45	0	3	2	3			6	12:45	9	47	11	43			90
01:00	1		0					13:00	5		5				
01:15	0		0					13:15	4		4				
01:30	0		0					13:30	6		9				
01:45	0	1	1	1			2	13:45	10	25	5	23			48
02:00	0		0					14:00	11		4				
02:15	0		2					14:15	15		5				
02:30	1		0					14:30	9		6				
02:45	0	1	1	3			4	14:45	12	47	9	24			71
03:00	0		0					15:00	11		12				
03:15	0		0					15:15	6		11				
03:30	0		1					15:30	6		15				
03:45	0	0	1	2			2	15:45	15	38	9	47			85
04:00	1		1					16:00	18		6				
04:15	1		0					16:15	26		11				
04:30	0		3					16:30	35		15				
04:45	2	4	4	8			12	16:45	33	112	18	50			162
05:00	1		1					17:00	41		20				
05:15	1		0					17:15	25		16				
05:30	6		1					17:30	16		11				
05:45	0	8	1	3			11	17:45	22	104	9	56			160
06:00	4		0					18:00	20		10				
06:15	5		1					18:15	18		5				
06:30	8		2					18:30	11		4				
06:45	12	29	3	6			35	18:45	6	55	9	28			83
07:00	18		11					19:00	5		5				
07:15	20		18					19:15	4		4				
07:30	16		20					19:30	6		5				
07:45	11	65	22	71			136	19:45	4	19	6	20			39
08:00	16		35					20:00	3		2				
08:15	19		28					20:15	5		1				
08:30	11		16					20:30	4		4				
08:45	8	54	18	97			151	20:45	1	13	2	9			22
09:00	9		20					21:00	5		1				
09:15	12		11					21:15	2		1				
09:30	4		9					21:30	1		2				
09:45	6	31	12	52			83	21:45	0	8	0	4			12
10:00	8		4					22:00	4		1				
10:15	9		5					22:15	2		1				
10:30	10		9					22:30	0		2				
10:45	5	32	5	23			55	22:45	1	7	0	4			11
11:00	4		4					23:00	0		0				
11:15	6		6					23:15	0		1				
11:30	6		4					23:30	1		1				
11:45	10	26	5	19			45	23:45	2	3	2	4			7
Total Vol.		254		288			**542**			478		312			**790**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	732	600			**1332**

	AM			PM		
Split %	46.9%	53.1%	**40.7%**	60.5%	39.5%	**59.3%**
Peak Hour	06:45	07:30	**07:30**	16:15	16:30	**16:30**
Volume	66	105	**167**	135	69	**203**
P.H.F.	0.83	0.75	**0.82**	0.91	0.86	**0.83**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Via Alta, From Westside Drive to Franklin Ridge Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	0		1					12:00	9		11				
00:15	1		0					12:15	12		8				
00:30	1		0					12:30	11		9				
00:45	0	2	0	1			3	12:45	8	40	4	32			72
01:00	0		1					13:00	9		5				
01:15	0		1					13:15	11		6				
01:30	0		2					13:30	16		2				
01:45	1	1	0	4			5	13:45	8	44	5	18			62
02:00	1		0					14:00	9		9				
02:15	0		0					14:15	10		4				
02:30	2		0					14:30	5		5				
02:45	0	3	1	1			4	14:45	4	28	4	22			50
03:00	0		1					15:00	9		8				
03:15	0		1					15:15	12		10				
03:30	0		0					15:30	5		11				
03:45	0	0	0	2			2	15:45	9	35	15	44			79
04:00	0		2					16:00	18		19				
04:15	1		0					16:15	28		16				
04:30	0		1					16:30	41		11				
04:45	1	2	0	3			5	16:45	44	131	17	63			194
05:00	2		0					17:00	32		10				
05:15	1		2					17:15	28		8				
05:30	3		1					17:30	21		9				
05:45	4	10	4	7			17	17:45	22	103	10	37			140
06:00	6		6					18:00	16		4				
06:15	4		9					18:15	18		8				
06:30	8		10					18:30	15		9				
06:45	9	27	5	30			57	18:45	11	60	5	26			86
07:00	11		18					19:00	5		4				
07:15	18		20					19:15	9		3				
07:30	20		26					19:30	10		2				
07:45	16	65	35	99			164	19:45	5	29	4	13			42
08:00	19		22					20:00	4		0				
08:15	11		41					20:15	6		1				
08:30	15		25					20:30	5		2				
08:45	8	53	20	108			161	20:45	4	19	1	4			23
09:00	6		19					21:00	2		0				
09:15	7		16					21:15	0		1				
09:30	9		11					21:30	5		0				
09:45	5	27	8	54			81	21:45	0	7	0	1			8
10:00	0		9					22:00	2		1				
10:15	4		5					22:15	1		2				
10:30	5		4					22:30	4		0				
10:45	1	10	6	24			34	22:45	0	7	0	3			10
11:00	6		5					23:00	1		1				
11:15	8		3					23:15	2		0				
11:30	4		5					23:30	1		0				
11:45	10	28	4	17			45	23:45	0	4	1	2			6
Total Vol.		228		350			**578**			507		265			**772**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	735	615			**1350**

	AM			PM		
Split %	39.4%	60.6%	**42.8%**	65.7%	34.3%	**57.2%**
Peak Hour	07:15	07:30	**07:30**	16:15	16:00	**16:15**
Volume	73	124	**190**	145	63	**199**
P.H.F.	0.91	0.76	**0.91**	0.89	0.83	**0.82**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Murray Ridge Rd, From Mission Center Road to I-805 NB Ramps

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	30		12					12:00	150		142				
00:15	26		12					12:15	169		139				
00:30	21		10					12:30	170		159				
00:45	18	95	9	43			138	12:45	164	653	121	561			1214
01:00	7		6					13:00	140		139				
01:15	6		10					13:15	142		133				
01:30	15		6					13:30	135		132				
01:45	12	40	10	32			72	13:45	142	559	128	532			1091
02:00	12		6					14:00	155		159				
02:15	2		7					14:15	165		170				
02:30	6		3					14:30	128		185				
02:45	6	26	7	23			49	14:45	141	589	199	713			1302
03:00	7		7					15:00	126		173				
03:15	8		8					15:15	144		194				
03:30	5		10					15:30	168		221				
03:45	5	25	12	37			62	15:45	174	612	182	770			1382
04:00	5		17					16:00	184		212				
04:15	11		22					16:15	161		203				
04:30	6		40					16:30	151		272				
04:45	10	32	38	117			149	16:45	155	651	238	925			1576
05:00	17		48					17:00	168		312				
05:15	19		68					17:15	163		312				
05:30	40		112					17:30	162		242				
05:45	66	142	107	335			477	17:45	140	633	206	1072			1705
06:00	87		113					18:00	152		185				
06:15	111		122					18:15	166		182				
06:30	124		144					18:30	137		152				
06:45	144	466	176	555			1021	18:45	124	579	132	651			1230
07:00	155		161					19:00	137		124				
07:15	160		184					19:15	156		95				
07:30	184		233					19:30	109		102				
07:45	266	765	176	754			1519	19:45	114	516	93	414			930
08:00	252		183					20:00	98		73				
08:15	216		166					20:15	88		82				
08:30	208		146					20:30	95		80				
08:45	242	918	121	616			1534	20:45	92	373	65	300			673
09:00	201		142					21:00	96		61				
09:15	155		111					21:15	96		58				
09:30	114		121					21:30	88		67				
09:45	117	587	104	478			1065	21:45	75	355	51	237			592
10:00	105		110					22:00	50		34				
10:15	83		128					22:15	56		34				
10:30	97		124					22:30	47		34				
10:45	122	407	115	477			884	22:45	55	208	27	129			337
11:00	105		101					23:00	37		23				
11:15	168		139					23:15	34		24				
11:30	127		133					23:30	24		20				
11:45	156	556	171	544			1100	23:45	25	120	12	79			199
Total Vol.		4059		4011			**8070**			5848		6383			**12231**

Daily Totals

NB	SB	EB	WB	**Combined**
9907	10394			**20301**

	AM			PM		
Split %	50.3%	49.7%	**39.8%**	47.8%	52.2%	**60.2%**
Peak Hour	07:45	07:15	**07:30**	15:30	16:30	**16:30**
Volume	942	776	**1676**	687	1134	**1771**
P.H.F.	0.89	0.83	**0.95**	0.96	0.91	**0.92**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Murray Ridge Rd, From Mission Center Road to I-805 NB Ramps

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	28		30					12:00	108		123				
00:15	23		7					12:15	121		116				
00:30	16		13					12:30	142		139				
00:45	13	80	14	64			144	12:45	139	510	161	539			1049
01:00	13		5					13:00	217		120				
01:15	11		9					13:15	161		123				
01:30	11		5					13:30	131		145				
01:45	14	49	5	24			73	13:45	154	663	109	497			1160
02:00	7		6					14:00	114		145				
02:15	3		6					14:15	151		176				
02:30	8		3					14:30	146		191				
02:45	3	21	7	22			43	14:45	181	592	159	671			1263
03:00	7		4					15:00	170		191				
03:15	3		3					15:15	163		195				
03:30	1		10					15:30	169		233				
03:45	6	17	13	30			47	15:45	153	655	211	830			1485
04:00	4		18					16:00	126		246				
04:15	10		17					16:15	153		220				
04:30	9		42					16:30	146		299				
04:45	21	44	37	114			158	16:45	147	572	264	1029			1601
05:00	6		57					17:00	152		312				
05:15	29		69					17:15	116		286				
05:30	35		117					17:30	131		240				
05:45	56	126	116	359			485	17:45	143	542	241	1079			1621
06:00	68		125					18:00	129		203				
06:15	112		124					18:15	112		168				
06:30	133		176					18:30	106		133				
06:45	134	447	174	599			1046	18:45	122	469	110	614			1083
07:00	156		174					19:00	106		108				
07:15	178		199					19:15	134		99				
07:30	172		216					19:30	125		79				
07:45	235	741	181	770			1511	19:45	120	485	60	346			831
08:00	257		182					20:00	104		81				
08:15	261		145					20:15	96		72				
08:30	190		143					20:30	71		56				
08:45	207	915	137	607			1522	20:45	80	351	62	271			622
09:00	158		118					21:00	93		77				
09:15	113		132					21:15	95		63				
09:30	89		123					21:30	67		67				
09:45	110	470	111	484			954	21:45	73	328	52	259			587
10:00	123		104					22:00	63		50				
10:15	93		104					22:15	64		49				
10:30	106		128					22:30	51		33				
10:45	82	404	126	462			866	22:45	51	229	32	164			393
11:00	101		116					23:00	38		26				
11:15	126		102					23:15	33		25				
11:30	113		136					23:30	40		20				
11:45	112	452	119	473			925	23:45	29	140	13	84			224
Total Vol.		3766		4008			**7774**			5536		6383			**11919**

Daily Totals

NB	SB	EB	WB	**Combined**
9302	10391			**19693**

	AM			**PM**		
Split %	48.4%	51.6%	**39.5%**	46.4%	53.6%	**60.5%**
Peak Hour	07:45	07:15	**07:30**	14:45	16:30	**16:30**
Volume	943	778	**1649**	683	1161	**1722**
P.H.F.	0.90	0.90	**0.94**	0.94	0.93	**0.93**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Murray Ridge Rd, From I-805 NB Ramps to I-805 SB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			19		22			12:00			79		91		
00:15			11		11			12:15			83		113		
00:30			13		13			12:30			79		84		
00:45			8	51	12	58	109	12:45			72	313	99	387	700
01:00			7		10			13:00			81		103		
01:15			1		6			13:15			77		79		
01:30			4		4			13:30			72		115		
01:45			5	17	8	28	45	13:45			65	295	103	400	695
02:00			6		4			14:00			89		96		
02:15			3		7			14:15			60		89		
02:30			0		6			14:30			78		107		
02:45			5	14	2	19	33	14:45			90	317	109	401	718
03:00			2		3			15:00			82		114		
03:15			2		6			15:15			81		123		
03:30			4		7			15:30			63		146		
03:45			3	11	5	21	32	15:45			64	290	143	526	816
04:00			2		6			16:00			66		168		
04:15			1		15			16:15			61		131		
04:30			1		12			16:30			50		205		
04:45			3	7	13	46	53	16:45			51	228	208	712	940
05:00			4		27			17:00			54		212		
05:15			8		30			17:15			50		206		
05:30			14		33			17:30			41		168		
05:45			17	43	43	133	176	17:45			43	188	151	737	925
06:00			17		67			18:00			64		162		
06:15			22		63			18:15			68		154		
06:30			38		55			18:30			68		151		
06:45			53	130	80	265	395	18:45			65	265	148	615	880
07:00			68		103			19:00			81		119		
07:15			70		105			19:15			64		87		
07:30			88		148			19:30			80		93		
07:45			105	331	105	461	792	19:45			53	278	87	386	664
08:00			91		116			20:00			75		71		
08:15			84		121			20:15			72		66		
08:30			80		90			20:30			58		58		
08:45			84	339	95	422	761	20:45			44	249	68	263	512
09:00			73		102			21:00			49		63		
09:15			57		85			21:15			44		53		
09:30			59		111			21:30			37		50		
09:45			63	252	100	398	650	21:45			49	179	47	213	392
10:00			57		89			22:00			31		53		
10:15			49		66			22:15			27		45		
10:30			55		60			22:30			32		28		
10:45			58	219	87	302	521	22:45			20	110	28	154	264
11:00			68		90			23:00			16		31		
11:15			55		71			23:15			14		22		
11:30			78		70			23:30			25		18		
11:45			62	263	103	334	597	23:45			13	68	17	88	156
Total Vol.				1677		2487	**4164**					2780		4882	**7662**

Daily Totals

NB	SB	EB	WB	Combined
		4457	7369	**11826**

	AM			PM		
Split %	40.3%	59.7%	**35.2%**	36.3%	63.7%	**64.8%**
Peak Hour	07:30	07:30	**07:30**	14:30	16:30	**16:30**
Volume	368	490	**858**	331	831	**1036**
P.H.F.	0.88	0.83	**0.91**	0.92	0.98	**0.97**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Murray Ridge Rd, From I-805 NB Ramps to I-805 SB Ramps

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			11		17			12:00			49		96		
00:15			14		14			12:15			62		78		
00:30			10		19			12:30			79		92		
00:45			7	42	10	60	102	12:45			73	263	74	340	603
01:00			4		10			13:00			85		91		
01:15			6		12			13:15			83		103		
01:30			5		7			13:30			71		101		
01:45			7	22	6	35	57	13:45			68	307	86	381	688
02:00			7		7			14:00			79		89		
02:15			3		5			14:15			65		69		
02:30			3		3			14:30			65		95		
02:45			5	18	4	19	37	14:45			75	284	122	375	659
03:00			2		1			15:00			70		131		
03:15			1		5			15:15			77		109		
03:30			1		3			15:30			69		138		
03:45			1	5	3	12	17	15:45			72	288	145	523	811
04:00			1		7			16:00			39		146		
04:15			1		13			16:15			51		150		
04:30			2		10			16:30			38		189		
04:45			5	9	12	42	51	16:45			47	175	155	640	815
05:00			6		29			17:00			45		231		
05:15			3		25			17:15			45		199		
05:30			15		38			17:30			40		232		
05:45			22	46	43	135	181	17:45			30	160	206	868	1028
06:00			18		76			18:00			45		168		
06:15			19		79			18:15			46		162		
06:30			35		78			18:30			50		145		
06:45			55	127	74	307	434	18:45			58	199	120	595	794
07:00			50		109			19:00			62		105		
07:15			82		125			19:15			68		77		
07:30			92		104			19:30			72		85		
07:45			84	308	131	469	777	19:45			55	257	66	333	590
08:00			107		131			20:00			56		65		
08:15			104		116			20:15			49		48		
08:30			100		112			20:30			47		68		
08:45			73	384	86	445	829	20:45			51	203	57	238	441
09:00			77		104			21:00			42		45		
09:15			61		108			21:15			57		52		
09:30			56		89			21:30			54		69		
09:45			51	245	92	393	638	21:45			37	190	57	223	413
10:00			65		78			22:00			39		56		
10:15			76		90			22:15			37		54		
10:30			51		80			22:30			33		44		
10:45			58	250	68	316	566	22:45			26	135	34	188	323
11:00			47		81			23:00			23		30		
11:15			62		80			23:15			15		27		
11:30			73		73			23:30			19		23		
11:45			59	241	70	304	545	23:45			9	66	27	107	173
Total Vol.				1697		2537	**4234**					2527		4811	**7338**

Daily Totals

NB	SB	EB	WB	Combined
		4224	7348	**11572**

	AM			PM		
Split %	40.1%	59.9%	**36.6%**	34.4%	65.6%	**63.4%**
Peak Hour	07:45	07:15	**07:45**	12:30	17:00	**17:00**
Volume	395	491	**885**	320	868	**1028**
P.H.F.	0.92	0.94	**0.93**	0.94	0.94	**0.93**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Russell Park Way, From Friars Road to Civita Boulevard

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	1		0					12:00	9		11				
00:15	0		0					12:15	15		4				
00:30	0		0					12:30	17		3				
00:45	1	2	0	0			2	12:45	10	51	3	21			72
01:00	0		0					13:00	16		5				
01:15	0		0					13:15	6		5				
01:30	1		0					13:30	6		5				
01:45	0	1	0	0			1	13:45	13	41	5	20			61
02:00	0		0					14:00	11		6				
02:15	0		0					14:15	14		4				
02:30	1		0					14:30	7		7				
02:45	1	2	0	0			2	14:45	13	45	5	22			67
03:00	0		0					15:00	16		12				
03:15	0		0					15:15	9		12				
03:30	1		0					15:30	10		31				
03:45	0	1	0	0			1	15:45	10	45	10	65			110
04:00	2		0					16:00	15		5				
04:15	1		0					16:15	9		8				
04:30	2		0					16:30	14		5				
04:45	1	6	1	1			7	16:45	15	53	3	21			74
05:00	1		1					17:00	5		5				
05:15	0		1					17:15	8		6				
05:30	2		1					17:30	11		3				
05:45	5	8	1	4			12	17:45	22	46	6	20			66
06:00	3		0					18:00	10		5				
06:15	14		1					18:15	14		2				
06:30	17		4					18:30	8		0				
06:45	15	49	4	9			58	18:45	8	40	2	9			49
07:00	17		3					19:00	11		2				
07:15	11		6					19:15	13		3				
07:30	5		5					19:30	5		2				
07:45	9	42	6	20			62	19:45	9	38	1	8			46
08:00	4		7					20:00	5		6				
08:15	5		5					20:15	6		1				
08:30	8		5					20:30	13		2				
08:45	12	29	3	20			49	20:45	7	31	2	11			42
09:00	7		1					21:00	9		0				
09:15	7		5					21:15	3		1				
09:30	6		5					21:30	1		1				
09:45	4	24	4	15			39	21:45	4	17	0	2			19
10:00	1		4					22:00	6		3				
10:15	6		4					22:15	5		0				
10:30	5		4					22:30	3		0				
10:45	9	21	2	14			35	22:45	4	18	0	3			21
11:00	5		3					23:00	5		1				
11:15	19		5					23:15	4		1				
11:30	8		7					23:30	2		0				
11:45	21	53	7	22			75	23:45	2	13	0	2			15
Total Vol.		238		105			**343**			438		204			**642**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	676	309			**985**

	AM			PM		
Split %	69.4%	30.6%	**34.8%**	68.2%	31.8%	**65.2%**
Peak Hour	06:15	11:15	**11:15**	12:15	15:00	**15:00**
Volume	63	30	**87**	58	65	**110**
P.H.F.	0.93	0.68	**0.78**	0.76	0.52	**0.67**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Russell Park Way, From Friars Road to Civita Boulevard

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	6		0					12:00	6		11				
00:15	0		0					12:15	11		3				
00:30	0		0					12:30	10		12				
00:45	1	7	0	0			7	12:45	12	39	7	33			72
01:00	3		0					13:00	8		4				
01:15	0		0					13:15	7		6				
01:30	0		0					13:30	6		5				
01:45	1	4	0	0			4	13:45	6	27	7	22			49
02:00	0		0					14:00	18		11				
02:15	0		0					14:15	13		1				
02:30	0		2					14:30	7		4				
02:45	0	0	0	2			2	14:45	6	44	7	23			67
03:00	0		0					15:00	7		14				
03:15	0		0					15:15	19		16				
03:30	0		0					15:30	19		24				
03:45	0	0	0	0				15:45	7	52	15	69			121
04:00	1		0					16:00	12		3				
04:15	0		0					16:15	12		9				
04:30	0		0					16:30	6		6				
04:45	0	1	1	1			2	16:45	10	40	2	20			60
05:00	0		0					17:00	12		6				
05:15	1		0					17:15	8		7				
05:30	0		2					17:30	16		4				
05:45	2	3	1	3			6	17:45	17	53	2	19			72
06:00	5		2					18:00	9		11				
06:15	11		2					18:15	8		1				
06:30	16		5					18:30	11		4				
06:45	15	47	4	13			60	18:45	15	43	1	17			60
07:00	19		4					19:00	8		1				
07:15	13		12					19:15	6		1				
07:30	3		19					19:30	9		1				
07:45	7	42	6	41			83	19:45	6	29	1	4			33
08:00	7		5					20:00	8		0				
08:15	7		6					20:15	8		1				
08:30	11		6					20:30	5		1				
08:45	7	32	2	19			51	20:45	4	25	5	7			32
09:00	8		5					21:00	4		0				
09:15	8		11					21:15	10		0				
09:30	12		2					21:30	3		6				
09:45	14	42	3	21			63	21:45	9	26	1	7			33
10:00	7		7					22:00	7		0				
10:15	11		15					22:15	4		0				
10:30	6		4					22:30	3		0				
10:45	9	33	4	30			63	22:45	3	17	0	0			17
11:00	14		4					23:00	2		0				
11:15	20		12					23:15	0		1				
11:30	13		8					23:30	1		0				
11:45	15	62	9	33			95	23:45	0	3	1	2			5
Total Vol.		273		163			**436**			398		223			**621**

Daily Totals

NB	SB	EB	WB	**Combined**
671	386			**1057**

	AM			**PM**		
Split %	62.6%	37.4%	**41.2%**	64.1%	35.9%	**58.8%**
Peak Hour	06:30	07:15	**11:00**	15:15	15:00	**15:00**
Volume	63	42	**95**	57	69	**121**
P.H.F.	0.83	0.55	**0.74**	0.68	0.72	**0.70**

Prepared by NDS/ATD

VOLUME

Camino Del Este Bet. Rio san Diego Dr & Camino De La Riena

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_104

DAILY TOTALS	NB	SB	EB	WB	Total
	3,133	5,247	0	0	8,380

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	11		12				23		12:00	71		107				178	
00:15	10		3				13		12:15	79		116				195	
00:30	8		4				12		12:30	76		105				181	
00:45	5	34	4	23			9	57	12:45	70	296	96	424			166	720
01:00	5		1				6		13:00	64		111				175	
01:15	1		2				3		13:15	74		85				159	
01:30	3		1				4		13:30	66		91				157	
01:45	1	10	0	4			1	14	13:45	71	275	88	375			159	650
02:00	2		2				4		14:00	62		78				140	
02:15	0		1				1		14:15	62		82				144	
02:30	1		5				6		14:30	43		91				134	
02:45	0	3	2	10			2	13	14:45	60	227	82	333			142	560
03:00	3		2				5		15:00	52		86				138	
03:15	1		0				1		15:15	54		79				133	
03:30	1		1				2		15:30	54		67				121	
03:45	0	5	4	7			4	12	15:45	64	224	100	332			164	556
04:00	1		6				7		16:00	56		101				157	
04:15	1		2				3		16:15	49		79				128	
04:30	2		8				10		16:30	56		119				175	
04:45	0	4	8	24			8	28	16:45	68	229	108	407			176	636
05:00	0		11				11		17:00	69		139				208	
05:15	3		13				16		17:15	60		135				195	
05:30	1		16				17		17:30	72		127				199	
05:45	5	9	15	55			20	64	17:45	68	269	95	496			163	765
06:00	8		32				40		18:00	62		102				164	
06:15	2		29				31		18:15	67		109				176	
06:30	8		35				43		18:30	71		83				154	
06:45	10	28	34	130			44	158	18:45	61	261	102	396			163	657
07:00	6		55				61		19:00	58		88				146	
07:15	6		57				63		19:15	63		75				138	
07:30	22		76				98		19:30	55		73				128	
07:45	16	50	70	258			86	308	19:45	63	239	84	320			147	559
08:00	19		62				81		20:00	45		73				118	
08:15	24		74				98		20:15	54		67				121	
08:30	16		71				87		20:30	42		55				97	
08:45	19	78	58	265			77	343	20:45	39	180	42	237			81	417
09:00	25		59				84		21:00	35		43				78	
09:15	27		66				93		21:15	38		27				65	
09:30	43		58				101		21:30	21		20				41	
09:45	28	123	56	239			84	362	21:45	25	119	23	113			48	232
10:00	35		59				94		22:00	15		23				38	
10:15	40		69				109		22:15	13		30				43	
10:30	39		88				127		22:30	10		11				21	
10:45	50	164	89	305			139	469	22:45	19	57	13	77			32	134
11:00	50		80				130		23:00	16		19				35	
11:15	47		85				132		23:15	12		8				20	
11:30	54		98				152		23:30	13		15				28	
11:45	53	204	105	368			158	572	23:45	4	45	7	49			11	94
TOTALS		712		1688				2400	TOTALS		2421		3559				5980
SPLIT %		29.7%		70.3%				28.6%	SPLIT %		40.5%		59.5%				71.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,133	5,247	0	0	8,380

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:00	16:45			16:45
AM Pk Volume	279	433			712	PM Pk Volume	296	509			778
Pk Hr Factor	0.883	0.933			0.913	Pk Hr Factor	0.937	0.915			0.935
7 - 9 Volume	128	523	0	0	651	4 - 6 Volume	498	903	0	0	1401
7 - 9 Peak Hour	07:30	07:30			07:30	4 - 6 Peak Hour	16:45	16:45			16:45
7 - 9 Pk Volume	81	282	0	0	363	4 - 6 Pk Volume	269	509	0	0	778
Pk Hr Factor	0.844	0.928	0.000	0.000	0.926	Pk Hr Factor	0.934	0.915	0.000	0.000	0.935

Prepared by NDS/ATD

VOLUME

Camino Del Este Bet. Rio san Diego Dr & Camino De La Riena

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_104

DAILY TOTALS	NB	SB	EB	WB	Total
	3,120	5,397	0	0	8,517

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	3		5						8		12:00	60		119						179	
00:15	2		5						7		12:15	64		102						166	
00:30	1		2						3		12:30	79		97						176	
00:45	3	9	6	18					9	27	12:45	80	283	112	430					192	713
01:00	11		2						13		13:00	71		97						168	
01:15	6		5						11		13:15	66		105						171	
01:30	3		3						6		13:30	57		107						164	
01:45	1	21	3	13					4	34	13:45	61	255	91	400					152	655
02:00	5		5						10		14:00	58		94						152	
02:15	3		4						7		14:15	63		86						149	
02:30	1		4						5		14:30	49		76						125	
02:45	3	12	2	15					5	27	14:45	55	225	65	321					120	546
03:00	0		0						0		15:00	52		82						134	
03:15	1		0						1		15:15	56		71						127	
03:30	0		1						1		15:30	51		95						146	
03:45	2	3	3	4					5	7	15:45	64	223	103	351					167	574
04:00	3		7						10		16:00	50		107						157	
04:15	0		6						6		16:15	69		104						173	
04:30	3		4						7		16:30	79		105						184	
04:45	4	10	9	26					13	36	16:45	55	253	136	452					191	705
05:00	1		9						10		17:00	70		122						192	
05:15	1		24						25		17:15	60		139						199	
05:30	1		14						15		17:30	78		153						231	
05:45	5	8	24	71					29	79	17:45	73	281	119	533					192	814
06:00	5		26						31		18:00	50		95						145	
06:15	10		38						48		18:15	63		121						184	
06:30	1		47						48		18:30	56		81						137	
06:45	9	25	33	144					42	169	18:45	64	233	86	383					150	616
07:00	5		54						59		19:00	68		90						158	
07:15	11		44						55		19:15	60		72						132	
07:30	18		55						73		19:30	57		77						134	
07:45	15	49	54	207					69	256	19:45	38	223	76	315					114	538
08:00	13		65						78		20:00	52		71						123	
08:15	12		60						72		20:15	51		61						112	
08:30	22		65						87		20:30	36		54						90	
08:45	26	73	63	253					89	326	20:45	40	179	54	240					94	419
09:00	22		55						77		21:00	44		42						86	
09:15	24		61						85		21:15	27		31						58	
09:30	41		80						121		21:30	29		35						64	
09:45	25	112	43	239					68	351	21:45	30	130	27	135					57	265
10:00	41		55						96		22:00	27		24						51	
10:15	29		72						101		22:15	17		29						46	
10:30	38		79						117		22:30	12		20						32	
10:45	48	156	80	286					128	442	22:45	20	76	20	93					40	169
11:00	42		99						141		23:00	17		19						36	
11:15	57		87						144		23:15	17		23						40	
11:30	62		104						166		23:30	14		20						34	
11:45	61	222	103	393					164	615	23:45	11	59	13	75					24	134
TOTALS		700		1669						2369	TOTALS		2420		3728						6148
SPLIT %		29.5%		70.5%						27.8%	SPLIT %		39.4%		60.6%						72.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,120	5,397	0	0	8,517

AM Peak Hour	11:45	11:30			11:45	PM Peak Hour	12:30	16:45			17:00
AM Pk Volume	264	428			685	PM Pk Volume	296	550			814
Pk Hr Factor	0.835	0.899			0.957	Pk Hr Factor	0.925	0.899			0.881
7 - 9 Volume	122	460	0	0	582	4 - 6 Volume	534	985	0	0	1519
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	17:00	16:45			17:00
7 - 9 Pk Volume	73	253	0	0	326	4 - 6 Pk Volume	281	550	0	0	814
Pk Hr Factor	0.702	0.973	0.000	0.000	0.916	Pk Hr Factor	0.901	0.899	0.000	0.000	0.881

Prepared by NDS/ATD

VOLUME

Camino Del Este Bet. Camino De La Reina & Camino Del Rio North

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_105

DAILY TOTALS	NB	SB	EB	WB	Total
	4,259	5,413	0	0	9,672

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	21		19						40		12:00	94		104						198	
00:15	11		6						17		12:15	97		109						206	
00:30	13		9						22		12:30	88		100						188	
00:45	8	53	5	39					13	92	12:45	124	403	96	409					220	812
01:00	11		4						15		13:00	78		96						174	
01:15	2		6						8		13:15	93		84						177	
01:30	4		2						6		13:30	62		85						147	
01:45	2	19	5	17					7	36	13:45	83	316	100	365					183	681
02:00	1		4						5		14:00	75		86						161	
02:15	2		4						6		14:15	81		98						179	
02:30	1		2						3		14:30	77		118						195	
02:45	0	4	6	16					6	20	14:45	70	303	93	395					163	698
03:00	4		2						6		15:00	80		100						180	
03:15	1		3						4		15:15	62		84						146	
03:30	1		2						3		15:30	67		80						147	
03:45	1	7	6	13					7	20	15:45	64	273	90	354					154	627
04:00	2		7						9		16:00	70		99						169	
04:15	0		5						5		16:15	68		89						157	
04:30	3		6						9		16:30	86		114						200	
04:45	1	6	8	26					9	32	16:45	70	294	112	414					182	708
05:00	0		8						8		17:00	79		139						218	
05:15	4		16						20		17:15	77		136						213	
05:30	5		9						14		17:30	78		128						206	
05:45	14	23	13	46					27	69	17:45	75	309	107	510					182	819
06:00	8		27						35		18:00	62		114						176	
06:15	3		21						24		18:15	73		102						175	
06:30	7		30						37		18:30	72		80						152	
06:45	18	36	32	110					50	146	18:45	63	270	101	397					164	667
07:00	11		50						61		19:00	66		96						162	
07:15	15		47						62		19:15	73		76						149	
07:30	20		48						68		19:30	91		109						200	
07:45	42	88	53	198					95	286	19:45	64	294	84	365					148	659
08:00	35		44						79		20:00	69		84						153	
08:15	31		62						93		20:15	62		71						133	
08:30	38		65						103		20:30	54		57						111	
08:45	47	151	47	218					94	369	20:45	49	234	71	283					120	517
09:00	36		53						89		21:00	56		71						127	
09:15	45		59						104		21:15	42		50						92	
09:30	57		40						97		21:30	42		46						88	
09:45	40	178	61	213					101	391	21:45	43	183	31	198					74	381
10:00	73		60						133		22:00	40		40						80	
10:15	58		75						133		22:15	36		38						74	
10:30	57		78						135		22:30	26		27						53	
10:45	77	265	88	301					165	566	22:45	34	136	18	123					52	259
11:00	75		75						150		23:00	32		23						55	
11:15	80		92						172		23:15	27		24						51	
11:30	84		84						168		23:30	13		17						30	
11:45	75	314	77	328					152	642	23:45	28	100	11	75					39	175
TOTALS		1144		1525						2669	TOTALS		3115		3888						7003
SPLIT %		42.9%		57.1%						27.6%	SPLIT %		44.5%		55.5%						72.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	4,259	5,413	0	0	9,672

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:00	16:45			16:45
AM Pk Volume	354	390			744	PM Pk Volume	403	515			819
Pk Hr Factor	0.912	0.894			0.903	Pk Hr Factor	0.813	0.926			0.939
7 - 9 Volume	239	416	0	0	655	4 - 6 Volume	603	924	0	0	1527
7 - 9 Peak Hour	08:00	07:45			07:45	4 - 6 Peak Hour	16:30	16:45			16:45
7 - 9 Pk Volume	151	224	0	0	370	4 - 6 Pk Volume	312	515	0	0	819
Pk Hr Factor	0.803	0.862	0.000	0.000	0.898	Pk Hr Factor	0.907	0.926	0.000	0.000	0.939

Prepared by NDS/ATD

VOLUME

Camino Del Este Bet. Camino De La Reina & Camino Del Rio North

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_105

DAILY TOTALS	NB	SB	EB	WB	Total
	4,550	5,536	0	0	10,086

AM Period	NB		SB		EB		WB		TOTAL	
00:00	11		8						19	
00:15	18		12						30	
00:30	14		8						22	
00:45	8	51	6	34					14	85
01:00	12		3						15	
01:15	7		9						16	
01:30	2		3						5	
01:45	4	25	2	17					6	42
02:00	2		9						11	
02:15	3		1						4	
02:30	2		5						7	
02:45	2	9	2	17					4	26
03:00	0		1						1	
03:15	3		3						6	
03:30	1		2						3	
03:45	2	6	2	8					4	14
04:00	2		8						10	
04:15	0		5						5	
04:30	5		4						9	
04:45	2	9	5	22					7	31
05:00	1		7						8	
05:15	3		14						17	
05:30	5		13						18	
05:45	8	17	17	51					25	68
06:00	7		25						32	
06:15	5		35						40	
06:30	8		38						46	
06:45	15	35	30	128					45	163
07:00	22		43						65	
07:15	24		50						74	
07:30	30		44						74	
07:45	29	105	55	192					84	297
08:00	26		33						59	
08:15	31		45						76	
08:30	49		50						99	
08:45	55	161	59	187					114	348
09:00	54		38						92	
09:15	66		45						111	
09:30	64		61						125	
09:45	47	231	58	202					105	433
10:00	55		41						96	
10:15	58		70						128	
10:30	61		64						125	
10:45	80	254	86	261					166	515
11:00	80		59						139	
11:15	85		71						156	
11:30	91		101						192	
11:45	109	365	83	314					192	679
TOTALS		1268		1433						**2701**
SPLIT %		46.9%		53.1%						**26.8%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	97		95						192	
12:15	103		114						217	
12:30	104		92						196	
12:45	106	410	111	412					217	822
13:00	107		113						220	
13:15	98		104						202	
13:30	75		104						179	
13:45	69	349	106	427					175	776
14:00	84		113						197	
14:15	79		97						176	
14:30	83		85						168	
14:45	67	313	87	382					154	695
15:00	70		99						169	
15:15	89		78						167	
15:30	90		92						182	
15:45	86	335	102	371					188	706
16:00	85		105						190	
16:15	81		118						199	
16:30	72		120						192	
16:45	62	300	116	459					178	759
17:00	72		133						205	
17:15	79		132						211	
17:30	78		121						199	
17:45	83	312	114	500					197	812
18:00	88		104						192	
18:15	73		92						165	
18:30	97		91						188	
18:45	75	333	100	387					175	720
19:00	79		97						176	
19:15	80		81						161	
19:30	68		90						158	
19:45	70	297	94	362					164	659
20:00	59		82						141	
20:15	46		86						132	
20:30	46		73						119	
20:45	57	208	94	335					151	543
21:00	49		87						136	
21:15	41		52						93	
21:30	44		55						99	
21:45	47	181	43	237					90	418
22:00	41		49						90	
22:15	42		41						83	
22:30	28		27						55	
22:45	30	141	24	141					54	282
23:00	36		18						54	
23:15	29		28						57	
23:30	18		22						40	
23:45	20	103	22	90					42	193
TOTALS		3282		4103						**7385**
SPLIT %		44.4%		55.6%						**73.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	4,550	5,536	0	0	10,086

AM Peak Hour	11:45	11:30			**11:45**
AM Pk Volume	413	393			**797**
Pk Hr Factor	0.947	0.862			**0.918**
7 - 9 Volume	266	379	0	0	**645**
7 - 9 Peak Hour	08:00	07:00			**08:00**
7 - 9 Pk Volume	161	192	0	0	**348**
Pk Hr Factor	0.732	0.873	0.000	0.000	**0.763**

PM Peak Hour	12:15	16:45			**12:15**
PM Pk Volume	420	502			**850**
Pk Hr Factor	0.981	0.944			**0.966**
4 - 6 Volume	612	959	0	0	**1571**
4 - 6 Peak Hour	17:00	16:45			**17:00**
4 - 6 Pk Volume	312	502	0	0	**812**
Pk Hr Factor	0.940	0.944	0.000	0.000	**0.962**

Segments 107 and 108 pertain to future roadways.

Prepared by NDS/ATD

VOLUME

Qualcomm Wy Bet. Friars Rd WB Ramps & Friars Rd EB Ramps

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_108

DAILY TOTALS	NB	SB	EB	WB	Total
	5,486	3,740	0	0	9,226

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	9		3						12		12:00	122		67						189	
00:15	4		5						9		12:15	120		68						188	
00:30	5		11						16		12:30	109		85						194	
00:45	2	20	0	19					2	39	12:45	123	474	77	297					200	771
01:00	4		9						13		13:00	81		64						145	
01:15	8		1						9		13:15	85		58						143	
01:30	4		3						7		13:30	94		66						160	
01:45	2	18	0	13					2	31	13:45	102	362	61	249					163	611
02:00	0		2						2		14:00	95		87						182	
02:15	5		1						6		14:15	82		73						155	
02:30	4		2						6		14:30	91		49						140	
02:45	2	11	1	6					3	17	14:45	93	361	89	298					182	659
03:00	1		0						1		15:00	96		71						167	
03:15	4		5						9		15:15	78		57						135	
03:30	3		2						5		15:30	77		81						158	
03:45	2	10	1	8					3	18	15:45	76	327	66	275					142	602
04:00	4		0						4		16:00	104		90						194	
04:15	4		5						9		16:15	93		82						175	
04:30	8		1						9		16:30	125		88						213	
04:45	10	26	8	14					18	40	16:45	113	435	65	325					178	760
05:00	10		5						15		17:00	142		93						235	
05:15	11		10						21		17:15	105		104						209	
05:30	17		13						30		17:30	122		82						204	
05:45	30	68	9	37					39	105	17:45	89	458	58	337					147	795
06:00	31		21						52		18:00	88		75						163	
06:15	63		26						89		18:15	63		57						120	
06:30	66		31						97		18:30	66		67						133	
06:45	84	244	21	99					105	343	18:45	67	284	48	247					115	531
07:00	107		27						134		19:00	52		41						93	
07:15	117		41						158		19:15	53		42						95	
07:30	134		54						188		19:30	47		39						86	
07:45	114	472	53	175					167	647	19:45	46	198	27	149					73	347
08:00	114		40						154		20:00	39		39						78	
08:15	102		46						148		20:15	31		25						56	
08:30	108		64						172		20:30	32		27						59	
08:45	104	428	51	201					155	629	20:45	34	136	27	118					61	254
09:00	88		53						141		21:00	28		15						43	
09:15	69		59						128		21:15	27		14						41	
09:30	69		58						127		21:30	20		9						29	
09:45	66	292	64	234					130	526	21:45	13	88	16	54					29	142
10:00	72		41						113		22:00	19		17						36	
10:15	60		62						122		22:15	16		9						25	
10:30	71		52						123		22:30	15		12						27	
10:45	71	274	59	214					130	488	22:45	16	66	5	43					21	109
11:00	90		70						160		23:00	9		9						18	
11:15	94		63						157		23:15	9		9						18	
11:30	114		96						210		23:30	7		4						11	
11:45	99	397	74	303					173	700	23:45	12	37	3	25					15	62
TOTALS		2260		1323						3583	TOTALS		3226		2417						5643
SPLIT %		63.1%		36.9%						38.8%	SPLIT %		57.2%		42.8%						61.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	5,486	3,740	0	0	9,226

AM Peak Hour	07:15	11:30			11:30	PM Peak Hour	16:30	16:30			16:30
AM Pk Volume	479	305			760	PM Pk Volume	485	350			835
Pk Hr Factor	0.894	0.794			0.905	Pk Hr Factor	0.854	0.841			0.888
7 - 9 Volume	900	376	0	0	1276	4 - 6 Volume	893	662	0	0	1555
7 - 9 Peak Hour	07:15	07:45			07:15	4 - 6 Peak Hour	16:30	16:30			16:30
7 - 9 Pk Volume	479	203	0	0	667	4 - 6 Pk Volume	485	350	0	0	835
Pk Hr Factor	0.894	0.793	0.000	0.000	0.887	Pk Hr Factor	0.854	0.841	0.000	0.000	0.888

Prepared by NDS/ATD

VOLUME

Qualcomm Wy Bet. Friars Rd WB Ramps & Friars Rd EB Ramps

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_108

DAILY TOTALS	NB	SB	EB	WB	Total
	5,475	3,897	0	0	9,372

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	7		1						8		12:00	102		66						168	
00:15	10		1						11		12:15	106		77						183	
00:30	6		8						14		12:30	102		100						202	
00:45	8	31	3	13					11	44	12:45	103	413	61	304					164	717
01:00	7		0						7		13:00	109		52						161	
01:15	4		4						8		13:15	103		59						162	
01:30	4		1						5		13:30	100		73						173	
01:45	8	23	4	9					12	32	13:45	90	402	69	253					159	655
02:00	0		3						3		14:00	80		79						159	
02:15	6		2						8		14:15	105		44						149	
02:30	6		2						8		14:30	78		55						133	
02:45	3	15	1	8					4	23	14:45	78	341	76	254					154	595
03:00	1		1						2		15:00	81		82						163	
03:15	1		1						2		15:15	93		80						173	
03:30	0		0						0		15:30	92		88						180	
03:45	1	3	2	4					3	7	15:45	109	375	69	319					178	694
04:00	3		2						5		16:00	110		83						193	
04:15	5		1						6		16:15	83		82						165	
04:30	1		2						3		16:30	103		91						194	
04:45	13	22	4	9					17	31	16:45	113	409	90	346					203	755
05:00	8		5						13		17:00	129		84						213	
05:15	16		7						23		17:15	92		93						185	
05:30	25		12						37		17:30	111		79						190	
05:45	26	75	15	39					41	114	17:45	83	415	76	332					159	747
06:00	47		29						76		18:00	76		79						155	
06:15	68		19						87		18:15	63		78						141	
06:30	64		26						90		18:30	64		64						128	
06:45	102	281	33	107					135	388	18:45	67	270	49	270					116	540
07:00	87		45						132		19:00	53		47						100	
07:15	87		37						124		19:15	63		50						113	
07:30	123		48						171		19:30	40		46						86	
07:45	124	421	63	193					187	614	19:45	39	195	31	174					70	369
08:00	140		60						200		20:00	48		30						78	
08:15	113		47						160		20:15	30		40						70	
08:30	119		61						180		20:30	27		23						50	
08:45	108	480	53	221					161	701	20:45	28	133	25	118					53	251
09:00	101		46						147		21:00	21		23						44	
09:15	90		45						135		21:15	24		16						40	
09:30	69		51						120		21:30	16		22						38	
09:45	77	337	42	184					119	521	21:45	20	81	21	82					41	163
10:00	68		63						131		22:00	21		21						42	
10:15	62		55						117		22:15	14		9						23	
10:30	72		57						129		22:30	7		5						12	
10:45	76	278	81	256					157	534	22:45	9	51	8	43					17	94
11:00	85		81						166		23:00	12		8						20	
11:15	86		69						155		23:15	5		6						11	
11:30	110		92						202		23:30	7		6						13	
11:45	112	393	88	330					200	723	23:45	7	31	9	29					16	60
TOTALS		2359		1373						3732	TOTALS		3116		2524						5640
SPLIT %		63.2%		36.8%						39.8%	SPLIT %		55.2%		44.8%						60.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	5,475	3,897	0	0	9,372

AM Peak Hour	07:30	11:45			11:30	PM Peak Hour	16:45	16:30			16:30
AM Pk Volume	500	331			753	PM Pk Volume	445	358			795
Pk Hr Factor	0.893	0.828			0.932	Pk Hr Factor	0.862	0.962			0.933
7 - 9 Volume	901	414	0	0	1315	4 - 6 Volume	824	678	0	0	1502
7 - 9 Peak Hour	07:30	07:45			07:45	4 - 6 Peak Hour	16:45	16:30			16:30
7 - 9 Pk Volume	500	231	0	0	727	4 - 6 Pk Volume	445	358	0	0	795
Pk Hr Factor	0.893	0.917	0.000	0.000	0.909	Pk Hr Factor	0.862	0.962	0.000	0.000	0.933

Segment ID: 110

Qualcomm Way from Friars Rd EB Ramps to Rio San Diego Dr

AM Peak Period Heavy Vehicle Percentage: 5.95%

Noon Peak Period Heavy Vehicle Percentage: 4.95%

PM Period Heavy Vehicle Percentage: 3.85%

Average Daily Heavy Vehicle Percentage: 4.00%

Prepared by National Data & Surveying Services

110

CLASSIFICATION

Qualcomm Wy Bet. Friars Rd EB Ramps & Rio San Diego Dr

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_109

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	69	6	1	1	0	0	0	0	0	0	0	0	77
01:00	0	16	0	0	1	0	0	1	0	0	0	0	0	18
02:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
03:00	0	7	1	0	0	0	0	0	0	0	0	0	0	8
04:00	0	12	1	0	1	0	0	1	0	0	0	0	0	15
05:00	0	32	0	0	2	0	0	0	0	0	0	0	0	34
06:00	1	193	15	1	9	0	0	5	0	0	0	0	0	224
07:00	2	398	37	1	23	2	0	3	0	0	0	0	0	466
08:00	1	554	55	0	21	0	0	2	0	0	0	0	0	633
09:00	0	513	61	1	31	2	1	1	0	0	0	0	0	610
10:00	3	488	55	3	27	1	0	1	1	0	0	0	0	579
11:00	4	599	57	2	40	1	0	1	1	0	0	0	0	705
12:00 PM	1	782	86	2	37	3	0	3	0	0	0	0	0	914
13:00	1	685	80	1	34	2	0	0	0	0	0	0	0	803
14:00	2	602	69	0	32	0	0	0	0	0	0	0	0	705
15:00	0	572	52	1	31	1	0	0	0	0	0	0	0	657
16:00	3	833	64	1	41	2	1	1	1	0	0	0	0	947
17:00	1	795	77	0	33	1	0	0	0	0	0	0	0	907
18:00	3	572	43	0	20	0	0	0	1	0	0	0	0	639
19:00	0	391	26	0	15	0	0	0	0	0	0	0	0	432
20:00	0	291	27	0	13	1	0	0	0	0	0	0	0	332
21:00	2	158	12	0	1	0	0	0	0	0	0	0	0	173
22:00	0	73	10	0	3	0	0	0	0	0	0	0	0	86
23:00	0	39	4	0	1	0	0	0	0	0	0	0	0	44
Totals	24	8679	839	14	417	16	2	19	4					10014
% of Totals	0%	87%	8%	0%	4%	0%	0%	0%	0%					100%

AM Volumes	11	2886	289	9	156	6	1	15	2	0	0	0	0	3375
% AM	0%	29%	3%	0%	2%	0%	0%	0%	0%					34%
AM Peak Hour	11:00	11:00	09:00	10:00	11:00	07:00	09:00	06:00	10:00					11:00
Volume	4	599	61	3	40	2	1	5	1					705
PM Volumes	13	5793	550	5	261	10	1	4	2	0	0	0	0	6639
% PM	0%	58%	5%	0%	3%	0%	0%	0%	0%					66%
PM Peak Hour	16:00	16:00	12:00	12:00	16:00	12:00	16:00	12:00	16:00					16:00
Volume	3	833	86	2	41	3	1	3	1					947

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	1099	⟷	11%	1717	⟷	17%	1854	⟷	19%	5344	⟷	53%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

110

Prepared by NDS/ATD

VOLUME

Qualcomm Wy Bet. Friars Rd EB Ramps & Rio San Diego Dr

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_109

DAILY TOTALS	NB	SB	EB	WB	Total
	5,950	4,064	0	0	10,014

AM Period	NB		SB		EB		WB		TOTAL	
00:00	6		7						13	
00:15	14		12						26	
00:30	14		12						26	
00:45	8	42	4	35					12	77
01:00	3		7						10	
01:15	0		2						2	
01:30	1		3						4	
01:45	1	5	1	13					2	18
02:00	0		1						1	
02:15	0		1						1	
02:30	0		2						2	
02:45	0		2	6					2	6
03:00	2		0						2	
03:15	0		4						4	
03:30	0		2						2	
03:45	0	2	0	6					0	8
04:00	0		0						0	
04:15	0		2						2	
04:30	1		1						2	
04:45	1	2	10	13					11	15
05:00	0		3						3	
05:15	2		6						8	
05:30	3		7						10	
05:45	5	10	8	24					13	34
06:00	17		21						38	
06:15	25		13						38	
06:30	45		27						72	
06:45	60	147	16	77					76	224
07:00	46		24						70	
07:15	75		36						111	
07:30	68		56						124	
07:45	110	299	51	167					161	466
08:00	130		33						163	
08:15	121		44						165	
08:30	77		65						142	
08:45	120	448	43	185					163	633
09:00	125		42						167	
09:15	96		63						159	
09:30	88		49						137	
09:45	81	390	66	220					147	610
10:00	90		55						145	
10:15	85		63						148	
10:30	82		52						134	
10:45	82	339	70	240					152	579
11:00	81		64						145	
11:15	104		73						177	
11:30	91		91						182	
11:45	123	399	78	306					201	705
TOTALS		2083		1292						3375
SPLIT %		61.7%		38.3%						33.7%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	126		66						192	
12:15	185		80						265	
12:30	140		86						226	
12:45	142	593	89	321					231	914
13:00	140		72						212	
13:15	138		70						208	
13:30	124		80						204	
13:45	100	502	79	301					179	803
14:00	104		89						193	
14:15	152		81						233	
14:30	80		62						142	
14:45	63	399	74	306					137	705
15:00	74		77						151	
15:15	66		66						132	
15:30	97		91						188	
15:45	107	344	79	313					186	657
16:00	160		100						260	
16:15	110		102						212	
16:30	148		113						261	
16:45	128	546	86	401					214	947
17:00	136		95						231	
17:15	114		126						240	
17:30	133		91						224	
17:45	131	514	81	393					212	907
18:00	144		96						240	
18:15	94		66						160	
18:30	58		75						133	
18:45	50	346	56	293					106	639
19:00	65		48						113	
19:15	61		52						113	
19:30	65		47						112	
19:45	62	253	32	179					94	432
20:00	58		35						93	
20:15	59		34						93	
20:30	41		32						73	
20:45	39	197	34	135					73	332
21:00	29		14						43	
21:15	26		22						48	
21:30	24		18						42	
21:45	27	106	13	67					40	173
22:00	24		16						40	
22:15	14		11						25	
22:30	2		8						10	
22:45	3	43	8	43					11	86
23:00	6		7						13	
23:15	10		7						17	
23:30	6		4						10	
23:45	2	24	2	20					4	44
TOTALS		3867		2772						6639
SPLIT %		58.2%		41.8%						66.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	5,950	4,064	0	0	10,014

AM Peak Hour	11:45	11:30			11:45	PM Peak Hour	12:15	16:30			16:00
AM Pk Volume	574	315			884	PM Pk Volume	607	420			947
Pk Hr Factor	0.776	0.865			0.834	Pk Hr Factor	0.820	0.833			0.907
7 - 9 Volume	747	352	0	0	1099	4 - 6 Volume	1060	794	0	0	1854
7 - 9 Peak Hour	08:00	07:45			08:00	4 - 6 Peak Hour	16:00	16:30			16:00
7 - 9 Pk Volume	448	193	0	0	633	4 - 6 Pk Volume	546	420	0	0	947
Pk Hr Factor	0.862	0.742	0.000	0.000	0.959	Pk Hr Factor	0.853	0.833	0.000	0.000	0.907

Prepared by National Data & Surveying Services

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CLASSIFICATION

Qualcomm Wy Bet. Friars Rd EB Ramps & Rio San Diego Dr

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_109

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	32	4	0	0	0	0	0	0	0	0	0	0	36
01:00	0	17	2	0	0	0	0	0	0	0	0	0	0	19
02:00	0	12	0	0	0	0	0	0	0	0	0	0	0	12
03:00	0	4	0	0	0	0	0	0	1	0	0	0	0	5
04:00	0	9	1	0	0	0	0	0	0	0	0	0	0	10
05:00	0	43	4	0	0	0	0	0	1	0	0	0	0	48
06:00	0	199	18	1	16	0	0	0	2	0	0	0	0	236
07:00	2	435	40	0	25	1	0	0	3	0	0	0	0	506
08:00	2	571	58	2	29	4	0	1	0	0	0	0	0	667
09:00	2	503	53	1	22	2	0	1	0	0	0	0	0	584
10:00	0	542	51	5	25	2	0	1	1	0	0	0	0	627
11:00	4	686	63	3	36	3	0	0	1	0	0	0	0	796
12:00 PM	3	799	84	1	35	0	0	1	1	0	0	0	0	924
13:00	2	668	48	2	34	1	0	1	0	0	0	0	0	756
14:00	0	614	55	1	22	2	0	0	1	0	0	0	0	695
15:00	2	657	64	1	29	0	0	0	0	0	0	0	0	753
16:00	4	890	63	0	35	0	0	1	0	0	0	0	0	993
17:00	1	858	74	0	38	0	0	0	1	0	0	0	0	972
18:00	3	579	48	0	22	0	0	0	0	0	0	0	0	652
19:00	2	412	32	0	13	0	0	0	0	0	0	0	0	459
20:00	0	292	21	0	11	0	0	0	0	0	0	0	0	324
21:00	0	150	10	0	3	0	0	0	0	0	0	0	0	163
22:00	0	83	8	0	1	0	0	0	0	0	0	0	0	92
23:00	0	54	3	0	2	0	0	0	0	0	0	0	0	59
Totals	27	9109	804	17	398	15		6	12					10388
% of Totals	0%	88%	8%	0%	4%	0%		0%	0%					100%

AM Volumes	10	3053	294	12	153	12	0	3	9	0	0	0	0	3546
% AM	0%	29%	3%	0%	1%	0%		0%	0%					34%
AM Peak Hour	11:00	11:00	11:00	10:00	11:00	08:00		08:00	07:00					11:00
Volume	4	686	63	5	36	4		1	3					796
PM Volumes	17	6056	510	5	245	3	0	3	3	0	0	0	0	6842
% PM	0%	58%	5%	0%	2%	0%		0%	0%					66%
PM Peak Hour	16:00	16:00	12:00	13:00	17:00	14:00		12:00	12:00					16:00
Volume	4	890	84	2	38	2		1	1					993

Directional Peak Periods All Classes	AM 7-9 Volume		%	NOON 12-2 Volume		%	PM 4-6 Volume		%	Off Peak Volumes Volume		%
	1173	⟷	11%	1680	⟷	16%	1965	⟷	19%	5570	⟷	54%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 >=4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

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Prepared by NDS/ATD

VOLUME

Qualcomm Wy Bet. Friars Rd EB Ramps & Rio San Diego Dr

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_109

DAILY TOTALS	NB	SB	EB	WB	Total
	6,056	4,332	0	0	10,388

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	6		4						10		12:00	144		80						224	
00:15	6		2						8		12:15	170		85						255	
00:30	3		10						13		12:30	147		90						237	
00:45	0	15	5	21					5	36	12:45	136	597	72	327					208	924
01:00	2		1						3		13:00	147		73						220	
01:15	0		9						9		13:15	104		78						182	
01:30	1		3						4		13:30	107		80						187	
01:45	0	3	3	16					3	19	13:45	96	454	71	302					167	756
02:00	1		5						6		14:00	107		71						178	
02:15	0		3						3		14:15	142		71						213	
02:30	0		2						2		14:30	94		71						165	
02:45	0	1	1	11					1	12	14:45	77	420	62	275					139	695
03:00	0		0						0		15:00	83		90						173	
03:15	0		2						2		15:15	78		91						169	
03:30	0		0						0		15:30	111		103						214	
03:45	0		3	5					3	5	15:45	113	385	84	368					197	753
04:00	0		2						2		16:00	144		105						249	
04:15	0		0						0		16:15	118		99						217	
04:30	2		3						5		16:30	167		101						268	
04:45	1	3	2	7					3	10	16:45	141	570	118	423					259	993
05:00	1		3						4		17:00	143		125						268	
05:15	4		2						6		17:15	119		108						227	
05:30	3		8						11		17:30	141		123						264	
05:45	17	25	10	23					27	48	17:45	121	524	92	448					213	972
06:00	22		23						45		18:00	133		96						229	
06:15	24		15						39		18:15	103		96						199	
06:30	39		20						59		18:30	53		66						119	
06:45	63	148	30	88					93	236	18:45	45	334	60	318					105	652
07:00	55		35						90		19:00	52		57						109	
07:15	68		31						99		19:15	70		62						132	
07:30	79		36						115		19:30	58		56						114	
07:45	142	344	60	162					202	506	19:45	57	237	47	222					104	459
08:00	124		59						183		20:00	52		36						88	
08:15	110		58						168		20:15	55		44						99	
08:30	92		59						151		20:30	42		25						67	
08:45	113	439	52	228					165	667	20:45	45	194	25	130					70	324
09:00	109		49						158		21:00	20		36						56	
09:15	93		42						135		21:15	17		14						31	
09:30	98		54						152		21:30	15		24						39	
09:45	89	389	50	195					139	584	21:45	20	72	17	91					37	163
10:00	104		63						167		22:00	19		22						41	
10:15	92		48						140		22:15	12		15						27	
10:30	107		57						164		22:30	8		5						13	
10:45	77	380	79	247					156	627	22:45	4	43	7	49					11	92
11:00	100		83						183		23:00	2		9						11	
11:15	90		84						174		23:15	16		7						23	
11:30	115		82						197		23:30	6		6						12	
11:45	146	451	96	345					242	796	23:45	4	28	9	31					13	59
TOTALS		2198		1348						3546	TOTALS		3858		2984						6842
SPLIT %		62.0%		38.0%						34.1%	SPLIT %		56.4%		43.6%						65.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	6,056	4,332	0	0	10,388

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:15	16:45			16:30
AM Pk Volume	607	351			958	PM Pk Volume	600	474			1022
Pk Hr Factor	0.893	0.914			0.939	Pk Hr Factor	0.882	0.948			0.953
7 - 9 Volume	783	390	0	0	1173	4 - 6 Volume	1094	871	0	0	1965
7 - 9 Peak Hour	07:45	07:45			07:45	4 - 6 Peak Hour	16:00	16:45			16:30
7 - 9 Pk Volume	468	236	0	0	704	4 - 6 Pk Volume	570	474	0	0	1022
Pk Hr Factor	0.824	0.983	0.000	0.000	0.871	Pk Hr Factor	0.853	0.948	0.000	0.000	0.953

Segment ID: 111

Qualcomm Way from Rio San Diego Dr to Camino Del Rio North

AM Peak Period Heavy Vehicle Percentage: 2.60%

Noon Peak Period Heavy Vehicle Percentage: 2.80%

PM Period Heavy Vehicle Percentage: 2.40%

Average Daily Heavy Vehicle Percentage: 2.50%

Prepared by National Data & Surveying Services

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CLASSIFICATION

Qualcomm Wy Bet. Rio San Diego Dr & Camino Del Rio North

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_110

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	131	10	0	1	0	0	0	0	0	0	0	0	142
01:00	0	70	3	0	0	0	0	0	0	0	0	0	0	73
02:00	0	45	3	0	1	0	0	1	0	0	0	0	0	50
03:00	0	34	1	0	1	0	0	0	0	0	0	0	0	36
04:00	0	89	14	3	2	0	0	0	0	0	0	0	0	108
05:00	1	278	29	1	10	1	0	0	0	0	0	0	0	320
06:00	1	785	68	0	22	2	0	2	0	0	0	0	0	880
07:00	6	1319	114	1	35	0	0	1	1	0	0	0	0	1477
08:00	1	1224	107	4	30	0	1	1	0	0	0	0	0	1368
09:00	3	1157	100	2	33	2	0	3	0	0	0	0	0	1300
10:00	2	1239	116	3	36	1	0	1	0	0	0	0	0	1398
11:00	1	1558	128	2	40	0	0	0	2	0	0	0	0	1731
12:00 PM	3	1674	138	2	48	0	0	0	0	0	0	0	0	1865
13:00	0	1630	135	2	43	1	0	2	0	0	0	0	0	1813
14:00	2	1500	130	1	40	3	0	1	0	0	0	0	0	1677
15:00	4	1547	124	2	41	1	0	0	0	0	0	0	0	1719
16:00	0	1802	137	1	45	0	0	0	0	0	0	0	0	1985
17:00	0	1679	120	2	41	0	0	1	1	0	0	0	0	1844
18:00	0	1389	94	1	29	0	0	0	0	0	0	0	0	1513
19:00	1	999	68	1	22	0	0	0	0	0	0	0	0	1091
20:00	1	771	47	0	14	0	0	0	0	0	0	0	0	833
21:00	0	452	28	0	12	0	0	1	0	0	0	0	0	493
22:00	0	314	13	0	4	0	0	0	0	0	0	0	0	331
23:00	0	166	9	0	1	0	0	0	0	0	0	0	0	176
Totals	26	21852	1736	28	551	11	1	14	4					24223
% of Totals	0%	90%	7%	0%	2%	0%	0%	0%	0%					100%

AM Volumes	15	7929	693	16	211	6	1	9	3	0	0	0	0	8883
% AM	0%	33%	3%	0%	1%	0%	0%	0%	0%					37%
AM Peak Hour	07:00	11:00	11:00	08:00	11:00	06:00	08:00	09:00	11:00					11:00
Volume	6	1558	128	4	40	2	1	3	2					1731
PM Volumes	11	13923	1043	12	340	5	0	5	1	0	0	0	0	15340
% PM	0%	57%	4%	0%	1%	0%		0%	0%					63%
PM Peak Hour	15:00	16:00	12:00	12:00	12:00	14:00		13:00	17:00					16:00
Volume	4	1802	138	2	48	3		2	1					1985

Directional Peak Periods All Classes	AM 7-9 Volume	↔	%	NOON 12-2 Volume	↔	%	PM 4-6 Volume	↔	%	Off Peak Volumes Volume	↔	%
	2845	↔	12%	3678	↔	15%	3829	↔	16%	13871	↔	57%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

111

Prepared by NDS/ATD

VOLUME

Qualcomm Wy Bet. Rio San Diego Dr & Camino Del Rio North

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_110

DAILY TOTALS	NB	SB	EB	WB	Total
	12,627	11,596	0	0	24,223

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	18		21						39		12:00	252		215						467	
00:15	19		20						39		12:15	263		213						476	
00:30	15		22						37		12:30	234		236						470	
00:45	13	65	14	77					27	142	12:45	259	1008	193	857					452	1865
01:00	14		12						26		13:00	203		243						446	
01:15	12		6						18		13:15	217		222						439	
01:30	8		6						14		13:30	255		217						472	
01:45	9	43	6	30					15	73	13:45	237	912	219	901					456	1813
02:00	5		3						8		14:00	208		225						433	
02:15	11		4						15		14:15	198		230						428	
02:30	9		4						13		14:30	201		204						405	
02:45	6	31	8	19					14	50	14:45	188	795	223	882					411	1677
03:00	3		1						4		15:00	199		221						420	
03:15	5		5						10		15:15	185		231						416	
03:30	3		7						10		15:30	216		238						454	
03:45	6	17	6	19					12	36	15:45	183	783	246	936					429	1719
04:00	5		9						14		16:00	181		308						489	
04:15	7		9						16		16:15	203		270						473	
04:30	13		14						27		16:30	193		316						509	
04:45	22	47	29	61					51	108	16:45	222	799	292	1186					514	1985
05:00	12		22						34		17:00	212		319						531	
05:15	29		30						59		17:15	182		304						486	
05:30	57		32						89		17:30	209		263						472	
05:45	100	198	38	122					138	320	17:45	173	776	182	1068					355	1844
06:00	72		69						141		18:00	198		221						419	
06:15	123		69						192		18:15	169		220						389	
06:30	153		102						255		18:30	166		183						349	
06:45	214	562	78	318					292	880	18:45	173	706	183	807					356	1513
07:00	215		83						298		19:00	144		152						296	
07:15	265		107						372		19:15	151		135						286	
07:30	290		113						403		19:30	135		145						280	
07:45	280	1050	124	427					404	1477	19:45	116	546	113	545					229	1091
08:00	237		112						349		20:00	116		119						235	
08:15	208		110						318		20:15	101		97						198	
08:30	214		135						349		20:30	103		115						218	
08:45	237	896	115	472					352	1368	20:45	87	407	95	426					182	833
09:00	197		111						308		21:00	101		68						169	
09:15	178		124						302		21:15	64		59						123	
09:30	210		132						342		21:30	58		45						103	
09:45	198	783	150	517					348	1300	21:45	49	272	49	221					98	493
10:00	194		160						354		22:00	46		53						99	
10:15	166		166						332		22:15	48		40						88	
10:30	204		157						361		22:30	44		37						81	
10:45	188	752	163	646					351	1398	22:45	26	164	37	167					63	331
11:00	204		182						386		23:00	26		24						50	
11:15	239		185						424		23:15	24		20						44	
11:30	250		225						475		23:30	22		23						45	
11:45	224	917	222	814					446	1731	23:45	26	98	11	78					37	176
TOTALS		5361		3522						8883	TOTALS		7266		8074						15340
SPLIT %		60.4%		39.6%						36.7%	SPLIT %		47.4%		52.6%						63.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,627	11,596	0	0	24,223

AM Peak Hour	07:15	11:45			11:30	PM Peak Hour	12:00	16:30			16:30
AM Pk Volume	1072	886			1864	PM Pk Volume	1008	1231			2040
Pk Hr Factor	0.924	0.939			0.979	Pk Hr Factor	0.958	0.965			0.960
7 - 9 Volume	1946	899	0	0	2845	4 - 6 Volume	1575	2254	0	0	3829
7 - 9 Peak Hour	07:15	07:45			07:15	4 - 6 Peak Hour	16:15	16:30			16:30
7 - 9 Pk Volume	1072	481	0	0	1528	4 - 6 Pk Volume	830	1231	0	0	2040
Pk Hr Factor	0.924	0.891	0.000	0.000	0.946	Pk Hr Factor	0.935	0.965	0.000	0.000	0.960

Prepared by National Data & Surveying Services

CLASSIFICATION

Qualcomm Wy Bet. Rio San Diego Dr & Camino Del Rio North

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_110

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	117	7	0	0	0	0	0	0	0	0	0	0	124
01:00	0	59	3	0	0	0	0	0	0	0	0	0	0	62
02:00	0	57	3	0	2	0	0	1	0	0	0	0	0	63
03:00	0	43	5	0	1	0	0	1	1	0	0	0	0	51
04:00	0	76	11	1	0	0	0	1	0	0	0	0	0	89
05:00	1	288	35	0	12	0	0	0	0	0	0	0	0	336
06:00	0	775	65	1	30	3	0	0	0	0	0	0	0	874
07:00	5	1261	112	1	28	2	0	0	1	0	0	0	0	1410
08:00	1	1340	100	3	30	2	0	1	2	0	0	0	0	1479
09:00	1	1087	87	3	37	0	0	3	1	0	0	0	0	1219
10:00	2	1246	113	2	36	2	0	4	1	0	0	0	0	1406
11:00	3	1585	149	2	49	0	0	1	0	0	0	0	0	1789
12:00 PM	4	1720	137	2	53	1	0	0	0	0	0	0	0	1917
13:00	3	1616	136	1	45	1	0	1	0	0	0	0	0	1803
14:00	2	1533	120	1	59	0	0	0	0	0	0	0	0	1715
15:00	5	1627	113	1	49	0	0	0	0	0	0	0	0	1795
16:00	2	1757	141	1	48	0	0	1	0	0	0	0	0	1950
17:00	1	1730	121	3	42	0	0	0	0	0	0	0	0	1897
18:00	0	1340	87	0	24	0	0	1	0	0	0	0	0	1452
19:00	1	1019	65	1	22	0	0	0	0	0	0	0	0	1108
20:00	0	782	54	0	14	0	0	0	0	0	0	0	0	850
21:00	0	477	40	0	8	0	0	1	0	0	0	0	0	526
22:00	0	291	16	2	5	0	0	0	0	0	0	0	0	314
23:00	0	193	9	1	2	0	0	0	0	0	0	0	0	205
Totals	31	22019	1729	26	596	11		16	6					24434
% of Totals	0%	90%	7%	0%	2%	0%		0%	0%					100%

AM Volumes	13	7934	690	13	225	9	0	12	6	0	0	0	0	8902
% AM	0%	32%	3%	0%	1%	0%		0%	0%					36%
AM Peak Hour	07:00	11:00	11:00	08:00	11:00	06:00		10:00	08:00					11:00
Volume	5	1585	149	3	49	3		4	2					1789
PM Volumes	18	14085	1039	13	371	2	0	4	0	0	0	0	0	15532
% PM	0%	58%	4%	0%	2%	0%		0%						64%
PM Peak Hour	15:00	16:00	16:00	17:00	14:00	12:00		13:00						16:00
Volume	5	1757	141	3	59	1		1						1950

Directional Peak Periods All Classes	AM 7-9 Volume	↔	%	NOON 12-2 Volume	↔	%	PM 4-6 Volume	↔	%	Off Peak Volumes Volume	↔	%
	2889	↔	12%	3720	↔	15%	3847	↔	16%	13978	↔	57%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 >=4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

111

Prepared by NDS/ATD

VOLUME

Qualcomm Wy Bet. Rio San Diego Dr & Camino Del Rio North

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_110

DAILY TOTALS	NB	SB	EB	WB	Total
	12,545	11,889	0	0	24,434

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	16		18						34		12:00	268		206						474	
00:15	26		17						43		12:15	275		224						499	
00:30	11		14						25		12:30	236		260						496	
00:45	12	65	10	59					22	124	12:45	222	1001	226	916					448	1917
01:00	9		9						18		13:00	209		226						435	
01:15	11		13						24		13:15	259		215						474	
01:30	5		6						11		13:30	231		224						455	
01:45	3	28	6	34					9	62	13:45	208	907	231	896					439	1803
02:00	4		10						14		14:00	220		240						460	
02:15	7		7						14		14:15	224		224						448	
02:30	12		8						20		14:30	204		193						397	
02:45	10	33	5	30					15	63	14:45	202	850	208	865					410	1715
03:00	6		6						12		15:00	169		243						412	
03:15	7		3						10		15:15	202		245						447	
03:30	9		5						14		15:30	200		264						464	
03:45	6	28	9	23					15	51	15:45	210	781	262	1014					472	1795
04:00	2		8						10		16:00	208		269						477	
04:15	10		6						16		16:15	177		290						467	
04:30	15		12						27		16:30	223		296						519	
04:45	16	43	20	46					36	89	16:45	195	803	292	1147					487	1950
05:00	17		24						41		17:00	227		341						568	
05:15	33		37						70		17:15	183		283						466	
05:30	63		29						92		17:30	193		256						449	
05:45	94	207	39	129					133	336	17:45	181	784	233	1113					414	1897
06:00	81		68						149		18:00	181		241						422	
06:15	131		72						203		18:15	187		212						399	
06:30	142		92						234		18:30	153		167						320	
06:45	197	551	91	323					288	874	18:45	149	670	162	782					311	1452
07:00	179		89						268		19:00	149		165						314	
07:15	247		89						336		19:15	149		153						302	
07:30	287		131						418		19:30	121		125						246	
07:45	268	981	120	429					388	1410	19:45	120	539	126	569					246	1108
08:00	244		137						381		20:00	131		128						259	
08:15	245		123						368		20:15	91		116						207	
08:30	223		137						360		20:30	104		112						216	
08:45	236	948	134	531					370	1479	20:45	79	405	89	445					168	850
09:00	189		118						307		21:00	64		83						147	
09:15	188		104						292		21:15	67		57						124	
09:30	195		119						314		21:30	72		66						138	
09:45	179	751	127	468					306	1219	21:45	62	265	55	261					117	526
10:00	192		137						329		22:00	44		53						97	
10:15	186		163						349		22:15	45		43						88	
10:30	191		167						358		22:30	37		27						64	
10:45	181	750	189	656					370	1406	22:45	29	155	36	159					65	314
11:00	205		228						433		23:00	37		28						65	
11:15	216		211						427		23:15	21		27						48	
11:30	224		211						435		23:30	21		24						45	
11:45	249	894	245	895					494	1789	23:45	27	106	20	99					47	205
TOTALS		5279		3623						8902	TOTALS		7266		8266						15532
SPLIT %		59.3%		40.7%						36.4%	SPLIT %		46.8%		53.2%						63.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,545	11,889	0	0	24,434

AM Peak Hour	07:15	11:45			11:45	PM Peak Hour	12:00	16:15			16:15
AM Pk Volume	1046	935			1963	PM Pk Volume	1001	1219			2041
Pk Hr Factor	0.911	0.899			0.983	Pk Hr Factor	0.910	0.894			0.898
7 - 9 Volume	1929	960	0	0	2889	4 - 6 Volume	1587	2260	0	0	3847
7 - 9 Peak Hour	07:15	08:00			07:30	4 - 6 Peak Hour	16:30	16:15			16:15
7 - 9 Pk Volume	1046	531	0	0	1555	4 - 6 Pk Volume	828	1219	0	0	2041
Pk Hr Factor	0.911	0.969	0.000	0.000	0.930	Pk Hr Factor	0.912	0.894	0.000	0.000	0.898

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Qualcomm Way, From Camino Del Rio North to I-8 WB Ramps

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	24		28					12:00	216		219				
00:15	18		21					12:15	266		242				
00:30	20		19					12:30	251		205				
00:45	16	78	20	88			166	12:45	242	975	266	932			1907
01:00	11		16					13:00	251		254				
01:15	15		11					13:15	242		242				
01:30	19		15					13:30	265		222				
01:45	20	65	9	51			116	13:45	222	980	218	936			1916
02:00	11		10					14:00	218		206				
02:15	15		5					14:15	205		235				
02:30	16		4					14:30	188		204				
02:45	9	51	6	25			76	14:45	191	802	219	864			1666
03:00	6		5					15:00	165		225				
03:15	4		4					15:15	174		219				
03:30	6		4					15:30	184		242				
03:45	4	20	5	18			38	15:45	195	718	251	937			1655
04:00	5		10					16:00	205		282				
04:15	9		6					16:15	188		313				
04:30	8		4					16:30	161		333				
04:45	11	33	5	25			58	16:45	215	769	328	1256			2025
05:00	15		11					17:00	166		366				
05:15	19		16					17:15	184		342				
05:30	28		18					17:30	188		341				
05:45	32	94	16	61			155	17:45	170	708	319	1368			2076
06:00	40		25					18:00	170		305				
06:15	65		32					18:15	151		318				
06:30	88		40					18:30	141		302				
06:45	105	298	70	167			465	18:45	151	613	284	1209			1822
07:00	121		88					19:00	162		262				
07:15	168		81					19:15	135		222				
07:30	188		90					19:30	141		215				
07:45	231	708	91	350			1058	19:45	108	546	203	902			1448
08:00	258		55					20:00	111		181				
08:15	216		98					20:15	106		162				
08:30	202		101					20:30	88		135				
08:45	231	907	111	365			1272	20:45	90	395	105	583			978
09:00	191		108					21:00	70		88				
09:15	151		111					21:15	66		70				
09:30	142		90					21:30	68		65				
09:45	165	649	121	430			1079	21:45	54	258	55	278			536
10:00	135		105					22:00	40		40				
10:15	141		101					22:15	35		35				
10:30	151		144					22:30	28		28				
10:45	145	572	145	495			1067	22:45	26	129	20	123			252
11:00	168		168					23:00	26		28				
11:15	181		191					23:15	21		21				
11:30	195		205					23:30	29		22				
11:45	212	756	242	806			1562	23:45	20	96	26	97			193
Total Vol.		4231		2881			**7112**			6989		9485			**16474**

Daily Totals

NB	SB	EB	WB	**Combined**
11220	12366			**23586**

	AM			**PM**		
Split %	59.5%	40.5%	**30.2%**	42.4%	57.6%	**69.8%**
Peak Hour	11:45	11:30	**11:45**	12:15	16:45	**16:45**
Volume	945	908	**1853**	1010	1377	**2130**
P.H.F.	0.89	0.94	**0.91**	0.94	0.94	**0.98**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Qualcomm Way, From Camino Del Rio North to I-8 WB Ramps

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	21		25					12:00	205		235				
00:15	20		20					12:15	219		214				
00:30	16		19					12:30	242		215				
00:45	18	75	20	84			159	12:45	223	889	212	876			1765
01:00	19		16					13:00	206		205				
01:15	20		15					13:15	218		218				
01:30	21		15					13:30	205		222				
01:45	15	75	19	65			140	13:45	235	864	215	860			1724
02:00	18		20					14:00	242		205				
02:15	10		16					14:15	216		189				
02:30	15		11					14:30	205		198				
02:45	11	54	8	55			109	14:45	184	847	212	804			1651
03:00	10		9					15:00	161		216				
03:15	8		10					15:15	154		218				
03:30	9		5					15:30	151		222				
03:45	12	39	4	28			67	15:45	189	655	268	924			1579
04:00	5		6					16:00	195		270				
04:15	4		9					16:15	208		335				
04:30	6		12					16:30	216		308				
04:45	4	19	5	32			51	16:45	222	841	325	1238			2079
05:00	9		18					17:00	205		344				
05:15	15		25					17:15	203		326				
05:30	18		28					17:30	184		326				
05:45	22	64	35	106			170	17:45	191	783	303	1299			2082
06:00	35		33					18:00	178		281				
06:15	45		42					18:15	184		298				
06:30	66		51					18:30	151		288				
06:45	84	230	68	194			424	18:45	142	655	270	1137			1792
07:00	116		91					19:00	155		222				
07:15	141		105					19:15	162		205				
07:30	168		111					19:30	131		184				
07:45	195	620	84	391			1011	19:45	128	576	191	802			1378
08:00	265		95					20:00	105		165				
08:15	241		68					20:15	116		184				
08:30	215		101					20:30	88		177				
08:45	205	926	124	388			1314	20:45	70	379	111	637			1016
09:00	218		141					21:00	65		121				
09:15	223		116					21:15	70		103				
09:30	184		106					21:30	54		88				
09:45	161	786	88	451			1237	21:45	66	255	90	402			657
10:00	142		95					22:00	51		70				
10:15	135		105					22:15	40		65				
10:30	144		121					22:30	35		77				
10:45	168	589	135	456			1045	22:45	41	167	54	266			433
11:00	151		141					23:00	28		35				
11:15	184		188					23:15	21		22				
11:30	184		191					23:30	26		28				
11:45	195	714	206	726			1440	23:45	28	103	21	106			209
Total Vol.		4191		2976			**7167**			7014		9351			**16365**

Daily Totals

NB	SB	EB	WB	**Combined**
11205	12327			**23532**

	AM			**PM**		
Split %	58.5%	41.5%	**30.5%**	42.9%	57.1%	**69.5%**
Peak Hour	08:00	11:45	**11:45**	13:15	16:45	**16:15**
Volume	926	870	**1731**	900	1321	**2163**
P.H.F.	0.87	0.93	**0.95**	0.95	0.96	**0.98**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Qualcomm Way, From I-8 WB Ramps to I-8 EB Ramps

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	35		40					12:00	316		305				
00:15	44		32					12:15	342		284				
00:30	41		31					12:30	352		288				
00:45	50	170	35	138			308	12:45	366	1376	291	1168			2544
01:00	28		33					13:00	313		319				
01:15	26		28					13:15	305		303				
01:30	26		21					13:30	319		333				
01:45	21	101	19	101			202	13:45	333	1270	316	1271			2541
02:00	19		20					14:00	284		288				
02:15	20		16					14:15	290		270				
02:30	15		10					14:30	298		291				
02:45	11	65	11	57			122	14:45	265	1137	288	1137			2274
03:00	18		15					15:00	288		290				
03:15	17		19					15:15	275		313				
03:30	16		19					15:30	268		305				
03:45	11	62	20	73			135	15:45	299	1130	336	1244			2374
04:00	10		16					16:00	296		345				
04:15	19		18					16:15	318		384				
04:30	18		11					16:30	305		390				
04:45	25	72	19	64			136	16:45	288	1207	441	1560			2767
05:00	35		22					17:00	294		484				
05:15	44		28					17:15	316		491				
05:30	51		31					17:30	305		498				
05:45	68	198	33	114			312	17:45	313	1228	419	1892			3120
06:00	77		67					18:00	319		403				
06:15	91		84					18:15	303		418				
06:30	128		88					18:30	270		388				
06:45	142	438	91	330			768	18:45	226	1118	362	1571			2689
07:00	188		105					19:00	235		333				
07:15	256		161					19:15	241		321				
07:30	320		177					19:30	222		270				
07:45	328	1092	184	627			1719	19:45	184	882	222	1146			2028
08:00	335		195					20:00	191		202				
08:15	305		162					20:15	177		184				
08:30	322		222					20:30	184		191				
08:45	306	1268	213	792			2060	20:45	191	743	170	747			1490
09:00	318		242					21:00	125		154				
09:15	333		262					21:15	102		140				
09:30	311		242					21:30	88		89				
09:45	318	1280	222	968			2248	21:45	91	406	85	468			874
10:00	333		218					22:00	70		81				
10:15	305		235					22:15	65		80				
10:30	295		242					22:30	77		70				
10:45	295	1228	225	920			2148	22:45	84	296	65	296			592
11:00	284		209					23:00	50		35				
11:15	319		241					23:15	40		51				
11:30	366		266					23:30	66		55				
11:45	342	1311	239	955			2266	23:45	37	193	40	181			374
Total Vol.		7285		5139			**12424**			10986		12681			**23667**

Daily Totals

NB	SB	EB	WB	**Combined**
18271	17820			**36091**

	AM			**PM**		
Split %	58.6%	41.4%	**34.4%**	46.4%	53.6%	**65.6%**
Peak Hour	11:30	11:45	**11:45**	12:00	16:45	**17:00**
Volume	1366	1116	**2468**	1376	1914	**3120**
P.H.F.	0.93	0.91	**0.96**	0.97	0.96	**0.97**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Qualcomm Way, From I-8 WB Ramps to I-8 EB Ramps

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	50		44					12:00	362		288				
00:15	40		41					12:15	319		294				
00:30	32		35					12:30	332		305				
00:45	33	155	28	148			303	12:45	305	1318	315	1202			2520
01:00	31		29					13:00	278		305				
01:15	28		30					13:15	298		333				
01:30	29		25					13:30	275		319				
01:45	20	108	22	106			214	13:45	255	1106	284	1241			2347
02:00	16		19					14:00	262		295				
02:15	19		20					14:15	284		277				
02:30	11		15					14:30	292		298				
02:45	15	61	18	72			133	14:45	235	1073	284	1154			2227
03:00	18		19					15:00	242		318				
03:15	12		20					15:15	268		305				
03:30	22		16					15:30	277		326				
03:45	16	68	11	66			134	15:45	284	1071	342	1291			2362
04:00	19		15					16:00	319		391				
04:15	20		19					16:15	305		388				
04:30	22		15					16:30	284		361				
04:45	32	93	26	75			168	16:45	284	1192	449	1589			2781
05:00	40		22					17:00	291		451				
05:15	55		32					17:15	319		506				
05:30	65		40					17:30	291		435				
05:45	70	230	55	149			379	17:45	305	1206	399	1791			2997
06:00	88		65					18:00	284		418				
06:15	101		70					18:15	306		406				
06:30	156		91					18:30	284		382				
06:45	191	536	88	314			850	18:45	262	1136	362	1568			2704
07:00	221		138					19:00	222		375				
07:15	284		151					19:15	235		303				
07:30	326		166					19:30	251		288				
07:45	290	1121	184	639			1760	19:45	262	970	292	1258			2228
08:00	351		161					20:00	242		265				
08:15	303		170					20:15	235		254				
08:30	311		181					20:30	221		221				
08:45	321	1286	221	733			2019	20:45	151	849	184	924			1773
09:00	335		262					21:00	135		161				
09:15	342		232					21:15	126		128				
09:30	306		218					21:30	111		103				
09:45	319	1302	242	954			2256	21:45	108	480	88	480			960
10:00	295		235					22:00	95		98				
10:15	288		222					22:15	103		70				
10:30	315		205					22:30	84		65				
10:45	333	1231	221	883			2114	22:45	70	352	55	288			640
11:00	362		221					23:00	65		84				
11:15	388		268					23:15	55		54				
11:30	319		275					23:30	40		40				
11:45	335	1404	270	1034			2438	23:45	55	215	35	213			428
Total Vol.		7595		5173			**12768**			10968		12999			**23967**

Daily Totals

NB	SB	EB	WB	**Combined**
18563	18172			**36735**

	AM			**PM**		
Split %	59.5%	40.5%	**34.8%**	45.8%	54.2%	**65.2%**
Peak Hour	11:00	11:45	**11:15**	12:00	16:45	**16:45**
Volume	1404	1157	**2505**	1318	1841	**3026**
P.H.F.	0.90	0.95	**0.95**	0.93	0.91	**0.92**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Qualcomm Way, From I-8 EB Ramps to Camino Del Rio South

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	20		24					12:00	203		206				
00:15	19		24					12:15	242		212				
00:30	22		26					12:30	262		205				
00:45	22	83	25	99			182	12:45	241	948	189	812			1760
01:00	16		20					13:00	241		191				
01:15	20		25					13:15	226		188				
01:30	15		15					13:30	202		184				
01:45	11	62	16	76			138	13:45	219	888	195	758			1646
02:00	9		17					14:00	184		174				
02:15	12		15					14:15	195		165				
02:30	16		19					14:30	199		177				
02:45	8	45	10	61			106	14:45	165	743	211	727			1470
03:00	9		8					15:00	213		202				
03:15	10		9					15:15	205		218				
03:30	5		10					15:30	225		242				
03:45	4	28	5	32			60	15:45	242	885	268	930			1815
04:00	9		4					16:00	268		277				
04:15	5		6					16:15	284		262				
04:30	12		9					16:30	242		288				
04:45	15	41	10	29			70	16:45	215	1009	321	1148			2157
05:00	18		15					17:00	235		342				
05:15	22		15					17:15	248		388				
05:30	28		18					17:30	255		385				
05:45	55	123	28	76			199	17:45	219	957	362	1477			2434
06:00	68		31					18:00	235		303				
06:15	99		41					18:15	212		305				
06:30	105		58					18:30	205		288				
06:45	126	398	95	225			623	18:45	181	833	270	1166			1999
07:00	141		101					19:00	165		284				
07:15	195		121					19:15	145		229				
07:30	235		135					19:30	111		184				
07:45	262	833	131	488			1321	19:45	125	546	191	888			1434
08:00	242		141					20:00	111		165				
08:15	221		155					20:15	108		174				
08:30	242		141					20:30	88		140				
08:45	223	928	184	621			1549	20:45	95	402	111	590			992
09:00	241		155					21:00	70		121				
09:15	202		141					21:15	65		105				
09:30	189		161					21:30	70		88				
09:45	216	848	177	634			1482	21:45	54	259	91	405			664
10:00	205		184					22:00	55		70				
10:15	215		135					22:15	40		65				
10:30	221		145					22:30	37		70				
10:45	206	847	168	632			1479	22:45	31	163	54	259			422
11:00	235		191					23:00	33		44				
11:15	214		175					23:15	28		35				
11:30	205		188					23:30	33		28				
11:45	242	896	154	708			1604	23:45	30	124	28	135			259
Total Vol.	5132		3681				**8813**		7757		9295				**17052**

Daily Totals

NB	SB	EB	WB	**Combined**
12889	12976			**25865**

	AM			**PM**		
Split %	58.2%	41.8%	**34.1%**	45.5%	54.5%	**65.9%**
Peak Hour	07:45	11:45	**11:45**	15:45	17:00	**17:00**
Volume	967	777	**1726**	1036	1477	**2434**
P.H.F.	0.92	0.92	**0.92**	0.95	0.95	**0.95**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Qualcomm Way, From I-8 EB Ramps to Camino Del Rio South

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	33		28					12:00	266		161				
00:15	34		30					12:15	235		188				
00:30	40		33					12:30	241		219				
00:45	26	133	25	116			249	12:45	222	964	203	771			1735
01:00	20		21					13:00	219		221				
01:15	18		19					13:15	206		206				
01:30	20		20					13:30	184		219				
01:45	16	74	15	75			149	13:45	191	800	203	849			1649
02:00	11		11					14:00	165		189				
02:15	15		18					14:15	174		191				
02:30	9		20					14:30	195		165				
02:45	12	47	16	65			112	14:45	221	755	178	723			1478
03:00	16		11					15:00	203		215				
03:15	11		9					15:15	232		232				
03:30	7		12					15:30	242		242				
03:45	9	43	13	45			88	15:45	241	918	255	944			1862
04:00	9		5					16:00	268		268				
04:15	15		9					16:15	242		284				
04:30	11		8					16:30	251		266				
04:45	18	53	4	26			79	16:45	213	974	351	1169			2143
05:00	16		10					17:00	244		331				
05:15	21		16					17:15	258		368				
05:30	32		22					17:30	240		344				
05:45	42	111	21	69			180	17:45	222	964	305	1348			2312
06:00	51		44					18:00	219		319				
06:15	90		65					18:15	203		284				
06:30	111		70					18:30	184		292				
06:45	141	393	91	270			663	18:45	151	757	268	1163			1920
07:00	168		108					19:00	141		242				
07:15	223		111					19:15	111		221				
07:30	242		105					19:30	126		205				
07:45	238	871	128	452			1323	19:45	132	510	219	887			1397
08:00	268		138					20:00	105		203				
08:15	219		156					20:15	88		184				
08:30	231		144					20:30	95		161				
08:45	225	943	191	629			1572	20:45	70	358	135	683			1041
09:00	223		180					21:00	65		142				
09:15	219		177					21:15	70		121				
09:30	195		165					21:30	54		102				
09:45	199	836	141	663			1499	21:45	44	233	88	453			686
10:00	206		135					22:00	35		70				
10:15	221		126					22:15	40		65				
10:30	203		141					22:30	21		77				
10:45	212	842	155	557			1399	22:45	29	125	50	262			387
11:00	251		151					23:00	22		40				
11:15	206		184					23:15	26		35				
11:30	223		170					23:30	30		44				
11:45	262	942	169	674			1616	23:45	25	103	28	147			250
Total Vol.		5288		3641			**8929**			7461		9399			**16860**

Daily Totals

NB	SB	EB	WB	**Combined**
12749	13040			**25789**

	AM			**PM**		
Split %	59.2%	40.8%	**34.6%**	44.3%	55.7%	**65.4%**
Peak Hour	11:45	11:45	**11:45**	15:45	16:45	**16:45**
Volume	1004	737	**1741**	1002	1394	**2349**
P.H.F.	0.94	0.84	**0.95**	0.93	0.95	**0.94**

Segment ID: 115

Texas Street from Camino Del Rio South to 1400 feet north of Madison Ave

AM Peak Period Heavy Vehicle Percentage: 3.15%

Noon Peak Period Heavy Vehicle Percentage: 3.10%

PM Period Heavy Vehicle Percentage: 2.00%

Average Daily Heavy Vehicle Percentage: 2.00%

Prepared by National Data & Surveying Services

CLASSIFICATION

Texas St Bet. Camino Del Rio South & 1400ft N/O Madison Ave

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_114

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	159	11	0	1	0	0	0	0	0	0	0	0	171
01:00	0	84	3	0	3	0	0	0	0	0	0	0	0	90
02:00	2	62	4	0	2	0	0	0	0	0	0	0	0	70
03:00	2	59	4	0	0	0	0	0	0	0	0	0	0	65
04:00	1	110	6	0	0	0	0	0	0	0	0	0	0	117
05:00	0	300	27	1	6	0	0	0	0	0	0	0	0	334
06:00	5	906	70	6	20	0	0	0	1	0	0	0	0	1008
07:00	10	1612	113	8	25	2	0	1	0	0	0	0	0	1771
08:00	4	1566	131	8	33	5	0	1	0	0	0	0	0	1748
09:00	4	1363	125	4	29	2	0	3	0	0	0	0	0	1530
10:00	9	1196	117	9	41	3	0	3	0	0	0	0	0	1378
11:00	3	1406	129	6	34	0	0	1	0	0	0	0	0	1579
12:00 PM	4	1598	138	7	36	2	0	0	2	0	0	0	0	1787
13:00	3	1567	152	10	35	0	0	0	0	0	0	0	0	1767
14:00	8	1615	152	8	48	0	0	1	0	0	0	0	0	1832
15:00	9	1793	153	7	35	1	0	0	0	0	0	0	0	1998
16:00	9	2150	149	9	39	1	0	0	0	0	0	0	0	2357
17:00	8	2379	150	6	42	0	0	0	2	0	0	0	0	2587
18:00	6	1977	129	8	22	1	0	0	0	0	0	0	0	2143
19:00	4	1496	100	4	16	0	0	0	0	0	0	0	0	1620
20:00	3	1119	77	3	13	1	1	1	0	0	0	0	0	1218
21:00	2	860	56	3	14	1	0	2	1	0	0	0	0	939
22:00	1	610	36	1	9	2	0	3	0	0	0	0	0	662
23:00	0	329	21	3	5	1	0	0	0	0	0	0	0	359
Totals	97	26316	2053	111	508	22	1	16	6					29130
% of Totals	0%	90%	7%	0%	2%	0%	0%	0%	0%					100%

AM Volumes	40	8823	740	42	194	12	0	9	1	0	0	0	0	9861
% AM	0%	30%	3%	0%	1%	0%		0%	0%					34%
AM Peak Hour	07:00	07:00	08:00	10:00	10:00	08:00		09:00	06:00					07:00
Volume	10	1612	131	9	41	5		3	1					1771
PM Volumes	57	17493	1313	69	314	10	1	7	5	0	0	0	0	19269
% PM	0%	60%	5%	0%	1%	0%	0%	0%	0%					66%
PM Peak Hour	15:00	17:00	15:00	13:00	14:00	12:00	20:00	22:00	12:00					17:00
Volume	9	2379	153	10	48	2	1	3	2					2587

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	3519		12%	3554		12%	4944		17%	17113		59%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

115

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Texas St Bet. Camino Del Rio South & 1400ft N/O Madison Ave

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_114

DAILY TOTALS	NB	SB	EB	WB	Total
	14,513	14,617	0	0	29,130

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	24		33		0	0	57		12:00	222		234		0	0	456	
00:15	19		27		0	0	46		12:15	237		205		0	0	442	
00:30	15		29		0	0	44		12:30	235		213		0	0	448	
00:45	9	67	15	104	0	0	24	171	12:45	225	919	216	868	0	0	441	1787
01:00	10		13		0	0	23		13:00	242		215		0	0	457	
01:15	9		18		0	0	27		13:15	223		222		0	0	445	
01:30	7		13		0	0	20		13:30	223		203		0	0	426	
01:45	12	38	8	52	0	0	20	90	13:45	218	906	221	861	0	0	439	1767
02:00	13		9		0	0	22		14:00	206		218		0	0	424	
02:15	8		12		0	0	20		14:15	258		227		0	0	485	
02:30	4		7		0	0	11		14:30	238		254		0	0	492	
02:45	10	35	7	35	0	0	17	70	14:45	188	890	243	942	0	0	431	1832
03:00	10		6		0	0	16		15:00	230		235		0	0	465	
03:15	7		5		0	0	12		15:15	216		258		0	0	474	
03:30	12		6		0	0	18		15:30	245		295		0	0	540	
03:45	16	45	3	20	0	0	19	65	15:45	210	901	309	1097	0	0	519	1998
04:00	5		3		0	0	8		16:00	239		349		0	0	588	
04:15	15		7		0	0	22		16:15	208		377		0	0	585	
04:30	28		9		0	0	37		16:30	228		362		0	0	590	
04:45	37	85	13	32	0	0	50	117	16:45	241	916	353	1441	0	0	594	2357
05:00	43		14		0	0	57		17:00	240		446		0	0	686	
05:15	51		21		0	0	72		17:15	217		417		0	0	634	
05:30	76		18		0	0	94		17:30	262		401		0	0	663	
05:45	73	243	38	91	0	0	111	334	17:45	226	945	378	1642	0	0	604	2587
06:00	117		38		0	0	155		18:00	207		374		0	0	581	
06:15	169		64		0	0	233		18:15	211		335		0	0	546	
06:30	221		63		0	0	284		18:30	204		341		0	0	545	
06:45	249	756	87	252	0	0	336	1008	18:45	178	800	293	1343	0	0	471	2143
07:00	250		90		0	0	340		19:00	177		250		0	0	427	
07:15	351		116		0	0	467		19:15	160		273		0	0	433	
07:30	379		86		0	0	465		19:30	155		234		0	0	389	
07:45	388	1368	111	403	0	0	499	1771	19:45	143	635	228	985	0	0	371	1620
08:00	330		96		0	0	426		20:00	138		211		0	0	349	
08:15	305		111		0	0	416		20:15	120		185		0	0	305	
08:30	309		146		0	0	455		20:30	101		194		0	0	295	
08:45	278	1222	173	526	0	0	451	1748	20:45	92	451	177	767	0	0	269	1218
09:00	261		160		0	0	421		21:00	104		173		0	0	277	
09:15	240		155		0	0	395		21:15	94		147		0	0	241	
09:30	261		128		0	0	389		21:30	86		144		0	0	230	
09:45	206	968	119	562	0	0	325	1530	21:45	60	344	131	595	0	0	191	939
10:00	177		126		0	0	303		22:00	69		132		0	0	201	
10:15	184		153		0	0	337		22:15	59		113		0	0	172	
10:30	218		162		0	0	380		22:30	55		89		0	0	144	
10:45	193	772	165	606	0	0	358	1378	22:45	56	239	89	423	0	0	145	662
11:00	188		162		0	0	350		23:00	47		70		0	0	117	
11:15	213		185		0	0	398		23:15	34		69		0	0	103	
11:30	210		198		0	0	408		23:30	31		40		0	0	71	
11:45	226	837	197	742	0	0	423	1579	23:45	19	131	49	228	0	0	68	359
TOTALS		6436		3425				9861	TOTALS		8077		11192				19269
SPLIT %		65.3%		34.7%				33.9%	SPLIT %		41.9%		58.1%				66.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	14,513	14,617	0	0	29,130

AM Peak Hour	07:15	11:45			07:15	PM Peak Hour	16:45	17:00			17:00
AM Pk Volume	1448	849			1857	PM Pk Volume	960	1642			2587
Pk Hr Factor	0.933	0.460			0.930	Pk Hr Factor	0.870	0.928			0.943
7 - 9 Volume	2590	929	0	0	3519	4 - 6 Volume	1861	3083	0	0	4944
7 - 9 Peak Hour	07:15	08:00			07:15	4 - 6 Peak Hour	16:45	17:00			17:00
7 - 9 Pk Volume	1448	526	0	0	1857	4 - 6 Pk Volume	960	1642	0	0	2587
Pk Hr Factor	0.933	0.760	0.000	0.000	0.930	Pk Hr Factor	0.916	0.920	0.000	0.000	0.943

Prepared by National Data & Surveying Services

CLASSIFICATION

Texas St Bet. Camino Del Rio South & 1400ft N/O Madison Ave

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_114

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	1	182	8	0	4	0	0	0	0	0	0	0	0	195
01:00	0	95	4	0	0	0	0	2	0	0	0	0	0	101
02:00	0	71	4	0	0	0	0	0	0	0	0	0	0	75
03:00	0	59	5	0	1	1	0	1	0	0	0	0	0	67
04:00	1	115	6	0	1	0	0	0	0	0	0	0	0	123
05:00	3	288	23	2	4	0	0	0	0	0	0	0	0	320
06:00	5	912	71	6	20	4	0	2	3	0	0	0	0	1023
07:00	6	1511	124	7	40	3	0	1	0	0	0	0	0	1692
08:00	6	1649	110	12	45	3	0	6	0	0	0	0	0	1831
09:00	8	1261	119	6	33	1	0	6	0	0	0	0	0	1434
10:00	6	1181	117	7	34	2	0	4	0	0	0	0	0	1351
11:00	6	1355	130	6	39	3	0	0	2	0	0	0	0	1541
12:00 PM	6	1488	136	11	47	0	0	2	0	0	0	0	0	1690
13:00	6	1525	142	8	43	0	0	0	0	0	0	0	0	1724
14:00	6	1626	128	10	46	1	0	1	0	0	0	0	0	1818
15:00	12	1859	154	14	49	0	0	1	0	0	0	0	0	2089
16:00	8	2082	161	10	41	0	0	1	0	0	0	0	0	2303
17:00	8	2452	141	6	37	2	0	1	0	0	0	0	0	2647
18:00	8	2051	137	5	38	3	0	1	0	0	0	0	0	2243
19:00	9	1461	86	3	22	2	0	2	1	0	0	0	0	1586
20:00	2	1099	63	2	12	0	0	0	0	0	0	0	0	1178
21:00	0	864	45	1	10	1	1	4	0	0	0	0	0	926
22:00	0	585	35	3	6	0	0	5	0	0	0	0	0	634
23:00	1	361	19	2	3	0	0	0	0	0	0	0	0	386
Totals	108	26132	1968	121	575	26	1	40	6					28977
% of Totals	0%	90%	7%	0%	2%	0%	0%	0%	0%					100%

AM Volumes	42	8679	721	46	221	17	0	22	5	0	0	0	0	9753
% AM	0%	30%	2%	0%	1%	0%		0%	0%					34%
AM Peak Hour	09:00	08:00	11:00	08:00	08:00	06:00		08:00	06:00					08:00
Volume	8	1649	130	12	45	4		6	3					1831
PM Volumes	66	17453	1247	75	354	9	1	18	1	0	0	0	0	19224
% PM	0%	60%	4%	0%	1%	0%	0%	0%	0%					66%
PM Peak Hour	15:00	17:00	16:00	15:00	15:00	18:00	21:00	22:00	19:00					17:00
Volume	12	2452	161	14	49	3	1	5	1					2647

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	3523		12%	3414		12%	4950		17%	17090		59%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

115

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

Texas St Bet. Camino Del Rio South & 1400ft N/O Madison Ave

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_114

DAILY TOTALS	NB	SB	EB	WB	Total
	14,456	14,521	0	0	28,977

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	28		39		0	0	67		12:00	206		208		0	0	414	
00:15	23		24		0	0	47		12:15	209		204		0	0	413	
00:30	21		20		0	0	41		12:30	235		208		0	0	443	
00:45	19	91	21	104	0	0	40	195	12:45	202	852	218	838	0	0	420	1690
01:00	16		15		0	0	31		13:00	222		212		0	0	434	
01:15	20		9		0	0	29		13:15	202		217		0	0	419	
01:30	7		7		0	0	14		13:30	229		204		0	0	433	
01:45	16	59	11	42	0	0	27	101	13:45	211	864	227	860	0	0	438	1724
02:00	14		8		0	0	22		14:00	233		207		0	0	440	
02:15	10		8		0	0	18		14:15	243		224		0	0	467	
02:30	15		6		0	0	21		14:30	245		216		0	0	461	
02:45	5	44	9	31	0	0	14	75	14:45	197	918	253	900	0	0	450	1818
03:00	8		2		0	0	10		15:00	218		290		0	0	508	
03:15	6		7		0	0	13		15:15	244		277		0	0	521	
03:30	17		11		0	0	28		15:30	262		283		0	0	545	
03:45	9	40	7	27	0	0	16	67	15:45	225	949	290	1140	0	0	515	2089
04:00	12		5		0	0	17		16:00	217		343		0	0	560	
04:15	23		6		0	0	29		16:15	235		349		0	0	584	
04:30	27		8		0	0	35		16:30	230		341		0	0	571	
04:45	35	97	7	26	0	0	42	123	16:45	204	886	384	1417	0	0	588	2303
05:00	40		11		0	0	51		17:00	227		420		0	0	647	
05:15	48		23		0	0	71		17:15	291		414		0	0	705	
05:30	66		27		0	0	93		17:30	227		429		0	0	656	
05:45	72	226	33	94	0	0	105	320	17:45	225	970	414	1677	0	0	639	2647
06:00	110		56		0	0	166		18:00	218		410		0	0	628	
06:15	165		64		0	0	229		18:15	210		384		0	0	594	
06:30	232		66		0	0	298		18:30	202		324		0	0	526	
06:45	253	760	77	263	0	0	330	1023	18:45	190	820	305	1423	0	0	495	2243
07:00	243		94		0	0	337		19:00	190		268		0	0	458	
07:15	318		98		0	0	416		19:15	171		253		0	0	424	
07:30	358		104		0	0	462		19:30	152		223		0	0	375	
07:45	373	1292	104	400	0	0	477	1692	19:45	132	645	197	941	0	0	329	1586
08:00	364		109		0	0	473		20:00	116		217		0	0	333	
08:15	312		120		0	0	432		20:15	114		178		0	0	292	
08:30	317		149		0	0	466		20:30	99		184		0	0	283	
08:45	304	1297	156	534	0	0	460	1831	20:45	111	440	159	738	0	0	270	1178
09:00	238		139		0	0	377		21:00	96		175		0	0	271	
09:15	213		151		0	0	364		21:15	84		175		0	0	259	
09:30	186		133		0	0	319		21:30	70		133		0	0	203	
09:45	241	878	133	556	0	0	374	1434	21:45	79	329	114	597	0	0	193	926
10:00	196		141		0	0	337		22:00	64		107		0	0	171	
10:15	216		139		0	0	355		22:15	57		106		0	0	163	
10:30	192		129		0	0	321		22:30	71		85		0	0	156	
10:45	175	779	163	572	0	0	338	1351	22:45	55	247	89	387	0	0	144	634
11:00	181		153		0	0	334		23:00	45		85		0	0	130	
11:15	195		174		0	0	369		23:15	47		57		0	0	104	
11:30	226		185		0	0	411		23:30	36		51		0	0	87	
11:45	221	823	206	718	0	0	427	1541	23:45	22	150	43	236	0	0	65	386
TOTALS		6386		3367				9753	TOTALS		8070		11154				19224
SPLIT %		65.5%		34.5%				33.7%	SPLIT %		42.0%		58.0%				66.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	14,456	14,521	0	0	28,977

AM Peak Hour	07:15	11:45				07:45	PM Peak Hour	17:00	17:00				17:00
AM Pk Volume	1413	826				1848	PM Pk Volume	970	1677				2647
Pk Hr Factor	0.947	0.498				0.969	Pk Hr Factor	0.969	0.954				0.939
7 - 9 Volume	2589	934	0	0		3523	4 - 6 Volume	1856	3094	0	0		4950
7 - 9 Peak Hour	07:15	08:00				07:45	4 - 6 Peak Hour	17:00	17:00				17:00
7 - 9 Pk Volume	1413	534	0	0		1848	4 - 6 Pk Volume	970	1677	0	0		2647
Pk Hr Factor	0.947	0.856	0.000	0.000		0.969	Pk Hr Factor	0.833	0.977	0.000	0.000		0.939

Prepared by NDS/ATD

VOLUME

Texas St 1400 Ft N/O Madison Ave

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_115

DAILY TOTALS	NB	SB	EB	WB	Total
	14,629	14,814	0	0	29,443

AM Period	NB		SB		EB		WB		TOTAL	
00:00	31		35						66	
00:15	24		30						54	
00:30	14		31						45	
00:45	14	83	17	113					31	196
01:00	14		17						31	
01:15	15		24						39	
01:30	9		12						21	
01:45	9	47	11	64					20	111
02:00	7		11						18	
02:15	9		13						22	
02:30	9		8						17	
02:45	7	32	4	36					11	68
03:00	10		6						16	
03:15	6		5						11	
03:30	12		8						20	
03:45	14	42	6	25					20	67
04:00	8		8						16	
04:15	13		4						17	
04:30	21		7						28	
04:45	36	78	10	29					46	107
05:00	28		10						38	
05:15	49		12						61	
05:30	62		21						83	
05:45	82	221	35	78					117	299
06:00	100		31						131	
06:15	153		56						209	
06:30	216		69						285	
06:45	265	734	79	235					344	969
07:00	264		84						348	
07:15	323		103						426	
07:30	372		106						478	
07:45	406	1365	88	381					494	1746
08:00	360		113						473	
08:15	322		115						437	
08:30	311		121						432	
08:45	296	1289	139	488					435	1777
09:00	267		162						429	
09:15	230		167						397	
09:30	231		107						338	
09:45	227	955	128	564					355	1519
10:00	193		133						326	
10:15	191		150						341	
10:30	188		171						359	
10:45	217	789	161	615					378	1404
11:00	174		172						346	
11:15	191		177						368	
11:30	213		200						413	
11:45	241	819	207	756					448	1575
TOTALS		6454		3384						9838
SPLIT %		65.6%		34.4%						33.4%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	239		236						475	
12:15	219		200						419	
12:30	214		196						410	
12:45	252	924	230	862					482	1786
13:00	260		232						492	
13:15	234		229						463	
13:30	210		197						407	
13:45	209	913	213	871					422	1784
14:00	183		245						428	
14:15	275		233						508	
14:30	214		236						450	
14:45	209	881	243	957					452	1838
15:00	207		222						429	
15:15	221		255						476	
15:30	255		293						548	
15:45	232	915	300	1070					532	1985
16:00	225		349						574	
16:15	197		363						560	
16:30	255		382						637	
16:45	247	924	361	1455					608	2379
17:00	222		447						669	
17:15	208		436						644	
17:30	263		434						697	
17:45	247	940	392	1709					639	2649
18:00	218		380						598	
18:15	210		377						587	
18:30	207		347						554	
18:45	169	804	290	1394					459	2198
19:00	172		270						442	
19:15	177		299						476	
19:30	142		238						380	
19:45	149	640	218	1025					367	1665
20:00	148		208						356	
20:15	118		210						328	
20:30	111		201						312	
20:45	88	465	166	785					254	1250
21:00	112		189						301	
21:15	107		151						258	
21:30	89		137						226	
21:45	69	377	130	607					199	984
22:00	65		139						204	
22:15	66		133						199	
22:30	58		94						152	
22:45	46	235	98	464					144	699
23:00	55		57						112	
23:15	38		74						112	
23:30	38		41						79	
23:45	26	157	59	231					85	388
TOTALS		8175		11430						19605
SPLIT %		41.7%		58.3%						66.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	14,629	14,814	0	0	29,443

AM Peak Hour	07:15	11:30			07:30
AM Pk Volume	1461	843			1882
Pk Hr Factor	0.900	0.893			0.952
7 - 9 Volume	2654	869	0	0	3523
7 - 9 Peak Hour	07:15	08:00			07:30
7 - 9 Pk Volume	1461	488	0	0	1882
Pk Hr Factor	0.900	0.878	0.000	0.000	0.952

PM Peak Hour	12:30	17:00			17:00
PM Pk Volume	960	1709			2649
Pk Hr Factor	0.923	0.956			0.950
4 - 6 Volume	1864	3164	0	0	5028
4 - 6 Peak Hour	16:45	17:00			17:00
4 - 6 Pk Volume	940	1709	0	0	2649
Pk Hr Factor	0.894	0.956	0.000	0.000	0.950

Prepared by NDS/ATD

VOLUME

Texas St 1400 Ft N/O Madison Ave

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_115

DAILY TOTALS	NB	SB	EB	WB	Total
	14,580	14,454	0	0	29,034

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	27		44						71		12:00	185		210						395	
00:15	25		25						50		12:15	195		189						384	
00:30	20		23						43		12:30	238		214						452	
00:45	23	95	28	120					51	215	12:45	212	830	207	820					419	1650
01:00	19		18						37		13:00	227		193						420	
01:15	14		9						23		13:15	223		204						427	
01:30	11		9						20		13:30	209		176						385	
01:45	10	54	11	47					21	101	13:45	224	883	219	792					443	1675
02:00	13		9						22		14:00	230		231						461	
02:15	13		11						24		14:15	245		221						466	
02:30	14		7						21		14:30	242		220						462	
02:45	12	52	6	33					18	85	14:45	191	908	272	944					463	1852
03:00	10		4						14		15:00	217		275						492	
03:15	11		7						18		15:15	259		269						528	
03:30	7		13						20		15:30	271		305						576	
03:45	19	47	4	28					23	75	15:45	212	959	275	1124					487	2083
04:00	10		6						16		16:00	237		325						562	
04:15	10		6						16		16:15	225		353						578	
04:30	25		6						31		16:30	223		327						550	
04:45	31	76	8	26					39	102	16:45	201	886	410	1415					611	2301
05:00	35		9						44		17:00	230		412						642	
05:15	40		14						54		17:15	287		439						726	
05:30	59		13						72		17:30	251		415						666	
05:45	80	214	25	61					105	275	17:45	202	970	441	1707					643	2677
06:00	105		39						144		18:00	227		403						630	
06:15	146		57						203		18:15	223		398						621	
06:30	227		79						306		18:30	210		340						550	
06:45	269	747	75	250					344	997	18:45	208	868	280	1421					488	2289
07:00	248		103						351		19:00	197		258						455	
07:15	312		105						417		19:15	196		273						469	
07:30	376		105						481		19:30	141		227						368	
07:45	393	1329	95	408					488	1737	19:45	139	673	191	949					330	1622
08:00	351		112						463		20:00	113		192						305	
08:15	332		103						435		20:15	122		182						304	
08:30	291		128						419		20:30	115		174						289	
08:45	314	1288	171	514					485	1802	20:45	88	438	160	708					248	1146
09:00	250		143						393		21:00	113		172						285	
09:15	202		118						320		21:15	91		184						275	
09:30	162		125						287		21:30	77		147						224	
09:45	253	867	149	535					402	1402	21:45	75	356	126	629					201	985
10:00	214		124						338		22:00	82		118						200	
10:15	199		117						316		22:15	59		114						173	
10:30	165		150						315		22:30	78		100						178	
10:45	186	764	144	535					330	1299	22:45	64	283	96	428					160	711
11:00	200		164						364		23:00	54		76						130	
11:15	210		172						382		23:15	46		55						101	
11:30	200		198						398		23:30	34		64						98	
11:45	218	828	185	719					403	1547	23:45	31	165	46	241					77	406
TOTALS		6361		3276						9637	TOTALS		8219		11178						19397
SPLIT %		66.0%		34.0%						33.2%	SPLIT %		42.4%		57.6%						66.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	14,580	14,454	0	0	29,034

AM Peak Hour	07:30	11:45			07:30	PM Peak Hour	15:15	17:00			17:00
AM Pk Volume	1452	798			1867	PM Pk Volume	979	1707			2677
Pk Hr Factor	0.924	0.932			0.956	Pk Hr Factor	0.903	0.968			0.922
7 - 9 Volume	2617	922	0	0	3539	4 - 6 Volume	1856	3122	0	0	4978
7 - 9 Peak Hour	07:30	08:00			07:30	4 - 6 Peak Hour	17:00	17:00			17:00
7 - 9 Pk Volume	1452	514	0	0	1867	4 - 6 Pk Volume	970	1707	0	0	2677
Pk Hr Factor	0.924	0.751	0.000	0.000	0.956	Pk Hr Factor	0.845	0.968	0.000	0.000	0.922

Prepared by NDS/ATD

VOLUME

Texas St Bet. Madison Ave & Meade Ave

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_116

DAILY TOTALS	NB	SB	EB	WB	Total
	8,423	8,630	0	0	17,053

AM Period	NB		SB		EB		WB		TOTAL	
00:00	23		24						47	
00:15	13		15						28	
00:30	13		20						33	
00:45	10	59	11	70					21	129
01:00	14		5						19	
01:15	10		10						20	
01:30	6		10						16	
01:45	6	36	7	32					13	68
02:00	7		6						13	
02:15	8		9						17	
02:30	4		6						10	
02:45	4	23	7	28					11	51
03:00	8		4						12	
03:15	3		6						9	
03:30	5		5						10	
03:45	9	25	2	17					11	42
04:00	4		2						6	
04:15	11		4						15	
04:30	16		8						24	
04:45	9	40	10	24					19	64
05:00	14		8						22	
05:15	26		25						51	
05:30	37		18						55	
05:45	49	126	32	83					81	209
06:00	58		49						107	
06:15	83		35						118	
06:30	102		36						138	
06:45	137	380	63	183					200	563
07:00	123		67						190	
07:15	175		58						233	
07:30	185		62						247	
07:45	222	705	74	261					296	966
08:00	166		53						219	
08:15	183		63						246	
08:30	171		85						256	
08:45	166	686	118	319					284	1005
09:00	145		101						246	
09:15	116		86						202	
09:30	126		114						240	
09:45	134	521	95	396					229	917
10:00	103		87						190	
10:15	114		95						209	
10:30	114		113						227	
10:45	125	456	107	402					232	858
11:00	90		110						200	
11:15	102		112						214	
11:30	132		112						244	
11:45	147	471	127	461					274	932
TOTALS		3528		2276						**5804**
SPLIT %		60.8%		39.2%						**34.0%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	144		125						269	
12:15	144		163						307	
12:30	122		112						234	
12:45	150	560	143	543					293	1103
13:00	145		126						271	
13:15	162		118						280	
13:30	116		144						260	
13:45	113	536	149	537					262	1073
14:00	107		128						235	
14:15	149		143						292	
14:30	94		152						246	
14:45	127	477	131	554					258	1031
15:00	120		133						253	
15:15	126		157						283	
15:30	158		182						340	
15:45	153	557	181	653					334	1210
16:00	119		220						339	
16:15	132		174						306	
16:30	137		198						335	
16:45	141	529	230	822					371	1351
17:00	123		224						347	
17:15	128		216						344	
17:30	163		213						376	
17:45	154	568	225	878					379	1446
18:00	131		203						334	
18:15	122		172						294	
18:30	116		200						316	
18:45	115	484	147	722					262	1206
19:00	105		152						257	
19:15	107		162						269	
19:30	84		157						241	
19:45	90	386	134	605					224	991
20:00	84		119						203	
20:15	73		93						166	
20:30	60		104						164	
20:45	52	269	104	420					156	689
21:00	81		96						177	
21:15	65		85						150	
21:30	50		60						110	
21:45	51	247	76	317					127	564
22:00	55		60						115	
22:15	39		46						85	
22:30	40		41						81	
22:45	34	168	42	189					76	357
23:00	29		47						76	
23:15	31		30						61	
23:30	27		19						46	
23:45	27	114	18	114					45	228
TOTALS		4895		6354						**11249**
SPLIT %		43.5%		56.5%						**66.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	8,423	8,630	0	0	17,053

AM Peak Hour	07:30	11:30			**11:30**	**PM Peak Hour**	12:30	16:45			**17:00**
AM Pk Volume	756	527			**1094**	**PM Pk Volume**	579	883			**1446**
Pk Hr Factor	0.851	0.808			**0.891**	**Pk Hr Factor**	0.894	0.960			**0.954**
7 - 9 Volume	1391	580	0	0	**1971**	**4 - 6 Volume**	1097	1700	0	0	**2797**
7 - 9 Peak Hour	07:30	08:00			**07:45**	**4 - 6 Peak Hour**	17:00	16:45			**17:00**
7 - 9 Pk Volume	756	319	0	0	**1017**	**4 - 6 Pk Volume**	568	883	0	0	**1446**
Pk Hr Factor	0.851	0.676	0.000	0.000	**0.859**	**Pk Hr Factor**	0.871	0.960	0.000	0.000	**0.954**

Prepared by NDS/ATD

VOLUME

Texas St Bet. Madison Ave & Meade Ave

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_116

DAILY TOTALS	NB	SB	EB	WB	Total
	8,332	8,789	0	0	17,121

AM Period	NB		SB		EB		WB		TOTAL	
00:00	21		15						36	
00:15	19		18						37	
00:30	15		16						31	
00:45	16	71	8	57					24	128
01:00	16		10						26	
01:15	8		7						15	
01:30	8		2						10	
01:45	13	45	10	29					23	74
02:00	10		9						19	
02:15	10		5						15	
02:30	12		5						17	
02:45	6	38	9	28					15	66
03:00	6		3						9	
03:15	6		5						11	
03:30	5		6						11	
03:45	9	26	6	20					15	46
04:00	8		3						11	
04:15	7		7						14	
04:30	16		8						24	
04:45	16	47	10	28					26	75
05:00	25		8						33	
05:15	19		23						42	
05:30	29		24						53	
05:45	41	114	31	86					72	200
06:00	60		42						102	
06:15	75		45						120	
06:30	117		51						168	
06:45	130	382	56	194					186	576
07:00	153		54						207	
07:15	158		59						217	
07:30	212		66						278	
07:45	189	712	68	247					257	959
08:00	190		72						262	
08:15	173		86						259	
08:30	158		93						251	
08:45	151	672	101	352					252	1024
09:00	130		103						233	
09:15	103		100						203	
09:30	113		87						200	
09:45	128	474	88	378					216	852
10:00	125		83						208	
10:15	101		108						209	
10:30	101		82						183	
10:45	110	437	112	385					222	822
11:00	103		122						225	
11:15	126		123						249	
11:30	121		122						243	
11:45	122	472	157	524					279	996
TOTALS		3490		2328						5818
SPLIT %		60.0%		40.0%						34.0%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	111		127						238	
12:15	118		138						256	
12:30	138		139						277	
12:45	124	491	141	545					265	1036
13:00	131		122						253	
13:15	150		134						284	
13:30	125		139						264	
13:45	148	554	146	541					294	1095
14:00	131		119						250	
14:15	107		135						242	
14:30	126		123						249	
14:45	132	496	161	538					293	1034
15:00	128		183						311	
15:15	151		184						335	
15:30	150		164						314	
15:45	128	557	172	703					300	1260
16:00	132		196						328	
16:15	141		178						319	
16:30	137		222						359	
16:45	123	533	192	788					315	1321
17:00	121		237						358	
17:15	157		201						358	
17:30	143		221						364	
17:45	114	535	234	893					348	1428
18:00	132		198						330	
18:15	121		187						308	
18:30	123		187						310	
18:45	135	511	164	736					299	1247
19:00	110		178						288	
19:15	105		132						237	
19:30	79		139						218	
19:45	92	386	130	579					222	965
20:00	76		137						213	
20:15	62		104						166	
20:30	70		109						179	
20:45	51	259	87	437					138	696
21:00	75		107						182	
21:15	52		89						141	
21:30	50		71						121	
21:45	44	221	68	335					112	556
22:00	61		64						125	
22:15	43		58						101	
22:30	52		42						94	
22:45	37	193	42	206					79	399
23:00	34		51						85	
23:15	26		44						70	
23:30	22		39						61	
23:45	24	106	26	160					50	266
TOTALS		4842		6461						11303
SPLIT %		42.8%		57.2%						66.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	8,332	8,789	0	0	17,121

AM Peak Hour	07:30	11:45			07:30
AM Pk Volume	764	561			1056
Pk Hr Factor	0.901	0.893			0.950
7 - 9 Volume	1384	599	0	0	1983
7 - 9 Peak Hour	07:30	08:00			07:30
7 - 9 Pk Volume	764	352	0	0	1056
Pk Hr Factor	0.901	0.871	0.000	0.000	0.950

PM Peak Hour	14:45	17:00			17:00
PM Pk Volume	561	893			1428
Pk Hr Factor	0.929	0.942			0.981
4 - 6 Volume	1068	1681	0	0	2749
4 - 6 Peak Hour	16:45	17:00			17:00
4 - 6 Pk Volume	544	893	0	0	1428
Pk Hr Factor	0.866	0.942	0.000	0.000	0.981

Prepared by NDS/ATD

VOLUME

Texas St Bet. Meade Ave & El Cajon Blvd

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_117

DAILY TOTALS	NB	SB	EB	WB	Total
	6,809	7,556	0	0	14,365

AM Period	NB		SB		EB		WB		TOTAL	
00:00	19		18						37	
00:15	11		22						33	
00:30	8		18						26	
00:45	9	47	10	68					19	115
01:00	13		6						19	
01:15	8		14						22	
01:30	6		2						8	
01:45	5	32	12	34					17	66
02:00	8		6						14	
02:15	9		15						24	
02:30	4		4						8	
02:45	2	23	8	33					10	56
03:00	6		6						12	
03:15	4		4						8	
03:30	4		5						9	
03:45	3	17	4	19					7	36
04:00	5		7						12	
04:15	7		2						9	
04:30	11		9						20	
04:45	5	28	7	25					12	53
05:00	10		13						23	
05:15	18		13						31	
05:30	25		24						49	
05:45	35	88	28	78					63	166
06:00	39		32						71	
06:15	66		42						108	
06:30	63		43						106	
06:45	92	260	51	168					143	428
07:00	89		56						145	
07:15	111		50						161	
07:30	145		53						198	
07:45	133	478	68	227					201	705
08:00	121		69						190	
08:15	134		64						198	
08:30	132		73						205	
08:45	130	517	99	305					229	822
09:00	113		88						201	
09:15	99		97						196	
09:30	105		74						179	
09:45	107	424	81	340					188	764
10:00	83		82						165	
10:15	84		97						181	
10:30	90		96						186	
10:45	106	363	83	358					189	721
11:00	72		84						156	
11:15	86		102						188	
11:30	103		113						216	
11:45	128	389	121	420					249	809
TOTALS		2666		2075						4741
SPLIT %		56.2%		43.8%						33.0%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	106		123						229	
12:15	110		113						223	
12:30	103		106						209	
12:45	136	455	111	453					247	908
13:00	109		107						216	
13:15	132		124						256	
13:30	99		115						214	
13:45	90	430	110	456					200	886
14:00	94		106						200	
14:15	115		119						234	
14:30	72		113						185	
14:45	119	400	130	468					249	868
15:00	102		109						211	
15:15	111		128						239	
15:30	115		142						257	
15:45	131	459	126	505					257	964
16:00	112		154						266	
16:15	129		171						300	
16:30	116		170						286	
16:45	111	468	154	649					265	1117
17:00	117		193						310	
17:15	107		177						284	
17:30	152		175						327	
17:45	122	498	177	722					299	1220
18:00	108		200						308	
18:15	111		166						277	
18:30	92		150						242	
18:45	101	412	148	664					249	1076
19:00	92		133						225	
19:15	91		125						216	
19:30	86		103						189	
19:45	65	334	99	460					164	794
20:00	65		112						177	
20:15	59		96						155	
20:30	52		102						154	
20:45	57	233	86	396					143	629
21:00	64		90						154	
21:15	64		63						127	
21:30	46		82						128	
21:45	44	218	75	310					119	528
22:00	43		70						113	
22:15	29		73						102	
22:30	35		64						99	
22:45	35	142	48	255					83	397
23:00	22		44						66	
23:15	32		50						82	
23:30	22		22						44	
23:45	18	94	27	143					45	237
TOTALS		4143		5481						9624
SPLIT %		43.0%		57.0%						67.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	6,809	7,556	0	0	14,365

AM Peak Hour	07:30	11:30			11:30	PM Peak Hour	17:00	17:15			17:00
AM Pk Volume	533	470			917	PM Pk Volume	498	729			1220
Pk Hr Factor	0.919	0.955			0.921	Pk Hr Factor	0.819	0.911			0.933
7 - 9 Volume	995	532	0	0	1527	4 - 6 Volume	966	1371	0	0	2337
7 - 9 Peak Hour	07:30	08:00			08:00	4 - 6 Peak Hour	17:00	17:00			17:00
7 - 9 Pk Volume	533	305	0	0	822	4 - 6 Pk Volume	498	722	0	0	1220
Pk Hr Factor	0.919	0.770	0.000	0.000	0.897	Pk Hr Factor	0.819	0.935	0.000	0.000	0.933

Prepared by NDS/ATD

VOLUME

Texas St Bet. Meade Ave & El Cajon Blvd

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_117

DAILY TOTALS	NB	SB	EB	WB	Total
	6,856	7,404	0	0	14,260

AM Period	NB		SB		EB		WB		TOTAL	
00:00	18		29						47	
00:15	24		19						43	
00:30	12		22						34	
00:45	17	71	18	88					35	159
01:00	14		9						23	
01:15	7		9						16	
01:30	13		10						23	
01:45	11	45	10	38					21	83
02:00	12		4						16	
02:15	10		7						17	
02:30	8		8						16	
02:45	3	33	7	26					10	59
03:00	7		5						12	
03:15	4		4						8	
03:30	3		6						9	
03:45	4	18	8	23					12	41
04:00	7		5						12	
04:15	4		5						9	
04:30	15		7						22	
04:45	7	33	10	27					17	60
05:00	13		13						26	
05:15	17		15						32	
05:30	18		13						31	
05:45	36	84	22	63					58	147
06:00	41		30						71	
06:15	54		44						98	
06:30	80		46						126	
06:45	93	268	45	165					138	433
07:00	94		55						149	
07:15	124		62						186	
07:30	137		51						188	
07:45	143	498	64	232					207	730
08:00	119		64						183	
08:15	141		70						211	
08:30	111		83						194	
08:45	115	486	99	316					214	802
09:00	103		77						180	
09:15	81		77						158	
09:30	98		67						165	
09:45	99	381	82	303					181	684
10:00	102		71						173	
10:15	77		57						134	
10:30	85		77						162	
10:45	85	349	95	300					180	649
11:00	86		112						198	
11:15	106		89						195	
11:30	97		114						211	
11:45	94	383	102	417					196	800
TOTALS		2649		1998						4647
SPLIT %		57.0%		43.0%						32.6%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	87		114						201	
12:15	106		109						215	
12:30	112		114						226	
12:45	109	414	122	459					231	873
13:00	107		114						221	
13:15	131		100						231	
13:30	118		89						207	
13:45	120	476	104	407					224	883
14:00	112		112						224	
14:15	92		122						214	
14:30	106		113						219	
14:45	106	416	130	477					236	893
15:00	101		137						238	
15:15	118		148						266	
15:30	117		154						271	
15:45	113	449	142	581					255	1030
16:00	107		150						257	
16:15	112		158						270	
16:30	131		144						275	
16:45	113	463	180	632					293	1095
17:00	116		174						290	
17:15	115		183						298	
17:30	146		187						333	
17:45	107	484	185	729					292	1213
18:00	110		188						298	
18:15	99		200						299	
18:30	102		152						254	
18:45	115	426	106	646					221	1072
19:00	104		124						228	
19:15	90		139						229	
19:30	75		121						196	
19:45	80	349	105	489					185	838
20:00	72		88						160	
20:15	60		89						149	
20:30	58		81						139	
20:45	47	237	99	357					146	594
21:00	70		75						145	
21:15	44		83						127	
21:30	48		68						116	
21:45	41	203	60	286					101	489
22:00	58		57						115	
22:15	40		57						97	
22:30	44		44						88	
22:45	37	179	53	211					90	390
23:00	37		36						73	
23:15	30		33						63	
23:30	19		32						51	
23:45	25	111	31	132					56	243
TOTALS		4207		5406						9613
SPLIT %		43.8%		56.2%						67.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	6,856	7,404	0	0	14,260

AM Peak Hour	07:30	11:30			11:45
AM Pk Volume	540	439			838
Pk Hr Factor	0.944	0.963			0.927
7 - 9 Volume	984	548	0	0	1532
7 - 9 Peak Hour	07:30	08:00			08:00
7 - 9 Pk Volume	540	316	0	0	802
Pk Hr Factor	0.944	0.798	0.000	0.000	0.937

PM Peak Hour	16:45	17:30			17:30
PM Pk Volume	490	760			1222
Pk Hr Factor	0.839	0.950			0.917
4 - 6 Volume	947	1361	0	0	2308
4 - 6 Peak Hour	16:45	17:00			16:45
4 - 6 Pk Volume	490	729	0	0	1214
Pk Hr Factor	0.839	0.975	0.000	0.000	0.911

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

River Run Drive, From Friars Road to Rio San Diego Drive

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	2		8					12:00	29		31				
00:15	3		8					12:15	44		35				
00:30	5		7					12:30	33		38				
00:45	1	11	2	25			36	12:45	48	154	44	148			302
01:00	3		6					13:00	25		44				
01:15	1		1					13:15	28		34				
01:30	1		1					13:30	34		30				
01:45	1	6	3	11			17	13:45	26	113	33	141			254
02:00	1		2					14:00	17		28				
02:15	1		1					14:15	22		28				
02:30	1		3					14:30	13		29				
02:45	3	6	2	8			14	14:45	27	79	26	111			190
03:00	1		0					15:00	28		33				
03:15	1		0					15:15	27		32				
03:30	0		0					15:30	31		42				
03:45	2	4	0	0			4	15:45	40	126	20	127			253
04:00	0		1					16:00	48		31				
04:15	0		1					16:15	33		30				
04:30	5		1					16:30	44		28				
04:45	5	10	3	6			16	16:45	39	164	34	123			287
05:00	8		2					17:00	41		40				
05:15	10		2					17:15	39		35				
05:30	8		10					17:30	29		49				
05:45	10	36	10	24			60	17:45	33	142	40	164			306
06:00	13		15					18:00	31		35				
06:15	17		21					18:15	39		42				
06:30	16		15					18:30	27		43				
06:45	31	77	21	72			149	18:45	27	124	42	162			286
07:00	33		38					19:00	20		21				
07:15	43		35					19:15	14		30				
07:30	42		44					19:30	17		39				
07:45	62	180	51	168			348	19:45	22	73	30	120			193
08:00	60		58					20:00	17		30				
08:15	50		42					20:15	19		21				
08:30	44		48					20:30	10		30				
08:45	31	185	36	184			369	20:45	4	50	19	100			150
09:00	70		29					21:00	10		17				
09:15	49		34					21:15	9		24				
09:30	44		29					21:30	11		22				
09:45	38	201	32	124			325	21:45	9	39	17	80			119
10:00	23		25					22:00	4		24				
10:15	17		20					22:15	11		19				
10:30	22		23					22:30	8		12				
10:45	24	86	29	97			183	22:45	4	27	16	71			98
11:00	18		12					23:00	5		9				
11:15	17		20					23:15	3		8				
11:30	23		20					23:30	5		8				
11:45	25	83	26	78			161	23:45	4	17	4	29			46
Total Vol.		885		797			**1682**		1108		1376				**2484**

Daily Totals

NB	SB	EB	WB	Combined
1993	2173			**4166**

	AM			PM		
Split %	52.6%	47.4%	**40.4%**	44.6%	55.4%	**59.6%**
Peak Hour	07:45	07:45	**07:45**	15:45	17:30	**12:15**
Volume	216	199	**415**	165	166	**311**
P.H.F.	0.87	0.86	**0.88**	0.80	0.85	**0.85**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

River Run Drive, From Friars Road to Rio San Diego Drive

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	3		6					12:00	28		31				
00:15	4		9					12:15	20		25				
00:30	6		7					12:30	32		33				
00:45	3	16	7	29			45	12:45	22	102	31	120			222
01:00	3		1					13:00	21		40				
01:15	0		2					13:15	27		25				
01:30	1		0					13:30	17		27				
01:45	0	4	1	4			8	13:45	26	91	30	122			213
02:00	0		0					14:00	27		21				
02:15	0		3					14:15	35		40				
02:30	4		1					14:30	12		28				
02:45	3	7	1	5			12	14:45	27	101	33	122			223
03:00	0		0					15:00	26		38				
03:15	1		0					15:15	28		38				
03:30	1		1					15:30	24		27				
03:45	0	2	1	2			4	15:45	28	106	39	142			248
04:00	1		0					16:00	28		25				
04:15	1		1					16:15	42		36				
04:30	6		0					16:30	34		31				
04:45	4	12	2	3			15	16:45	35	139	41	133			272
05:00	3		3					17:00	28		43				
05:15	9		1					17:15	62		42				
05:30	12		5					17:30	33		41				
05:45	6	30	10	19			49	17:45	27	150	47	173			323
06:00	11		20					18:00	29		35				
06:15	19		24					18:15	28		37				
06:30	15		12					18:30	27		39				
06:45	16	61	15	71			132	18:45	29	113	36	147			260
07:00	40		29					19:00	26		30				
07:15	54		20					19:15	14		36				
07:30	45		33					19:30	17		42				
07:45	64	203	32	114			317	19:45	14	71	31	139			210
08:00	74		48					20:00	19		17				
08:15	42		38					20:15	11		20				
08:30	27		40					20:30	16		36				
08:45	25	168	30	156			324	20:45	3	49	28	101			150
09:00	31		40					21:00	13		13				
09:15	30		40					21:15	14		21				
09:30	20		24					21:30	12		8				
09:45	24	105	30	134			239	21:45	19	58	15	57			115
10:00	29		20					22:00	20		5				
10:15	23		24					22:15	4		19				
10:30	21		15					22:30	9		19				
10:45	23	96	26	85			181	22:45	6	39	8	51			90
11:00	22		23					23:00	7		11				
11:15	17		22					23:15	10		4				
11:30	20		19					23:30	7		13				
11:45	23	82	29	93			175	23:45	2	26	12	40			66
Total Vol.		786		715			**1501**			1045		1347			**2392**

Daily Totals

NB	SB	EB	WB	**Combined**
1831	2062			**3893**

	AM			PM		
Split %	52.4%	47.6%	**38.6%**	43.7%	56.3%	**61.4%**
Peak Hour	07:15	07:45	**07:30**	16:30	17:00	**16:45**
Volume	237	158	**376**	159	173	**325**
P.H.F.	0.80	0.82	**0.77**	0.89	0.92	**0.78**

Prepared by NDS/ATD

VOLUME

Fenton Pkwy Bet. Portofino Dwy & Friars Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_119

DAILY TOTALS	NB	SB	EB	WB	Total
	2,051	2,043	0	0	4,094

AM Period	NB		SB		EB		WB		TOTAL	
00:00	9		5						14	
00:15	9		3						12	
00:30	4		4						8	
00:45	4	26	6	18					10	44
01:00	5		3						8	
01:15	1		0						1	
01:30	1		0						1	
01:45	4	11	2	5					6	16
02:00	3		2						5	
02:15	0		0						0	
02:30	0		1						1	
02:45	2	5	2	5					4	10
03:00	0		0						0	
03:15	2		0						2	
03:30	1		1						2	
03:45	0	3	3	4					3	7
04:00	0		2						2	
04:15	0		2						2	
04:30	1		5						6	
04:45	2	3	11	20					13	23
05:00	2		7						9	
05:15	2		7						9	
05:30	3		11						14	
05:45	3	10	22	47					25	57
06:00	6		24						30	
06:15	4		24						28	
06:30	3		38						41	
06:45	7	20	41	127					48	147
07:00	10		47						57	
07:15	12		54						66	
07:30	11		67						78	
07:45	16	49	66	234					82	283
08:00	21		68						89	
08:15	10		50						60	
08:30	15		54						69	
08:45	18	64	43	215					61	279
09:00	23		34						57	
09:15	20		35						55	
09:30	24		43						67	
09:45	20	87	29	141					49	228
10:00	15		34						49	
10:15	12		26						38	
10:30	15		25						40	
10:45	25	67	21	106					46	173
11:00	10		32						42	
11:15	16		21						37	
11:30	18		28						46	
11:45	17	61	23	104					40	165
TOTALS		406		1026						1432
SPLIT %		28.4%		71.6%						35.0%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	25		22						47	
12:15	39		29						68	
12:30	27		26						53	
12:45	26	117	33	110					59	227
13:00	24		16						40	
13:15	29		14						43	
13:30	29		22						51	
13:45	19	101	25	77					44	178
14:00	24		29						53	
14:15	20		24						44	
14:30	25		41						66	
14:45	28	97	24	118					52	215
15:00	29		18						47	
15:15	31		26						57	
15:30	33		24						57	
15:45	40	133	21	89					61	222
16:00	43		34						77	
16:15	49		26						75	
16:30	49		27						76	
16:45	51	192	31	118					82	310
17:00	48		32						80	
17:15	74		36						110	
17:30	62		25						87	
17:45	48	232	24	117					72	349
18:00	51		25						76	
18:15	59		35						94	
18:30	49		20						69	
18:45	46	205	31	111					77	316
19:00	48		18						66	
19:15	38		24						62	
19:30	46		16						62	
19:45	46	178	17	75					63	253
20:00	48		24						72	
20:15	43		27						70	
20:30	43		13						56	
20:45	22	156	13	77					35	233
21:00	31		12						43	
21:15	34		14						48	
21:30	22		11						33	
21:45	23	110	6	43					29	153
22:00	21		13						34	
22:15	18		22						40	
22:30	16		6						22	
22:45	13	68	9	50					22	118
23:00	13		14						27	
23:15	20		5						25	
23:30	10		7						17	
23:45	13	56	6	32					19	88
TOTALS		1645		1017						2662
SPLIT %		61.8%		38.2%						65.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,051	2,043	0	0	4,094

AM Peak Hour	11:45	07:15			07:15	PM Peak Hour	16:45	16:30			16:45
AM Pk Volume	108	255			315	PM Pk Volume	235	126			359
Pk Hr Factor	0.692	0.938			0.885	Pk Hr Factor	0.794	0.875			0.816
7 - 9 Volume	113	449	0	0	562	4 - 6 Volume	424	235	0	0	659
7 - 9 Peak Hour	08:00	07:15			07:15	4 - 6 Peak Hour	16:45	16:30			16:45
7 - 9 Pk Volume	64	255	0	0	315	4 - 6 Pk Volume	235	126	0	0	359
Pk Hr Factor	0.762	0.938	0.000	0.000	0.885	Pk Hr Factor	0.794	0.875	0.000	0.000	0.816

120

Prepared by NDS/ATD

VOLUME

Fenton Pkwy Bet. Portofino Dwy & Friars Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_119

DAILY TOTALS	NB	SB	EB	WB	Total
	2,043	2,092	0	0	4,135

AM Period	NB		SB		EB		WB		TOTAL	
00:00	4		3						7	
00:15	9		4						13	
00:30	5		5						10	
00:45	6	24	6	18					12	42
01:00	8		1						9	
01:15	3		4						7	
01:30	3		2						5	
01:45	2	16	0	7					2	23
02:00	3		1						4	
02:15	2		3						5	
02:30	2		0						2	
02:45	1	8	3	7					4	15
03:00	0		1						1	
03:15	0		3						3	
03:30	1		1						2	
03:45	1	2	2	7					3	9
04:00	1		0						1	
04:15	0		1						1	
04:30	1		4						5	
04:45	0	2	4	9					4	11
05:00	4		9						13	
05:15	2		12						14	
05:30	2		12						14	
05:45	1	9	18	51					19	60
06:00	3		17						20	
06:15	4		29						33	
06:30	8		34						42	
06:45	8	23	44	124					52	147
07:00	8		42						50	
07:15	5		65						70	
07:30	8		68						76	
07:45	11	32	68	243					79	275
08:00	7		65						72	
08:15	15		56						71	
08:30	6		62						68	
08:45	16	44	39	222					55	266
09:00	20		31						51	
09:15	15		33						48	
09:30	17		29						46	
09:45	23	75	24	117					47	192
10:00	19		40						59	
10:15	24		24						48	
10:30	16		29						45	
10:45	21	80	24	117					45	197
11:00	18		27						45	
11:15	23		35						58	
11:30	22		22						44	
11:45	24	87	34	118					58	205
TOTALS		402		1040						**1442**
SPLIT %		27.9%		72.1%						**34.9%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	24		32						56	
12:15	29		22						51	
12:30	25		25						50	
12:45	30	108	29	108					59	216
13:00	27		37						64	
13:15	32		31						63	
13:30	28		25						53	
13:45	29	116	28	121					57	237
14:00	21		29						50	
14:15	22		27						49	
14:30	37		31						68	
14:45	28	108	21	108					49	216
15:00	31		23						54	
15:15	38		29						67	
15:30	33		30						63	
15:45	45	147	26	108					71	255
16:00	36		27						63	
16:15	35		23						58	
16:30	54		21						75	
16:45	37	162	22	93					59	255
17:00	60		24						84	
17:15	53		27						80	
17:30	61		33						94	
17:45	71	245	29	113					100	358
18:00	59		28						87	
18:15	41		33						74	
18:30	55		33						88	
18:45	44	199	18	112					62	311
19:00	41		25						66	
19:15	51		21						72	
19:30	40		16						56	
19:45	49	181	31	93					80	274
20:00	41		20						61	
20:15	29		21						50	
20:30	41		26						67	
20:45	44	155	14	81					58	236
21:00	41		14						55	
21:15	26		10						36	
21:30	23		21						44	
21:45	20	110	8	53					28	163
22:00	20		8						28	
22:15	17		5						22	
22:30	17		6						23	
22:45	12	66	13	32					25	98
23:00	13		8						21	
23:15	11		7						18	
23:30	7		9						16	
23:45	13	44	6	30					19	74
TOTALS		1641		1052						**2693**
SPLIT %		60.9%		39.1%						**65.1%**

DAILY TOTALS	NB	SB	EB	WB	Total
	2,043	2,092	0	0	4,135

AM Peak Hour	11:45	07:15			**07:30**
AM Pk Volume	102	266			**298**
Pk Hr Factor	0.879	0.978			**0.943**
7 - 9 Volume	76	465	0	0	**541**
7 - 9 Peak Hour	08:00	07:15			**07:30**
7 - 9 Pk Volume	44	266	0	0	**298**
Pk Hr Factor	0.688	0.978	0.000	0.000	**0.943**

PM Peak Hour	17:00	17:30			**17:15**
PM Pk Volume	245	123			**361**
Pk Hr Factor	0.863	0.932			**0.903**
4 - 6 Volume	407	206	0	0	**613**
4 - 6 Peak Hour	17:00	17:00			**17:00**
4 - 6 Pk Volume	245	113	0	0	**358**
Pk Hr Factor	0.863	0.856	0.000	0.000	**0.895**

121

Prepared by NDS/ATD

VOLUME

Fenton Pkwy Bet. Friars Rd & Rio San Diego Dr/Fenton Marketplace Dwy

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_120

DAILY TOTALS	NB	SB	EB	WB	Total
	5,763	6,940	0	0	12,703

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	8		10						18		12:00	124		156						280	
00:15	11		6						17		12:15	121		155						276	
00:30	1		5						6		12:30	152		149						301	
00:45	2	22	2	23					4	45	12:45	112	509	129	589					241	1098
01:00	6		4						10		13:00	106		152						258	
01:15	3		3						6		13:15	127		133						260	
01:30	1		1						2		13:30	110		113						223	
01:45	3	13	3	11					6	24	13:45	113	456	114	512					227	968
02:00	3		3						6		14:00	108		132						240	
02:15	0		1						1		14:15	110		130						240	
02:30	1		5						6		14:30	93		125						218	
02:45	0	4	5	14					5	18	14:45	106	417	133	520					239	937
03:00	1		1						2		15:00	105		158						263	
03:15	1		4						5		15:15	96		132						228	
03:30	4		1						5		15:30	100		145						245	
03:45	3	9	6	12					9	21	15:45	94	395	150	585					244	980
04:00	2		7						9		16:00	116		163						279	
04:15	3		5						8		16:15	101		124						225	
04:30	4		1						5		16:30	100		112						212	
04:45	9	18	4	17					13	35	16:45	110	427	147	546					257	973
05:00	11		7						18		17:00	134		160						294	
05:15	11		6						17		17:15	122		178						300	
05:30	27		16						43		17:30	92		143						235	
05:45	26	75	17	46					43	121	17:45	125	473	134	615					259	1088
06:00	25		15						40		18:00	113		145						258	
06:15	34		19						53		18:15	102		160						262	
06:30	38		27						65		18:30	119		162						281	
06:45	37	134	40	101					77	235	18:45	102	436	122	589					224	1025
07:00	41		33						74		19:00	103		154						257	
07:15	66		42						108		19:15	102		122						224	
07:30	73		62						135		19:30	85		101						186	
07:45	61	241	62	199					123	440	19:45	82	372	107	484					189	856
08:00	51		59						110		20:00	103		89						192	
08:15	64		66						130		20:15	84		58						142	
08:30	60		44						104		20:30	66		42						108	
08:45	67	242	62	231					129	473	20:45	51	304	47	236					98	540
09:00	47		70						117		21:00	53		34						87	
09:15	51		85						136		21:15	41		28						69	
09:30	60		83						143		21:30	37		35						72	
09:45	55	213	118	356					173	569	21:45	35	166	6	103					41	269
10:00	79		102						181		22:00	19		24						43	
10:15	68		117						185		22:15	22		16						38	
10:30	93		130						223		22:30	10		11						21	
10:45	95	335	119	468					214	803	22:45	11	62	16	67					27	129
11:00	75		125						200		23:00	18		9						27	
11:15	99		147						246		23:15	12		15						27	
11:30	107		144						251		23:30	7		12						19	
11:45	113	394	152	568					265	962	23:45	9	46	12	48					21	94
TOTALS		1700		2046						3746	TOTALS		4063		4894						8957
SPLIT %		45.4%		54.6%						29.5%	SPLIT %		45.4%		54.6%						70.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	5,763	6,940	0	0	12,703

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:00	16:45			12:00
AM Pk Volume	510	612			1122	PM Pk Volume	509	628			1098
Pk Hr Factor	0.839	0.981			0.932	Pk Hr Factor	0.837	0.882			0.912
7 - 9 Volume	483	430	0	0	913	4 - 6 Volume	900	1161	0	0	2061
7 - 9 Peak Hour	07:15	07:30			07:30	4 - 6 Peak Hour	17:00	16:45			17:00
7 - 9 Pk Volume	251	249	0	0	498	4 - 6 Pk Volume	473	628	0	0	1088
Pk Hr Factor	0.860	0.943	0.000	0.000	0.922	Pk Hr Factor	0.882	0.882	0.000	0.000	0.907

121

Prepared by NDS/ATD

VOLUME

Fenton Pkwy Bet. Friars Rd & Rio San Diego Dr/Fenton Marketplace Dwy

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_120

DAILY TOTALS	NB	SB	EB	WB	Total
	5,802	6,719	0	0	12,521

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	6		7				13		12:00	114		130				244	
00:15	5		3				8		12:15	104		176				280	
00:30	6		5				11		12:30	126		139				265	
00:45	4	21	7	22			11	43	12:45	124	468	164	609			288	1077
01:00	4		4				8		13:00	133		135				268	
01:15	3		4				7		13:15	105		151				256	
01:30	1		4				5		13:30	120		133				253	
01:45	2	10	2	14			4	24	13:45	124	482	112	531			236	1013
02:00	4		5				9		14:00	120		116				236	
02:15	0		3				3		14:15	106		136				242	
02:30	4		7				11		14:30	83		123				206	
02:45	3	11	5	20			8	31	14:45	119	428	134	509			253	937
03:00	2		4				6		15:00	114		122				236	
03:15	3		3				6		15:15	110		111				221	
03:30	2		2				4		15:30	119		103				222	
03:45	3	10	2	11			5	21	15:45	86	429	153	489			239	918
04:00	2		9				11		16:00	106		125				231	
04:15	6		7				13		16:15	113		181				294	
04:30	6		0				6		16:30	134		125				259	
04:45	7	21	8	24			15	45	16:45	124	477	130	561			254	1038
05:00	13		8				21		17:00	125		132				257	
05:15	12		2				14		17:15	118		154				272	
05:30	28		11				39		17:30	97		165				262	
05:45	27	80	22	43			49	123	17:45	107	447	158	609			265	1056
06:00	33		15				48		18:00	107		138				245	
06:15	30		18				48		18:15	92		135				227	
06:30	37		28				65		18:30	112		132				244	
06:45	41	141	33	94			74	235	18:45	102	413	117	522			219	935
07:00	34		47				81		19:00	102		106				208	
07:15	53		63				116		19:15	72		89				161	
07:30	63		46				109		19:30	86		80				166	
07:45	60	210	57	213			117	423	19:45	84	344	86	361			170	705
08:00	43		73				116		20:00	92		67				159	
08:15	71		58				129		20:15	74		64				138	
08:30	54		63				117		20:30	85		51				136	
08:45	52	220	77	271			129	491	20:45	85	336	34	216			119	552
09:00	60		61				121		21:00	54		45				99	
09:15	59		61				120		21:15	54		37				91	
09:30	69		92				161		21:30	35		29				64	
09:45	67	255	92	306			159	561	21:45	19	162	28	139			47	301
10:00	53		96				149		22:00	23		14				37	
10:15	63		137				200		22:15	19		13				32	
10:30	66		110				176		22:30	22		21				43	
10:45	100	282	136	479			236	761	22:45	24	88	17	65			41	153
11:00	88		119				207		23:00	9		10				19	
11:15	93		159				252		23:15	8		8				16	
11:30	111		148				259		23:30	15		23				38	
11:45	123	415	132	558			255	973	23:45	20	52	12	53			32	105
TOTALS		1676		2055				3731	TOTALS		4126		4664				8790
SPLIT %		44.9%		55.1%				29.8%	SPLIT %		46.9%		53.1%				70.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	5,802	6,719	0	0	12,521

AM Peak Hour	11:45	11:30			11:45	PM Peak Hour	16:30	17:15			12:15
AM Pk Volume	467	586			1044	PM Pk Volume	501	615			1101
Pk Hr Factor	0.927	0.832			0.932	Pk Hr Factor	0.935	0.932			0.956
7 - 9 Volume	430	484	0	0	914	4 - 6 Volume	924	1170	0	0	2094
7 - 9 Peak Hour	07:30	08:00			08:00	4 - 6 Peak Hour	16:30	17:00			16:15
7 - 9 Pk Volume	237	271	0	0	491	4 - 6 Pk Volume	501	609	0	0	1064
Pk Hr Factor	0.835	0.880	0.000	0.000	0.952	Pk Hr Factor	0.935	0.923	0.000	0.000	0.905

Prepared by NDS/ATD

VOLUME

Fenton Pkwy Bet. Rio San Diego Dr/Fenton Marketplace Dwy & Del Rio Apartment Dwy

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_121

DAILY TOTALS	NB	SB	EB	WB	Total
	2,885	2,663	0	0	5,548

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	11		13						24		12:00	68		56						124	
00:15	9		4						13		12:15	70		78						148	
00:30	0		3						3		12:30	71		68						139	
00:45	2	22	2	22					4	44	12:45	73	282	63	265					136	547
01:00	1		1						2		13:00	73		57						130	
01:15	2		3						5		13:15	70		67						137	
01:30	0		1						1		13:30	53		44						97	
01:45	0	3	1	6					1	9	13:45	55	251	58	226					113	477
02:00	1		2						3		14:00	54		54						108	
02:15	0		1						1		14:15	47		62						109	
02:30	1		1						2		14:30	46		59						105	
02:45	0	2	7	11					7	13	14:45	51	198	49	224					100	422
03:00	1		1						2		15:00	59		58						117	
03:15	0		0						0		15:15	51		55						106	
03:30	2		0						2		15:30	45		54						99	
03:45	2	5	1	2					3	7	15:45	45	200	54	221					99	421
04:00	1		0						1		16:00	64		52						116	
04:15	3		3						6		16:15	57		55						112	
04:30	1		1						2		16:30	43		45						88	
04:45	4	9	2	6					6	15	16:45	55	219	52	204					107	423
05:00	6		5						11		17:00	78		63						141	
05:15	6		2						8		17:15	59		67						126	
05:30	7		2						9		17:30	64		47						111	
05:45	5	24	6	15					11	39	17:45	48	249	37	214					85	463
06:00	9		4						13		18:00	45		44						89	
06:15	14		9						23		18:15	60		53						113	
06:30	18		11						29		18:30	54		47						101	
06:45	12	53	9	33					21	86	18:45	48	207	42	186					90	393
07:00	17		13						30		19:00	52		48						100	
07:15	26		10						36		19:15	49		36						85	
07:30	36		24						60		19:30	45		36						81	
07:45	31	110	16	63					47	173	19:45	45	191	30	150					75	341
08:00	28		19						47		20:00	35		35						70	
08:15	36		24						60		20:15	33		28						61	
08:30	20		28						48		20:30	28		15						43	
08:45	32	116	24	95					56	211	20:45	43	139	20	98					63	237
09:00	16		21						37		21:00	26		14						40	
09:15	27		31						58		21:15	22		11						33	
09:30	26		35						61		21:30	29		18						47	
09:45	30	99	37	124					67	223	21:45	21	98	10	53					31	151
10:00	30		36						66		22:00	16		21						37	
10:15	35		44						79		22:15	10		10						20	
10:30	42		41						83		22:30	7		5						12	
10:45	43	150	38	159					81	309	22:45	8	41	10	46					18	87
11:00	29		55						84		23:00	7		5						12	
11:15	60		41						101		23:15	3		9						12	
11:30	60		56						116		23:30	3		6						9	
11:45	53	202	62	214					115	416	23:45	2	15	6	26					8	41
TOTALS		795		750						1545	TOTALS		2090		1913						4003
SPLIT %		51.5%		48.5%						27.8%	SPLIT %		52.2%		47.8%						72.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,885	2,663	0	0	5,548

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:15	12:15			12:15
AM Pk Volume	262	264			526	PM Pk Volume	287	266			553
Pk Hr Factor	0.923	0.846			0.889	Pk Hr Factor	0.983	0.853			0.934
7 - 9 Volume	226	158	0	0	384	4 - 6 Volume	468	418	0	0	886
7 - 9 Peak Hour	07:30	08:00			07:30	4 - 6 Peak Hour	16:45	16:45			16:45
7 - 9 Pk Volume	131	95	0	0	214	4 - 6 Pk Volume	256	229	0	0	485
Pk Hr Factor	0.910	0.848	0.000	0.000	0.892	Pk Hr Factor	0.821	0.854	0.000	0.000	0.860

Prepared by NDS/ATD

VOLUME

Fenton Pkwy Bet. Rio San Diego Dr/Fenton Marketplace Dwy & Del Rio Apartment Dwy

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_121

DAILY TOTALS	NB	SB	EB	WB	Total
	2,763	2,484	0	0	5,247

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	3		5						8		12:00	52		48						100	
00:15	5		5						10		12:15	52		59						111	
00:30	3		4						7		12:30	69		52						121	
00:45	0	11	4	18					4	29	12:45	67	240	75	234					142	474
01:00	1		3						4		13:00	60		47						107	
01:15	2		3						5		13:15	50		56						106	
01:30	3		4						7		13:30	54		63						117	
01:45	0	6	5	15					5	21	13:45	70	234	56	222					126	456
02:00	1		4						5		14:00	65		47						112	
02:15	1		1						2		14:15	58		62						120	
02:30	2		4						6		14:30	31		34						65	
02:45	2	6	3	12					5	18	14:45	62	216	46	189					108	405
03:00	1		2						3		15:00	45		39						84	
03:15	0		2						2		15:15	60		45						105	
03:30	3		4						7		15:30	53		51						104	
03:45	1	5	1	9					2	14	15:45	46	204	54	189					100	393
04:00	1		5						6		16:00	57		50						107	
04:15	4		4						8		16:15	47		59						106	
04:30	4		0						4		16:30	52		41						93	
04:45	3	12	1	10					4	22	16:45	61	217	55	205					116	422
05:00	9		6						15		17:00	57		55						112	
05:15	3		1						4		17:15	57		63						120	
05:30	8		1						9		17:30	58		60						118	
05:45	6	26	5	13					11	39	17:45	66	238	62	240					128	478
06:00	12		5						17		18:00	58		46						104	
06:15	13		13						26		18:15	45		34						79	
06:30	14		11						25		18:30	36		35						71	
06:45	13	52	5	34					18	86	18:45	52	191	38	153					90	344
07:00	15		12						27		19:00	42		34						76	
07:15	25		19						44		19:15	34		26						60	
07:30	33		15						48		19:30	29		29						58	
07:45	29	102	11	57					40	159	19:45	34	139	32	121					66	260
08:00	23		14						37		20:00	42		28						70	
08:15	31		15						46		20:15	38		24						62	
08:30	24		16						40		20:30	32		28						60	
08:45	27	105	26	71					53	176	20:45	45	157	18	98					63	255
09:00	30		22						52		21:00	30		17						47	
09:15	27		24						51		21:15	22		20						42	
09:30	26		37						63		21:30	22		19						41	
09:45	23	106	24	107					47	213	21:45	7	81	16	72					23	153
10:00	21		40						61		22:00	12		10						22	
10:15	28		40						68		22:15	15		7						22	
10:30	37		43						80		22:30	13		11						24	
10:45	47	133	46	169					93	302	22:45	13	53	13	41					26	94
11:00	40		28						68		23:00	4		2						6	
11:15	46		53						99		23:15	7		5						12	
11:30	62		45						107		23:30	2		10						12	
11:45	64	212	54	180					118	392	23:45	4	17	8	25					12	42
TOTALS		776		695						1471	TOTALS		1987		1789						3776
SPLIT %		52.8%		47.2%						28.0%	SPLIT %		52.6%		47.4%						72.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,763	2,484	0	0	5,247

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:15	12:45			12:15
AM Pk Volume	237	213			450	PM Pk Volume	248	241			481
Pk Hr Factor	0.859	0.903			0.930	Pk Hr Factor	0.899	0.803			0.847
7 - 9 Volume	207	128	0	0	335	4 - 6 Volume	455	445	0	0	900
7 - 9 Peak Hour	07:30	08:00			08:00	4 - 6 Peak Hour	17:00	17:00			17:00
7 - 9 Pk Volume	116	71	0	0	176	4 - 6 Pk Volume	238	240	0	0	478
Pk Hr Factor	0.879	0.683	0.000	0.000	0.830	Pk Hr Factor	0.902	0.952	0.000	0.000	0.934

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Mission City Parkway, From Camino Del Rio North to Camino Del Rio South

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	2		16					12:00	93		55				
00:15	1		12					12:15	61		51				
00:30	1		4					12:30	49		61				
00:45	1	5	4	36			41	12:45	55	258	87	254			512
01:00	0		1					13:00	48		70				
01:15	3		4					13:15	30		63				
01:30	1		1					13:30	32		53				
01:45	1	5	3	9			14	13:45	45	155	52	238			393
02:00	0		0					14:00	32		68				
02:15	0		5					14:15	36		57				
02:30	1		1					14:30	35		66				
02:45	0	1	0	6			7	14:45	29	132	88	279			411
03:00	0		0					15:00	26		74				
03:15	0		2					15:15	26		63				
03:30	0		2					15:30	37		78				
03:45	0	0	0	4			4	15:45	36	125	85	300			425
04:00	1		1					16:00	55		152				
04:15	2		1					16:15	50		112				
04:30	2		0					16:30	49		171				
04:45	17	22	3	5			27	16:45	62	216	143	578			794
05:00	7		2					17:00	64		170				
05:15	16		3					17:15	52		148				
05:30	16		4					17:30	52		135				
05:45	16	55	5	14			69	17:45	44	212	90	543			755
06:00	16		3					18:00	42		121				
06:15	24		5					18:15	16		62				
06:30	32		12					18:30	17		55				
06:45	64	136	23	43			179	18:45	17	92	48	286			378
07:00	61		24					19:00	9		46				
07:15	75		38					19:15	11		28				
07:30	87		32					19:30	21		23				
07:45	129	352	48	142			494	19:45	7	48	26	123			171
08:00	103		64					20:00	15		23				
08:15	103		62					20:15	6		18				
08:30	105		57					20:30	6		13				
08:45	104	415	59	242			657	20:45	7	34	28	82			116
09:00	70		41					21:00	14		14				
09:15	60		37					21:15	6		18				
09:30	40		41					21:30	6		7				
09:45	45	215	29	148			363	21:45	15	41	12	51			92
10:00	26		31					22:00	18		10				
10:15	27		38					22:15	9		7				
10:30	25		27					22:30	8		11				
10:45	30	108	34	130			238	22:45	10	45	2	30			75
11:00	32		31					23:00	7		12				
11:15	38		40					23:15	10		5				
11:30	32		36					23:30	6		3				
11:45	43	145	59	166			311	23:45	7	30	4	24			54
Total Vol.		1459		945			**2404**			1388		2788			**4176**

Daily Totals

NB	SB	EB	WB	**Combined**
2847	3733			**6580**

	AM			PM		
Split %	60.7%	39.3%	**36.5%**	33.2%	66.8%	**63.5%**
Peak Hour	07:45	08:00	**07:45**	12:00	16:30	**16:30**
Volume	440	242	**671**	258	632	**859**
P.H.F.	0.85	0.95	**0.95**	0.68	0.92	**0.92**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Mission City Parkway, From Camino Del Rio North to Camino Del Rio South

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	3		11					12:00	45		58				
00:15	2		3					12:15	61		60				
00:30	4		3					12:30	48		61				
00:45	2	11	2	19			30	12:45	39	193	87	266			459
01:00	4		4					13:00	39		67				
01:15	3		4					13:15	40		52				
01:30	2		0					13:30	36		67				
01:45	1	10	3	11			21	13:45	35	150	47	233			383
02:00	0		1					14:00	35		64				
02:15	1		5					14:15	24		55				
02:30	4		1					14:30	27		60				
02:45	1	6	1	8			14	14:45	35	121	63	242			363
03:00	3		1					15:00	32		91				
03:15	2		0					15:15	27		51				
03:30	4		0					15:30	49		104				
03:45	4	13	0	1			14	15:45	44	152	72	318			470
04:00	5		0					16:00	49		102				
04:15	1		0					16:15	34		106				
04:30	2		0					16:30	44		156				
04:45	20	28	1	1			29	16:45	45	172	144	508			680
05:00	9		1					17:00	55		201				
05:15	17		2					17:15	47		155				
05:30	13		3					17:30	40		141				
05:45	20	59	2	8			67	17:45	32	174	92	589			763
06:00	17		2					18:00	30		99				
06:15	23		4					18:15	19		78				
06:30	41		10					18:30	22		47				
06:45	77	158	16	32			190	18:45	19	90	32	256			346
07:00	56		19					19:00	9		33				
07:15	75		18					19:15	7		24				
07:30	115		33					19:30	13		24				
07:45	115	361	45	115			476	19:45	12	41	19	100			141
08:00	117		46					20:00	9		13				
08:15	117		43					20:15	6		21				
08:30	94		55					20:30	8		14				
08:45	70	398	42	186			584	20:45	4	27	24	72			99
09:00	59		45					21:00	4		34				
09:15	40		33					21:15	10		14				
09:30	43		24					21:30	4		16				
09:45	39	181	38	140			321	21:45	11	29	8	72			101
10:00	27		30					22:00	28		16				
10:15	27		34					22:15	14		15				
10:30	24		30					22:30	12		8				
10:45	22	100	36	130			230	22:45	10	64	9	48			112
11:00	32		38					23:00	11		16				
11:15	39		36					23:15	6		5				
11:30	37		50					23:30	9		5				
11:45	37	145	48	172			317	23:45	11	37	4	30			67
Total Vol.		1470		823			**2293**			1250		2734			**3984**

Daily Totals

NB	SB	EB	WB	**Combined**
2720	3557			**6277**

	AM			**PM**		
Split %	64.1%	35.9%	**36.5%**	31.4%	68.6%	**63.5%**
Peak Hour	07:30	11:45	**07:45**	12:00	16:30	**16:30**
Volume	464	227	**632**	193	656	**847**
P.H.F.	0.99	0.93	**0.97**	0.83	0.82	**0.83**

Prepared by NDS/ATD

VOLUME

Northside Dr Bet. Portofino Dwy & Friars Rd

Day: Wednesday
Date: 9/9/2015

City: San Diego
Project #: CA15_4269_123

DAILY TOTALS	NB	SB	EB	WB	Total
	3,237	3,319	0	0	6,556

AM Period	NB		SB		EB		WB		TOTAL	
00:00	1		0						1	
00:15	5		6						11	
00:30	5		2						7	
00:45	4	15	1	9					5	24
01:00	6		2						8	
01:15	3		2						5	
01:30	3		2						5	
01:45	11	23	3	9					14	32
02:00	5		3						8	
02:15	0		2						2	
02:30	7		3						10	
02:45	2	14	2	10					4	24
03:00	4		1						5	
03:15	0		1						1	
03:30	1		2						3	
03:45	1	6	4	8					5	14
04:00	0		9						9	
04:15	2		3						5	
04:30	6		14						20	
04:45	2	10	19	45					21	55
05:00	0		12						12	
05:15	3		29						32	
05:30	4		34						38	
05:45	6	13	32	107					38	120
06:00	7		37						44	
06:15	11		46						57	
06:30	6		75						81	
06:45	16	40	74	232					90	272
07:00	11		99						110	
07:15	11		76						87	
07:30	11		86						97	
07:45	21	54	87	348					108	402
08:00	34		72						106	
08:15	31		86						117	
08:30	21		69						90	
08:45	21	107	67	294					88	401
09:00	20		33						53	
09:15	23		57						80	
09:30	29		46						75	
09:45	19	91	48	184					67	275
10:00	34		38						72	
10:15	25		37						62	
10:30	22		44						66	
10:45	29	110	42	161					71	271
11:00	29		40						69	
11:15	48		43						91	
11:30	25		41						66	
11:45	34	136	40	164					74	300
TOTALS		619		1571						**2190**
SPLIT %		28.3%		71.7%						**33.4%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	46		39						85	
12:15	29		37						66	
12:30	34		50						84	
12:45	45	154	46	172					91	326
13:00	45		33						78	
13:15	48		43						91	
13:30	42		48						90	
13:45	49	184	38	162					87	346
14:00	47		45						92	
14:15	39		31						70	
14:30	60		43						103	
14:45	53	199	41	160					94	359
15:00	60		46						106	
15:15	64		43						107	
15:30	50		55						105	
15:45	57	231	37	181					94	412
16:00	58		39						97	
16:15	70		41						111	
16:30	59		45						104	
16:45	75	262	53	178					128	440
17:00	84		61						145	
17:15	78		60						138	
17:30	93		46						139	
17:45	81	336	53	220					134	556
18:00	99		44						143	
18:15	78		51						129	
18:30	72		54						126	
18:45	73	322	54	203					127	525
19:00	82		56						138	
19:15	75		44						119	
19:30	78		30						108	
19:45	75	310	38	168					113	478
20:00	60		33						93	
20:15	47		33						80	
20:30	60		28						88	
20:45	63	230	33	127					96	357
21:00	54		20						74	
21:15	38		22						60	
21:30	53		28						81	
21:45	40	185	16	86					56	271
22:00	40		17						57	
22:15	35		22						57	
22:30	28		10						38	
22:45	27	130	8	57					35	187
23:00	16		11						27	
23:15	22		13						35	
23:30	22		5						27	
23:45	15	75	5	34					20	109
TOTALS		2618		1748						**4366**
SPLIT %		60.0%		40.0%						**66.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	3,237	3,319	0	0	6,556

AM Peak Hour	11:15	07:00			**07:30**	**PM Peak Hour**	17:15	16:45			**17:00**
AM Pk Volume	153	348			**428**	**PM Pk Volume**	351	220			**556**
Pk Hr Factor	0.797	0.879			**0.915**	**Pk Hr Factor**	0.886	0.902			**0.959**
7 - 9 Volume	161	642	0	0	**803**	**4 - 6 Volume**	598	398	0	0	**996**
7 - 9 Peak Hour	07:45	07:00			**07:30**	**4 - 6 Peak Hour**	17:00	16:45			**17:00**
7 - 9 Pk Volume	107	348	0	0	**428**	**4 - 6 Pk Volume**	336	220	0	0	**556**
Pk Hr Factor	0.787	0.879	0.000	0.000	**0.915**	**Pk Hr Factor**	0.903	0.902	0.000	0.000	**0.959**

Prepared by NDS/ATD

VOLUME

Northside Dr Bet. Portofino Dwy & Friars Rd

Day: Thursday
Date: 9/10/2015

City: San Diego
Project #: CA15_4269_123

DAILY TOTALS	NB	SB	EB	WB	Total
	3,286	3,342	0	0	6,628

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	14		5						19		12:00	44		43						87	
00:15	6		5						11		12:15	30		44						74	
00:30	14		6						20		12:30	47		43						90	
00:45	6	40	5	21					11	61	12:45	57	178	47	177					104	355
01:00	4		5						9		13:00	30		43						73	
01:15	11		0						11		13:15	34		38						72	
01:30	4		4						8		13:30	43		35						78	
01:45	5	24	1	10					6	34	13:45	30	137	43	159					73	296
02:00	7		3						10		14:00	51		32						83	
02:15	3		1						4		14:15	49		40						89	
02:30	1		2						3		14:30	56		48						104	
02:45	1	12	3	9					4	21	14:45	40	196	40	160					80	356
03:00	2		2						4		15:00	52		38						90	
03:15	5		4						9		15:15	62		40						102	
03:30	3		4						7		15:30	51		38						89	
03:45	3	13	4	14					7	27	15:45	66	231	38	154					104	385
04:00	3		3						6		16:00	67		39						106	
04:15	1		6						7		16:15	69		41						110	
04:30	3		17						20		16:30	69		56						125	
04:45	3	10	19	45					22	55	16:45	71	276	56	192					127	468
05:00	3		14						17		17:00	80		58						138	
05:15	2		22						24		17:15	92		51						143	
05:30	3		31						34		17:30	82		62						144	
05:45	5	13	38	105					43	118	17:45	92	346	55	226					147	572
06:00	7		35						42		18:00	84		58						142	
06:15	10		50						60		18:15	93		56						149	
06:30	8		82						90		18:30	82		36						118	
06:45	9	34	62	229					71	263	18:45	66	325	51	201					117	526
07:00	6		73						79		19:00	70		37						107	
07:15	11		94						105		19:15	67		42						109	
07:30	15		87						102		19:30	59		39						98	
07:45	20	52	82	336					102	388	19:45	66	262	25	143					91	405
08:00	24		68						92		20:00	66		42						108	
08:15	18		82						100		20:15	54		27						81	
08:30	26		78						104		20:30	56		34						90	
08:45	27	95	74	302					101	397	20:45	61	237	25	128					86	365
09:00	20		51						71		21:00	63		32						95	
09:15	39		46						85		21:15	50		23						73	
09:30	33		66						99		21:30	43		25						68	
09:45	27	119	40	203					67	322	21:45	46	202	23	103					69	305
10:00	25		50						75		22:00	42		20						62	
10:15	19		27						46		22:15	39		20						59	
10:30	27		39						66		22:30	18		18						36	
10:45	31	102	36	152					67	254	22:45	30	129	8	66					38	195
11:00	36		41						77		23:00	33		9						42	
11:15	45		33						78		23:15	21		21						42	
11:30	38		43						81		23:30	26		10						36	
11:45	40	159	43	160					83	319	23:45	14	94	7	47					21	141
TOTALS		673		1586						**2259**	**TOTALS**		2613		1756						**4369**
SPLIT %		29.8%		70.2%						**34.1%**	**SPLIT %**		59.8%		40.2%						**65.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	3,286	3,342	0	0	6,628

AM Peak Hour	11:15	07:00			**07:15**	**PM Peak Hour**	17:30	17:30			**17:30**
AM Pk Volume	167	336			**401**	**PM Pk Volume**	351	231			**582**
Pk Hr Factor	0.928	0.894			**0.955**	**Pk Hr Factor**	0.944	0.931			**0.977**
7 - 9 Volume	147	638	0	0	**785**	**4 - 6 Volume**	622	418	0	0	**1040**
7 - 9 Peak Hour	08:00	07:00			**07:15**	**4 - 6 Peak Hour**	17:00	16:45			**17:00**
7 - 9 Pk Volume	95	336	0	0	**401**	**4 - 6 Pk Volume**	346	227	0	0	**572**
Pk Hr Factor	0.880	0.894	0.000	0.000	**0.955**	**Pk Hr Factor**	0.940	0.915	0.000	0.000	**0.973**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Northside Drive, From Friars Road to Fenton Marketplace Driveway

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	24		18					12:00	219		218				
00:15	21		20					12:15	226		251				
00:30	22		16					12:30	205		262				
00:45	26	93	11	65			158	12:45	218	868	235	966			1834
01:00	18		9					13:00	205		216				
01:15	20		12					13:15	184		203				
01:30	15		5					13:30	161		214				
01:45	19	72	4	30			102	13:45	177	727	202	835			1562
02:00	20		9					14:00	184		181				
02:15	5		5					14:15	161		162				
02:30	10		4					14:30	184		174				
02:45	1	36	6	24			60	14:45	191	720	184	701			1421
03:00	0		6					15:00	165		151				
03:15	2		5					15:15	184		166				
03:30	1		4					15:30	177		184				
03:45	5	8	4	19			27	15:45	184	710	195	696			1406
04:00	6		5					16:00	208		198				
04:15	4		9					16:15	251		161				
04:30	5		10					16:30	229		184				
04:45	9	24	15	39			63	16:45	232	920	166	709			1629
05:00	19		16					17:00	218		184				
05:15	20		15					17:15	248		188				
05:30	26		21					17:30	216		151				
05:45	22	87	32	84			171	17:45	202	884	162	685			1569
06:00	32		41					18:00	208		154				
06:15	40		50					18:15	216		142				
06:30	65		70					18:30	184		135				
06:45	70	207	88	249			456	18:45	151	759	121	552			1311
07:00	80		128					19:00	135		135				
07:15	65		95					19:15	121		144				
07:30	68		126					19:30	116		125				
07:45	77	290	138	487			777	19:45	108	480	105	509			989
08:00	84		156					20:00	121		88				
08:15	88		141					20:15	103		95				
08:30	94		177					20:30	88		70				
08:45	81	347	142	616			963	20:45	91	403	68	321			724
09:00	104		152					21:00	70		77				
09:15	111		162					21:15	65		84				
09:30	121		135					21:30	66		65				
09:45	135	471	141	590			1061	21:45	50	251	40	266			517
10:00	141		151					22:00	35		35				
10:15	151		168					22:15	41		44				
10:30	168		177					22:30	35		41				
10:45	177	637	184	680			1317	22:45	28	139	28	148			287
11:00	191		195					23:00	22		20				
11:15	205		213					23:15	26		19				
11:30	215		206					23:30	19		20				
11:45	206	817	218	832			1649	23:45	20	87	24	83			170
Total Vol.		3089		3715			**6804**			6948		6471			**13419**

Daily Totals

NB	SB	EB	WB	**Combined**
10037	10186			**20223**

	AM			**PM**		
Split %	45.4%	54.6%	**33.6%**	51.8%	48.2%	**66.4%**
Peak Hour	11:30	11:45	**11:45**	16:15	12:00	**12:00**
Volume	866	949	**1805**	930	966	**1834**
P.H.F.	0.96	0.91	**0.95**	0.94	0.92	**0.96**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Northside Drive, From Friars Road to Fenton Marketplace Driveway

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	18		24					12:00	199		191				
00:15	20		21					12:15	218		213				
00:30	16		18					12:30	209		241				
00:45	19	73	20	83			156	12:45	235	861	215	860			1721
01:00	20		16					13:00	204		206				
01:15	15		20					13:15	191		218				
01:30	11		15					13:30	188		205				
01:45	9	55	11	62			117	13:45	188	771	188	817			1588
02:00	12		9					14:00	161		195				
02:15	16		10					14:15	174		206				
02:30	11		5					14:30	180		184				
02:45	8	47	4	28			75	14:45	199	714	181	766			1480
03:00	6		9					15:00	177		190				
03:15	4		5					15:15	156		165				
03:30	3		4					15:30	148		155				
03:45	1	14	6	24			38	15:45	189	670	168	678			1348
04:00	2		9					16:00	198		174				
04:15	0		9					16:15	262		195				
04:30	4		12					16:30	245		165				
04:45	9	15	18	48			63	16:45	255	960	150	684			1644
05:00	8		22					17:00	243		144				
05:15	12		26					17:15	235		168				
05:30	18		35					17:30	215		174				
05:45	22	60	44	127			187	17:45	226	919	195	681			1600
06:00	19		51					18:00	208		184				
06:15	44		68					18:15	219		105				
06:30	51		84					18:30	205		116				
06:45	68	182	95	298			480	18:45	184	816	128	533			1349
07:00	88		105					19:00	161		131				
07:15	91		126					19:15	141		105				
07:30	70		135					19:30	111		121				
07:45	65	314	151	517			831	19:45	99	512	106	463			975
08:00	77		141					20:00	84		88				
08:15	84		165					20:15	101		90				
08:30	91		184					20:30	95		101				
08:45	99	351	151	641			992	20:45	80	360	84	363			723
09:00	87		141					21:00	70		80				
09:15	105		142					21:15	65		70				
09:30	111		148					21:30	77		65				
09:45	141	444	162	593			1037	21:45	84	296	40	255			551
10:00	168		177					22:00	54		41				
10:15	177		184					22:15	55		35				
10:30	154		155					22:30	40		28				
10:45	162	661	195	711			1372	22:45	32	181	33	137			318
11:00	195		162					23:00	28		25				
11:15	189		189					23:15	26		20				
11:30	205		212					23:30	22		19				
11:45	212	801	210	773			1574	23:45	20	96	20	84			180
Total Vol.		3017		3905			**6922**			7156		6321			**13477**

Daily Totals

NB	SB	EB	WB	**Combined**
10173	10226			**20399**

	AM			**PM**		
Split %	43.6%	56.4%	**33.9%**	53.1%	46.9%	**66.1%**
Peak Hour	11:45	11:45	**11:45**	16:15	12:30	**12:15**
Volume	838	855	**1693**	1005	880	**1741**
P.H.F.	0.96	0.89	**0.94**	0.97	0.91	**0.97**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Northside Drive, From Fenton Marketplace Driveway to Lowe's frontage road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	22		24					12:00	206		151				
00:15	18		19					12:15	215		168				
00:30	20		15					12:30	203		177				
00:45	16	76	19	77			153	12:45	218	842	170	666			1508
01:00	19		11					13:00	205		184				
01:15	20		12					13:15	181		177				
01:30	15		16					13:30	165		105				
01:45	11	65	11	50			115	13:45	151	702	111	577			1279
02:00	11		8					14:00	142		106				
02:15	10		9					14:15	135		89				
02:30	8		10					14:30	142		90				
02:45	9	38	5	32			70	14:45	161	580	70	355			935
03:00	8		4					15:00	165		65				
03:15	7		9					15:15	144		77				
03:30	5		5					15:30	142		54				
03:45	6	26	10	28			54	15:45	154	605	74	270			875
04:00	5		5					16:00	168		88				
04:15	8		9					16:15	215		111				
04:30	4		8					16:30	206		105				
04:45	10	27	10	32			59	16:45	212	801	88	392			1193
05:00	19		11					17:00	242		91				
05:15	15		16					17:15	202		121				
05:30	19		19					17:30	219		98				
05:45	35	88	21	67			155	17:45	188	851	116	426			1277
06:00	31		28					18:00	188		105				
06:15	36		35					18:15	191		88				
06:30	40		44					18:30	165		91				
06:45	51	158	60	167			325	18:45	170	714	70	354			1068
07:00	68		77					19:00	154		84				
07:15	70		65					19:15	142		70				
07:30	61		78					19:30	105		65				
07:45	66	265	105	325			590	19:45	111	512	55	274			786
08:00	75		126					20:00	84		70				
08:15	74		131					20:15	95		65				
08:30	88		130					20:30	70		51				
08:45	81	318	115	502			820	20:45	65	314	65	251			565
09:00	77		101					21:00	44		50				
09:15	84		121					21:15	35		40				
09:30	95		113					21:30	40		35				
09:45	88	344	128	463			807	21:45	28	147	44	169			316
10:00	108		135					22:00	21		28				
10:15	111		106					22:15	19		22				
10:30	162		141					22:30	20		16				
10:45	151	532	151	533			1065	22:45	24	84	18	84			168
11:00	188		161					23:00	18		20				
11:15	215		168					23:15	20		15				
11:30	200		120					23:30	16		19				
11:45	213	816	131	580			1396	23:45	22	76	20	74			150
Total Vol.		2753		2856			**5609**			6228		3892			**10120**

Daily Totals

NB	SB	EB	WB	**Combined**
8981	6748			**15729**

	AM			**PM**		
Split %	49.1%	50.9%	**35.7%**	61.5%	38.5%	**64.3%**
Peak Hour	11:45	11:45	**11:45**	16:15	12:30	**12:15**
Volume	837	627	**1464**	875	708	**1540**
P.H.F.	0.97	0.89	**0.96**	0.98	0.96	**0.99**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Northside Drive, From Fenton Marketplace Driveway to Lowe's frontage road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	28		21					12:00	205		177				
00:15	20		20					12:15	222		165				
00:30	16		25					12:30	213		151				
00:45	18	82	20	86			168	12:45	242	882	168	661			1543
01:00	20		15					13:00	216		177				
01:15	15		11					13:15	206		184				
01:30	11		19					13:30	218		135				
01:45	9	55	20	65			120	13:45	184	824	141	637			1461
02:00	12		11					14:00	162		116				
02:15	11		8					14:15	151		88				
02:30	16		9					14:30	142		91				
02:45	9	48	12	40			88	14:45	135	590	70	365			955
03:00	5		5					15:00	144		54				
03:15	7		4					15:15	168		66				
03:30	9		6					15:30	177		84				
03:45	6	27	8	23			50	15:45	154	643	91	295			938
04:00	9		9					16:00	168		105				
04:15	5		5					16:15	191		105				
04:30	5		4					16:30	212		121				
04:45	8	27	10	28			55	16:45	235	806	103	434			1240
05:00	9		11					17:00	225		88				
05:15	15		18					17:15	215		95				
05:30	18		21					17:30	235		106				
05:45	20	62	26	76			138	17:45	205	880	117	406			1286
06:00	33		24					18:00	218		111				
06:15	42		28					18:15	188		90				
06:30	51		31					18:30	184		84				
06:45	40	166	44	127			293	18:45	174	764	84	369			1133
07:00	61		51					19:00	165		81				
07:15	88		84					19:15	141		77				
07:30	70		81					19:30	111		84				
07:45	65	284	111	327			611	19:45	126	543	65	307			850
08:00	70		121					20:00	103		40				
08:15	54		116					20:15	88		35				
08:30	66		138					20:30	70		44				
08:45	84	274	141	516			790	20:45	65	326	51	170			496
09:00	84		105					21:00	70		40				
09:15	77		116					21:15	54		35				
09:30	84		105					21:30	40		42				
09:45	91	336	118	444			780	21:45	35	199	28	145			344
10:00	98		126					22:00	22		21				
10:15	111		114					22:15	26		30				
10:30	124		124					22:30	20		26				
10:45	141	474	156	520			994	22:45	19	87	20	97			184
11:00	166		168					23:00	19		18				
11:15	184		174					23:15	20		22				
11:30	191		135					23:30	22		28				
11:45	206	747	142	619			1366	23:45	25	86	21	89			175
Total Vol.		2582		2871			**5453**			6630		3975			**10605**

Daily Totals

NB	SB	EB	WB	**Combined**
9212	6846			**16058**

	AM			**PM**		
Split %	47.4%	52.6%	**34.0%**	62.5%	37.5%	**66.0%**
Peak Hour	11:45	11:45	**11:45**	16:45	12:30	**12:30**
Volume	846	635	**1481**	910	680	**1557**
P.H.F.	0.95	0.90	**0.96**	0.95	0.92	**0.95**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Mission Village Drive, From Ronda Avenue to Friars Road WB Ramps

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	23		5					12:00	111		107				
00:15	14		5					12:15	114		117				
00:30	10		7					12:30	122		119				
00:45	6	53	4	21			74	12:45	133	480	115	458			938
01:00	11		3					13:00	97		171				
01:15	8		6					13:15	120		129				
01:30	6		2					13:30	100		129				
01:45	4	29	0	11			40	13:45	112	429	110	539			968
02:00	4		4					14:00	116		175				
02:15	5		1					14:15	103		141				
02:30	2		2					14:30	111		152				
02:45	5	16	3	10			26	14:45	135	465	124	592			1057
03:00	11		3					15:00	111		148				
03:15	0		3					15:15	145		155				
03:30	3		5					15:30	137		181				
03:45	2	16	5	16			32	15:45	136	529	205	689			1218
04:00	2		9					16:00	128		206				
04:15	6		10					16:15	142		191				
04:30	3		16					16:30	142		284				
04:45	6	17	15	50			67	16:45	139	551	288	969			1520
05:00	6		28					17:00	156		312				
05:15	12		31					17:15	195		352				
05:30	23		49					17:30	148		266				
05:45	24	65	48	156			221	17:45	141	640	298	1228			1868
06:00	35		50					18:00	117		252				
06:15	44		76					18:15	114		189				
06:30	53		98					18:30	120		135				
06:45	108	240	113	337			577	18:45	109	460	109	685			1145
07:00	169		132					19:00	109		114				
07:15	194		137					19:15	103		93				
07:30	200		159					19:30	119		71				
07:45	270	833	151	579			1412	19:45	104	435	77	355			790
08:00	212		129					20:00	74		66				
08:15	205		145					20:15	104		56				
08:30	141		149					20:30	78		48				
08:45	133	691	123	546			1237	20:45	72	328	52	222			550
09:00	128		100					21:00	71		46				
09:15	83		146					21:15	91		49				
09:30	83		92					21:30	68		33				
09:45	83	377	99	437			814	21:45	51	281	37	165			446
10:00	67		85					22:00	54		31				
10:15	69		99					22:15	43		29				
10:30	70		86					22:30	37		22				
10:45	79	285	88	358			643	22:45	31	165	24	106			271
11:00	78		96					23:00	30		18				
11:15	84		106					23:15	29		18				
11:30	101		87					23:30	26		10				
11:45	100	363	94	383			746	23:45	14	99	8	54			153
Total Vol.		2985		2904			**5889**			4862		6062			**10924**

Daily Totals

NB	SB	EB	WB	**Combined**
7847	8966			**16813**

	AM			**PM**		
Split %	50.7%	49.3%	**35.0%**	44.5%	55.5%	**65.0%**
Peak Hour	07:30	07:30	**07:30**	17:00	16:30	**16:30**
Volume	887	584	**1471**	640	1236	**1868**
P.H.F.	0.82	0.92	**0.87**	0.83	0.88	**0.85**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Mission Village Drive, From Ronda Avenue to Friars Road WB Ramps

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	10		9					12:00	109		87				
00:15	18		15					12:15	112		98				
00:30	15		2					12:30	96		101				
00:45	9	52	4	30			82	12:45	115	432	107	393			825
01:00	8		7					13:00	106		118				
01:15	8		1					13:15	79		119				
01:30	6		8					13:30	106		118				
01:45	8	30	3	19			49	13:45	98	389	115	470			859
02:00	3		2					14:00	95		122				
02:15	7		2					14:15	104		118				
02:30	5		5					14:30	122		120				
02:45	5	20	2	11			31	14:45	126	447	132	492			939
03:00	5		3					15:00	147		138				
03:15	3		4					15:15	162		134				
03:30	2		4					15:30	153		205				
03:45	6	16	8	19			35	15:45	149	611	243	720			1331
04:00	4		9					16:00	132		345				
04:15	7		6					16:15	131		344				
04:30	4		10					16:30	129		363				
04:45	5	20	20	45			65	16:45	122	514	438	1490			2004
05:00	4		21					17:00	156		445				
05:15	15		24					17:15	149		418				
05:30	19		41					17:30	155		337				
05:45	30	68	53	139			207	17:45	146	606	306	1506			2112
06:00	29		45					18:00	129		285				
06:15	35		79					18:15	105		184				
06:30	71		82					18:30	114		187				
06:45	120	255	123	329			584	18:45	135	483	122	778			1261
07:00	156		131					19:00	105		118				
07:15	235		127					19:15	98		88				
07:30	230		159					19:30	96		72				
07:45	276	897	157	574			1471	19:45	110	409	65	343			752
08:00	240		144					20:00	89		72				
08:15	200		137					20:15	82		37				
08:30	185		129					20:30	90		44				
08:45	159	784	117	527			1311	20:45	70	331	41	194			525
09:00	111		120					21:00	70		49				
09:15	77		139					21:15	67		45				
09:30	77		99					21:30	65		49				
09:45	91	356	91	449			805	21:45	59	261	48	191			452
10:00	68		110					22:00	48		63				
10:15	73		108					22:15	48		30				
10:30	63		89					22:30	33		21				
10:45	80	284	98	405			689	22:45	25	154	19	133			287
11:00	75		114					23:00	32		14				
11:15	74		109					23:15	21		12				
11:30	99		109					23:30	23		8				
11:45	98	346	120	452			798	23:45	30	106	14	48			154
Total Vol.		3128		2999			**6127**			4743		6758			**11501**

Daily Totals

NB	SB	EB	WB	**Combined**
7871	9757			**17628**

	AM			**PM**		
Split %	51.1%	48.9%	**34.8%**	41.2%	58.8%	**65.2%**
Peak Hour	07:15	07:30	**07:15**	15:00	16:30	**16:30**
Volume	981	597	**1568**	611	1664	**2220**
P.H.F.	0.89	0.94	**0.91**	0.95	0.93	**0.92**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Mission Village Drive, From Friars Road WB Ramps to Friars Road EB Ramps

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	11		8					12:00	97		103				
00:15	7		10					12:15	103		99				
00:30	6		17					12:30	96		109				
00:45	2	26	8	43			69	12:45	94	390	93	404			794
01:00	7		6					13:00	92		128				
01:15	5		3					13:15	105		118				
01:30	1		10					13:30	78		121				
01:45	4	17	6	25			42	13:45	100	375	105	472			847
02:00	4		10					14:00	82		148				
02:15	2		3					14:15	86		101				
02:30	2		20					14:30	73		129				
02:45	4	12	6	39			51	14:45	112	353	92	470			823
03:00	0		3					15:00	98		123				
03:15	1		8					15:15	101		123				
03:30	3		12					15:30	104		140				
03:45	3	7	9	32			39	15:45	96	399	172	558			957
04:00	1		8					16:00	87		181				
04:15	3		16					16:15	104		188				
04:30	3		13					16:30	123		219				
04:45	3	10	21	58			68	16:45	108	422	245	833			1255
05:00	4		33					17:00	130		252				
05:15	6		29					17:15	165		277				
05:30	13		64					17:30	129		245				
05:45	14	37	73	199			236	17:45	93	517	218	992			1509
06:00	24		53					18:00	86		258				
06:15	40		69					18:15	82		211				
06:30	56		83					18:30	82		168				
06:45	78	198	82	287			485	18:45	66	316	156	793			1109
07:00	94		114					19:00	84		139				
07:15	156		116					19:15	92		127				
07:30	183		123					19:30	93		120				
07:45	238	671	110	463			1134	19:45	59	328	105	491			819
08:00	202		103					20:00	57		103				
08:15	163		127					20:15	84		64				
08:30	123		133					20:30	58		61				
08:45	123	611	109	472			1083	20:45	45	244	55	283			527
09:00	78		93					21:00	45		52				
09:15	66		112					21:15	69		50				
09:30	67		66					21:30	43		37				
09:45	47	258	98	369			627	21:45	24	181	36	175			356
10:00	57		77					22:00	34		39				
10:15	49		83					22:15	32		33				
10:30	57		77					22:30	21		37				
10:45	82	245	72	309			554	22:45	12	99	34	143			242
11:00	63		69					23:00	18		16				
11:15	65		92					23:15	13		19				
11:30	84		82					23:30	14		7				
11:45	74	286	92	335			621	23:45	13	58	8	50			108
Total Vol.		2378		2631			**5009**			3682		5664			**9346**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	6060	8295			**14355**

	AM			**PM**		
Split %	47.5%	52.5%	**34.9%**	39.4%	60.6%	**65.1%**
Peak Hour	07:30	07:45	**07:30**	16:45	16:45	**16:45**
Volume	786	473	**1249**	532	1019	**1551**
P.H.F.	0.83	0.89	**0.90**	0.86	0.92	**0.88**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Mission Village Drive, From Friars Road WB Ramps to Friars Road EB Ramps

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	3		19					12:00	100		76				
00:15	12		13					12:15	71		74				
00:30	8		14					12:30	81		93				
00:45	2	25	5	51			76	12:45	79	331	73	316			647
01:00	1		16					13:00	84		108				
01:15	6		8					13:15	65		74				
01:30	4		7					13:30	84		81				
01:45	2	13	7	38			51	13:45	74	307	85	348			655
02:00	1		2					14:00	76		94				
02:15	5		7					14:15	84		91				
02:30	2		12					14:30	75		81				
02:45	1	9	1	22			31	14:45	100	335	91	357			692
03:00	1		7					15:00	106		98				
03:15	2		10					15:15	113		94				
03:30	0		10					15:30	105		127				
03:45	4	7	12	39			46	15:45	107	431	149	468			899
04:00	4		11					16:00	92		205				
04:15	6		8					16:15	87		243				
04:30	3		12					16:30	98		251				
04:45	3	16	18	49			65	16:45	97	374	277	976			1350
05:00	3		34					17:00	103		266				
05:15	5		20					17:15	100		285				
05:30	17		43					17:30	110		268				
05:45	18	43	70	167			210	17:45	108	421	202	1021			1442
06:00	22		45					18:00	92		207				
06:15	25		68					18:15	62		141				
06:30	63		83					18:30	82		133				
06:45	97	207	102	298			505	18:45	68	304	102	583			887
07:00	87		105					19:00	71		91				
07:15	153		102					19:15	67		74				
07:30	223		129					19:30	60		59				
07:45	226	689	123	459			1148	19:45	55	253	54	278			531
08:00	173		108					20:00	48		60				
08:15	138		114					20:15	55		24				
08:30	125		116					20:30	57		32				
08:45	99	535	100	438			973	20:45	47	207	46	162			369
09:00	86		111					21:00	44		35				
09:15	49		96					21:15	33		43				
09:30	48		80					21:30	35		43				
09:45	70	253	69	356			609	21:45	22	134	48	169			303
10:00	52		80					22:00	23		59				
10:15	51		77					22:15	33		31				
10:30	59		61					22:30	15		24				
10:45	71	233	65	283			516	22:45	17	88	23	137			225
11:00	61		88					23:00	17		13				
11:15	80		85					23:15	13		11				
11:30	70		85					23:30	8		12				
11:45	72	283	94	352			635	23:45	14	52	17	53			105
Total Vol.		2313		2552			**4865**			3237		4868			**8105**

Daily Totals

NB	SB	EB	WB	**Combined**
5550	7420			**12970**

	AM			PM		
Split %	47.5%	52.5%	**37.5%**	39.9%	60.1%	**62.5%**
Peak Hour	07:15	07:30	**07:15**	15:00	16:45	**16:45**
Volume	775	474	**1237**	431	1096	**1506**
P.H.F.	0.86	0.92	**0.88**	0.95	0.96	**0.98**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Rancho Mission Road, From Friars Road to San Diego Mission Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	14		19					12:00	99		98				
00:15	9		18					12:15	114		105				
00:30	6		9					12:30	98		96				
00:45	9	38	19	65			103	12:45	93	404	86	385			789
01:00	8		17					13:00	91		120				
01:15	2		7					13:15	85		95				
01:30	6		7					13:30	107		98				
01:45	5	21	8	39			60	13:45	98	381	107	420			801
02:00	5		8					14:00	78		100				
02:15	4		6					14:15	107		118				
02:30	5		7					14:30	100		143				
02:45	3	17	5	26			43	14:45	121	406	151	512			918
03:00	5		7					15:00	118		117				
03:15	7		6					15:15	106		131				
03:30	11		7					15:30	101		114				
03:45	10	33	6	26			59	15:45	86	411	154	516			927
04:00	5		5					16:00	116		124				
04:15	7		5					16:15	123		141				
04:30	15		6					16:30	110		137				
04:45	13	40	11	27			67	16:45	120	469	136	538			1007
05:00	20		15					17:00	128		154				
05:15	27		16					17:15	127		122				
05:30	47		28					17:30	102		135				
05:45	54	148	25	84			232	17:45	121	478	124	535			1013
06:00	72		31					18:00	131		152				
06:15	68		31					18:15	77		161				
06:30	128		37					18:30	93		160				
06:45	123	391	46	145			536	18:45	74	375	146	619			994
07:00	135		49					19:00	76		107				
07:15	137		52					19:15	67		126				
07:30	136		76					19:30	101		98				
07:45	170	578	88	265			843	19:45	48	292	93	424			716
08:00	143		78					20:00	68		72				
08:15	124		91					20:15	45		77				
08:30	120		92					20:30	49		90				
08:45	116	503	98	359			862	20:45	33	195	83	322			517
09:00	92		64					21:00	34		78				
09:15	87		69					21:15	40		78				
09:30	85		67					21:30	30		55				
09:45	87	351	62	262			613	21:45	32	136	71	282			418
10:00	76		74					22:00	22		55				
10:15	74		89					22:15	21		29				
10:30	74		67					22:30	25		37				
10:45	73	297	85	315			612	22:45	11	79	27	148			227
11:00	76		76					23:00	18		38				
11:15	110		87					23:15	17		32				
11:30	115		81					23:30	16		28				
11:45	92	393	99	343			736	23:45	12	63	17	115			178
Total Vol.		2810		1956			**4766**			3689		4816			**8505**

Daily Totals				
NB	SB	EB	WB	**Combined**
6499	6772			**13271**

	AM			PM		
Split %	59.0%	41.0%	**35.9%**	43.4%	56.6%	**64.1%**
Peak Hour	07:15	11:45	**07:30**	16:30	18:00	**16:15**
Volume	586	398	**906**	485	619	**1049**
P.H.F.	0.86	0.95	**0.88**	0.95	0.96	**0.93**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Rancho Mission Road, From Friars Road to San Diego Mission Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	16		12					12:00	98		74				
00:15	9		12					12:15	96		89				
00:30	12		19					12:30	92		100				
00:45	3	40	12	55			95	12:45	84	370	78	341			711
01:00	5		12					13:00	85		87				
01:15	8		14					13:15	88		75				
01:30	8		15					13:30	86		97				
01:45	8	29	6	47			76	13:45	88	347	88	347			694
02:00	9		11					14:00	80		93				
02:15	1		3					14:15	69		119				
02:30	7		6					14:30	108		125				
02:45	6	23	8	28			51	14:45	139	396	132	469			865
03:00	2		9					15:00	95		105				
03:15	5		8					15:15	110		104				
03:30	6		8					15:30	110		116				
03:45	13	26	6	31			57	15:45	101	416	107	432			848
04:00	7		5					16:00	103		106				
04:15	7		3					16:15	111		123				
04:30	13		8					16:30	128		110				
04:45	19	46	11	27			73	16:45	120	462	112	451			913
05:00	17		14					17:00	129		120				
05:15	29		16					17:15	132		104				
05:30	45		8					17:30	125		114				
05:45	49	140	32	70			210	17:45	95	481	119	457			938
06:00	63		25					18:00	124		108				
06:15	78		23					18:15	93		121				
06:30	120		29					18:30	69		123				
06:45	146	407	53	130			537	18:45	78	364	119	471			835
07:00	158		39					19:00	59		113				
07:15	152		55					19:15	49		122				
07:30	146		80					19:30	81		79				
07:45	163	619	112	286			905	19:45	62	251	98	412			663
08:00	132		71					20:00	57		70				
08:15	120		52					20:15	41		74				
08:30	116		85					20:30	46		71				
08:45	115	483	64	272			755	20:45	30	174	69	284			458
09:00	93		59					21:00	53		67				
09:15	98		76					21:15	44		64				
09:30	85		63					21:30	41		49				
09:45	78	354	59	257			611	21:45	25	163	42	222			385
10:00	78		66					22:00	27		44				
10:15	67		64					22:15	34		40				
10:30	76		58					22:30	18		39				
10:45	91	312	79	267			579	22:45	21	100	26	149			249
11:00	82		79					23:00	29		31				
11:15	78		91					23:15	14		20				
11:30	86		78					23:30	16		33				
11:45	89	335	94	342			677	23:45	16	75	22	106			181
Total Vol.		2814		1812			**4626**			3599		4141			**7740**

Daily Totals

NB	SB	EB	WB	**Combined**
6413	5953			**12366**

	AM			**PM**		
Split %	60.8%	39.2%	**37.4%**	46.5%	53.5%	**62.6%**
Peak Hour	07:00	11:45	**07:15**	16:30	14:15	**16:45**
Volume	619	357	**911**	509	481	**956**
P.H.F.	0.95	0.89	**0.83**	0.98	0.91	**0.96**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Rancho Mission Road/Ward Road, From San Diego Mission Road to Camino Del Rio North

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	17		9					12:00	66		65				
00:15	10		7					12:15	75		68				
00:30	11		7					12:30	69		80				
00:45	6	44	2	25			69	12:45	56	266	60	273			539
01:00	6		7					13:00	70		81				
01:15	11		5					13:15	74		73				
01:30	1		9					13:30	70		79				
01:45	6	24	6	27			51	13:45	56	270	76	309			579
02:00	3		5					14:00	49		69				
02:15	2		5					14:15	56		64				
02:30	3		3					14:30	55		80				
02:45	5	13	2	15			28	14:45	80	240	92	305			545
03:00	2		2					15:00	62		85				
03:15	2		2					15:15	76		79				
03:30	2		6					15:30	74		93				
03:45	6	12	7	17			29	15:45	59	271	83	340			611
04:00	5		3					16:00	77		96				
04:15	3		3					16:15	89		101				
04:30	1		8					16:30	93		103				
04:45	6	15	6	20			35	16:45	92	351	112	412			763
05:00	8		18					17:00	94		116				
05:15	8		13					17:15	113		135				
05:30	11		23					17:30	105		137				
05:45	23	50	29	83			133	17:45	108	420	110	498			918
06:00	17		19					18:00	87		106				
06:15	21		34					18:15	84		116				
06:30	31		40					18:30	66		82				
06:45	44	113	51	144			257	18:45	64	301	58	362			663
07:00	81		76					19:00	65		69				
07:15	71		75					19:15	65		54				
07:30	101		88					19:30	63		51				
07:45	95	348	119	358			706	19:45	55	248	46	220			468
08:00	144		129					20:00	50		39				
08:15	77		125					20:15	50		40				
08:30	78		115					20:30	61		36				
08:45	60	359	85	454			813	20:45	41	202	44	159			361
09:00	87		79					21:00	44		34				
09:15	58		59					21:15	31		38				
09:30	47		62					21:30	46		32				
09:45	53	245	68	268			513	21:45	35	156	27	131			287
10:00	41		51					22:00	29		25				
10:15	45		52					22:15	38		23				
10:30	41		54					22:30	23		16				
10:45	44	171	54	211			382	22:45	21	111	20	84			195
11:00	57		48					23:00	16		16				
11:15	57		58					23:15	20		11				
11:30	47		65					23:30	14		11				
11:45	56	217	73	244			461	23:45	10	60	7	45			105
Total Vol.		1611		1866			**3477**			2896		3138			**6034**

Daily Totals

NB	SB	EB	WB	**Combined**
4507	5004			**9511**

	AM			**PM**		
Split %	46.3%	53.7%	**36.6%**	48.0%	52.0%	**63.4%**
Peak Hour	07:30	07:45	**07:45**	17:00	16:45	**17:00**
Volume	417	488	**882**	420	500	**918**
P.H.F.	0.72	0.95	**0.81**	0.92	0.91	**0.93**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Rancho Mission Road/Ward Road, From San Diego Mission Road to Camino Del Rio North

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	9		12					12:00	59		79				
00:15	13		6					12:15	71		79				
00:30	7		9					12:30	64		61				
00:45	17	46	11	38			84	12:45	67	261	87	306			567
01:00	4		2					13:00	58		73				
01:15	6		4					13:15	78		80				
01:30	4		4					13:30	57		60				
01:45	5	19	9	19			38	13:45	66	259	75	288			547
02:00	5		2					14:00	60		66				
02:15	6		4					14:15	58		65				
02:30	1		3					14:30	75		74				
02:45	3	15	2	11			26	14:45	68	261	80	285			546
03:00	1		3					15:00	73		81				
03:15	4		1					15:15	51		85				
03:30	3		2					15:30	65		63				
03:45	4	12	1	7			19	15:45	85	274	89	318			592
04:00	5		3					16:00	72		115				
04:15	4		4					16:15	70		151				
04:30	4		10					16:30	88		128				
04:45	2	15	10	27			42	16:45	91	321	141	535			856
05:00	2		11					17:00	105		168				
05:15	8		17					17:15	121		140				
05:30	8		24					17:30	116		131				
05:45	21	39	17	69			108	17:45	88	430	128	567			997
06:00	22		31					18:00	83		122				
06:15	25		31					18:15	91		97				
06:30	32		38					18:30	87		94				
06:45	48	127	52	152			279	18:45	70	331	88	401			732
07:00	104		51					19:00	62		61				
07:15	121		88					19:15	61		42				
07:30	148		105					19:30	49		48				
07:45	105	478	151	395			873	19:45	62	234	52	203			437
08:00	91		80					20:00	39		35				
08:15	98		70					20:15	41		33				
08:30	88		88					20:30	61		29				
08:45	65	342	81	319			661	20:45	38	179	36	133			312
09:00	51		84					21:00	33		39				
09:15	64		57					21:15	43		48				
09:30	52		61					21:30	34		31				
09:45	36	203	66	268			471	21:45	39	149	37	155			304
10:00	45		74					22:00	36		23				
10:15	44		55					22:15	26		23				
10:30	46		54					22:30	19		19				
10:45	35	170	39	222			392	22:45	18	99	19	84			183
11:00	39		62					23:00	14		20				
11:15	50		52					23:15	26		18				
11:30	53		58					23:30	24		17				
11:45	52	194	80	252			446	23:45	10	74	3	58			132
Total Vol.		1660		1779			**3439**			2872		3333			**6205**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	4532	5112			**9644**

	AM			**PM**		
Split %	48.3%	51.7%	**35.7%**	46.3%	53.7%	**64.3%**
Peak Hour	07:00	07:15	**07:15**	16:45	16:15	**16:45**
Volume	478	424	**889**	433	588	**1013**
P.H.F.	0.81	0.70	**0.87**	0.90	0.88	**0.93**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Santo Road, From Northern Terminus to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	10		10					12:00	34		35				
00:15	15		7					12:15	38		37				
00:30	12		5					12:30	42		55				
00:45	13	50	2	24			74	12:45	34	148	49	176			324
01:00	14		5					13:00	35		47				
01:15	19		4					13:15	46		39				
01:30	6		2					13:30	38		52				
01:45	8	47	2	13			60	13:45	39	158	37	175			333
02:00	5		5					14:00	45		34				
02:15	1		8					14:15	41		37				
02:30	6		2					14:30	50		40				
02:45	3	15	4	19			34	14:45	46	182	27	138			320
03:00	1		2					15:00	61		47				
03:15	2		6					15:15	52		37				
03:30	0		8					15:30	43		90				
03:45	1	4	14	30			34	15:45	58	214	35	209			423
04:00	3		12					16:00	77		48				
04:15	2		21					16:15	49		35				
04:30	2		18					16:30	81		45				
04:45	3	10	20	71			81	16:45	61	268	42	170			438
05:00	4		28					17:00	87		48				
05:15	5		19					17:15	71		43				
05:30	8		24					17:30	66		60				
05:45	8	25	28	99			124	17:45	81	305	56	207			512
06:00	16		38					18:00	87		28				
06:15	27		62					18:15	90		45				
06:30	31		66					18:30	72		46				
06:45	26	100	69	235			335	18:45	63	312	48	167			479
07:00	23		83					19:00	81		41				
07:15	14		70					19:15	60		34				
07:30	14		82					19:30	49		33				
07:45	25	76	57	292			368	19:45	65	255	28	136			391
08:00	27		50					20:00	48		28				
08:15	17		59					20:15	55		32				
08:30	23		55					20:30	52		25				
08:45	29	96	60	224			320	20:45	45	200	30	115			315
09:00	36		46					21:00	45		16				
09:15	20		43					21:15	37		16				
09:30	23		41					21:30	27		13				
09:45	26	105	41	171			276	21:45	31	140	10	55			195
10:00	18		38					22:00	36		9				
10:15	22		33					22:15	25		21				
10:30	13		45					22:30	19		20				
10:45	27	80	35	151			231	22:45	15	95	8	58			153
11:00	33		34					23:00	15		3				
11:15	35		34					23:15	11		5				
11:30	33		52					23:30	16		9				
11:45	42	143	42	162			305	23:45	13	55	8	25			80
Total Vol.		751		1491			**2242**			2332		1631			**3963**

Daily Totals

NB	SB	EB	WB	**Combined**
3083	3122			**6205**

	AM			**PM**		
Split %	33.5%	66.5%	**36.1%**	58.8%	41.2%	**63.9%**
Peak Hour	11:45	06:45	**06:15**	17:45	15:15	**17:30**
Volume	156	304	**387**	330	210	**513**
P.H.F.	0.93	0.92	**0.91**	0.97	0.58	**0.94**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Santo Road, From Northern Terminus to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	18		3					12:00	40		40				
00:15	9		4					12:15	37		49				
00:30	18		7					12:30	50		47				
00:45	11	56	3	17			73	12:45	28	155	41	177			332
01:00	9		7					13:00	57		56				
01:15	12		1					13:15	32		43				
01:30	6		0					13:30	44		53				
01:45	6	33	3	11			44	13:45	41	174	66	218			392
02:00	14		6					14:00	38		47				
02:15	7		1					14:15	61		44				
02:30	2		1					14:30	64		30				
02:45	4	27	3	11			38	14:45	47	210	53	174			384
03:00	5		3					15:00	58		37				
03:15	3		3					15:15	59		48				
03:30	1		7					15:30	57		88				
03:45	2	11	12	25			36	15:45	58	232	48	221			453
04:00	3		11					16:00	72		46				
04:15	3		16					16:15	80		43				
04:30	2		20					16:30	49		51				
04:45	4	12	11	58			70	16:45	69	270	46	186			456
05:00	2		30					17:00	56		38				
05:15	4		32					17:15	67		37				
05:30	9		35					17:30	75		44				
05:45	9	24	30	127			151	17:45	85	283	53	172			455
06:00	16		48					18:00	66		44				
06:15	22		50					18:15	70		44				
06:30	36		57					18:30	80		47				
06:45	31	105	73	228			333	18:45	67	283	35	170			453
07:00	27		91					19:00	73		42				
07:15	16		82					19:15	65		32				
07:30	33		85					19:30	58		35				
07:45	22	98	56	314			412	19:45	54	250	32	141			391
08:00	31		53					20:00	60		31				
08:15	19		49					20:15	44		36				
08:30	23		49					20:30	55		28				
08:45	33	106	62	213			319	20:45	42	201	22	117			318
09:00	34		41					21:00	50		18				
09:15	27		39					21:15	44		23				
09:30	20		49					21:30	50		15				
09:45	17	98	43	172			270	21:45	41	185	17	73			258
10:00	26		54					22:00	39		18				
10:15	21		44					22:15	25		19				
10:30	18		44					22:30	20		14				
10:45	31	96	35	177			273	22:45	26	110	14	65			175
11:00	37		30					23:00	28		8				
11:15	37		37					23:15	28		15				
11:30	32		42					23:30	18		11				
11:45	36	142	48	157			299	23:45	20	94	10	44			138
Total Vol.		808		1510			**2318**			2447		1758			**4205**

Daily Totals

NB	SB	EB	WB	**Combined**
3255	3268			**6523**

	AM			**PM**		
Split %	34.9%	65.1%	**35.5%**	58.2%	41.8%	**64.5%**
Peak Hour	11:45	06:45	**06:45**	17:45	15:15	**15:30**
Volume	163	331	**438**	301	230	**492**
P.H.F.	0.82	0.91	**0.93**	0.86	0.65	**0.85**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Riverdale Street, From Zion Road to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	0		0					12:00	27		22				
00:15	0		0					12:15	22		32				
00:30	1		0					12:30	32		39				
00:45	0	1	0	0			1	12:45	36	117	32	125			242
01:00	0		0					13:00	14		28				
01:15	0		1					13:15	18		23				
01:30	0		0					13:30	24		25				
01:45	0	0	1	2			2	13:45	23	79	18	94			173
02:00	2		2					14:00	31		25				
02:15	0		0					14:15	16		36				
02:30	0		0					14:30	19		31				
02:45	0	2	0	2			4	14:45	25	91	24	116			207
03:00	0		2					15:00	19		24				
03:15	0		0					15:15	23		34				
03:30	0		0					15:30	32		31				
03:45	0	0	1	3			3	15:45	33	107	24	113			220
04:00	0		3					16:00	27		25				
04:15	0		0					16:15	36		29				
04:30	0		0					16:30	29		23				
04:45	2	2	2	5			7	16:45	39	131	26	103			234
05:00	1		1					17:00	35		29				
05:15	4		7					17:15	31		30				
05:30	1		2					17:30	35		24				
05:45	1	7	6	16			23	17:45	31	132	23	106			238
06:00	0		8					18:00	24		20				
06:15	5		5					18:15	27		23				
06:30	7		9					18:30	29		21				
06:45	6	18	13	35			53	18:45	16	96	14	78			174
07:00	5		20					19:00	16		16				
07:15	10		32					19:15	21		22				
07:30	11		73					19:30	15		11				
07:45	11	37	92	217			254	19:45	12	64	12	61			125
08:00	12		88					20:00	16		12				
08:15	5		28					20:15	10		10				
08:30	10		29					20:30	8		8				
08:45	9	36	19	164			200	20:45	7	41	9	39			80
09:00	5		16					21:00	6		12				
09:15	12		26					21:15	6		6				
09:30	19		32					21:30	10		8				
09:45	16	52	28	102			154	21:45	4	26	3	29			55
10:00	14		16					22:00	1		4				
10:15	11		13					22:15	2		3				
10:30	6		14					22:30	2		10				
10:45	14	45	24	67			112	22:45	0	5	4	21			26
11:00	17		21					23:00	3		5				
11:15	24		22					23:15	1		0				
11:30	30		25					23:30	1		2				
11:45	23	94	30	98			192	23:45	0	5	1	8			13
Total Vol.		294		711			**1005**			894		893			**1787**

Daily Totals

NB	SB	EB	WB	Combined
1188	1604			**2792**

	AM			PM		
Split %	29.3%	70.7%	**36.0%**	50.0%	50.0%	**64.0%**
Peak Hour	11:15	07:15	**07:15**	16:45	12:15	**16:45**
Volume	104	285	**329**	140	131	**249**
P.H.F.	0.87	0.77	**0.80**	0.87	0.84	**0.96**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Riverdale Street, From Zion Road to Friars Road

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	3		0					12:00	27		25				
00:15	0		0					12:15	28		37				
00:30	0		0					12:30	23		38				
00:45	0	3	0	0			3	12:45	20	98	29	129			227
01:00	0		0					13:00	27		23				
01:15	0		0					13:15	27		24				
01:30	1		0					13:30	28		26				
01:45	0	1	0	0			1	13:45	24	106	26	99			205
02:00	2		1					14:00	22		33				
02:15	1		1					14:15	29		33				
02:30	0		0					14:30	25		31				
02:45	0	3	0	2			5	14:45	24	100	40	137			237
03:00	0		0					15:00	28		25				
03:15	0		0					15:15	21		30				
03:30	1		0					15:30	26		27				
03:45	1	2	3	3			5	15:45	20	95	25	107			202
04:00	0		0					16:00	38		34				
04:15	0		1					16:15	27		25				
04:30	0		1					16:30	30		18				
04:45	1	1	3	5			6	16:45	28	123	23	100			223
05:00	2		0					17:00	34		27				
05:15	0		1					17:15	39		30				
05:30	0		3					17:30	39		16				
05:45	6	8	6	10			18	17:45	30	142	22	95			237
06:00	8		4					18:00	28		20				
06:15	4		6					18:15	14		16				
06:30	9		12					18:30	28		20				
06:45	3	24	14	36			60	18:45	30	100	12	68			168
07:00	11		28					19:00	16		16				
07:15	15		33					19:15	27		21				
07:30	18		30					19:30	22		18				
07:45	10	54	48	139			193	19:45	14	79	15	70			149
08:00	11		41					20:00	13		12				
08:15	8		44					20:15	10		9				
08:30	9		23					20:30	10		9				
08:45	12	40	28	136			176	20:45	10	43	5	35			78
09:00	6		21					21:00	9		9				
09:15	18		20					21:15	7		4				
09:30	7		16					21:30	9		5				
09:45	17	48	16	73			121	21:45	7	32	6	24			56
10:00	8		17					22:00	1		3				
10:15	22		27					22:15	2		3				
10:30	17		22					22:30	4		1				
10:45	14	61	24	90			151	22:45	4	11	2	9			20
11:00	18		25					23:00	3		2				
11:15	23		29					23:15	0		1				
11:30	27		29					23:30	0		0				
11:45	19	87	23	106			193	23:45	2	5	1	4			9
Total Vol.		332		600			**932**			934		877			**1811**

Daily Totals

NB	SB	EB	WB	**Combined**
1266	1477			**2743**

	AM			**PM**		
Split %	35.6%	64.4%	**34.0%**	51.6%	48.4%	**66.0%**
Peak Hour	11:30	07:30	**11:45**	17:00	14:00	**14:00**
Volume	101	163	**220**	142	137	**237**
P.H.F.	0.90	0.85	**0.85**	0.97	0.86	**0.93**

WEDNESDAY - SEPTEMBER 16, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Riverdale Street, From Friars Road to Vandever Avenue

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	5		4					12:00	78		100				
00:15	0		6					12:15	105		64				
00:30	1		3					12:30	79		76				
00:45	1	7	2	15			22	12:45	85	347	90	330			677
01:00	2		6					13:00	102		74				
01:15	0		2					13:15	83		108				
01:30	3		3					13:30	73		98				
01:45	2	7	3	14			21	13:45	82	340	93	373			713
02:00	3		1					14:00	67		80				
02:15	3		5					14:15	77		123				
02:30	0		4					14:30	97		94				
02:45	4	10	2	12			22	14:45	90	331	111	408			739
03:00	2		6					15:00	106		90				
03:15	0		2					15:15	98		67				
03:30	2		7					15:30	70		96				
03:45	2	6	10	25			31	15:45	78	352	86	339			691
04:00	0		3					16:00	62		79				
04:15	0		2					16:15	106		78				
04:30	6		10					16:30	78		61				
04:45	2	8	2	17			25	16:45	105	351	58	276			627
05:00	5		6					17:00	102		62				
05:15	15		12					17:15	130		61				
05:30	13		30					17:30	88		53				
05:45	14	47	37	85			132	17:45	77	397	61	237			634
06:00	19		43					18:00	57		85				
06:15	15		23					18:15	60		59				
06:30	43		25					18:30	54		56				
06:45	31	108	44	135			243	18:45	41	212	51	251			463
07:00	43		55					19:00	30		49				
07:15	33		95					19:15	31		33				
07:30	46		121					19:30	42		46				
07:45	36	158	128	399			557	19:45	25	128	32	160			288
08:00	41		176					20:00	33		32				
08:15	58		135					20:15	36		16				
08:30	47		119					20:30	20		15				
08:45	60	206	92	522			728	20:45	24	113	22	85			198
09:00	55		92					21:00	26		25				
09:15	63		76					21:15	18		25				
09:30	64		68					21:30	17		17				
09:45	64	246	85	321			567	21:45	10	71	12	79			150
10:00	52		63					22:00	8		23				
10:15	65		77					22:15	4		9				
10:30	76		90					22:30	9		6				
10:45	58	251	82	312			563	22:45	9	30	8	46			76
11:00	69		86					23:00	3		7				
11:15	80		72					23:15	2		6				
11:30	64		88					23:30	3		9				
11:45	87	300	77	323			623	23:45	0	8	4	26			34
Total Vol.		1354		2180			**3534**			2680		2610			**5290**

	Daily Totals				
	NB	SB	EB	WB	**Combined**
	4034	4790			**8824**

	AM			**PM**		
Split %	38.3%	61.7%	**40.0%**	50.7%	49.3%	**60.0%**
Peak Hour	11:45	07:30	**07:30**	16:45	14:15	**14:15**
Volume	349	560	**741**	425	418	**788**
P.H.F.	0.83	0.80	**0.85**	0.90	0.85	**0.98**

THURSDAY - SEPTEMBER 17, 2015 CITY: MISSION VALLEY PROJECT: PDT15-0911-01

Riverdale Street, From Friars Road to Vandever Avenue

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	3		5					12:00	90		71				
00:15	3		4					12:15	99		98				
00:30	2		5					12:30	102		88				
00:45	3	11	4	18			29	12:45	88	379	77	334			713
01:00	2		0					13:00	80		108				
01:15	0		3					13:15	80		106				
01:30	3		3					13:30	79		92				
01:45	1	6	0	6			12	13:45	94	333	88	394			727
02:00	0		3					14:00	72		86				
02:15	2		6					14:15	75		119				
02:30	6		10					14:30	86		93				
02:45	2	10	2	21			31	14:45	99	332	84	382			714
03:00	1		4					15:00	78		90				
03:15	1		3					15:15	94		66				
03:30	3		7					15:30	93		96				
03:45	2	7	6	20			27	15:45	83	348	69	321			669
04:00	6		8					16:00	150		70				
04:15	2		7					16:15	88		77				
04:30	4		4					16:30	121		84				
04:45	6	18	6	25			43	16:45	90	449	68	299			748
05:00	7		10					17:00	121		78				
05:15	5		16					17:15	135		71				
05:30	9		24					17:30	88		66				
05:45	18	39	27	77			116	17:45	84	428	51	266			694
06:00	15		25					18:00	68		57				
06:15	21		28					18:15	65		57				
06:30	51		37					18:30	33		41				
06:45	52	139	34	124			263	18:45	45	211	58	213			424
07:00	50		46					19:00	36		58				
07:15	44		98					19:15	31		41				
07:30	38		151					19:30	26		49				
07:45	41	173	177	472			645	19:45	41	134	32	180			314
08:00	44		121					20:00	28		39				
08:15	51		116					20:15	24		44				
08:30	60		98					20:30	26		16				
08:45	51	206	91	426			632	20:45	25	103	19	118			221
09:00	49		93					21:00	22		15				
09:15	69		79					21:15	11		16				
09:30	57		95					21:30	12		13				
09:45	53	228	71	338			566	21:45	14	59	16	60			119
10:00	67		82					22:00	8		14				
10:15	47		81					22:15	7		16				
10:30	74		66					22:30	6		17				
10:45	63	251	55	284			535	22:45	7	28	7	54			82
11:00	60		88					23:00	2		3				
11:15	68		91					23:15	5		5				
11:30	72		74					23:30	10		6				
11:45	88	288	82	335			623	23:45	5	22	1	15			37
Total Vol.	1376		2146				**3522**		2826		2636				**5462**

Daily Totals

NB	SB	EB	WB	**Combined**
4202	4782			**8984**

	AM			PM		
Split %	39.1%	60.9%	**39.2%**	51.7%	48.3%	**60.8%**
Peak Hour	11:45	07:30	**07:30**	16:30	13:00	**16:30**
Volume	379	565	**739**	467	394	**768**
P.H.F.	0.93	0.80	**0.85**	0.94	0.91	**0.93**

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Friars Rd & Camino Del Rio North

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_133

DAILY TOTALS	NB	SB	EB	WB	Total
	7,262	7,480	0	0	14,742

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	12		15				27		12:00	139		120				259	
00:15	13		13				26		12:15	147		141				288	
00:30	6		12				18		12:30	125		129				254	
00:45	11	42	6	46			17	88	12:45	119	530	120	510			239	1040
01:00	5		11				16		13:00	108		135				243	
01:15	4		6				10		13:15	126		103				229	
01:30	4		8				12		13:30	122		114				236	
01:45	11	24	7	32			18	56	13:45	111	467	110	462			221	929
02:00	12		11				23		14:00	108		147				255	
02:15	7		26				33		14:15	123		120				243	
02:30	3		11				14		14:30	106		118				224	
02:45	4	26	4	52			8	78	14:45	109	446	161	546			270	992
03:00	6		9				15		15:00	113		110				223	
03:15	1		5				6		15:15	109		105				214	
03:30	4		9				13		15:30	124		112				236	
03:45	3	14	16	39			19	53	15:45	121	467	144	471			265	938
04:00	7		11				18		16:00	109		102				211	
04:15	12		13				25		16:15	130		140				270	
04:30	15		20				35		16:30	141		97				238	
04:45	12	46	28	72			40	118	16:45	117	497	122	461			239	958
05:00	11		15				26		17:00	125		107				232	
05:15	23		22				45		17:15	117		96				213	
05:30	40		42				82		17:30	109		117				226	
05:45	30	104	55	134			85	238	17:45	106	457	136	456			242	913
06:00	52		58				110		18:00	119		105				224	
06:15	74		57				131		18:15	107		102				209	
06:30	104		107				211		18:30	127		101				228	
06:45	96	326	111	333			207	659	18:45	108	461	118	426			226	887
07:00	114		93				207		19:00	119		96				215	
07:15	113		120				233		19:15	91		93				184	
07:30	150		137				287		19:30	96		118				214	
07:45	119	496	149	499			268	995	19:45	70	376	100	407			170	783
08:00	131		174				305		20:00	84		62				146	
08:15	137		117				254		20:15	72		78				150	
08:30	146		109				255		20:30	56		57				113	
08:45	113	527	95	495			208	1022	20:45	68	280	61	258			129	538
09:00	104		119				223		21:00	60		51				111	
09:15	100		113				213		21:15	44		63				107	
09:30	116		84				200		21:30	39		57				96	
09:45	96	416	107	423			203	839	21:45	42	185	52	223			94	408
10:00	91		100				191		22:00	36		35				71	
10:15	88		91				179		22:15	31		45				76	
10:30	105		97				202		22:30	42		47				89	
10:45	86	370	97	385			183	755	22:45	31	140	59	186			90	326
11:00	122		101				223		23:00	27		21				48	
11:15	102		108				210		23:15	43		30				73	
11:30	124		115				239		23:30	22		35				57	
11:45	104	452	131	455			235	907	23:45	21	113	23	109			44	222
TOTALS		2843		2965				5808	TOTALS		4419		4515				8934
SPLIT %		48.9%		51.1%				39.4%	SPLIT %		49.5%		50.5%				60.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	7,262	7,480	0	0	14,742

AM Peak Hour	07:30	07:15			07:30	PM Peak Hour	12:00	14:00			12:00
AM Pk Volume	537	580			1114	PM Pk Volume	530	546			1040
Pk Hr Factor	0.895	0.833			0.913	Pk Hr Factor	0.901	0.848			0.903
7 - 9 Volume	1023	994	0	0	2017	4 - 6 Volume	954	917	0	0	1871
7 - 9 Peak Hour	07:30	07:15			07:30	4 - 6 Peak Hour	16:15	16:15			16:15
7 - 9 Pk Volume	537	580	0	0	1114	4 - 6 Pk Volume	513	466	0	0	979
Pk Hr Factor	0.895	0.833	0.000	0.000	0.913	Pk Hr Factor	0.910	0.832	0.000	0.000	0.906

Prepared by NDS/ATD

VOLUME

Mission Gorge Rd Bet. Friars Rd & Camino Del Rio North

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_133

DAILY TOTALS	NB	SB	EB	WB	Total
	7,288	7,396	0	0	14,684

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	17		20						37		12:00	125		115						240	
00:15	20		17						37		12:15	120		140						260	
00:30	13		11						24		12:30	136		136						272	
00:45	10	60	11	59					21	119	12:45	113	494	125	516					238	1010
01:00	6		15						21		13:00	118		130						248	
01:15	9		11						20		13:15	87		108						195	
01:30	8		8						16		13:30	105		110						215	
01:45	11	34	13	47					24	81	13:45	107	417	104	452					211	869
02:00	2		10						12		14:00	113		127						240	
02:15	4		9						13		14:15	120		124						244	
02:30	9		9						18		14:30	129		139						268	
02:45	6	21	5	33					11	54	14:45	104	466	147	537					251	1003
03:00	5		6						11		15:00	119		137						256	
03:15	5		5						10		15:15	124		107						231	
03:30	4		4						8		15:30	122		119						241	
03:45	2	16	16	31					18	47	15:45	112	477	128	491					240	968
04:00	3		5						8		16:00	117		114						231	
04:15	10		8						18		16:15	123		126						249	
04:30	14		17						31		16:30	123		120						243	
04:45	13	40	26	56					39	96	16:45	136	499	99	459					235	958
05:00	21		21						42		17:00	129		106						235	
05:15	21		28						49		17:15	132		100						232	
05:30	31		39						70		17:30	120		115						235	
05:45	39	112	62	150					101	262	17:45	107	488	119	440					226	928
06:00	66		53						119		18:00	117		119						236	
06:15	78		67						145		18:15	137		108						245	
06:30	81		82						163		18:30	110		128						238	
06:45	92	317	144	346					236	663	18:45	115	479	123	478					238	957
07:00	121		75						196		19:00	109		105						214	
07:15	142		100						242		19:15	98		92						190	
07:30	103		153						256		19:30	95		70						165	
07:45	123	489	161	489					284	978	19:45	77	379	83	350					160	729
08:00	142		127						269		20:00	73		69						142	
08:15	114		113						227		20:15	56		76						132	
08:30	148		88						236		20:30	73		71						144	
08:45	136	540	90	418					226	958	20:45	55	257	53	269					108	526
09:00	93		106						199		21:00	62		65						127	
09:15	86		98						184		21:15	61		59						120	
09:30	95		100						195		21:30	50		64						114	
09:45	102	376	85	389					187	765	21:45	55	228	45	233					100	461
10:00	80		98						178		22:00	49		48						97	
10:15	104		109						213		22:15	32		43						75	
10:30	119		106						225		22:30	37		40						77	
10:45	108	411	110	423					218	834	22:45	25	143	41	172					66	315
11:00	95		102						197		23:00	43		32						75	
11:15	104		114						218		23:15	37		25						62	
11:30	118		118						236		23:30	19		26						45	
11:45	108	425	119	453					227	878	23:45	21	120	22	105					43	225
TOTALS		2841		2894						5735	TOTALS		4447		4502						8949
SPLIT %		49.5%		50.5%						39.1%	SPLIT %		49.7%		50.3%						60.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	7,288	7,396	0	0	14,684

AM Peak Hour	08:00	07:30			07:15	PM Peak Hour	16:30	14:15			14:15
AM Pk Volume	540	554			1051	PM Pk Volume	520	547			1019
Pk Hr Factor	0.912	0.860			0.925	Pk Hr Factor	0.956	0.930			0.951
7 - 9 Volume	1029	907	0	0	1936	4 - 6 Volume	987	899	0	0	1886
7 - 9 Peak Hour	08:00	07:30			07:15	4 - 6 Peak Hour	16:30	16:00			16:15
7 - 9 Pk Volume	540	554	0	0	1051	4 - 6 Pk Volume	520	459	0	0	962
Pk Hr Factor	0.912	0.860	0.000	0.000	0.925	Pk Hr Factor	0.956	0.911	0.000	0.000	0.966

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Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. Camino Del Rio North/I-8 WB Off Ramp & I-8 EB Off Ramp

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_134

DAILY TOTALS	NB	SB	EB	WB	Total
	21,925	18,128	0	0	40,053

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	37		43						80		12:00	391		258						649	
00:15	24		34						58		12:15	383		292						675	
00:30	16		28						44		12:30	362		312						674	
00:45	19	96	30	135					49	231	12:45	359	1495	244	1106					603	2601
01:00	26		26						52		13:00	417		271						688	
01:15	25		18						43		13:15	396		293						689	
01:30	18		21						39		13:30	398		307						705	
01:45	6	75	20	85					26	160	13:45	383	1594	299	1170					682	2764
02:00	15		15						30		14:00	374		308						682	
02:15	8		27						35		14:15	346		326						672	
02:30	14		11						25		14:30	382		368						750	
02:45	13	50	12	65					25	115	14:45	302	1404	367	1369					669	2773
03:00	10		12						22		15:00	326		329						655	
03:15	15		13						28		15:15	371		378						749	
03:30	12		12						24		15:30	348		393						741	
03:45	18	55	9	46					27	101	15:45	318	1363	413	1513					731	2876
04:00	23		10						33		16:00	296		421						717	
04:15	26		16						42		16:15	310		423						733	
04:30	66		12						78		16:30	306		454						760	
04:45	52	167	22	60					74	227	16:45	304	1216	440	1738					744	2954
05:00	80		28						108		17:00	343		443						786	
05:15	98		36						134		17:15	324		454						778	
05:30	164		44						208		17:30	327		450						777	
05:45	185	527	53	161					238	688	17:45	287	1281	369	1716					656	2997
06:00	212		77						289		18:00	300		371						671	
06:15	299		86						385		18:15	318		325						643	
06:30	357		83						440		18:30	289		295						584	
06:45	440	1308	136	382					576	1690	18:45	266	1173	274	1265					540	2438
07:00	410		183						593		19:00	217		283						500	
07:15	445		191						636		19:15	212		231						443	
07:30	495		233						728		19:30	184		238						422	
07:45	541	1891	229	836					770	2727	19:45	133	746	205	957					338	1703
08:00	528		204						732		20:00	150		172						322	
08:15	479		214						693		20:15	118		163						281	
08:30	483		232						715		20:30	134		173						307	
08:45	444	1934	238	888					682	2822	20:45	126	528	158	666					284	1194
09:00	492		216						708		21:00	110		162						272	
09:15	357		215						572		21:15	77		157						234	
09:30	348		261						609		21:30	80		133						213	
09:45	334	1531	231	923					565	2454	21:45	90	357	118	570					208	927
10:00	363		242						605		22:00	75		112						187	
10:15	346		218						564		22:15	87		68						155	
10:30	326		233						559		22:30	58		79						137	
10:45	310	1345	244	937					554	2282	22:45	51	271	77	336					128	607
11:00	291		255						546		23:00	52		55						107	
11:15	372		235						607		23:15	39		62						101	
11:30	348		242						590		23:30	58		59						117	
11:45	320	1331	252	984					572	2315	23:45	38	187	44	220					82	407
TOTALS		10310		5502						15812	TOTALS		11615		12626						24241
SPLIT %		65.2%		34.8%						39.5%	SPLIT %		47.9%		52.1%						60.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	21,925	18,128	0	0	40,053

AM Peak Hour	07:30	11:45			07:30	PM Peak Hour	13:00	16:30			16:45
AM Pk Volume	2043	1114			2923	PM Pk Volume	1594	1791			3085
Pk Hr Factor	0.944	0.893			0.949	Pk Hr Factor	0.956	0.986			0.981
7 - 9 Volume	3825	1724	0	0	5549	4 - 6 Volume	2497	3454	0	0	5951
7 - 9 Peak Hour	07:30	08:00			07:30	4 - 6 Peak Hour	16:45	16:30			16:45
7 - 9 Pk Volume	2043	888	0	0	2923	4 - 6 Pk Volume	1298	1791	0	0	3085
Pk Hr Factor	0.944	0.933	0.000	0.000	0.949	Pk Hr Factor	0.946	0.986	0.000	0.000	0.981

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Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. Camino Del Rio North/I-8 WB Off Ramp & I-8 EB Off Ramp

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_134

DAILY TOTALS	NB	SB	EB	WB	Total
	21,980	18,390	0	0	40,370

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	30		56						86		12:00	381		294						675	
00:15	29		41						70		12:15	387		322						709	
00:30	27		37						64		12:30	377		292						669	
00:45	13	99	40	174					53	273	12:45	362	1507	247	1155					609	2662
01:00	15		20						35		13:00	359		303						662	
01:15	16		24						40		13:15	359		335						694	
01:30	10		17						27		13:30	411		276						687	
01:45	9	50	18	79					27	129	13:45	382	1511	290	1204					672	2715
02:00	15		22						37		14:00	301		311						612	
02:15	10		19						29		14:15	382		299						681	
02:30	14		18						32		14:30	375		372						747	
02:45	15	54	17	76					32	130	14:45	387	1445	321	1303					708	2748
03:00	16		19						35		15:00	318		412						730	
03:15	13		13						26		15:15	366		374						740	
03:30	16		15						31		15:30	320		445						765	
03:45	22	67	14	61					36	128	15:45	341	1345	382	1613					723	2958
04:00	24		12						36		16:00	313		448						761	
04:15	29		11						40		16:15	348		421						769	
04:30	60		13						73		16:30	364		455						819	
04:45	54	167	20	56					74	223	16:45	323	1348	478	1802					801	3150
05:00	57		24						81		17:00	356		428						784	
05:15	97		48						145		17:15	329		438						767	
05:30	149		47						196		17:30	350		405						755	
05:45	177	480	43	162					220	642	17:45	318	1353	412	1683					730	3036
06:00	183		50						233		18:00	301		365						666	
06:15	258		92						350		18:15	250		321						571	
06:30	405		108						513		18:30	268		318						586	
06:45	458	1304	144	394					602	1698	18:45	227	1046	242	1246					469	2292
07:00	370		184						554		19:00	200		295						495	
07:15	382		173						555		19:15	219		227						446	
07:30	524		187						711		19:30	189		247						436	
07:45	596	1872	246	790					842	2662	19:45	148	756	201	970					349	1726
08:00	533		202						735		20:00	155		194						349	
08:15	525		206						731		20:15	117		190						307	
08:30	491		220						711		20:30	111		147						258	
08:45	438	1987	218	846					656	2833	20:45	109	492	177	708					286	1200
09:00	340		220						560		21:00	109		160						269	
09:15	369		197						566		21:15	104		148						252	
09:30	395		242						637		21:30	104		132						236	
09:45	347	1451	228	887					575	2338	21:45	100	417	116	556					216	973
10:00	340		255						595		22:00	84		112						196	
10:15	329		229						558		22:15	66		86						152	
10:30	335		242						577		22:30	68		84						152	
10:45	360	1364	250	976					610	2340	22:45	52	270	89	371					141	641
11:00	339		266						605		23:00	60		60						120	
11:15	318		251						569		23:15	42		52						94	
11:30	347		257						604		23:30	42		63						105	
11:45	389	1393	270	1044					659	2437	23:45	58	202	59	234					117	436
TOTALS		10288		5545						15833	TOTALS		11692		12845						24537
SPLIT %		65.0%		35.0%						39.2%	SPLIT %		47.7%		52.3%						60.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	21,980	18,390	0	0	40,370

AM Peak Hour	07:30	11:45			07:30	PM Peak Hour	13:00	16:00			16:15
AM Pk Volume	2178	1178			3019	PM Pk Volume	1511	1802			3173
Pk Hr Factor	0.914	0.915			0.896	Pk Hr Factor	0.919	0.942			0.969
7 - 9 Volume	3859	1636	0	0	5495	4 - 6 Volume	2701	3485	0	0	6186
7 - 9 Peak Hour	07:30	07:45			07:30	4 - 6 Peak Hour	16:15	16:00			16:15
7 - 9 Pk Volume	2178	874	0	0	3019	4 - 6 Pk Volume	1391	1802	0	0	3173
Pk Hr Factor	0.914	0.888	0.000	0.000	0.896	Pk Hr Factor	0.955	0.942	0.000	0.000	0.969

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Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. I-8 EB Off Ramp & Camino Del Rio South(WB)

Day: Wednesday
Date: 9/16/2015

City: San Diego
Project #: CA15_4269_135

DAILY TOTALS	NB	SB	EB	WB	Total
	40,982	40,294	0	0	81,276

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	59		143						202		12:00	549		548						1097	
00:15	49		123						172		12:15	545		536						1081	
00:30	32		95						127		12:30	579		554						1133	
00:45	44	184	56	417					100	601	12:45	520	2193	527	2165					1047	4358
01:00	37		59						96		13:00	587		633						1220	
01:15	29		49						78		13:15	550		586						1136	
01:30	37		69						106		13:30	612		613						1225	
01:45	25	128	47	224					72	352	13:45	599	2348	604	2436					1203	4784
02:00	20		42						62		14:00	634		647						1281	
02:15	28		36						64		14:15	553		708						1261	
02:30	20		48						68		14:30	583		779						1362	
02:45	23	91	36	162					59	253	14:45	536	2306	833	2967					1369	5273
03:00	19		28						47		15:00	612		787						1399	
03:15	36		26						62		15:15	705		856						1561	
03:30	53		18						71		15:30	721		804						1525	
03:45	32	140	21	93					53	233	15:45	649	2687	836	3283					1485	5970
04:00	65		26						91		16:00	623		846						1469	
04:15	89		25						114		16:15	595		832						1427	
04:30	134		30						164		16:30	670		877						1547	
04:45	138	426	39	120					177	546	16:45	668	2556	832	3387					1500	5943
05:00	165		38						203		17:00	693		773						1466	
05:15	331		62						393		17:15	652		848						1500	
05:30	413		116						529		17:30	624		837						1461	
05:45	405	1314	100	316					505	1630	17:45	583	2552	873	3331					1456	5883
06:00	620		119						739		18:00	567		790						1357	
06:15	743		159						902		18:15	597		813						1410	
06:30	944		257						1201		18:30	596		778						1374	
06:45	1000	3307	295	830					1295	4137	18:45	630	2390	723	3104					1353	5494
07:00	1006		340						1346		19:00	472		741						1213	
07:15	1009		464						1473		19:15	399		594						993	
07:30	942		480						1422		19:30	357		539						896	
07:45	803	3760	522	1806					1325	5566	19:45	342	1570	502	2376					844	3946
08:00	939		531						1470		20:00	340		521						861	
08:15	948		529						1477		20:15	303		474						777	
08:30	919		505						1424		20:30	308		451						759	
08:45	857	3663	533	2098					1390	5761	20:45	300	1251	438	1884					738	3135
09:00	610		459						1069		21:00	266		442						708	
09:15	590		514						1104		21:15	217		442						659	
09:30	562		568						1130		21:30	245		418						663	
09:45	496	2258	444	1985					940	4243	21:45	205	933	346	1648					551	2581
10:00	524		482						1006		22:00	155		379						534	
10:15	515		462						977		22:15	150		282						432	
10:30	486		487						973		22:30	123		285						408	
10:45	509	2034	454	1885					963	3919	22:45	108	536	220	1166					328	1702
11:00	428		456						884		23:00	114		230						344	
11:15	473		527						1000		23:15	103		190						293	
11:30	535		450						985		23:30	88		168						256	
11:45	553	1989	446	1879					999	3868	23:45	61	366	144	732					205	1098
TOTALS		19294		11815						31109	TOTALS		21688		28479						50167
SPLIT %		62.0%		38.0%						38.3%	SPLIT %		43.2%		56.8%						61.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	40,982	40,294	0	0	81,276

AM Peak Hour	06:30	08:00			08:00	PM Peak Hour	15:15	15:45			15:15
AM Pk Volume	3959	2098			5761	PM Pk Volume	2698	3391			6040
Pk Hr Factor	0.981	0.984			0.975	Pk Hr Factor	0.936	0.967			0.967
7 - 9 Volume	7423	3904	0	0	11327	4 - 6 Volume	5108	6718	0	0	11826
7 - 9 Peak Hour	07:00	08:00			08:00	4 - 6 Peak Hour	16:30	16:00			16:30
7 - 9 Pk Volume	3760	2098	0	0	5761	4 - 6 Pk Volume	2683	3387	0	0	6013
Pk Hr Factor	0.932	0.984	0.000	0.000	0.975	Pk Hr Factor	0.968	0.966	0.000	0.000	0.972

Prepared by NDS/ATD

VOLUME

Fairmount Ave Bet. I-8 EB Off Ramp & Camino Del Rio South(WB)

Day: Thursday
Date: 9/17/2015

City: San Diego
Project #: CA15_4269_135

DAILY TOTALS	NB	SB	EB	WB	Total
	41,641	42,839	0	0	84,480

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	51		144						195		12:00	550		571						1121	
00:15	58		112						170		12:15	597		523						1120	
00:30	52		124						176		12:30	551		578						1129	
00:45	35	196	76	456					111	652	12:45	524	2222	623	2295					1147	4517
01:00	40		65						105		13:00	526		626						1152	
01:15	26		50						76		13:15	558		612						1170	
01:30	33		75						108		13:30	628		676						1304	
01:45	36	135	52	242					88	377	13:45	696	2408	637	2551					1333	4959
02:00	25		46						71		14:00	682		704						1386	
02:15	37		32						69		14:15	638		827						1465	
02:30	20		37						57		14:30	643		856						1499	
02:45	29	111	45	160					74	271	14:45	580	2543	874	3261					1454	5804
03:00	31		33						64		15:00	627		872						1499	
03:15	43		29						72		15:15	663		882						1545	
03:30	40		29						69		15:30	777		926						1703	
03:45	29	143	25	116					54	259	15:45	717	2784	907	3587					1624	6371
04:00	71		22						93		16:00	648		866						1514	
04:15	94		31						125		16:15	588		905						1493	
04:30	144		25						169		16:30	686		865						1551	
04:45	142	451	38	116					180	567	16:45	636	2558	950	3586					1586	6144
05:00	191		58						249		17:00	695		907						1602	
05:15	328		72						400		17:15	639		1018						1657	
05:30	385		120						505		17:30	633		923						1556	
05:45	396	1300	125	375					521	1675	17:45	521	2488	869	3717					1390	6205
06:00	583		159						742		18:00	568		824						1392	
06:15	740		157						897		18:15	532		820						1352	
06:30	955		239						1194		18:30	524		745						1269	
06:45	1049	3327	315	870					1364	4197	18:45	507	2131	660	3049					1167	5180
07:00	996		384						1380		19:00	454		719						1173	
07:15	999		502						1501		19:15	367		639						1006	
07:30	953		537						1490		19:30	404		597						1001	
07:45	941	3889	554	1977					1495	5866	19:45	353	1578	584	2539					937	4117
08:00	906		528						1434		20:00	317		523						840	
08:15	888		552						1440		20:15	286		486						772	
08:30	895		515						1410		20:30	295		485						780	
08:45	792	3481	687	2282					1479	5763	20:45	270	1168	482	1976					752	3144
09:00	629		539						1168		21:00	287		481						768	
09:15	634		443						1077		21:15	233		475						708	
09:30	590		405						995		21:30	254		445						699	
09:45	484	2337	411	1798					895	4135	21:45	223	997	428	1829					651	2826
10:00	497		475						972		22:00	206		424						630	
10:15	502		495						997		22:15	184		302						486	
10:30	549		448						997		22:30	211		326						537	
10:45	565	2113	446	1864					1011	3977	22:45	171	772	251	1303					422	2075
11:00	515		463						978		23:00	141		259						400	
11:15	475		493						968		23:15	124		233						357	
11:30	502		463						965		23:30	142		223						365	
11:45	500	1992	561	1980					1061	3972	23:45	110	517	195	910					305	1427
TOTALS		19475		12236						31711	TOTALS		22166		30603						52769
SPLIT %		61.4%		38.6%						37.5%	SPLIT %		42.0%		58.0%						62.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	41,641	42,839	0	0	84,480

AM Peak Hour	06:30	08:15			07:15	PM Peak Hour	15:15	16:45			16:45
AM Pk Volume	3999	2293			5920	PM Pk Volume	2805	3798			6401
Pk Hr Factor	0.953	0.834			0.986	Pk Hr Factor	0.903	0.933			0.966
7 - 9 Volume	7370	4259	0	0	11629	4 - 6 Volume	5046	7303	0	0	12349
7 - 9 Peak Hour	07:00	08:00			07:15	4 - 6 Peak Hour	16:30	16:45			16:45
7 - 9 Pk Volume	3889	2282	0	0	5920	4 - 6 Pk Volume	2656	3798	0	0	6401
Pk Hr Factor	0.973	0.830	0.000	0.000	0.986	Pk Hr Factor	0.955	0.933	0.000	0.000	0.966

Intersection Traffic Counts

ID	N/S Street	E/W Street
1	I-5 SB Ramps	Tecolote Road
2	I-5 NB Ramps	Tecolote Road
3	I-805 SB Ramps	Phyllis Place
4	I-805 NB Ramps	Murray Ridge Road
5	Mission Center Road	Mission Valley Road/Civita Boulevard
6	Mission Center Road	Westside Drive
7	Sea World Drive	Friars Road
8	Napa Street	Friars Road
9	Colusa Street	Friars Road
10	Via Las Cumbres	Friars Road
11	Fashion Valley Road	Friars Road
12	Via De La Moda	Friars Road
13	Avenida De Las Tiendas	Friars Road
14	Ulric Street/SR-163 SB Ramps	Friars Road
15	SR-163 NB Ramps	Friars Road
16	Frazee Road	Friars Road
17	Mission Center Road	Friars Road WB Ramps
18	Mission Center Road	Friars Road EB Ramps
19	Qualcomm Way	Friars Road WB Ramps
20	Qualcomm Way	Friars Road EB Ramps
21	River Run Drive	Friars Road
22	Fenton Parkway	Friars Road
23	Northside Drive	Friars Road
24	Mission Village Drive	Friars Road WB Ramps
25	Mission Village Drive	Friars Road EB Ramps
26	I-15 SB Ramps	Friars Road
27	I-15 NB Ramps	Friars Road
28	Rancho Mission Road	Friars Road
29	Santo Road	Friars Road
30	Riverdale Street	Friars Road
31	Mission Gorge Road	Friars Road
32	Mission Center Road	Mission Center Court
33	Qualcomm Way	Rio San Diego Drive
34	River Run Drive	Rio San Diego Drive
35	Fenton Parkway	Rio San Diego Drive
36	Northside Drive	Rio San Diego Drive
37	Rancho Mission Road	San Diego Mission Road

ID	N/S Street	E/W Street
38	Mission Center Road	Hazard Center Drive
39	Avenida Del Rio	Camino De La Reina
40	Mission Center Road	Camino De La Reina
41	Camino Del Este	Camino De La Reina
42	Qualcomm Way	Camino De La Reina
43	Mission City Parkway	Camino Del Rio North
44	Ward Road	Camino Del Rio North
45	Fairmount Avenue	Camino Del Rio North
46	I-8 WB Ramps	Hotel Circle North
47	I-8 WB Ramps	Hotel Circle North
48	Fashion Valley Road	Hotel Circle North
49	Mission Center Road	Camino Del Rio North
50	I-8 Ramps	Camino Del Rio North
51	Camino Del Este	Camino Del Rio North
52	Qualcomm Way	Camino Del Rio North/ I-8 WB Ramps
53	Morena Boulevard	Taylor Street
54	I-8 Ramps	Taylor Street
55	Hotel Circle North	Hotel Circle South
56	I-8 EB Ramps	Hotel Circle South
57	Bachman Place	Hotel Cirle South
58	Mission Center Road	I-8 EB Ramps
59	Mission Center Road	Camino Del Rio South
60	Qualcomm Way	I-8 EB Ramps
61	Qualcomm Way/Texas Street	Camino Del Rio South
62	Mission City Parkway	Camino Del Rio South
63	I-15 SB Offramp	Camino Del Rio South
64	SR-15 SB Onramp	Camino Del Rio South
65	I-15 NB Onramp	Camino Del Rio South
66	I-8 EB/I-15 SB Offramps	Fairmount Avenue
67	Texas Street	Madison Avenue

1

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	I-5 NB Ramps	LOCATION #:	1
THURSDAY	EAST & WEST:	Tecolote Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

WEEKDAY AM

	NORTHBOUND I-5 NB Ramps			SOUTHBOUND I-5 NB Ramps			EASTBOUND Tecolote Road			WESTBOUND Tecolote Road			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0.5	1	X	X	X	2	2	X	X	2	0	
7:00 AM	11	7	37				255	75			84	103	572
7:15 AM	16	7	36				248	79			80	114	580
7:30 AM	18	5	52				305	144			80	139	743
7:45 AM	11	10	71				258	155			148	113	766
8:00 AM	19	5	48				244	124			149	94	683
8:15 AM	24	5	76				256	129			101	130	721
8:30 AM	20	3	75				222	139			104	106	669
8:45 AM	42	12	85				234	143			102	83	701
VOLUMES	161	54	480	0	0	0	2,022	988	0	0	848	83	5,435
APPROACH %	23%	8%	69%	0%	0%	0%	67%	33%	0%	0%	91%	9%	
APP/DEPART	695	/	2,159	0	/	0	3,010	/	1,468	931	/	1,009	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	72	25	247	0	0	0	1,063	552	0	0	478	476	2,913
APPROACH %	21%	7%	72%	0%	0%	0%	66%	34%	0%	0%	50%	50%	
PEAK HR FACTOR		0.819			0.000			0.899			0.914		0.951
APP/DEPART	344	/	1,564	0	/	0	1,615	/	799	954	/	550	0

WEEKDAY AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

WEEKDAY PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	47	5	117				190	133			124	106	722
4:15 PM	62	9	121				201	123			121	167	804
4:30 PM	38	7	102				207	127			139	106	726
4:45 PM	61	2	138				179	140			142	86	748
5:00 PM	59	3	125				208	155			137	110	797
5:15 PM	75	5	135				192	153			113	131	804
5:30 PM	74	2	114				179	102			108	107	686
5:45 PM	45	1	99				150	115			119	101	630
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	461	34	951	0	0	0	1,506	1,048	0	0	1,003	914	5,917
APPROACH %	32%	2%	66%	0%	0%	0%	59%	41%	0%	0%	52%	48%	
APP/DEPART	1,446	/	2,454	0	/	0	2,554	/	1,999	1,917	/	1,464	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	233	17	500	0	0	0	786	575	0	0	531	433	3,075
APPROACH %	31%	2%	67%	0%	0%	0%	58%	42%	0%	0%	55%	45%	
PEAK HR FACTOR		0.872			0.000			0.937			0.837		0.956
APP/DEPART	750	/	1,236	0	/	0	1,361	/	1,075	964	/	764	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	2	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	4	0	0	4
0	3	0	0	3
0	2	0	0	2
				0
				0
	pm			0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
				0
				0
				0
				0
				0
0	13	0	0	13

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			0			0		0
	0			0			1			2		2
	0			0			1			3		3
	0			0			1			2		2
	0			0			0			0		0
	0			0			0			0		0
	0			0			2			0		0
	0			0			1			0		0
												0
												0
	pm											0
	0			0			1			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			3			3		3
	0			0			0			1		1
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
												0
												0
												0
												0
												6
0	0	0	0	0	0	0	10	0	0	11	0	17

2

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	I-5 SB Ramps	LOCATION #:	2
THURSDAY	EAST & WEST:	Tecolote Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

	NORTHBOUND I-5 SB Ramps			SOUTHBOUND I-5 SB Ramps			EASTBOUND Tecolote Road			WESTBOUND Tecolote Road			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	1	0	1	X	2	1	2	2	X	
WEEKDAY AM													
7:00 AM				42	0	158		284	0	61	38		583
7:15 AM				85	0	205		244	0	63	40		637
7:30 AM				52	1	185		391	0	55	41		725
7:45 AM				77	0	181		344	0	94	57		753
8:00 AM				67	0	156		307	0	98	78		706
8:15 AM				65	0	163		331	0	70	62		691
8:30 AM				82	1	160		283	0	72	54		652
8:45 AM				64	0	160		321	1	84	69		699
VOLUMES	0	0	0	534	2	1,368	0	2,505	1	597	439	0	5,446
APPROACH %	0%	0%	0%	28%	0%	72%	0%	100%	0%	58%	42%	0%	
APP/DEPART	0	/	0	1,904	/	600	2,506	/	3,039	1,036	/	1,807	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	0	0	0	261	1	685	0	1,373	0	317	238	0	2,875
APPROACH %	0%	0%	0%	28%	0%	72%	0%	100%	0%	57%	43%	0%	
PEAK HR FACTOR		0.000			0.918			0.878			0.788		0.955
APP/DEPART	0	/	0	947	/	318	1,373	/	1,634	555	/	923	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM				71	2	237		259	0	74	93		736
4:15 PM				63	2	264		267	2	75	106		779
4:30 PM				69	0	241		266	5	82	97		760
4:45 PM				69	2	311		251	0	86	109		828
5:00 PM				73	3	269		282	0	75	122		824
5:15 PM				74	0	326		273	3	53	129		858
5:30 PM				55	0	330		231	1	54	128		799
5:45 PM				68	1	298		204	0	62	100		733
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	0	542	10	2,276	0	2,033	11	561	884	0	6,317
APPROACH %	0%	0%	0%	19%	0%	80%	0%	99%	1%	39%	61%	0%	
APP/DEPART	0	/	0	2,828	/	582	2,044	/	2,575	1,445	/	3,160	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	0	0	0	271	5	1,236	0	1,037	4	268	488	0	3,309
APPROACH %	0%	0%	0%	18%	0%	82%	0%	100%	0%	35%	65%	0%	
PEAK HR FACTOR		0.000			0.945			0.923			0.959		0.964
APP/DEPART	0	/	0	1,512	/	277	1,041	/	1,308	756	/	1,724	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	0	0	0	0

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7:00 AM	0	2	0	0	2
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	1	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1
8:30 AM	0	1	0	0	1
8:45 AM	0	2	0	0	2
					0
		pm			0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
					0
					0
					0
					0
					0
					0
	0	8	0	0	8

BIKE MOVEMENTS

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM		0			0			0			0		0
7:15 AM		0			0			1			2		2
7:30 AM		0			0			1			2		2
7:45 AM		0			0			1			3		3
8:00 AM		0			0			0			0		0
8:15 AM		0			0			0			0		0
8:30 AM		0			0			1			0		0
8:45 AM		0			0			1			0		0
													0
													0
4:00 PM		0			0			1			0		0
4:15 PM		0			0			0			0		0
4:30 PM		0			0			0			0		0
4:45 PM		0			0			2			0		0
5:00 PM		0			0			1			2		2
5:15 PM		0			0			0			2		2
5:30 PM		0			0			0			0		0
5:45 PM		0			0			0			0		0
													0
													0
													0
													0
													0
													7
	0	0	0	0	0	0	0	9	0	0	11	0	18

3

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/16/15	NORTH & SOUTH:	I-805 SB Ramps	LOCATION #:	3
WEDNESDAY	EAST & WEST:	Phyllis Place	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

	NORTHBOUND I-805 SB Ramps			SOUTHBOUND I-805 SB Ramps			EASTBOUND Phyllis Place			WESTBOUND Phyllis Place			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	0.5	0.5	1	X	1	0	1	1	X	
WEEKDAY AM													
7:00 AM				51	0	0		22	6	87	7		173
7:15 AM				53	0	5		21	10	104	3		196
7:30 AM				74	0	3		16	8	124	10		235
7:45 AM				94	0	5		13	12	109	6		239
8:00 AM				78	1	2		17	7	98	7		210
8:15 AM				62	0	9		18	6	101	12		208
8:30 AM				68	0	1		13	14	98	7		201
8:45 AM				55	0	3		22	7	73	10		170
VOLUMES	0	0	0	535	1	28	0	142	70	794	62	0	1,632
APPROACH %	0%	0%	0%	95%	0%	5%	0%	67%	33%	93%	7%	0%	
APP/DEPART	0	/	0	564	/	865	212	/	677	856	/	90	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	0	0	0	308	1	19	0	64	33	432	35	0	892
APPROACH %	0%	0%	0%	94%	0%	6%	0%	66%	34%	93%	7%	0%	
PEAK HR FACTOR		0.000			0.828			0.970			0.871		0.933
APP/DEPART	0	/	0	328	/	466	97	/	372	467	/	54	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM				46	0	10		13	6	157	15		247
4:15 PM				50	0	2		8	3	107	14		184
4:30 PM				45	0	6		9	4	178	22		264
4:45 PM				39	0	11		8	9	159	29		255
5:00 PM				40	0	12		10	7	197	20		286
5:15 PM				44	1	6		11	5	182	18		267
5:30 PM				33	6	11		14	1	141	23		229
5:45 PM				35	0	10		9	2	144	18		218
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	0	332	7	68	0	82	37	1,265	159	0	1,950
APPROACH %	0%	0%	0%	82%	2%	17%	0%	69%	31%	89%	11%	0%	
APP/DEPART	0	/	0	407	/	1,309	119	/	414	1,424	/	227	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	0	0	168	1	35	0	38	25	716	89	0	1,072
APPROACH %	0%	0%	0%	82%	0%	17%	0%	60%	40%	89%	11%	0%	
PEAK HR FACTOR		0.000			0.981			0.926			0.927		0.937
APP/DEPART	0	/	0	204	/	742	63	/	206	805	/	124	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
				0
				0
				0
				0
1				1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
1	0	0	0	1

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/16/15	NORTH & SOUTH:	I-805 NB Ramps	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Murray Ridge Road	CONTROL:	SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W   E ►
S ▼

	NORTHBOUND I-805 NB Ramps			SOUTHBOUND I-805 NB Ramps			EASTBOUND Murray Ridge Road			WESTBOUND Murray Ridge Road			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0.5	1	X	X	X	1	1	X	X	1.5	0.5	
WEEKDAY AM													
7:00 AM	4	0	99				14	53			90	75	335
7:15 AM	2	0	94				14	59			101	78	348
7:30 AM	3	0	118				12	69			138	93	433
7:45 AM	5	2	167				10	101			103	67	455
8:00 AM	6	3	172				10	88			104	78	461
8:15 AM	5	3	146				10	67			108	62	401
8:30 AM	4	4	141				7	71			93	61	381
8:45 AM	8	0	169				14	68			88	46	393
VOLUMES	37	12	1,106	0	0	0	91	576	0	0	825	560	3,207
APPROACH %	3%	1%	96%	0%	0%	0%	14%	86%	0%	0%	60%	40%	
APP/DEPART	1,155	/	663	0	/	0	667	/	1,682	1,385	/	862	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	19	8	603	0	0	0	42	325	0	0	453	300	1,750
APPROACH %	3%	1%	96%	0%	0%	0%	11%	89%	0%	0%	60%	40%	
PEAK HR FACTOR		0.870			0.000			0.827			0.815		0.949
APP/DEPART	630	/	350	0	/	0	367	/	928	753	/	472	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	7	0	118				9	54			158	61	407
4:15 PM	12	0	109				5	49			117	81	373
4:30 PM	13	0	105				11	44			183	84	440
4:45 PM	22	0	121				5	39			172	67	426
5:00 PM	5	1	118				7	45			205	100	481
5:15 PM	7	1	118				8	47			193	110	484
5:30 PM	9	0	110				4	41			158	72	394
5:45 PM	8	1	110				6	39			148	88	400
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	83	3	909	0	0	0	55	358	0	0	1,334	663	3,405
APPROACH %	8%	0%	91%	0%	0%	0%	13%	87%	0%	0%	67%	33%	
APP/DEPART	995	/	721	0	/	0	413	/	1,267	1,997	/	1,417	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	47	2	462	0	0	0	31	175	0	0	753	361	1,831
APPROACH %	9%	0%	90%	0%	0%	0%	15%	85%	0%	0%	68%	32%	
PEAK HR FACTOR		0.893			0.000			0.936			0.913		0.946
APP/DEPART	511	/	394	0	/	0	206	/	637	1,114	/	800	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES		0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
	2			2
				0
				0
				0
				0
				0
				0
				0
				0
				0
	PM			0
				0
				0
				0
				0
				0
1				1
				0
				0
				0
				0
				0
				0
				0
1	2	0	0	3

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
												0
												0
												0
	NO BIKES											0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
0	0	0	0	0	0	0	0	0	0	0	0	0

5

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/16/15	NORTH & SOUTH:	Mission Center Road	LOCATION #:	5
WEDNESDAY	EAST & WEST:	Mission Valley Road/Civita Boulevard	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Mission Center Road			SOUTHBOUND Mission Center Road			EASTBOUND Mission Valley Road/Civita Boulevard			WESTBOUND Mission Valley Road/Civita Boulevard			
	LANES:	NL 2	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 1	ER 1	WL 2	WT 0.5	WR 0.5	TOTAL
WEEKDAY AM	7:00 AM	38	43	22	10	41	61	5	1	7	31	1	24	284
	7:15 AM	76	51	21	7	51	35	2	0	8	16	0	17	284
	7:30 AM	102	41	14	8	80	41	3	0	9	30	2	16	346
	7:45 AM	119	52	11	1	83	87	8	1	12	19	5	10	408
	8:00 AM	103	48	11	5	56	84	14	1	19	33	0	21	395
	8:15 AM	80	35	9	4	67	83	10	1	18	31	1	18	357
	8:30 AM	78	30	12	3	61	53	10	0	22	23	4	11	307
	8:45 AM	84	31	14	7	67	94	7	0	33	19	4	8	368
	VOLUMES	680	331	114	45	506	538	59	4	128	202	17	125	2,749
	APPROACH %	60%	29%	10%	4%	46%	49%	31%	2%	67%	59%	5%	36%	
	APP/DEPART	1,125	/	515	1,089	/	836	191	/	163	344	/	1,235	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	404	176	45	18	286	295	35	3	58	113	8	65	1,506
	APPROACH %	65%	28%	7%	3%	48%	49%	36%	3%	60%	61%	4%	35%	
	PEAK HR FACTOR		0.859			0.876			0.706			0.861		0.923
	APP/DEPART	625	/	276	599	/	457	96	/	66	186	/	707	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	11	100	15	9	62	8	62	1	83	13	0	17	381
	4:15 PM	25	103	13	7	77	14	61	1	75	21	1	7	405
	4:30 PM	15	98	11	9	98	9	89	1	81	14	2	16	443
	4:45 PM	29	107	22	11	113	10	59	3	74	19	2	14	463
	5:00 PM	30	139	29	8	99	24	122	6	108	23	0	16	604
	5:15 PM	43	89	15	8	102	15	71	2	53	22	0	13	433
	5:30 PM	23	109	18	12	105	9	49	1	42	21	2	11	402
	5:45 PM	25	101	18	7	87	19	39	2	44	12	1	9	364
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	201	846	141	71	743	108	552	17	560	145	8	103	3,495
	APPROACH %	17%	71%	12%	8%	81%	12%	49%	2%	50%	57%	3%	40%	
	APP/DEPART	1,188	/	1,501	922	/	1,448	1,129	/	229	256	/	317	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	117	433	77	36	412	58	341	12	316	78	4	59	1,943
	APPROACH %	19%	69%	12%	7%	81%	11%	51%	2%	47%	55%	3%	42%	
	PEAK HR FACTOR		0.792			0.944			0.709			0.904		0.804
	APP/DEPART	627	/	833	506	/	806	669	/	125	141	/	179	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
1				1
1				1
1				1
		2	1	3
				0
			1	1
				0
3	0	2	2	7
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
2				2
			3	3
				0
			1	1
1		1		2
1				1
1				1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
5	0	1	4	10

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	2	3	0	5
0	2	1	0	3
0	3	2	0	5
0	1	1	0	2
0	1	1	2	4
0	0	0	2	2
0	2	2	1	5
0	2	1	0	3
				0
PM				0
0	1	0	2	3
0	2	0	3	5
0	0	1	1	2
0	3	0	3	6
0	2	1	1	4
0	0	2	0	2
0	1	1	1	3
0	1	1	2	4
				0
				0
				0
				0
				0
				0
0	23	17	18	58

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			1		1
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0		1	0		1
												0
PM												0
	0			0			1			0		0
	0			0			0			0		0
	0			0		1	0			0		0
	0			0			3			1		1
	0			1			0			0		0
	0			0			3			0		0
	0			0			0			0		0
	0			0			0			1		1
												0
												0
												0
												0
												0
												3
0	0	0	0	1	0	1	7	0	1	3	0	7

6

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/16/15 WEDNESDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Mission Center Road
EAST & WEST: Westside Drive

PROJECT #: PDT15-0911-01
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Mission Center Road			SOUTHBOUND Mission Center Road			EASTBOUND Westside Drive			WESTBOUND Westside Drive			
	LANES:	NL 2	NT 3	NR 1	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 1	WL 1	WT 1	WR 0	TOTAL
WEEKDAY AM	7:00 AM	48	110	11	2	51	18	6	0	33	17	8	8	312
	7:15 AM	63	119	4	0	54	16	10	1	31	24	6	4	332
	7:30 AM	49	120	11	1	84	23	17	1	33	35	11	7	392
	7:45 AM	62	144	11	1	100	16	19	2	50	30	3	5	443
	8:00 AM	68	162	11	0	90	17	5	0	41	26	7	4	431
	8:15 AM	50	111	5	1	92	14	12	3	24	35	3	6	356
	8:30 AM	53	107	11	4	91	15	9	1	49	32	5	3	380
	8:45 AM	46	108	11	5	95	18	12	3	34	34	2	3	371
	VOLUMES	439	981	75	14	657	137	90	11	295	233	45	40	3,017
	APPROACH %	29%	66%	5%	2%	81%	17%	23%	3%	74%	73%	14%	13%	
	APP/DEPART	1,495	/	1,111	808	/	1,185	396	/	100	318	/	621	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	229	537	38	3	366	70	53	6	148	126	24	22	1,622
	APPROACH %	28%	67%	5%	1%	83%	16%	26%	3%	71%	73%	14%	13%	
	PEAK HR FACTOR		0.834			0.938			0.729			0.811		0.915
	APP/DEPART	804	/	612	439	/	640	207	/	47	172	/	323	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	72	96	26	0	153	20	14	11	112	9	4	2	519
	4:15 PM	63	115	23	1	131	20	17	5	67	15	1	3	461
	4:30 PM	75	123	49	3	158	23	17	8	84	28	6	4	578
	4:45 PM	60	113	27	9	155	26	21	7	89	15	4	4	530
	5:00 PM	78	141	20	5	206	16	30	5	99	31	0	1	632
	5:15 PM	89	149	40	6	201	21	24	4	105	14	1	4	658
	5:30 PM	71	104	31	7	134	15	25	2	101	20	6	4	520
	5:45 PM	68	142	33	1	144	21	24	12	90	19	5	3	562
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	576	983	249	32	1,282	162	172	54	747	151	27	25	4,460
	APPROACH %	32%	54%	14%	2%	87%	11%	18%	6%	77%	74%	13%	12%	
	APP/DEPART	1,808	/	1,180	1,476	/	2,180	973	/	335	203	/	765	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	302	526	136	23	720	86	92	24	377	88	11	13	2,398
	APPROACH %	31%	55%	14%	3%	87%	10%	19%	5%	76%	79%	10%	12%	
	PEAK HR FACTOR		0.867			0.909			0.920			0.737		0.911
	APP/DEPART	964	/	631	829	/	1,185	493	/	183	112	/	399	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
				0
				0
				0
				0
				0
	1			1
				0
0	1	0	0	1
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
2				2
3				3
2				2
2				2
1				1
1				1
1				1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
12	0	0	0	12

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	3	1	2	6
0	1	1	0	2
0	6	2	0	8
0	4	1	1	6
0	6	0	0	6
0	2	1	0	3
0	2	1	0	3
0	2	0	2	4
				0
pm				0
0	6	1	3	10
0	5	1	5	11
0	3	2	2	7
0	9	2	2	13
0	8	0	3	11
0	5	1	2	8
0	13	1	3	17
0	6	4	2	12
				0
				0
				0
				0
				0
				0
0	81	19	27	127

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			1			0			0		0
	0			0			0			0		0
	0			0			0			0		0
												0
pm												0
	0			0			0			0		0
	0			1			0			0	2	2
	0			0		1	1			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			1			0		0
	0			0			0			0		0
	0			0			1			0		0
												0
												0
												0
												0
												0
												2
0	0	0	0	2	0	1	3	0	0	0	2	4

7

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Sea World Drive	LOCATION #:	7
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Sea World Drive			SOUTHBOUND Sea World Drive			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL X	NT 2	NR 1	SL 2	ST 2	SR X	EL X	ET X	ER X	WL 1.5	WT X	WR 1.5	TOTAL
WEEKDAY AM	7:00 AM		274	65	21	146					72		37	615
	7:15 AM		313	146	51	145					49		52	756
	7:30 AM		342	91	45	145					90		61	774
	7:45 AM		320	108	31	173					88		47	767
	8:00 AM		287	67	36	187					108		48	733
	8:15 AM		263	95	24	173					159		82	796
	8:30 AM		266	127	24	169					157		87	830
	8:45 AM		216	137	25	154					151		76	759
	VOLUMES	0	2,281	836	257	1,292	0	0	0	0	874	0	490	6,030
	APPROACH %	0%	73%	27%	17%	83%	0%	0%	0%	0%	64%	0%	36%	
	APP/DEPART	3,117	/	2,771	1,549	/	2,166	0	/	1,093	1,364	/	0	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	0	1,136	397	115	702	0	0	0	0	512	0	264	3,126
	APPROACH %	0%	74%	26%	14%	86%	0%	0%	0%	0%	66%	0%	34%	
	PEAK HR FACTOR		0.895			0.916			0.000			0.795		0.942
	APP/DEPART	1,533	/	1,400	817	/	1,214	0	/	512	776	/	0	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM		263	155	51	252					109		27	857
	4:15 PM		282	230	76	292					110		34	1,024
	4:30 PM		277	206	81	274					88		36	962
	4:45 PM		257	196	112	299					76		38	978
	5:00 PM		328	181	86	259					90		29	973
	5:15 PM		262	176	96	308					136		36	1,014
	5:30 PM		271	145	98	325					159		37	1,035
	5:45 PM		184	98	60	333					89		27	791
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	0	2,124	1,387	660	2,342	0	0	0	0	857	0	264	7,634
	APPROACH %	0%	60%	40%	22%	78%	0%	0%	0%	0%	76%	0%	24%	
	APP/DEPART	3,511	/	2,388	3,002	/	3,199	0	/	2,047	1,121	/	0	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	1,118	698	392	1,191	0	0	0	0	461	0	140	4,000
	APPROACH %	0%	62%	38%	25%	75%	0%	0%	0%	0%	77%	0%	23%	
	PEAK HR FACTOR		0.892			0.936			0.000			0.767		0.966
	APP/DEPART	1,816	/	1,258	1,583	/	1,652	0	/	1,090	601	/	0	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
			1	1
				0
				0
	2			2
	3			3
	2			2
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	7	0	1	8

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
0	1	0	0	1	7:00 AM
0	0	0	0	0	7:15 AM
0	0	0	0	0	7:30 AM
0	0	0	0	0	7:45 AM
0	0	0	0	0	8:00 AM
0	0	0	0	0	8:15 AM
0	0	0	0	0	8:30 AM
0	0	0	0	0	8:45 AM
				0	
				0	
	pm			0	
0	0	0	0	0	4:00 PM
0	0	0	0	0	4:15 PM
0	1	0	0	1	4:30 PM
0	0	0	0	0	4:45 PM
0	1	0	0	1	5:00 PM
0	0	0	0	0	5:15 PM
0	0	0	0	0	5:30 PM
0	0	0	0	0	5:45 PM
				0	
				0	
				0	
				0	
				0	
0	3	0	0	3	

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	2			0					1			1
	4		2	0					2			2
	1			1					4			4
	2	1		3								0
	0	3		0								0
	1			0					1			1
	3			0								0
	1			0								0
												0
												0
			pm						pm			0
	0	1		1								0
	3			0								0
	1	1		1								0
	0			0								0
	1			0					2			2
	0			0								0
	1			0								0
	0			0					3			3
												0
												0
												0
												0
												6
0	20	6	2	6	0	0	0	0	13	0	0	19

8

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Napa Street	LOCATION #:	8
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

WEEKDAY AM

	NORTHBOUND Napa Street			SOUTHBOUND Napa Street			EASTBOUND Friars Road			WESTBOUND Friars Road			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	1.5	X	1.5	1	2	X	X	2	1	
7:00 AM				18		7	24	55			86	87	277
7:15 AM				35		9	52	110			117	104	427
7:30 AM				45		10	51	103			123	136	468
7:45 AM				40		17	41	83			122	155	458
8:00 AM				55		20	34	73			162	165	509
8:15 AM				53		23	35	72			209	207	599
8:30 AM				48		16	68	78			233	187	630
8:45 AM				50		27	80	86			183	175	601
VOLUMES	0	0	0	344	0	129	385	660	0	0	1,235	1,216	3,969
APPROACH %	0%	0%	0%	73%	0%	27%	37%	63%	0%	0%	50%	50%	
APP/DEPART	0	/	1,601	473	/	0	1,045	/	1,004	2,451	/	1,364	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	0	0	206	0	86	217	309	0	0	787	734	2,339
APPROACH %	0%	0%	0%	71%	0%	29%	41%	59%	0%	0%	52%	48%	
PEAK HR FACTOR		0.000			0.948			0.792			0.905		0.928
APP/DEPART	0	/	951	292	/	0	526	/	515	1,521	/	873	0

U-TURNS	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0

WEEKDAY AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS	NB	SB	EB	WB	TTL
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0

WEEKDAY PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM				92		45	25	198			80	61	501
4:15 PM				128		35	10	272			81	66	592
4:30 PM				131		43	35	251			83	75	618
4:45 PM				118		26	32	274			83	103	636
5:00 PM				142		41	40	219			92	77	611
5:15 PM				140		54	30	255			108	79	666
5:30 PM				123		66	32	201			117	91	630
5:45 PM				90		34	18	142			80	79	443
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	0	964	0	344	222	1,812	0	0	724	631	4,697
APPROACH %	0%	0%	0%	74%	0%	26%	11%	89%	0%	0%	53%	47%	
APP/DEPART	0	/	853	1,308	/	0	2,034	/	2,776	1,355	/	1,068	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	0	0	0	523	0	187	134	949	0	0	400	350	2,543
APPROACH %	0%	0%	0%	74%	0%	26%	12%	88%	0%	0%	53%	47%	
PEAK HR FACTOR		0.000			0.915			0.885			0.901		0.955
APP/DEPART	0	/	484	710	/	0	1,083	/	1,472	750	/	587	0

U-TURNS	NB	SB	EB	WB	TTL
4:00 PM			1		1
4:15 PM			1		1
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	0	2	0	2

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0		9	0	9
4		4	0	8
6		8	1	15
3		9	0	12
5		7	1	13
5		12	1	18
6		8	0	14
3		8	0	11
				0
		pm		0
6		10	0	16
1		5	0	6
7		16	0	23
6		7	2	15
12		10	0	22
4		10	1	15
1		9	0	10
3		4	5	12
				0
				0
				0
				0
				0
				0
72	0	136	11	219

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
			0				2			5		5
			1				1			3		3
			2				0			1		1
			0			1	0			1		1
			2				0			4		4
			1			1	0			1		1
			0			1	2			1		1
			5				1			0		0
												0
										pm		0
			1				1			2		2
			0		1	1	0			1		1
			0				1			0		0
			0				0			1		1
			1				1			1		1
			0				2			2	1	3
			1			1	1			1	1	2
			1			1	4			5		5
												0
												0
												0
												0
												0
												22
0	0	0	15	0	1	6	16	0	0	29	2	53

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9-10-15 THURSDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Colusa Street
EAST & WEST: Friars Road

PROJECT #: PDT15-0911-01
LOCATION #: 9
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Colusa Street			SOUTHBOUND Colusa Street			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 0.5	NT 0.5	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
WEEKDAY AM	7:00 AM	18	2	2	11	0	5	6	61	3	0	152	10	270
	7:15 AM	6	2	8	14	1	16	7	93	2	2	185	9	345
	7:30 AM	14	0	6	18	0	18	7	135	6	6	227	18	455
	7:45 AM	12	0	11	18	0	10	8	109	0	2	241	20	431
	8:00 AM	17	1	4	11	0	12	6	91	6	2	319	19	488
	8:15 AM	12	1	7	12	1	3	5	82	3	1	410	28	565
	8:30 AM	14	2	8	16	0	12	9	77	6	2	453	18	617
	8:45 AM	10	1	15	16	1	5	19	132	4	8	339	16	566
	VOLUMES	103	9	61	116	3	81	67	780	30	23	2,326	138	3,737
	APPROACH %	60%	5%	35%	58%	2%	41%	8%	89%	3%	1%	94%	6%	
	APP/DEPART	173	/	214	200	/	56	877	/	957	2,487	/	2,510	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	53	5	34	55	2	32	39	382	19	13	1,521	81	2,236
	APPROACH %	58%	5%	37%	62%	2%	36%	9%	87%	4%	1%	94%	5%	
	PEAK HR FACTOR		0.885			0.795			0.710			0.854		0.906
	APP/DEPART	92	/	125	89	/	34	440	/	471	1,615	/	1,606	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	3	0	7	21	6	8	12	273	11	3	126	5	475
	4:15 PM	5	0	0	23	1	13	7	300	9	7	156	14	535
	4:30 PM	2	0	2	15	2	12	15	385	13	13	125	7	591
	4:45 PM	4	0	2	26	0	7	14	372	14	12	149	15	615
	5:00 PM	10	1	4	30	1	11	14	350	10	4	155	12	602
	5:15 PM	5	0	3	42	4	11	10	321	8	7	156	13	580
	5:30 PM	9	0	5	41	4	20	18	332	11	11	172	5	628
	5:45 PM	3	0	2	16	2	11	9	235	9	6	142	11	446
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	41	1	25	214	20	93	99	2,568	85	63	1,181	82	4,472
	APPROACH %	61%	1%	37%	65%	6%	28%	4%	93%	3%	5%	89%	6%	
	APP/DEPART	67	/	182	327	/	168	2,752	/	2,807	1,326	/	1,315	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	28	1	14	139	9	49	56	1,375	43	34	632	45	2,425
	APPROACH %	65%	2%	33%	71%	5%	25%	4%	93%	3%	5%	89%	6%	
	PEAK HR FACTOR		0.717			0.758			0.921			0.945		0.965
	APP/DEPART	43	/	102	197	/	86	1,474	/	1,528	711	/	709	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
				0
		1		1
1				1
		1		1
				0
		1		1
				0
1	0	3	0	4
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
		2		2
		0		0
		2		2
		3		3
		3		3
		2		2
		5		5
		1		1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	18	0	18

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
9	7	0	5	21
4	3	0	1	8
6	2	0	1	9
12	2	0	3	17
2	6	0	4	12
6	3	0	1	10
0	1	0	0	1
2	3	0	3	8
				0
	pm			0
0	2	0	1	3
1	2	0	0	3
1	1	0	0	2
3	2	0	0	5
2	5	0	3	10
3	4	0	2	9
1	3	0	2	6
3	8	0	3	14
				0
				0
				0
				0
				0
				0
55	54	0	29	138

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	1	0			0			2		2
	0	0		0			5			4		4
	0	0		0			1			0		0
	0	0		0			2		1	1		2
	0	0		0			1			0		0
	0	0		0			1			0		0
	0	2		0			2			0		0
	0	0		0			0			0		0
												0
	pm						pm					0
	0	0		1			1			1		1
	0	0		0			2			0		0
	0	1		0			0			2		2
	0	0		0			1			0		0
	0	1		0			0			2		2
	0	1		0			2			0		0
	0	0		0			2			1		1
	0	0		0			4			1		1
												0
												0
												0
												0
												0
												9
0	0	5	1	1	0	0	24	0	1	14	0	24

10

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Via Las Cumbres	LOCATION #:	10
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Via Las Cumbres			SOUTHBOUND Via Las Cumbres			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 2	ER X	WL X	WT 2	WR 1	TOTAL
WEEKDAY AM	7:00 AM				33		27	23	60			134	69	346
	7:15 AM				46		34	70	77			178	129	534
	7:30 AM				60		41	62	108			209	133	613
	7:45 AM				54		40	33	125			255	112	619
	8:00 AM				43		23	30	80			358	105	639
	8:15 AM				34		35	19	78			407	122	695
	8:30 AM				34		24	13	115			445	120	751
	8:45 AM				48		33	25	105			290	118	619
	VOLUMES	0	0	0	352	0	257	275	748	0	0	2,276	908	4,816
	APPROACH %	0%	0%	0%	58%	0%	42%	27%	73%	0%	0%	71%	29%	
	APP/DEPART	0	/	1,183	609	/	0	1,023	/	1,100	3,184	/	2,533	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	0	0	159	0	115	87	378	0	0	1,500	465	2,704
	APPROACH %	0%	0%	0%	58%	0%	42%	19%	81%	0%	0%	76%	24%	
	PEAK HR FACTOR		0.000			0.729			0.736			0.869		0.900
	APP/DEPART	0	/	552	274	/	0	465	/	537	1,965	/	1,615	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM				118		24	31	238			134	45	590
	4:15 PM				97		34	29	242			155	56	613
	4:30 PM				88		34	38	340			154	35	689
	4:45 PM				63		22	43	318			161	58	665
	5:00 PM				115		32	38	335			151	65	736
	5:15 PM				90		39	51	289			176	58	703
	5:30 PM				92		36	55	340			164	59	746
	5:45 PM				75		18	37	194			149	57	530
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	0	0	0	738	0	239	322	2,296	0	0	1,244	433	5,272
	APPROACH %	0%	0%	0%	76%	0%	24%	12%	88%	0%	0%	74%	26%	
	APP/DEPART	0	/	755	977	/	0	2,618	/	3,034	1,677	/	1,483	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	0	0	360	0	129	187	1,282	0	0	652	240	2,850
	APPROACH %	0%	0%	0%	74%	0%	26%	13%	87%	0%	0%	73%	27%	
	PEAK HR FACTOR		0.000			0.832			0.930			0.953		0.955
	APP/DEPART	0	/	427	489	/	0	1,469	/	1,642	892	/	781	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
				0
				0
				0
				0
	2			2
	1			1
				0
0	3	0	0	3
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
			1	1
				0
			1	1
				0
				0
				0
				0
	1			1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	1	0	2	3

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
2	0	0	1	3
6	0	0	0	6
4	0	0	0	4
2	0	0	0	2
5	0	0	0	5
0	0	0	0	0
				0
	PM			0
7	0	0	0	7
0	0	0	0	0
1	0	0	0	1
1	0	0	0	1
6	0	0	0	6
6	0	0	0	6
7	0	0	0	7
1	0	0	0	1
				0
				0
				0
				0
				0
				0
48	0	0	1	49

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			4			0		0
	0			0			2			0		0
	0			0			2			0		0
	0			0			3			7		7
	0			0			0			1		1
	0			0			2			0		0
	0			0			1			0		0
	0			0			0			0		0
												0
	PM						PM					0
	0			0			4			1		1
	0			0			2			0		0
	0			0			3			0		0
	0			0			0			2		2
	0			0			0			0		0
	0			0			0			1		1
	0			0			2			0		0
	0			0			0			0		0
												0
												0
												0
												0
												0
												12
0	0	0	0	0	0	0	25	0	0	12	0	24

11

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Fashion Valley Road	LOCATION #:	11
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Fashion Valley Road			SOUTHBOUND Fashion Valley Road			EASTBOUND Friars Road			WESTBOUND Friars Road			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0.5	1	0	1	0	1	3	0	2	2	0	
WEEKDAY AM													
7:00 AM	29	0	20	7	0	0	1	93	21	23	151	0	345
7:15 AM	25	0	15	1	0	3	1	132	16	29	228	0	450
7:30 AM	51	0	14	6	1	2	2	153	20	23	279	2	553
7:45 AM	38	0	21	3	1	1	1	209	38	42	305	0	659
8:00 AM	59	0	15	3	1	1	0	127	26	43	331	0	606
8:15 AM	109	0	21	3	0	2	1	123	20	41	379	1	700
8:30 AM	70	1	19	5	0	1	0	133	31	47	458	3	768
8:45 AM	42	0	26	6	1	1	1	155	26	42	373	4	677
VOLUMES	423	1	151	34	4	11	7	1,125	198	290	2,504	10	4,758
APPROACH %	74%	0%	26%	69%	8%	22%	1%	85%	15%	10%	89%	0%	
APP/DEPART	575	/	18	49	/	492	1,330	/	1,310	2,804	/	2,938	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	280	1	81	17	2	5	2	538	103	173	1,541	8	2,751
APPROACH %	77%	0%	22%	71%	8%	21%	0%	84%	16%	10%	89%	0%	
PEAK HR FACTOR		0.696			0.750			0.883			0.847		0.896
APP/DEPART	362	/	11	24	/	278	643	/	636	1,722	/	1,826	0
WEEKDAY AM													
11:00 AM	31	0	48	1	2	1	4	123	31	45	122	1	409
11:15 AM	34	0	48	1	0	0	2	154	28	31	119	2	419
11:30 AM	34	2	42	2	0	1	1	137	37	37	95	0	388
11:45 AM	42	1	50	1	0	1	2	156	33	36	137	1	460
12:00 PM	47	2	66	1	0	0	0	155	41	42	124	2	480
12:15 PM	49	1	60	2	1	2	1	158	47	31	119	4	475
12:30 PM	38	0	53	1	1	0	1	162	35	43	153	1	488
12:45 PM	40	0	57	1	0	0	2	162	42	55	132	2	493
VOLUMES	315	6	424	10	4	5	13	1,207	294	320	1,001	13	3,612
APPROACH %	42%	1%	57%	53%	21%	26%	1%	80%	19%	24%	75%	1%	
APP/DEPART	745	/	32	19	/	618	1,514	/	1,641	1,334	/	1,321	0
BEGIN PEAK HR		12:00 PM											
VOLUMES	174	3	236	5	2	2	4	637	165	171	528	9	1,936
APPROACH %	42%	1%	57%	56%	22%	22%	0%	79%	20%	24%	75%	1%	
PEAK HR FACTOR		0.898			0.450			0.978			0.898		0.982
APP/DEPART	413	/	16	9	/	338	806	/	878	708	/	704	0
WEEKDAY PM													
4:00 PM	37	0	66	1	0	3	1	351	55	34	156	2	706
4:15 PM	49	3	81	2	1	1	1	374	64	44	181	0	801
4:30 PM	56	4	90	2	1	0	0	368	45	25	155	2	748
4:45 PM	49	0	64	1	0	1	1	375	69	45	189	5	799
5:00 PM	68	1	77	1	1	1	3	346	72	55	187	2	814
5:15 PM	64	2	65	1	2	0	1	404	92	45	178	2	856
5:30 PM	59	2	83	3	0	0	2	344	79	52	185	4	813
5:45 PM	51	0	69	0	1	0	5	295	51	41	178	5	696
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	433	12	595	11	6	6	14	2,857	527	341	1,409	22	6,233
APPROACH %	42%	1%	57%	48%	26%	26%	0%	84%	16%	19%	80%	1%	
APP/DEPART	1,040	/	48	23	/	874	3,398	/	3,463	1,772	/	1,848	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	240	5	289	6	3	2	7	1,469	312	197	739	13	3,282
APPROACH %	45%	1%	54%	55%	27%	18%	0%	82%	17%	21%	78%	1%	
PEAK HR FACTOR		0.914			0.917			0.899			0.972		0.959
APP/DEPART	534	/	25	11	/	512	1,788	/	1,764	949	/	981	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM			1		1
7:15 AM			1		1
7:30 AM			1		1
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	3	0	3
11:00 AM			1		1
11:15 AM					0
11:30 AM					0
11:45 AM			1		1
12:00 PM				1	1
12:15 PM			1		1
12:30 PM					0
12:45 PM			3		3
VOLUMES	0	0	6	1	7
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM				1	1
5:00 PM			1		1
5:15 PM			1		1
5:30 PM			1		1
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	0	3	1	4

PEDESTRIAN CROSSINGS / **BIKE MOVEMENTS**

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4		4	2	10	7:00 AM							2						0
5		3	1	9	7:15 AM													0
2	1	1		4	7:30 AM													0
6	3	3	1	13	7:45 AM													0
1	2	1		4	8:00 AM													0
2	1	3	1	7	8:15 AM							1	1			1		1
1		1	1	3	8:30 AM							1						0
4	2	2	1	9	8:45 AM							1	1					0
	2	2	1	5	11:00 AM													0
2			1	3	11:15 AM													0
3	1	1		5	11:30 AM			1				1						0
				0	11:45 AM							1						0
		1		1	12:00 PM							1				1	1	2
		4		4	12:15 PM													0
1	1		2	4	12:30 PM								2					0
1	1			2	12:45 PM							1	1				1	1
1	1	1	4	7	4:00 PM											1		1
1	3	1	4	9	4:15 PM			1										0
1			1	2	4:30 PM											1		1
2	1	1	2	6	4:45 PM								1					0
3	1	1	7	12	5:00 PM											2		2
4	2	2	2	10	5:15 PM								1			1		1
	2		2	4	5:30 PM													0
				0	5:45 PM									1				9
44	24	32	33	133		0	0	2	0	0	0	9	7	1	0	7	2	18

12

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Via De La Moda	LOCATION #:	12
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Via De La Moda			SOUTHBOUND Via De La Moda			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 1	NT 0	NR 1	SL X	ST X	SR X	EL 1	ET 3	ER 0	WL 2	WT 2	WR X	TOTAL
WEEKDAY AM	7:00 AM	0	0	4					114	0	5	177		300
	7:15 AM	0	0	2					154	3	13	287		459
	7:30 AM	0	2	7					199	3	14	309		534
	7:45 AM	3	0	1					198	3	16	324		545
	8:00 AM	0	0	7					161	5	16	432		621
	8:15 AM	0	0	7					146	2	16	428		599
	8:30 AM	1	0	6					172	2	21	490		692
	8:45 AM	3	0	3					174	6	31	406		623
	VOLUMES	7	2	37	0	0	0	0	1,318	24	132	2,853	0	4,373
	APPROACH %	15%	4%	80%	0%	0%	0%	0%	98%	2%	4%	96%	0%	
	APP/DEPART	46	/	2	0	/	156	1,342	/	1,355	2,985	/	2,860	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	4	0	23	0	0	0	0	653	15	84	1,756	0	2,535
	APPROACH %	15%	0%	85%	0%	0%	0%	0%	98%	2%	5%	95%	0%	
	PEAK HR FACTOR	0.964			0.000				0.928			0.900		0.916
	APP/DEPART	27	/	0	0	/	99	668	/	676	1,840	/	1,760	0
WEEKDAY AM	11:00 AM	9	0	52					168	12	83	161		485
	11:15 AM	7	0	47					180	15	74	130		453
	11:30 AM	7	0	56					158	11	80	119		431
	11:45 AM	13	0	66					200	13	75	141		508
	12:00 PM	14	0	54					220	21	84	161		554
	12:15 PM	9	0	65					190	13	91	133		501
	12:30 PM	11	0	65					223	11	79	158		547
	12:45 PM	21	0	55					224	11	97	185		593
	VOLUMES	91	0	460	0	0	0	0	1,563	107	663	1,188	0	4,072
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	94%	6%	36%	64%	0%	
	APP/DEPART	551	/	0	0	/	770	1,670	/	2,023	1,851	/	1,279	0
	BEGIN PEAK HR	12:00 PM												
	VOLUMES	55	0	239	0	0	0	0	857	56	351	637	0	2,195
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	94%	6%	36%	64%	0%	
	PEAK HR FACTOR	0.967			0.000				0.947			0.876		0.925
	APP/DEPART	294	/	0	0	/	407	913	/	1,096	988	/	692	0
WEEKDAY PM	4:00 PM	12	0	64					403	16	47	185		727
	4:15 PM	15	0	68					404	19	57	199		762
	4:30 PM	14	0	60					417	10	54	175		730
	4:45 PM	10	0	53					420	15	55	224		777
	5:00 PM	12	0	68					399	12	73	226		790
	5:15 PM	11	0	57					433	14	49	234		798
	5:30 PM	9	0	64					418	15	58	205		769
	5:45 PM	11	0	77					329	19	46	195		677
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	94	0	511	0	0	0	0	3,223	120	439	1,643	0	6,030
	APPROACH %	16%	0%	84%	0%	0%	0%	0%	96%	4%	21%	79%	0%	
	APP/DEPART	605	/	0	0	/	559	3,343	/	3,734	2,082	/	1,737	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	42	0	242	0	0	0	0	1,670	56	235	889	0	3,134
	APPROACH %	15%	0%	85%	0%	0%	0%	0%	97%	3%	21%	79%	0%	
	PEAK HR FACTOR	0.807			0.000				0.965			0.940		0.982
	APP/DEPART	284	/	0	0	/	291	1,726	/	1,912	1,124	/	931	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
		1	1	2
		2	1	3
		4	7	11
		2	9	11
			7	7
		2	7	9
		1	5	6
		1	8	9
0	0	13	45	58
		1	19	20
		5	14	19
			20	20
		3	17	20
			30	30
		3	22	25
		2	27	29
		1	28	29
0	0	15	177	192
1			11	12
			13	13
			15	15
			11	11
1		1	20	22
		2	14	16
		2	13	15
		3	14	17
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
2	0	8	111	121

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
			5	5	7:00 AM
			1	1	7:15 AM
	3		7	10	7:30 AM
			6	6	7:45 AM
	1		1	2	8:00 AM
	5			5	8:15 AM
	1		3	4	8:30 AM
	1		5	6	8:45 AM
			2	2	11:00 AM
			3	3	11:15 AM
			1	1	11:30 AM
			2	2	11:45 AM
	1		1	2	12:00 PM
			2	2	12:15 PM
			2	2	12:30 PM
	1		2	3	12:45 PM
				0	4:00 PM
	1			1	4:15 PM
				0	4:30 PM
	1			1	4:45 PM
				0	5:00 PM
				0	5:15 PM
				0	5:30 PM
	1			1	5:45 PM
0	16	0	43	59	

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
1												0
							2			1		1
							3		1	1		2
							6					0
1							1			2		2
1									1	3		4
												0
							1		1	3		4
												0
1									2			2
							1		3			3
												0
							2			2		2
							1			2		2
							1					0
							2		1	4		5
1			1						1			1
1												0
							3		2	2		4
							3		1	2		3
1							4					0
2							2			4		4
							2					38
9	0	0	1	0	0	0	34	0	13	26	0	77

13

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Avenida De Las Tiendas	LOCATION #:	13
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Avenida De Las Tiendas			SOUTHBOUND Avenida De Las Tiendas			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 1	NT 0.5	NR 1.5	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 0	WL 2	WT 3	WR 0	TOTAL
WEEKDAY AM	7:00 AM	1	0	3	4	0	0	0	113	1	22	188	1	333
	7:15 AM	1	0	1	8	0	1	0	154	0	20	308	0	493
	7:30 AM	0	0	6	10	0	1	0	188	1	19	314	0	539
	7:45 AM	0	0	3	11	0	2	0	212	3	44	341	2	618
	8:00 AM	1	0	4	8	0	0	0	159	5	27	428	0	632
	8:15 AM	1	0	6	8	0	2	0	153	5	32	461	2	670
	8:30 AM	1	0	4	6	0	1	0	164	4	38	508	0	726
	8:45 AM	0	0	1	5	0	0	0	173	7	62	442	0	690
	VOLUMES	5	0	28	60	0	7	0	1,316	26	264	2,990	5	4,701
	APPROACH %	15%	0%	85%	90%	0%	10%	0%	98%	2%	8%	92%	0%	
	APP/DEPART	33	/	5	67	/	290	1,342	/	1,404	3,259	/	3,002	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	3	0	15	27	0	3	0	649	21	159	1,839	2	2,718
	APPROACH %	17%	0%	83%	90%	0%	10%	0%	97%	3%	8%	92%	0%	
	PEAK HR FACTOR	0.643			0.750				0.931			0.916		0.936
	APP/DEPART	18	/	2	30	/	180	670	/	691	2,000	/	1,845	0
WEEKDAY AM	11:00 AM	6	0	38	5	0	1	3	199	33	155	234	0	674
	11:15 AM	5	0	39	1	0	1	1	193	16	159	211	4	630
	11:30 AM	5	0	41	7	0	1	2	220	7	162	219	1	665
	11:45 AM	9	0	50	3	0	0	2	241	14	153	222	5	699
	12:00 PM	8	0	45	3	0	0	1	223	13	165	278	2	738
	12:15 PM	5	0	37	2	0	0	0	265	12	172	239	4	736
	12:30 PM	9	0	55	3	0	0	5	277	15	180	279	0	823
	12:45 PM	10	0	58	4	0	1	4	281	14	188	245	3	808
	VOLUMES	57	0	363	28	0	4	18	1,899	124	1,334	1,927	19	5,773
	APPROACH %	14%	0%	86%	88%	0%	13%	1%	93%	6%	41%	59%	1%	
	APP/DEPART	420	/	37	32	/	1,458	2,041	/	2,290	3,280	/	1,988	0
	BEGIN PEAK HR	12:00 PM												
	VOLUMES	32	0	195	12	0	1	10	1,046	54	705	1,041	9	3,105
	APPROACH %	14%	0%	86%	92%	0%	8%	1%	94%	5%	40%	59%	1%	
	PEAK HR FACTOR	0.835			0.650				0.928			0.956		0.943
	APP/DEPART	227	/	19	13	/	759	1,110	/	1,253	1,755	/	1,074	0
WEEKDAY PM	4:00 PM	8	0	59	7	0	0	4	425	12	118	242	1	876
	4:15 PM	11	1	63	4	0	0	3	482	15	123	250	2	954
	4:30 PM	9	0	69	2	0	2	6	526	18	121	226	7	986
	4:45 PM	10	1	61	6	0	0	4	443	11	128	279	3	946
	5:00 PM	6	0	68	4	0	0	5	471	8	121	271	7	961
	5:15 PM	12	0	77	6	0	1	7	516	10	122	273	10	1,034
	5:30 PM	6	0	54	12	0	2	5	427	14	142	258	9	929
	5:45 PM	6	0	59	2	0	1	3	394	21	127	239	11	863
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	68	2	510	43	0	6	37	3,684	109	1,002	2,038	50	7,549
	APPROACH %	12%	0%	88%	88%	0%	12%	1%	96%	3%	32%	66%	2%	
	APP/DEPART	580	/	89	49	/	1,111	3,830	/	4,237	3,090	/	2,112	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	37	1	275	18	0	3	22	1,956	47	492	1,049	27	3,927
	APPROACH %	12%	0%	88%	86%	0%	14%	1%	97%	2%	31%	67%	2%	
	PEAK HR FACTOR	0.879			0.375				0.920			0.956		0.949
	APP/DEPART	313	/	50	21	/	539	2,025	/	2,249	1,568	/	1,089	0

U-TURNS

	NB X	SB X	EB X	WB X	TTL
7:00 AM			1	5	6
7:15 AM				9	9
7:30 AM				7	7
7:45 AM				16	16
8:00 AM				8	8
8:15 AM				11	11
8:30 AM				11	11
8:45 AM				18	18
	0	0	1	85	86
11:00 AM				25	25
11:15 AM			1	30	31
11:30 AM				35	35
11:45 AM			2	32	34
12:00 PM				33	33
12:15 PM				32	32
12:30 PM			4	37	41
12:45 PM				32	32
	0	0	7	256	263
4:00 PM			2	17	19
4:15 PM			3	19	22
4:30 PM			5	22	27
4:45 PM			4	24	28
5:00 PM			4	30	34
5:15 PM			8	17	25
5:30 PM			1	20	21
5:45 PM			3	18	21
	0	0	30	167	197

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7:00 AM					0
7:15 AM				1	1
7:30 AM					0
7:45 AM				1	1
8:00 AM				1	1
8:15 AM					0
8:30 AM		1		2	3
8:45 AM					0
11:00 AM				1	1
11:15 AM		1		2	3
11:30 AM	1			2	3
11:45 AM		1		2	3
12:00 PM					0
12:15 PM					0
12:30 PM				2	2
12:45 PM					0
4:00 PM		1		4	5
4:15 PM				7	7
4:30 PM				1	1
4:45 PM				3	3
5:00 PM				1	1
5:15 PM		1		3	4
5:30 PM		1			1
5:45 PM				2	2
	1	6	0	35	42

BIKE MOVEMENTS

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM													0
7:15 AM													0
7:30 AM								2			1		1
7:45 AM	1							3		1			1
8:00 AM								5	1		1		2
8:15 AM								2		1			1
8:30 AM											2		2
8:45 AM								1	1		3		4
11:00 AM													0
11:15 AM										1	2		3
11:30 AM	1							1					0
11:45 AM													0
12:00 PM								1		2	2		4
12:15 PM	1							1			1		1
12:30 PM								2		1	2		3
12:45 PM											1		1
4:00 PM	2							1		1	3		4
4:15 PM													0
4:30 PM										1			1
4:45 PM	1	1						3			1		1
5:00 PM								2	1		1		2
5:15 PM								4					0
5:30 PM								2	1		3		4
5:45 PM								4					34
	6	1	0	0	0	0	0	34	4	8	23	0	69

14

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/10/15	NORTH & SOUTH:	Ulric Street/SR-163 SB Ramps	LOCATION #:	14
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

WR IS TO ULRIC

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Ulric Street/SR-163 SB Ramps			SOUTHBOUND Ulric Street/SR-163 SB Ramps			EASTBOUND Friars Road			WESTBOUND Friars Road			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:													
WEEKDAY AM	7:00 AM												98	98
	7:15 AM												111	111
	7:30 AM												136	136
	7:45 AM												116	116
	8:00 AM												100	100
	8:15 AM												96	96
	8:30 AM												85	85
	8:45 AM												94	94
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	836	836
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	0	/	836	0	/	0	0	/	0	836	/	0	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	463	463
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.851		0.851
	APP/DEPART	0	/	463	0	/	0	0	/	0	463	/	0	0
WEEKDAY AM	11:00 AM												103	103
	11:15 AM												84	84
	11:30 AM												94	94
	11:45 AM												108	108
	12:00 PM												90	90
	12:15 PM												101	101
	12:30 PM												109	109
	12:45 PM												114	114
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	803	803
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	0	/	803	0	/	0	0	/	0	803	/	0	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	414	414
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.908		0.908
	APP/DEPART	0	/	414	0	/	0	0	/	0	414	/	0	0
WEEKDAY PM	4:00 PM												143	143
	4:15 PM												144	144
	4:30 PM												160	160
	4:45 PM												150	150
	5:00 PM												135	135
	5:15 PM												169	169
	5:30 PM												164	164
	5:45 PM												117	117
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	1,182	1,182
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
	APP/DEPART	0	/	1,182	0	/	0	0	/	0	1,182	/	0	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	618	618
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.914		0.914
	APP/DEPART	0	/	618	0	/	0	0	/	0	618	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES		0	0	0	0

PEDESTRIAN CROSSINGS / **BIKE MOVEMENTS**

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
				0	7:00 AM											1		1
				0	7:15 AM		1									1		1
				0	7:30 AM													0
				0	7:45 AM													0
				0	8:00 AM													0
				0	8:15 AM													0
				0	8:30 AM													0
				0	8:45 AM													0
				0	11:00 AM													0
				0	11:15 AM													0
				0	11:30 AM													0
				0	11:45 AM													0
				0	12:00 PM													0
				0	12:15 PM													0
				0	12:30 PM													0
				0	12:45 PM													0
				0	4:00 PM													0
				0	4:15 PM													0
				0	4:30 PM													0
				0	4:45 PM													0
				0	5:00 PM													0
				0	5:15 PM													0
				0	5:30 PM													0
				0	5:45 PM													0
0	0	0	0	0		0	1	0	0	0	0	0	0	0	0	2	0	2

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9-10-15 THURSDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Ulric Street/SR-163 SB Ramps
EAST & WEST: Friars Road

PROJECT #: PDT15-0911-01
LOCATION #: 14
CONTROL: SIGNAL

NOTES:
WR IS TO SB-ONRAMP

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Ulric Street/SR-163 SB Ramps			SOUTHBOUND Ulric Street/SR-163 SB Ramps			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 0.5	NT 0.5	NR 1	SL 2	ST 0	SR 1	EL 1	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL
WEEKDAY AM	7:00 AM	45	9	118	60	2	20	8	94	42		157	122	677
	7:15 AM	76	15	194	61	1	21	10	95	55		248	113	889
	7:30 AM	89	11	212	79	2	20	11	168	71		240	102	1,005
	7:45 AM	91	10	197	85	1	21	16	131	63		305	108	1,028
	8:00 AM	118	12	176	91	4	15	8	99	44		317	102	986
	8:15 AM	130	2	212	58	1	23	18	127	51		392	107	1,121
	8:30 AM	107	9	185	73	0	18	10	128	47		380	107	1,064
	8:45 AM	103	5	211	71	1	20	8	96	39		321	114	989
	VOLUMES	759	73	1,505	578	12	158	89	938	412	0	2,360	875	7,759
	APPROACH %	32%	3%	64%	77%	2%	21%	6%	65%	29%	0%	73%	27%	
	APP/DEPART	2,337	/	1,037	748	/	424	1,439	/	3,021	3,235	/	3,277	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	446	33	770	307	6	77	52	485	205	0	1,394	424	4,199
	APPROACH %	36%	3%	62%	79%	2%	20%	7%	65%	28%	0%	77%	23%	
	PEAK HR FACTOR		0.908			0.886			0.883			0.911		0.936
	APP/DEPART	1,249	/	509	390	/	211	742	/	1,562	1,818	/	1,917	0
WEEKDAY AM	11:00 AM	113	9	157	64	0	20	22	161	102		226	121	995
	11:15 AM	101	7	143	55	0	14	24	174	94		244	108	964
	11:30 AM	102	7	142	45	1	19	13	177	125		306	112	1,049
	11:45 AM	103	15	166	60	1	18	13	193	121		312	146	1,148
	12:00 PM	105	10	138	61	0	18	18	210	127		227	152	1,066
	12:15 PM	97	13	151	43	1	15	13	217	112		308	125	1,095
	12:30 PM	93	9	183	52	2	19	21	201	165		293	135	1,173
	12:45 PM	93	7	199	68	2	17	17	220	135		284	141	1,183
	VOLUMES	807	77	1,279	448	7	140	141	1,553	981	0	2,200	1,040	8,673
	APPROACH %	37%	4%	59%	75%	1%	24%	5%	58%	37%	0%	68%	32%	
	APP/DEPART	2,163	/	1,258	595	/	988	2,675	/	3,280	3,240	/	3,147	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	388	39	671	224	5	69	69	848	539	0	1,112	553	4,517
	APPROACH %	35%	4%	61%	75%	2%	23%	5%	58%	37%	0%	67%	33%	
	PEAK HR FACTOR		0.918			0.856			0.941			0.961		0.955
	APP/DEPART	1,098	/	661	298	/	544	1,456	/	1,743	1,665	/	1,569	0
WEEKDAY PM	4:00 PM	79	18	202	76	1	29	20	379	212		257	143	1,416
	4:15 PM	95	16	172	104	1	35	33	385	196		209	154	1,400
	4:30 PM	79	12	181	102	1	36	27	425	175		277	161	1,476
	4:45 PM	82	12	255	89	0	45	31	429	169		284	159	1,555
	5:00 PM	94	13	208	121	0	34	33	442	207		283	153	1,588
	5:15 PM	80	10	193	82	1	43	28	442	155		292	124	1,450
	5:30 PM	79	7	181	145	0	41	37	391	145		249	133	1,408
	5:45 PM	101	18	219	86	0	33	16	359	159		251	113	1,355
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	689	106	1,611	805	4	296	225	3,252	1,418	0	2,102	1,140	11,648
	APPROACH %	29%	4%	67%	73%	0%	27%	5%	66%	29%	0%	65%	35%	
	APP/DEPART	2,406	/	1,471	1,105	/	1,422	4,895	/	5,668	3,242	/	3,087	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	335	47	837	394	2	158	119	1,738	706	0	1,136	597	6,069
	APPROACH %	27%	4%	69%	71%	0%	29%	5%	68%	28%	0%	66%	34%	
	PEAK HR FACTOR		0.873			0.745			0.940			0.978		0.955
	APP/DEPART	1,219	/	763	554	/	708	2,563	/	2,969	1,733	/	1,629	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
		1		1
				0
		1		1
				0
		1		1
		1		1
0	0	4	0	4
				0
				0
		2		2
		3		3
				0
		1		1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	6	0	6

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
				0	7:00 AM
	1			1	7:15 AM
				0	7:30 AM
				0	7:45 AM
				0	8:00 AM
				0	8:15 AM
	1			1	8:30 AM
				0	8:45 AM
		1		1	11:00 AM
	1	2		3	11:15 AM
				0	11:30 AM
				0	11:45 AM
				0	12:00 PM
				0	12:15 PM
				0	12:30 PM
				0	12:45 PM
	2			2	4:00 PM
				0	4:15 PM
		1	1	2	4:30 PM
				0	4:45 PM
				0	5:00 PM
				0	5:15 PM
				0	5:30 PM
				0	5:45 PM
0	5	4	1	10	

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
										1		1
										2		2
												0
												0
												0
										1		1
						1						0
												0
												0
												0
												0
						1						0
												0
												0
												0
					1							0
												0
												0
										1		1
												0
												0
					1		1			1		1
										2		2
					1					1		1
										1		1
					2							0
					1							7
0	0	0	0	0	6	2	1	0	0	10	0	17

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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/10/15	NORTH & SOUTH:	SR-163 NB Ramps	LOCATION #:	15
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND SR-163 NB Ramps			SOUTHBOUND SR-163 NB Ramps			EASTBOUND Friars Road			WESTBOUND Friars Road			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	1	X	X	1	1	3	X	X	2	1	
WEEKDAY AM													
7:00 AM			121			129	84	215			223	141	913
7:15 AM			168			194	91	248			281	152	1,134
7:30 AM			184			184	127	298			290	162	1,245
7:45 AM			191			177	126	297			349	188	1,328
8:00 AM			242			149	88	305			369	174	1,327
8:15 AM			218			175	105	277			385	152	1,312
8:30 AM			206			189	80	287			385	189	1,336
8:45 AM			189			181	92	275			319	144	1,200
VOLUMES	0	0	1,519	0	0	1,378	793	2,202	0	0	2,601	1,302	9,795
APPROACH %	0%	0%	100%	0%	0%	100%	26%	74%	0%	0%	67%	33%	
APP/DEPART	1,519	/	2,095	1,378	/	0	2,995	/	3,721	3,903	/	3,979	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	0	0	857	0	0	690	399	1,166	0	0	1,488	703	5,303
APPROACH %	0%	0%	100%	0%	0%	100%	25%	75%	0%	0%	68%	32%	
PEAK HR FACTOR		0.885			0.913			0.925			0.954		0.992
APP/DEPART	857	/	1,102	690	/	0	1,565	/	2,023	2,191	/	2,178	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM			121			189	148	518			336	219	1,531
4:15 PM			142			223	167	503			302	206	1,543
4:30 PM			138			242	155	541			352	218	1,646
4:45 PM			126			216	152	618			384	213	1,709
5:00 PM			142			248	131	613			336	221	1,691
5:15 PM			118			223	129	584			349	241	1,644
5:30 PM			141			216	109	594			332	219	1,611
5:45 PM			129			195	119	491			305	206	1,445
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	1,057	0	0	1,752	1,110	4,462	0	0	2,696	1,743	12,820
APPROACH %	0%	0%	100%	0%	0%	100%	20%	80%	0%	0%	61%	39%	
APP/DEPART	1,057	/	2,853	1,752	/	0	5,572	/	5,519	4,439	/	4,448	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	0	524	0	0	929	567	2,356	0	0	1,421	893	6,690
APPROACH %	0%	0%	100%	0%	0%	100%	19%	81%	0%	0%	61%	39%	
PEAK HR FACTOR		0.923			0.936			0.949			0.969		0.979
APP/DEPART	524	/	1,460	929	/	0	2,923	/	2,880	2,314	/	2,350	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES		0	0	0	0

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
	0	0	0	0	0

BIKE MOVEMENTS

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM											1		1
7:15 AM											1		1
7:30 AM													0
7:45 AM													0
8:00 AM													0
8:15 AM													0
8:30 AM													0
8:45 AM													0
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
4:00 PM													0
4:15 PM													0
4:30 PM													0
4:45 PM													0
5:00 PM													0
5:15 PM													0
5:30 PM													0
5:45 PM													0
	0	0	0	0	0	0	0	0	0	0	2	0	2

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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:			
9/10/15 THURSDAY	LOCATION: MISSION VALLEY	PROJECT #:	PDT15-0911-01
	NORTH & SOUTH: Frazee Road	LOCATION #:	16
	EAST & WEST: Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

	NORTHBOUND Frazee Road			SOUTHBOUND Frazee Road			EASTBOUND Friars Road			WESTBOUND Friars Road			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	0	2	1	1	2	3	1	1	3	1	
WEEKDAY AM													
7:00 AM	30	7	3	2	3	37	112	129	63	4	235	14	639
7:15 AM	29	9	5	1	3	40	110	146	80	10	278	12	723
7:30 AM	33	17	8	5	5	49	132	186	90	8	439	16	988
7:45 AM	28	27	6	7	2	41	173	249	147	13	390	10	1,093
8:00 AM	31	30	8	8	9	67	162	214	110	10	429	11	1,089
8:15 AM	30	29	7	3	8	60	138	217	119	14	433	12	1,070
8:30 AM	39	25	7	7	11	57	173	206	104	9	423	10	1,071
8:45 AM	37	22	8	11	15	79	159	214	127	10	444	9	1,135
VOLUMES	257	166	52	44	56	430	1,159	1,561	840	78	3,071	94	7,808
APPROACH %	54%	35%	11%	8%	11%	81%	33%	44%	24%	2%	95%	3%	
APP/DEPART	475	/	1,419	530	/	974	3,560	/	1,657	3,243	/	3,758	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	137	106	30	29	43	263	632	851	460	43	1,729	42	4,365
APPROACH %	50%	39%	11%	9%	13%	79%	33%	44%	24%	2%	95%	2%	
PEAK HR FACTOR		0.961			0.798			0.972			0.979		0.961
APP/DEPART	273	/	780	335	/	546	1,943	/	910	1,814	/	2,129	0
WEEKDAY AM													
11:00 AM	44	16	17	33	24	110	104	271	140	21	225	11	1,016
11:15 AM	62	20	25	21	28	90	77	215	132	23	241	13	947
11:30 AM	75	16	27	19	24	102	95	240	102	37	244	9	990
11:45 AM	69	21	20	24	24	112	85	233	141	32	254	8	1,023
12:00 PM	82	28	26	16	32	114	98	232	102	22	274	8	1,034
12:15 PM	79	19	21	20	30	89	104	278	134	17	333	21	1,145
12:30 PM	88	21	18	23	36	125	112	245	109	25	289	9	1,100
12:45 PM	96	18	36	18	31	93	88	362	157	18	209	6	1,132
VOLUMES	595	159	190	174	229	835	763	2,076	1,017	195	2,069	85	8,387
APPROACH %	63%	17%	20%	14%	18%	67%	20%	54%	26%	8%	88%	4%	
APP/DEPART	944	/	1,007	1,238	/	1,441	3,856	/	2,440	2,349	/	3,499	0
BEGIN PEAK HR		12:00 PM											
VOLUMES	345	86	101	77	129	421	402	1,117	502	82	1,105	44	4,411
APPROACH %	65%	16%	19%	12%	21%	67%	20%	55%	25%	7%	90%	4%	
PEAK HR FACTOR		0.887			0.852			0.832			0.830		0.963
APP/DEPART	532	/	532	627	/	713	2,021	/	1,295	1,231	/	1,871	0
WEEKDAY PM													
4:00 PM	111	23	35	32	30	136	74	450	190	24	259	6	1,370
4:15 PM	59	13	31	28	21	136	88	484	174	19	278	8	1,339
4:30 PM	112	21	48	28	24	155	78	513	177	28	287	13	1,484
4:45 PM	114	25	52	37	16	152	89	506	178	30	302	11	1,512
5:00 PM	101	17	33	32	28	144	99	528	151	18	276	9	1,436
5:15 PM	98	20	41	39	18	145	98	500	170	21	290	10	1,450
5:30 PM	101	25	34	31	22	94	101	544	165	23	296	9	1,445
5:45 PM	91	14	37	26	10	105	90	451	175	18	256	6	1,279
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	787	158	311	253	169	1,067	717	3,976	1,380	181	2,244	72	11,315
APPROACH %	63%	13%	25%	17%	11%	72%	12%	65%	23%	7%	90%	3%	
APP/DEPART	1,256	/	947	1,489	/	1,730	6,073	/	4,540	2,497	/	4,098	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	425	83	174	136	86	596	364	2,047	676	97	1,155	43	5,882
APPROACH %	62%	12%	26%	17%	11%	73%	12%	66%	22%	7%	89%	3%	
PEAK HR FACTOR		0.893			0.988			0.953			0.944		0.973
APP/DEPART	682	/	490	818	/	859	3,087	/	2,357	1,295	/	2,176	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM			2		2
7:15 AM					0
7:30 AM			3		3
7:45 AM			4		4
8:00 AM			3		3
8:15 AM			4		4
8:30 AM			1		1
8:45 AM			5		5
VOLUMES	0	0	22	0	22
11:00 AM			7	6	13
11:15 AM			3	7	10
11:30 AM			8	9	17
11:45 AM			2	7	9
12:00 PM			1	2	3
12:15 PM			1	1	2
12:30 PM			5		5
12:45 PM			7		7
VOLUMES	0	0	34	32	66
4:00 PM			9		9
4:15 PM			14	4	18
4:30 PM			10	2	12
4:45 PM			8	3	11
5:00 PM			2	4	6
5:15 PM			4	2	6
5:30 PM			2	3	5
5:45 PM			3	2	5
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	0	52	20	72

PEDESTRIAN CROSSINGS / BIKE MOVEMENTS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
2	1	4		7	7:00 AM												1	1
	1	8		9	7:15 AM													0
		6		6	7:30 AM													0
	4	11		15	7:45 AM													0
1		13		14	8:00 AM		2											0
	2	6		8	8:15 AM													0
	1	2		3	8:30 AM													0
2		8		10	8:45 AM		1		2									0
	7	11		18	11:00 AM													0
		4		4	11:15 AM													0
2	1	8	1	12	11:30 AM													0
		6		6	11:45 AM													0
	1	3	3	7	12:00 PM													0
		4		4	12:15 PM													0
	1	3		4	12:30 PM													0
	1	5	1	7	12:45 PM													0
3			7	10	4:00 PM													0
2	4	4		10	4:15 PM													0
3	16	7		26	4:30 PM					1								0
3	3	6	1	13	4:45 PM													0
		10	1	11	5:00 PM		1			2								0
	4	17		21	5:15 PM					1			1					0
1	3	17		21	5:30 PM		1											0
1	3	9	2	15	5:45 PM					1								0
20	53	172	16	261		0	5	0	2	5	0	0	1	0	0	0	1	1

17

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/16/15	NORTH & SOUTH:	Mission Center Road	LOCATION #:	17
WEDNESDAY	EAST & WEST:	Friars Road WB Ramps	CONTROL:	SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

	NORTHBOUND Mission Center Road			SOUTHBOUND Mission Center Road			EASTBOUND Friars Road WB Ramps			WESTBOUND Friars Road WB Ramps			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	X	X	2	1	X	X	X	1	1	1	
WEEKDAY AM													
7:00 AM	40	108			49	68				18	0	44	327
7:15 AM	41	115			58	56				20	0	67	357
7:30 AM	37	106			70	77				28	0	78	396
7:45 AM	28	121			88	78				38	0	84	437
8:00 AM	33	128			91	62				30	0	91	435
8:15 AM	41	113			98	60				39	0	80	431
8:30 AM	40	104			86	67				40	0	74	411
8:45 AM	33	94			92	66				27	0	62	374
VOLUMES	293	889	0	0	632	534	0	0	0	240	0	580	3,168
APPROACH %	25%	75%	0%	0%	54%	46%	0%	0%	0%	29%	0%	71%	
APP/DEPART	1,182	/	1,469	1,166	/	872	0	/	0	820	/	827	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	142	466	0	0	363	267	0	0	0	147	0	329	1,714
APPROACH %	23%	77%	0%	0%	58%	42%	0%	0%	0%	31%	0%	69%	
PEAK HR FACTOR		0.944			0.949			0.000			0.975		0.981
APP/DEPART	608	/	795	630	/	510	0	/	0	476	/	409	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	66	138			188	59				38	0	65	554
4:15 PM	68	144			174	41				36	0	68	531
4:30 PM	58	152			232	45				38	0	78	603
4:45 PM	51	142			221	50				44	1	61	570
5:00 PM	62	178			260	75				46	2	70	693
5:15 PM	60	173			232	58				35	2	78	638
5:30 PM	70	161			222	53				45	1	54	606
5:45 PM	51	150			205	42				40	2	66	556
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	486	1,238	0	0	1,734	423	0	0	0	322	8	540	4,751
APPROACH %	28%	72%	0%	0%	80%	20%	0%	0%	0%	37%	1%	62%	
APP/DEPART	1,724	/	1,778	2,157	/	2,056	0	/	0	870	/	917	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	243	654	0	0	935	236	0	0	0	170	6	263	2,507
APPROACH %	27%	73%	0%	0%	80%	20%	0%	0%	0%	39%	1%	60%	
PEAK HR FACTOR		0.934			0.874			0.000			0.930		0.904
APP/DEPART	897	/	917	1,171	/	1,105	0	/	0	439	/	485	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM		1			1
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	1	0	0	1

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1	0	0	3	4
1	0	0	2	3
0	0	0	1	1
0	0	0	1	1
0	1	1	1	3
0	1	0	0	1
0	0	0	0	0
0	0	1	0	1
0	2	0	0	2
PM				0
0	2	1	1	4
0	0	0	3	3
0	1	0	0	1
1	0	0	0	1
1	0	0	2	3
1	0	1	1	3
2	0	2	1	5
0	1	1	1	3
				0
				0
				0
				0
				0
				0
7	8	7	17	39

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
	1			1								0
				1								0
	1											0
	1											0
												0
												0
												0
												0
PM												0
												0
												0
	1			1								0
												0
				1								0
	1			1								0
												0
												0
												0
												0
												0
												0
												0
												0
0	5	0	0	5	0	0	0	0	0	0	0	0

18

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9-16-15 WEDNESDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Mission Center Road
EAST & WEST: Friars Road EB Ramps

PROJECT #: PDT15-0911-01
LOCATION #: 18
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Mission Center Road			SOUTHBOUND Mission Center Road			EASTBOUND Friars Road EB Ramps			WESTBOUND Friars Road EB Ramps			
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 1	ET 1	ER 1	WL X	WT X	WR X	TOTAL
WEEKDAY AM	7:00 AM		102	14	26	38		35	0	11				226
	7:15 AM		109	13	25	53		34	0	22				256
	7:30 AM		108	25	29	75		46	0	24				307
	7:45 AM		106	14	39	97		51	2	51				360
	8:00 AM		107	22	28	89		36	0	40				322
	8:15 AM		108	21	24	99		29	0	47				328
	8:30 AM		104	21	31	96		39	1	35				327
	8:45 AM		97	22	38	91		43	0	54				345
	VOLUMES	0	841	152	240	638	0	313	3	284	0	0	0	2,471
	APPROACH %	0%	85%	15%	27%	73%	0%	52%	1%	47%	0%	0%	0%	
	APP/DEPART	993	/	1,154	878	/	922	600	/	395	0	/	0	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	0	425	78	122	381	0	155	3	173	0	0	0	1,337
	APPROACH %	0%	84%	16%	24%	76%	0%	47%	1%	52%	0%	0%	0%	
	PEAK HR FACTOR		0.975			0.925			0.796			0.000		0.928
	APP/DEPART	503	/	580	503	/	554	331	/	203	0	/	0	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM		164	73	101	117		57	0	79				591
	4:15 PM		126	76	78	128		51	2	57				518
	4:30 PM		157	87	94	160		51	2	48				599
	4:45 PM		135	72	96	162		72	0	69				606
	5:00 PM		183	98	131	206		69	0	69				756
	5:15 PM		137	83	112	157		81	3	88				661
	5:30 PM		160	87	101	153		49	2	91				643
	5:45 PM		142	77	98	148		68	1	87				621
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	0	1,204	653	811	1,231	0	498	10	588	0	0	0	4,995
	APPROACH %	0%	65%	35%	40%	60%	0%	45%	1%	54%	0%	0%	0%	
	APP/DEPART	1,857	/	1,702	2,042	/	1,819	1,096	/	1,474	0	/	0	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	622	345	442	664	0	267	6	335	0	0	0	2,681
	APPROACH %	0%	64%	36%	40%	60%	0%	44%	1%	55%	0%	0%	0%	
	PEAK HR FACTOR		0.860			0.820			0.884			0.000		0.887
	APP/DEPART	967	/	889	1,106	/	999	608	/	793	0	/	0	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
	1			1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	1	0	0	1

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
		0	2	2
		2	2	4
		1	3	4
		0	1	1
		0	1	1
		0	1	1
		0	0	0
		0	1	1
				0
PM				0
		3	1	4
		0	3	3
		1	3	4
		0	3	3
		1	0	1
		3	0	3
		3	0	3
		1	1	2
				0
				0
				0
				0
				0
				0
0	0	15	22	37

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0								0
	0			0								0
	0			0								0
	0			0								0
	0			0								0
	0			0								0
	0			1								0
	0			0								0
												0
PM												0
	0			0								0
	0			0								0
	0			0								0
	1			0								0
	0			0								0
	2			0								0
	0			0								0
	1			0								0
												0
												0
												0
												0
												0
												0
0	4	0	0	1	0	0	0	0	0	0	0	0

19

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/16/15	NORTH & SOUTH:	Qualcomm Way	LOCATION #:	19
WEDNESDAY	EAST & WEST:	Friars Road WB Ramps	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Qualcomm Way			SOUTHBOUND Qualcomm Way			EASTBOUND Friars Road WB Ramps			WESTBOUND Friars Road WB Ramps			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	X	X	1	0	X	X	X	2	0	0	
WEEKDAY AM													
7:00 AM	79	2			2	1				29	0	2	115
7:15 AM	107	1			1	0				22	0	1	132
7:30 AM	84	7			4	0				41	0	0	136
7:45 AM	126	2			6	0				39	0	1	174
8:00 AM	120	1			4	1				49	0	0	175
8:15 AM	119	4			6	0				39	1	0	169
8:30 AM	105	1			4	0				55	0	2	167
8:45 AM	113	4			0	4				30	2	3	156
VOLUMES	853	22	0	0	27	6	0	0	0	304	0	9	1,224
APPROACH %	97%	3%	0%	0%	82%	18%	0%	0%	0%	97%	0%	3%	
APP/DEPART	875	/	31	33	/	331	0	/	0	313	/	859	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	470	8	0	0	20	1	0	0	0	182	1	3	685
APPROACH %	98%	2%	0%	0%	95%	5%	0%	0%	0%	98%	1%	2%	
PEAK HR FACTOR		0.934			0.875			0.000			0.816		0.979
APP/DEPART	478	/	11	21	/	202	0	/	0	186	/	472	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	93	0			2	0				67	1	0	163
4:15 PM	103	2			2	1				78	3	0	189
4:30 PM	129	2			3	0				97	1	0	232
4:45 PM	106	2			1	0				86	3	0	198
5:00 PM	130	1			2	3				86	0	0	222
5:15 PM	107	2			1	0				97	1	0	208
5:30 PM	106	0			0	0				79	0	0	185
5:45 PM	102	2			0	3				95	1	1	204
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	876	11	0	0	11	7	0	0	0	685	10	1	1,601
APPROACH %	99%	1%	0%	0%	61%	39%	0%	0%	0%	98%	1%	0%	
APP/DEPART	887	/	12	18	/	696	0	/	0	696	/	893	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	472	7	0	0	7	3	0	0	0	366	5	0	860
APPROACH %	99%	1%	0%	0%	70%	30%	0%	0%	0%	99%	1%	0%	
PEAK HR FACTOR		0.914			0.500			0.000			0.946		0.927
APP/DEPART	479	/	7	10	/	373	0	/	0	371	/	480	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM	1				1
8:15 AM					0
8:30 AM					0
8:45 AM					0
Total	1	0	0	0	1
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
Total	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM	1				1
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
Total	1	0	0	0	1

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
				0
				0
	NO PEDS			0
				0
				0
PM				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
1												0
												0
									2			2
												0
												0
												0
												0
												0
												0
												2
1	0	0	0	0	0	0	0	0	2	0	0	4

20

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/16/15	NORTH & SOUTH:	Qualcomm Way	LOCATION #:	20
WEDNESDAY	EAST & WEST:	Friars Road EB Ramps	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N · ◄ W · E ► · S ▼

		NORTHBOUND Qualcomm Way			SOUTHBOUND Qualcomm Way			EASTBOUND Friars Road EB Ramps			WESTBOUND Friars Road EB Ramps			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	2	1	1	2	X	0.5	0.5	1	X	X	X	
WEEKDAY AM	7:00 AM		69	35	0	31		13	0	17				165
	7:15 AM		80	37	1	22		20	0	18				178
	7:30 AM		83	50	0	44		8	0	24				209
	7:45 AM		122	47	0	50		13	0	25				257
	8:00 AM		109	43	1	50		16	0	30				249
	8:15 AM		107	48	0	38		13	0	36				242
	8:30 AM		87	49	3	50		8	0	27				224
	8:45 AM		106	47	0	38		12	0	37				240
	VOLUMES	0	763	356	5	323	0	103	0	214	0	0	0	1,764
	APPROACH %	0%	68%	32%	2%	98%	0%	32%	0%	68%	0%	0%	0%	
	APP/DEPART	1,119	/	866	328	/	537	317	/	361	0	/	0	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	0	425	187	4	188	0	50	0	118	0	0	0	972
	APPROACH %	0%	69%	31%	2%	98%	0%	30%	0%	70%	0%	0%	0%	
	PEAK HR FACTOR		0.905			0.906			0.857			0.000		0.946
	APP/DEPART	612	/	475	192	/	306	168	/	191	0	/	0	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM		96	105	4	66		7	3	56				337
	4:15 PM		92	78	1	81		13	0	69				334
	4:30 PM		118	98	2	97		9	3	79				406
	4:45 PM		92	97	1	81		12	0	69				352
	5:00 PM		133	65	2	93		9	2	78				382
	5:15 PM		95	66	0	102		15	1	79				358
	5:30 PM		89	76	0	84		12	0	64				325
	5:45 PM		97	71	3	87		7	1	62				328
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	0	812	656	13	691	0	84	10	556	0	0	0	2,822
	APPROACH %	0%	55%	45%	2%	98%	0%	13%	2%	86%	0%	0%	0%	
	APP/DEPART	1,468	/	896	704	/	1,247	650	/	679	0	/	0	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	438	326	5	373	0	45	6	305	0	0	0	1,498
	APPROACH %	0%	57%	43%	1%	99%	0%	13%	2%	86%	0%	0%	0%	
	PEAK HR FACTOR		0.884			0.926			0.937			0.000		0.922
	APP/DEPART	764	/	483	378	/	678	356	/	337	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
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				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1		2		3
				0
		1		1
				0
				0
				0
				0
PM				0
				0
				0
				0
				0
				0
				0
1				1
		1		1
				0
				0
				0
				0
				0
				0
				0
				0
2	0	4	0	6

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
				1								0
												0
												0
												0
												0
PM												0
												0
												0
				1								0
												0
												0
												0
												0
							2					0
												0
												0
												0
												0
												0
												0
												0
												0
0	0	0	0	2	0	0	2	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9-16-15 WEDNESDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: River Run Drive
EAST & WEST: Friars Road

PROJECT #: PDT15-0911-01
LOCATION #: 21
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N / ◄ W / E ► / S ▼

		NORTHBOUND River Run Drive			SOUTHBOUND River Run Drive			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 1	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 3	ER 0	WL 1	WT 3	WR 0	TOTAL
WEEKDAY AM	7:00 AM	21	7	9	1	1	3	12	115	8	21	312	30	540
	7:15 AM	26	10	10	0	0	2	20	126	4	33	305	41	577
	7:30 AM	33	11	15	1	0	2	18	151	5	38	355	50	679
	7:45 AM	38	9	19	2	1	4	26	169	11	41	364	58	742
	8:00 AM	31	12	20	2	1	2	21	141	12	40	375	42	699
	8:15 AM	25	15	11	1	2	6	18	184	10	29	336	28	665
	8:30 AM	20	8	11	2	1	2	12	165	8	34	342	33	638
	8:45 AM	18	7	8	3	0	1	12	155	9	28	310	28	579
	VOLUMES	212	79	103	12	6	22	139	1,206	67	264	2,699	310	5,119
	APPROACH %	54%	20%	26%	30%	15%	55%	10%	85%	5%	8%	82%	9%	
	APP/DEPART	394	/	528	40	/	337	1,412	/	1,321	3,273	/	2,933	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	127	47	65	6	4	14	83	645	38	148	1,430	178	2,785
	APPROACH %	53%	20%	27%	25%	17%	58%	11%	84%	5%	8%	81%	10%	
	PEAK HR FACTOR		0.905			0.667			0.903			0.948		0.938
	APP/DEPART	239	/	308	24	/	190	766	/	716	1,756	/	1,571	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	16	0	26	56	1	20	12	428	20	13	234	6	832
	4:15 PM	6	4	18	31	0	15	7	481	14	9	250	4	839
	4:30 PM	13	0	35	68	0	34	8	509	13	17	236	5	938
	4:45 PM	15	1	19	39	0	30	5	440	25	11	277	1	863
	5:00 PM	5	1	31	34	1	11	3	458	21	15	302	4	886
	5:15 PM	12	1	27	27	1	9	5	507	19	16	296	10	930
	5:30 PM	8	2	18	17	1	9	5	546	34	15	302	6	963
	5:45 PM	12	1	15	6	0	10	6	371	22	13	282	4	742
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	87	10	189	278	4	138	51	3,740	168	109	2,179	40	6,993
	APPROACH %	30%	3%	66%	66%	1%	33%	1%	94%	4%	5%	94%	2%	
	APP/DEPART	286	/	101	420	/	281	3,959	/	4,207	2,328	/	2,404	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	40	5	95	117	3	59	18	1,951	99	57	1,177	21	3,642
	APPROACH %	29%	4%	68%	65%	2%	33%	1%	94%	5%	5%	94%	2%	
	PEAK HR FACTOR		0.875			0.649			0.884			0.971		0.945
	APP/DEPART	140	/	44	179	/	159	2,068	/	2,163	1,255	/	1,276	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
			2	2
		2		2
		2		2
			1	1
		3	1	4
		1		1
		1		1
		1		1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	10	4	14

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	1	0	0	1
1	0	2	0	3
1	2	14	3	20
0	0	2	6	8
1	0	0	0	1
0	0	1	0	1
0	1	1	0	2
0	0	0	0	0
				0
0	0	0	0	0
0	0	3	0	3
0	0	3	0	3
0	1	3	1	5
1	1	2	0	4
2	1	1	2	6
0	0	1	4	5
1	0	0	1	2
				0
				0
				0
				0
				0
				0
				0
7	7	33	17	64

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0		1	1			0	1		0		1
	0			0			0			0		0
	1			0			0			0		0
	0			0			2			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	1			0			0			0		0
												0
	0			0			0			0		0
	0			0			1			0		0
	0			1			2			0		0
	1		1	0		1	0			1		1
	1			0			1			0		0
	0		1	1			0			0		0
	0			0			0			0		0
												0
												0
												0
												0
												0
												0
												0
												0
												1
0	4	0	3	3	0	1	6	1	0	1	0	3

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/16/15 WEDNESDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Fenton Parkway
EAST & WEST: Friars Road

PROJECT #: PDT15-0911-01
LOCATION #: 22
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Fenton Parkway			SOUTHBOUND Fenton Parkway			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 2	NT 1	NR 1	SL 2	ST 0.5	SR 1.5	EL 1	ET 3	ER 1	WL 2	WT 3	WR 1	TOTAL
WEEKDAY AM	7:00 AM	15	1	34	16	2	23	4	96	10	22	235	3	461
	7:15 AM	23	2	29	16	2	35	6	130	12	39	328	1	623
	7:30 AM	22	3	44	19	6	54	7	149	9	48	303	1	665
	7:45 AM	26	3	38	14	4	38	7	121	12	46	379	3	691
	8:00 AM	20	1	38	17	1	47	10	170	8	39	384	3	738
	8:15 AM	14	1	44	15	2	40	8	150	10	36	353	5	678
	8:30 AM	24	2	29	16	1	38	6	153	22	35	311	4	641
	8:45 AM	23	2	31	20	4	28	10	151	21	43	260	11	604
	VOLUMES	167	15	287	133	22	303	58	1,120	104	308	2,553	31	5,101
	APPROACH %	36%	3%	61%	29%	5%	66%	5%	87%	8%	11%	88%	1%	
	APP/DEPART	469	/	104	458	/	434	1,282	/	1,540	2,892	/	3,023	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	82	8	164	65	13	179	32	590	39	169	1,419	12	2,772
	APPROACH %	32%	3%	65%	25%	5%	70%	5%	89%	6%	11%	89%	1%	
	PEAK HR FACTOR	0.920			0.813			0.879			0.935			0.939
	APP/DEPART	254	/	52	257	/	221	661	/	819	1,600	/	1,680	0
WEEKDAY AM	11:00 AM	38	2	52	8	5	14	9	196	83	40	187	3	637
	11:15 AM	71	7	71	7	6	13	8	181	74	57	206	7	708
	11:30 AM	58	3	67	6	0	20	8	193	75	54	177	5	666
	11:45 AM	57	2	69	11	3	12	13	254	89	49	204	6	769
	12:00 PM	65	2	74	11	6	15	17	285	96	43	204	5	823
	12:15 PM	85	3	77	3	5	19	10	273	84	58	197	9	823
	12:30 PM	90	4	80	6	4	16	14	244	86	48	209	3	804
	12:45 PM	70	7	96	5	3	12	25	255	67	56	220	2	818
	VOLUMES	534	30	586	57	32	121	104	1,881	654	405	1,604	40	6,048
	APPROACH %	46%	3%	51%	27%	15%	58%	4%	71%	25%	20%	78%	2%	
	APP/DEPART	1,150	/	174	210	/	1,091	2,639	/	2,524	2,049	/	2,259	0
	BEGIN PEAK HR	12:00 PM												
	VOLUMES	310	16	327	25	18	62	66	1,057	333	205	830	19	3,268
	APPROACH %	47%	2%	50%	24%	17%	59%	5%	73%	23%	19%	79%	2%	
	PEAK HR FACTOR	0.938			0.820			0.915			0.948			0.993
	APP/DEPART	653	/	101	105	/	556	1,456	/	1,409	1,054	/	1,202	0
WEEKDAY PM	4:00 PM	63	7	100	10	3	12	21	545	73	40	184	8	1,066
	4:15 PM	45	6	81	10	2	12	27	462	75	47	205	13	985
	4:30 PM	59	5	76	3	4	9	24	499	72	54	207	12	1,024
	4:45 PM	58	10	75	8	5	11	29	497	85	62	210	10	1,060
	5:00 PM	62	6	87	4	1	18	22	500	89	68	213	17	1,087
	5:15 PM	44	9	94	7	2	17	37	475	90	48	269	19	1,111
	5:30 PM	68	6	66	5	6	17	38	472	84	52	231	13	1,058
	5:45 PM	53	10	68	6	3	6	38	395	80	42	245	17	963
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	452	59	647	53	26	102	236	3,845	648	413	1,764	109	8,354
	APPROACH %	39%	5%	56%	29%	14%	56%	5%	81%	14%	18%	77%	5%	
	APP/DEPART	1,158	/	404	181	/	1,087	4,729	/	4,545	2,286	/	2,318	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	232	31	322	24	14	63	126	1,944	348	230	923	59	4,316
	APPROACH %	40%	5%	55%	24%	14%	62%	5%	80%	14%	19%	76%	5%	
	PEAK HR FACTOR	0.944			0.902			0.989			0.902			0.971
	APP/DEPART	585	/	216	101	/	592	2,418	/	2,290	1,212	/	1,218	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
			1	1
		1	2	3
			1	1
				0
1				1
				0
				0
1	0	1	4	6
			1	1
			3	3
			2	2
1			1	2
			1	1
			1	1
			2	2
			2	2
1	0	0	13	14
			3	3
1			2	3
			1	1
1			2	3
1			1	2
			2	2
		1	2	4
			2	2
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
4	0	1	15	20

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	
7				3	3	7:00 AM
		1		2	3	7:15 AM
			1	2	3	7:30 AM
			1	2	3	7:45 AM
8					0	8:00 AM
	1				1	8:15 AM
		2	1		3	8:30 AM
			1		1	8:45 AM
11					0	11:00 AM
			3	2	5	11:15 AM
		1	1		2	11:30 AM
			3	3	6	11:45 AM
12			1	5	6	12:00 PM
	2		6		8	12:15 PM
	2	1	3	2	8	12:30 PM
				2	2	12:45 PM
4		1	1		2	4:00 PM
		1			1	4:15 PM
	1		1		2	4:30 PM
		4	2		6	4:45 PM
5			3	3	6	5:00 PM
			1	1	2	5:15 PM
				3	3	5:30 PM
				1	1	5:45 PM
	6	11	29	31	77	

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
												0
												0
												0
												0
							1					0
												0
												0
												0
												0
												0
												0
												0
							1					0
												0
								1				1
											2	2
												0
												0
												0
0	0	0	0	0	0	0	2	1	0	0	2	6

23

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/16/15 WEDNESDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Northside Drive
EAST & WEST: Friars Road

PROJECT #: PDT15-0911-01
LOCATION #: 23
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Northside Drive			SOUTHBOUND Northside Drive			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 2	NT 1	NR 1	SL 2	ST 1	SR 1	EL 2	ET 3	ER 1	WL 2	WT 3	WR 1	TOTAL
WEEKDAY AM	7:00 AM	28	0	45	40	4	40	3	128	44	85	228	8	653
	7:15 AM	19	1	48	50	4	39	4	111	35	57	285	6	659
	7:30 AM	21	1	44	45	7	30	5	133	40	90	326	8	750
	7:45 AM	20	1	56	38	6	39	3	169	23	104	337	5	801
	8:00 AM	24	0	58	26	11	34	7	185	36	103	343	9	836
	8:15 AM	23	1	52	22	3	34	6	170	25	120	315	12	783
	8:30 AM	26	7	71	35	7	36	9	145	43	120	281	13	793
	8:45 AM	22	2	62	29	7	24	9	152	28	100	263	9	707
	VOLUMES	183	13	436	285	49	276	46	1,193	274	779	2,378	70	5,982
	APPROACH %	29%	2%	69%	47%	8%	45%	3%	79%	18%	24%	74%	2%	
	APP/DEPART	632	/	129	610	/	1,102	1,513	/	1,914	3,227	/	2,837	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	93	9	237	121	27	143	25	669	127	447	1,276	39	3,213
	APPROACH %	27%	3%	70%	42%	9%	49%	3%	81%	15%	25%	72%	2%	
	PEAK HR FACTOR		0.815			0.877			0.900			0.968		0.961
	APP/DEPART	339	/	73	291	/	601	821	/	1,027	1,762	/	1,512	0
WEEKDAY AM	11:00 AM	50	4	134	21	4	22	24	165	45	158	154	17	798
	11:15 AM	42	7	146	15	7	21	15	192	69	126	180	10	830
	11:30 AM	45	2	163	23	5	27	8	215	53	138	184	14	877
	11:45 AM	50	3	153	18	4	18	28	221	76	130	185	16	902
	12:00 PM	53	2	168	19	4	25	30	236	69	147	170	9	932
	12:15 PM	61	8	150	20	4	23	28	234	86	159	206	12	991
	12:30 PM	44	5	147	27	2	24	18	242	70	168	194	19	960
	12:45 PM	67	6	149	29	3	21	27	252	91	151	178	12	986
	VOLUMES	412	37	1,210	172	33	181	178	1,757	559	1,177	1,451	109	7,276
	APPROACH %	25%	2%	73%	45%	9%	47%	7%	70%	22%	43%	53%	4%	
	APP/DEPART	1,659	/	324	386	/	1,769	2,494	/	3,139	2,737	/	2,044	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	225	21	614	95	13	93	103	964	316	625	748	52	3,869
	APPROACH %	26%	2%	71%	47%	6%	46%	7%	70%	23%	44%	52%	4%	
	PEAK HR FACTOR		0.964			0.948			0.934			0.935		0.976
	APP/DEPART	860	/	176	201	/	954	1,383	/	1,673	1,425	/	1,066	0
WEEKDAY PM	4:00 PM	31	4	165	26	2	23	26	506	51	139	178	29	1,180
	4:15 PM	49	7	185	20	4	24	27	528	48	115	183	24	1,214
	4:30 PM	50	6	188	16	2	17	26	491	51	132	212	24	1,215
	4:45 PM	47	4	167	27	6	18	34	486	44	95	215	30	1,173
	5:00 PM	42	8	162	26	5	17	26	489	65	107	242	36	1,225
	5:15 PM	51	11	181	23	4	15	26	565	83	92	238	40	1,329
	5:30 PM	49	8	163	26	7	20	32	367	43	103	245	36	1,099
	5:45 PM	41	9	133	23	9	13	36	417	46	112	216	38	1,093
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	360	57	1,344	187	39	147	233	3,849	431	895	1,729	257	9,528
	APPROACH %	20%	3%	76%	50%	10%	39%	5%	85%	10%	31%	60%	9%	
	APP/DEPART	1,761	/	547	373	/	1,365	4,513	/	5,380	2,881	/	2,236	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	190	29	698	92	17	67	112	2,031	243	426	907	130	4,942
	APPROACH %	21%	3%	76%	52%	10%	38%	5%	85%	10%	29%	62%	9%	
	PEAK HR FACTOR		0.940			0.830			0.885			0.950		0.930
	APP/DEPART	917	/	271	176	/	686	2,386	/	2,821	1,463	/	1,164	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
1				1
2		1		3
1		1	1	3
				0
				0
				0
		1		1
				0
4	0	3	1	8
				0
		1	1	2
1				1
				0
				0
		3		3
		2		2
		2		2
1	0	8	1	10
		1		1
		1	2	2
				0
1		1		2
				0
2			3	5
			2	2
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
3	0	2	7	12

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
		3		3
		2		2
				0
	1	2		3
		1		1
				0
1				1
		1		1
				0
		1		1
				0
				0
	2	1		3
				0
		1		1
				0
		1		1
		1		1
		4		4
		1		1
				0
				0
1	3	19	0	23

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
					1		1					0
				1								0
				1								0
												0
				1			1			1		1
												0
												0
												0
												0
												0
												0
							1					0
												0
					1							0
							1			1		1
							2					0
												0
							1					2
0	0	0	0	3	2	0	7	0	0	2	0	4

24

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/16/15	NORTH & SOUTH:	Mission Village Drive	LOCATION #:	24
WEDNESDAY	EAST & WEST:	Friars Road WB Ramps	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Mission Village Drive			SOUTHBOUND Mission Village Drive			EASTBOUND Friars Road WB Ramps			WESTBOUND Friars Road WB Ramps			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	X	X	2	1	X	X	X	1	0	1	
WEEKDAY AM													
7:00 AM	21	73			94	40				12	0	98	338
7:15 AM	49	106			89	40				15	0	80	379
7:30 AM	65	125			103	53				20	0	74	440
7:45 AM	74	164			84	65				17	0	100	504
8:00 AM	61	136			85	43				12	0	68	405
8:15 AM	36	127			106	42				13	1	69	394
8:30 AM	40	103			93	49				32	0	34	351
8:45 AM	22	89			77	37				28	0	46	299
VOLUMES	368	923	0	0	731	369	0	0	0	149	1	569	3,110
APPROACH %	29%	71%	0%	0%	66%	34%	0%	0%	0%	21%	0%	79%	
APP/DEPART	1,291	/	1,492	1,100	/	880	0	/	0	719	/	738	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	236	552	0	0	378	203	0	0	0	62	1	311	1,743
APPROACH %	30%	70%	0%	0%	65%	35%	0%	0%	0%	17%	0%	83%	
PEAK HR FACTOR		0.828			0.931			0.000			0.799		0.865
APP/DEPART	788	/	863	581	/	440	0	/	0	374	/	440	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	22	67			145	37				39	0	65	375
4:15 PM	21	70			142	52				34	0	64	383
4:30 PM	32	79			201	77				27	0	52	468
4:45 PM	24	78			210	77				33	0	69	491
5:00 PM	37	94			212	112				42	0	61	558
5:15 PM	34	117			238	105				35	0	79	608
5:30 PM	31	89			200	86				44	0	59	509
5:45 PM	29	88			209	87				17	0	59	489
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	230	682	0	0	1,557	633	0	0	0	271	0	508	3,881
APPROACH %	25%	75%	0%	0%	71%	29%	0%	0%	0%	35%	0%	65%	
APP/DEPART	912	/	1,190	2,190	/	1,828	0	/	0	779	/	863	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	126	378	0	0	860	380	0	0	0	154	0	268	2,166
APPROACH %	25%	75%	0%	0%	69%	31%	0%	0%	0%	36%	0%	64%	
PEAK HR FACTOR		0.834			0.904			0.000			0.925		0.891
APP/DEPART	504	/	646	1,240	/	1,014	0	/	0	422	/	506	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES		0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
NO AM				0
PM				0
				0
			2	2
		1		1
				0
				0
				0
	1			1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	1	1	2	4

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
												0
												0
												0
												0
1												0
	2											0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
1	2	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-16-15	NORTH & SOUTH:	Mission Village Drive	LOCATION #:	25
WEDNESDAY	EAST & WEST:	Friars Road EB Ramps	CONTROL:	SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W E ►
S ▼

	NORTHBOUND Mission Village Drive			SOUTHBOUND Mission Village Drive			EASTBOUND Friars Road EB Ramps			WESTBOUND Friars Road EB Ramps			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	2	0	1.5	0.5	X	1	0	1	X	X	X	
WEEKDAY AM													
7:00 AM		70	18	72	24		32	0	14				230
7:15 AM		111	15	79	40		30	1	14				290
7:30 AM		148	35	77	53		30	0	12				355
7:45 AM		180	34	55	38		49	0	38				394
8:00 AM		163	20	70	41		33	0	24				351
8:15 AM		134	28	75	36		44	0	15				332
8:30 AM		121	22	64	30		39	0	18				294
8:45 AM		70	12	68	45		50	0	26				271
VOLUMES	0	997	184	560	307	0	307	1	161	0	0	0	2,517
APPROACH %	0%	84%	16%	65%	35%	0%	65%	0%	34%	0%	0%	0%	
APP/DEPART	1,181	/	1,304	867	/	468	469	/	745	0	/	0	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	0	625	117	277	168	0	156	0	89	0	0	0	1,432
APPROACH %	0%	84%	16%	62%	38%	0%	64%	0%	36%	0%	0%	0%	
PEAK HR FACTOR		0.867			0.856			0.704			0.000		0.909
APP/DEPART	742	/	781	445	/	257	245	/	394	0	/	0	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM		43	26	99	83		45	0	43				339
4:15 PM		44	27	85	106		50	0	66				378
4:30 PM		53	29	105	94		55	0	53				389
4:45 PM		39	23	100	116		65	0	52				395
5:00 PM		65	50	98	184		52	0	59				508
5:15 PM		71	36	118	159		76	0	70				530
5:30 PM		65	25	91	143		58	1	62				445
5:45 PM		50	26	108	122		47	0	48				401
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	430	242	804	1,007	0	448	1	453	0	0	0	3,385
APPROACH %	0%	64%	36%	44%	56%	0%	50%	0%	50%	0%	0%	0%	
APP/DEPART	672	/	878	1,811	/	1,460	902	/	1,047	0	/	0	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	0	251	137	415	608	0	233	1	239	0	0	0	1,884
APPROACH %	0%	65%	35%	41%	59%	0%	49%	0%	51%	0%	0%	0%	
PEAK HR FACTOR		0.843			0.907			0.810			0.000		0.889
APP/DEPART	388	/	484	1,023	/	847	473	/	553	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	1	1
0	0	2	0	2
0	0	0	0	0
				0
PM				0
0	0	0	7	7
0	0	1	0	1
0	0	1	0	1
0	0	1	0	1
0	0	0	0	0
0	0	0	1	1
0	0	1	1	2
0	0	3	2	5
				0
				0
				0
				0
				0
				0
0	0	11	12	23

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	1			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
												0
PM												0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	1			0			0			0		0
	1			0			0			0		0
	1			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
												0
												0
												0
												0
												0
												0
0	4	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/16/15 WEDNESDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: I-15 SB Ramps
EAST & WEST: Friars Road

PROJECT #: PDT15-0911-01
LOCATION #: 26
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND I-15 SB Ramps			SOUTHBOUND I-15 SB Ramps			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL X	NT X	NR X	SL 2	ST 0	SR 1	EL 1	ET 3	ER 1	WL 1	WT 3	WR 1	TOTAL
WEEKDAY AM	7:00 AM				88	0	114	44	151	61	61	262	105	886
	7:15 AM				96	1	121	41	167	55	70	305	119	975
	7:30 AM				135	0	135	56	184	65	80	313	105	1,073
	7:45 AM				168	0	162	60	118	50	81	395	115	1,149
	8:00 AM				168	1	142	51	121	50	78	398	121	1,130
	8:15 AM				184	2	116	50	118	54	75	378	126	1,103
	8:30 AM				154	1	105	54	132	52	58	369	106	1,031
	8:45 AM				162	0	126	48	142	42	60	311	100	991
	VOLUMES	0	0	0	1,155	5	1,021	404	1,133	429	563	2,731	897	8,338
	APPROACH %	0%	0%	0%	53%	0%	47%	21%	58%	22%	13%	65%	21%	
	APP/DEPART	0	/	1,301	2,181	/	997	1,966	/	2,288	4,191	/	3,752	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	0	0	0	655	3	555	217	541	219	314	1,484	467	4,455
	APPROACH %	0%	0%	0%	54%	0%	46%	22%	55%	22%	14%	66%	21%	
	PEAK HR FACTOR		0.000			0.919			0.801			0.948		0.969
	APP/DEPART	0	/	684	1,213	/	536	977	/	1,196	2,265	/	2,039	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM				251		110	96	384	167	64	265	70	1,407
	4:15 PM				218		100	122	494	182	48	272	88	1,524
	4:30 PM				269		104	117	446	174	56	259	78	1,503
	4:45 PM				261		84	100	488	137	54	294	77	1,495
	5:00 PM				269		80	95	401	169	69	298	71	1,452
	5:15 PM				240		92	102	445	157	71	305	69	1,481
	5:30 PM				239		91	86	459	177	46	289	72	1,459
	5:45 PM				256		116	73	379	140	46	274	60	1,344
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	0	0	0	2,003	0	777	791	3,496	1,303	454	2,256	585	11,665
	APPROACH %	0%	0%	0%	72%	0%	28%	14%	63%	23%	14%	68%	18%	
	APP/DEPART	0	/	1,376	2,780	/	1,757	5,590	/	5,499	3,295	/	3,033	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	0	0	0	1,017	0	368	434	1,829	662	227	1,123	314	5,974
	APPROACH %	0%	0%	0%	73%	0%	27%	15%	63%	23%	14%	67%	19%	
	PEAK HR FACTOR		0.000			0.928			0.916			0.935		0.980
	APP/DEPART	0	/	748	1,385	/	889	2,925	/	2,846	1,664	/	1,491	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
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				0
				0
				0
				0
0	0	0	0	0
			2	2
			1	1
			2	2
			1	1
		1	2	3
			1	1
			1	1
				0
				0
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				0
				0
				0
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				0
				0
				0
				0
				0
0	0	1	10	11

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
	NO PEDS			0
				0
				0
				0
				0
				0
				0
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				0
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				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
	NO BIKES											0
												0
												0
												0
												0
												0
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												0
												0
												0
												0
												0
0	0	0	0	0	0	0	0	0	0	0	0	0

27

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/16/15	NORTH & SOUTH:	I-15 NB Ramps	LOCATION #:	27
WEDNESDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-15 NB Ramps			SOUTHBOUND I-15 NB Ramps			EASTBOUND Friars Road			WESTBOUND Friars Road			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	1	X	X	1	1	3	X	X	3	1	
WEEKDAY AM													
7:00 AM			48			76	87	162			375	268	1,016
7:15 AM			51			56	96	181			430	280	1,094
7:30 AM			55			53	101	194			475	252	1,130
7:45 AM			70			66	96	215			494	223	1,164
8:00 AM			84			90	97	203			489	289	1,252
8:15 AM			81			97	68	218			509	206	1,179
8:30 AM			70			115	69	226			428	251	1,159
8:45 AM			84			133	86	235			313	214	1,065
VOLUMES	0	0	543	0	0	686	700	1,634	0	0	3,513	1,983	9,059
APPROACH %	0%	0%	100%	0%	0%	100%	30%	70%	0%	0%	64%	36%	
APP/DEPART	543	/	2,683	686	/	0	2,334	/	2,177	5,496	/	4,199	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	0	0	305	0	0	368	330	862	0	0	1,920	969	4,754
APPROACH %	0%	0%	100%	0%	0%	100%	28%	72%	0%	0%	66%	34%	
PEAK HR FACTOR		0.908			0.800			0.958			0.928		0.949
APP/DEPART	305	/	1,299	368	/	0	1,192	/	1,167	2,889	/	2,288	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM			148			158	103	526			262	192	1,389
4:15 PM			168			172	141	542			207	155	1,385
4:30 PM			174			175	126	601			243	183	1,502
4:45 PM			184			187	145	625			225	166	1,532
5:00 PM			188			186	117	545			261	165	1,462
5:15 PM			162			187	101	598			249	187	1,484
5:30 PM			189			184	149	559			224	188	1,493
5:45 PM			151			179	105	542			234	140	1,351
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	1,364	0	0	1,428	987	4,538	0	0	1,905	1,376	11,598
APPROACH %	0%	0%	100%	0%	0%	100%	18%	82%	0%	0%	58%	42%	
APP/DEPART	1,364	/	2,363	1,428	/	0	5,525	/	5,902	3,281	/	3,333	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	0	708	0	0	735	489	2,369	0	0	978	701	5,980
APPROACH %	0%	0%	100%	0%	0%	100%	17%	83%	0%	0%	58%	42%	
PEAK HR FACTOR		0.937			0.983			0.928			0.963		0.976
APP/DEPART	708	/	1,190	735	/	0	2,858	/	3,077	1,679	/	1,713	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
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0	0	0	0	0
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				0
				0
				0
				0
0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
		no peds		0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
	no bikes											0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
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												0
												0
												0
												0
												0
												0
												0
0	0	0	0	0	0	0	0	0	0	0	0	0

28

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/16/15 WEDNESDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Rancho Mission Road
EAST & WEST: Friars Road

PROJECT #: PDT15-0911-01
LOCATION #: 28
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Rancho Mission Road			SOUTHBOUND Rancho Mission Road			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 1.5	NT X	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL 1	WT 4	WR X	TOTAL
WEEKDAY AM	7:00 AM	117		18					178	40	11	564		928
	7:15 AM	132		19					176	35	7	554		923
	7:30 AM	122		25					186	54	11	586		984
	7:45 AM	164		19					256	74	9	575		1,097
	8:00 AM	141		11					214	62	20	665		1,113
	8:15 AM	114		9					264	56	26	562		1,031
	8:30 AM	120		11					242	56	31	565		1,025
	8:45 AM	101		14					249	74	22	423		883
	VOLUMES	1,011	0	126	0	0	0	0	1,765	451	137	4,494	0	7,984
	APPROACH %	89%	0%	11%	0%	0%	0%	0%	80%	20%	3%	97%	0%	
	APP/DEPART	1,137	/	0	0	/	588	2,216	/	1,891	4,631	/	5,505	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	539	0	50	0	0	0	0	976	248	86	2,367	0	4,266
	APPROACH %	92%	0%	8%	0%	0%	0%	0%	80%	20%	4%	96%	0%	
	PEAK HR FACTOR		0.805			0.000			0.927			0.895		0.958
	APP/DEPART	589	/	0	0	/	334	1,224	/	1,026	2,453	/	2,906	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	Y		31					572	97	17	362		1,079
	4:15 PM	88		41					598	116	19	292		1,154
	4:30 PM	73		38					621	118	28	342		1,220
	4:45 PM	79		33					674	113	19	336		1,254
	5:00 PM	100		29					629	132	19	373		1,282
	5:15 PM	86		50					637	106	14	316		1,209
	5:30 PM	69		28					634	107	22	291		1,151
	5:45 PM	84		43					591	112	19	273		1,122
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	579	0	293	0	0	0	0	4,956	901	157	2,585	0	9,471
	APPROACH %	66%	0%	34%	0%	0%	0%	0%	85%	15%	6%	94%	0%	
	APP/DEPART	872	/	0	0	/	1,058	5,857	/	5,249	2,742	/	3,164	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	338	0	150	0	0	0	0	2,561	469	80	1,367	0	4,965
	APPROACH %	69%	0%	31%	0%	0%	0%	0%	85%	15%	6%	94%	0%	
	PEAK HR FACTOR		0.897			0.000			0.963			0.923		0.968
	APP/DEPART	488	/	0	0	/	549	3,030	/	2,711	1,447	/	1,705	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
			1	1
				0
			1	1
			2	2
			1	1
			2	2
			1	1
				0
0	0	0	8	8
				0
				0
				0
				0
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0	0	0	0	0
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0	0	0	3	3

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
			1	1
				0
				0
1				1
				0
pm				0
				0
				0
				0
				0
				0
				0
1				1
				0
				0
				0
				0
				0
				0
2	0	0	1	3

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
												0
												0
												0
												0
												0
pm				no bikes								0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-17-15	NORTH & SOUTH:	Santo Road	LOCATION #:	29
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Santo Road			SOUTHBOUND Santo Road			EASTBOUND Friars Road			WESTBOUND Friars Road			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:				2		1	2	3			4	0	
WEEKDAY AM													
7:00 AM				12		82	43	155			506	11	809
7:15 AM				10		67	26	185			507	9	804
7:30 AM				16		70	24	182			523	15	830
7:45 AM				12		57	20	255			548	11	903
8:00 AM				8		44	31	222			589	10	904
8:15 AM				6		55	33	241			516	7	858
8:30 AM				16		41	23	196			552	11	839
8:45 AM				9		58	44	243			403	17	774
VOLUMES	0	0	0	89	0	474	244	1,679	0	0	4,144	91	6,721
APPROACH %	0%	0%	0%	16%	0%	84%	13%	87%	0%	0%	98%	2%	
APP/DEPART	0	/	335	563	/	0	1,923	/	1,768	4,235	/	4,618	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	0	0	0	42	0	197	107	914	0	0	2,205	39	3,504
APPROACH %	0%	0%	0%	18%	0%	82%	10%	90%	0%	0%	98%	2%	
PEAK HR FACTOR		0.000			0.866			0.928			0.937		0.969
APP/DEPART	0	/	146	239	/	0	1,021	/	956	2,244	/	2,402	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM				22		50	66	519			298	15	970
4:15 PM				23		42	83	552			271	18	989
4:30 PM				19		55	50	600			302	9	1,035
4:45 PM				19		44	57	598			310	10	1,038
5:00 PM				16		38	46	628			349	12	1,089
5:15 PM				14		28	55	625			326	20	1,068
5:30 PM				12		55	52	636			249	13	1,017
5:45 PM				21		62	72	589			230	24	998
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	0	146	0	374	481	4,747	0	0	2,335	121	8,204
APPROACH %	0%	0%	0%	28%	0%	72%	9%	91%	0%	0%	95%	5%	
APP/DEPART	0	/	602	520	/	0	5,228	/	4,893	2,456	/	2,709	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	0	0	68	0	165	208	2,451	0	0	1,287	51	4,230
APPROACH %	0%	0%	0%	29%	0%	71%	8%	92%	0%	0%	96%	4%	
PEAK HR FACTOR		0.000			0.702			0.966			0.927		0.971
APP/DEPART	0	/	259	233	/	0	2,659	/	2,519	1,338	/	1,452	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM			1		1
8:30 AM					0
8:45 AM					0
Total	0	0	1	0	1
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
Total	0	0	0	0	0
4:00 PM					0
4:15 PM	1				1
4:30 PM	1		1		2
4:45 PM					0
5:00 PM			2		2
5:15 PM			1		1
5:30 PM	1		1		2
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
Total	3	0	5	0	8

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
		1		1
				0
				0
				0
				0
				0
				0
				0
pm				0
				0
				0
				0
				0
1				1
				0
				0
				0
				0
				0
				0
				0
				0
				0
1	0	1	0	2

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
										1		1
											1	1
												0
												0
												0
												0
												0
pm												0
												0
												0
										1		1
												0
										1		1
												0
												0
			1									0
												0
												0
												0
												0
												0
												3
0	0	0	1	0	0	0	0	0	0	3	1	7

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/17/15 THURSDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Riverdale Street
EAST & WEST: Friars Road

PROJECT #: PDT15-0911-01
LOCATION #: 30
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — N / W / E / S

		NORTHBOUND Riverdale Street			SOUTHBOUND Riverdale Street			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 1	SR 0	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL
WEEKDAY AM	7:00 AM	43	5	6	2	9	16	16	131	24	12	460	5	729
	7:15 AM	21	9	7	2	15	21	12	124	45	34	503	9	802
	7:30 AM	25	6	4	2	54	38	16	138	46	43	482	6	860
	7:45 AM	25	10	10	3	53	28	32	141	78	52	494	10	936
	8:00 AM	19	13	8	5	26	30	26	148	49	41	506	8	879
	8:15 AM	35	13	9	7	18	33	20	157	64	40	474	7	877
	8:30 AM	43	7	6	2	12	27	21	132	58	21	428	5	762
	8:45 AM	36	10	7	4	13	14	30	174	57	23	362	10	740
	VOLUMES	247	73	57	27	200	207	173	1,145	421	266	3,709	60	6,585
	APPROACH %	66%	19%	15%	6%	46%	48%	10%	66%	24%	7%	92%	1%	
	APP/DEPART	377	/	306	434	/	887	1,739	/	1,229	4,035	/	4,163	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	104	42	31	17	151	129	94	584	237	176	1,956	31	3,552
	APPROACH %	59%	24%	18%	6%	51%	43%	10%	64%	26%	8%	90%	1%	
	PEAK HR FACTOR		0.776			0.790			0.911			0.973		0.949
	APP/DEPART	177	/	167	297	/	564	915	/	632	2,163	/	2,189	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	64	15	25	11	4	33	38	425	54	11	206	13	899
	4:15 PM	49	11	24	3	8	25	38	504	52	9	227	15	965
	4:30 PM	67	21	28	9	11	27	42	514	50	20	235	13	1,037
	4:45 PM	52	20	24	7	7	30	47	536	46	14	210	9	1,002
	5:00 PM	76	15	38	12	13	33	55	548	49	14	270	10	1,133
	5:15 PM	65	30	31	9	15	29	61	532	48	9	227	4	1,060
	5:30 PM	51	11	22	6	5	13	51	574	53	5	263	19	1,073
	5:45 PM	39	11	31	7	12	21	50	488	37	10	171	10	887
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	463	134	223	64	75	211	382	4,121	389	92	1,809	93	8,056
	APPROACH %	56%	16%	27%	18%	21%	60%	8%	84%	8%	5%	91%	5%	
	APP/DEPART	820	/	609	350	/	556	4,892	/	4,408	1,994	/	2,483	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	244	76	115	34	40	105	214	2,190	196	42	970	42	4,268
	APPROACH %	56%	17%	26%	19%	22%	59%	8%	84%	8%	4%	92%	4%	
	PEAK HR FACTOR		0.843			0.772			0.959			0.896		0.942
	APP/DEPART	435	/	332	179	/	278	2,600	/	2,339	1,054	/	1,319	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
			1	1
				0
		1	1	2
		6	2	8
				0
			3	3
		1		1
			4	4
0	0	8		19
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
		1	6	7
		1	4	5
		1	3	4
		1	1	2
				0
			4	4
			4	4
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	4	22	26

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1	0	0	0	1
0	0	0	1	1
0	0	0	2	2
0	0	1	1	2
2	0	0	0	2
0	0	1	0	1
1	0	0	1	2
0	0	3	0	3
				0
PM				0
0	0	1	1	2
0	0	2	0	2
0	0	0	0	0
0	3	1	1	5
0	2	2	4	8
0	1	1	1	3
1	0	1	1	3
1	0	1	1	3
				0
				0
				0
				0
				0
				0
6	6	14	14	40

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			2			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
												0
PM												0
	0			0			0			1		1
	0			0			0			0		0
	0			0			0			0		0
	0			0			1			0		0
	2			0			0			0		0
	1			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
												0
												0
												0
												0
												0
												0
												1
0	3	0	0	2	0	0	1	0	0	1	0	2

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9-17-15 THURSDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Mission Gorge Road
EAST & WEST: Friars Road

PROJECT #: PDT15-0911-01
LOCATION #: 31
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Mission Gorge Road			SOUTHBOUND Mission Gorge Road			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 1	NT X	NR 2	SL X	ST X	SR X	EL X	ET 3	ER 1	WL 2	WT 3	WR X	TOTAL
WEEKDAY AM	7:00 AM	39		55					103	34	55	446		732
	7:15 AM	27		57					114	21	66	558		843
	7:30 AM	43		52					117	34	115	497		858
	7:45 AM	48		65					136	43	114	503		909
	8:00 AM	43		68					135	34	100	470		850
	8:15 AM	31		74					128	40	60	481		814
	8:30 AM	53		53					112	29	67	410		724
	8:45 AM	45		73					156	40	47	360		721
	VOLUMES	329	0	497	0	0	0	0	1,001	275	624	3,725	0	6,451
	APPROACH %	40%	0%	60%	0%	0%	0%	0%	78%	22%	14%	86%	0%	
	APP/DEPART	826	/	0	0	/	899	1,276	/	1,498	4,349	/	4,054	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	161	0	242	0	0	0	0	502	132	395	2,028	0	3,460
	APPROACH %	40%	0%	60%	0%	0%	0%	0%	79%	21%	16%	84%	0%	
	PEAK HR FACTOR		0.892			0.000			0.885			0.971		0.952
	APP/DEPART	403	/	0	0	/	527	634	/	744	2,423	/	2,189	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	84		101					415	55	58	151		864
	4:15 PM	85		96					514	66	51	166		978
	4:30 PM	83		120					452	54	58	198		965
	4:45 PM	66		101					538	58	43	179		985
	5:00 PM	87		119					499	54	41	194		994
	5:15 PM	84		126					522	35	63	185		1,015
	5:30 PM	77		127					514	49	51	180		998
	5:45 PM	52		88					434	57	54	155		840
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	618	0	878	0	0	0	0	3,888	428	419	1,408	0	7,639
	APPROACH %	41%	0%	59%	0%	0%	0%	0%	90%	10%	23%	77%	0%	
	APP/DEPART	1,496	/	0	0	/	847	4,316	/	4,766	1,827	/	2,026	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	314	0	473	0	0	0	0	2,073	196	198	738	0	3,992
	APPROACH %	40%	0%	60%	0%	0%	0%	0%	91%	9%	21%	79%	0%	
	PEAK HR FACTOR		0.937			0.000			0.952			0.944		0.983
	APP/DEPART	787	/	0	0	/	394	2,269	/	2,546	936	/	1,052	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
2				2
1				1
5				5
7				7
				0
				0
3			1	4
1				1
19	0	0	1	20
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
1				1
3				3
4				4
3				3
3				3
6				6
4				4
5				5
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
29	0	0	0	29

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
				0
1		2		3
		1		1
				0
				0
pm				0
				0
	3			3
				0
				0
				0
				0
				0
	1			1
				0
				0
				0
				0
				0
1	4	3	0	8

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
										1		1
												0
												0
											1	1
												0
												0
												0
												0
pm												0
												0
												0
												0
										1		1
												0
												0
												0
												0
												0
												0
												0
												2
0	0	0	0	0	0	0	0	0	0	2	1	5

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/16/15	NORTH & SOUTH:	Mission Center Road	LOCATION #:	32
WEDNESDAY	EAST & WEST:	Mission Center Court	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Mission Center Road			SOUTHBOUND Mission Center Road			EASTBOUND Mission Center Court			WESTBOUND Mission Center Court			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	0	1	0	0	1	0	
WEEKDAY AM													
7:00 AM	8	77	3	8	51	6	5	1	2	10	1	28	200
7:15 AM	7	89	3	11	54	5	4	0	3	16	1	33	226
7:30 AM	5	98	2	9	68	6	3	1	0	19	1	28	240
7:45 AM	10	101	6	9	101	0	6	0	5	22	2	18	280
8:00 AM	15	87	2	15	76	8	6	1	2	19	1	21	253
8:15 AM	9	85	6	11	93	10	7	0	4	18	0	25	268
8:30 AM	18	95	9	11	86	20	4	0	3	15	0	25	286
8:45 AM	16	92	5	15	81	8	9	2	3	16	1	20	268
VOLUMES	88	724	36	89	610	63	44	5	22	135	7	198	2,021
APPROACH %	10%	85%	4%	12%	80%	8%	62%	7%	31%	40%	2%	58%	
APP/DEPART	848	/	966	762	/	767	71	/	130	340	/	158	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	52	368	23	46	356	38	23	1	14	74	3	89	1,087
APPROACH %	12%	83%	5%	10%	81%	9%	61%	3%	37%	45%	2%	54%	
PEAK HR FACTOR		0.908			0.940			0.864			0.965		0.950
APP/DEPART	443	/	480	440	/	444	38	/	70	166	/	93	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	11	196	18	24	153	16	17	0	22	7	0	17	481
4:15 PM	18	153	17	20	134	11	25	2	18	10	0	17	425
4:30 PM	23	179	19	28	158	11	30	0	25	14	0	23	510
4:45 PM	14	172	16	29	173	19	13	2	15	12	0	14	479
5:00 PM	14	203	20	37	207	13	29	3	47	25	0	34	632
5:15 PM	24	184	19	33	154	29	26	2	18	15	2	17	523
5:30 PM	18	178	18	32	186	18	15	2	22	18	3	29	539
5:45 PM	16	170	13	35	153	20	26	1	32	25	2	15	508
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	138	1,435	140	238	1,318	137	181	12	199	126	7	166	4,097
APPROACH %	8%	84%	8%	14%	78%	8%	46%	3%	51%	42%	2%	56%	
APP/DEPART	1,713	/	1,782	1,693	/	1,643	392	/	390	299	/	282	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	72	735	70	137	700	80	96	8	119	83	7	95	2,202
APPROACH %	8%	84%	8%	15%	76%	9%	43%	4%	53%	45%	4%	51%	
PEAK HR FACTOR		0.925			0.892			0.706			0.784		0.871
APP/DEPART	877	/	926	917	/	902	223	/	215	185	/	159	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM	1				1
7:30 AM					0
7:45 AM	1				1
8:00 AM	3				3
8:15 AM	2	1			3
8:30 AM	2	1			3
8:45 AM	1				1
Total	10	2	0	0	12
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
Total	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
Total	0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
0	1	0	0	1
2	1	0	2	5
0	1	1	0	2
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
				0
pm				0
2	0	2	4	8
2	0	2	4	8
1	3	1	1	6
1	0	3	1	5
1	1	1	3	6
6	1	0	0	7
3	1	4	3	11
1	1	1	3	6
				0
				0
				0
				0
				0
				0
19	12	15	21	67

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
	0			0			0			0		0
	0			0			1			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
												0
pm												0
	0			0			0			0		0
	0			0			1			1		1
	0			0			0			1		1
	0			0			0			0		0
	0			0			0			0		0
	0			0			2			1		1
	0			0			0			0		0
	0			0			0			0		0
												0
												0
												0
												0
												0
												3
0	0	0	0	0	0	0	4	0	0	3	0	6

33

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/16/15 WEDNESDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Qualcomm Way
EAST & WEST: Rio San Diego Drive

PROJECT #: PDT15-0911-01
LOCATION #: 33
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — N / W / E / S

		NORTHBOUND Qualcomm Way			SOUTHBOUND Qualcomm Way			EASTBOUND Rio San Diego Drive			WESTBOUND Rio San Diego Drive			
	LANES:	NL 2	NT 3	NR 0	SL 2	ST 3	SR 0	EL 2	ET 1	ER 1	WL 2	WT 2	WR 1	TOTAL
WEEKDAY AM	7:00 AM	8	65	102	7	33	4	23	12	25	32	6	11	328
	7:15 AM	10	88	135	12	24	5	24	9	21	39	9	9	385
	7:30 AM	10	91	153	14	41	9	24	16	27	44	14	14	457
	7:45 AM	16	132	150	12	52	14	24	10	21	53	9	15	508
	8:00 AM	14	100	142	9	53	14	15	15	15	51	7	27	462
	8:15 AM	19	105	113	15	53	13	22	16	25	41	9	20	451
	8:30 AM	33	115	100	9	51	13	25	13	34	45	6	9	453
	8:45 AM	28	109	112	15	38	13	21	12	30	52	11	19	460
	VOLUMES	138	805	1,007	93	345	85	178	103	198	357	71	124	3,504
	APPROACH %	7%	41%	52%	18%	66%	16%	37%	22%	41%	65%	13%	22%	
	APP/DEPART	1,950	/	1,107	523	/	900	479	/	1,203	552	/	294	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	59	428	558	50	199	50	85	57	88	189	39	76	1,878
	APPROACH %	6%	41%	53%	17%	67%	17%	37%	25%	38%	62%	13%	25%	
	PEAK HR FACTOR		0.877			0.923			0.858			0.894		0.924
	APP/DEPART	1,045	/	589	299	/	476	230	/	665	304	/	148	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	32	92	91	4	92	29	42	33	61	192	50	61	779
	4:15 PM	34	80	70	4	111	31	40	29	33	130	26	44	632
	4:30 PM	46	115	86	7	119	31	40	21	46	160	43	61	775
	4:45 PM	53	100	77	10	101	37	55	29	55	170	46	34	767
	5:00 PM	47	77	73	3	137	35	44	23	59	178	54	66	796
	5:15 PM	58	89	80	2	142	38	31	31	58	135	46	35	745
	5:30 PM	34	93	75	6	103	32	37	23	59	128	35	38	663
	5:45 PM	42	89	88	9	96	46	48	35	52	113	19	24	661
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	346	735	640	45	901	279	337	224	423	1,206	319	363	5,818
	APPROACH %	20%	43%	37%	4%	74%	23%	34%	23%	43%	64%	17%	19%	
	APP/DEPART	1,721	/	1,435	1,225	/	2,530	984	/	909	1,888	/	944	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	204	381	316	22	499	141	170	104	218	643	189	196	3,083
	APPROACH %	23%	42%	35%	3%	75%	21%	35%	21%	44%	63%	18%	19%	
	PEAK HR FACTOR		0.912			0.909			0.885			0.862		0.968
	APP/DEPART	901	/	747	662	/	1,360	492	/	442	1,028	/	534	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
			1	1
				0
1			1	2
			1	1
1			1	2
3				3
			3	3
5	0	0	7	12
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
			4	4
		1	1	2
		1		1
				0
			1	1
			1	1
				0
			1	1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	2	8	10

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
2	5	3	0	10
1	5	1	2	9
4	0	0	0	4
0	1	0	0	1
1	3	0	0	4
3	6	0	2	11
2	4	0	1	7
1	2	1	1	5
				0
PM				0
2	3	0	0	5
4	5	1	5	15
6	1	0	1	8
2	1	0	1	4
1	3	1	1	6
6	7	1	1	15
5	2	1	1	9
3	3	0	1	7
				0
				0
				0
				0
				0
				0
43	51	9	17	120

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			2			1			0		0
	0			0			0			1		1
	0			0			0			0		0
	0			1			0			0		0
	0			2			1			0		0
												0
PM												0
	0			0			0			0		0
	0			0			0			1		1
	0			0	1		0	1	1	0		2
	0			0			0			1		1
	0			2			0			0		0
	0			0	1		0		1	1		2
	0			0			0			1		1
	0			0			0		1	0		1
												0
												0
												0
												0
												0
												0
												9
0	0	0	0	7	2	0	2	1	3	5	0	18

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/16/15 WEDNESDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: River Run Drive
EAST & WEST: Rio San Diego Drive

PROJECT #: PDT15-0911-01
LOCATION #: 34
CONTROL: STOP

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND River Run Drive			SOUTHBOUND River Run Drive			EASTBOUND Rio San Diego Drive			WESTBOUND Rio San Diego Drive			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
WEEKDAY AM	7:00 AM	0	1	1	2	0	22	15	20	3	1	42	15	122
	7:15 AM	1	0	0	2	0	12	12	16	0	1	72	14	130
	7:30 AM	0	3	1	6	1	24	21	29	1	0	65	17	168
	7:45 AM	0	0	0	4	0	41	35	25	1	2	74	18	200
	8:00 AM	0	1	0	5	1	46	16	31	1	0	61	9	171
	8:15 AM	0	0	0	2	0	34	14	28	1	5	67	16	167
	8:30 AM	1	0	0	6	0	24	16	27	1	1	61	16	153
	8:45 AM	1	3	0	6	2	24	14	34	2	3	51	10	150
	VOLUMES	3	8	2	33	4	227	143	210	10	13	493	115	1,261
	APPROACH %	23%	62%	15%	13%	2%	86%	39%	58%	3%	2%	79%	19%	
	APP/DEPART	13	/	266	264	/	27	363	/	245	621	/	723	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	0	4	1	17	2	145	86	113	4	7	267	60	706
	APPROACH %	0%	80%	20%	10%	1%	88%	42%	56%	2%	2%	80%	18%	
	PEAK HR FACTOR		0.313			0.788			0.832			0.888		0.883
	APP/DEPART	5	/	150	164	/	13	203	/	131	334	/	412	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	1	2	1	13	1	11	33	99	1	6	95	12	275
	4:15 PM	1	0	1	10	0	12	21	88	1	2	76	9	221
	4:30 PM	1	1	0	10	1	12	30	100	1	1	85	10	252
	4:45 PM	2	1	0	22	0	13	29	88	0	1	96	9	261
	5:00 PM	0	2	0	9	0	10	39	95	0	8	93	8	264
	5:15 PM	1	1	1	12	2	12	29	97	0	6	91	15	267
	5:30 PM	0	0	2	16	1	15	22	87	1	2	82	11	239
	5:45 PM	0	1	1	16	1	5	17	80	0	1	70	12	204
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	6	8	6	108	6	90	220	734	4	27	688	86	1,983
	APPROACH %	30%	40%	30%	53%	3%	44%	23%	77%	0%	3%	86%	11%	
	APP/DEPART	20	/	314	204	/	37	958	/	848	801	/	784	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	4	5	1	53	3	47	127	380	1	16	365	42	1,044
	APPROACH %	40%	50%	10%	51%	3%	46%	25%	75%	0%	4%	86%	10%	
	PEAK HR FACTOR		0.833			0.736			0.948			0.944		0.978
	APP/DEPART	10	/	174	103	/	20	508	/	434	423	/	416	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
		1	1	2
		1	1	2
		2	0	2
		1	2	3
			0	0
		3	4	7
		1	1	2
		1	3	4
0	0	10	12	22

				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

			6	6
		2	2	4
		3	1	4
		6	1	7
		4	6	10
		1	5	6
		6	2	8
		2	1	3
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	24	24	48

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
2	0	0	0	2
1	1	0	1	3
2	0	0	0	2
4	2	0	1	7
0	0	0	1	1
1	1	0	1	3
4	0	0	0	4
0	0	1	0	1
				0
pm				0
2	1	0	0	3
2	1	1	1	5
1	0	0	0	1
2	0	0	0	2
1	3	0	0	4
6	4	0	1	11
5	3	1	0	9
0	2	0	0	2
				0
				0
				0
				0
				0
				0
33	18	3	6	60

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			1		1
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
												0
pm												0
	1			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	1			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
												0
												0
												0
												0
												0
												0
												0
0	2	0	0	0	0	0	0	0	0	1	0	1

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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/16/15 WEDNESDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Fenton Parkway
EAST & WEST: Rio San Diego Drive

PROJECT #: PDT15-0911-01
LOCATION #: 35
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ S ▼ W ◄ E ►

		NORTHBOUND Fenton Parkway			SOUTHBOUND Fenton Parkway			EASTBOUND Rio San Diego Drive			WESTBOUND Rio San Diego Drive			
	LANES:	NL 1	NT 2	NR 0	SL 2	ST 2	SR 0	EL 1.5	ET 0.5	ER 1	WL 1.5	WT 1	WR 0.5	TOTAL
WEEKDAY AM	7:00 AM	6	17	0	17	9	13	12	16	7	1	21	10	129
	7:15 AM	2	18	1	18	4	30	15	12	4	1	21	11	137
	7:30 AM	2	29	0	28	8	34	22	19	4	1	26	12	185
	7:45 AM	5	18	1	22	10	31	11	17	4	0	24	21	164
	8:00 AM	3	17	1	17	7	33	17	23	3	0	23	18	162
	8:15 AM	2	16	0	25	11	20	19	20	10	0	30	8	161
	8:30 AM	3	18	1	22	10	21	18	19	6	0	27	11	156
	8:45 AM	5	16	1	26	17	22	12	26	8	0	25	18	176
	VOLUMES	28	149	5	175	76	204	126	152	46	3	197	109	1,270
	APPROACH %	15%	82%	3%	38%	17%	45%	39%	47%	14%	1%	64%	35%	
	APP/DEPART	182	/	384	455	/	125	324	/	332	309	/	429	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	12	80	2	92	36	118	69	79	21	1	103	59	672
	APPROACH %	13%	85%	2%	37%	15%	48%	41%	47%	12%	1%	63%	36%	
	PEAK HR FACTOR		0.758			0.879			0.862			0.906		0.908
	APP/DEPART	94	/	208	246	/	58	169	/	173	163	/	233	0
WEEKDAY AM	11:00 AM	11	17	1	102	30	7	16	47	23	2	48	33	337
	11:15 AM	14	30	1	96	23	11	17	48	16	5	49	40	350
	11:30 AM	19	25	1	98	14	13	19	63	26	2	52	43	375
	11:45 AM	21	24	2	116	28	6	23	67	36	3	50	49	425
	12:00 PM	17	39	0	112	29	11	23	68	33	3	69	37	441
	12:15 PM	16	36	0	101	30	11	31	63	26	1	74	46	435
	12:30 PM	27	33	1	105	20	17	25	50	26	3	76	59	442
	12:45 PM	26	49	0	88	23	15	22	58	28	2	85	41	437
	VOLUMES	151	253	6	818	197	91	176	464	214	21	503	348	3,242
	APPROACH %	37%	62%	1%	74%	18%	8%	21%	54%	25%	2%	58%	40%	
	APP/DEPART	410	/	777	1,106	/	432	854	/	1,288	872	/	745	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	86	157	1	406	102	54	101	239	113	9	304	183	1,755
	APPROACH %	35%	64%	0%	72%	18%	10%	22%	53%	25%	2%	61%	37%	
	PEAK HR FACTOR		0.813			0.924			0.913			0.899		0.993
	APP/DEPART	244	/	441	562	/	224	453	/	646	496	/	444	0
WEEKDAY PM	4:00 PM	28	44	1	70	28	20	28	66	25	7	90	55	462
	4:15 PM	26	41	2	95	20	16	26	68	26	5	88	33	446
	4:30 PM	24	35	1	90	19	18	30	70	33	6	95	48	469
	4:45 PM	38	40	3	105	22	22	33	84	38	8	70	55	518
	5:00 PM	26	44	2	99	26	26	35	99	40	8	88	42	535
	5:15 PM	22	42	1	95	30	20	25	95	41	9	95	51	526
	5:30 PM	20	50	4	93	33	19	29	84	28	5	106	38	509
	5:45 PM	20	40	3	80	33	22	22	70	29	7	77	40	443
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	204	336	17	727	211	163	228	636	260	55	709	362	3,908
	APPROACH %	37%	60%	3%	66%	19%	15%	20%	57%	23%	5%	63%	32%	
	APP/DEPART	557	/	926	1,101	/	526	1,124	/	1,380	1,126	/	1,076	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	106	176	10	392	111	87	122	362	147	30	359	186	2,088
	APPROACH %	36%	60%	3%	66%	19%	15%	19%	57%	23%	5%	62%	32%	
	PEAK HR FACTOR		0.901			0.977			0.907			0.927		0.976
	APP/DEPART	292	/	484	590	/	288	631	/	764	575	/	552	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
	4		1	5
	4			4
	6			6
	2	1		3
	4			4
	7			7
	5			5
	2			2
0	34	1	1	36
	9			9
	10			10
	9			9
	9	2		11
	16	2		18
	13	1		14
	17	1		18
1	12	1	1	15
1	95	7	1	104
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
	1		2	3
1	1	1	5	8
2	2	2	5	11
1			2	3
2		2		4
2		2	5	9
1		1		2
			1	1
1			1	2
	4		6	10
3		1	2	6
3			1	4
4	1	0	3	8
4	2	1	2	9
4	3		4	11
2	3	1	3	9
4		1		5
3	1	1	2	7
3			2	5
5	1		6	12
4	2	1	5	12
5	3		5	13
		1	3	4
1				1
55	24	15	65	159

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
												0
												0
												0
												0
												0
				1								0
												0
												0
												0
												0
											1	1
											1	1
												0
												0
												0
												0
												0
												0
												0
												0
												2
0	0	0	0	1	0	0	0	0	0	0	2	4

36

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/16/15	NORTH & SOUTH:	Northside Drive	LOCATION #:	36
WEDNESDAY	EAST & WEST:	Rio San Diego Drive	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER

N ▲ ◄ W E ► S ▼

	NORTHBOUND Northside Drive			SOUTHBOUND Northside Drive			EASTBOUND Rio San Diego Drive			WESTBOUND Rio San Diego Drive			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	1	1	1.3	0.3	0.3	0	1	0	
WEEKDAY AM													
7:00 AM	2	13	0	49	12	12	49	10	2	0	0	4	153
7:15 AM	1	10	0	46	6	12	51	7	1	0	1	3	138
7:30 AM	0	12	3	54	14	10	50	2	1	0	0	6	152
7:45 AM	0	8	1	75	15	13	53	8	0	0	1	6	180
8:00 AM	1	13	2	85	23	13	51	7	2	0	1	1	199
8:15 AM	0	11	2	89	23	14	61	10	0	0	0	3	213
8:30 AM	0	15	1	94	19	18	70	47	5	0	0	2	271
8:45 AM	1	13	0	68	21	13	65	3	0	0	2	9	195
VOLUMES	5	95	9	560	133	105	450	94	11	0	5	34	1,501
APPROACH %	5%	87%	8%	70%	17%	13%	81%	17%	2%	0%	13%	87%	
APP/DEPART	109	/	579	798	/	144	555	/	663	39	/	115	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	2	52	5	336	86	58	247	67	7	0	3	15	878
APPROACH %	3%	88%	8%	70%	18%	12%	77%	21%	2%	0%	17%	83%	
PEAK HR FACTOR		0.922			0.916			0.658			0.409		0.810
APP/DEPART	59	/	314	480	/	93	321	/	408	18	/	63	0
WEEKDAY AM													
11:00 AM	2	36	2	24	58	83	129	1	3	1	4	16	359
11:15 AM	3	52	1	20	52	94	139	0	1	0	2	26	390
11:30 AM	1	32	1	22	43	49	129	4	0	0	4	24	309
11:45 AM	1	51	3	23	56	55	127	0	1	2	5	34	358
12:00 PM	1	46	2	24	48	77	118	1	3	3	9	38	370
12:15 PM	2	45	1	28	50	85	123	4	0	3	7	35	383
12:30 PM	0	49	4	34	70	71	125	6	0	2	4	24	389
12:45 PM	1	53	8	44	55	80	126	8	5	3	3	25	411
VOLUMES	11	364	22	219	432	594	1,016	24	13	14	38	222	2,969
APPROACH %	3%	92%	6%	18%	35%	48%	96%	2%	1%	5%	14%	81%	
APP/DEPART	397	/	1,602	1,245	/	459	1,053	/	265	274	/	643	0
BEGIN PEAK HR		12:00 PM											
VOLUMES	4	193	15	130	223	313	492	19	8	11	23	122	1,553
APPROACH %	2%	91%	7%	20%	33%	47%	95%	4%	2%	7%	15%	78%	
PEAK HR FACTOR		0.855			0.930			0.933			0.780		0.945
APP/DEPART	212	/	807	666	/	242	519	/	164	156	/	340	0
WEEKDAY PM													
4:00 PM	1	35	0	14	30	41	91	5	0	0	1	38	256
4:15 PM	1	51	1	20	28	66	124	3	1	1	4	45	345
4:30 PM	1	47	1	20	34	56	104	2	0	1	2	61	329
4:45 PM	1	37	1	17	20	50	127	2	1	0	2	46	304
5:00 PM	1	44	0	12	27	59	114	0	1	7	8	77	350
5:15 PM	1	38	2	25	32	63	102	2	1	5	15	67	353
5:30 PM	1	39	0	20	29	45	132	0	0	2	16	50	334
5:45 PM	2	30	1	25	35	59	112	0	0	2	1	37	304
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	9	321	6	153	235	439	906	14	4	18	49	421	2,575
APPROACH %	3%	96%	2%	19%	28%	53%	98%	2%	0%	4%	10%	86%	
APP/DEPART	336	/	1,648	827	/	257	924	/	173	488	/	497	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	5	151	3	82	123	226	460	2	2	16	40	231	1,341
APPROACH %	3%	95%	2%	19%	29%	52%	99%	0%	0%	6%	14%	80%	
PEAK HR FACTOR		0.883			0.898			0.879			0.780		0.950
APP/DEPART	159	/	842	431	/	141	464	/	87	287	/	271	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM		4			4
7:15 AM		7			7
7:30 AM		8			8
7:45 AM		2			2
8:00 AM		10			10
8:15 AM		5			5
8:30 AM		7			7
8:45 AM		4			4
	0	47	0	0	47
11:00 AM		8			8
11:15 AM		9			9
11:30 AM		7			7
11:45 AM		13			13
12:00 PM		11			11
12:15 PM		11			11
12:30 PM		11			11
12:45 PM		13			13
	0	83	0	0	83
4:00 PM		5		1	6
4:15 PM		7			7
4:30 PM		11			11
4:45 PM		6			6
5:00 PM		4			4
5:15 PM		16			16
5:30 PM		12			12
5:45 PM		13			13
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
	0	74	0	1	75

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7	2	1	1		4
15			1		1
30			2		2
45	1				1
8			1		1
15			1		1
30	1				1
45					0
11	4		2		6
15	4				4
30	11			1	12
45	10			1	11
12	10	2		1	13
15	23	1			24
30	5	1	2		8
45	1		1		2
4					0
15			1		1
30	1				1
45	1				1
5			3		3
15					0
30	2				2
45	2		1		3
	78	5	16	3	102

BIKE MOVEMENTS

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7													0
15													0
30													0
45													0
8													0
15													0
30							1						0
45													0
11													0
15											1		1
30													0
45			1										0
12													0
15							1						0
30													0
45													0
4													0
15					1								0
30													0
45					1								0
5													0
15													0
30													0
45													1
	0	0	1	0	2	0	2	0	0	0	1	0	2

37

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/17/15	NORTH & SOUTH:	Rancho Mission Road	LOCATION #:	37
THURSDAY	EAST & WEST:	San Diego Mission Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Rancho Mission Road			SOUTHBOUND Rancho Mission Road			EASTBOUND San Diego Mission Road			WESTBOUND San Diego Mission Road			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	1	1	2	0	1	2	0	
WEEKDAY AM													
7:00 AM	52	54	8	16	21	12	9	15	16	15	33	24	275
7:15 AM	66	37	11	16	30	13	16	12	13	33	72	35	354
7:30 AM	74	56	12	19	46	20	13	13	23	31	133	39	479
7:45 AM	52	41	14	29	55	24	10	28	27	60	103	41	484
8:00 AM	51	36	11	24	27	17	2	18	17	31	73	34	341
8:15 AM	46	38	11	13	33	14	10	14	21	23	54	28	305
8:30 AM	34	40	8	39	42	17	8	15	22	25	45	24	319
8:45 AM	24	27	4	21	37	15	13	16	19	16	18	31	241
VOLUMES	399	329	79	177	291	132	81	131	158	234	531	256	2,798
APPROACH %	49%	41%	10%	30%	49%	22%	22%	35%	43%	23%	52%	25%	
APP/DEPART	807	/	666	600	/	683	370	/	387	1,021	/	1,062	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	243	170	48	88	158	74	41	71	80	155	381	149	1,658
APPROACH %	53%	37%	10%	28%	49%	23%	21%	37%	42%	23%	56%	22%	
PEAK HR FACTOR		0.812			0.741			0.738			0.839		0.856
APP/DEPART	461	/	360	320	/	393	192	/	207	685	/	698	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	22	32	23	20	33	15	19	53	48	33	29	31	358
4:15 PM	14	42	15	35	48	9	27	75	76	23	17	32	413
4:30 PM	21	49	16	23	37	15	23	58	66	21	23	35	387
4:45 PM	18	45	20	27	40	9	30	89	81	25	26	39	449
5:00 PM	16	57	35	33	43	16	38	70	93	24	23	35	483
5:15 PM	26	60	24	25	40	16	42	116	80	29	25	24	507
5:30 PM	26	71	27	23	42	9	28	78	68	24	30	34	460
5:45 PM	16	47	22	17	51	12	29	52	66	21	24	23	380
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	159	403	182	203	334	101	236	591	578	200	197	253	3,437
APPROACH %	21%	54%	24%	32%	52%	16%	17%	42%	41%	31%	30%	39%	
APP/DEPART	744	/	892	638	/	1,112	1,405	/	976	650	/	457	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	86	233	106	108	165	50	138	353	322	102	104	132	1,899
APPROACH %	20%	55%	25%	33%	51%	15%	17%	43%	40%	30%	31%	39%	
PEAK HR FACTOR		0.857			0.878			0.854			0.939		0.936
APP/DEPART	425	/	503	323	/	589	813	/	567	338	/	240	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
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				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1			4	5
	2	2	2	6
	1	2	1	4
2			3	5
2	2	4	3	11
		1	2	3
	1	3	3	7
	6	1	2	9
				0
				0
				0
				0
				0
				0
				0
				0
2	3		5	10
4	2	4	6	16
	2		2	4
3	1	1	5	10
	6	5	4	15
2	7	1	4	14
2	6	2	2	12
2	9	2	5	18
20	48	28	53	149

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
				1						1		1
						1						0
												0
										1		1
												0
												0
1		1		1								0
		1				1						0
												0
												0
												0
												0
												0
												0
												0
												0
						1						0
												0
												0
	2						1					0
												0
											1	1
												0
												2
1	2	2	0	2	0	3	1	0	0	2	1	5

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/10/15 THURSDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Mission Center Road
EAST & WEST: Hazard Center Drive

PROJECT #: PDT15-0911-01
LOCATION #: 38
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Mission Center Road			SOUTHBOUND Mission Center Road			EASTBOUND Hazard Center Drive			WESTBOUND Hazard Center Drive			
	LANES:	NL 1	NT 1.5	NR 0.5	SL 1	ST 3	SR 0	EL 1.5	ET 0.5	ER 1	WL 0	WT 1	WR 0	TOTAL
WEEKDAY AM	7:00 AM	36	97	6	6	51	5	6	3	28	0	0	0	238
	7:15 AM	33	99	4	9	61	6	10	4	26	0	0	0	252
	7:30 AM	41	102	15	8	87	1	6	4	34	2	0	0	300
	7:45 AM	52	126	26	15	68	7	9	8	26	1	0	0	338
	8:00 AM	62	121	25	6	81	7	7	2	46	4	1	0	362
	8:15 AM	67	133	21	8	90	7	8	3	24	2	0	1	364
	8:30 AM	72	116	13	7	125	10	12	2	50	5	1	1	414
	8:45 AM	48	134	7	11	122	27	14	1	46	4	0	1	415
	VOLUMES	411	928	117	70	685	70	72	27	280	18	2	3	2,683
	APPROACH %	28%	64%	8%	8%	83%	8%	19%	7%	74%	78%	9%	13%	
	APP/DEPART	1,456	/	1,003	825	/	983	379	/	214	23	/	483	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	249	504	66	32	418	51	41	8	166	15	2	3	1,555
	APPROACH %	30%	62%	8%	6%	83%	10%	19%	4%	77%	75%	10%	15%	
	PEAK HR FACTOR		0.926			0.783			0.840			0.714		0.937
	APP/DEPART	819	/	548	501	/	599	215	/	106	20	/	302	0
WEEKDAY AM	11:00 AM	62	145	7	9	121	6	6	2	56	6	1	1	422
	11:15 AM	46	146	14	6	138	9	4	2	79	1	1	1	447
	11:30 AM	48	143	9	9	169	9	9	1	73	2	1	2	475
	11:45 AM	93	173	7	22	169	5	12	1	69	10	2	4	567
	12:00 PM	54	155	8	9	197	7	16	1	82	7	5	2	543
	12:15 PM	74	166	9	10	192	8	14	2	84	8	4	3	574
	12:30 PM	71	179	13	24	172	9	25	3	90	5	2	1	594
	12:45 PM	87	209	17	20	171	5	19	3	70	4	2	4	611
	VOLUMES	535	1,316	84	109	1,329	58	105	15	603	43	18	18	4,233
	APPROACH %	28%	68%	4%	7%	89%	4%	15%	2%	83%	54%	23%	23%	
	APP/DEPART	1,935	/	1,439	1,496	/	1,975	723	/	208	79	/	611	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	286	709	47	63	732	29	74	9	326	24	13	10	2,322
	APPROACH %	27%	68%	5%	8%	89%	4%	18%	2%	80%	51%	28%	21%	
	PEAK HR FACTOR		0.832			0.967			0.867			0.783		0.950
	APP/DEPART	1,042	/	793	824	/	1,082	409	/	119	47	/	328	0
WEEKDAY PM	4:00 PM	66	174	5	13	206	3	25	2	122	9	1	1	627
	4:15 PM	51	172	5	10	193	5	8	3	102	7	0	3	559
	4:30 PM	71	142	3	18	208	8	23	1	136	7	0	0	617
	4:45 PM	72	177	3	12	249	13	19	1	132	7	2	0	687
	5:00 PM	78	146	11	9	252	9	30	4	146	22	4	2	713
	5:15 PM	71	183	0	9	277	15	21	1	113	14	3	0	707
	5:30 PM	80	174	6	11	177	7	20	0	128	25	1	5	634
	5:45 PM	86	178	3	7	216	7	19	1	111	4	2	2	636
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	575	1,346	36	89	1,778	67	165	13	990	95	13	13	5,180
	APPROACH %	29%	69%	2%	5%	92%	3%	14%	1%	85%	79%	11%	11%	
	APP/DEPART	1,957	/	1,524	1,934	/	2,863	1,168	/	138	121	/	655	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	301	680	20	41	955	44	90	6	519	68	10	7	2,741
	APPROACH %	30%	68%	2%	4%	92%	4%	15%	1%	84%	80%	12%	8%	
	PEAK HR FACTOR		0.937			0.864			0.854			0.685		0.961
	APP/DEPART	1,001	/	777	1,040	/	1,542	615	/	67	85	/	355	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM	1	4			5
7:15 AM	2	6			8
7:30 AM	3	5			8
7:45 AM	1	6			7
8:00 AM	2	4			6
8:15 AM	4	5	2		11
8:30 AM	2	6	2		10
8:45 AM	4	8	1		13
	19	44	5	0	68
11:00 AM	9	7		1	17
11:15 AM	8	3		1	12
11:30 AM	14	5	1	1	21
11:45 AM	10	12			22
12:00 PM	5	5	1		11
12:15 PM	10	9			19
12:30 PM	13	17			30
12:45 PM	17	13	2		32
	86	71		3	164
4:00 PM	18	11	1		30
4:15 PM	15	10			25
4:30 PM	21	15			36
4:45 PM	17	11			28
5:00 PM	14	3			17
5:15 PM	18	9			27
5:30 PM	21	9			30
5:45 PM	25	6			31
	149	74	1	0	224

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7		7	2	2	11
15		4	2	3	9
30		3	2	3	8
45	1				1
8		1	1	2	4
15		8		4	12
30		4	1	2	7
45		3	3	2	8
11		7	4		11
15		3	3	5	11
30	1	1	4	2	8
45		5	6	3	14
12		5	2	5	12
15			1		1
30		5	2	5	12
45		6	1	3	10
4		4		3	7
15		5	3	3	11
30		2		2	4
45		2	2	3	7
5		3	1	4	8
15		3	2	3	8
30		7	2	6	15
45		1		2	3
	2	89	44	67	202

BIKE MOVEMENTS

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7					1								0
15													0
30													0
45									1				1
8	1												0
15											5		5
30													0
45													0
11													0
15													0
30		1			1			1		1			1
45													0
12								1					0
15		2											0
30					1								0
45													0
4													0
15		2						1					0
30					1			1					0
45													0
5		1			1								0
15		1			1								0
30					1			1					0
45		1									1		7
	1	8	0	0	7	0	0	5	1	1	6	0	14

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Avenida Del Rio	LOCATION #:	39
THURSDAY	EAST & WEST:	Camino De La Riena	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Avenida Del Rio			SOUTHBOUND Avenida Del Rio			EASTBOUND Camino De La Riena			WESTBOUND Camino De La Riena			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	1	X	1	1	1	X	X	1	1	
WEEKDAY AM													
7:00 AM				5		1	1	27			33	14	81
7:15 AM				6		2	1	19			48	26	102
7:30 AM				14		1	5	35			58	24	137
7:45 AM				18		6	4	35			62	27	152
8:00 AM				11		3	10	46			104	47	221
8:15 AM				10		5	5	43			155	49	267
8:30 AM				18		7	8	46			151	46	276
8:45 AM				16		3	12	43			90	52	216
VOLUMES	0	0	0	98	0	28	46	294	0	0	701	285	1,452
APPROACH %	0%	0%	0%	78%	0%	22%	14%	86%	0%	0%	71%	29%	
APP/DEPART	0	/	331	126	/	0	340	/	392	986	/	729	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	0	0	55	0	18	35	178	0	0	500	194	980
APPROACH %	0%	0%	0%	75%	0%	25%	16%	84%	0%	0%	72%	28%	
PEAK HR FACTOR		0.000			0.730			0.951			0.850		0.888
APP/DEPART	0	/	229	73	/	0	213	/	233	694	/	518	0
WEEKDAY AM													
11:00 AM				40		9	21	55			40	67	232
11:15 AM				35		8	23	62			43	92	263
11:30 AM				40		16	22	49			42	76	245
11:45 AM				41		8	20	62			56	89	276
12:00 PM				46		17	24	78			51	79	295
12:15 PM				54		10	26	66			58	96	310
12:30 PM				58		22	23	64			69	97	333
12:45 PM				68		16	16	64			51	84	299
VOLUMES	0	0	0	382	0	106	175	500	0	0	410	680	2,253
APPROACH %	0%	0%	0%	78%	0%	22%	26%	74%	0%	0%	38%	62%	
APP/DEPART	0	/	855	488	/	0	675	/	882	1,090	/	516	0
BEGIN PEAK HR		12:00 PM											
VOLUMES	0	0	0	226	0	65	89	272	0	0	229	356	1,237
APPROACH %	0%	0%	0%	78%	0%	22%	25%	75%	0%	0%	39%	61%	
PEAK HR FACTOR		0.000			0.866			0.885			0.881		0.929
APP/DEPART	0	/	445	291	/	0	361	/	498	585	/	294	0
WEEKDAY PM													
4:00 PM				84		30	10	82			64	59	329
4:15 PM				70		17	17	81			61	79	325
4:30 PM				78		19	14	93			74	78	356
4:45 PM				87		8	15	111			68	73	362
5:00 PM				88		24	15	122			76	96	421
5:15 PM				94		17	16	102			80	77	386
5:30 PM				93		14	26	91			60	80	364
5:45 PM				71		20	25	93			42	79	330
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	0	665	0	149	138	775	0	0	525	621	2,873
APPROACH %	0%	0%	0%	82%	0%	18%	15%	85%	0%	0%	46%	54%	
APP/DEPART	0	/	759	814	/	0	913	/	1,440	1,146	/	674	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	0	0	0	362	0	63	72	426	0	0	284	326	1,533
APPROACH %	0%	0%	0%	85%	0%	15%	14%	86%	0%	0%	47%	53%	
PEAK HR FACTOR		0.000			0.949			0.909			0.887		0.910
APP/DEPART	0	/	398	425	/	0	498	/	788	610	/	347	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
Total	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
Total	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
Total	0	0	0	0	0

	PEDESTRIAN CROSSINGS						BIKE MOVEMENTS												
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7	2			2	4	7:00 AM				2		1					2	2	4
15	1			5	6	7:15 AM				1									0
30	1			8	9	7:30 AM							2						0
45				8	8	7:45 AM				2		1					1	2	3
8				2	2	8:00 AM				1		1		1					0
15	1			3	4	8:15 AM								1				3	3
30				4	4	8:30 AM								2			1		1
45				4	4	8:45 AM											1		1
11				2	2	11:00 AM													0
15				4	4	11:15 AM													0
30				5	5	11:30 AM						1							0
45				5	5	11:45 AM											1		1
12	1			24	25	12:00 PM											2		2
15	3			1	4	12:15 PM													0
30				5	5	12:30 PM													0
45	3				3	12:45 PM											2		2
4				2	2	4:00 PM				2		2		1			1		1
15	1				1	4:15 PM													0
30	1			1	2	4:30 PM							1				1		1
45				1	1	4:45 PM				1		1					2		2
5				3	3	5:00 PM				1							1	2	3
15				2	2	5:15 PM				1				1			3		3
30	2			1	3	5:30 PM				1				1			1	1	2
45	1			3	4	5:45 PM				1									25
	17	0	0	95	112		0	0	0	13	0	7	3	7	0	0	19	10	54

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/10/15 THURSDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Mission Center Road
EAST & WEST: Camino De La Riena

PROJECT #: PDT15-0911-01
LOCATION #: 40
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Mission Center Road			SOUTHBOUND Mission Center Road			EASTBOUND Camino De La Riena			WESTBOUND Camino De La Riena			
	LANES:	NL 2	NT 3	NR 0	SL 2	ST 3	SR 1	EL 2	ET 2	ER 0	WL 2	WT 2	WR 0	TOTAL
WEEKDAY AM	7:00 AM	10	97	9	10	52	12	12	13	9	19	24	22	289
	7:15 AM	15	82	10	19	53	10	22	10	12	18	35	29	315
	7:30 AM	31	109	10	15	63	33	10	17	12	18	36	40	394
	7:45 AM	27	144	20	22	57	34	17	16	11	18	40	44	450
	8:00 AM	36	134	20	16	74	14	8	12	9	30	59	55	467
	8:15 AM	53	148	14	29	56	27	24	20	24	20	63	60	538
	8:30 AM	42	121	18	37	94	46	25	26	8	13	91	50	571
	8:45 AM	29	125	18	46	109	31	21	14	10	22	89	36	550
	VOLUMES	243	960	119	194	558	207	139	128	95	158	437	336	3,574
	APPROACH %	18%	73%	9%	20%	58%	22%	38%	35%	26%	17%	47%	36%	
	APP/DEPART	1,322	/	1,435	959	/	811	362	/	441	931	/	887	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	160	528	70	128	333	118	78	72	51	85	302	201	2,126
	APPROACH %	21%	70%	9%	22%	58%	20%	39%	36%	25%	14%	51%	34%	
	PEAK HR FACTOR		0.881			0.778			0.739			0.955		0.931
	APP/DEPART	758	/	807	579	/	469	201	/	270	588	/	580	0
WEEKDAY AM	11:00 AM	56	107	56	57	78	32	52	59	42	65	54	66	724
	11:15 AM	61	105	71	92	100	29	42	78	51	62	85	56	832
	11:30 AM	40	113	68	70	130	40	48	48	33	78	45	57	770
	11:45 AM	59	129	51	92	113	54	52	81	43	78	77	78	907
	12:00 PM	42	122	66	81	165	57	61	76	52	69	57	72	920
	12:15 PM	46	104	55	101	100	54	61	104	44	90	86	72	917
	12:30 PM	45	131	52	102	146	37	65	85	50	74	67	88	942
	12:45 PM	48	130	57	90	103	46	68	83	68	94	79	84	950
	VOLUMES	397	941	476	685	935	349	449	614	383	610	550	573	6,962
	APPROACH %	22%	52%	26%	35%	47%	18%	31%	42%	26%	35%	32%	33%	
	APP/DEPART	1,814	/	1,963	1,969	/	1,928	1,446	/	1,775	1,733	/	1,296	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	181	487	230	374	514	194	255	348	214	327	289	316	3,729
	APPROACH %	20%	54%	26%	35%	48%	18%	31%	43%	26%	35%	31%	34%	
	PEAK HR FACTOR		0.955			0.893			0.933			0.907		0.981
	APP/DEPART	898	/	1,058	1,082	/	1,055	817	/	952	932	/	664	0
WEEKDAY PM	4:00 PM	49	96	32	92	178	51	58	94	47	63	57	65	882
	4:15 PM	36	106	47	92	162	57	58	95	50	51	57	67	878
	4:30 PM	50	88	30	108	185	56	47	95	44	52	51	59	865
	4:45 PM	40	116	34	121	173	62	48	105	57	68	79	60	963
	5:00 PM	51	123	38	98	234	55	57	113	59	65	72	55	1,020
	5:15 PM	51	109	43	109	223	73	63	122	48	70	70	84	1,065
	5:30 PM	52	106	30	99	209	65	55	106	55	86	63	72	998
	5:45 PM	46	104	35	114	178	47	55	112	59	70	52	75	947
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	375	848	289	833	1,542	466	441	842	419	525	501	537	7,618
	APPROACH %	25%	56%	19%	29%	54%	16%	26%	49%	25%	34%	32%	34%	
	APP/DEPART	1,512	/	1,826	2,841	/	2,486	1,702	/	1,964	1,563	/	1,342	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	194	454	145	427	839	255	223	446	219	289	284	271	4,046
	APPROACH %	24%	57%	18%	28%	55%	17%	25%	50%	25%	34%	34%	32%	
	PEAK HR FACTOR		0.935			0.939			0.953			0.942		0.950
	APP/DEPART	793	/	948	1,521	/	1,347	888	/	1,018	844	/	733	0

U-TURNS

	NB X	SB X	EB X	WB X	TTL
7:00 AM		1			1
7:15 AM		`			0
7:30 AM	1	1			2
7:45 AM	1	1			2
8:00 AM		2			2
8:15 AM		4			4
8:30 AM		6			6
8:45 AM	1	4			5
	3	19	0	0	22
11:00 AM		4			4
11:15 AM	1	7			8
11:30 AM	1	3			4
11:45 AM	2	4			6
12:00 PM	2	4			6
12:15 PM	1	15			16
12:30 PM	4	6			10
12:45 PM	2	8			10
	13	51	0	0	64
4:00 PM	3	3			6
4:15 PM	4	2			6
4:30 PM	3	9			12
4:45 PM		6			6
5:00 PM		6			6
5:15 PM		4			4
5:30 PM	1	5			6
5:45 PM	2	3			5
	13	38	0	0	51

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7	1		1	1	3
15	2	2		1	5
30	1	3			4
45		1	1	1	3
8	4	1	1	1	7
15	1	1	1		3
30		1	1	1	3
45		3	3	2	8
11		1	1	2	4
15	1	2	2		5
30	2		1		3
45			1		1
12	1	1	1		3
15	1	2			3
30	1	3	7	1	12
45	5	4		2	11
4	1	2	2		5
15	2	7	10	3	22
30	3	7		4	14
45	1	2	3	2	8
5	1	4	6	3	14
15	1	3	4	2	10
30	1	1	8		10
45	1	6	6		13
	31	57	60	26	174

BIKE MOVEMENTS

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7					1			1			1		1
15											1		1
30								1					0
45					1			2			2		2
8								3					0
15													0
30			1										0
45													0
11													0
15													0
30					1								0
45								1		1			1
12													0
15								1			1		1
30													0
45											1	1	2
4					1						1		1
15				1				1					0
30								1			1		1
45											1		1
5						1							0
15								1			2		2
30		1								1	1		2
45								3					13
	0	1	1	1	4	1	0	15	0	2	12	1	28

41

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/16/15 WEDNESDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Camino Del Este
EAST & WEST: Camino De La Riena

PROJECT #: PDT15-0911-01
LOCATION #: 41
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Camino Del Este			SOUTHBOUND Camino Del Este			EASTBOUND Camino De La Riena			WESTBOUND Camino De La Riena			
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
WEEKDAY AM	7:00 AM	8	4	4	10	37	10	5	12	2	3	38	3	136
	7:15 AM	5	8	3	9	36	12	2	16	3	4	38	1	137
	7:30 AM	9	7	1	17	41	23	3	18	5	8	50	2	184
	7:45 AM	9	7	4	9	41	24	2	28	6	11	81	5	227
	8:00 AM	6	8	3	9	40	8	9	19	1	13	71	3	190
	8:15 AM	10	10	4	15	45	19	9	24	13	10	63	1	223
	8:30 AM	12	13	6	8	47	12	16	24	8	9	52	5	212
	8:45 AM	10	10	4	7	32	22	10	29	7	7	75	7	220
	VOLUMES	69	67	29	84	319	130	56	170	45	65	468	27	1,529
	APPROACH %	42%	41%	18%	16%	60%	24%	21%	63%	17%	12%	84%	5%	
	APP/DEPART	165	/	150	533	/	429	271	/	283	560	/	667	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	37	38	17	41	173	63	36	95	28	43	267	14	852
	APPROACH %	40%	41%	18%	15%	62%	23%	23%	60%	18%	13%	82%	4%	
	PEAK HR FACTOR		0.742			0.877			0.828			0.835		0.938
	APP/DEPART	92	/	88	277	/	244	159	/	153	324	/	367	0
WEEKDAY AM	11:00 AM	16	17	11	5	42	37	22	85	20	16	68	5	344
	11:15 AM	20	24	20	12	46	54	33	84	37	22	87	6	445
	11:30 AM	39	23	16	12	48	45	33	91	36	34	86	4	467
	11:45 AM	31	34	18	11	45	39	25	127	37	33	93	4	497
	12:00 PM	37	22	17	14	42	56	39	89	47	42	110	2	517
	12:15 PM	28	20	18	11	47	51	41	135	47	40	109	3	550
	12:30 PM	28	21	22	14	41	51	36	135	57	37	109	6	557
	12:45 PM	33	21	19	25	55	50	48	146	50	42	81	1	571
	VOLUMES	232	182	141	104	366	383	277	892	331	266	743	31	3,948
	APPROACH %	42%	33%	25%	12%	43%	45%	18%	59%	22%	26%	71%	3%	
	APP/DEPART	555	/	490	853	/	963	1,500	/	1,137	1,040	/	1,358	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	126	84	76	64	185	208	164	505	201	161	409	12	2,195
	APPROACH %	44%	29%	27%	14%	40%	46%	19%	58%	23%	28%	70%	2%	
	PEAK HR FACTOR		0.941			0.879			0.891			0.945		0.961
	APP/DEPART	286	/	260	457	/	547	870	/	645	582	/	743	0
WEEKDAY PM	4:00 PM	21	23	25	14	50	45	44	147	46	16	78	6	515
	4:15 PM	16	27	28	19	42	39	24	137	45	17	100	7	501
	4:30 PM	24	27	16	21	64	53	48	139	40	24	69	7	532
	4:45 PM	32	38	13	17	56	44	32	142	63	19	91	3	550
	5:00 PM	20	24	12	17	55	59	31	128	40	26	92	7	511
	5:15 PM	24	22	15	24	69	53	37	142	41	38	79	8	552
	5:30 PM	30	25	10	18	57	39	36	175	54	24	96	11	575
	5:45 PM	28	24	20	18	54	35	50	143	39	27	79	9	526
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	195	210	139	148	447	367	302	1,153	368	191	684	58	4,262
	APPROACH %	36%	39%	26%	15%	46%	38%	17%	63%	20%	20%	73%	6%	
	APP/DEPART	544	/	570	962	/	1,006	1,823	/	1,440	933	/	1,246	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	106	109	50	76	237	195	136	587	198	107	358	29	2,188
	APPROACH %	40%	41%	19%	15%	47%	38%	15%	64%	21%	22%	72%	6%	
	PEAK HR FACTOR		0.798			0.870			0.869			0.943		0.951
	APP/DEPART	265	/	274	508	/	542	921	/	713	494	/	659	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
			1	1
			1	1
			1	1
			4	4
			3	3
			5	5
		1	6	7
			1	1
0	0	1	22	23
		2	4	6
		4	6	10
	1	6	16	23
		3	11	14
		7	6	13
		6	7	13
		2	8	10
		8	14	22
0	1	38	72	111
		5	4	9
		4	5	9
		12	2	14
		7	5	12
		6	7	13
		6	8	14
		8	7	15
		5	4	9
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	53	42	95

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7					0
15					0
30		1			1
45	1	2	1		4
8			1		1
15	2		1	1	4
30		2	1	2	5
45	1		1		2
11		2	1	2	5
15		1	1	2	4
30		2	2	2	6
45	4	4	3	2	13
12	1	2	4	4	11
15		2	4	4	10
30			3	3	6
45	5	3	5	8	21
4	1	3	2	2	8
15		3	5	1	9
30	1	5	3	2	11
45	1	3	2	1	7
5	3	3	3	2	11
15	4	8	2	5	19
30	1	3	4	5	13
45	3	6	5	2	16
	28	55	54	50	187

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
							2					0
	1									1		1
							1					0
				1								0
										1		1
												0
												0
							1					0
							2			1		1
					1							0
												0
							1					0
				1			2					0
							1					0
	1											0
							1					0
							2			1		1
			1				4			1		1
												0
							1					0
										2		2
							2			1		1
							4			1		1
												0
							1					0
												0
												0
0	2	0	1	4	1	0	17	0	0	8	0	15

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/17/15 THURSDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Qualcomm Way
EAST & WEST: Camino De La Riena

PROJECT #: PDT15-0911-01
LOCATION #: 42
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Qualcomm Way			SOUTHBOUND Qualcomm Way			EASTBOUND Camino De La Riena			WESTBOUND Camino De La Riena			
	LANES:	NL 2	NT 3	NR 0	SL 2	ST 3	SR 0	EL 1	ET 2	ER 1	WL 2	WT 2	WR 1	TOTAL
WEEKDAY AM	7:00 AM	11	166	33	7	80	6	1	17	19	18	18	25	401
	7:15 AM	18	206	55	8	84	9	5	16	21	24	37	35	518
	7:30 AM	29	219	59	16	84	8	7	5	24	46	39	47	583
	7:45 AM	21	220	42	13	106	15	12	19	22	33	56	44	603
	8:00 AM	32	206	67	19	95	18	10	19	16	26	43	38	589
	8:15 AM	29	191	83	23	103	10	1	16	18	38	36	27	575
	8:30 AM	27	205	72	13	97	17	10	24	21	25	47	34	592
	8:45 AM	35	206	65	26	109	16	7	17	19	24	38	20	582
	VOLUMES	202	1,619	476	125	758	99	53	133	160	234	314	270	4,443
	APPROACH %	9%	70%	21%	13%	77%	10%	15%	38%	46%	29%	38%	33%	
	APP/DEPART	2,297	/	1,942	982	/	1,152	346	/	734	818	/	615	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	109	822	264	68	401	60	33	78	77	122	182	143	2,359
	APPROACH %	9%	69%	22%	13%	76%	11%	18%	41%	41%	27%	41%	32%	
	PEAK HR FACTOR		0.980			0.972			0.855			0.840		0.978
	APP/DEPART	1,195	/	998	529	/	600	188	/	410	447	/	351	0
WEEKDAY AM	11:00 AM	43	175	35	10	137	40	33	22	45	28	40	15	623
	11:15 AM	44	202	28	12	131	41	44	40	60	32	44	26	704
	11:30 AM	41	196	27	19	122	43	30	50	70	31	49	25	703
	11:45 AM	52	172	30	20	178	29	43	45	69	33	52	29	752
	12:00 PM	53	189	25	15	171	34	48	46	65	31	53	31	761
	12:15 PM	40	206	32	22	137	48	33	63	64	32	61	39	777
	12:30 PM	42	186	40	22	150	39	54	62	74	34	47	32	782
	12:45 PM	51	182	31	32	153	26	34	66	84	29	53	28	769
	VOLUMES	366	1,508	248	152	1,179	300	319	394	531	250	399	225	5,871
	APPROACH %	17%	71%	12%	9%	72%	18%	26%	32%	43%	29%	46%	26%	
	APP/DEPART	2,122	/	2,052	1,631	/	1,960	1,244	/	794	874	/	1,065	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	186	763	128	91	611	147	169	237	287	126	214	130	3,089
	APPROACH %	17%	71%	12%	11%	72%	17%	24%	34%	41%	27%	46%	28%	
	PEAK HR FACTOR		0.969			0.965			0.912			0.890		0.988
	APP/DEPART	1,077	/	1,062	849	/	1,024	693	/	456	470	/	547	0
WEEKDAY PM	4:00 PM	35	124	31	25	219	18	26	70	78	70	40	31	767
	4:15 PM	41	187	50	39	221	35	31	63	53	50	31	21	822
	4:30 PM	25	162	34	41	245	44	37	80	70	85	34	18	875
	4:45 PM	42	148	43	52	258	38	28	72	72	72	41	18	884
	5:00 PM	40	145	42	34	278	40	41	98	68	82	51	31	950
	5:15 PM	56	154	58	55	212	41	22	80	85	68	33	27	891
	5:30 PM	36	123	67	41	218	44	47	127	105	58	50	21	937
	5:45 PM	37	143	53	33	219	35	33	84	74	52	29	22	814
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	312	1,186	378	320	1,870	295	265	674	605	537	309	189	6,940
	APPROACH %	17%	63%	20%	13%	75%	12%	17%	44%	39%	52%	30%	18%	
	APP/DEPART	1,876	/	1,640	2,485	/	3,012	1,544	/	1,372	1,035	/	916	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	174	570	210	182	966	163	138	377	330	280	175	97	3,662
	APPROACH %	18%	60%	22%	14%	74%	12%	16%	45%	39%	51%	32%	18%	
	PEAK HR FACTOR		0.890			0.931			0.757			0.841		0.964
	APP/DEPART	954	/	805	1,311	/	1,576	845	/	769	552	/	512	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
		1		1
				0
	1		1	2
				0
		2		2
				0
				0
				0
0	1	3	1	5
		1	1	2
		2	1	3
		2		2
				0
		1		1
		3		3
		1		1
			3	3
0	0	10	5	15
		1		1
	2			2
	2			2
		1		1
		2		2
		1		1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	4	5	0	9

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
1			1	2
2		2		4
1				1
				0
1			1	2
3		1		4
1	1	1	3	6
6		1	1	8
			1	1
2				2
				0
2				2
1		1		2
6		1	1	8
1				1
2				2
				0
1				1
3		1		4
1				1
4				4
				0
2			#REF!	#REF!
40	1	8	#REF!	#REF!

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
										1		1
	2									2		2
1	1						1					0
				1			3			6		6
	2	1					2			3		3
	1	1										0
										1		1
		1								2		2
				1						6		6
	1						1			1		1
	1									1		1
							1					0
				1			1					0
												0
	1									1		1
										2		2
										2		2
										1		1
												0
												0
										1		1
	1											0
												27
1	10	3	0	3	0	0	9	0	0	30	0	57

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-17-15	NORTH & SOUTH:	Mission City Parkway	LOCATION #:	43
THURSDAY	EAST & WEST:	Camino Del Rio North	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

	NORTHBOUND Mission City Parkway			SOUTHBOUND Mission City Parkway			EASTBOUND Camino Del Rio North			WESTBOUND Camino Del Rio North			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	X	1	X	X	X	X	1	1	1	1	X	
WEEKDAY AM													
7:00 AM	39		8					13	4	7	64		135
7:15 AM	78		9					19	9	16	95		226
7:30 AM	94		12					19	6	27	131		289
7:45 AM	112		12					27	16	40	143		350
8:00 AM	97		9					26	8	35	116		291
8:15 AM	101		16					24	14	26	106		287
8:30 AM	79		20					25	21	34	87		266
8:45 AM	66		8					30	17	26	83		230
VOLUMES	666	0	94	0	0	0	0	183	95	211	825	0	2,074
APPROACH %	88%	0%	12%	0%	0%	0%	0%	66%	34%	20%	80%	0%	
APP/DEPART	760	/	0	0	/	306	278	/	277	1,036	/	1,491	0
BEGIN PEAK HR		7:30 AM											
VOLUMES	404	0	49	0	0	0	0	96	44	128	496	0	1,217
APPROACH %	89%	0%	11%	0%	0%	0%	0%	69%	31%	21%	79%	0%	
PEAK HR FACTOR		0.913			0.000			0.814			0.852		0.869
APP/DEPART	453	/	0	0	/	172	140	/	145	624	/	900	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	26		22					84	102	12	40		286
4:15 PM	23		15					93	93	16	54		294
4:30 PM	26		25					103	150	22	53		379
4:45 PM	27		22					89	112	21	55		326
5:00 PM	26		32					139	164	33	63		457
5:15 PM	20		31					132	109	26	53		371
5:30 PM	21		18					137	124	22	66		388
5:45 PM	9		21					94	83	14	47		268
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	178	0	186	0	0	0	0	871	937	166	431	0	2,769
APPROACH %	49%	0%	51%	0%	0%	0%	0%	48%	52%	28%	72%	0%	
APP/DEPART	364	/	0	0	/	1,103	1,808	/	1,057	597	/	609	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	94	0	103	0	0	0	0	497	509	102	237	0	1,542
APPROACH %	48%	0%	52%	0%	0%	0%	0%	49%	51%	30%	70%	0%	
PEAK HR FACTOR		0.849			0.000			0.830			0.883		0.844
APP/DEPART	197	/	0	0	/	611	1,006	/	600	339	/	331	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	2	0	0	2
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
				0
PM				0
0	3	0	0	3
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	2	0	0	2
0	0	0	1	1
0	0	0	0	0
0	1	0	0	1
				0
				0
				0
				0
				0
				0
0	10	0	2	12

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
							0			0		0
1							0		1	0		1
1							0		1	2		3
							0	1		2		3
							1			3		3
1							0		1	2		3
							0			0		0
							0			2		2
												0
PM												0
							0			1		1
							2			1		1
							2			2		2
1							1			0		0
							0			0		0
1							0			0		0
							1			0		0
							1	1		0		1
												0
												0
												0
												0
												0
												16
5	0	0	0	0	0	0	8	2	3	15	0	36

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-17-15	NORTH & SOUTH:	Ward Road	LOCATION #:	44
THURSDAY	EAST & WEST:	Camino Del Rio North	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Ward Road			SOUTHBOUND Ward Road			EASTBOUND Camino Del Rio North			WESTBOUND Camino Del Rio North				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	X	X	X	1	X	1	1	2	X	X	2	1		X	X	X	X	
WEEKDAY AM																		
7:00 AM				59		30	9	5			65	88	256					0
7:15 AM				54		35	8	11			82	81	271					0
7:30 AM				67		66	13	8			109	90	353					0
7:45 AM				70		74	20	7			143	84	398					0
8:00 AM				61		53	10	7			114	78	323					0
8:15 AM				38		54	9	12			111	69	293					0
8:30 AM				56		48	7	10			109	52	282					0
8:45 AM				51		42	7	11			94	53	258					0
VOLUMES	0	0	0	456	0	402	83	71	0	0	827	595	2,434	0	0	0	0	0
APPROACH %	0%	0%	0%	53%	0%	47%	54%	46%	0%	0%	58%	42%						
APP/DEPART	0	/	678	858	/	0	154	/	527	1,422	/	1,229	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	0	0	0	236	0	247	52	34	0	0	477	321	1,367					
APPROACH %	0%	0%	0%	49%	0%	51%	60%	40%	0%	0%	60%	40%						
PEAK HR FACTOR		0.000			0.839			0.796			0.879		0.859					
APP/DEPART	0	/	373	483	/	0	86	/	270	798	/	724	0					
WEEKDAY AM																		
11:00 AM													0					0
11:15 AM													0					0
11:30 AM													0					0
11:45 AM													0					0
12:00 PM													0					0
12:15 PM													0					0
12:30 PM													0					0
12:45 PM													0					0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		12:45 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
WEEKDAY PM																		
4:00 PM				79		20	42	84			20	39	284					0
4:15 PM				91		27	49	83			31	42	323					0
4:30 PM				115		24	50	87			40	52	368					0
4:45 PM				116		32	40	79			39	47	353					0
5:00 PM				96		29	45	117			30	33	350					0
5:15 PM				106		28	61	131			37	61	424					0
5:30 PM				84		39	67	112			29	59	390					0
5:45 PM				100		27	51	80			31	39	328					0
6:00 PM													0					0
6:15 PM													0					0
6:30 PM													0					0
6:45 PM													0					0
7:00 PM													0					0
7:15 PM													0					0
7:30 PM													0					0
7:45 PM													0					0
8:00 PM													0					0
8:15 PM													0					0
8:30 PM													0					0
8:45 PM													0					0
VOLUMES	0	0	0	787	0	226	405	773	0	0	257	372	2,820	0	0	0	0	0
APPROACH %	0%	0%	0%	78%	0%	22%	34%	66%	0%	0%	41%	59%						
APP/DEPART	0	/	777	1,013	/	0	1,178	/	1,560	629	/	483	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	0	0	0	402	0	128	213	439	0	0	135	200	1,517					
APPROACH %	0%	0%	0%	76%	0%	24%	33%	67%	0%	0%	40%	60%						
PEAK HR FACTOR		0.000			0.895			0.849			0.855		0.894					
APP/DEPART	0	/	413	530	/	0	652	/	841	335	/	263	0					

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
2	0	0	0	2
0	0	0	0	0
1	0	0	1	2
				0
PM				0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
4	0	0	2	6

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
							0			0		0
			1		1	1	0			0		0
			1			1	2			0		0
							2			0	1	1
							3			1		1
			1			1	2			0		0
							0			0		0
							2			0		0
												0
												0
							1			0		0
							1			2		2
							2			2		2
			1				0			1		1
							0			0		0
			1		1		0			0		0
							0			1		1
							0			1	1	2
												0
												0
												0
												0
												0
												10
0	0	0	5	0	2	3	15	0	0	8	2	20

45

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-17-15	NORTH & SOUTH:	Fairmount Avenue	LOCATION #:	45
THURSDAY	EAST & WEST:	Camino Del Rio North	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Fairmount Avenue			SOUTHBOUND Fairmount Avenue			EASTBOUND Camino Del Rio North			WESTBOUND Camino Del Rio North			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	2	2	1	1.5	0.5	1	2	0.5	1.5	
WEEKDAY AM													
7:00 AM	72	212	23	1	119	11	9	3	69	92	77	51	739
7:15 AM	97	233	13	3	161	13	11	2	70	113	98	49	863
7:30 AM	96	269	21	2	184	20	13	6	78	116	12	48	865
7:45 AM	102	314	31	4	188	37	15	5	95	87	122	50	1,050
8:00 AM	94	343	42	5	198	30	7	3	86	103	102	53	1,066
8:15 AM	106	309	43	4	180	20	8	7	70	115	103	76	1,041
8:30 AM	78	320	53	1	188	15	14	9	71	104	85	70	1,008
8:45 AM	84	269	49	1	184	21	4	6	78	84	78	75	933
VOLUMES	729	2,269	275	21	1,402	167	81	41	617	814	677	472	7,565
APPROACH %	22%	69%	8%	1%	88%	11%	11%	6%	83%	41%	34%	24%	
APP/DEPART	3,273	/	2,822	1,590	/	2,833	739	/	337	1,963	/	1,573	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	380	1,286	169	14	754	102	44	24	322	409	412	249	4,165
APPROACH %	21%	70%	9%	2%	87%	12%	11%	6%	83%	38%	39%	23%	
PEAK HR FACTOR		0.958			0.933			0.848			0.910		0.977
APP/DEPART	1,835	/	1,579	870	/	1,485	390	/	207	1,070	/	894	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	50	209	31	6	313	14	19	23	134	141	26	50	1,016
4:15 PM	58	219	40	7	313	15	21	28	121	138	30	59	1,049
4:30 PM	68	235	41	9	335	18	25	32	148	162	38	60	1,171
4:45 PM	66	238	35	12	345	20	21	25	151	145	31	66	1,155
5:00 PM	61	252	44	5	316	11	26	22	134	155	32	68	1,126
5:15 PM	66	226	45	8	318	15	20	26	141	162	22	50	1,099
5:30 PM	54	233	51	9	289	19	25	20	122	131	35	52	1,040
5:45 PM	55	213	40	10	295	12	20	15	121	128	26	42	977
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	478	1,825	327	66	2,524	124	177	191	1,072	1,162	240	447	8,633
APPROACH %	18%	69%	12%	2%	93%	5%	12%	13%	74%	63%	13%	24%	
APP/DEPART	2,630	/	2,449	2,714	/	4,758	1,440	/	584	1,849	/	842	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	261	951	165	34	1,314	64	92	105	574	624	123	244	4,551
APPROACH %	19%	69%	12%	2%	93%	5%	12%	14%	74%	63%	12%	25%	
PEAK HR FACTOR		0.964			0.936			0.940			0.953		0.972
APP/DEPART	1,377	/	1,287	1,412	/	2,512	771	/	304	991	/	448	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
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				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	1	0	0	1
0	0	0	2	2
0	0	0	2	2
0	0	0	0	0
0	1	0	1	2
0	0	0	2	2
0	2	0	2	4
				0
0	0	0	0	0
0	0	0	0	0
0	0	0	3	3
0	0	0	1	1
0	0	0	2	2
0	0	0	1	1
0	0	0	2	2
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
0	4	0	18	22

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
2	0			0			0			1		1
2	0			0			0			2		2
3	0			0			0			0		0
6	0			0			0			4		4
0	0			3			0			0		0
2	0			0			0			0		0
1	0			0			0			0		0
0	0			0			0			0		0
												0
0	1			0			0			0		0
0	0			2			0			0		0
0	0			0			0			0		0
1	1			2			0			0		0
2	1			0			0			1		1
1	0			1			0			2		2
0	0			0			0			1		1
0	1			0			0			0		0
												0
												0
												0
												0
												0
												0
												8
20	4	0	0	8	0	0	0	0	0	11	0	19

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/10/15	NORTH & SOUTH:	I-8 WB Ramps	LOCATION #:	46
THURSDAY	EAST & WEST:	Hotel Circle North	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-8 WB Ramps			SOUTHBOUND I-8 WB Ramps			EASTBOUND Hotel Circle North			WESTBOUND Hotel Circle North			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	X	1	1	1	X	1	0	2	1	
WEEKDAY AM													
7:00 AM					55	29	16		26	3	168	6	303
7:15 AM					61	32	19		22	1	198	9	342
7:30 AM					51	26	18		30	1	240	10	376
7:45 AM					41	87	35		12	4	241	15	435
8:00 AM					54	107	31		25	2	219	10	448
8:15 AM					54	115	31		37	3	200	8	448
8:30 AM					82	129	40		63	2	140	10	466
8:45 AM					40	39	34		45	0	160	24	342
VOLUMES	0	0	0	0	438	564	224	0	260	16	1,566	92	3,160
APPROACH %	0%	0%	0%	0%	44%	56%	46%	0%	54%	1%	94%	5%	
APP/DEPART	0	/	316	1,002	/	714	484	/	0	1,674	/	2,130	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	0	0	0	0	231	438	137	0	137	11	800	43	1,797
APPROACH %	0%	0%	0%	0%	35%	65%	50%	0%	50%	1%	94%	5%	
PEAK HR FACTOR		0.000			0.793			0.665			0.821		0.964
APP/DEPART	0	/	180	669	/	379	274	/	0	854	/	1,238	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM					28	51	44		35	0	69	24	251
4:15 PM					32	49	59		33	0	70	25	268
4:30 PM					32	60	48		20	0	112	29	301
4:45 PM					24	61	68		21	0	96	25	295
5:00 PM					49	75	40		29	0	93	30	316
5:15 PM					26	55	62		27	0	104	22	296
5:30 PM					25	59	53		28	0	95	21	281
5:45 PM					26	55	56		31	0	98	18	284
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	0	0	242	465	430	0	224	0	737	194	2,292
APPROACH %	0%	0%	0%	0%	34%	66%	66%	0%	34%	0%	79%	21%	
APP/DEPART	0	/	624	707	/	466	654	/	0	931	/	1,202	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	0	0	0	0	131	251	218	0	97	0	405	106	1,208
APPROACH %	0%	0%	0%	0%	34%	66%	69%	0%	31%	0%	79%	21%	
PEAK HR FACTOR		0.000			0.770			0.885			0.906		0.956
APP/DEPART	0	/	324	382	/	228	315	/	0	511	/	656	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
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0	0	0	0	0
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				0
				0
				0
				0
				0
				0
0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
				0
	pm			0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0	1	1
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0	1		0			0		0
	0			0			0			0		0
												0
												0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0	1		0			0		0
	0			0			0			0		0
	0			0	2		0			0		0
	0			0	1		0			0		0
												0
												0
												0
												0
												0
												0
0	0	0	0	0	5	0	0	0	0	0	1	1

47

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	I-8 WB Ramps	LOCATION #:	47
THURSDAY	EAST & WEST:	Hotel Circle North	CONTROL:	STOP

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-8 WB Ramps			SOUTHBOUND I-8 WB Ramps			EASTBOUND Hotel Circle North			WESTBOUND Hotel Circle North			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	1	0	0	1	1	1	1	0	
WEEKDAY AM													
7:00 AM	66	2	121	0	0	1	1	15	1	26	18	4	255
7:15 AM	70	3	142	2	0	0	1	28	2	25	29	5	307
7:30 AM	89	3	138	1	1	0	0	26	3	28	33	6	328
7:45 AM	91	3	175	1	0	0	0	35	2	19	39	5	370
8:00 AM	88	4	162	2	0	1	0	28	2	20	40	4	351
8:15 AM	94	4	184	3	1	0	0	20	1	28	44	2	381
8:30 AM	70	5	151	2	0	0	0	28	2	22	51	4	335
8:45 AM	88	1	160	1	0	0	0	38	1	24	42	3	358
VOLUMES	656	25	1,233	12	2	2	2	218	14	192	296	33	2,685
APPROACH %	34%	1%	64%	75%	13%	13%	1%	93%	6%	37%	57%	6%	
APP/DEPART	1,914	/	60	16	/	208	234	/	1,463	521	/	954	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	343	16	672	8	1	1	0	111	7	89	174	15	1,437
APPROACH %	33%	2%	65%	80%	10%	10%	0%	94%	6%	32%	63%	5%	
PEAK HR FACTOR		0.914			0.625			0.797			0.903		0.943
APP/DEPART	1,031	/	31	10	/	97	118	/	791	278	/	518	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	40	1	105	2	0	0	0	61	3	70	18	2	302
4:15 PM	29	1	135	2	0	1	1	66	3	61	26	2	327
4:30 PM	35	2	135	0	0	0	1	91	2	80	29	2	377
4:45 PM	31	1	142	1	1	1	0	80	4	88	33	4	386
5:00 PM	33	0	121	2	0	0	0	74	5	78	28	2	343
5:15 PM	40	1	108	1	0	0	0	65	6	84	26	1	332
5:30 PM	36	2	116	2	0	0	0	55	5	74	44	2	336
5:45 PM	31	1	126	1	1	0	0	62	5	77	35	1	340
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	275	9	988	11	2	2	2	554	33	612	239	16	2,743
APPROACH %	22%	1%	78%	73%	13%	13%	0%	94%	6%	71%	28%	2%	
APP/DEPART	1,272	/	27	15	/	647	589	/	1,553	867	/	516	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	139	4	506	4	1	1	1	310	17	330	116	9	1,438
APPROACH %	21%	1%	78%	67%	17%	17%	0%	95%	5%	73%	25%	2%	
PEAK HR FACTOR		0.932			0.500			0.872			0.910		0.931
APP/DEPART	649	/	14	6	/	348	328	/	820	455	/	256	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
TOTAL	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
TOTAL	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM				1	1
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
TOTAL	0	0	0	1	1

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
2	4	0	2	8
0	2	0	2	4
2	3	0	0	5
4	5	0	2	11
3	2	0	0	5
0	1	0	0	1
1	1	0	0	2
0	4	0	0	4
				0
	PM			0
3	1	0	1	5
1	0	0	0	1
0	1	0	0	1
3	1	0	0	4
1	1	0	0	2
3	0	0	0	3
5	0	0	1	6
6	5	0	4	15
				0
				0
				0
				0
				0
				0
34	31	0	12	77

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			0			1		1
	0			0			3			3		3
	0			0			2			3		3
	0			0			0			3		3
	0			0			0			2		2
	0			0			1			1		1
	0			0			0			0		0
	0			0			4			0		0
												0
	PM						PM					0
	0			0			0			0		0
	0			0			0			4		4
	0			0			1			0		0
	0			0			0			1		1
	0			0			0			1		1
0	0			0		1	2			0		0
0	0			0		1	0			5		5
	0			0			0			5		5
												0
												0
												0
												0
												0
												22
0	0	0	0	0	0	2	13	0	0	29	0	51

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Fashion Valley Road	LOCATION #:	48
THURSDAY	EAST & WEST:	Hotel Circle North	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Fashion Valley Road			SOUTHBOUND Fashion Valley Road			EASTBOUND Hotel Circle North			WESTBOUND Hotel Circle North			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	1	X	1	1	1	X	X	1	1	
WEEKDAY AM													
7:00 AM				25		9	31	94			24	17	200
7:15 AM				13		12	42	115			41	21	244
7:30 AM				24		9	38	131			46	21	269
7:45 AM				26		20	72	168			39	32	357
8:00 AM				24		21	61	132			28	20	286
8:15 AM				32		25	82	137			77	37	390
8:30 AM				35		20	64	135			59	20	333
8:45 AM				24		22	55	145			45	23	314
VOLUMES	0	0	0	203	0	138	445	1,057	0	0	359	191	2,393
APPROACH %	0%	0%	0%	60%	0%	40%	30%	70%	0%	0%	65%	35%	
APP/DEPART	0	/	636	341	/	0	1,502	/	1,260	550	/	497	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	0	0	0	117	0	86	279	572	0	0	203	109	1,366
APPROACH %	0%	0%	0%	58%	0%	42%	33%	67%	0%	0%	65%	35%	
PEAK HR FACTOR		0.000			0.890			0.886			0.684		0.876
APP/DEPART	0	/	388	203	/	0	851	/	689	312	/	289	0
WEEKDAY AM													
11:00 AM				28		20	69	76			37	32	262
11:15 AM				25		40	73	69			47	26	280
11:30 AM				18		35	73	76			41	39	282
11:45 AM				23		28	91	85			52	36	315
12:00 PM				39		30	73	84			41	43	310
12:15 PM				28		34	74	91			48	33	308
12:30 PM				30		33	72	85			51	35	306
12:45 PM				35		46	103	75			53	35	347
VOLUMES	0	0	0	226	0	266	628	641	0	0	370	279	2,410
APPROACH %	0%	0%	0%	46%	0%	54%	49%	51%	0%	0%	57%	43%	
APP/DEPART	0	/	907	492	/	0	1,269	/	867	649	/	636	0
BEGIN PEAK HR		12:00 PM											
VOLUMES	0	0	0	132	0	143	322	335	0	0	193	146	1,271
APPROACH %	0%	0%	0%	48%	0%	52%	49%	51%	0%	0%	57%	43%	
PEAK HR FACTOR		0.000			0.849			0.923			0.963		0.916
APP/DEPART	0	/	468	275	/	0	657	/	467	339	/	336	0
WEEKDAY PM													
4:00 PM				45		41	74	104			52	35	351
4:15 PM				40		53	85	119			56	26	379
4:30 PM				53		36	112	139			61	41	442
4:45 PM				45		41	96	113			76	39	410
5:00 PM				62		69	68	124			74	31	428
5:15 PM				49		50	76	80			76	36	367
5:30 PM				65		37	82	108			70	37	399
5:45 PM				64		43	75	103			65	36	386
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	0	423	0	370	668	890	0	0	530	281	3,162
APPROACH %	0%	0%	0%	53%	0%	47%	43%	57%	0%	0%	65%	35%	
APP/DEPART	0	/	949	793	/	0	1,558	/	1,313	811	/	900	0
BEGIN PEAK HR		4:15 PM											
VOLUMES	0	0	0	200	0	199	361	495	0	0	267	137	1,659
APPROACH %	0%	0%	0%	50%	0%	50%	42%	58%	0%	0%	66%	34%	
PEAK HR FACTOR		0.000			0.761			0.853			0.878		0.938
APP/DEPART	0	/	498	399	/	0	856	/	695	404	/	466	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM				2	2
7:15 AM					0
7:30 AM					0
7:45 AM				2	2
8:00 AM	2				2
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	2	0	0	4	6
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	0	0	0	0

PEDESTRIAN CROSSINGS / **BIKE MOVEMENTS**

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
				0	7:00 AM								1			1		1
2				2	7:15 AM						1							0
				0	7:30 AM						1						2	2
			2	2	7:45 AM						1	6	1			1	1	2
2				2	8:00 AM													0
				0	8:15 AM						1					1		1
3				3	8:30 AM											1	2	3
				0	8:45 AM												2	2
1				1	11:00 AM				1									0
				0	11:15 AM				1			1					1	1
				0	11:30 AM						1					1		1
				0	11:45 AM											1	1	2
1				1	12:00 PM											1		1
				0	12:15 PM													0
				0	12:30 PM								1					0
11				11	12:45 PM													0
3				3	4:00 PM				1				1			3	2	5
				0	4:15 PM				1			6						0
				0	4:30 PM						1		2				1	1
1				1	4:45 PM								2				2	2
1				1	5:00 PM													0
1				1	5:15 PM											2		2
7				7	5:30 PM						1	1				1		1
2				2	5:45 PM				1									24
35	0	0	2	37		0	0	0	5	0	7	14	8	0	0	13	14	51

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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Mission Center Rd	LOCATION #:	49
THURSDAY	EAST & WEST:	Camino Del Rio N.	CONTROL:	Signal

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

		NORTHBOUND Mission Center Rd			SOUTHBOUND Mission Center Rd			EASTBOUND Camino Del Rio N.			WESTBOUND Camino Del Rio N.				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	2	2	1	2	2	1	1	2	1	2	1	1		X	X	X	X	
WEEKDAY AM	7:00 AM	15	30	40	30	38	3	0	8	12	44	61	88	369					0
	7:15 AM	20	38	33	33	44	4	1	12	11	51	70	70	387					0
	7:30 AM	26	44	38	28	51	5	0	18	11	54	50	111	436					0
	7:45 AM	33	51	41	35	68	9	0	12	8	44	48	126	475					0
	8:00 AM	45	65	54	31	65	8	1	19	15	51	40	115	509					0
	8:15 AM	41	64	61	44	62	5	2	21	18	55	64	128	565					0
	8:30 AM	35	62	68	35	68	5	0	16	20	62	69	121	561					0
	8:45 AM	33	55	70	30	77	6	0	10	16	51	90	103	541					0
	VOLUMES	248	409	405	266	473	45	4	116	111	412	492	862	3,843	0	0	0	0	0
	APPROACH %	23%	39%	38%	34%	60%	6%	2%	50%	48%	23%	28%	49%						
	APP/DEPART	1,062	/	1,275	784	/	996	231	/	787	1,766	/	785	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	154	246	253	140	272	24	3	66	69	219	263	467	2,176					
	APPROACH %	24%	38%	39%	32%	62%	6%	2%	48%	50%	23%	28%	49%						
	PEAK HR FACTOR		0.983			0.965			0.841			0.941		0.963					
	APP/DEPART	653	/	716	436	/	560	138	/	459	949	/	441	0					
WEEKDAY AM	11:00 AM	30	77	77	66	105	10	3	44	28	51	55	121	667					0
	11:15 AM	22	84	84	65	126	8	4	51	31	50	60	135	720					0
	11:30 AM	28	94	95	54	144	9	2	68	33	44	45	141	757					0
	11:45 AM	29	98	99	56	158	12	2	77	42	45	55	128	801					0
	12:00 PM	33	111	103	65	184	6	4	58	28	51	55	135	833					0
	12:15 PM	31	84	121	70	169	8	5	55	40	65	74	116	838					0
	12:30 PM	25	95	116	65	188	9	2	68	32	65	68	132	865					0
	12:45 PM	26	80	105	51	192	10	3	81	44	70	50	128	840					0
	VOLUMES	224	723	800	492	1,266	72	25	502	278	441	462	1,036	6,321	0	0	0	0	0
	APPROACH %	13%	41%	46%	27%	69%	4%	3%	62%	35%	23%	24%	53%						
	APP/DEPART	1,747	/	1,784	1,830	/	1,985	805	/	1,794	1,939	/	758	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	115	370	445	251	733	33	14	262	144	251	247	511	3,376					
	APPROACH %	12%	40%	48%	25%	72%	3%	3%	62%	34%	25%	24%	51%						
	PEAK HR FACTOR		0.941			0.970			0.820			0.952		0.976					
	APP/DEPART	930	/	895	1,017	/	1,128	420	/	958	1,009	/	395	0					
WEEKDAY PM	4:00 PM	35	88	111	88	167	12	7	40	50	61	60	70	789					0
	4:15 PM	40	80	108	70	184	18	8	55	50	70	68	111	862					0
	4:30 PM	41	77	121	84	212	20	6	40	68	77	70	99	915					0
	4:45 PM	35	80	132	95	208	16	5	35	70	65	54	105	900				1	1
	5:00 PM	48	91	152	88	216	11	5	45	54	55	68	105	938					0
	5:15 PM	42	70	131	84	222	9	3	51	55	54	70	99	890					0
	5:30 PM	40	84	111	77	216	12	5	66	60	77	54	106	908					0
	5:45 PM	31	81	121	84	184	15	4	32	51	70	56	111	840					0
	6:00 PM													0					0
	6:15 PM													0					0
	6:30 PM													0					0
	6:45 PM													0					0
	7:00 PM													0					0
	7:15 PM													0					0
	7:30 PM													0					0
	7:45 PM													0					0
	8:00 PM													0					0
	8:15 PM													0					0
	8:30 PM													0					0
	8:45 PM													0					0
	VOLUMES	312	651	987	670	1,609	113	43	364	458	529	500	806	7,042	0	0	0	1	1
	APPROACH %	16%	33%	51%	28%	67%	5%	5%	42%	53%	29%	27%	44%						
	APP/DEPART	1,950	/	1,500	2,392	/	2,596	865	/	2,021	1,835	/	925	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	166	318	536	351	858	56	19	171	247	251	262	408	3,643					
	APPROACH %	16%	31%	53%	28%	68%	4%	4%	39%	57%	27%	28%	44%						
	PEAK HR FACTOR		0.876			0.991			0.834			0.936		0.971					
	APP/DEPART	1,020	/	745	1,265	/	1,356	437	/	1,058	921	/	484	0					

PEDESTRIAN CROSSINGS						BIKE MOVEMENTS												
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
2	4	0	2	8	7:00 AM		0			1			0			0		0
0	2	0	2	4	7:15 AM		3			3			0			0		0
2	3	0	0	5	7:30 AM		2			3			0			0		0
4	5	0	2	11	7:45 AM		0			3			0			0		0
3	2	0	0	5	8:00 AM		0			2			0			0		0
0	1	0	0	1	8:15 AM		1			1			0			0		0
1	1	0	0	2	8:30 AM		0			0			0			0		0
0	4	0	0	4	8:45 AM		4			0			0			0		0
0	1	0	0	1	11:00 AM		0			0			0			0		0
1	2	0	0	3	11:15 AM		0			0			0			0		0
1	5	0	1	7	11:30 AM		1			0			0			0		0
1	4	0	0	5	11:45 AM	1	2			0			0			0		0
2	1	0	1	4	12:00 PM		1			0			0			0		0
0	3	0	0	3	12:15 PM	1	0			1			0			0		0
0	1	0	0	1	12:30 PM		1			2			0			0		0
0	0	0	0	0	12:45 PM		0			2			0			0		0
3	1	0	1	5	4:00 PM		0			0			0			0		0
1	0	0	0	1	4:15 PM		0			4			0			0		0
0	1	0	0	1	4:30 PM		1			0			0			0		0
3	1	0	0	4	4:45 PM		0			1			0			0		0
1	1	0	0	2	5:00 PM		0			1			0			0		0
3	0	0	0	3	5:15 PM	1	2			0			0			1		1
5	0	0	1	6	5:30 PM	1	0			5			0			1		1
6	5	0	4	15	5:45 PM		0			5			0			0		2
39	48	0	14	101		4	18	0	0	34	0	0	0	0	0	2	0	4

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/10/15	NORTH & SOUTH:	I-8 Ramps	LOCATION #:	50
THURSDAY	EAST & WEST:	Camino Del Rio North	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND I-8 Ramps			SOUTHBOUND I-8 Ramps			EASTBOUND Camino Del Rio North			WESTBOUND Camino Del Rio North			
	LANES:	NL 1.5	NT 0.5	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 1	WL 1	WT 2	WR X	TOTAL
WEEKDAY AM	7:00 AM	173	6	22					7	53	27	24		312
	7:15 AM	169	10	24					18	68	24	23		336
	7:30 AM	171	9	21					10	91	32	25		359
	7:45 AM	158	5	18					18	70	29	33		331
	8:00 AM	177	8	16					19	72	36	24		352
	8:15 AM	224	18	30					32	112	24	23		463
	8:30 AM	220	19	32					18	91	26	22		428
	8:45 AM	219	28	31					20	105	28	24		455
	VOLUMES	1,511	103	194	0	0	0	0	142	662	226	198	0	3,036
	APPROACH %	84%	6%	11%	0%	0%	0%	0%	18%	82%	53%	47%	0%	
	APP/DEPART	1,808	/	103	0	/	888	804	/	336	424	/	1,709	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	840	73	109	0	0	0	0	89	380	114	93	0	1,698
	APPROACH %	82%	7%	11%	0%	0%	0%	0%	19%	81%	55%	45%	0%	
	PEAK HR FACTOR		0.919			0.000			0.814			0.863		0.917
	APP/DEPART	1,022	/	73	0	/	494	469	/	198	207	/	933	0
WEEKDAY AM	11:00 AM	148	19	53					66	148	59	67		560
	11:15 AM	164	32	59					76	152	69	76		628
	11:30 AM	167	42	62					65	161	72	62		631
	11:45 AM	169	44	52					58	162	74	66		625
	12:00 PM	173	39	64					71	151	74	58		630
	12:15 PM	181	41	59					72	166	61	63		643
	12:30 PM	199	55	63					89	167	83	72		728
	12:45 PM	203	68	54					103	199	99	68		794
	VOLUMES	1,404	340	466	0	0	0	0	600	1,306	591	532	0	5,239
	APPROACH %	64%	15%	21%	0%	0%	0%	0%	31%	69%	53%	47%	0%	
	APP/DEPART	2,210	/	340	0	/	1,897	1,906	/	1,066	1,123	/	1,936	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	756	203	240	0	0	0	0	335	683	317	261	0	2,795
	APPROACH %	63%	17%	20%	0%	0%	0%	0%	33%	67%	55%	45%	0%	
	PEAK HR FACTOR		0.922			0.000			0.843			0.865		0.880
	APP/DEPART	1,199	/	203	0	/	1,000	1,018	/	575	578	/	1,017	0
WEEKDAY PM	4:00 PM	149	20	83					56	190	58	66		622
	4:15 PM	166	29	71					55	197	76	81		675
	4:30 PM	168	37	84					71	161	59	71		651
	4:45 PM	155	23	78					48	197	68	69		638
	5:00 PM	139	23	92					50	201	73	76		654
	5:15 PM	166	26	77					49	213	62	65		658
	5:30 PM	178	21	65					39	219	55	58		635
	5:45 PM	189	32	55					42	188	45	60		611
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	1,310	211	605	0	0	0	0	410	1,566	496	546	0	5,144
	APPROACH %	62%	10%	28%	0%	0%	0%	0%	21%	79%	48%	52%	0%	
	APP/DEPART	2,126	/	211	0	/	2,062	1,976	/	1,015	1,042	/	1,856	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	628	112	325	0	0	0	0	224	756	276	297	0	2,618
	APPROACH %	59%	11%	31%	0%	0%	0%	0%	23%	77%	48%	52%	0%	
	PEAK HR FACTOR		0.921			0.000			0.935			0.912		0.970
	APP/DEPART	1,065	/	112	0	/	1,032	980	/	549	573	/	925	0

U-TURNS					
NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
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				0
				0
				0
0	0	0	0	0

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
				0
				0
				0
	no peds			0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

BIKE MOVEMENTS												
NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
												0
												0
												0
												0
		no bikes										0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
0	0	0	0	0	0	0	0	0	0	0	0	0

51

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-16-15	NORTH & SOUTH:	Camino Del Este	LOCATION #:	51
WEDNESDAY	EAST & WEST:	Camino Del Rio North	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Camino Del Este			SOUTHBOUND Camino Del Este			EASTBOUND Camino Del Rio North			WESTBOUND Camino Del Rio North			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	1	X	1	1	1	X	X	2	1	
WEEKDAY AM													
7:00 AM	-			35		6	9	13			15	6	84
7:15 AM				30		6	15	8			14	8	81
7:30 AM				36		16	19	11			19	12	113
7:45 AM				37		17	19	18			28	14	133
8:00 AM				30		16	18	20			30	9	123
8:15 AM				44		14	19	19			29	19	144
8:30 AM				42		10	25	22			49	15	163
8:45 AM				36		10	19	18			53	18	154
VOLUMES	0	0	0	290	0	95	143	129	0	0	237	101	995
APPROACH %	0%	0%	0%	75%	0%	25%	53%	47%	0%	0%	70%	30%	
APP/DEPART	0	/	244	385	/	0	272	/	419	338	/	332	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	0	0	152	0	50	81	79	0	0	161	61	584
APPROACH %	0%	0%	0%	75%	0%	25%	51%	49%	0%	0%	73%	27%	
PEAK HR FACTOR		0.000			0.871			0.851			0.782		0.896
APP/DEPART	0	/	142	202	/	0	160	/	231	222	/	211	0
WEEKDAY AM													
11:00 AM				64		31	54	52			65	27	293
11:15 AM				62		33	49	57			62	31	294
11:30 AM				64		30	50	57			61	29	291
11:45 AM				43		25	50	48			79	32	277
12:00 PM				69		21	52	56			76	43	317
12:15 PM				74		34	55	45			81	35	324
12:30 PM				85		28	58	60			64	37	332
12:45 PM				78		39	45	66			55	44	327
VOLUMES	0	0	0	539	0	241	413	441	0	0	543	278	2,455
APPROACH %	0%	0%	0%	69%	0%	31%	48%	52%	0%	0%	66%	34%	
APP/DEPART	0	/	691	780	/	0	854	/	980	821	/	784	0
BEGIN PEAK HR		12:00 PM											
VOLUMES	0	0	0	306	0	122	210	227	0	0	276	159	1,300
APPROACH %	0%	0%	0%	71%	0%	29%	48%	52%	0%	0%	63%	37%	
PEAK HR FACTOR		0.000			0.915			0.926			0.914		0.979
APP/DEPART	0	/	369	428	/	0	437	/	533	435	/	398	0
WEEKDAY PM													
4:00 PM				76		24	57	87			46	24	314
4:15 PM				96		25	58	85			49	30	343
4:30 PM				83		32	47	64			59	15	300
4:45 PM				94		51	58	68			66	31	368
5:00 PM				79		31	41	64			44	21	280
5:15 PM				97		38	46	61			58	26	326
5:30 PM				106		31	44	64			60	25	330
5:45 PM				77		37	45	71			51	36	317
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	0	708	0	269	396	564	0	0	433	208	2,578
APPROACH %	0%	0%	0%	72%	0%	28%	41%	59%	0%	0%	68%	32%	
APP/DEPART	0	/	604	977	/	0	960	/	1,272	641	/	702	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	0	0	0	349	0	132	220	304	0	0	220	100	1,325
APPROACH %	0%	0%	0%	73%	0%	27%	42%	58%	0%	0%	69%	31%	
PEAK HR FACTOR		0.000			0.829			0.910			0.825		0.900
APP/DEPART	0	/	320	481	/	0	524	/	653	320	/	352	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
1				1
				0
				0
				0
1	0	0	0	1
				0
				0
				0
				0
2				2
				0
				0
				0
2	0	0	0	2
				0
				0
				0
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				0
				0
				0
				0
				0
				0
0	0	0	0	0

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
			1		1
					0
					0
					0
					0
					0
					0
					0
11					0
					0
	1		1		2
					0
12			2		2
					0
					0
					0
4			2		2
					0
					0
			1		1
5					0
					0
					0
			1		1
	1	0	8	0	9

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
						2						0
												0
						1						0
												0
												0
												0
				1								0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
				1								0
0	0	0	0	2	0	3	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

52

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-16-15	NORTH & SOUTH:	Qualcomm Way	LOCATION #:	52
WEDNESDAY	EAST & WEST:	Camino Del Rio North/ I-8 WB Ramps	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Qualcomm Way			Qualcomm Way			Camino Del Rio North/ I-8 WB Ramps			Camino Del Rio North/ I-8 WB Ramps			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	X	X	2	1	1	X	1	0.5	0.5	1	
WEEKDAY AM													
7:00 AM	14	111			63	58	6		16	3	9	100	380
7:15 AM	6	150			65	45	1		18	2	14	76	377
7:30 AM	21	163			66	52	5		17	4	21	85	434
7:45 AM	20	218			74	65	6		14	2	14	98	511
8:00 AM	23	230			31	104	9		15	1	64	70	547
8:15 AM	16	185			68	65	9		21	4	28	87	483
8:30 AM	28	183			73	69	5		20	7	36	113	534
8:45 AM	21	214			90	58	10		24	5	38	113	573
VOLUMES	149	1,454	0	0	530	516	51	0	145	28	224	742	3,839
APPROACH %	9%	91%	0%	0%	51%	49%	26%	0%	74%	3%	23%	75%	
APP/DEPART	1,603	/	2,247	1,046	/	703	196	/	0	994	/	889	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	88	812	0	0	262	296	33	0	80	17	166	383	2,137
APPROACH %	10%	90%	0%	0%	47%	53%	29%	0%	71%	3%	29%	68%	
PEAK HR FACTOR		0.889			0.943			0.831			0.907		0.932
APP/DEPART	900	/	1,228	558	/	359	113	/	0	566	/	550	0
WEEKDAY AM													
11:00 AM	41	118			104	78	14		54	2	19	66	496
11:15 AM	52	132			130	83	21		62	2	24	81	587
11:30 AM	44	147			143	100	9		45	3	32	89	612
11:45 AM	47	163			191	90	19		59	6	30	65	670
12:00 PM	49	166			152	73	13		68	3	39	60	623
12:15 PM	51	201			183	114	13		54	1	38	61	716
12:30 PM	54	199			153	115	16		62	4	36	59	698
12:45 PM	36	196			178	118	19		85	4	44	66	746
VOLUMES	374	1,322	0	0	1,234	771	124	0	489	25	262	547	5,148
APPROACH %	22%	78%	0%	0%	62%	38%	20%	0%	80%	3%	31%	66%	
APP/DEPART	1,696	/	1,993	2,005	/	1,748	613	/	0	834	/	1,407	0
BEGIN PEAK HR		12:00 PM											
VOLUMES	190	762	0	0	666	420	61	0	269	12	157	246	2,783
APPROACH %	20%	80%	0%	0%	61%	39%	18%	0%	82%	3%	38%	59%	
PEAK HR FACTOR		0.941			0.914			0.793			0.910		0.933
APP/DEPART	952	/	1,069	1,086	/	947	330	/	0	415	/	767	0
WEEKDAY PM													
4:00 PM	37	157			199	116	82		81	2	33	66	773
4:15 PM	45	143			200	132	28		99	4	30	52	733
4:30 PM	20	131			237	148	26		97	3	24	45	731
4:45 PM	47	178			244	146	26		80	4	28	54	807
5:00 PM	20	145			264	139	29		91	4	33	57	782
5:15 PM	36	151			259	144	14		74	5	32	64	779
5:30 PM	50	128			237	142	23		106	6	25	73	790
5:45 PM	39	136			233	112	23		97	2	24	81	747
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	294	1,169	0	0	1,873	1,079	251	0	725	30	229	492	6,142
APPROACH %	20%	80%	0%	0%	63%	37%	26%	0%	74%	4%	30%	66%	
APP/DEPART	1,463	/	1,912	2,952	/	2,628	976	/	0	751	/	1,602	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	153	602	0	0	1,004	571	92	0	351	19	118	248	3,158
APPROACH %	20%	80%	0%	0%	64%	36%	21%	0%	79%	5%	31%	64%	
PEAK HR FACTOR		0.839			0.977			0.859			0.900		0.978
APP/DEPART	755	/	942	1,575	/	1,374	443	/	0	385	/	842	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM			3		3
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM			2		2
8:15 AM			1		1
8:30 AM					0
8:45 AM					0
TOTAL	0	0	6	0	6
11:00 AM			2		2
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM			1		1
12:15 PM			1		1
12:30 PM					0
12:45 PM					0
TOTAL	0	0	4	0	4
4:00 PM					0
4:15 PM			3		3
4:30 PM			1		1
4:45 PM			4		4
5:00 PM					0
5:15 PM					0
5:30 PM			5		5
5:45 PM			4		4
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
TOTAL	0	0	17	0	17

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7			2	2	4
15				1	1
30		1			1
45					0
8					0
15					0
30		1			1
45		3			3
11	3		1		4
15		2			2
30		1			1
45					0
12					0
15					0
30	6				6
45					0
4					0
15	2				2
30	2				2
45					0
5				1	1
15	3				3
30					0
45	1			1	2
	17	8	3	5	33

BIKE MOVEMENTS

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7													0
15													0
30													0
45													0
8													0
15													0
30													0
45		1					1						0
11													0
15													0
30													0
45									1				1
12													0
15													0
30													0
45													0
4													0
15													0
30													0
45													0
5													0
15													0
30													0
45		1	1					1					1
	0	2	1	0	0	0	1	1	1	0	0	0	2

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/10/15 THURSDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Morena Boulevard
EAST & WEST: Taylor Street

PROJECT #: PDT15-0911-01
LOCATION #: 53
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Morena Boulevard			SOUTHBOUND Morena Boulevard			EASTBOUND Taylor Street			WESTBOUND Taylor Street			
	LANES:	NL 0	NT 0	NR 1	SL 1.5	ST 0.5	SR 1	EL 2	ET 1.5	ER 0.5	WL 1	WT 2	WR 0	TOTAL
WEEKDAY AM	7:00 AM	0	0	4	4	0	29	31	31	4	1	186	46	336
	7:15 AM	0	1	0	17	0	31	51	22	2	2	192	88	406
	7:30 AM	0	0	4	33	1	62	80	25	2	3	168	113	491
	7:45 AM	0	0	6	32	0	57	68	31	0	0	250	127	571
	8:00 AM	0	0	5	11	0	62	76	25	1	0	251	123	554
	8:15 AM	0	0	0	12	0	40	61	31	0	0	165	99	408
	8:30 AM	1	0	0	5	1	60	75	37	2	0	202	67	450
	8:45 AM	0	0	6	11	1	63	70	37	0	2	241	70	501
	VOLUMES	1	1	25	125	3	404	512	239	11	8	1,655	733	3,717
	APPROACH %	4%	4%	93%	23%	1%	76%	67%	31%	1%	0%	69%	31%	
	APP/DEPART	27	/	1,246	532	/	22	762	/	389	2,396	/	2,060	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	0	0	15	88	1	221	285	112	3	3	834	462	2,024
	APPROACH %	0%	0%	100%	28%	0%	71%	71%	28%	1%	0%	64%	36%	
	PEAK HR FACTOR		0.625			0.807			0.935			0.861		0.886
	APP/DEPART	15	/	747	310	/	7	400	/	215	1,299	/	1,055	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	0	0	6	52	0	49	106	182	3	0	69	37	504
	4:15 PM	0	1	6	58	1	52	145	174	5	1	63	26	532
	4:30 PM	0	2	9	51	2	78	121	194	3	1	72	35	568
	4:45 PM	1	1	3	26	1	60	146	159	5	2	103	31	538
	5:00 PM	0	2	1	46	4	85	133	118	5	3	76	22	495
	5:15 PM	0	1	6	52	5	96	155	175	3	1	85	33	612
	5:30 PM	2	4	6	49	3	95	111	170	12	0	89	30	571
	5:45 PM	0	0	6	52	1	79	103	140	5	3	120	38	547
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	3	11	43	386	17	594	1,020	1,312	41	11	677	252	4,367
	APPROACH %	5%	19%	75%	39%	2%	60%	43%	55%	2%	1%	72%	27%	
	APP/DEPART	57	/	1,283	997	/	69	2,373	/	1,741	940	/	1,274	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	2	7	19	199	13	355	502	603	25	7	370	123	2,225
	APPROACH %	7%	25%	68%	35%	2%	63%	44%	53%	2%	1%	74%	25%	
	PEAK HR FACTOR		0.583			0.926			0.848			0.776		0.909
	APP/DEPART	28	/	632	567	/	45	1,130	/	821	500	/	727	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
			1	1
				0
				0
				0
				0
				0
			2	2
0	0	0	3	3
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
	2			2
	1			1
	2		1	3
			1	1
	1			1
	1			1
	2			2
	1			1
	2			2
0	10	0	2	12

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1	0	7	0	8
1	0	3	0	4
0	1	7	0	8
0	1	5	1	7
1	0	3	0	4
2	1	4	0	7
2	0	4	0	6
0	0	2	0	2
				0
	pm			0
1	2	2	0	5
0	1	5	0	6
0	0	2	0	2
2	0	7	0	9
0	1	3	0	4
1	4	2	0	7
0	0	2	0	2
1	0	1	1	3
				0
				0
				0
				0
				0
				0
12	11	59	2	84

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
					3	1					4	4
	1					2		1			1	2
											2	2
					1	1						0
			2			1					2	2
					1							0
						1					1	1
				1	1							0
												0
	pm											0
			1			1						0
											1	1
			2					2			1	3
			2		1						1	1
			2		1							0
			1		2						1	1
		1	1		2	1					1	1
												0
												0
												0
												0
												0
												0
												10
1	0	1	11	1	12	10	0	3	0	0	15	28

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9-10-15 THURSDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: I-8 Ramps
EAST & WEST: Taylor Street

PROJECT #: PDT15-0911-01
LOCATION #: 54
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-8 Ramps			SOUTHBOUND I-8 Ramps			EASTBOUND Taylor Street			WESTBOUND Taylor Street			
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 1	WR 1	TOTAL
WEEKDAY AM	7:00 AM				25		19	42	14			207	9	316
	7:15 AM				25		34	31	13			234	7	344
	7:30 AM				40		29	45	22			244	7	387
	7:45 AM				40		28	53	23			352	12	508
	8:00 AM				48		30	51	14			346	42	531
	8:15 AM				57		28	35	31			354	4	509
	8:30 AM				51		28	44	38			289	16	466
	8:45 AM				59		29	44	32			199	4	367
	VOLUMES	0	0	0	345	0	225	345	187	0	0	2,225	101	3,428
	APPROACH %	0%	0%	0%	61%	0%	39%	65%	35%	0%	0%	96%	4%	
	APP/DEPART	0	/	446	570	/	0	532	/	532	2,326	/	2,450	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	0	0	0	196	0	114	183	106	0	0	1,341	74	2,014
	APPROACH %	0%	0%	0%	63%	0%	37%	63%	37%	0%	0%	95%	5%	
	PEAK HR FACTOR		0.000			0.912			0.881			0.912		0.948
	APP/DEPART	0	/	257	310	/	0	289	/	302	1,415	/	1,455	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM				75		12	162	73			78	34	434
	4:15 PM				77		13	150	108			66	39	453
	4:30 PM				84		15	160	52			89	42	442
	4:45 PM				79		13	141	67			105	30	435
	5:00 PM				69		16	151	47			87	57	427
	5:15 PM				72		15	152	89			105	40	473
	5:30 PM				72		17	153	108			97	29	476
	5:45 PM				98		33	138	98			105	30	502
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	0	0	0	626	0	134	1,207	642	0	0	732	301	3,642
	APPROACH %	0%	0%	0%	82%	0%	18%	65%	35%	0%	0%	71%	29%	
	APP/DEPART	0	/	1,508	760	/	0	1,849	/	1,268	1,033	/	866	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	0	0	0	311	0	81	594	342	0	0	394	156	1,878
	APPROACH %	0%	0%	0%	79%	0%	21%	63%	37%	0%	0%	72%	28%	
	PEAK HR FACTOR		0.000			0.748			0.897			0.948		0.935
	APP/DEPART	0	/	750	392	/	0	936	/	653	550	/	475	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
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				0
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				0
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0	0	0	0	0
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				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
		0		0
		2		2
		0		0
		1		1
		1		1
		0		0
		2		2
		0		0
	PM			0
		0		0
		0		0
		0		0
		0		0
		0		0
		0		0
		0		0
		0		0
		1		1
				0
				0
				0
				0
				0
				0
0	0	7	0	7

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
							2					0
							1					0
							1					0
							1					0
							0					0
							0					0
							0					0
							0					0
	PM											0
							0					0
							2					0
							0					0
							0					0
							0					0
							4					0
							2					0
							1					0
												0
												0
												0
												0
												0
												0
												0
0	0	0	0	0	0	0	14	0	0	0	0	0

CHEN RYAN

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: Hotel Circle S @ Hotel Circle N

Date of Count: *Thursday, November 19, 2015*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *15-0452*



CHEN RYAN

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: Hotel Circle S @ Hotel Circle N

AM Period (7:00 AM - 9:00 AM)							
	Southbound		Westbound			Eastbound	
	Right	Left	Right	Thru		Thru	Left	TOTAL
7:00 AM	164	19	14	24		17	22	260
7:15 AM	142	20	26	23		22	20	253
7:30 AM	168	22	24	21		29	35	299
7:45 AM	122	25	26	19		31	41	264
8:00 AM	169	31	24	19		20	41	304
8:15 AM	145	26	28	20		23	29	271
8:30 AM	136	45	25	20		37	35	298
8:45 AM	154	38	22	29		40	41	324
Total	1,200	226	189	175		219	264	2,273

AM Intersection Peak Hour : **8:00 AM - 9:00 AM** Intersection PHF : **0.92**

	Southbound		Westbound			Eastbound		TOTAL
	Right	Left	Right	Thru		Thru	Left	
Volume	604	140	99	88		120	146	1,197
PHF	0.89	0.78	0.88	0.76		0.75	0.89	0.92
Movement PHF	0.93		0.92			0.82		0.92

PM Period (4:00 PM - 6:00 PM)							
	Southbound		Westbound			Eastbound	
	Right	Left	Right	Thru		Thru	Left	TOTAL
4:00 PM	98	30	33	11		89	41	302
4:15 PM	93	36	24	15		97	63	328
4:30 PM	116	36	21	22		111	55	361
4:45 PM	117	38	17	16		99	66	353
5:00 PM	117	43	23	12		124	69	388
5:15 PM	129	39	14	17		93	70	362
5:30 PM	113	25	20	14		136	71	379
5:45 PM	127	45	23	20		119	52	386
Total	910	292	175	127		868	487	2,859

PM Intersection Peak Hour : **5:00 PM - 6:00 PM** Intersection PHF : **0.98**

	Southbound		Westbound			Eastbound		TOTAL
	Right	Left	Right	Thru		Thru	Left	
Volume	486	152	80	63		472	262	1515
PHF	0.94	0.844	0.87	0.788		0.868	0.923	0.98
Movement PHF	0.93		0.83			0.89		0.98

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	I-8 EB Ramps	LOCATION #:	56
THURSDAY	EAST & WEST:	Hotel Circle South	CONTROL:	STOP

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

	NORTHBOUND I-8 EB Ramps			SOUTHBOUND I-8 EB Ramps			EASTBOUND Hotel Circle South			WESTBOUND Hotel Circle South			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	1	X	1	1	1	X	X	1	1	
WEEKDAY AM													
7:00 AM				34		5	34	13			35	79	200
7:15 AM				35		2	45	22			51	86	241
7:30 AM				54		6	41	14			46	124	285
7:45 AM				89		6	34	19			59	114	321
8:00 AM				61		6	37	24			79	78	285
8:15 AM				53		6	40	23			97	88	307
8:30 AM				44		5	51	21			121	88	330
8:45 AM				73		8	39	30			71	66	287
VOLUMES	0	0	0	443	0	44	321	166	0	0	559	723	2,256
APPROACH %	0%	0%	0%	91%	0%	9%	66%	34%	0%	0%	44%	56%	
APP/DEPART	0	/	1,044	487	/	0	487	/	609	1,282	/	603	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	0	0	0	247	0	23	162	87	0	0	356	368	1,243
APPROACH %	0%	0%	0%	91%	0%	9%	65%	35%	0%	0%	49%	51%	
PEAK HR FACTOR		0.000			0.711			0.865			0.866		0.942
APP/DEPART	0	/	530	270	/	0	249	/	334	724	/	379	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM				22		1	82	67			44	151	367
4:15 PM				24		8	89	58			44	173	396
4:30 PM				32		1	103	40			41	161	378
4:45 PM				21		6	89	63			54	165	398
5:00 PM				45		10	191	134			34	163	577
5:15 PM				35		4	107	58			34	156	394
5:30 PM				26		7	80	65			43	177	398
5:45 PM				33		6	73	82			48	154	396
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	0	238	0	43	814	567	0	0	342	1,300	3,304
APPROACH %	0%	0%	0%	85%	0%	15%	59%	41%	0%	0%	21%	79%	
APP/DEPART	0	/	2,114	281	/	0	1,381	/	805	1,642	/	385	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	0	0	0	127	0	27	467	320	0	0	165	661	1,767
APPROACH %	0%	0%	0%	82%	0%	18%	59%	41%	0%	0%	20%	80%	
PEAK HR FACTOR		0.000			0.700			0.605			0.939		0.766
APP/DEPART	0	/	1,128	154	/	0	787	/	447	826	/	192	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM				1	1
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
	0	0	0	1	1

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
				0
PM				0
0	0	0	0	0
0	2	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	1	0	2
0	0	0	0	0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
0	5	1	0	6

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			1			0		0
	0			0			2			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			1		1
	0			0			0			1		1
	0			0			0			1		1
												0
PM						PM						0
	0			0			0			1		1
	0			0			0			1		1
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			2		2
	0			0			3			0		0
	0			0			0			0		0
	0			0			0			1		1
												0
												0
												0
												0
												0
												8
0	0	0	0	0	0	0	6	0	0	8	0	16

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Bachman Place	LOCATION #:	57
THURSDAY	EAST & WEST:	Hotel Circle South	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Bachman Place			SOUTHBOUND Bachman Place			EASTBOUND Hotel Circle South			WESTBOUND Hotel Circle South			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	X	1	X	X	X	X	1	0	1	1	X	
WEEKDAY AM													
7:00 AM	30		18					24	35	61	68		236
7:15 AM	50		18					26	31	75	76		276
7:30 AM	100		37					36	42	72	77		364
7:45 AM	50		23					51	66	99	99		388
8:00 AM	40		23					40	45	66	108		322
8:15 AM	88		50					61	34	68	139		440
8:30 AM	50		23					38	32	87	154		384
8:45 AM	35		26					59	53	68	100		341
VOLUMES	443	0	218	0	0	0	0	335	338	596	821	0	2,751
APPROACH %	67%	0%	33%	0%	0%	0%	0%	50%	50%	42%	58%	0%	
APP/DEPART	661	/	0	0	/	934	673	/	553	1,417	/	1,264	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	228	0	119	0	0	0	0	190	177	320	500	0	1,534
APPROACH %	66%	0%	34%	0%	0%	0%	0%	52%	48%	39%	61%	0%	
PEAK HR FACTOR		0.629			0.000			0.784			0.851		0.872
APP/DEPART	347	/	0	0	/	497	367	/	309	820	/	728	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	100		53					67	19	31	135		405
4:15 PM	100		46					54	26	49	123		398
4:30 PM	110		61					54	18	41	180		464
4:45 PM	93		66					75	19	61	138		452
5:00 PM	96		53					67	29	45	110		400
5:15 PM	94		65					69	23	56	125		432
5:30 PM	72		67					71	24	51	136		421
5:45 PM	66		51					84	29	60	143		433
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	731	0	462	0	0	0	0	541	187	394	1,090	0	3,405
APPROACH %	61%	0%	39%	0%	0%	0%	0%	74%	26%	27%	73%	0%	
APP/DEPART	1,193	/	0	0	/	581	728	/	1,003	1,484	/	1,821	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	393	0	245	0	0	0	0	265	89	203	553	0	1,748
APPROACH %	62%	0%	38%	0%	0%	0%	0%	75%	25%	27%	73%	0%	
PEAK HR FACTOR		0.933			0.000			0.783			0.855		0.942
APP/DEPART	638	/	0	0	/	292	354	/	510	756	/	946	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
6	0	0	2	8
4	1	0	0	5
13	0	0	9	22
10	0	0	2	12
5	0	0	1	6
3	0	0	0	3
4	1	0	3	8
7	0	0	0	7
	PM			0
7	0	0	3	10
6	0	0	2	8
12	0	0	7	19
8	0	0	4	12
14	0	0	7	21
7	0	0	0	7
19	0	0	5	24
7	0	0	0	7
				0
				0
				0
				0
				0
				0
				0
132	2	0	45	179

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1		0			0			0		0
	0	1		0			0			0		0
	0	2		0			0			0		0
1	0	4		0			0	1	1	0		2
	0	1		0			0			0		0
	0	1		0			0	1		0		1
	0	1		0			0		1	0		1
	0			0			0	1		0		1
	PM											0
1	0											0
2	0	2		0			0			0		0
1	0			0			0			0		0
	0			0			0			0		0
1	0	2		0			0			0		0
2	0			0			0	1	1	1		3
	0			0			0		1	0		1
1	0			0			0	1		0		1
												0
												0
												0
												0
												0
												0
												10
9	0	15	0	0	0	0	0	5	4	1	0	20

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/9/15	NORTH & SOUTH:	Mission Center Road	LOCATION #:	58
WEDNESDAY	EAST & WEST:	I-8 EB Ramps	CONTROL:	SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Mission Center Road			SOUTHBOUND Mission Center Road			EASTBOUND I-8 EB Ramps			WESTBOUND I-8 EB Ramps			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	2	1	2	2	X	2	X	1	X	X	X	
WEEKDAY AM													
7:00 AM		40	18	56	41		38		68				261
7:15 AM		63	28	52	68		55		78				344
7:30 AM		82	37	50	50		65		93				377
7:45 AM		71	24	38	75		112		103				423
8:00 AM		57	28	59	69		86		101				400
8:15 AM		82	26	50	73		83		100				414
8:30 AM		94	30	75	62		79		97				437
8:45 AM		80	26	66	72		88		83				415
VOLUMES	0	569	217	446	510	0	606	0	723	0	0	0	3,071
APPROACH %	0%	72%	28%	47%	53%	0%	46%	0%	54%	0%	0%	0%	
APP/DEPART	786	/	1,175	956	/	1,233	1,329	/	663	0	/	0	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	0	304	108	222	279	0	360	0	401	0	0	0	1,674
APPROACH %	0%	74%	26%	44%	56%	0%	47%	0%	53%	0%	0%	0%	
PEAK HR FACTOR		0.831			0.914			0.885			0.000		0.958
APP/DEPART	412	/	664	501	/	680	761	/	330	0	/	0	0
WEEKDAY AM													
11:00 AM		101	30	113	84		188		66				582
11:15 AM		107	53	107	88		186		67				608
11:30 AM		99	42	162	91		172		79				645
11:45 AM		110	35	127	98		171		63				604
12:00 PM		118	39	173	99		192		51				672
12:15 PM		107	48	157	67		163		47				589
12:30 PM		112	29	110	84		131		60				526
12:45 PM		114	36	160	93		160		70				633
VOLUMES	0	868	312	1,109	704	0	1,363	0	503	0	0	0	4,859
APPROACH %	0%	74%	26%	61%	39%	0%	73%	0%	27%	0%	0%	0%	
APP/DEPART	1,180	/	2,231	1,813	/	1,207	1,866	/	1,421	0	/	0	0
BEGIN PEAK HR		11:15 AM											
VOLUMES	0	434	169	569	376	0	721	0	260	0	0	0	2,529
APPROACH %	0%	72%	28%	60%	40%	0%	73%	0%	27%	0%	0%	0%	
PEAK HR FACTOR		0.942			0.869			0.969			0.000		0.941
APP/DEPART	603	/	1,155	945	/	636	981	/	738	0	/	0	0
WEEKDAY PM													
4:00 PM		106	82	181	98		136		52				655
4:15 PM		105	63	193	81		163		77				682
4:30 PM		115	70	207	96		148		88				724
4:45 PM		90	70	194	97		159		89				699
5:00 PM		134	92	196	103		152		82				759
5:15 PM		118	70	192	90		141		68				679
5:30 PM		131	83	203	98		120		101				736
5:45 PM		120	58	136	94		165		94				667
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	919	588	1,502	757	0	1,184	0	651	0	0	0	5,601
APPROACH %	0%	61%	39%	66%	34%	0%	65%	0%	35%	0%	0%	0%	
APP/DEPART	1,507	/	2,103	2,259	/	1,408	1,835	/	2,090	0	/	0	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	0	473	315	785	388	0	572	0	340	0	0	0	2,873
APPROACH %	0%	60%	40%	67%	33%	0%	63%	0%	37%	0%	0%	0%	
PEAK HR FACTOR		0.872			0.974			0.880			0.000		0.946
APP/DEPART	788	/	1,045	1,173	/	728	912	/	1,100	0	/	0	0

U-TURNS

	NB	SB	EB	WB	TTL
LANES	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
TOTAL	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
TOTAL	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
TOTAL	0	0	0	0	0

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7				2	2
					0
				5	5
				1	1
8				3	3
					0
				3	3
					0
11				3	3
					0
					0
				3	3
12					0
				1	1
				3	3
				4	4
4				6	6
				5	5
				6	6
				5	5
5				4	4
				3	3
				4	4
				10	10
	0	0	0	71	71

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
				1								0
												0
				1								0
												0
				1								0
												0
												0
				1								0
	1			2								0
												0
												0
												0
												0
				1								0
												0
												0
				1								0
												0
												0
				1								0
				1								0
0	1	0	0	10	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/10/15	NORTH & SOUTH:	Mission Center Road	LOCATION #:	59
THURSDAY	EAST & WEST:	Camino Del Rio South	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Mission Center Road			SOUTHBOUND Mission Center Road			EASTBOUND Camino Del Rio South			WESTBOUND Camino Del Rio South			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	0	1	0	1.5	0.5	1	1.5	1.5	0	0	2	0	
WEEKDAY AM	7:00 AM	2	1	0	47	8	67	32	4	0	1	13	19	194
	7:15 AM	0	3	0	57	12	62	44	4	1	0	5	39	227
	7:30 AM	1	8	2	59	11	89	50	3	1	3	15	48	290
	7:45 AM	2	3	2	53	14	92	44	5	0	6	15	38	274
	8:00 AM	0	2	0	70	21	105	47	7	0	1	20	42	315
	8:15 AM	1	6	0	58	21	90	50	4	2	3	25	46	306
	8:30 AM	1	0	1	55	13	74	43	7	0	5	28	67	294
	8:45 AM	0	3	0	79	21	77	57	9	3	1	21	68	339
	VOLUMES	7	26	5	478	121	656	367	43	7	20	142	367	2,239
	APPROACH %	18%	68%	13%	38%	10%	52%	88%	10%	2%	4%	27%	69%	
	APP/DEPART	38	/	760	1,255	/	148	417	/	526	529	/	805	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	2	11	1	262	76	346	197	27	5	10	94	223	1,254
	APPROACH %	14%	79%	7%	38%	11%	51%	86%	12%	2%	3%	29%	68%	
	PEAK HR FACTOR		0.500			0.872			0.830			0.818		0.925
	APP/DEPART	14	/	431	684	/	91	229	/	290	327	/	442	0
WEEKDAY AM	11:00 AM	0	13	0	81	12	73	59	13	0	0	10	56	317
	11:15 AM	2	12	0	66	15	69	81	14	2	2	17	81	361
	11:30 AM	0	3	3	86	6	74	69	12	2	1	10	59	325
	11:45 AM	0	7	3	62	12	83	63	7	1	2	16	72	328
	12:00 PM	0	5	2	66	8	71	85	13	2	3	9	72	336
	12:15 PM	3	8	0	54	4	59	82	10	2	5	15	70	312
	12:30 PM	0	8	2	86	11	63	85	14	3	2	17	56	347
	12:45 PM	0	6	2	98	15	87	80	13	3	2	13	70	389
	VOLUMES	5	62	12	599	83	579	604	96	15	17	107	536	2,715
	APPROACH %	6%	78%	15%	48%	7%	46%	84%	13%	2%	3%	16%	81%	
	APP/DEPART	79	/	1,202	1,261	/	115	715	/	707	660	/	691	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	3	27	6	304	38	280	332	50	10	12	54	268	1,384
	APPROACH %	8%	75%	17%	49%	6%	45%	85%	13%	3%	4%	16%	80%	
	PEAK HR FACTOR		0.818			0.778			0.961			0.928		0.889
	APP/DEPART	36	/	627	622	/	60	392	/	360	334	/	337	0
WEEKDAY PM	4:00 PM	1	6	0	90	5	58	110	20	2	1	10	61	364
	4:15 PM	0	12	2	83	4	64	112	13	2	1	14	55	362
	4:30 PM	2	4	1	84	4	80	120	13	8	2	13	75	406
	4:45 PM	0	4	3	108	7	76	85	8	1	1	13	64	370
	5:00 PM	1	16	6	104	5	86	139	27	0	2	11	72	469
	5:15 PM	1	5	3	72	8	61	121	22	2	1	20	68	384
	5:30 PM	1	2	1	126	4	58	120	18	1	0	17	66	414
	5:45 PM	0	3	1	100	8	80	114	12	3	1	19	78	419
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	6	52	17	767	45	563	921	133	19	9	117	539	3,188
	APPROACH %	8%	69%	23%	56%	3%	41%	86%	12%	2%	1%	18%	81%	
	APP/DEPART	75	/	1,512	1,375	/	73	1,073	/	917	665	/	686	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	3	26	11	402	25	285	494	79	6	4	67	284	1,686
	APPROACH %	8%	65%	28%	56%	4%	40%	85%	14%	1%	1%	19%	80%	
	PEAK HR FACTOR		0.435			0.913			0.872			0.906		0.899
	APP/DEPART	40	/	804	712	/	35	579	/	492	355	/	355	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM		1			1
7:15 AM					0
7:30 AM				1	1
7:45 AM					0
8:00 AM		1			1
8:15 AM					0
8:30 AM					0
8:45 AM					0
	0	2	0	1	3
11:00 AM					0
11:15 AM					0
11:30 AM		1			1
11:45 AM					0
12:00 PM					0
12:15 PM		2			2
12:30 PM					0
12:45 PM		1			1
	0	4	0	0	4
4:00 PM					0
4:15 PM		1			1
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM		1			1
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
	0	2	0	0	2

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
			1	1
			1	1
			1	1
			1	1
				0
				0
				0
			1	1
				0
				0
				0
				0
			2	2
				0
				0
			3	3
			1	1
				0
			1	1
			2	2
				0
			6	6
			2	2
0	0	0	22	22

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
			2									0
	1				1							0
												0
												0
												0
					2							0
												0
												0
												0
			1									0
					1							0
	1											0
					1							0
												0
0	2	0	3	0	5	0	0	0	0	0	0	0

60

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9/17/15 THURSDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: Qualcomm Way
EAST & WEST: I-8 EB Ramps

PROJECT #: PDT15-0911-01
LOCATION #: 60
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Qualcomm Way			SOUTHBOUND Qualcomm Way			EASTBOUND I-8 EB Ramps			WESTBOUND I-8 EB Ramps			
	LANES:	NL X	NT 2	NR 1	SL X	ST 2	SR 1	EL X	ET X	ER 2	WL X	WT X	WR 1	TOTAL
WEEKDAY AM	7:00 AM		162	64		106	28			50			49	459
	7:15 AM		219	80		109	35			78			76	597
	7:30 AM		224	75		99	61			69			101	629
	7:45 AM		243	83		141	30			77			45	619
	8:00 AM		260	85		132	25			79			86	667
	8:15 AM		218	70		154	33			113			95	683
	8:30 AM		225	99		144	35			125			76	704
	8:45 AM		229	67		192	43			136			84	751
	VOLUMES	0	1,780	623	0	1,077	290	0	0	727	0	0	0	5,109
	APPROACH %	0%	74%	26%	0%	79%	21%	0%	0%	100%	0%	0%	0%	
	APP/DEPART	2,403	/	1,780	1,367	/	1,804	727	/	623	0	/	290	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	932	321	0	622	136	0	0	453	0	0	341	2,805
	APPROACH %	0%	74%	26%	0%	82%	18%	0%	0%	100%	0%	0%	100%	
	PEAK HR FACTOR		0.908			0.806			0.833			0.897		0.934
	APP/DEPART	1,253	/	1,273	758	/	1,075	453	/	321	341	/	136	0
WEEKDAY AM	11:00 AM		243	84		150	73			69			109	728
	11:15 AM		193	65		171	92			92			93	706
	11:30 AM		247	105		179	73			100			73	777
	11:45 AM		251	76		174	111			110			77	799
	12:00 PM		266	98		157	107			101			85	814
	12:15 PM		225	77		183	106			109			95	795
	12:30 PM		247	77		212	102			97			92	827
	12:45 PM		210	86		207	111			113			101	828
	VOLUMES	0	1,882	668	0	1,433	775	0	0	791	0	0	725	6,274
	APPROACH %	0%	74%	26%	0%	65%	35%	0%	0%	100%	0%	0%	100%	
	APP/DEPART	2,550	/	2,607	2,208	/	2,224	791	/	668	725	/	775	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	0	948	338	0	759	426	0	0	420	0	0	373	3,264
	APPROACH %	0%	74%	26%	0%	64%	36%	0%	0%	100%	0%	0%	100%	
	PEAK HR FACTOR		0.883			0.932			0.929			0.923		0.986
	APP/DEPART	1,286	/	1,321	1,185	/	1,179	420	/	338	373	/	426	0
WEEKDAY PM	4:00 PM		258	114		256	133			85			46	892
	4:15 PM		237	127		270	105			122			64	925
	4:30 PM		252	91		256	98			92			38	827
	4:45 PM		223	78		343	124			102			50	920
	5:00 PM		227	109		324	118			88			47	913
	5:15 PM		261	97		359	140			73			48	978
	5:30 PM		232	90		343	89			112			52	918
	5:45 PM		235	87		311	87			114			65	899
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	0	1,925	793	0	2,462	894	0	0	788	0	0	410	7,272
	APPROACH %	0%	71%	29%	0%	73%	27%	0%	0%	100%	0%	0%	100%	
	APP/DEPART	2,718	/	2,335	3,356	/	3,250	788	/	793	410	/	894	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	943	374	0	1,369	471	0	0	375	0	0	197	3,729
	APPROACH %	0%	72%	28%	0%	74%	26%	0%	0%	100%	0%	0%	100%	
	PEAK HR FACTOR		0.920			0.922			0.822			0.758		0.953
	APP/DEPART	1,317	/	1,140	1,840	/	1,744	375	/	374	197	/	471	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7				2	2
				2	2
				1	1
				2	2
8				2	2
				3	3
				1	1
				3	3
11				3	3
				2	2
				1	1
				1	1
12				3	3
				1	1
					0
					0
4					0
				1	1
				1	1
				1	1
5			1		1
				3	3
				3	3
				3	3
	0	0	1	39	40

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
				2								0
												0
				1								0
												0
												0
												0
				1								0
				1								0
				2								0
				1								0
				1								0
				9								0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/16/15	NORTH & SOUTH:	Qualcomm Way/Texas Street	LOCATION #:	61
WEDNESDAY	EAST & WEST:	Camino Del Rio South	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Qualcomm Way/Texas Street			Qualcomm Way/Texas Street			Camino Del Rio South			Camino Del Rio South			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	1	1	0.5	1.5	1	1	1	
WEEKDAY AM 7:00 AM	21	217	19	36	92	21	9	2	7	5	19	10	458
7:15 AM	21	322	16	39	83	36	8	2	4	13	15	12	571
7:30 AM	31	321	34	66	85	41	13	5	10	14	16	10	646
7:45 AM	26	320	43	82	79	61	11	11	2	5	12	14	666
8:00 AM	28	290	27	71	66	55	10	11	11	9	11	23	612
8:15 AM	26	259	37	104	100	70	24	8	9	10	12	22	681
8:30 AM	28	214	42	141	115	64	30	20	12	8	20	27	721
8:45 AM	27	260	36	126	129	58	22	17	27	11	11	29	753
VOLUMES	208	2,203	254	665	749	406	127	76	82	75	116	147	5,108
APPROACH %	8%	83%	10%	37%	41%	22%	45%	27%	29%	22%	34%	43%	
APP/DEPART	2,665	/	2,477	1,820	/	906	285	/	995	338	/	730	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	109	1,023	142	442	410	247	86	56	59	38	54	101	2,767
APPROACH %	9%	80%	11%	40%	37%	22%	43%	28%	29%	20%	28%	52%	
PEAK HR FACTOR		0.923			0.859			0.761			0.877		0.919
APP/DEPART	1,274	/	1,210	1,099	/	507	201	/	640	193	/	410	0
WEEKDAY AM 11:00 AM	15	158	15	83	125	26	33	9	30	21	10	73	598
11:15 AM	9	135	16	61	156	36	33	16	24	14	19	91	610
11:30 AM	8	193	24	84	171	49	58	15	19	16	23	106	766
11:45 AM	18	199	30	94	179	40	39	23	20	30	10	119	801
12:00 PM	13	149	15	89	173	34	33	17	18	33	9	107	690
12:15 PM	15	187	28	101	146	29	31	25	21	21	13	103	720
12:30 PM	19	152	22	118	148	40	29	17	23	24	16	98	706
12:45 PM	12	195	48	112	167	39	24	22	27	19	6	83	754
VOLUMES	109	1,368	198	742	1,265	293	280	144	182	178	106	780	5,645
APPROACH %	7%	82%	12%	32%	55%	13%	46%	24%	30%	17%	10%	73%	
APP/DEPART	1,675	/	2,428	2,300	/	1,625	606	/	1,084	1,064	/	508	0
BEGIN PEAK HR		11:30 AM											
VOLUMES	54	728	97	368	669	152	161	80	78	100	55	435	2,977
APPROACH %	6%	83%	11%	31%	56%	13%	50%	25%	24%	17%	9%	74%	
PEAK HR FACTOR		0.890			0.950			0.867			0.928		0.929
APP/DEPART	879	/	1,324	1,189	/	847	319	/	545	590	/	261	0
WEEKDAY PM 4:00 PM	8	137	23	76	239	27	50	79	74	46	11	130	900
4:15 PM	18	159	23	79	255	30	50	66	62	50	13	103	908
4:30 PM	17	206	45	66	265	35	55	68	63	49	10	129	1,008
4:45 PM	16	162	31	58	272	45	57	45	66	44	14	134	944
5:00 PM	15	200	18	54	280	33	53	30	60	48	12	145	948
5:15 PM	24	160	36	41	349	34	39	25	58	48	17	120	951
5:30 PM	22	224	20	57	336	33	47	26	57	32	12	104	970
5:45 PM	17	173	28	52	394	43	47	33	65	30	9	83	974
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	137	1,421	224	483	2,390	280	398	372	505	347	98	948	7,603
APPROACH %	8%	80%	13%	15%	76%	9%	31%	29%	40%	25%	7%	68%	
APP/DEPART	1,782	/	2,767	3,153	/	3,242	1,275	/	1,079	1,393	/	515	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	72	728	130	219	1,166	147	204	168	247	189	53	528	3,851
APPROACH %	8%	78%	14%	14%	76%	10%	33%	27%	40%	25%	7%	69%	
PEAK HR FACTOR		0.868			0.783			0.832			0.939		0.955
APP/DEPART	930	/	1,460	1,532	/	1,602	619	/	517	770	/	272	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM		1			1
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	1	0	0	1

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7	2			2	4
				1	1
	1		1		2
	1			1	2
8	1				1
	1				1
				2	2
	2	3			5
11				1	1
		2		2	4
			1		1
		2	1	2	5
12	1			1	2
	2	3	3	1	9
					0
	1	1	1	11	14
4	4	1	2	2	9
				2	2
		2	1	2	5
	3			1	4
5	2	1	2	1	6
	3		2	3	8
		1		1	2
	2	0			2
	26	16	14	36	92

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
									1			1
												0
			2									0
												0
				1								0
							1				1	1
												0
												0
												0
				1								0
	1						1					0
											1	1
												0
												0
												0
												0
												0
												0
												0
												0
	2											0
	1			1								0
												2
0	4	0	2	3	0	0	2	0	1	0	2	5

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-17-15	NORTH & SOUTH:	Mission City Parkway	LOCATION #:	62
THURSDAY	EAST & WEST:	Camino Del Rio South	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Mission City Parkway			SOUTHBOUND Mission City Parkway			EASTBOUND Camino Del Rio South			WESTBOUND Camino Del Rio South				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	X	X	X	1	X	1	1	1	X	X	1	1		X	X	X	X	
WEEKDAY AM																		
7:00 AM				3		14	4	10			55	45	131					0
7:15 AM				6		15	5	14			57	79	176					0
7:30 AM				11		21	5	20			56	105	218					0
7:45 AM				10		31	5	31			80	116	273					0
8:00 AM				14		29	6	39			92	100	280					0
8:15 AM				21		32	6	47			107	110	323					0
8:30 AM				23		31	7	36			101	85	283					0
8:45 AM				13		27	9	43			118	64	274					0
VOLUMES	0	0	0	101	0	200	47	43	0	0	666	704	1,958	0	0	0	0	0
APPROACH %	0%	0%	0%	34%	0%	66%	52%	48%	0%	0%	49%	51%						
APP/DEPART	0	/	751	301	/	0	90	/	144	1,370	/	866	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	0	0	71	0	119	28	165	0	0	418	359	1,160					
APPROACH %	0%	0%	0%	37%	0%	63%	15%	85%	0%	0%	54%	46%						
PEAK HR FACTOR		0.000			0.880			0.910			0.895		0.898					
APP/DEPART	0	/	387	190	/	0	193	/	236	777	/	537	0					
WEEKDAY AM																		
11:00 AM													0					0
11:15 AM													0					0
11:30 AM													0					0
11:45 AM													0					0
12:00 PM													0					0
12:15 PM													0					0
12:30 PM													0					0
12:45 PM													0					0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
BEGIN PEAK HR		12:45 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
WEEKDAY PM																		
4:00 PM				90		11	23	116			58	24	322					0
4:15 PM				99		14	12	89			39	25	278					0
4:30 PM				136		18	27	96			55	25	357					0
4:45 PM				126		21	11	100			47	33	338					0
5:00 PM				169		20	35	153			57	24	458					0
5:15 PM				128		22	28	137			38	22	375					0
5:30 PM				121		13	18	136			39	20	347					0
5:45 PM				88		6	13	126			43	18	294					0
6:00 PM													0					0
6:15 PM													0					0
6:30 PM													0					0
6:45 PM													0					0
7:00 PM													0					0
7:15 PM													0					0
7:30 PM													0					0
7:45 PM													0					0
8:00 PM													0					0
8:15 PM													0					0
8:30 PM													0					0
8:45 PM													0					0
VOLUMES	0	0	0	957	0	125	167	953	0	0	376	191	2,769	0	0	0	0	0
APPROACH %	0%	0%	0%	88%	0%	12%	15%	85%	0%	0%	66%	34%						
APP/DEPART	0	/	358	1,082	/	0	1,120	/	1,910	567	/	501	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	0	0	0	559	0	81	101	486	0	0	197	104	1,528					
APPROACH %	0%	0%	0%	87%	0%	13%	17%	83%	0%	0%	65%	35%						
PEAK HR FACTOR		0.000			0.847			0.781			0.929		0.834					
APP/DEPART	0	/	205	640	/	0	587	/	1,045	301	/	278	0					

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
1	1	1	0	3
0	1	1	0	2
0	0	4	0	4
0	0	0	0	0
0	0	0	0	0
				0
pm				0
0	0	0	0	0
1	0	2	0	3
2	0	2	0	4
1	0	0	0	1
1	1	2	0	4
0	0	1	0	1
0	0	1	0	1
0	0	0	0	0
				0
				0
				0
				0
				0
				0
7	3	14	0	24

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0		1	0			0		0
	0		1	1		3	0			0		0
	0			0			0			0		0
	0		1	0		1	0			0		0
	0		1	0		1	0			0		0
	0			0			0			0		0
	0			0		1	0			0		0
	0			0			0			0		0
												0
pm												0
	0			0			0			0		0
	0			0		1	0			0		0
	0			0			0			0		0
	0			1			0			0		0
	0			0			1			0		0
	0			0			0			0		0
	0			0		1	0			0		0
	0			0			0			0		0
												0
												0
												0
												0
												0
												0
0	0	0	3	2	0	9	1	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9-16-15 WEDNESDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: I-15 SB Off Ramp - DWY
EAST & WEST: Camino Del Rio S.

PROJECT #: PDT15-0911-01
LOCATION #: 63
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 SB Off Ramp - DWY			SOUTHBOUND I-15 SB Off Ramp - DWY			EASTBOUND Camino Del Rio S.			WESTBOUND Camino Del Rio S.			
	LANES:	NL 0.5	NT X	NR 0.5	SL 0.5	ST 0.5	SR 1	EL X	ET 1.5	ER 0.5	WL 1	WT 1.5	WR X	TOTAL
WEEKDAY AM	7:00 AM	0		0	3	0	51		20	1	1	81		157
	7:15 AM	0		1	4	1	68		21	1	3	118		217
	7:30 AM	0		1	5	1	77		20	1	1	148		254
	7:45 AM	1		2	12	2	84		26	3	4	161		295
	8:00 AM	2		1	18	1	91		22	2	5	184		326
	8:15 AM	0		0	11	2	95		31	5	5	194		343
	8:30 AM	0		1	15	3	111		34	5	6	199		374
	8:45 AM	2		0	9	4	121		31	4	5	151		327
	VOLUMES	5	0	6	77	14	698	0	205	22	30	1,236	0	2,293
	APPROACH %	45%	0%	55%	10%	2%	88%	0%	90%	10%	2%	98%	0%	
	APP/DEPART	11	/	0	789	/	66	227	/	288	1,266	/	1,939	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	4	0	2	53	10	418	0	118	16	21	728	0	1,370
	APPROACH %	67%	0%	33%	11%	2%	87%	0%	88%	12%	3%	97%	0%	
	PEAK HR FACTOR		0.500			0.897			0.859			0.913		0.916
	APP/DEPART	6	/	0	481	/	47	134	/	173	749	/	1,150	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	0		7	28	0	10		315	1	8	40		409
	4:15 PM	4		9	33	0	18		295	4	9	38		410
	4:30 PM	5		9	34	4	22		326	4	9	30		443
	4:45 PM	6		12	40	5	26		339	5	10	40		483
	5:00 PM	4		8	38	6	20		428	4	5	41		554
	5:15 PM	5		5	41	1	20		432	5	4	30		543
	5:30 PM	5		9	44	5	19		318	3	8	33		444
	5:45 PM	6		9	35	4	20		305	5	9	28		421
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	35	0	68	293	25	155	0	2,758	31	62	280	0	3,707
	APPROACH %	34%	0%	66%	62%	5%	33%	0%	99%	1%	18%	82%	0%	
	APP/DEPART	103	/	0	473	/	118	2,789	/	3,119	342	/	470	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	20	0	34	163	17	85	0	1,517	17	27	144	0	2,024
	APPROACH %	37%	0%	63%	62%	6%	32%	0%	99%	1%	16%	84%	0%	
	PEAK HR FACTOR		0.750			0.933			0.878			0.855		0.913
	APP/DEPART	54	/	0	265	/	61	1,534	/	1,714	171	/	249	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
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				0
				0
				0
				0
				0
				0
				0
0	1	0	0	1

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
2			2	4
			1	1
1		1		2
1			1	2
1				1
1				1
			2	2
2	3			5
			1	1
	2		2	4
		1		1
	2	1	2	5
1			1	2
2	3	3	1	9
				0
1	1	1	11	14
4	1	2	2	9
			2	2
	2	1	2	5
3			1	4
2	1	2	1	6
3		2	3	8
	1		1	2
2	0			2
26	16	14	36	92

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
									1			1
												0
							2					0
												0
							1					0
							1			1		1
												0
												0
												0
							1					0
							1			1		1
										1		1
												0
												0
												0
												0
												0
										2		2
							1			1		1
												6
0	0	0	0	0	0	0	7	0	1	6	0	13

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE: 9-17-15 THURSDAY

LOCATION: MISSION VALLEY
NORTH & SOUTH: SR-15 SB Onramp
EAST & WEST: Camino Del Rio South

PROJECT #: PDT15-0911-01
LOCATION #: 64
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND SR-15 SB Onramp			SOUTHBOUND SR-15 SB Onramp			EASTBOUND Camino Del Rio South			WESTBOUND Camino Del Rio South			
	LANES:	NL X	NT X	NR X	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 1	WT 2	WR X	TOTAL
WEEKDAY AM	7:00 AM								14	1	2	86		103
	7:15 AM								22	4	3	122		151
	7:30 AM								17	3	1	142		163
	7:45 AM								35	5	2	173		215
	8:00 AM								31	7	9	191		238
	8:15 AM								32	14	3	197		246
	8:30 AM								35	12	7	178		232
	8:45 AM								34	14	5	184		237
	VOLUMES	0	0	0	0	0	0	0	220	60	32	1,273	0	1,585
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	79%	21%	2%	98%	0%	
	APP/DEPART	0	/	0	0	/	92	280	/	220	1,305	/	1,273	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	0	0	0	0	0	0	132	47	24	750	0	953
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	74%	26%	3%	97%	0%	
	PEAK HR FACTOR		0.000			0.000			0.932			0.968		0.968
	APP/DEPART	0	/	0	0	/	71	179	/	132	774	/	750	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM								256	92	9	56		413
	4:15 PM								247	84	4	33		368
	4:30 PM								261	124	6	41		432
	4:45 PM								277	120	3	46		446
	5:00 PM								338	134	11	42		525
	5:15 PM								346	148	10	33		537
	5:30 PM								259	106	10	42		417
	5:45 PM								244	89	4	38		375
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	2,228	897	57	331	0	3,513
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	71%	29%	15%	85%	0%	
	APP/DEPART	0	/	0	0	/	954	3,125	/	2,228	388	/	331	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	1,222	526	30	162	0	1,940
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	70%	30%	16%	84%	0%	
	PEAK HR FACTOR		0.000			0.000			0.885			0.906		0.903
	APP/DEPART	0	/	0	0	/	556	1,748	/	1,222	192	/	162	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
				0
				0
				0
				0
				0
				0
			1	1
0	0	0	1	1
				0
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PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
				0
				0
				0
				0
pm				0
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				0
				0
				0
				0
				0
0	0	0	0	0

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
							1					0
												0
												0
							2					0
												0
												0
pm												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
							4					0
												0
												0
												0
												0
												0
												0
												0
0	0	0	0	0	0	0	7	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/17/15	NORTH & SOUTH:	I-15 NB Onramp	LOCATION #:	65
THURSDAY	EAST & WEST:	Camino Del Rio South	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND I-15 NB Onramp			SOUTHBOUND I-15 NB Onramp			EASTBOUND Camino Del Rio South			WESTBOUND Camino Del Rio South			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	0.5	0.5	X	X	X	1	2	X	X	1	1	
WEEKDAY AM	7:00 AM	64	2	7				4	11			24	4	116
	7:15 AM	101	1	12				3	18			33	8	176
	7:30 AM	85	2	15				3	14			52	16	187
	7:45 AM	127	4	16				9	28			51	15	250
	8:00 AM	132	2	25				6	27			69	9	270
	8:15 AM	131	0	39				1	31			66	12	280
	8:30 AM	118	0	18				11	24			72	13	256
	8:45 AM	120	1	14				5	30			65	9	244
	VOLUMES	878	12	146	0	0	0	42	183	0	0	432	86	1,779
	APPROACH %	85%	1%	14%	0%	0%	0%	19%	81%	0%	0%	83%	17%	
	APP/DEPART	1,036	/	140	0	/	0	225	/	329	518	/	1,310	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	508	6	98	0	0	0	27	110	0	0	258	49	1,056
	APPROACH %	83%	1%	16%	0%	0%	0%	20%	80%	0%	0%	84%	16%	
	PEAK HR FACTOR		0.900			0.000			0.926			0.903		0.943
	APP/DEPART	612	/	82	0	/	0	137	/	208	307	/	766	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	33	1	26				66	187			30	16	359
	4:15 PM	13	0	34				83	181			19	3	333
	4:30 PM	30	0	25				82	172			20	9	338
	4:45 PM	40	1	25				72	201			15	6	360
	5:00 PM	21	0	31				115	226			28	12	433
	5:15 PM	21	0	30				100	241			24	14	430
	5:30 PM	28	1	24				72	200			23	5	353
	5:45 PM	35	0	17				45	186			12	6	301
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	221	3	212	0	0	0	635	1,594	0	0	171	71	2,907
	APPROACH %	51%	1%	49%	0%	0%	0%	28%	72%	0%	0%	71%	29%	
	APP/DEPART	436	/	709	0	/	0	2,229	/	1,806	242	/	392	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	110	2	110	0	0	0	359	868	0	0	90	37	1,576
	APPROACH %	50%	1%	50%	0%	0%	0%	29%	71%	0%	0%	71%	29%	
	PEAK HR FACTOR		0.841			0.000			0.900			0.794		0.910
	APP/DEPART	222	/	398	0	/	0	1,227	/	978	127	/	200	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
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				0
0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
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				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
							1					0
							1					0
												0
							2					0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
												0
							1					0
												0
												0
							1					0
												0
							1					0
							2					0
0	0	0	0	0	0	0	9	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/17/15	NORTH & SOUTH:	I-8 EB/I-15 SB Offramps	LOCATION #:	66
THURSDAY	EAST & WEST:	Fairmount Avenue	CONTROL:	SIGNAL

NOTES:

NL = UTURN

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-8 EB/I-15 SB Offramps			SOUTHBOUND I-8 EB/I-15 SB Offramps			EASTBOUND Fairmount Avenue			WESTBOUND Fairmount Avenue			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	X	X	3	1	2	X	3	X	X	X	
WEEKDAY AM													
7:00 AM	25	148			101	38	135		199				646
7:15 AM	38	198			157	52	195		223				863
7:30 AM	40	226			162	44	229		245				946
7:45 AM	39	236			150	69	240		268				1,002
8:00 AM	44	244			156	58	251		270				1,023
8:15 AM	51	265			149	56	226		295				1,042
8:30 AM	40	251			159	51	235		315				1,051
8:45 AM	33	240			149	66	245		303				1,036
VOLUMES	310	1,808	0	0	1,183	434	1,756	0	2,118	0	0	0	7,609
APPROACH %	15%	85%	0%	0%	73%	27%	45%	0%	55%	0%	0%	0%	
APP/DEPART	2,118	/	3,564	1,617	/	3,301	3,874	/	0	0	/	744	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	168	1,000	0	0	613	231	957	0	1,183	0	0	0	4,152
APPROACH %	14%	86%	0%	0%	73%	27%	45%	0%	55%	0%	0%	0%	
PEAK HR FACTOR		0.924			0.981			0.973			0.000		0.988
APP/DEPART	1,168	/	1,957	844	/	1,796	2,140	/	0	0	/	399	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	1	126			318	127	175		428				1,175
4:15 PM	1	121			286	147	180		445				1,180
4:30 PM	4	131			319	137	199		468				1,258
4:45 PM	6	144			316	155	216		484				1,321
5:00 PM	2	151			299	165	205		495				1,317
5:15 PM	2	128			329	141	216		505				1,321
5:30 PM	4	135			310	132	203		533				1,317
5:45 PM	2	144			301	121	184		484				1,236
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	22	1,080	0	0	2,478	1,125	1,578	0	3,842	0	0	0	10,125
APPROACH %	2%	98%	0%	0%	69%	31%	29%	0%	71%	0%	0%	0%	
APP/DEPART	1,102	/	2,658	3,603	/	6,320	5,420	/	0	0	/	1,147	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	14	558	0	0	1,254	593	840	0	2,017	0	0	0	5,276
APPROACH %	2%	98%	0%	0%	68%	32%	29%	0%	71%	0%	0%	0%	
PEAK HR FACTOR		0.935			0.980			0.970			0.000		0.998
APP/DEPART	572	/	1,398	1,847	/	3,271	2,857	/	0	0	/	607	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
WEEKDAY AM					
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0
WEEKDAY AM					
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
WEEKDAY PM					
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
			1	1
				0
			1	1
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	2	2

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
												0
												0
												0
												0
												0
												0
												0
												0
				3								0
				2								0
				3								0
				2								0
				1								0
				3								0
				2								0
				1								0
												0
												0
												0
												0
												0
												0
												0
												0
0	0	0	0	17	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9/17/15	NORTH & SOUTH:	Texas Street	LOCATION #:	67
THURSDAY	EAST & WEST:	Madison Avenue	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

		NORTHBOUND Texas Street			SOUTHBOUND Texas Street			EASTBOUND Madison Avenue			WESTBOUND Madison Avenue			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	1	0	1	2	0	1	1	0	1	1	1	
WEEKDAY AM	7:00 AM	3	160	1	12	70	17	52	3	5	8	14	41	386
	7:15 AM	5	167	2	24	66	11	70	10	12	1	3	68	439
	7:30 AM	2	186	2	18	70	12	87	10	3	2	5	113	510
	7:45 AM	2	195	0	9	66	11	60	9	5	2	14	107	480
	8:00 AM	5	191	2	14	66	11	80	11	11	5	12	79	487
	8:15 AM	4	156	6	11	84	16	51	7	7	2	14	101	459
	8:30 AM	3	123	0	22	96	15	70	15	5	3	12	71	435
	8:45 AM	1	149	3	28	103	19	57	10	6	2	15	97	490
	VOLUMES	25	1,327	16	138	621	112	527	75	54	25	89	677	3,686
	APPROACH %	2%	97%	1%	16%	71%	13%	80%	11%	8%	3%	11%	86%	
	APP/DEPART	1,368	/	2,531	871	/	700	656	/	229	791	/	226	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	13	728	10	52	286	50	278	37	26	11	45	400	1,936
	APPROACH %	2%	97%	1%	13%	74%	13%	82%	11%	8%	2%	10%	88%	
	PEAK HR FACTOR		0.948			0.874			0.836			0.927		0.949
	APP/DEPART	751	/	1,406	388	/	323	341	/	99	456	/	108	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	15	105	7	33	288	26	33	12	12	10	8	30	579
	4:15 PM	11	121	9	28	312	18	34	15	11	8	9	44	620
	4:30 PM	16	161	12	33	336	20	41	22	15	9	11	51	727
	4:45 PM	19	131	5	35	319	24	28	26	19	12	15	55	688
	5:00 PM	20	142	9	40	300	33	44	20	10	5	18	66	707
	5:15 PM	11	122	12	41	384	31	41	19	8	4	10	51	734
	5:30 PM	15	142	12	44	352	28	48	20	9	9	16	68	763
	5:45 PM	19	108	11	37	405	33	38	11	12	10	11	44	739
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	126	1,032	77	291	2,696	213	307	145	96	67	98	409	5,557
	APPROACH %	10%	84%	6%	9%	84%	7%	56%	26%	18%	12%	17%	71%	
	APP/DEPART	1,235	/	1,748	3,200	/	2,859	548	/	513	574	/	437	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	65	514	44	162	1,441	125	171	70	39	28	55	229	2,943
	APPROACH %	10%	83%	7%	9%	83%	7%	61%	25%	14%	9%	18%	73%	
	PEAK HR FACTOR		0.911			0.909			0.909			0.839		0.964
	APP/DEPART	623	/	914	1,728	/	1,508	280	/	276	312	/	245	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	1	2	0	3
0	0	0	0	0
1	1	1	0	3
0	2	2	1	5
1	0	2	1	4
0	0	0	2	2
1	1	1	0	3
1	1	0	2	4
				0
1	1	0	1	3
1	0	0	1	2
2	0	0	2	4
0	3	1	0	4
0	0	2	3	5
4	3	0	0	7
4	1	2	1	8
6	2	3	0	11
				0
				0
				0
				0
				0
				0
				0
22	16	16	14	68

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			0			0	1	1
	0			0			0			2		2
	1			2			1			0	1	1
	0			1			0			1		1
	0			0			0			0		0
	0			1		1	0			1		1
	0			0			0			0	1	1
	1			0		1	0			1		1
												0
	0			0			0			2		2
	0			0			0			2		2
	0			1			1			0	1	1
	0			0		2	2			0	1	1
	0			2		1	0			0	1	1
	0			1		1	3			1		1
	1			0		1	0			2		2
	2			1			1			0		0
												0
												0
												0
												0
												0
												0
												14
0	5	0	0	9	0	7	8	0	0	12	6	32

Freeway Traffic Counts

Dist	Route	County		Postmile		Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
11	5	SD	R	15.405		SAN DIEGO, PERSHING DRIVE	16600	230000	215000	16600	230000	215000
11	5	SD	R	16.069		SAN DIEGO, JCT. RTE. 163	16600	230000	215000	16000	222000	206000
11	5	SD	R	16.311		SAN DIEGO, SIXTH AVENUE	16000	222000	206000	16000	222000	206000
11	5	SD	R	16.589		SAN DIEGO, FIRST AVENUE	16000	222000	206000	12400	175000	163000
11	5	SD	R	16.912		SAN DIEGO, HAWTHORN STREET	12400	175000	163000	15300	212000	194000
11	5	SD	R	17.25		SAN DIEGO, INDIA/SASSAFRAS STREETS	15300	212000	194000	14900	205000	188000
11	5	SD	R	17.53		PACIFIC HIGHWAY VIADUCT	14900	205000	188000	12000	161000	149000
11	5	SD	R	17.77		SAN DIEGO, SASSAFRAS STREET	12000	161000	149000	11700	155000	145000
11	5	SD	R	18.283		SAN DIEGO, WASHINGTON STREET	11700	155000	145000	15400	206000	192000
11	5	SD	R	19.033		SAN DIEGO, OLD TOWN AVENUE	15400	206000	192000	15400	207000	199000
11	5	SD	R	20.056		JCT. RTE. 8/CAMINO DEL RIO	15400	207000	199000	16300	215000	201000
11	5	SD	R	20.818		SAN DIEGO, MISSION BAY DR/SEA WORLD DR	16300	215000	201000	17600	233000	218000
11	5	SD	R	22.262		CLAIREMONT DRIVE	17600	233000	218000	16700	206000	201000
11	5	SD	R	22.872		SAN DIEGO, DE ANZA ROAD	16700	206000	201000	13400	165000	160000
11	5	SD	R	23.476		SAN DIEGO, BALBOA AVENUE	13400	165000	160000	12300	150000	144000
11	5	SD	R	23.93		SAN DIEGO, MISSION BAY DRIVE	12300	150000	144000	16600	213000	202000
11	5	SD	R	25.947		JCT. RTE. 52 EAST	16600	213000	202000	13900	193000	188000
11	5	SD	R	26.79		SAN DIEGO, GILMAN DRIVE	13900	193000	188000	12700	177000	169000
11	5	SD	R	28.159		SAN DIEGO, NOBEL DRIVE	12700	177000	169000	11100	157000	149000
11	5	SD	R	28.428		SAN DIEGO, LA JOLLA DRIVE	11100	157000	149000	11700	164000	163000
11	5	SD	R	29.463		SAN DIEGO, GENESEE AVENUE	11700	164000	163000	12200	170000	169000
11	5	SD	R	30.426	R	SAN DIEGO, SORRENTO VALLEY RD, BEG RT ALIGN				6700	81000	75000
11	5	SD	R	30.682	R	SAN DIEGO, NORTH JCT. RTE. 805	6700	81000	75000	6600	82000	75000
11	5	SD	R	31.188	R	END RIGHT ALIGN	8100	109000	108000			
11	5	SD	R	30.345	L	BEGIN LEFT ALIGN				6300	76000	71000
11	5	SD	R	30.682	L	SAN DIEGO, NORTH JCT. RTE. 805	6300	76000	71000	8200	103000	99000
11	5	SD	R	31.155	L	END LEFT ALIGN	8200	103000	99000			
11	5	SD	R	31.805		SAN DIEGO, CARMEL MOUNTAIN ROAD	15700	220000	207000	15700	220000	207000
11	5	SD	R	32.841		JCT. RTE. 56	15700	220000	207000	15700	220000	207000
11	5	SD	R	32.901		SAN DIEGO, CARMEL VALLEY ROAD	15700	220000	207000	16500	253000	250000
11	5	SD	R	34.134		SAN DIEGO, DEL MAR HEIGHTS ROAD	16500	253000	250000	16200	249000	248000

2. I-5: I-8 Interchange and Old Town Avenue - NB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	96639	1152	100
9/2/2015	99447	1152	100
9/3/2015	102529	1152	100
9/8/2015	98255	1152	100
9/9/2015	99486	1152	100
9/10/2015	100812	1152	100
9/15/2015	91158	1152	100
9/16/2015	99851	1152	100
9/17/2015	102384	1152	97
9/22/2015	96853	1152	100
9/23/2015	100196	1152	100
9/24/2015	104559	1152	100
9/29/2015	96507	1152	100
9/30/2015	98309	1152	100
TOTAL AVERAGE	**99070**		

2. I-5: I-8 Interchange and Old Town Avenue - SB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	92824	1440	60
9/2/2015	92731	1440	60
9/3/2015	94467	1440	60
9/8/2015	92685	1440	60
9/9/2015	95095	1440	60
9/10/2015	94644	1440	60
9/15/2015	86376	1440	60
9/16/2015	92156	1440	60
9/17/2015	94037	1440	58
9/22/2015	91059	1440	60
9/23/2015	93249	1440	60
9/24/2015	94954	1440	60
9/29/2015	88665	1440	60
9/30/2015	91995	1440	60
TOTAL AVERAGE	**92496**		

3. I-5: Genesee to Friars Road - NB ADT

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	92685	1440	100
9/2/2015	82624	1440	100
9/3/2015	100577	1440	99
9/8/2015	101655	1440	100
9/9/2015	103533	1440	100
9/10/2015	104643	1440	100
9/15/2015	94006	1440	100
9/16/2015	98546	1440	100
9/17/2015	88745	1440	97
9/22/2015	101946	1440	100
9/23/2015	103943	1440	100
9/24/2015	105376	1440	100
9/29/2015	102414	1440	100
9/30/2015	102549	1440	100

TOTAL AVERAGE **98803**

3. I-5: Genesee to Friars Road - SB ADT

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	91032	1152	100
9/2/2015	91389	1152	100
9/3/2015	93356	1152	100
9/8/2015	84223	1152	93
9/9/2015	84447	1152	100
9/10/2015	88427	1152	100
9/15/2015	86088	1152	100
9/16/2015	91084	1152	100
9/17/2015	93194	1152	97
9/22/2015	90287	1152	100
9/23/2015	90318	1152	100
9/24/2015	90464	1152	100
9/29/2015	87796	1152	100
9/30/2015	89657	1152	100
TOTAL AVERAGE	**89412**		

4. I-5: Friars to I-8 Interchange - NB ADT

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	89679	1728	100
9/2/2015	91956	1728	100
9/3/2015	92463	1728	100
9/8/2015	90260	1728	93
9/9/2015	91060	1728	100
9/10/2015	91250	1728	100
9/15/2015	87161	1728	100
9/16/2015	91239	1728	100
9/17/2015	92031	1728	97
9/22/2015	91274	1728	95
9/23/2015	91426	1728	100
9/24/2015	92120	1728	100
9/29/2015	90322	1728	100
9/30/2015	91959	1728	100
TOTAL AVERAGE	**91014**		

4. I-5: Friars to I-8 Interchage - SB ADT

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	90364	1152	75
9/2/2015	90435	1152	75
9/3/2015	91196	1152	75
9/8/2015	89543	1152	75
9/9/2015	89887	1152	75
9/10/2015	91091	1152	75
9/15/2015	85900	1152	75
9/16/2015	89172	1152	75
9/17/2015	90864	1152	72
9/22/2015	87754	1152	75
9/23/2015	89597	1152	75
9/24/2015	86994	1152	75
9/29/2015	87552	1152	75
9/30/2015	89241	1152	75
TOTAL AVERAGE	**89256**		

5. I-5: I-8 Interchange to 6th Avenue - NB ADT

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	92551	1152	100
9/2/2015	92911	1152	100
9/3/2015	95656	1152	100
9/8/2015	91127	1152	92
9/9/2015	92887	1152	100
9/10/2015	92947	1152	100
9/15/2015	90127	1152	100
9/16/2015	93665	1152	100
9/17/2015	94319	1152	97
9/22/2015	93822	1152	100
9/23/2015	94803	1152	100
9/24/2015	96084	1152	100
9/29/2015	93685	1152	100
9/30/2015	95507	1152	100

TOTAL AVERAGE **93578**

5. I-5: I-8 Interchange to 6th Avenue - SB ADT

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	94729	1440	100
9/2/2015	94597	1440	100
9/3/2015	96943	1440	100
9/8/2015	93933	1440	91
9/9/2015	94592	1440	100
9/10/2015	94644	1440	100
9/15/2015	89494	1440	100
9/16/2015	94882	1440	100
9/17/2015	96481	1440	97
9/22/2015	93641	1440	100
9/23/2015	94545	1440	100
9/24/2015	95508	1440	100
9/29/2015	93105	1440	100
9/30/2015	94762	1440	100

6. I-5: 6th Avenue to Washington Street - NB ADT

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	55460	576	100
9/2/2015	55458	576	100
9/3/2015	57328	576	100
9/8/2015	54622	576	100
9/9/2015	55768	576	100
9/10/2015	55698	576	100
9/15/2015	51522	576	100
9/16/2015	54788	576	100
9/17/2015	56100	576	97
9/22/2015	55365	576	100
9/23/2015	56277	576	100
9/24/2015	56713	576	100
9/29/2015	55295	576	100
9/30/2015	56178	576	100

TOTAL AVERAGE **55469**

6. I-5: 6th Avenue to Washington Street - SB ADT

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	51102	576	100
9/2/2015	50747	576	100
9/3/2015	52937	576	100
9/8/2015	50191	576	100
9/9/2015	50491	576	100
9/10/2015	50967	576	100
9/15/2015	43834	576	100
9/16/2015	49967	576	100
9/17/2015	51744	576	97
9/22/2015	49503	576	100
9/23/2015	50187	576	100
9/24/2015	51477	576	100
9/29/2015	49154	576	100
9/30/2015	50337	576	100

TOTAL AVERAGE **50188**

7. I-5: Mesa College Drive to Phyllis Place - NB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	107731	1440	100
9/2/2015	108410	1440	100
9/3/2015	110494	1440	100
9/8/2015	111699	1440	100
9/9/2015	108934	1440	100
9/10/2015	109315	1440	100
9/15/2015	102826	1440	100
9/16/2015	107703	1440	100
9/17/2015	109110	1440	97
9/22/2015	108005	1440	100
9/23/2015	107842	1440	100
9/24/2015	110356	1440	100
9/29/2015	107840	1440	100
9/30/2015	107024	1440	100
TOTAL AVERAGE	**108378**		

7. I-5: Mesa College Drive to Phyllis Place - SB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	106746	1440	100
9/2/2015	109620	1440	100
9/3/2015	113631	1440	100
9/8/2015	106988	1440	100
9/9/2015	108232	1440	100
9/10/2015	110083	1440	100
9/15/2015	105077	1440	100
9/16/2015	113105	1440	100
9/17/2015	111077	1440	97
9/22/2015	112065	1440	100
9/23/2015	111715	1440	100
9/24/2015	114373	1440	100
9/29/2015	110924	1440	100
9/30/2015	112304	1440	100
TOTAL AVERAGE	**110424**		

8. I-5: Phyllis Place to I-8 Interchange - NB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	107399	1440	80
9/2/2015	108691	1440	80
9/3/2015	110001	1440	80
9/8/2015	111013	1440	80
9/9/2015	109302	1440	80
9/10/2015	109452	1440	80
9/15/2015	104080	1440	80
9/16/2015	108222	1440	80
9/17/2015	109069	1440	77
9/22/2015	108432	1440	80
9/23/2015	108346	1440	80
9/24/2015	110030	1440	80
9/29/2015	108153	1440	80
9/30/2015	107394	1440	80
TOTAL AVERAGE	**108542**		

8. I-5: Phyllis Place to I-8 Interchange - SB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	108435	1728	100
9/2/2015	111398	1728	100
9/3/2015	115606	1728	100
9/8/2015	108703	1728	100
9/9/2015	110008	1728	100
9/10/2015	111906	1728	100
9/15/2015	106411	1728	100
9/16/2015	114827	1728	100
9/17/2015	112863	1728	97
9/22/2015	113505	1728	100
9/23/2015	113470	1728	100
9/24/2015	115902	1728	100
9/29/2015	112333	1728	100
9/30/2015	113742	1728	100
TOTAL AVERAGE	**112079**		

9. I-5: I-8 Interchange to Adams Avenue - NB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	74312	1152	100
9/2/2015	75087	1152	100
9/3/2015	76724	1152	100
9/8/2015	77655	1152	100
9/9/2015	75619	1152	100
9/10/2015	76615	1152	94
9/15/2015	71080	1152	100
9/16/2015	74388	1152	100
9/17/2015	75474	1152	97
9/22/2015	74674	1152	100
9/23/2015	74820	1152	100
9/24/2015	76371	1152	100
9/29/2015	74851	1152	100
9/30/2015	75040	1152	100

TOTAL AVERAGE **75194**

9. I-5: I-8 Interchange to Adams Avenue - SB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	72277	1152	100
9/2/2015	74280	1152	100
9/3/2015	77095	1152	100
9/8/2015	71750	1152	100
9/9/2015	73198	1152	100
9/10/2015	74321	1152	94
9/15/2015	71748	1152	100
9/16/2015	76459	1152	100
9/17/2015	75373	1152	96
9/22/2015	75621	1152	100
9/23/2015	75551	1152	100
9/24/2015	77770	1152	100
9/29/2015	75064	1152	100
9/30/2015	76178	1152	100
TOTAL AVERAGE	**74763**		

10. I-5: Adams Avenue to El Cajon Boulevard - NB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	65923	864	100
9/2/2015	66920	864	100
9/3/2015	68561	864	100
9/8/2015	68818	864	100
9/9/2015	66911	864	100
9/10/2015	67172	864	100
9/15/2015	62910	864	100
9/16/2015	59031	864	48
9/17/2015	53026	864	0
9/22/2015	66138	864	100
9/23/2015	66511	864	100
9/24/2015	68065	864	100
9/29/2015	66074	864	100
9/30/2015	66893	864	100

TOTAL AVERAGE **65211**

10. I-5: Adams Avenue to El Cajon Boulevard - SB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	99887	1728	100
9/2/2015	101429	1728	100
9/3/2015	105366	1728	100
9/8/2015	98249	1728	100
9/9/2015	100800	1728	100
9/10/2015	101759	1728	100
9/15/2015	96850	1728	100
9/16/2015	93042	1728	48
9/17/2015	94109	1728	0
9/22/2015	102395	1728	100
9/23/2015	102713	1728	100
9/24/2015	105895	1728	100
9/29/2015	101339	1728	100
9/30/2015	103391	1728	100
TOTAL AVERAGE	**100516**		

11. I-5: Aero to Friars Road - NB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	91437	1440	100
9/2/2015	91977	1440	100
9/3/2015	94102	1440	100
9/8/2015	93042	1440	100
9/9/2015	93163	1440	100
9/10/2015	91088	1440	100
9/15/2015	85086	1440	100
9/16/2015	91245	1440	100
9/17/2015	92128	1440	97
9/22/2015	91527	1440	100
9/23/2015	91620	1440	100
9/24/2015	93380	1440	100
9/29/2015	88075	1440	100
9/30/2015	93821	1440	100

TOTAL AVERAGE **91549**

11. I-5: Aero to Friars Road - SB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	109386	1440	100
9/2/2015	109946	1440	100
9/3/2015	112879	1440	100
9/8/2015	109181	1440	100
9/9/2015	111669	1440	100
9/10/2015	110871	1440	100
9/15/2015	104966	1440	100
9/16/2015	109870	1440	100
9/17/2015	112563	1440	97
9/22/2015	109383	1440	100
9/23/2015	109909	1440	100
9/24/2015	114108	1440	100
9/29/2015	109087	1440	100
9/30/2015	112636	1440	100
TOTAL AVERAGE	**110461**		

12. I-5: Friars Road to I-8 Interchange - NB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	106093	1152	50
9/2/2015	105831	1152	50
9/3/2015	108818	1152	50
9/8/2015	107460	1152	50
9/9/2015	106323	1152	50
9/10/2015	106853	1152	50
9/15/2015	96949	1152	50
9/16/2015	104488	1152	50
9/17/2015	106255	1152	48
9/22/2015	105697	1152	50
9/23/2015	104548	1152	50
9/24/2015	105883	1152	50
9/29/2015	103820	1152	50
9/30/2015	105901	1152	50
TOTAL AVERAGE	**105351**		

12. I-5: Friars Road to I-8 Interchange - SB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	111792	1728	100
9/2/2015	112057	1728	100
9/3/2015	115594	1728	100
9/8/2015	111137	1728	100
9/9/2015	114233	1728	100
9/10/2015	113182	1728	100
9/15/2015	105755	1728	100
9/16/2015	111828	1728	100
9/17/2015	114205	1728	97
9/22/2015	111290	1728	100
9/23/2015	111948	1728	100
9/24/2015	116228	1728	100
9/29/2015	110446	1728	100
9/30/2015	114324	1728	100
TOTAL AVERAGE	**112430**		

13. I-5: I-8 Interchange to Adams Avenue - NB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	97616	1152	50
9/2/2015	99124	1152	50
9/3/2015	101593	1152	50
9/8/2015	97409	1152	50
9/9/2015	98748	1152	50
9/10/2015	97147	1152	50
9/15/2015	87126	1152	50
9/16/2015	96377	1152	50
9/17/2015	95812	1152	48
9/22/2015	100055	1152	50
9/23/2015	101716	1152	50
9/24/2015	97290	1152	50
9/29/2015	94046	1152	50
9/30/2015	97547	1152	50
TOTAL AVERAGE	**97258**		

13. I-5: I-8 Interchange to Adams Avenue - SB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	85730	1440	20
9/2/2015	88102	1440	20
9/3/2015	76828	1440	20
9/8/2015	84236	1440	0
9/9/2015	71871	1440	20
9/10/2015	87008	1440	0
9/15/2015	82351	1440	20
9/16/2015	77203	1440	40
9/17/2015	69938	1440	39
9/22/2015	86228	1440	40
9/23/2015	88698	1440	40
9/24/2015	89204	1440	40
9/29/2015	85212	1440	20
9/30/2015	74520	1440	20

TOTAL AVERAGE **81938**

14. I-5: Adams Avenue to El Cajon Boulevard - NB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	87524	1152	100
9/2/2015	89189	1152	100
9/3/2015	91689	1152	100
9/8/2015	88113	1152	100
9/9/2015	88655	1152	100
9/10/2015	87322	1152	100
9/15/2015	75843	1152	100
9/16/2015	86135	1152	100
9/17/2015	86032	1152	97
9/22/2015	90539	1152	100
9/23/2015	93121	1152	100
9/24/2015	87261	1152	100
9/29/2015	83638	1152	100
9/30/2015	86321	1152	100
TOTAL AVERAGE	**87242**		

14. I-5: Adams Avenue to El Cajon Boulevard - SB (ADT)

Day	Flow (Veh/Day)	# Lane Points	% Observed
9/1/2015	85293	1440	100
9/2/2015	88744	1440	100
9/3/2015	90551	1440	100
9/8/2015	84930	1440	100
9/9/2015	89361	1440	100
9/10/2015	88570	1440	100
9/15/2015	80252	1440	100
9/16/2015	87814	1440	100
9/17/2015	85002	1440	97
9/22/2015	86684	1440	100
9/23/2015	87725	1440	100
9/24/2015	87426	1440	100
9/29/2015	86203	1440	100
9/30/2015	87632	1440	100
TOTAL AVERAGE	**86871**		

Eastbound: I-8: Fairmount Avenue SB On-Ramp

Hour	Flow (Veh/Hour)	# Lane Points	% Observed
9/1/2015 16:00	10524	72	100
9/1/2015 17:00	10093	72	100
9/2/2015 16:00	9714	72	100
9/2/2015 17:00	9693	72	100
9/3/2015 16:00	9131	72	100
9/3/2015 17:00	9558	72	100
9/8/2015 16:00	9850	72	100
9/8/2015 17:00	9729	72	100
9/9/2015 16:00	9750	72	100
9/9/2015 17:00	9877	72	100
9/10/2015 16:00	10322	72	100
9/10/2015 17:00	9728	72	100
9/15/2015 16:00	9575	72	100
9/15/2015 17:00	8583	72	100
9/16/2015 16:00	9912	72	100
9/16/2015 17:00	8831	72	100
9/17/2015 16:00	9355	72	100
9/17/2015 17:00	8841	72	100
9/22/2015 16:00	9722	72	100
9/22/2015 17:00	10057	72	100
9/23/2015 16:00	9844	72	100
9/23/2015 17:00	9668	72	100
9/24/2015 16:00	9885	72	100
9/24/2015 17:00	8092	72	100
9/29/2015 16:00	9683	72	100
9/29/2015 17:00	9499	72	100
9/30/2015 16:00	9679	72	100
9/30/2015 17:00	9565	72	100
TOTAL AVERAGe	**9599**		

Eastbound: I-8: Sports Arena Boulevard On-Ramps to I-5 SB Off-Ramp

Hour	Lane 1 Flow (Veh/H	Lane 2 Flow (Veh/I	Lane 3 Flow (Veh/I	Lane 4 Flow (Ve	Flow (Veh/Ho	# Lane Poi	% Observed
9/1/2015 7:00	1154	1013	932	686	3785	48	100
9/1/2015 8:00	1233	1039	964	725	3961	48	100
9/2/2015 7:00	1196	1053	947	698	3894	48	100
9/2/2015 8:00	1179	983	980	718	3860	48	100
9/3/2015 7:00	1198	1027	972	654	3851	48	100
9/3/2015 8:00	1205	1024	919	679	3827	48	100
9/8/2015 7:00	1214	1073	966	768	4021	48	100
9/8/2015 8:00	1101	1109	1019	775	4004	48	67
9/9/2015 7:00	1290	1101	952	758	4101	48	100
9/9/2015 8:00	1210	1032	964	731	3937	48	100
9/10/2015 7:00	1260	1119	984	820	4183	48	100
9/10/2015 8:00	1228	984	952	756	3920	48	100
9/15/2015 7:00	1235	1125	990	911	4261	48	100
9/15/2015 8:00	1157	1024	937	739	3857	48	100
9/16/2015 7:00	1229	1058	957	764	4008	48	100
9/16/2015 8:00	1166	992	995	717	3870	48	100
9/17/2015 7:00	1238	1109	1009	801	4157	48	83
9/17/2015 8:00	1198	1006	968	767	3939	48	100
9/22/2015 7:00	1250	1096	999	651	3996	48	100
9/22/2015 8:00	1206	1062	943	730	3941	48	100
9/23/2015 7:00	1192	1174	970	772	4108	48	100
9/23/2015 8:00	1084	1048	944	762	3838	48	100
9/24/2015 7:00	1356	1099	975	703	4133	48	100
9/24/2015 8:00	1201	1002	948	733	3884	48	100
9/29/2015 7:00	1269	1135	982	730	4116	48	100
9/29/2015 8:00	1165	1095	955	743	3958	48	100
9/30/2015 7:00	1277	1087	965	849	4178	48	100
9/30/2015 8:00	1192	1011	933	759	3895	48	100
				TOTAL AVERAC	**3982**		

Eastbound: I-8: Hotel Circle South On-Ramp to SR- 163 SB Off-Ramp

Hour	Lane 1 Flow (Veh/Hour)	Lane 2 Flow (Veh/Hour)	Lane 3 Flow (Veh/Hour)	Lane 4 Flow (Veh/Hour)	Lane 5 Flow (Veh/Hour)	Flow (Veh/Hour)	# Lane Points	% Observed
9/1/2015 16:00	1984	1993	1479	1768	730	7954	60	100
9/1/2015 17:00	1936	1955	1449	1758	718	7816	60	100
9/2/2015 16:00	2021	1957	1479	1806	697	7960	60	100
9/2/2015 17:00	1906	1850	1338	1649	677	7420	60	100
9/3/2015 16:00	1910	1845	1397	1703	705	7560	60	100
9/3/2015 17:00	1983	1855	1332	1616	645	7431	60	100
9/8/2015 16:00	1925	1846	1409	1686	710	7576	60	100
9/8/2015 17:00	1886	1859	1418	1694	666	7523	60	100
9/9/2015 16:00	1887	1844	1393	1631	696	7451	60	100
9/9/2015 17:00	1822	1835	1320	1649	699	7325	60	100
9/10/2015 16:00	1890	1853	1393	1705	703	7544	60	100
9/10/2015 17:00	1950	1921	1470	1746	695	7782	60	100
9/15/2015 16:00	1809	1811	1378	1640	648	7286	60	100
9/15/2015 17:00	1638	1634	1204	1467	642	6585	60	100
9/16/2015 16:00	1703	1735	1203	1506	700	6847	60	100
9/16/2015 17:00	1852	1799	1358	1584	654	7247	60	100
9/17/2015 16:00	1834	1843	1312	1641	726	7356	60	100
9/17/2015 17:00	1838	1790	1283	1570	764	7245	60	100
9/22/2015 16:00	1945	1877	1453	1700	691	7666	60	100
9/22/2015 17:00	1881	1857	1305	1642	704	7389	60	100
9/23/2015 16:00	1879	1810	1263	1544	699	7195	60	100
9/23/2015 17:00	1876	1820	1259	1579	704	7238	60	100
9/24/2015 16:00	1841	1786	1311	1593	717	7248	60	100
9/24/2015 17:00	1844	1825	1321	1604	666	7260	60	100
9/29/2015 16:00	1884	1793	1320	1552	717	7266	60	100
9/29/2015 17:00	1842	1811	1313	1631	692	7289	60	100
9/30/2015 16:00	1832	1766	1290	1541	687	7116	60	100
9/30/2015 17:00	1819	1771	1278	1555	711	7134	60	100
					TOTAL AVERAG	**7382**		

Eastbound: I-8: SR-163 NB Off-Ramp

Hour	Lane 1 Flow (Veh/Hour)	Lane 2 Flow (Veh/Hour)	Lane 3 Flow (Veh/Hour)	Lane 4 Flow (Veh/Hour)	Flow (Veh/Hour)	# Lane Points	% Observed
9/1/2015 16:00	1784	1638	1427	911	5760	48	100
9/1/2015 17:00	1734	1625	1393	923	5675	48	100
9/2/2015 16:00	1798	1598	1400	917	5713	48	100
9/2/2015 17:00	1609	1528	1294	881	5312	48	100
9/3/2015 16:00	1714	1518	1356	888	5476	48	100
9/3/2015 17:00	1535	1469	1281	974	5259	48	100
9/8/2015 16:00	1688	1494	1371	905	5458	48	100
9/8/2015 17:00	1638	1509	1368	888	5403	48	100
9/9/2015 16:00	1657	1497	1334	905	5393	48	100
9/9/2015 17:00	1582	1489	1342	858	5271	48	100
9/10/2015 16:00	1727	1568	1331	896	5522	48	100
9/10/2015 17:00	1706	1590	1359	850	5505	48	100
9/15/2015 16:00	1615	1467	1271	839	5192	48	100
9/15/2015 17:00	1466	1344	1214	870	4894	48	100
9/16/2015 16:00	1375	1287	1116	969	4747	48	100
9/16/2015 17:00	1566	1434	1280	860	5140	48	100
9/17/2015 16:00	1671	1553	1288	891	5403	48	100
9/17/2015 17:00	1454	1330	1243	1052	5079	48	100
9/22/2015 16:00	1682	1579	1369	969	5599	48	100
9/22/2015 17:00	1579	1493	1335	936	5343	48	100
9/23/2015 16:00	1623	1526	1306	872	5327	48	100
9/23/2015 17:00	1568	1511	1285	863	5227	48	100
9/24/2015 16:00	1604	1491	1326	860	5281	48	100
9/24/2015 17:00	1573	1485	1316	862	5236	48	100
9/29/2015 16:00	1584	1501	1316	864	5265	48	100
9/29/2015 17:00	1548	1513	1277	875	5213	48	100
9/30/2015 16:00	1593	1457	1334	876	5260	48	100
9/30/2015 17:00	1579	1437	1309	847	5172	48	100
			TOTAL AVERAGE	**5326**			

Eastbound: I-8: Mission Center Road Off-Ramp

Hour	Lane 1 Flow (Veh/H	Lane 2 Flow (Veh/l	Lane 3 Flow (Veh/l	Lane 4 Flow (Ve	Flow (Veh/Ho	# Lane Poi	% Observed
9/1/2015 16:00	1680	1591	1384	1134	5789	48	75
9/1/2015 17:00	1673	1542	1356	1142	5713	48	75
9/2/2015 16:00	1674	1508	1384	1096	5662	48	75
9/2/2015 17:00	1537	1454	1287	1010	5288	48	75
9/3/2015 16:00	1657	1466	1259	1026	5408	48	75
9/3/2015 17:00	1547	1380	1256	932	5115	48	75
9/8/2015 16:00	1611	1469	1326	1059	5465	48	75
9/8/2015 17:00	1588	1466	1320	1052	5426	48	75
9/9/2015 16:00	1550	1452	1277	1048	5327	48	75
9/9/2015 17:00	1516	1475	1251	1095	5337	48	75
9/10/2015 16:00	1653	1554	1265	1096	5568	48	75
9/10/2015 17:00	1601	1505	1322	1101	5529	48	75
9/15/2015 16:00	1521	1486	1203	1049	5259	48	75
9/15/2015 17:00	1407	1368	1168	1031	4974	48	75
9/16/2015 16:00	1415	1294	1160	858	4727	48	75
9/16/2015 17:00	1516	1424	1216	1040	5196	48	75
9/17/2015 16:00	1642	1453	1295	1026	5416	48	75
9/17/2015 17:00	1470	1315	1185	855	4825	48	75
9/22/2015 16:00	1642	1463	1342	1020	5467	48	75
9/22/2015 17:00	1561	1443	1294	1000	5298	48	75
9/23/2015 16:00	1560	1480	1282	1035	5357	48	75
9/23/2015 17:00	1511	1459	1223	1074	5267	48	75
9/24/2015 16:00	1521	1232	1284	1026	5063	48	75
9/24/2015 17:00	1512	1245	1231	1064	5052	48	75
9/29/2015 16:00	1583	1206	1276	976	5041	48	75
9/29/2015 17:00	1503	1180	1285	937	4905	48	75
9/30/2015 16:00	1542	1479	1260	1052	5333	48	75
9/30/2015 17:00	1505	1425	1245	1000	5175	48	75
		TOTAL AVERAGE			**5285**		

Eastbound: I-8: Mission Center Road Off-Ramp to SR-163 NB On-Ramp

Hour	Lane 1 Flow (Veh/H	Lane 2 Flow (Veh/l	Lane 3 Flow (Veh/l	Lane 4 Flow (Ve	Lane 5 Flow (	Flow (Veh/	# Lane Poi	% Observe
9/1/2015 16:00	1730	1725	1781	1754	1435	8425	60	100
9/1/2015 17:00	1730	1691	1735	1663	1347	8166	60	100
9/2/2015 16:00	1705	1726	1716	1633	1152	7932	60	100
9/2/2015 17:00	1644	1632	1697	1493	1247	7713	60	100
9/3/2015 16:00	1679	1587	1649	1550	1260	7725	60	100
9/3/2015 17:00	1577	1417	1554	1441	1201	7190	60	100
9/8/2015 16:00	1684	1652	1711	1554	1280	7881	60	100
9/8/2015 17:00	1642	1644	1685	1526	1205	7702	60	100
9/9/2015 16:00	1588	1607	1668	1498	1282	7643	60	100
9/9/2015 17:00	1576	1546	1661	1656	1318	7757	60	100
9/10/2015 16:00	1671	1636	1738	1758	1396	8199	60	100
9/10/2015 17:00	1633	1584	1730	1751	1280	7978	60	100
9/15/2015 16:00	1517	1527	1664	1806	1422	7936	60	100
9/15/2015 17:00	1402	1415	1557	1558	1247	7179	60	100
9/16/2015 16:00	1490	1485	1406	1266	1125	6772	60	100
9/16/2015 17:00	1602	1614	1636	1511	1197	7560	60	100
9/17/2015 16:00	1685	1645	1644	1489	1259	7722	60	100
9/17/2015 17:00	1530	1494	1403	1281	1119	6827	60	100
9/22/2015 16:00	1735	1697	1603	1450	1267	7752	60	100
9/22/2015 17:00	1634	1640	1638	1441	1234	7587	60	100
9/23/2015 16:00	1636	1614	1691	1615	1290	7846	60	100
9/23/2015 17:00	1532	1529	1566	1662	1306	7595	60	100
9/24/2015 16:00	1555	1647	1395	1252	989	6838	60	0
9/24/2015 17:00	1479	1580	1341	1207	944	6551	60	0
9/29/2015 16:00	1471	1555	1319	1188	938	6471	60	0
9/29/2015 17:00	1550	1633	1380	1241	984	6788	60	0
9/30/2015 16:00	1599	1592	1701	1739	1336	7967	60	100
9/30/2015 17:00	1550	1527	1586	1539	1278	7480	60	100
				TOTAL AVERAGE		**7542**		

Eastbound: I-8: Mission Center Road On-Ramp

Hour	Lane 1 Flow (Veh/Hour)	Lane 2 Flow (Veh/Hour)	Lane 3 Flow (Veh/Hour)	Lane 4 Flow (Veh/Hour)	Lane 5 Flow (Veh/Hour)	Flow (Veh/Hour)	# Lane Points	% Observed
9/1/2015 16:00	2053	1947	1763	2122	1920	9805	60	100
9/1/2015 17:00	2059	1900	1676	2042	1941	9618	60	100
9/2/2015 16:00	1988	1840	1680	2034	1908	9450	60	100
9/2/2015 17:00	1875	1731	1606	1893	1937	9042	60	100
9/3/2015 16:00	1853	1734	1654	1905	1906	9052	60	100
9/3/2015 17:00	1732	1672	1625	1877	1940	8846	60	100
9/8/2015 16:00	1949	1790	1661	1936	1874	9210	60	100
9/8/2015 17:00	1941	1869	1616	1789	1861	9076	60	100
9/9/2015 16:00	1884	1681	1541	1901	1862	8869	60	100
9/9/2015 17:00	1882	1783	1655	1953	1884	9157	60	100
9/10/2015 16:00	1995	1879	1701	2074	1864	9513	60	100
9/10/2015 17:00	1916	1877	1739	2005	1969	9506	60	100
9/15/2015 16:00	1792	1785	1772	2002	1866	9217	60	100
9/15/2015 17:00	1673	1648	1565	1816	1752	8454	60	100
9/16/2015 16:00	1597	1495	1468	1700	1832	8092	60	100
9/16/2015 17:00	1802	1710	1617	1886	1928	8943	60	100
9/17/2015 16:00	1945	1789	1615	1838	1843	9030	60	100
9/17/2015 17:00	1529	1431	1468	1690	1834	7952	60	100
9/22/2015 16:00	1866	1777	1602	1935	1866	9046	60	100
9/22/2015 17:00	1874	1734	1565	1951	1885	9009	60	100
9/23/2015 16:00	1893	1762	1667	1982	1918	9222	60	100
9/23/2015 17:00	1797	1752	1582	1937	1845	8913	60	100
9/24/2015 16:00	1863	1778	1615	1862	1869	8987	60	100
9/24/2015 17:00	1761	1686	1593	1650	1821	8511	60	100
9/29/2015 16:00	1716	1614	1549	1811	1914	8604	60	100
9/29/2015 17:00	1745	1728	1618	1866	1844	8801	60	100
9/30/2015 16:00	1924	1828	1617	2002	1814	9185	60	100
9/30/2015 17:00	1813	1722	1594	1829	1878	8836	60	100
				TOTAL AVERAGE		**8998**		

Eastbound: I-805 Off-Ramp

Hour	Lane 1 Flow (Veh/H	Lane 2 Flow (Veh/I	Lane 3 Flow (Veh/I	Lane 4 Flow (Ve	Flow (Veh/Ho	# Lane Poi	% Observed
9/1/2015 16:00	1967	1748	1638	982	6335	48	100
9/1/2015 17:00	1959	1726	1560	878	6123	48	100
9/2/2015 16:00	1852	1649	1531	935	5967	48	100
9/2/2015 17:00	1643	1541	1465	977	5626	48	100
9/3/2015 16:00	1696	1545	1461	925	5627	48	100
9/3/2015 17:00	1612	1528	1455	1015	5610	48	100
9/8/2015 16:00	1722	1602	1503	1028	5855	48	100
9/8/2015 17:00	1847	1701	1550	810	5908	48	100
9/9/2015 16:00	1735	1554	1443	877	5609	48	100
9/9/2015 17:00	1780	1631	1548	830	5789	48	100
9/10/2015 16:00	1918	1692	1572	923	6105	48	100
9/10/2015 17:00	1829	1689	1622	909	6049	48	100
9/15/2015 16:00	1746	1664	1577	951	5938	48	100
9/15/2015 17:00	1566	1518	1419	910	5413	48	100
9/16/2015 16:00	1491	1408	1273	1040	5212	48	100
9/16/2015 17:00	1553	1518	1417	1003	5491	48	100
9/17/2015 16:00	1807	1640	1526	927	5900	48	100
9/17/2015 17:00	1395	1291	1245	1010	4941	48	100
9/22/2015 16:00	1645	1547	1459	1006	5657	48	100
9/22/2015 17:00	1702	1578	1460	936	5676	48	100
9/23/2015 16:00	1709	1590	1537	1002	5838	48	100
9/23/2015 17:00	1717	1630	1502	909	5758	48	100
9/24/2015 16:00	1732	1614	1442	951	5739	48	100
9/24/2015 17:00	1628	1531	1362	833	5354	48	100
9/29/2015 16:00	1524	1472	1370	1063	5429	48	100
9/29/2015 17:00	1582	1509	1503	1035	5629	48	100
9/30/2015 16:00	1834	1677	1515	899	5925	48	100
9/30/2015 17:00	1655	1572	1458	954	5639	48	100
				TOTAL AVERAGE	**5719**		

Eastbound: I-8: Qualcomm Way On-Ramp

Hour	Lane 1 Flow (Veh/Hour)	Lane 2 Flow (Veh/Hour)	Lane 3 Flow (Veh/Hour)	Lane 4 Flow (Veh/Hour)	Flow (Veh/Hour)	# Lane Points	% Observed
9/1/2015 16:00	1849	1704	1912	2044	7509	48	75
9/1/2015 17:00	1853	1699	1900	1904	7356	48	75
9/2/2015 16:00	1709	1648	1835	1852	7044	48	75
9/2/2015 17:00	1641	1671	1772	1565	6649	48	75
9/3/2015 16:00	1573	1582	1744	1634	6533	48	75
9/3/2015 17:00	1510	1604	1733	1466	6313	48	75
9/8/2015 16:00	1682	1693	1782	1555	6712	48	75
9/8/2015 17:00	1753	1677	1807	1861	7098	48	75
9/9/2015 16:00	1727	1628	1796	1761	6912	48	75
9/9/2015 17:00	1657	1664	1780	1707	6808	48	75
9/10/2015 16:00	1789	1712	1939	1906	7346	48	75
9/10/2015 17:00	1779	1769	1831	1659	7038	48	75
9/15/2015 16:00	1691	1680	1883	1912	7166	48	75
9/15/2015 17:00	1515	1487	1666	1748	6416	48	75
9/16/2015 16:00	1624	1595	1756	1387	6362	48	75
9/16/2015 17:00	1609	1627	1719	1509	6464	48	75
9/17/2015 16:00	1630	1683	1745	1732	6790	48	75
9/17/2015 17:00	1383	1450	1553	1442	5828	48	75
9/22/2015 16:00	1608	1663	1756	1420	6447	48	75
9/22/2015 17:00	1661	1669	1811	1685	6826	48	75
9/23/2015 16:00	1802	1737	1847	1545	6931	48	75
9/23/2015 17:00	1658	1632	1803	1750	6843	48	75
9/24/2015 16:00	1681	1612	1749	1796	6838	48	75
9/24/2015 17:00	1425	1447	1583	1665	6120	48	75
9/29/2015 16:00	1430	1617	1912	1493	6452	48	75
9/29/2015 17:00	1586	1656	1947	1611	6800	48	75
9/30/2015 16:00	1680	1706	1995	1700	7081	48	75
9/30/2015 17:00	1547	1584	1881	1877	6889	48	75
			TOTAL AVERAGE		**6770**		

Eastbound: I-8: Qualcomm Way On-Ramp to I-805 On-Ramp

Hour	Lane 1 Flow (Veh/Hour)	Lane 2 Flow (Veh/Hour)	Lane 3 Flow (Veh/Hour)	Lane 4 Flow (Veh/Hour)	Lane 5 Flow (Veh/Hour)	Lane 6 Flow (Veh/Hour)	Flow (Veh/Hour)	# Lane Points	% Observed
9/1/2015 16:00	1812	1644	1653	1817	982	1599	9507	72	83
9/1/2015 17:00	1747	1638	1627	1822	1001	1618	9453	72	83
9/2/2015 16:00	1604	1572	1576	1736	969	1660	9117	72	83
9/2/2015 17:00	1530	1521	1523	1631	966	1730	8901	72	83
9/3/2015 16:00	1472	1466	1493	1630	934	1642	8637	72	83
9/3/2015 17:00	1450	1525	1507	1504	941	1713	8640	72	83
9/8/2015 16:00	1555	1538	1521	1643	969	1763	8989	72	83
9/8/2015 17:00	1687	1557	1510	1675	996	1552	8977	72	83
9/9/2015 16:00	1658	1565	1506	1667	947	1636	8979	72	83
9/9/2015 17:00	1580	1533	1467	1651	964	1577	8772	72	83
9/10/2015 16:00	1740	1653	1694	1883	995	1589	9554	72	83
9/10/2015 17:00	1650	1605	1589	1663	988	1754	9249	72	83
9/15/2015 16:00	1677	1598	1626	1802	1035	1565	9303	72	83
9/15/2015 17:00	1420	1378	1465	1578	939	1514	8294	72	83
9/16/2015 16:00	1532	1512	1546	1562	929	1652	8733	72	83
9/16/2015 17:00	1482	1457	1499	1587	936	1757	8718	72	83
9/17/2015 16:00	1453	1524	1515	1556	972	1733	8753	72	83
9/17/2015 17:00	1250	1271	1326	1436	869	1712	7864	72	83
9/22/2015 16:00	1499	1518	1523	1595	937	1743	8815	72	83
9/22/2015 17:00	1583	1554	1559	1668	968	1771	9103	72	83
9/23/2015 16:00	1711	1623	1554	1673	972	1700	9233	72	83
9/23/2015 17:00	1553	1559	1472	1690	958	1614	8846	72	83
9/24/2015 16:00	1545	1512	1518	1612	960	1653	8800	72	83
9/24/2015 17:00	1289	1288	1395	1445	846	1647	7910	72	83
9/29/2015 16:00	1307	1609	1641	1933	950	746	8186	72	0
9/29/2015 17:00	1375	1684	1717	2018	999	753	8546	72	0
9/30/2015 16:00	1436	1750	1781	2094	979	761	8801	72	0
9/30/2015 17:00	1453	1777	1809	2128	977	724	8868	72	0
					TOTAL AVERAGE		**8841**		

Eastbound: I-8: Fairmount Avenue SB On-Ramp

Hour	Flow (Veh/Hour)	# Lane Points	% Observed
9/1/2015 16:00	10524	72	100
9/1/2015 17:00	10093	72	100
9/2/2015 16:00	9714	72	100
9/2/2015 17:00	9693	72	100
9/3/2015 16:00	9131	72	100
9/3/2015 17:00	9558	72	100
9/8/2015 16:00	9850	72	100
9/8/2015 17:00	9729	72	100
9/9/2015 16:00	9750	72	100
9/9/2015 17:00	9877	72	100
9/10/2015 16:00	10322	72	100
9/10/2015 17:00	9728	72	100
9/15/2015 16:00	9575	72	100
9/15/2015 17:00	8583	72	100
9/16/2015 16:00	9912	72	100
9/16/2015 17:00	8831	72	100
9/17/2015 16:00	9355	72	100
9/17/2015 17:00	8841	72	100
9/22/2015 16:00	9722	72	100
9/22/2015 17:00	10057	72	100
9/23/2015 16:00	9844	72	100
9/23/2015 17:00	9668	72	100
9/24/2015 16:00	9885	72	100
9/24/2015 17:00	8092	72	100
9/29/2015 16:00	9683	72	100
9/29/2015 17:00	9499	72	100
9/30/2015 16:00	9679	72	100
9/30/2015 17:00	9565	72	100
TOTAL AVERAGe	**9599**		

Westbound: I-8: Fairmount Avenue Off-Ramp

Hour	Flow (Veh/Hour	# Lane Points	% Observed
9/1/2015 7:00	10510	72	100
9/1/2015 8:00	10103	72	100
9/2/2015 7:00	10144	72	100
9/2/2015 8:00	10116	72	100
9/3/2015 7:00	10341	72	100
9/3/2015 8:00	10349	72	100
9/8/2015 7:00	10943	72	100
9/8/2015 8:00	9853	72	100
9/9/2015 7:00	10183	72	100
9/9/2015 8:00	9875	72	100
9/10/2015 7:00	10348	72	100
9/10/2015 8:00	7594	72	100
9/15/2015 7:00	10579	72	100
9/15/2015 8:00	9413	72	100
9/16/2015 7:00	9673	72	100
9/16/2015 8:00	9942	72	100
9/17/2015 7:00	9878	72	100
9/17/2015 8:00	9370	72	100
9/22/2015 7:00	10936	72	100
9/22/2015 8:00	9814	72	100
9/23/2015 7:00	10043	72	100
9/23/2015 8:00	9781	72	100
9/24/2015 7:00	9063	72	100
9/24/2015 8:00	9469	72	100
9/29/2015 7:00	9415	72	100
9/29/2015 8:00	8427	72	100
9/30/2015 7:00	9738	72	100
9/30/2015 8:00	9286	72	100

TOTAL AVERAG	9828.071429

Westbound: I-8: I-15 SB Off-Ramp to I-15 On-Ramp

Hour	Lane 1 Flow (Veh/Hour)	Lane 2 Flow (Veh/Hour)	Lane 3 Flow (Veh/Hour)	Lane 4 Flow (Veh/Hour)	Flow (Veh/Hour)	# Lane Points	% Observed
9/1/2015 7:00	1799	1678	1523	1417	6417	48	100
9/1/2015 8:00	1680	1656	1574	1417	6327	48	100
9/2/2015 7:00	1852	1746	1520	1146	6264	48	100
9/2/2015 8:00	1750	1683	1477	1358	6268	48	100
9/3/2015 7:00	1807	1733	1527	1534	6601	48	100
9/3/2015 8:00	1761	1715	1618	1513	6607	48	100
9/8/2015 7:00	1934	1769	1675	1585	6963	48	100
9/8/2015 8:00	1740	1633	1482	1202	6057	48	100
9/9/2015 7:00	1740	1682	1503	1204	6129	48	100
9/9/2015 8:00	1716	1657	1483	1218	6074	48	100
9/10/2015 7:00	1799	1696	1520	1355	6370	48	100
9/10/2015 8:00	1174	1082	888	744	3888	48	100
9/15/2015 7:00	1931	1742	1513	1468	6654	48	100
9/15/2015 8:00	1658	1544	1303	1028	5533	48	100
9/16/2015 7:00	1750	1584	1404	1428	6166	48	100
9/16/2015 8:00	1771	1644	1468	1441	6324	48	100
9/17/2015 7:00	1729	1670	1466	1059	5924	48	100
9/17/2015 8:00	1674	1584	1355	1114	5727	48	100
9/22/2015 7:00	1936	1769	1546	1456	6707	48	100
9/22/2015 8:00	1678	1665	1504	1443	6290	48	100
9/23/2015 7:00	1823	1674	1441	1356	6294	48	100
9/23/2015 8:00	1673	1619	1447	1287	6026	48	100
9/24/2015 7:00	1437	1479	1387	1376	5679	48	100
9/24/2015 8:00	1630	1548	1428	1260	5866	48	100
9/29/2015 7:00	1597	1541	1413	1222	5773	48	100
9/29/2015 8:00	1408	1344	1176	929	4857	48	100
9/30/2015 7:00	1699	1643	1488	1087	5917	48	100
9/30/2015 8:00	1581	1536	1369	1151	5637	48	100
			TOTAL AVERAGE		**6048**		

Westbound: I-8: I-15 SB Off-Ramp to I-15 On-Ramp

Hour	Lane 1 Flow (Veh/Hour)	Lane 2 Flow (Veh/Hour)	Lane 3 Flow (Veh/Hour)	Lane 4 Flow (Veh/Hour)	Flow (Veh/Hour)	# Lane Points	% Observed
9/1/2015 7:00	1799	1678	1523	1417	6417	48	100
9/1/2015 8:00	1680	1656	1574	1417	6327	48	100
9/2/2015 7:00	1852	1746	1520	1146	6264	48	100
9/2/2015 8:00	1750	1683	1477	1358	6268	48	100
9/3/2015 7:00	1807	1733	1527	1534	6601	48	100
9/3/2015 8:00	1761	1715	1618	1513	6607	48	100
9/8/2015 7:00	1934	1769	1675	1585	6963	48	100
9/8/2015 8:00	1740	1633	1482	1202	6057	48	100
9/9/2015 7:00	1740	1682	1503	1204	6129	48	100
9/9/2015 8:00	1716	1657	1483	1218	6074	48	100
9/10/2015 7:00	1799	1696	1520	1355	6370	48	100
9/10/2015 8:00	1174	1082	888	744	3888	48	100
9/15/2015 7:00	1931	1742	1513	1468	6654	48	100
9/15/2015 8:00	1658	1544	1303	1028	5533	48	100
9/16/2015 7:00	1750	1584	1404	1428	6166	48	100
9/16/2015 8:00	1771	1644	1468	1441	6324	48	100
9/17/2015 7:00	1729	1670	1466	1059	5924	48	100
9/17/2015 8:00	1674	1584	1355	1114	5727	48	100
9/22/2015 7:00	1936	1769	1546	1456	6707	48	100
9/22/2015 8:00	1678	1665	1504	1443	6290	48	100
9/23/2015 7:00	1823	1674	1441	1356	6294	48	100
9/23/2015 8:00	1673	1619	1447	1287	6026	48	100
9/24/2015 7:00	1437	1479	1387	1376	5679	48	100
9/24/2015 8:00	1630	1548	1428	1260	5866	48	100
9/29/2015 7:00	1597	1541	1413	1222	5773	48	100
9/29/2015 8:00	1408	1344	1176	929	4857	48	100
9/30/2015 7:00	1699	1643	1488	1087	5917	48	100
9/30/2015 8:00	1581	1536	1369	1151	5637	48	100
			TOTAL AVERAGE		**6048**		

Westbound: I-8: Qualcomm Way Off-Ramp

Hour	Lane 1 Flow (Veh/Hour)	Lane 2 Flow (Veh/Hour)	Lane 3 Flow (Veh/Hour)	Lane 4 Flow (Veh/Hour)	Flow (Veh/Hour)	# Lane Points	% Observed
9/1/2015 7:00	1667	1631	1584	1895	6777	48	100
9/1/2015 8:00	1782	1840	1686	2006	7314	48	100
9/2/2015 7:00	2111	1825	1606	1681	7223	48	100
9/2/2015 8:00	1980	1849	1616	2024	7469	48	100
9/3/2015 7:00	1980	1843	1649	1818	7290	48	100
9/3/2015 8:00	1804	1823	1723	2008	7358	48	100
9/8/2015 7:00	1997	1853	1701	1799	7350	48	100
9/8/2015 8:00	1829	1766	1622	1989	7206	48	100
9/9/2015 7:00	1881	1760	1581	1704	6926	48	100
9/9/2015 8:00	1826	1751	1630	2037	7244	48	100
9/10/2015 7:00	1796	1806	1662	1903	7167	48	100
9/10/2015 8:00	1124	1050	1092	1760	5026	48	100
9/15/2015 7:00	2017	1826	1636	1705	7184	48	100
9/15/2015 8:00	1836	1718	1528	1849	6931	48	100
9/16/2015 7:00	1936	1773	1524	1547	6780	48	100
9/16/2015 8:00	1749	1682	1587	1998	7016	48	100
9/17/2015 7:00	1964	1814	1566	1733	7077	48	100
9/17/2015 8:00	1868	1704	1617	1940	7129	48	100
9/22/2015 7:00	2113	1902	1644	1759	7418	48	100
9/22/2015 8:00	1860	1784	1638	2054	7336	48	100
9/23/2015 7:00	1947	1807	1592	1745	7091	48	100
9/23/2015 8:00	1732	1750	1558	2017	7057	48	100
9/24/2015 7:00	1751	1717	1621	1632	6721	48	100
9/24/2015 8:00	1768	1718	1582	1969	7037	48	100
9/29/2015 7:00	1657	1664	1578	1821	6720	48	100
9/29/2015 8:00	1399	1370	1369	1873	6011	48	100
9/30/2015 7:00	2008	1773	1531	1597	6909	48	100
9/30/2015 8:00	1829	1750	1578	2004	7161	48	8
			TOTAL AVERAGE		**6997**		

Westbound: I-8: Qualcomm Way Off-Ramp to I-805 On-Ramp

Hour	Lane 1 Flow (Veh/Hour)	Lane 2 Flow (Veh/Hour)	Lane 3 Flow (Veh/Hour)	Lane 4 Flow (Veh/Hour)	Flow (Veh/Hour)	# Lane Points	% Observed
9/1/2015 7:00	1597	1520	1356	1356	5829	48	100
9/1/2015 8:00	1826	1771	1617	1448	6662	48	100
9/2/2015 7:00	1925	1745	1562	1276	6508	48	100
9/2/2015 8:00	1840	1722	1582	1478	6622	48	100
9/3/2015 7:00	1913	1784	1631	1266	6594	48	100
9/3/2015 8:00	1842	1747	1631	1435	6655	48	100
9/8/2015 7:00	1897	1740	1561	1416	6614	48	100
9/8/2015 8:00	1776	1669	1534	1434	6413	48	100
9/9/2015 7:00	1777	1694	1552	1497	6520	48	100
9/9/2015 8:00	1751	1670	1509	1492	6422	48	100
9/10/2015 7:00	1780	1697	1502	1433	6412	48	100
9/10/2015 8:00	1077	1009	889	885	3860	48	100
9/15/2015 7:00	1888	1744	1605	1301	6538	48	100
9/15/2015 8:00	1716	1638	1469	1415	6238	48	100
9/16/2015 7:00	1827	1667	1519	1208	6221	48	100
9/16/2015 8:00	1684	1562	1376	1371	5993	48	100
9/17/2015 7:00	1845	1720	1519	1389	6473	48	100
9/17/2015 8:00	1773	1670	1500	1497	6440	48	100
9/22/2015 7:00	1919	1742	1590	1442	6693	48	100
9/22/2015 8:00	1775	1720	1594	1511	6600	48	100
9/23/2015 7:00	1816	1685	1515	1425	6441	48	100
9/23/2015 8:00	1723	1611	1468	1446	6248	48	100
9/24/2015 7:00	1736	1653	1504	1273	6166	48	100
9/24/2015 8:00	1731	1638	1461	1455	6285	48	100
9/29/2015 7:00	1681	1618	1382	1361	6042	48	100
9/29/2015 8:00	1404	1315	1122	1120	4961	48	100
9/30/2015 7:00	1858	1691	1516	1273	6338	48	100
9/30/2015 8:00	1769	1647	1515	1455	6386	48	8
			TOTAL AVERAGE		**6256**		

Westbound: I-8: I-805 On-Ramp to Mission Center Road Off-Ramp

Hour	Lane 1 Flow (Veh/Hour)	Lane 2 Flow (Veh/Hour)	Lane 3 Flow (Veh/Hour)	Lane 4 Flow (Veh/Hour)	Lane 5 Flow (Veh/Hour)	Flow (Veh/Hour)	# Lane Points	% Observed
9/1/2015 7:00	1757	1708	1612	1612	1394	8083	60	100
9/1/2015 8:00	2012	1912	1869	1961	1622	9376	60	100
9/2/2015 7:00	1991	1921	1888	2085	1365	9250	60	100
9/2/2015 8:00	2030	1877	1797	1930	1570	9204	60	100
9/3/2015 7:00	1928	1980	1951	2036	1371	9266	60	100
9/3/2015 8:00	1976	1890	1884	2006	1632	9388	60	100
9/8/2015 7:00	2031	1906	1881	1931	1346	9095	60	100
9/8/2015 8:00	1933	1840	1753	1815	1529	8870	60	100
9/9/2015 7:00	1975	1883	1849	1862	1366	8935	60	100
9/9/2015 8:00	1941	1830	1807	1812	1568	8958	60	100
9/10/2015 7:00	1935	1866	1781	1827	1333	8742	60	100
9/10/2015 8:00	1157	1118	1092	1114	1356	5837	60	100
9/15/2015 7:00	1986	1929	1929	1995	1324	9163	60	100
9/15/2015 8:00	1901	1803	1784	1767	1484	8739	60	100
9/16/2015 7:00	1871	1825	1820	1892	1267	8675	60	100
9/16/2015 8:00	1821	1727	1627	1629	1530	8334	60	100
9/17/2015 7:00	2009	1904	1801	1822	1329	8865	60	100
9/17/2015 8:00	1980	1815	1756	1775	1509	8835	60	100
9/22/2015 7:00	2028	1919	1862	1935	1383	9127	60	100
9/22/2015 8:00	1991	1901	1889	1918	1555	9254	60	100
9/23/2015 7:00	2057	1884	1791	1776	1341	8849	60	100
9/23/2015 8:00	1866	1788	1757	1813	1494	8718	60	100
9/24/2015 7:00	1894	1883	1815	1923	1297	8812	60	100
9/24/2015 8:00	1922	1805	1737	1803	1547	8814	60	100
9/29/2015 7:00	1929	1796	1707	1696	1306	8434	60	100
9/29/2015 8:00	1528	1472	1352	1326	1375	7053	60	100
9/30/2015 7:00	1948	1848	1848	1882	1262	8788	60	100
9/30/2015 8:00	1934	1832	1770	1801	1536	8873	60	8
			TOTAL AVERAGE			**8726**		

INTERSTATE 8					
Direction	**Segment**	**Type**	**Peak Hour Volume**	**Density[a]**	**LOS**
Eastbound	Sunset Cliffs Blvd to Sports Arena Blvd SB On-Ramp	Basic	2,108	16	B
	Sports Arena Blvd On-Ramps to I-5 SB Off-Ramp	Weave	3,982	16	B
	I-5 SB Off Ramp to I-5 SB On-Ramp	Basic	3,061	a	**F**
	I-5 SB On Ramp to Camino Del Rio West On-Ramp	Basic	5,660	a	**F**
	Camino Del Rio West On-Ramp	Merge	7,410	32	C
	I-5 NB On-Ramp to Taylor St Off-Ramp	Weave	6,611	33	D
	Taylor St Off-Ramp to Taylor St On-Ramp	Basic	8,147	40	**E**
	Taylor St On-Ramp	Merge	8,147	31	D
	Taylor St On-Ramp to Hotel Cir S Off-Ramp	Basic	7,859	44	**E**
	Hotel Cir South Off-Ramp	Diverge	9,337	30	D
	Hotel Cir South On-Ramp to SR-163 SB Off-Ramp	Weave	7,382	25	C
	SR-163 NB Off-Ramp	Diverge	5,326	21	C
	Mission Center Rd Off-Ramp	Diverge	5,285	23	C
	Mission Center Rd Off-Ramp to SR-163 NB On-Ramp	Basic	7,542	30	D
	SR-163 NB On-Ramp	Merge	4,570	28	C
	Mission Center Rd On-Ramp	Merge	8,998	31	D
	Qualcomm Way Off-Ramp	Diverge	6,916	32	D
	Qualcomm Way Off-Ramp to I-805 Off-Ramp	Basic	5,559	19	C
	I-805 Off-Ramp	Diverge	5,719	31	D
	I-805 Off-Ramp to Qualcomm Way On-Ramp	Basic	4,367	17	B
	Qualcomm Way On-Ramp	Merge	6,770	42	**E**
	Qualcomm Way On-Ramp to I-805 On Ramp	Basic	8,841	33	D
	I-805 On-Ramp to I-15 NB Off-Ramp	Weave	6,827	A	**F**
	I-15 NB Off-Ramp to I-15 SB On-Ramp	Basic	10,000	a	**F**
	I-15 SB On-Ramp to Fairmount Ave SB On-Ramp	Basic	6,548	17	B
	Fairmount Ave SB On-Ramp	Merge	9,599	45	**E**

a- Density is measured in pc/hr/ln. If density is not shown, volume exceeded capacity.

Bold values indicate intersections operating at LOS E or F

[1] Gray rows represent information from the Transportation Concept Report – Interstate 8 (December 2015).

INTERSTATE 8					
Direction	Segment	Type[1]	Peak Hour Volume	Density[a]	LOS
Westbound	Fairmount Ave Off-Ramp	Diverge	9,828	31	D
	Fairmount Ave Off-Ramp to I-15 NB Off-Ramp	Basic	9,387	29	D
	I-15 NB Off-Ramp	Diverge	11,664	42	E
	I-15 SB Off-Ramp	Diverge	9,365	46	F
	I-15 SB Off Ramp to I-15 On-Ramp	Basic	6,048	29	D
	I-15 On-Ramp to I-805 Off-Ramp	Weave	11,327	35	D
	Qualcomm Way Off-Ramp	Diverge	6,997	29	D
	Qualcomm Way Off-Ramp to I-805 On-Ramp	Basic	6,256	28	D
	I-805 On-Ramp to Mission Center Rd Off-Ramp	Weave	8,726	32	D
	Mission Center Rd Off-Ramp to Mission Center Rd On-Ramp	Basic	10,150	72	F
	Mission Center Rd On-Ramp to SR-163 NB Off-Ramp	Weave	9,069	29	D
	SR-163 SB Off-Ramp	Diverge	8,384	37	E
	SR-163 SB Off-Ramp to SR-163 SB On-Ramp	Basic	7,264	22	C
	SR-163 On-Ramps	Merge	9,639	42	E
	SR-163 NB On-Ramp to Fashion Valley Rd On-Ramp	Basic	7,986	25	D
	Fashion Valley Rd On-Ramp	Merge	10,918	55	F
	Fashion Valley Rd On-Ramp to Taylor St Off-Ramp	Basic	8,000	26	D
	Taylor St Off-Ramp	Diverge	11,101	47	F
	Taylor St Off-Ramp to Taylor St On-Ramp	Basic	7,561	33	D
	Taylor St On-Ramp	Merge	9,021	54	F
	Morena Blvd Off-Ramp	Diverge	7,747	27	C
	I-5 SB Off-Ramp	Diverge	6,589	24	C
	I-5 NB Off-Ramp	Diverge	4,093	24	C
	I-5 NB Off-Ramp to I-5 On-Ramp	Basic	4,355	24	C
	I-5 On-Ramp to Mission Bay Dr Off-Ramp	Basic	3,000	11	B
	Mission Bay Dr Off-Ramp	Diverge	3,801	19	B
	Mission Bay Dr Off-Ramp to Sunset Cliffs Blvd	Basic	1,796	11	B

a- Density is measured in pc/hr/ln. If density is not shown, volume exceeded capacity.

Bold values indicate intersections operating at LOS E or F.

Red highlights represent volumes from Kimley-Horn's existing conditions analysis prepared for the Transportation Concept Report – Interstate 8 corridor (December 2015).

Appendix B
Traffic Signal Timing & Ramp Metering Rate

Traffic Signal Timings

ID	N/S Street	E/W Street
1	I-5 SB Ramps	Tecolote Road
2	I-5 NB Ramps	Tecolote Road
3	I-805 SB Ramps	Phyllis Place
4	I-805 NB Ramps	Murray Ridge Road
5	Mission Center Road	Mission Valley Road/Civita Boulevard
6	Mission Center Road	Westside Drive
7	Sea World Drive	Friars Road
8	Napa Street	Friars Road
9	Colusa Street	Friars Road
10	Via Las Cumbres	Friars Road
11	Fashion Valley Road	Friars Road
12	Via De La Moda	Friars Road
13	Avenida De Las Tiendas	Friars Road
14	Ulric Street/SR-163 SB Ramps	Friars Road
15	SR-163 NB Ramps	Friars Road
16	Frazee Road	Friars Road
17	Mission Center Road	Friars Road WB Ramps
18	Mission Center Road	Friars Road EB Ramps
19	Qualcomm Way	Friars Road WB Ramps
20	Qualcomm Way	Friars Road EB Ramps
21	River Run Drive	Friars Road
22	Fenton Parkway	Friars Road
23	Northside Drive	Friars Road
24	Mission Village Drive	Friars Road WB Ramps
25	Mission Village Drive	Friars Road EB Ramps
26	I-15 SB Ramps	Friars Road
27	I-15 NB Ramps	Friars Road
28	Rancho Mission Road	Friars Road
29	Santo Road	Friars Road
30	Riverdale Street	Friars Road
31	Mission Gorge Road	Friars Road
32	Mission Center Road	Mission Center Court
33	Qualcomm Way	Rio San Diego Drive
34 (Stop Control)	River Run Drive	Rio San Diego Drive
35	Fenton Parkway	Rio San Diego Drive
36	Northside Drive	Rio San Diego Drive
37	Rancho Mission Road	San Diego Mission Road

ID	N/S Street	E/W Street
38	Mission Center Road	Hazard Center Drive
39	Avenida Del Rio	Camino De La Reina
40	Mission Center Road	Camino De La Reina
41	Camino Del Este	Camino De La Reina
42	Qualcomm Way	Camino De La Reina
43	Mission City Parkway	Camino Del Rio North
44	Ward Road	Camino Del Rio North
45	Fairmount Avenue	Camino Del Rio North
46	I-8 WB Ramps	Hotel Circle North
47 (Stop Control)	I-8 WB Ramps	Hotel Circle North
48	Fashion Valley Road	Hotel Circle North
49	Mission Center Road	Camino Del Rio North
50	I-8 Ramps	Camino Del Rio North
51	Camino Del Este	Camino Del Rio North
52	Qualcomm Way	Camino Del Rio North/ I-8 WB Ramps
53	Morena Boulevard	Taylor Street
54	I-8 Ramps	Taylor Street
55 (Stop Control)	Hotel Circle North	Hotel Circle South
56 (Stop Control)	I-8 EB Ramps	Hotel Circle South
57	Bachman Place	Hotel Cirle South
58	Mission Center Road	I-8 EB Ramps
59	Mission Center Road	Camino Del Rio South
60	Qualcomm Way	I-8 EB Ramps
61	Qualcomm Way/Texas Street	Camino Del Rio South
62	Mission City Parkway	Camino Del Rio South
63	I-15 SB Offramp	Camino Del Rio South
64	SR-15 SB Onramp	Camino Del Rio South
65	I-15 NB Onramp	Camino Del Rio South
66	I-8 EB/I-15 SB Offramps	Fairmount Avenue
67	Texas Street	Madison Avenue

1 LOCATION: **RTE 5 SB / SEA WORLD DRIVE**

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F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8
0	WALK	1	7	7	1	1	1	1	1
1	DONT WALK	1	14	11	1	1	1	1	1
2	MIN GREEN	5	14	5	5	1	13	1	1
3	TYPE 3 DET	0	0	0	0	0	0	0	0
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	PASSAGE	2.0	2.0	0.9	1.0	0.9	2.0	0.9	0.9
6	MAX GAP	3.0	2.0	0.9	1.0	0.9	2.0	0.9	0.9
7	MIN GAP	1.0	2.0	0.9	1.0	0.9	2.0	0.9	0.9
8	MAX EXT	30	30	20	30	9	30	9	9
9	MAX 2								
A	MAX 3								
B									
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	YELLOW	3.7	4.5	3.0	4.1	3.0	4.5	3.0	3.0
F	RED	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	PED XING FT		49	38					
	BIKE XING FT		101				90		

CLK RST	
YR	
MO	
DAY	
DOW	
HR	
MIN	
SEC	

	PRE-EMPTION E	
	EV SEL	0
	RR1 CLR	5
	EVA DLY	0
	EVA CLR	5
	EVB DLY	0
	EVB CLR	5
	EVC DLY	0
	EVC CLR	5
	EVD DLY	0
	EVD CLR	5
	MAX EV	255
	RR2 CLR	5

F FLAGS	1	2	3	4	5	6	7	8	
PERMIT	1	2	3	4	5	6	7	8	0
RED LOCK	1			4					1
YEL LOCK									2
V RECALL		2				6			3
P RECALL									4
PED PHASES		2	3						5
RT OLA									6
RT OLB									7
DBL ENTRY									8
MAX 2 PHASES									9
LAG PHASES	READ ONLY								A
RED REST									B
REST-IN-WALK									C
MAX 3 PHASES									D
YEL START UP		2				6			E
FIRST PHASE				4					F
	1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

NOTES:

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

LOCATION: **RTE 5 SB / SEA WORLD DRIVE**

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C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAGS									
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH	60	75	100	100	100	100								LAG FZ FREE		2		4		6		8	0
1	FZ1 GRN FCTR	10	15	15	15	15	20							GAPOUT CP1	LAG FZ CP 1	1		3			6		8	1
2														GAPOUT CP2	LAG FZ CP 2	1		3			6		8	2
3	FZ3 GRN FCTR	14	14	14	14	14	14							GAPOUT CP3	LAG FZ CP 3	1		3			6		8	3
4	FZ4 GRN FCTR	15	20	30	30	25	25				PERM TIME			GAPOUT CP4	LAG FZ CP 4	1		3			6		8	4
5	FZ5 GRN FCTR	0	0	0	0	0	0				LAG OFFSET			GAPOUT CP5	LAG FZ CP 5	1		3			6		8	5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6	1		3			6		8	6
7	FZ7 GRN FCTR	0	0	0	0	0	0				LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR	0	0	0	0	0	0				NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE	0	0	0	0	0	0							GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A	0	0	0	0	0	0				OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		2				6			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRPT																							F
																1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER:
RTE 5 NB RAMP

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8		

LOCATION	OFF	ON
1		1
2		
3		
4		
5		
6		
7		
8		

COO = 1

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1	1			4					CP 1								
2	CP 2									CP 2	1			4					CP 2								
3	CP 3									CP 3	1			4					CP 3								
4	CP 4									CP 4	1			4					CP 4								
5	CP 5									CP 5	1			4					CP 5								
6	CP 6									CP 6	1			4					CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		2							5
6										6 PED			3						6
7										4 PED				4					7
8										8 PED								8	8
9																			9
A	OLA NOT			3						OLA ON	1	2		4		6			A
B	OLB NOT				4					OLB ON	1	2	3			6			B
C	OLC NOT	1			4					OLC ON		2	3			6			C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E
MINUTE = D-B-E
DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)
RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F
MINUTE = D-B-F
DAY = D-C-F

D-E-E = C8 VERSION NUMBER
D-E-F = LITHIUM BATTERY CONDITION
84 = BAD
85 = GOOD

LOCATION: **RTE 5 SB / SEA WORLD DRIVE**

CALTRANS C8 Version 3 DATE: 8/5/2003

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION

2 MAX 2

3 MAX 3

4 COND SERV (1ST SELECT)

5 COND SERV (2ND SELECT)

6 ENERGIZE AUX OUTPUT-RED

7 ENERGIZE AUX OUTPUT-GREEN

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	06	00	1	A		2	3	4	5	6	
1	07	00	2	A		2	3	4	5	6	
2	07	30	3	A		2	3	4	5	6	
3	08	00	2	A		2	3	4	5	6	
4	09	30	6	A		2	3	4	5	6	
5	15	30	4	A		2	3	4	5	6	
6	18	00	2	A		2	3	4	5	6	
7	18	30	E			2	3	4	5	6	
8	15	00	5	A	1						7
9	19	00	E		1						7
A											
B											
C											
D											
E											
F											

8 ENERGIZE AUX OUTPUT-YELLOW

9 TIME OF DAY MAX RECALL (1ST SELECT)

A TRAFFIC ACT. MAX 2 OPERATION

B TIME OF DAY MAX RECALL (2ND SELECT)

C YELLOW YIELD COORDINATION

D YELLOW YIELD COORDINATION

E TIME OF DAY FREE OPERATION

F FLASHING OPERATION

9 PAGE CO9 = 2

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

CONDUCTOR SCHEDULE				
AWG SIZE	PHASE	FUNCTION & CIRCUIT	CONDUIT SIZE 2½" ⚠1	CONDUIT SIZE 2½" ⚠2
#14	1	TRAFFIC SIGNALS	5	
	2	↓	3	
	4		6	
	6		3	
	2	WALK/DONT WALK	2	
	6	↓	2	
	7	PED PUSH BUTTON	1	
	6	↓	1	
		INTERCONNECT	4	
		PUSH BUTTON COMMON	1	
#14		SPARES	3	
		TOTAL #14	32	
#10		SIGNAL COMMON	1	
DLC	1	LOOP DLC		1
	2			1
	4	↓		1
MLC	6	MAGNETOMETER MLC		2
#4		SIGNAL SERVICE	2	
TOTAL CONDUCTORS/CABLES			35	5

DETECTOR ASSIGNMENTS									
DET. NO	PHASE	SLOT	FIELD TERMINAL CONNECTIONS						
1	2	I 2 U	T 2 - 5 & 6						
2	4	I 6 U	T 4 - 9 & 10						
3	1	I 1 U	T 2 - 1 & 2						
PPB	2	I 12 U	T 10 - 9						
PPB	6	I 13 U	T 10 - 11						
MLC NO.	PHASE	TERMINAL NO.	W	B	R	G	FUNCTION	CI COMM.	
M6-1	6	MT-1	1	2	3	4	COUNT / EXT.	C-40	
M6-2	6	MT-1	5	6	7	8	COUNT / EXT.	C-44	

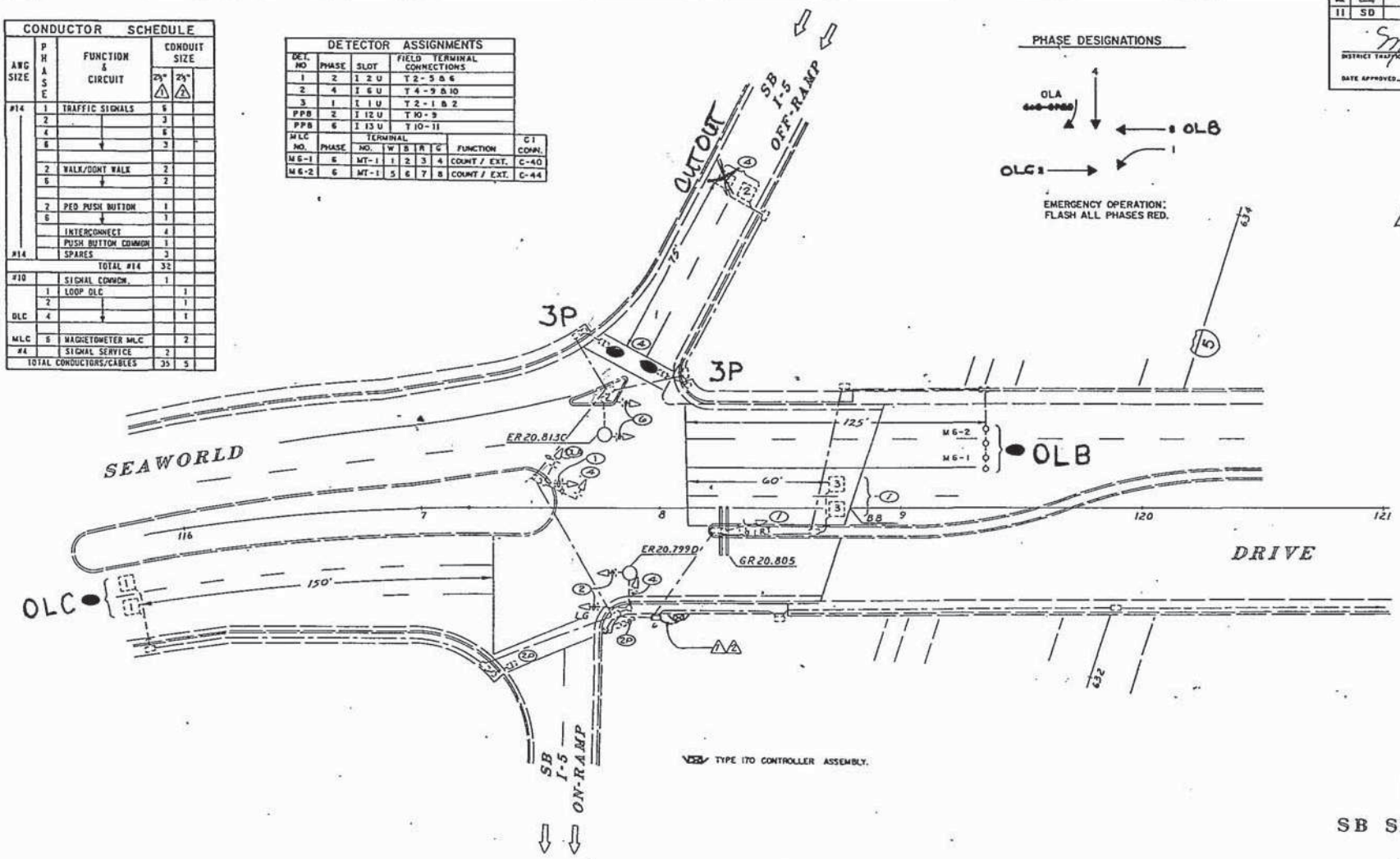
PHASE DESIGNATIONS

OLA 4 6 8 9 10

OLB 1

OLC 2

EMERGENCY OPERATION: FLASH ALL PHASES RED.



TYPE 170 CONTROLLER ASSEMBLY.

Rte	County	Route	Post Mile / Local Project	Sheet No.	Total Sheets
11	SD	5	R 21.0	2	15

M.A. Chase
DISTRICT TRAFFIC ENGINEER — REGISTERED CIVIL ENGINEER NO. 9361

DATE APPROVED

ROUTE 5 AT SB SEAWORLD DR IN SAN DIEGO SIGNAL

LOCATION - 1
SIGNAL NO. EXIST: P20.817 NEW: P20.819

0 20 40
SCALE IN FEET

SHEET E-2

Project Engineer	Date	Design Engineer	Date	Approved Recommended By	Date
D.A. Gilmour	8-77	M.A. Chase	8-77	R.B. Findley	8-77

CU 11359, WO 182821

Revised	Revised	Revised	Revised
8-79	10/78	2/78	12/77

2 LOCATION: **RTE 5 NB / SEA WORLD DRIVE**

CALTRANS C8 Version 3 DATE: 2/11/2015 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	7	1	1	19	7	1	1	CLK RST
1	DONT WALK	1	11	1	1	1	16	1	1	
2	MIN GREEN	1	10	1	5	5	14	1	5	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	0.9	2.0	0.9	1.0	2.0	2.0	0.9	1.0	
6	MAX GAP	0.9	2.0	0.9	1.0	3.0	2.0	0.9	1.0	
7	MIN GAP	0.9	2.0	0.9	1.0	1.0	2.0	0.9	1.0	
8	MAX EXT	9	30	9	25	30	30	9	15	
9	MAX 2									YR
A	MAX 3				40					MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.0	4.5	3.0	4.1	3.7	4.5	3.0	4.0	MIN
F	RED	1.0	1.5	1.0	1.0	1.0	1.5	1.0	1.0	SEC
	PED XING FT		40				55			
	BIKE XING FT		50				106			

	PRE-EMPTION E	
	EV SEL	0
	RR1 CLR	5
	EVA DLY	0
	EVA CLR	5
	EVB DLY	0
	EVB CLR	5
	EVC DLY	0
	EVC CLR	5
	EVD DLY	0
	EVD CLR	5
	MAX EV	255
	RR2 CLR	5

	F FLAGS	1	2	3	4	5	6	7	8	
	PERMIT	1	2	3	4	5	6	7	8	0
	RED LOCK				4	5				1
	YEL LOCK									2
	V RECALL		2				6			3
	P RECALL									4
	PED PHASES		2			5	6			5
	RT OLA									6
	RT OLB									7
	DBL ENTRY				4				8	8
	MAX 2 PHASES									9
	LAG PHASES	READ ONLY								A
	RED REST									B
	REST-IN-WALK									C
	MAX 3 PHASES				4					D
	YEL START UP		2				6			E
	FIRST PHASE				4					F
		1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

ENTRIES IN THESE LOCATIONS ARE NOT TO BE CHANGED

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

LOCATION: **RTE 5 NB / SEA WORLD DRIVE**

CALTRANS C8 Version 3 DATE: 8/5/2003

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE		FLAGS									
		1	2	3	4	5	6	7	8	9		C	D	E		F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH	60	75	100	100	100	100									LAG FZ FREE		2		4		6		8	0
1	FZ1 GRN FCTR	0	0	0	0	0	0							GAPOUT CP1	1	LAG FZ CP 1		2		4	5			8	1
2														GAPOUT CP2	1	LAG FZ CP 2		2		4	5			8	2
3	FZ3 GRN FCTR	0	0	0	0	0	0							GAPOUT CP3	1	LAG FZ CP 3		2		4	5			8	3
4	FZ4 GRN FCTR	10	15	20	30	25	35				PERM TIME			GAPOUT CP4	0	LAG FZ CP 4		2		4	5			8	4
5	FZ5 GRN FCTR	20	25	35	30	40	25				LAG OFFSET			GAPOUT CP5		LAG FZ CP 5		2		4	5			8	5
6											FORCE OFF			GAPOUT CP6		LAG FZ CP 6		2		4	5			8	6
7	FZ7 GRN FCTR	0	0	0	0	0	0				LONG GRN			GAPOUT CP7		LAG FZ CP 7									7
8	FZ8 GRN FCTR	10	15	15	15	15	15				NO GREEN			GAPOUT CP8		LAG FZ CP 8									8
9	MULTI CYCLE	0	0	0	0	0	0							GAPOUT CP9		LAG FZ CP 9									9
A	OFFSET A	50	60	70	70	70	70				OFFSET					LAG C COORD									A
B	OFFSET B															LAG D COORD									B
C	OFFSET C															COORD FAZES		2				6			C
D	FZ 3 EXT																								D
E	FZ 7 EXT																								E
F	OFFSET INTRPT																								F
																	1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER:
RT5 NB RAMP

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8		

LOCATION	OFF	ON
1		
2		1
3		
4		
5		
6		
7		
8		

COO = 2

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS								
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8	
0	RCL									RCL									RCL									0
1	CP 1									CP 1				4	5				CP 1					5				1
2	CP 2									CP 2				4	5				CP 2					5				2
3	CP 3									CP 3				4	5				CP 3									3
4	CP 4					5				CP 4				4					CP 4									4
5	CP 5					5				CP 5									CP 5									5
6	CP 6									CP 6				4					CP 6					5				6
7	CP 7									CP 7									CP 7									7
8	CP 8									CP 8									CP 8									8
9	CP 9									CP 9									CP 9									9
A																			RCL 1									A
B																			RCL 2									B
C																												C
D																												D
E																												E
F																												F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		2							5
6										6 PED						6			6
7										4 PED				4					7
8										8 PED					5				8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E
MINUTE = D-B-E
DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)
RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F
MINUTE = D-B-F
DAY = D-C-F

D-E-E = C8 VERSION NUMBER
D-E-F = LITHIUM BATTERY CONDITION
84 = BAD
85 = GOOD

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
				ON/	S	M	T	W	T	F	S
	HR	MIN	ACT	OFF	1	2	3	4	5	6	7
0	06	00	3	X	1	2	3	4	5	6	7
1	19	00	3		1	2	3	4	5	6	7
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

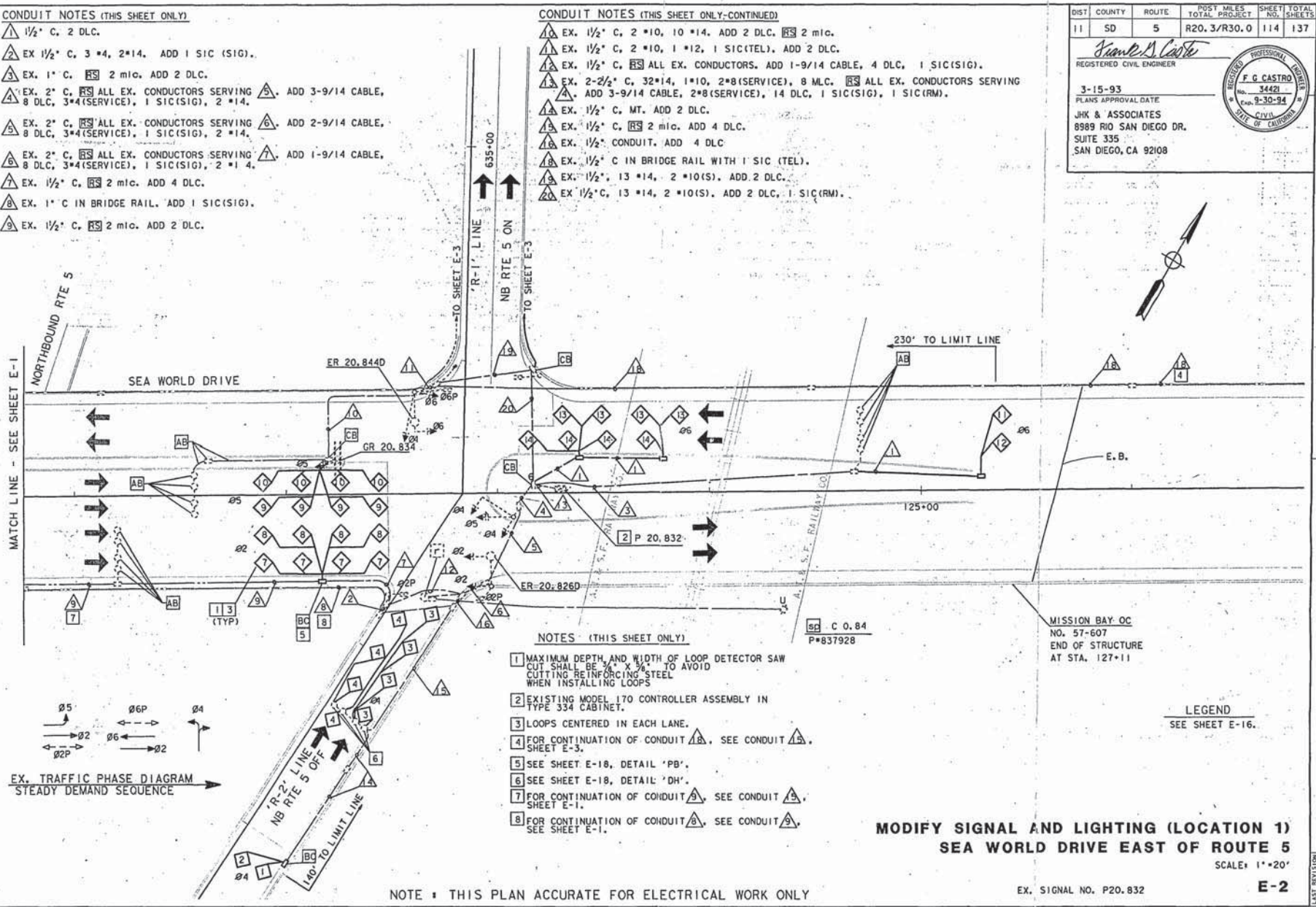
1 TYPE OF MAX TERMINATION
2 MAX 2
3 MAX 3
4 COND SERV (1ST SELECT)
5 COND SERV (2ND SELECT)
6 ENERGIZE AUX OUTPUT-RED
7 ENERGIZE AUX OUTPUT-GREEN
8 ENERGIZE AUX OUTPUT-YELLOW
9 TIME OF DAY MAX RECALL (1ST SELECT)
A TRAFFIC ACT. MAX 2 OPERATION
B TIME OF DAY MAX RECALL (2ND SELECT)
C YELLOW YIELD COORDINATION
D YELLOW YIELD COORDINATION
E TIME OF DAY FREE OPERATION
F FLASHING OPERATION

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
					S	M	T	W	T	F	S
	HR	MIN	CP	OS	1	2	3	4	5	6	7
0	06	00	1	A		2	3	4	5	6	
1	07	00	2	A		2	3	4	5	6	
2	07	30	3	A		2	3	4	5	6	
3	08	00	2	A		2	3	4	5	6	
4	09	30	6	A		2	3	4	5	6	
5	15	30	4	A		2	3	4	5	6	
6	18	00	2	A		2	3	4	5	6	
7	18	30	E			2	3	4	5	6	
8	15	00	5		1						7
9	19	00	E		1						7
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 2

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
					S	M	T	W	T	F	S
	HR	MIN	CP	OS	1	2	3	4	5	6	7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											


CONDUIT NOTES (THIS SHEET ONLY)
1 1½" C. 2 DLC.
2 EX 1½" C. 3 #4, 2#14. ADD 1 SIC (SIG).
3 EX. 1" C. RS 2 mlc. ADD 2 DLC.
4 EX. 2" C. RS ALL EX. CONDUCTORS SERVING 5. ADD 3-9/14 CABLE, 8 DLC, 3#4(SERVICE), 1 SIC(SIG), 2 #14.
5 EX. 2" C. RS ALL EX. CONDUCTORS SERVING 6. ADD 2-9/14 CABLE, 8 DLC, 3#4(SERVICE), 1 SIC(SIG), 2 #14.
6 EX. 2" C. RS ALL EX. CONDUCTORS SERVING 7. ADD 1-9/14 CABLE, 8 DLC, 3#4(SERVICE), 1 SIC(SIG), 2 #14.
7 EX. 1½" C. RS 2 mlc. ADD 4 DLC.
8 EX. 1" C IN BRIDGE RAIL. ADD 1 SIC(SIG).
9 EX. 1½" C. RS 2 mlc. ADD 2 DLC.
CONDUIT NOTES (THIS SHEET ONLY-CONTINUED)
10 EX. 1½" C, 2 #10, 10 #14. ADD 2 DLC. RS 2 mlc.
11 EX. 1½" C, 2 #10, 1 #12, 1 SIC(TEL). ADD 2 DLC.
12 EX. 1½" C. RS ALL EX. CONDUCTORS. ADD 1-9/14 CABLE, 4 DLC, 1 SIC(SIG).
13 EX. 2-2½" C, 32#14, 1#10, 2#8(SERVICE), 8 MLC. RS ALL EX. CONDUCTORS SERVING 4. ADD 3-9/14 CABLE, 2#8(SERVICE), 14 DLC, 1 SIC(SIG), 1 SIC(RM).
14 EX. 1½" C. MT. ADD 2 DLC.
15 EX. 1½" C. RS 2 mlc. ADD 4 DLC.
16 EX. 1½" CONDUIT. ADD 4 DLC
17 EX. 1½" C IN BRIDGE RAIL WITH 1 SIC (TEL).
18 EX. 1½", 13 #14, 2 #10(S). ADD 2 DLC.
19 EX 1½"C, 13 #14, 2 #10(S). ADD 2 DLC, 1 SIC(RM).
DIST 11 | COUNTY SD | ROUTE 5 | POST MILES TOTAL PROJECT R20.3/R30.0 | SHEET NO. 114 | TOTAL SHEETS 137
REGISTERED CIVIL ENGINEER
3-15-93
PLANS APPROVAL DATE
F G CASTRO No. 34421 Exp. 9-30-94 CIVIL
JHK & ASSOCIATES
8989 RIO SAN DIEGO DR.
SUITE 335
SAN DIEGO, CA 92108
NORTHBOUND RTE 5
SEA WORLD DRIVE
MATCH LINE - SEE SHEET E-1
TO SHEET E-3
'R-1' LINE
NB RTE 5 ON
635+00
TO SHEET E-3
ER 20.844D
GR 20.834
230' TO LIMIT LINE
E.B.
125+00
P 20.832
ER-20.826D
A.T.&S.F. RAILWAY CO.
MISSION BAY OC
NO. 57-607
END OF STRUCTURE
AT STA. 127+11
SD C 0.84
P-837928
NOTES (THIS SHEET ONLY)
1 MAXIMUM DEPTH AND WIDTH OF LOOP DETECTOR SAW CUT SHALL BE ¾" X ¾" TO AVOID CUTTING REINFORCING STEEL WHEN INSTALLING LOOPS
2 EXISTING MODEL 170 CONTROLLER ASSEMBLY IN TYPE 334 CABINET.
3 LOOPS CENTERED IN EACH LANE.
4 FOR CONTINUATION OF CONDUIT 18, SEE CONDUIT 15, SHEET E-3.
5 SEE SHEET E-18, DETAIL 'PB'.
6 SEE SHEET E-18, DETAIL 'DH'.
7 FOR CONTINUATION OF CONDUIT 9, SEE CONDUIT 15, SHEET E-1.
8 FOR CONTINUATION OF CONDUIT 8, SEE CONDUIT 9, SEE SHEET E-1.
LEGEND
SEE SHEET E-16.
Ø5 Ø6P Ø4 Ø2 Ø6 Ø2 Ø2P
EX. TRAFFIC PHASE DIAGRAM
STEADY DEMAND SEQUENCE
'R-2' LINE
NB RTE 5 OFF
140' TO LIMIT LINE
NOTE : THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY
MODIFY SIGNAL AND LIGHTING (LOCATION 1)
SEA WORLD DRIVE EAST OF ROUTE 5
SCALE: 1"=20'
EX. SIGNAL NO. P20.832
E-2
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL
DESIGN OVERSIGH JESSIE CABUGAO
CALCULATED/DESIGNED BY FGC 2/93
CHECKED BY BCS 2/93
DATE REVISED
REVISED BY
LAST REVISION 02-18-93
FORM DC-OE-90-PF (REV. 3/88)
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3
CU 11205
EA 085971

Dist.	County	Route	Post Mile / Total Project	Sheet No.	Total Sheets
11	SD	5	R21.0	3	15

DISTRICT TRAFFIC ENGINEER — REGISTERED CIVIL ENGINEER No. 9351

DATE APPROVED

PHASE DESIGNATIONS

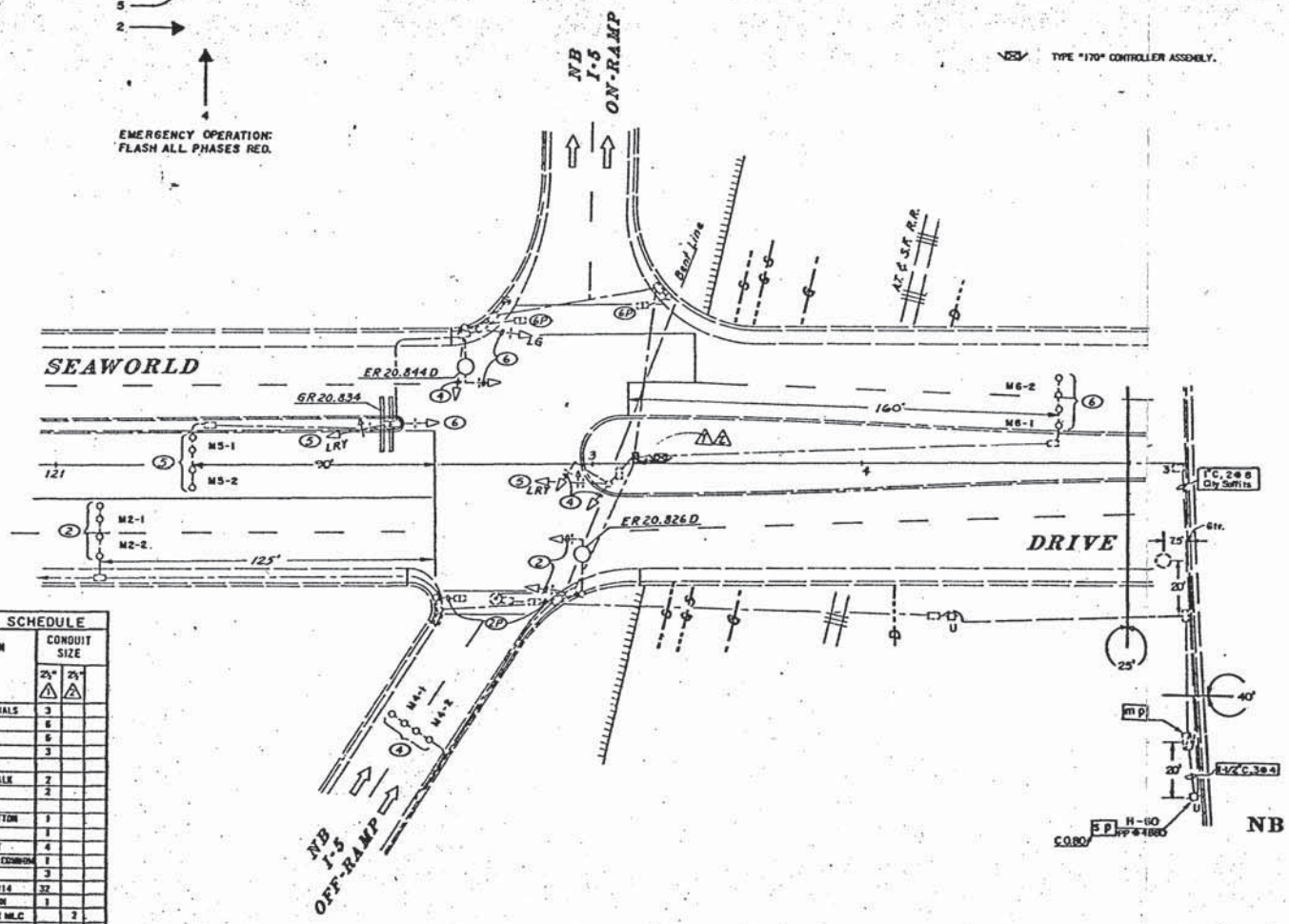
5 → 6

2 →

4

EMERGENCY OPERATION: FLASH ALL PHASES RED.

TYPE "170" CONTROLLER ASSEMBLY.



CONDUCTOR SCHEDULE

AWG SIZE	PHASE	FUNCTION & SIZE	CONDUIT SIZE 2½"	CONDUIT SIZE 2½"
#14	2	TRAFFIC SIGNALS	3	
	4		6	
	5		6	
	6		3	
	2	WALK/DONT WALK	2	
	6		2	
	2	PED PUSH BUTTON	1	
	6		1	
		INTERCONNECT	4	
		PUSH BUTTON COMMON	1	
#14		SPARES	3	
		TOTAL #14	32	
#10		SIGNAL COMMON	1	
	2	MAGNETOMETER WIRE		2
	4			2
	5			2
	6			2
WIRE				
#8		SIGNAL SERVICE	2	
TOTAL CONDUCTORS/CABLES			35	8

ROUTE 5 AT NB SEAWORLD DR IN SAN DIEGO SIGNAL

LOCATION - 2

EXIST: P20.834

SIGNAL NO. NEW: P20.832

SCALE IN FEET 0 20 40

SHEET E-3

Project Engineer	Date	Design Engineer	Date	Approved Recommended By	Date
D. A. Gilmour	8-77	M. A. Chase	8-77	R. B. Findley	8-77

CU 11359 WO 182821

3

LOCATION: **RTE 805 SB @ MURRAY RIDGE ROAD**

CALTRANS C8 Version 3 DATE: 2/26/2015 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	7	1	1	1	7	1	1	CLK RST
1	DONT WALK	1	15	1	1	1	12	1	1	
2	MIN GREEN	5	12	1	5	1	11	1	1	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	2.0	2.0	0.9	2.0	0.9	2.0	0.9	0.9	
6	MAX GAP	2.0	2.0	0.9	2.0	0.9	2.0	0.9	0.9	
7	MIN GAP	2.0	2.0	0.9	2.0	0.9	2.0	0.9	0.9	
8	MAX EXT	35	5	9	25	9	40	9	9	
9	MAX 2									YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.7	4.8	3.0	4.5	3.0	4.8	3.0	3.0	MIN
F	RED	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	SEC
	PED XING FT		53				42			
	PED XING FT		81				58			

PRE-EMPTION E		F FLAGS	1	2	3	4	5	6	7	8	
EV SEL	0	PERMIT	1	2	3	4	5	6	7	8	0
RR1 CLR	5	RED LOCK		2		4					1
EVA DLY	0	YEL LOCK									2
EVA CLR	5	V RECALL						6			3
EVB DLY	0	P RECALL									4
EVB CLR	5	PED PHASES		2				6			5
EVC DLY	0	RT OLA									6
EVC CLR	5	RT OLB									7
EVD DLY	0	DBL ENTRY									8
EVD CLR	5	MAX 2 PHASES									9
MAX EV	255	LAG PHASES	READ ONLY								A
RR2 CLR	5	RED REST									B
		REST-IN-WALK									C
		MAX 3 PHASES									D
		YEL START UP		2				6			E
		FIRST PHASE				4					F
			1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FD0 TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

NOTES:

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY ▨

LOCATION: **RTE 805 SB @ MURRAY RIDGE ROAD**

CALTRANS C8 Version 3 DATE: 3/12/2009

C PAGE

		CONTROL PLANS										Y-COORD		LAG PHASE	FLAGS								
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH														LAG FZ FREE		2		4		6		8	0
1	FZ1 GRN FCTR													GAPOUT CP1	LAG FZ CP 1									1
2														GAPOUT CP2	LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3	LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4	LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A										OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		2				6			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRPT																							F
																1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER:

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8		

LOCATION	OFF	ON
1		1
2		
3		
4		
5		
6		
7		
8		

COO = 1

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

LOCATION: **RTE 805 SB @ MURRAY RIDGE ROAD**

CALTRANS C8 Version 3 DATE: 3/12/2009

D PAGE

	D MAX	FLAGS 1	2	3	4	5	6	7	8	E MIN	FLAGS 1	2	3	4	5	6	7	8	F PED	FLAGS 1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8

E PAGE

	E FUNCTION	FLAGS 1	2	3	4	5	6	7	8	F FUNCTION	FLAGS 1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		2							5
6										6 PED						6			6
7										4 PED				4					7
8										8 PED								8	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E

MINUTE = D-B-E

DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES

(CALL ACTIVE LIGHTS)

RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES

(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F

MINUTE = D-B-F

DAY = D-C-F

D-E-E = C8 VERSION NUMBER

D-E-F = LITHIUM BATTERY CONDITION

84 = BAD

85 = GOOD

LOCATION: **RTE 805 SB @ MURRAY RIDGE ROAD**

CALTRANS C8 Version 3 DATE: 3/12/2009

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION
2 MAX 2
3 MAX 3
4 COND SERV (1ST SELECT)
5 COND SERV (2ND SELECT)
6 ENERGIZE AUX OUTPUT-RED
7 ENERGIZE AUX OUTPUT-GREEN

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

8 ENERGIZE AUX OUTPUT-YELLOW
9 TIME OF DAY MAX RECALL (1ST SELECT)
A TRAFFIC ACT. MAX 2 OPERATION
B TIME OF DAY MAX RECALL (2ND SELECT)
C YELLOW YIELD COORDINATION
D YELLOW YIELD COORDINATION
E TIME OF DAY FREE OPERATION
F FLASHING OPERATION

9 PAGE C09 = 2

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

POLE SCHEDULE

NO.	STANDARD TYPE	HGT.	SIG. M.A.	LUM. M.A.	LUMINAIRE HPS	PLACEMENT A	PLACEMENT B	SIGNAL MOUNTING VEHICLE		PEDESTRIAN SIGNAL	PEDESTRIAN PPB	REMARKS
(A)	24-4-[illegible]	30'	35'	15'	200W	5'	4'	1-MAST 1-MAS	SV-2-TD	SP-1-T	[illegible]	PEU
(B)	15[illegible]	30'	-	15'	200W	-3'	4'	-	-	SP-1-T	[illegible]	-
(C)	17-2-100	30'	15'	15'	200W	12'	4'	1-MAS	SV-2-TD	SP-1-T	[illegible]	-
(D)	17-2-100	30'	15'	15'	200W	9'	4'	1-MAS	SV-1-T SV-2-TD	SP-1-T	[illegible]	8

ISTRUCTION NOTES

E CONTROLLER ASSEMBLY WILL BE STATE-FURNISHED ALONG WITH A BATTERY CK UP SYSTEM (BBS). THE CONTRACTOR WILL BE REQUIRED TO INSTALL THE NTROLLER ASSEMBLY ON FOUNDATION. IN ADDITION TO THE 252 DISCRIMINATOR CARD E CONTRACTOR SHALL FURNISH AND INSTALL VIDEO DETECTION UNITS (VDU), A FLAT NEL DISPLAY, BATTERIES FOR THE BATTERY BACK UP SYSTEM AND ONE SERIAL TO ERNET CONVERTER UNIT (SECU). See Sheet [illegible] FOR EQUIPMENT CONFIGURATIONS DETAILS

RNISH AND INSTALL TYPE III-BF SERVICE EQUIPMENT.

STALL EMERGENCY VEHICLE DETECTOR (EVD) PER CALTRANS STANDARD PLANS -4E.

RNISH AND INSTALL R3-4, R3-18 AND R61-7(CA) SIGNS PER CALTRANS STANDARD ANS ES-7N.

RNISH AND INSTALL R9-3a SIGN ON SIGNAL POLE. (STRAP AND SADDLE).

RNISH AND INSTALL VIDEO IMAGE SENSOR (VIS) AS SHOWN. SEE SPECIAL PROVISION.

NTRACTOR SHALL VERIFY SERVICE LOCATION AN REQUIREMENT WITH SAN DIEGO GAS D ELECTRIC CO.

ACE PHASE 2 SIGNAL HEAD 17' ABOVE BASE PLAT.

STING RAMP METER CONTROLLER, CONTRACTOR SHALL PLACE A TERMINAL STRIP EXISTING RAMP METER CONTROLLER CABINET TO LAND ALL THREE OCC'S. RNISH AND INSTALL ONE ETHERNET SWITCH IN THE EXISTING RAMP METER NTROLLER CABINET. See controllers Details

R LOOP DETECTOR INSTALLATION ON EXISTING BRIDGE DECK SEE DETAIL "A".

TYPE 15 ELECTROLIER.

STING CONDUIT TO BE REMAIN FOR CONDUCTORS SEE CONDUIT NOTES RUN 17.

STING CONDUIT TO BE REMAIN, REMOVE ALL CONDUCTORS.

CONDUIT NOTES

6 2"C, [illegible]ITING), 3#14 (PEU), 2#8 (RAMP METER POWER).

7 2"C, 2#8 (SIGNAL).

8 2"C, PER SDG&E REQUIREMENTS.

9 2"C, 2DLC.

10 2"C, 1DLC.

11 2"C, 3-4 PAIR OUTDOOR CATEGORY 5E CABLE (OCC).

12 2"C, 2#8 (RAMP METER POWER).

13 EXISTING 1 1/2"C, 2# 8 (RAMP METER POWER), 2#8 (Ig), 2#8 (RAMP METER POWER), 2dlc.

14 EXISTING 1 1/2"C, 1#8.

15 EXISTING 1 1/2"C, 2# 8 (RAMP METER POWER), 2#8 (Ig), 2dlc. REMOVE 4#8.

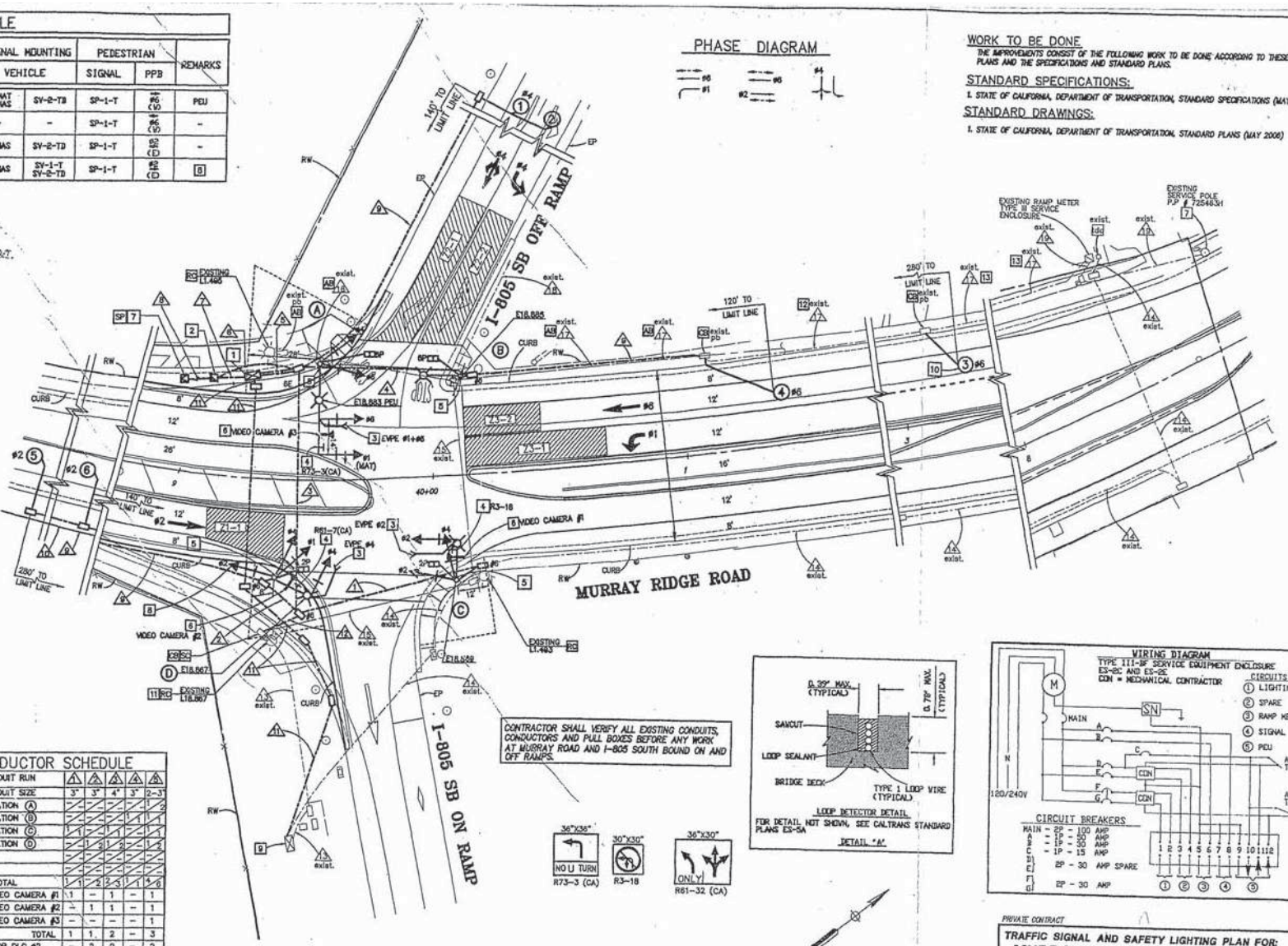
16 EXISTING 1 1/2"C, 2# 8 (Ig)

17 EXISTING 1 1/2"C, 2# 8 (RAMP METER POWER), 2#8 (Ig). REMOVE CONDUCTORS AND INSTALL 1DLC.

18 EXISTING 1"C, 2#8c.

19 EXISTING CONDUIT PER SDG&E.

PHASE DIAGRAM



WORK TO BE DONE

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD PLANS.

STANDARD SPECIFICATIONS:

1. STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS (MAY 2006)

STANDARD DRAWINGS:

1. STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD PLANS (MAY 2006)

CONDUCTOR SCHEDULE

COND SIZE THW	CONDUIT RUN	1	2	3	4	5
	CONDUIT SIZE	3"	3"	4"	3"	2-3
#8	LOCATION (A)	-	-	-	-	2
#8	LOCATION (B)	-	-	-	1	1
#8	LOCATION (C)	1	-	1	-	1
#8	LOCATION (D)	-	1	1	1	1
#8		-	-	-	-	-
#8		-	-	-	-	-
#8	TOTAL	1	1	2	1	4
VIDEO HARNESS	VIDEO CAMERA #1	1	-	1	-	1
VIDEO HARNESS	VIDEO CAMERA #2	-	1	1	-	1
VIDEO HARNESS	VIDEO CAMERA #3	-	-	-	-	1
VIDEO HARNESS	TOTAL	1	1	2	-	3
DLC TYPE II	LOOP DLC #2	-	2	2	-	2
DLC TYPE II	LOOP DLC #4	-	-	-	-	1
DLC TYPE II	LOOP DLC #6	-	-	-	2	2
DLC TYPE II	TOTAL DLC	-	2	2	2	5
	EVC	1	1	2	-	3
#6	LIGHTING	-	2	2	2	-
#6	GROUND	1	1	1	1	1
	RAMP METRER	-	-	2	-	-
#10	VIDEO SERVICE	-	-	-	-	-
#14	PEU	-	-	-	-	-
	TDC	-	-	-	-	-
INTERCONNECT CABLE (SIC)		-	-	-	-	-

CONTRACTOR SHALL VERIFY ALL EXISTING CONDUITS, CONDUCTORS AND PULL BOXES BEFORE ANY WORK AT MURRAY ROAD AND I-805 SOUTH BOUND ON AND OFF RAMPS.

LOOP DETECTOR DETAIL

FOR DETAIL NOT SHOWN, SEE CALTRANS STANDARD PLANS ES-5A

DETAIL "A"

SCALE: 1"=20'
0 10 20

PRELIMINARY PLANS
NOT FOR BID OR CONSTRUCTION
PLANS NOT APPROVED

BASE PROVIDED BY: STUART ENGINEERING
TRAFFIC SIGNAL PLAN BY:
URBAN SYSTEMS ASSOCIATES, INC.
ANDREW P. SCHLAEFLI - R.C.E. #15964 DATE

CTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME D COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE TRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, S REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES D, INDEMNIF HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL REAL OR A IN CONNECTION WITH PERFORMANCE OF WORK ON THIS EXCEPTING Y ARISING FROM THE SOLE NEGLIGENCE OF DESIGN ONAL.

UNAUTHORIZED CHANGES & USES

N:
NEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE UTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE UST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE

PLAN SHEET ACCURATE FOR ELECTRICAL WORK ONLY

PRIVATE CONTRACT

TRAFFIC SIGNAL AND SAFETY LIGHTING PLAN FOR:

MURRAY RIDGE ROAD AND I-805 SB ON/OFF RAMPS SIGNAL NO. P18.875

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 9 OF 42 SHEETS

W.O. NO. 427506
P.T.S NO. 124604

FOR CITY ENGINEER			DATE	
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	USAI			
AS-BUILTS				

V.T.M.

1862-6281 NAD83 COORDINATES

222-1721 LAMBERT COORDINATES

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

24456-10-D

TRAFFIC SIGNAL INSTRUCTIONS, DOT 1704

4 LOCATION: **RTE 805 NB @ MURRAY RIDGE ROAD**

CALTRANS C8 Version 3 DATE: 2/26/2015 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	7	1	1	1	7	1	7	CLK RST
1	DONT WALK	1	15	1	1	1	29	1	37	
2	MIN GREEN	5	11	1	1	5	17	1	5	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	0.9	2.0	0.9	0.9	2.0	2.0	0.9	2.0	
6	MAX GAP	0.9	2.0	0.9	0.9	2.0	2.0	0.9	2.0	
7	MIN GAP	0.9	2.0	0.9	0.9	2.0	2.0	0.9	2.0	
8	MAX EXT	9	35	9	9	30	35	9	40	
9	MAX 2									YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.0	4.8	3.0	3.0	3.7	4.8	3.0	4.1	MIN
F	RED	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	SEC
	PED XING FT		54				100		130	
	PED XING FT		64				157			

	PRE-EMPTION E	
	EV SEL	0
	RR1 CLR	5
	EVA DLY	0
	EVA CLR	5
	EVB DLY	0
	EVB CLR	5
	EVC DLY	0
	EVC CLR	5
	EVD DLY	0
	EVD CLR	5
	MAX EV	255
	RR2 CLR	5

F FLAGS	1	2	3	4	5	6	7	8	
PERMIT	1	2	3	4	5	6	7	8	0
RED LOCK									1
YEL LOCK									2
V RECALL		2				6			3
P RECALL									4
PED PHASES		2				6		8	5
RT OLA									6
RT OLB									7
DBL ENTRY									8
MAX 2 PHASES									9
LAG PHASES	READ ONLY								A
RED REST									B
REST-IN-WALK									C
MAX 3 PHASES									D
YEL START UP		2				6			E
FIRST PHASE								8	F
	1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

NOTES:

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

LOCATION: **RTE 805 NB @ MURRAY RIDGE ROAD**

CALTRANS C8 Version 3 DATE: 6/5/2012 PAGE 2

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAGS									
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH														LAG FZ FREE		2		4		6		8	0
1	FZ1 GRN FCTR													GAPOUT CP1	LAG FZ CP 1									1
2														GAPOUT CP2	LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3	LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4	LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A										OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		2				6			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRPT																							F
																1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER:

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8		

LOCATION	OFF	ON
1		1
2		
3		
4		
5		
6		
7		
8		

COO = 1

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		2							5
6										6 PED						6			6
7										4 PED				4					7
8										8 PED								8	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E
MINUTE = D-B-E
DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)
RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F
MINUTE = D-B-F
DAY = D-C-F

D-E-E = C8 VERSION NUMBER
D-E-F = LITHIUM BATTERY CONDITION
84 = BAD
85 = GOOD

LOCATION: **RTE 805 NB @ MURRAY RIDGE ROAD**

CALTRANS C8 Version 3 DATE: 6/5/2012

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION
2 MAX 2
3 MAX 3
4 COND SERV (1ST SELECT)
5 COND SERV (2ND SELECT)
6 ENERGIZE AUX OUTPUT-RED
7 ENERGIZE AUX OUTPUT-GREEN
8 ENERGIZE AUX OUTPUT-YELLOW
9 TIME OF DAY MAX RECALL (1ST SELECT)
A TRAFFIC ACT. MAX 2 OPERATION
B TIME OF DAY MAX RECALL (2ND SELECT)
C YELLOW YIELD COORDINATION
D YELLOW YIELD COORDINATION
E TIME OF DAY FREE OPERATION
F FLASHING OPERATION

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 2

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

EQUIPMENT AND POLE SCHEDULE

LOC	STANDARDS TYPE	STANDARDS SMS	STANDARDS LMA	PLACEMENT DIMENSIONS A	PLACEMENT DIMENSIONS B	SIGNAL MOUNTING AND PLACEMENT VEHICLE POLE	VEHICLE MAST ARM	PEDESTRIAN SIGNAL	PEDESTRIAN PED	LUMINAIRE	REMARKS
A	15TS	-	18'	4.5'	4'	SV-1-T	-	SP-1-T	2@2	200W HPS	
B	13-2-100	25'	15'	3'	4'	SV-1-T	MAS(28)	-	-	200W HPS	3 4 5
C	18-2-100	25'	-	8.5'	4'	SV-1-T	MAS(28)	SP-1-T	1@2	-	3 4 5 7
D	15TS	-	15'	-29'	4'	SV-2-T	-	SP-2-T	1@2 1@3	200W HPS	
E	26-2-100	45'	15'	12'	4'	SV-2-T	MAT(25) MAS(32)	SP-2-T	2@2 1@3	200W HPS	3 4 5

CONDUIT AND CONDUCTOR SCHEDULE

AWG SIZE OR CABLE TYPE	PHASE	POLE OR CIRCUIT	CONDUIT SIZE AND RUN 3" /1	4" /2	2" /3	4" /4	4" /5	2-4" /6	3" /7	3" /8	2-3" /9
3 C8C / 12 C8C		POLE - A	-	-	-	-	-	-	-	-	1
		B	-	-	-	-	-	-	-	-	1
		C	-	-	1	-	-	-	-	-	1
		D	-	-	-	18	5	1	-	-	1
		E	-	-	-	-	5	1	-	-	1
TOTAL 3 C8C / 12 C8C			-	-	1	3	5	1	-	-	4
VIDEO CABLE HARNESS	2/#8	CAMERA #1	-	-	-	-	-	-	1	-	1
	6	CAMERA #2	1	1	1	1	-	1	-	-	1
	8	CAMERA #3	-	1	1	1	-	1	-	-	1
*10		FLASHING BEACON	-	-	-	-	-	-	-	-	-
*10		SAFETY LIGHTING	2	2	2	2	2	2	2	2	2
*8		IRRIGATION	2	2	-	-	-	-	-	-	-
*6		SIGNAL	-	-	2	2	-	2	-	-	2
TYPE E DLC	2/#8	LOOP DLC	-	-	-	-	-	-	-	-	2
	8	LOOP DLC	-	-	-	-	-	-	-	-	1
	8	LOOP DLC	-	-	-	-	1	-	-	-	1
EVPE CABLE	(EVC)		1	2	2	2	1	3	-	-	3
SIC	TEL IC		-	-	-	-	-	-	-	-	1
	CONTROLLER IC		-	-	-	-	-	-	-	-	1
QCC (CATEGORY 5E CABLE)			-	-	-	-	-	-	-	-	1
TOTAL CONDUCTORS/CABLES			7	8	14	18	8	23	4	5	29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	805	18.9/19.0	17	18

REGISTERED CIVIL ENGINEER — DATE 29OCT10

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

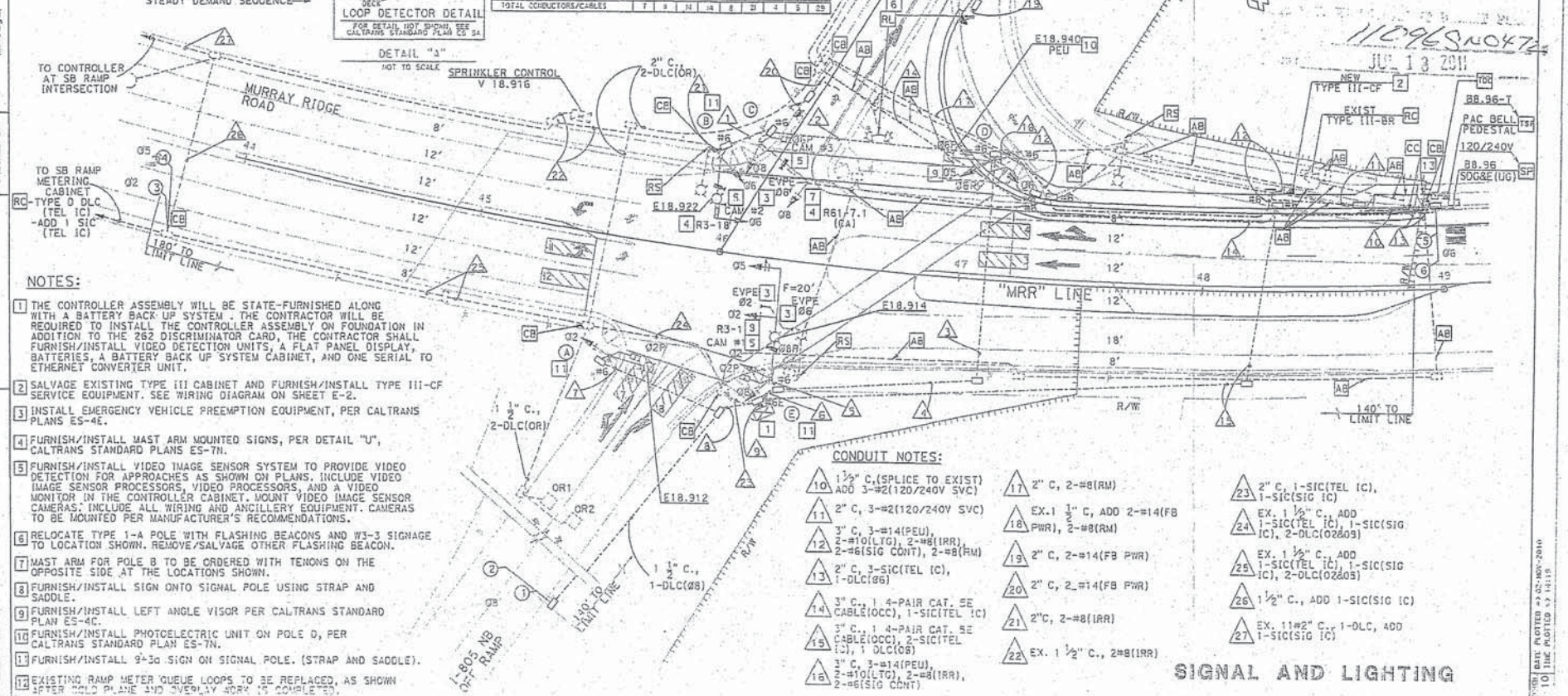
REGISTERED PROFESSIONAL ENGINEER — EDGAR A. CAMERINO — No. 58844 — Exp. 6-30-11 — CIVIL — STATE OF CALIFORNIA

RICK ENGINEERING COMPANY
5620 FRIARS RD
SAN DIEGO, CA 92110
(619) 291-0707

TRAFFIC PHASE DIAGRAM
STEADY DEMAND SEQUENCE

LOOP DETECTOR DETAIL
FOR DETAIL NOT SHOWN, SEE CALTRANS STANDARD PLAN ES 5A

DETAIL "A"
NOT TO SCALE



NOTES:

1. THE CONTROLLER ASSEMBLY WILL BE STATE-FURNISHED ALONG WITH A BATTERY BACK UP SYSTEM. THE CONTRACTOR WILL BE REQUIRED TO INSTALL THE CONTROLLER ASSEMBLY ON FOUNDATION IN ADDITION TO THE 2&2 DISCRIMINATOR CARD, THE CONTRACTOR SHALL FURNISH/INSTALL VIDEO DETECTION UNITS, A FLAT PANEL DISPLAY, BATTERIES, A BATTERY BACK UP SYSTEM CABINET, AND ONE SERIAL TO ETHERNET CONVERTER UNIT.
2. SALVAGE EXISTING TYPE III CABINET AND FURNISH/INSTALL TYPE III-CF SERVICE EQUIPMENT. SEE WIRING DIAGRAM ON SHEET E-2.
3. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT, PER CALTRANS PLANS ES-4E.
4. FURNISH/INSTALL MAST ARM MOUNTED SIGNS, PER DETAIL "U", CALTRANS STANDARD PLANS ES-7N.
5. FURNISH/INSTALL VIDEO IMAGE SENSOR SYSTEM TO PROVIDE VIDEO DETECTION FOR APPROACHES AS SHOWN ON PLANS. INCLUDE VIDEO IMAGE SENSOR PROCESSORS, VIDEO PROCESSORS, AND A VIDEO MONITOR IN THE CONTROLLER CABINET. MOUNT VIDEO IMAGE SENSOR CAMERAS. INCLUDE ALL WIRING AND ANCILLERY EQUIPMENT. CAMERAS TO BE MOUNTED PER MANUFACTURER'S RECOMMENDATIONS.
6. RELOCATE TYPE 1-A POLE WITH FLASHING BEACONS AND W3-3 SIGNAGE TO LOCATION SHOWN. REMOVE/SALVAGE OTHER FLASHING BEACON.
7. MAST ARM FOR POLE B TO BE ORDERED WITH TENONS ON THE OPPOSITE SIDE AT THE LOCATIONS SHOWN.
8. FURNISH/INSTALL SIGN ONTO SIGNAL POLE USING STRAP AND SADDLE.
9. FURNISH/INSTALL LEFT ANGLE VISOR PER CALTRANS STANDARD PLAN ES-4C.
10. FURNISH/INSTALL PHOTOELECTRIC UNIT ON POLE D, PER CALTRANS STANDARD PLAN ES-7N.
11. FURNISH/INSTALL 9"x3o SIGN ON SIGNAL POLE. (STRAP AND SADDLE).
12. EXISTING RAMP METER QUEUE LOOPS TO BE REPLACED, AS SHOWN AFTER COLD PLANE AND OVERLAY WORK IS COMPLETED.
13. ADJUST PULL BOXES TO GRADE.

CONDUIT NOTES:

10. 1½" C.(SPLICE TO EXIST) ADD 3-#2(120/240V SVC)
11. 2" C, 3-#2(120/240V SVC)
12. 3" C, 3-#14(PEU), 2-#10(LTG), 2-#8(IRR), 2-#6(SIG CONT), 2-#8(RM)
13. 2" C, 3-SIC(TEL IC), 1-DLC(Ø6)
14. 3" C., 1 4-PAIR CAT. 5E CABLE(OCC), 1-SIC(TEL IC)
15. 3" C., 1 4-PAIR CAT. 5E CABLE(OCC), 2-SIC(TEL IC), 1 DLC(Ø8)
16. 3" C, 3-#14(PEU), 2-#10(LTG), 2-#8(IRR), 2-#6(SIG CONT)
17. 2" C, 2-#8(RM)
18. EX.1 1½" C, ADD 2-#14(FB PWR), 2-#8(RM)
19. 2" C, 2-#14(FB PWR)
20. 2" C, 2_#14(FB PWR)
21. 2"C, 2-#8(IRR)
22. EX. 1 ½" C., 2#8(IRR)
23. 2" C, 1-SIC(TEL IC), 1-SIC(SIG IC)
24. EX. 1 ½" C., ADD 1-SIC(TEL IC), 1-SIC(SIG IC), 2-DLC(02&03)
25. EX. 1 ½" C., ADD 1-SIC(TEL IC), 1-SIC(SIG IC), 2-DLC(02&03)
26. 1½" C., ADD 1-SIC(SIG IC)
27. EX. 11#2" C., 1-DLC, ADD 1-SIC(SIG IC)

SIGNAL AND LIGHTING

E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — CONSULTANT FUNCTIONAL SUPERVISOR: E. Camerino — CALCULATED-DESIGNED BY: J. Cruz — CHECKED BY: M. Jugar — REVISED BY — DATE REVISED

BAR PLOTTED = 02-NOV-2010
10-29 10 TIME PLOTTED = 14:18

11C96 SN0472
JUL 13 2011

5

Mission Valley Rd @ Mission Center Rd — 223 Program

Group Assignment:
Field Master Assignment:
N/S Street Name: Mission Ce[illegible]
E/W Street Name: Civita Blvd. [illegible]n Valley Rd
Last Database Change:
System Ref. Number:

	Mission Center	Mission Valley	Mission Center	Civita
Column # --->	Phase			
Phase # --->	1	2	3	4	5	6	7	8
Row	↳	↑	⌜	→	↰	↓	↱	←
0 Ped Walk		7				7		7
1 Ped FDW		21				20		21
2 Min Green	4	10	4	4	4	10	4	4
3 Type 3 Limit								
4 Add/Veh								
5 Veh Extn	2.0	3.8	3.0	5.6	2.0	6.1	2.0	5.4
6 Max Gap	2.0	3.8	3.0	5.6	2.0	6.1	2.0	5.4
7 Min Gap	2.0	0.2	3.0	0.2	2.0	0.2	2.0	0.2
8 Max Limit	30	60	15	40	30	60	30	15
9 Max Limit 2								
A Bus Adv								
B Call to Phs								
C Reduce By		0.1		0.1		0.1		0.1
D Every		0.8		0.6		0.5		0.6
E Yellow	3.4	4.3	3.4	3.9	3.4	4.3	3.4	3.9
F Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <F Page>
F + Phase + Row

Row	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing
F + E + Row

Row	F
Permit	12345678
Red Lock	
Yellow Lock	
Min Recall	
Ped Recall	
Peds (View)	_2___6_8
Rest In Walk	
Red Rest	
Dbl Entry	
Max Recall	
Soft Recall	_2___6__
Max 2	
Cond Serv	
Ped Lock	12345678
Yellow Start	_2___6__
1st Phases	__3___7_

Phase Functions <F Page>
F + F + Row

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	8
Zone Number	8
Area Number	4
Area Address	72
QuicNet Channel	COM89

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6_8	0

Lag Phases <C Page>

Overlap Timing

Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A			
Overlap B	B			
Overlap C	C			
Overlap D	D			

<F Page>
F + COLOR +

<D Page>
D + 0 + OVERLAP

Downtime Flash	255 (minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234_

Disable Communication Ports
D + D + 9

Manual Plan	0
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Timing Sheet By: KT
Approved By: FLG
Drawing Number: 35450-37-D
Timing Implemented On:

Row	Time	Function	Day of Week	Column F Phases/Bits
0	:			
1	:			
2	:			
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		1.8
3		
4		
5		
6		
7		1.8
8	10.0	
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		1.8
3		
4		
5		
6		
7		1.8
8	10.0	
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

TERSECTION: Civita Blvd/Mission Valley Rd @ Mis[illegible] Center Rd — 223 Program

Coordination Timing By: KT
Implemented On:

Row	Column # ---> / Plan Name --->	Plan 1 AM	Plan 2 MID	Plan 3 PM	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
0	Cycle Length	104	102	108						
1	Phase 1 - ForceOff	84	83	88						
2	Phase 2 - ForceOff	24	20	17						
3	Phase 3 - ForceOff	41	37	35						
4	Phase 4 - ForceOff	71	69	75						
5	Phase 5 - ForceOff	24	20	17						
6	Phase 6 - ForceOff	0	0	0						
7	Phase 7 - ForceOff	38	36	42						
8	Phase 8 - ForceOff	71	69	75						
9	Ring Offset									
A	Offset A	103	44	9						
B	Offset B									
C	Offset C									
D	Permissive	24	20	17						
E	Hold Release	255	255	255						
F	Ped Shift	0	0	0						

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Coordination <C Page>

C + Plan + ROW

Row	Time	Plan	Offset	Day of Week
0	11 : 30	2	A	23456
1	13 : 30	E	A	23456
2	15 : 00	3	A	23456
3	17 : 30	E	A	1234567
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	2 4 6 8
Plan 1	6	1	Plan 1 - Lag	2 45 8
Plan 2	6	2	Plan 2 - Lag	2 45 8
Plan 3	6	3	Plan 3 - Lag	2 45 8
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6		6	Plan 6 - Lag	
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases

C + E + FUNCTION #

Lag Phases <C Page>

C + F + FUNCTION #

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

6

INTERSECTION: MISSION CENTER RD & MISSION CENTER DY/WESTSIDE DR

233 Program

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street: Mission Center Rd
E/W Street: Mission Center Dy/Westside Dr

Timing sheets by: KT
Approved by: FLG
Timing implemented on:
Drawing Number: 35450-36-D

Mss Ctr | Westside | Mss Ctr Dy | Mss Ctr

Row	Phase Numbers---->	1	2	3	4	5	6	7	8
0	Ped Walk		7	7			7		
1	Ped FDW		8	24			12		
2	Min Green	4	7	4	4	4	7		
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	3.9	3.8	2.0	2.0	4.5		
6	Max Gap	2.0	3.9	3.8	2.0	2.0	4.5		
7	Min Gap	2.0	0.2	0.2	2.0	2.0	0.2		
8	Max Limit	30	60	40	40	30	60		
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every		0.8	0.8			0.7		
E	Yellow Change	3.4	4.3	3.9	3.9	3.4	4.5		
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0		

Phase Timing - Bank 1 <F/1+Phase+Row>

Row		E
0	RR-1 Delay	
1	RR-1 Clear	
2	EV-A Delay	0
3	EV-A Clear	0
4	EV-B Delay	0
5	EV-B Clear	0
6	EV-C Delay	0
7	EV-C Clear	0
8	EV-D Delay	0
9	EV-D Clear	0
A	RR-2 Delay	
B	RR-2 Clear	
C	*View EV Delay*	- - -
D	*View EV Clear*	- - -
E	*View RR Delay*	- - -
F	*View RR Clear*	- - -

Preempt Timing <F/1+E+Row>

Row		F
0	Permit	123456
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	*View Set Peds*	23 6
6	Rest In Walk	
7	Red Rest	
8	Double Entry	
9	Max Recall	
A	Soft Recall	2 6
B	Max 2	
C	Cond. Service	
D	Man Cntrl Calls	
E	Yellow Start	2 6
F	First Phases	4

Phase Functions <F/1+F+Row>

Current Calculated Cycle Length: C/0 + B + F

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

Drop Number	7	<C/0+0+0>
Zone Number	7	<C/0+0+1>
Area Number	4	<C/0+0+2>
Area Address	71	<C/0+0+3>
QuicNet Channel	COM8	(QuicNet)

Communication Addresses

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>

Start / Revert Times

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

(Outputs specified in Assignable Outputs at E/127+A+E & F)

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Free Lag	2 4 6	<C/1+F+0>

How to Set Page Access Code:
F/1 – C + 0 + F = 1

Notes:

Row		Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

	F	Row
Fast Green Flash Phase		0
Green Flash Phases		1
Flashing Walk Phases		2
Guaranteed Passage		3
Simultaneous Gap Term	12345678	4
Sequential Timing		5
Advance Walk Phases		6
Delay Walk Phases		7
External Recall		8
Start-up Overlap Green		9
Max Extension		A
Inhibit Ped Reservice		B
Semi-Actuated		C
Start-up Overlap Yellow		D
Start-up Vehicle Calls	12345678	E
Start-up Ped Calls	12345678	F

Specials <F/2+F+Row>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	3
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	3
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	C	Row
EV-A		0
EV-B		1
EV-C		2
EV-D		3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7
		8
		9
		A
		B
		C
		D
		E
		F

<E/125+C+Row>

Preemption Priority

(* RR-1 is always Highest, and RR-2 is always Second Highest)

	2	Row
		0
Phase 1	0	1
Phase 2	0	2
Phase 3	0	3
Phase 4	0	4
Phase 5	0	5
Phase 6	0	6
Phase 7	0	7
Phase 8	0	8
		9
		A
		B
		C
		D
		E
		F

<C/5+2+Row>

Coordination Transition Minimums

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Time and Date

Begin Month	0	<C/5+2+A>
Begin Week	0	<C/5+2+B>
End Month	0	<C/5+2+C>
End Week	0	<C/5+2+D>

Daylight Savings Time

Daylight Savings Date:
If set to all zeros, standard dates will be used.

INTERSECTION: MISSION CENTER RD & MSSION CENTER DY/WESTSIDE DR

233 Program

Row	Detector Name	0 C1 Pin Number	1 Attributes	2 Phase(s)	3 Assign	1 Delay	3 Carry-Over
0	2I2U	39					1.8
1	6J2U	40					1.8
2	4I6U	41				10.0	
3		42					
4	2I2L	43					1.8
5	6J2L	44					1.8
6		45					
7		46					
8		47					
9		48					
A		49					
B		50					
C		55					
D		56					
E		57					
F	3I5	58					1.8

Program Type:

	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	30

<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	5	<D/0+0+1>
Max ON (minutes)	60	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <E/125+D+Row>

Row	Detector Name	4 C1 Pin Number	5 Attributes	6 Phase(s)	7 Assign	2 Delay	4 Carry-Over
0		59					
1		60					
2		61					
3		62					
4		63					
5	6J3U	64					1.8
6		65					
7		66					
8		67					
9		68					
A		69					
B	3 - 8PPB	70		3			
C		76					
D		77					
E		78					
F		79					

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Detector Assignments <E/126+Column+Row> <D/0+Column+Row>

	D
Number of Digits	
1 st Digit	
2 ed Digit	
3 ed Digit	
4 th Digit	
5 th Digit	
6 th Digit	
7 th Digit	
8 th Digit	
9 th Digit	
10 th Digit	
11 th Digit	
12 th Digit	
13 th Digit	
14 th Digit	
15 th Digit	

<C/5+D+Row>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	1	A
DELAY-B	1	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

<D/0+B+Row> (seconds)

Delay Logic Times

Omit Alarm	#NAME?

<C/5+F+0>

Disable Alarm Reporting

Time	0	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	07 : 00	4	A	_23456_
1	09 : 00	E	A	_23456_
2	11 : 30	2	A	_23456_
3	14 : 00	3	A	_23456_
4	17 : 30	E	A	1234567
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row> (Bank 1)

Time	Funct.	Day of Week

TOD Function <7/0.1+Row>

Column 4 Phases/Bits

<E/27+4+Row>

Row	Day	Year	Month	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Dates <8/1.1+Row> (Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row> (Bank 1)

Row
0
1
2
3
4
5
6
7
8
9
A
B
C
D
E
F

T.O.D. Functions:
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select:
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Month Select:
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Cycle Timer:
Master: C/0 + A + 0
Ring A: C/0 + B + 0
Ring B: C/0 + D + **0**

Interval Timer:
Ring A: F/0 + A + Interval Row
Ring B: F/0 + B + Interval Row

Master Plan: C/0 + A + 2
Current Plan: C/0 + A + 3
TOD Plan: C/0 + A + 5

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.2+Row> (Bank 2)

Time	Funct.	Holiday Type

Holiday TOD Function <7/0.2+Row>

Column 4 Phases/Bits

<E/28+Row>

Row	Day	Year	Month	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Dates <8/1.2+Row> (Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.2+Row> (Bank 2)

Row
0
1
2
3
4
5
6
7
8
9
A
B
C
D
E
F

Row	Plan Name --->	1	2 MID	3 PM	4 AM	5	6	7	8	9	Row
0	Cycle Length		102	108	90						0
1	Phase 1 - ForceOff		64	67	61						1
2	Phase 2 - ForceOff		0	0	0						2
3	Phase 3 - ForceOff		33	33	31						3
4	Phase 4 - ForceOff		48	53	48						4
5	Phase 5 - ForceOff		71	75	65						5
6	Phase 6 - ForceOff		0	0	0						6
7	Phase 7 - ForceOff										7
8	Phase 8 - ForceOff										8
9	Ring Offset										9
A	Offset 1		52	3	83						A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End		10	10	10						D
E	Hold Release		255	255	255						E
F	Zone Offset		0	0	0						F

Plan

Coordination - Timing Plans <C/1+Plan+Row>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync	2 6	2
3	Plan 3 - Sync	2 6	3
4	Plan 4 - Sync	2 6	4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync		7
8	Plan 8 - Sync		8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C/1+E+Row>

Row											Row
0	Ped Adjustment										0
1	Perm 2 - Start										1
2	Perm 2 - End										2
3	Perm 3 - Start										3
4	Perm 3 - End										4
5	Reservice Time										5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase										A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Parameters <C/2+Plan+Row>

Row		F	Row
0	Free Lag	2 4 6	0
1	Plan 1 - Lag		1
2	Plan 2 - Lag	2 4 6	2
3	Plan 3 - Lag	2 4 6	3
4	Plan 4 - Lag	2 4 6	4
5	Plan 5 - Lag		5
6	Plan 6 - Lag		6
7	Plan 7 - Lag		7
8	Plan 8 - Lag		8
9	Plan 9 - Lag		9
A	External Lag		A
B			B
C			C
D			D
E			E
F			F

Lag Phases <C/1+F+Row>

Coordination Timing B KT

Row	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Spec. Funct. 1	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term	0
1	Spec. Funct. 2	NOT-4	System Det 1	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	Spec. Funct. 3	OR-4 (a)	System Det 2	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	Spec. Funct. 4	OR-4 (b)	System Det 3	Plan 3	Dimming	Offset 2 (7-Wire)	EV-C 73	3
4	NAND-3 (a)	OR-5 (a)	System Det 4	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	NAND-3 (b)	OR-5 (b)	System Det 5	Plan 5	Stop Time	Free (7-Wire)	RR-1 51	5
6	NAND-4 (a)	OR-6 (a)	System Det 6	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 52	6
7	NAND-4 (b)	OR-6 (b)	System Det 7	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	OR-7 (a)	Fig 3 Diamond	System Det 8	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	OR-7 (b)	Fig 4 Diamond	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Phase ON - 4	Sp Evnt Out 3	Fig 3 Diamond	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Phase ON - 5	Sp Evnt Out 4	Fig 4 Diamond	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Phase ON - 6	Sp Evnt Out 5		Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Phase ON - 7	Sp Evnt Out 6		Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Phase ON - 8	Sp Evnt Out 7		Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Ph. Check - 2		NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C		C
D	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D		D
E	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E		E
F	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F		F

Assignable Outputs <E/127+Column+Row>

7

INTERSECTION: Sea World Dr @ Friars Rd

223 Prc m

Group Assignment:
Field Master Assignment:

N/S Street Name: Friars
E/W Street Name: Sea World

Last Database Change:
System Ref. Number:

Row	Column # --->	Sea World				Sea World			Friars
	Phase # --->	1	2	3	4	5	6	7	8
		↙	←------→				←		2+8 ↑ ↕
0	Ped Walk		7						7
1	Ped FDW		21						20
2	Min Green	4	7				7		4
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	4.0				5.2		2.0
6	Max Gap	2.0	4.0				5.2		2.0
7	Min Gap	2.0	0.2				0.2		2.0
8	Max Limit	30	60				60		40
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1				0.1		
D	Every		0.8				0.6		
E	Yellow	3.4	5.2				4.4		5.2
F	Red Clear	1.0	1.0				1.0		1.0
	Grade								

Phase Timing - Bank 1
F + Phase + Row

<F Page>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	
EV-A Clear	
EV-B Delay	
EV-B Clear	
EV-C Delay	
EV-C Clear	
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	12 6 8
1	Red Lock	
2	Yellow Lock	
3	Min Recall	2 6
4	Ped Recall	
5	Peds (View)	2 8
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	2 6
F	1st Phases	8

Phase Functions <F Page>
F + F + Row

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number		C + 0 + 0
Zone Number		C + 0 + 1
Area Number		C + 0 + 2
Area Address		C + 0 + 3
QuicNet Channel		(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	2 6 8	0

Lag Phases <C Page>

Overlap Timing

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page> F + COLOR +
<D Page> D + 0 + OVERLAP

Manual Plan	14	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	234

Disable Communication Ports
D + D + 9

Timing Sheet By: FLG
Approved By: EFF
Drawing Number:
Timing Implemented On:

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function

7 + ROW

<D Page>

D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	
7	Ped 4P	
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	8
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1

Configuration

<E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1_34
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

Sea World

Sea World

Friars

PHASE TIMING

200 SA 1.e

INTERVAL		1	2	3	4	5	6	7	8	PREEMPT	E	
WALK	0		7						7	RR 1 DELAY		0
FLASH D/W	1		21						20	RR 1 CLEAR		1
MIN GREEN	2	4	7				7		4	EVA DELAY		2
TYPE 3 DET	3									EVA CLEAR		3
ADD PER VEH	4									EVB DELAY		4
VEH EXTN *	5	2.0	2.1				3.5		2.0	EVB CLEAR		5
MAX GAP *	6	2.0	2.1				3.5		2.0	EVC DELAY		6
MIN GAP *	7	2.0	0.2				0.2		2.0	EVC CLEAR		7
MAX EXTN	8	30	60				60		40	EVD DELAY		8
MAX 2	9									EVD CLEAR		9
BUS LEAD	A									RR2 DELAY		A
CALL TO PHS	B									RR 2 CLEAR		B
REDUCE BY	C		0.1				0.1			EV CLR TMR		C
EVERY	D		1.2				0.7			EV DLY TMR		D
YELLOW	E	3.0	~~5.5~~ 5.4				~~4.8~~ 4.4		5.0	RR CLR TMR		E
RED CLEAR	F	1.0	1.0				1.0		1.0	RR DLY TMR		F

F + PHASE + LOCATION

* Must be the same for non-density operation

MAX INITIAL (F-0-E) _____ RED REVERT (F-0-F) 5.0 ALL-RED START (F-C-0) 0.0

PHASE FUNCTION FLAGS

		PHASE 1	2	3	4	5	6	7	8
PERMIT	0	X	X				X		X
RED LOCK	1								
YELLOW LOCK	2								
VEHICLE RECALL	3		X				X		
PED RECALL	4								
PEDS (VIEW)	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A								
MAX 2	B								
COND SERVICE	C								
	D								
START-UP	E		X				X		
FIRST PHASES	F								X

F + F + FUNCTION #

OVERLAP TIMING

	LOAD SWITCH	GREEN 9	YELLOW C	RED D
OLAP A				
OLAP B				
OLAP C				
OLAP D				

D + 0 + OVERLAP

F + COLOR + OVERLAP

PHASE SEQUENCE

	PHASE 1	2	3	4	5	6	7	8
LAG 0 (FREE)		X		X		X		X

C + F + 0

MANUAL (C-A-1) 14

ADDRESS (C-0-0) _____

TURN-ON DATE:

TIME:

DRAWING NO. D- 13352-18

LAST CHANGE: 04-08-1997

BY: MLG

LOCATION	FRIARS ROAD & SEA WORLD DRIVE

DETECTOR TIMES

Y \ X	SET DELAY 1	2	SET CARRY 3	4	OBS COUNT 5	6	OBS DELAY 7	8	OBS CARRY 9	A
0	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1
1	2I2U	6J2U	2I2U 1.8	6J2U 1.8	2I2U	6J2U	2I2U	6J2U	2I2U	6J2U
2	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L
3	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U
4	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L
5	2I4	6J4	2I4	6J4	2I4	6J4	2I4	6J4	2I4	6J4
6	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5
7	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U
8	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L
9	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U
A	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L
B	4I8	8J8	4I8	8J8	4I8	8J8	4I8	8J8	4I8	8J8
C	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U
D	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L

D + X (ACROSS) + Y (DOWN)

TO ACCESS CONFIGURATION DATA, SET F-9-E = 1

TIME OF DAY FEATURES

EVENT	TIME	FUNC	DAY OF WEEK S	M	T	W	T	F	S
0			1	2	3	4	5	6	7
1									
2									
3									
4									
5									
6									
7									
8									
9									

7 + EVENT #

PHASE OR FUNCTION 1	2	3	4	5	6	7

D + F + EVENT

TIME OF DAY FUNCTION CODES

0-PERMIT
1-RED LOCK
2-YELLOW LOCK
3-VEH RECALL
4-PED RECALL
5-[RESERVED]
6-REST IN WALK
7-RED REST
8-DBL ENTRY
9-VEH MAX RCL
A-SOFT RCL
B-MAX 2 EXT
C-COND SERV
D-TOD LAG PHS

E-1-LOCAL OVERRIDE
2-PHASE BANK 2
3-PHASE BANK 3
7-DET COUNT
8-SPLIT MONITOR

F - TOD OUTPUTS
1- TOD OUTPUT 1
2- TOD OUTPUT 2
3- TOD OUTPUT 3
4- TOD OUTPUT 4

TIME AND DATE

8 - 0 HOUR, MINUTE, DAY-OF-WEEK
8 - 1 DAY-OF-MONTH, YEAR, MONTH
8 - F SECONDS

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
EXCLUSIVE	0								
RR1 GN CLR	1								
RR2 GRN CLR	2								
RR2 LTD SRV	3								
PRO/PERM	4								
OLA GN OMIT	5								
OLB GN OMIT	6								
OLC GN OMIT	7								
OLD GN OMIT	8								
OV FL YELLOW	9								
EMVEH A	A								
EMVEH B	B								
EMVEH C	C								
EMVEH D	D								
EXTRA	E	X		X					
IC SELECT	F		X						

E + E + INTERVAL

EXTRA (E+E+E)
1-TBC TYPE 1
2-NEMA COORD
3-DAYLIGHT SAVINGS
4-EV ADVANCE
5-REMOTE EVP
6-SPECIAL EVENT
7-PRETIMED
8-SPLIT RING

ICSELECT (E+E+F)
1-SIMPLEX IN
2-2 WAY MODEM
3-7 WIRE IN
4-FLH/FREE
5-SIMPLEX OUT
6-7 WIRE OUT

ASSIGN5 (E+F+F)
1-RT OVERLAP
2-TOD OUTPUTS
3-STEADY EV BEACON
4-FLASH EV BEACON

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
	0								
RR OLAP A	1								
RR OLAP B	2								
RR OLAP C	3								
RR OLAP D	4								
PED 2P	5		X						
PED 6P	6								
PED 4P	7								
PED 8P	8								X
FLH YELLOW	9								
OVERLAP A	A								X
OVERLAP B	B								
OVERLAP C	C								
OVERLAP D	D								
RESTRICT	E								
ASSIGN5	F	X							

E + F + INTERVAL

LOCATION	FRIARS ROAD & SEA WORLD DRIVE

8

INTERSECTION: FRIARS RD @ NAPA ST

223 Pr...ram

Group Assignment:
Field Master Assignment:

N/S Street Name: NAPA
E/W Street Name: FRIARS

Row	Column # --->	1	2	3	4	5	6	7	8
	Phase # --->		FRIARS	PED	NAPA		FRIARS		
			Phase						
			→	↕	↓ ↑ 4+6	→	←		
0	Ped Walk		7	7			7		
1	Ped FDW		17	20			20		
2	Min Green		7	4	4	4	7		
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn		4.6	0.0	5.0	2.0	4.2		
6	Max Gap		4.6	0.0	5.0	2.0	4.2		
7	Min Gap		0.2	0.0	0.2	2.0	0.2		
8	Max Limit		30	0	20	30	30		
9	Max Limit 2		40		40		40		
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1		0.1		0.1		
D	Every		0.7		0.6		0.8		
E	Yellow		5.0	3.0	3.9	3.4	4.6		
F	Red Clear		1.0		1.0	1.0	1.0		

Phase Timing - Bank 1
F + Phase + Row

<F Page>

Row		E
	RR-1 Delay	
	RR-1 Clear	
	EV-A Delay	0
	EV-A Clear	0
	EV-B Delay	0
	EV-B Clear	0
	EV-C Delay	0
	EV-C Clear	0
	EV-D Delay	
	EV-D Clear	
	RR-2 Delay	
	RR-2 Clear	
	View EV Delay	---
	View EV Clear	---
	View RR Delay	---
	View RR Clear	---

F + E + Row

Row		F
0	Permit	_23456__
1	Red Lock	
2	Yellow Lock	
3	Min Recall	_2___6__
4	Ped Recall	
5	Peds (View)	_23__6__
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	___4____

F + F + Row

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	4	C + 0 + 0
Zone Number	4	C + 0 + 1
Area Number	5	C + 0 + 2
Area Address	81	C + 0 + 3
QuicNet Channel	COM 51	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_23__6__	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +

<D Page>
D + 0 + OVERLAP

Manual Plan	14	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234____

Disable Communication Ports
D + D + 9

Timing Sheet By: M2S
Approved By: FLG
Drawing Number: 26904-82-D
Timing Implemented On: 05/03/10

INTERSECTION: FRIARS RD @ NAPA ST

223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0	16 : 00	B	_23456_	_2_4_6_
1	18 : 30	B	_23456_	
2	00 : 01	E	1234567	1_____
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function 7 + ROW

<D Page> D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	_2_____
6	Ped 6P	_____6__
7	Ped 4P	
8	Ped 8P	__3_____
9	Yellow Flash Phases	
A	Overlap A - Phases	__4_6__
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1_____

Configuration E + F + ROW

<E Page>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	_____6__
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	_2__5___
B	EV-B Phases	___4____
C	EV-C Phases	_____6__
D	EV-D Phases	
E	Extra 1 Config. Bits	1_345___
F	IC Select (Interconnect)	_2_____

Configuration E + E + ROW

For access, set F + 9 + E = 1

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 = Bus Advance

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		1.8
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)



PHASE TIMING

200 SA 1.e

INTERVAL		1	2 (FRIARS →)	3 (PED)	4 (NAPA ↓)	5 (↑)	6 (FRIARS ←)	7	8
WALK	0		7	7			7		
FLASH D/W	1		17	20			20		
MIN GREEN	2		7	4	4	4	7		
TYPE 3 DET	3								
ADD PER VEH	4								
VEH EXTN *	5		4.2	0.0	3.4	2.0	4.3		
MAX GAP *	6		4.2	0.0	3.4	2.0	4.3		
MIN GAP *	7		0.2	0.0	0.2	2.0	0.2		
MAX EXTN	8		60	0	40	30	60		
MAX 2	9								
BUS LEAD	A								
CALL TO PHS	B								
REDUCE BY	C		0.1		0.1		0.1		
EVERY	D		0.8		0.9		0.7		
YELLOW	E		5.5	3.0	3.0	3.0	4.5		
RED CLEAR	F		1.0		1.0	1	1.0		

F + PHASE + LOCATION

PREEMPT		
	E	
RR 1 DELAY		0
RR 1 CLEAR		1
EVA DELAY	0	2
EVA CLEAR	3	3
EVB DELAY	0	4
EVB CLEAR	3	5
EVC DELAY	0	6
EVC CLEAR	3	7
EVD DELAY		8
EVD CLEAR		9
RR2 DELAY		A
RR 2 CLEAR		B
EV CLR TMR		C
EV DLY TMR		D
RR CLR TMR		E
RR DLY TMR		F

* Must be the same for non-density operation

MAX INITIAL (F-0-E) 0 RED REVERT (F-0-F) 5.0 ALL-RED START (F-C-0) 0.0

PHASE FUNCTION FLAGS

		PHASE 1	2	3	4	5	6	7	8
PERMIT	0		X	X	X	X	X		
RED LOCK	1								
YELLOW LOCK	2								
VEHICLE RECALL	3		X				X		
PED RECALL	4								
PEDS (VIEW)	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A								
MAX 2	B								
COND SERVICE	C								
	D								
START-UP	E		X				X		
FIRST PHASES	F				X				

F + F + FUNCTION #

OVERLAP TIMING

LOAD SWITCH		GREEN 9	YELLOW C	RED D
	OLAP A			
	OLAP B			
	OLAP C			
	OLAP D			

D + 0 + OVERLAP

F + COLOR + OVERLAP

PHASE SEQUENCE

	PHASE 1	2	3	4	5	6	7	8
LAG 0 (FREE)		X	X			X		X

C + F + 0

MANUAL (C-A-1) 14

ADDRESS (C-0-0)

TURN-ON DATE: 12-09-1997

TIME: 11:20

DRAWING NO. D- 26904-77

LAST CHANGE: 04-02-1998

BY: FLG

New phasing implemented 4-2-98

LOCATION Friars Rd. & Napa St.

DETECTOR TIMES

Y \ X	SET DELAY 1	2	SET CARRY 3	4	OBS COUNT 5	6	OBS DELAY 7	8	OBS CARRY 9	A
0	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1
1	2I2U	6J2U	2I2U 1.8	6J2U 1.8	2I2U	6J2U	2I2U	6J2U	2I2U	6J2U
2	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L
3	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U
4	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L
5	2I4	6J4	2I4	6J4	2I4	6J4	2I4	6J4	2I4	6J4
6	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5
7	4I6U	8J6U	4I6U 1.8	8J6U	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U
8	4I6L 10.	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L
9	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U
A	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L
B	4I8	8J8	4I8	8J8	4I8	8J8	4I8	8J8	4I8	8J8
C	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U
D	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L

D + X (ACROSS) + Y (DOWN)

TO ACCESS CONFIGURATION DATA, SET F-9-E = 1

TIME OF DAY FEATURES

EVENT	TIME	FUNC	DAY OF WEEK S	M	T	W	T	F	S
0			1	2	3	4	5	6	7
1									
2									
3									
4									
5									
6									
7									
8									
9									

7 + EVENT #

PHASE OR FUNCTION

1	2	3	4	5	6	7	

D + F + EVENT

TIME OF DAY FUNCTION CODES

0-PERMIT
1-RED LOCK
2-YELLOW LOCK
3-VEH RECALL
4-PED RECALL
5-[RESERVED]
6-REST IN WALK
7-RED REST
8-DBL ENTRY
9-VEH MAX RCL
A-SOFT RCL
B-MAX 2 EXT
C-COND SERV
D-TOD LAG PHS

E-1-LOCAL OVERRIDE
2-PHASE BANK 2
3-PHASE BANK 3
7-DET COUNT
8-SPLIT MONITOR

F - TOD OUTPUTS
1- TOD OUTPUT 1
2- TOD OUTPUT 2
3- TOD OUTPUT 3
4- TOD OUTPUT 4

TIME AND DATE

8 - 0 HOUR, MINUTE, DAY-OF-WEEK
8 - 1 DAY-OF-MONTH, YEAR, MONTH
8 - F SECONDS

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
EXCLUSIVE	0								
RR1 GN CLR	1								
RR2 GRN CLR	2								
RR2 LTD SRV	3								
PRO/PERM	4								
OLA GN OMIT	5						X		
OLB GN OMIT	6								
OLC GN OMIT	7								
OLD GN OMIT	8								
OV FL YELLOW	9								
EMVEH A	A		X			X			
EMVEH B	B				X				
EMVEH C	C						X		
EMVEH D	D								
EXTRA	E	X		X	X				
IC SELECT	F		X						

E + E + INTERVAL

EXTRA (E+E+E)
1-TBC TYPE 1
2-NEMA COORD
3-DAYLIGHT SAVINGS
4-EV ADVANCE
5-REMOTE EVP
6-SPECIAL EVENT
7-PRETIMED
8-SPLIT RING

ICSELECT (E+E+F)
1-SIMPLEX IN
2-2 WAY MODEM
3-7 WIRE IN
4-FLH/FREE
5-SIMPLEX OUT
6-7 WIRE OUT

ASSIGN5 (E+F+F)
1-RT OVERLAP
2-TOD OUTPUTS
3-STEADY EV BEACON
4-FLASH EV BEACON

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
	0								
RR OLAP A	1								
RR OLAP B	2								
RR OLAP C	3								
RR OLAP D	4								
PED 2P	5		X						
PED 6P	6						X		
PED 4P	7								
PED 8P	8			X					
FLH YELLOW	9								
OVERLAP A	A				X		X		
OVERLAP B	B								
OVERLAP C	C								
OVERLAP D	D								
RESTRICT	E								
ASSIGN5	F	X							

E + F + INTERVAL

LOCATION	Friars Rd.	&	Napa St.

9

INTERSECTION: COLUSA St & FRIARS Rd

223 Program

Group Assignment:
Field Master Assignment:

N/S Street Name: COLUSA St
E/W Street Name: FRIARS Rd

Last Database Change:
System Ref. Number:

N

Row	Column # --->	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
		FRIARS			COLUSA		FRIARS		COLUSA
0	Ped Walk		7		7		7		
1	Ped FDW		17		24		9		
2	Min Green	4	10		4	4	10		4
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	6.1		2.0	2.0	6.4		2.0
6	Max Gap	2.0	6.1		2.0	2.0	6.4		2.0
7	Min Gap	2.0	0.2		2.0	2.0	0.2		2.0
8	Max Limit	30	60		40	30	60		40
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1				0.1		
D	Every		0.5				0.5		
E	Yellow	3.4	4.7		3.9	3.4	5.0		3.9
F	Red Clear	1.0	1.0		1.0	1.0	1.0		1.0
	Grade								

Phase Timing - Bank 1
F + Phase + Row

<F Page>

Row		E
	RR-1 Delay	
	RR-1 Clear	
	EV-A Delay	0
	EV-A Clear	0
	EV-B Delay	
	EV-B Clear	
	EV-C Delay	0
	EV-C Clear	0
	EV-D Delay	
	EV-D Clear	
	RR-2 Delay	
	RR-2 Clear	
	View EV Delay	---
	View EV Clear	---
	View RR Delay	---
	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	12_456_8
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	Peds (View)	_2_4_6__
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	___4___8
9	Max Recall	
A	Soft Recall	_2___6__
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	___4___8

Phase Functions <F Page>
F + F + Row

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	5	C + 0 + 0
Zone Number	5	C + 0 + 1
Area Number	5	C + 0 + 2
Area Address	82	C + 0 + 3
QuicNet Channel	DIGI 47:	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6_8	0

Lag Phases <C Page>

Overlap Timing

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +

<D Page>
D + 0 + OVERLAP

Manual Plan	14	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	234

Disable Communication Ports
D + D + 9

Timing Sheet By: WXW
Approved By: EFF
Drawing Number:
Timing Implemented On: 2/24/05

INTERSECTION: COLUSA St & FRIARS Rd

223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function

7 + ROW

<D Page>

D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration

E + F + ROW

<E Page>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week

8-1 Day-of-Month, Year, Month

8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications

(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program

C + C + F = version

Remote Download

C + 0 + 4 = 1 -255

w/ E + E + E bit 5 on

INTERSECTION: COLUSA St & FRIARS Rd — 223 Program

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8	10.0	
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8	10.0	
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	5678
E	-- -- -- -- -- -- -- --	1234
F	-- 25 26 27 28 -- -- --	2345

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+Ã+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

10

Friars Rd

Via las Cumbres

Friars Rd

200 SA 1.e

PHASE TIMING

INTERVAL		1	2	3	4	5	6	7	8
WALK	0				7		7		
FLASH D/W	1			26	~~22~~	19	~~15~~		
MIN GREEN	2		10		4	4	10		
TYPE 3 DET	3								
ADD PER VEH	4								
VEH EXTN *	5		2.3		2.0	2.0	2.0		
MAX GAP *	6		2.3		2.0	2.0	2.0		
MIN GAP *	7		0.2		2.0	2.0	0.2		
MAX EXTN	8		50		30	25	50		
MAX 2	9								
BUS LEAD	A								
CALL TO PHS	B								
REDUCE BY	C		0.1				0.1		
EVERY	D		1.0				1.1		
YELLOW	E		5.0		3.0	3.0	5.0		
RED CLEAR	F		1.0		1.0	1.0	1.0		

F + PHASE + LOCATION

PREEMPT

	E	
RR 1 DELAY		0
RR 1 CLEAR		1
EVA DELAY		2
EVA CLEAR		3
EVB DELAY		4
EVB CLEAR		5
EVC DELAY		6
EVC CLEAR		7
EVD DELAY		8
EVD CLEAR		9
RR2 DELAY		A
RR 2 CLEAR		B
EV CLR TMR		C
EV DLY TMR		D
RR CLR TMR		E
RR DLY TMR		F

Curr 9/30/96

* Must be the same for non-density operation

MAX INITIAL (F-0-E) _____ RED REVERT (F-0-F) 5.0 ALL-RED START (F-C-0) 0.0

PHASE FUNCTION FLAGS

		PHASE 1	2	3	4	5	6	7	8
PERMIT	0		X		X	X	X		
RED LOCK	1								
YELLOW LOCK	2								
VEHICLE RECALL	3		X				X		
PED RECALL	4								
PEDS (VIEW)	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A								
MAX 2	B								
COND SERVICE	C								
	D								
START-UP	E		X				X		
FIRST PHASES	F				X				

F + F + FUNCTION

OVERLAP TIMING

LOAD SWITCH

	GREEN 9	YELLOW C	RED D
OLAP A			
OLAP B			
OLAP C			
OLAP D			

D + 0 + OVERLAP

F + COLOR +

PHASE SEQUENCE

	PHASE 1	2	3	4	5	6	7	8
LAG 0 (FREE)		X		X		X		

C + F + 0

MANUAL (C-A-1) 14

ADDRESS (C-0-0) _____

TURN-ON DATE: 03-01-1997

TIME:

DRAWING NO. D- 16804-1

LAST CHANGE: 03-03-1997

BY: MLG

LOCATION FRIARS ROAD & VIA LAS CUMBRES

Audible Signal (FDW 3.5 FPS)

DETECTOR TIMES

Y \ X	SET DELAY 1	2	SET CARRY 3	4	OBS COUNT 5	6	OBS DELAY 7	8	OBS CARRY 9	A
0	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1
1	2I2U	6J2U	2I2U 1.8	6J2U 1.8	2I2U	6J2U	2I2U	6J2U	2I2U	6J2U
2	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L
3	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U
4	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L
5	2I4	6J4	2I4	6J4	2I4	6J4	2I4	6J4	2I4	6J4
6	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5
7	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U
8	4I6L 10.	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L
9	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U
A	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L
B	4I8	8J8	4I8	8J8	4I8	8J8	4I8	8J8	4I8	8J8
C	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U
D	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L

D + X (ACROSS) + Y (DOWN)

TIME OF DAY FEATURES

EVENT	TIME	FUNC	DAY OF WEEK S	M	T	W	T	F	S
0			1	2	3	4	5	6	7
1									
2									
3									
4									
5									
6									
7									
8									
9									

7 + EVENT #

PHASE OR FUNCTION

1	2	3	4	5	6	7	

D + F + EVENT

TIME OF DAY FUNCTION CODES

0-PERMIT
1-RED LOCK
2-YELLOW LOCK
3-VEH RECALL
4-PED RECALL
5-[RESERVED]
6-REST IN WALK
7-RED REST
8-DBL ENTRY
9-VEH MAX RCL
A-SOFT RCL
B-MAX 2 EXT
C-COND SERV
D-TOD LAG PHS

E-1-LOCAL OVERRIDE
2-PHASE BANK 2
3-PHASE BANK 3
7-DET COUNT
8-SPLIT MONITOR

F - TOD OUTPUTS
1- TOD OUTPUT 1
2- TOD OUTPUT 2
3- TOD OUTPUT 3
4- TOD OUTPUT 4

TIME AND DATE

8 - 0 HOUR, MINUTE, DAY-OF-WEEK
8 - 1 DAY-OF-MONTH, YEAR, MONTH
8 - F SECONDS

TO ACCESS CONFIGURATION DATA, SET F-9-E = 1

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
EXCLUSIVE	0								
RR1 GN CLR	1								
RR2 GRN CLR	2								
RR2 LTD SRV	3								
PRO/PERM	4								
OLA GN OMIT	5								
OLB GN OMIT	6								
OLC GN OMIT	7								
OLD GN OMIT	8								
OV FL YELLOW	9								
EMVEH A	A								
EMVEH B	B								
EMVEH C	C								
EMVEH D	D								
EXTRA	E	X		X	X				
IC SELECT	F		X						

E + E + INTERVAL

EXTRA (E+E+E)
1-TBC TYPE 1
2-NEMA COORD
3-DAVLIGHT
4-EV ADVANCE
5-REMOTE EVP
6-SPECIAL EVENT
7-PRETIMED
8-SPLIT RING

ICSELECT (E+E+F)
1-SIMPLEX IN
2-2 WAY MODEM
3-7 WIRE IN
4-FLH/FREE
5-SIMPLEX OUT
6-7 WIRE OUT

ASSIGN5 (E+F+F)
1-RT OVERLAP
2-TOD OUTPUTS
3-STEADY EV BEACON
4-FLASH EV BEACON

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
	0								
RR OLAP A	1								
RR OLAP B	2								
RR OLAP C	3								
RR OLAP D	4								
PED 2P	5								
PED 6P	6						X		
PED 4P	7				X				
PED 8P	8								
FLH YELLOW	9								
OVERLAP A	A								
OVERLAP B	B								
OVERLAP C	C								
OVERLAP D	D								
RESTRICT	E								
ASSIGN5	F								

E + F + INTERVAL

LOCATION	FRIARS ROAD & VIA LAS CUMBRES

INTERSECTION: FRIARS RD @ VIA LAS CUMBRES

223 Program

Group Assignment:
Field Master Assignment:

N/S Street Name: VIA LAS CUMBRES
E/W Street Name: FRIARS

FRIARS | VIA LAS CUMBRES | FR

Column # --->		Phase							
Phase # --->		1	2	3	4	5	6	7	8
Row			→		↓	↑	←		
0	Ped Walk				7		7		
1	Ped FDW				25		19		
2	Min Green		10		4	4	10		
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn		2.4		2.0	2.0	2.4		
6	Max Gap		2.4		2.0	2.0	2.4		
7	Min Gap		0.2		2.0	2.0	0.2		
8	Max Limit		60		30	30	60		
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1				0.1		
D	Every		1.3				1.3		
E	Yellow		4.7		4.1	3.4	4.9		
F	Red Clear		1.0		1.0	1.0	1.0		

Phase Timing - Bank 1
F + Phase + Row
<F Page>

	B
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	
EV-B Clear	
EV-C Delay	0
EV-C Clear	0
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

F + E + Row

	F	Row
Permit	_2_456__	0
Red Lock		1
Yellow Lock		2
Min Recall	_2___6__	3
Ped Recall		4
Peds (View)	___4_6__	5
Rest In Walk		6
Red Rest		7
Dbl Entry		8
Max Recall		9
Soft Recall		A
Max 2		B
Cond Serv		C
Ped Lock	12345678	D
Yellow Start	_2___6__	E
1st Phases	___4____	F

F + F + Row

Note: FDW calculated using 3.5 fps.

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	6	C + 0 + 0
Zone Number	6	C + 0 + 1
Area Number	5	C + 0 + 2
Area Address	83	C + 0 + 3
QuicNet Channel	COM51	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6__	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +

<D Page>
D + 0 + OVERLAP

Manual Plan	14	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	_234____

Disable Communication Ports
D + D + 9

Timing Sheet By: M2S
Approved By: FLG
Drawing Number: 16804-1-D
Timing Implemented On:

INTERSECTION: FRIARS RD @ VIA LAS CUMBRES

223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function 7 + ROW

<D Page> D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration E + F + ROW <E Page>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration E + E + ROW

For access, set F + 9 + E = 1

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 = Bus Advance

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8	10.0	
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

Friars Rd - Via Cumbres 0620 C72

CITY OF SAN DIEGO

ACTUATED SIGNAL TIMING RECORD (Solid State)

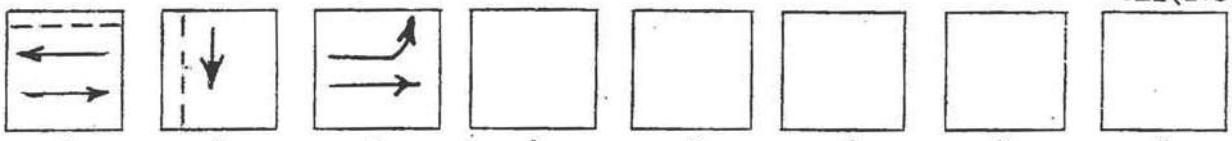
START
FIRST PHASES
DUAL ENTRY
G.P.T.
SIM. GAP
MAX. EXT.

TYPE CONTROLLER: MULTISONICS - 901

DATE TURNED ON 11-04-76 @ 0943

OL1(1+3)

Phase Diagrams



CONTROLLER PHASE	1	2	3	4	5	6	7	8
RECALL								
Secs. per Actuat.	1/2							
Non-Lock		Pin						
Minimum Initial	10	4 ~~2~~	4 ~~2~~					
Maximum Initial	22	2	2					
Walk	8"	8	-					
Ped. Clearance	16"	22	-					
Preset Veh. Extension	6	2	2					
Minimum Veh. Extension	2	2	2					
Start Reduction	16	-	-					
TIME TO REDUCE	16	-	-					
Maximum 1.	48	32	24					
Maximum 2.								
Yellow	6/22/77 4.0 ~~3.5~~	3.0	4.0 ~~3.0~~	4/27/77 TRM				4.0 ~~3.5~~
All Red	6/22/77 1.0 ~~3/4~~	1.0 ~~.5~~	1.0					1.0 ~~1/2~~
Mags EXT.	in - 1" out - Ø							
Detector Mode	calling on pulse	presence	presence					

NOTES:

Location: Friars & Via Las Cumbres

11

INTERSECTION: FASHION VALLEY RD @ FRIARS RD

233 Program

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S St: FASHION VALLEY
E/W Street: FRIARS

Last Database Change:

Timing sheets by: M2S
Approved by: FLG
Timing implemented on: 04/13/10

		FRIARS	FASHION VALLEY			FRIARS		FASHION VALLEY	
		Phase							
Phase Numbers—>		1	2	3	4	5	6	7	8
Row		1+8							
0	Ped Walk		7				7		10
1	Ped FDW		14				7		25
2	Min Green	4	10			4	10		4
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	2.9			2.0	3.7		2.2
6	Max Gap	2.0	2.9			2.0	3.7		2.2
7	Min Gap	2.0	0.2			2.0	0.2		0.2
8	Max Limit	30	60			30	60		50
9	Max Limit 2								
A	Adv. / Delay Walk								10
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every		1.1				0.8		1.5
E	Yellow Change	3.4	4.9			3.4	4.3		3.9
F	Red Clear	1.0	1.0			1.0	1.0		1.0

Phase Timing - Bank 1 <F/1+Phase+Row>

	E	Row
RR-1 Delay		
RR-1 Clear		
EV-A Delay	0	
EV-A Clear	0	
EV-B Delay		
EV-B Clear		
EV-C Delay	0	
EV-C Clear	0	
EV-D Delay	0	
EV-D Clear	0	
RR-2 Delay		
RR-2 Clear		
View EV Delay	- - -	
View EV Clear	- - -	
View RR Delay	- - -	
View RR Clear	- - -	

Preempt Timing <F/1+E+Row>

	F	Row
Permit	12 56 8	0
Red Lock		1
Yellow Lock		2
Min Recall	2 6	3
Ped Recall		4
View Set Peds	2 6 8	5
Rest In Walk		6
Red Rest		7
Double Entry		8
Max Recall		9
Soft Recall		A
Max 2		B
Cond. Service		C
Man Cntrl Calls		D
Yellow Start	2 6	E
First Phases	8	F

Phase Functions <F/1+F+Row>

Current Calculated Cycle Length: C/0 + B + F

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

Drop Number	1	<C/0+0+0>
Zone Number	1	<C/0+0+1>
Area Number	4	<C/0+0+2>
Area Address	81	<C/0+0+3>
QuicNet Channel	90	(QuicNet)

Communication Addresses

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>

Start / Revert Times

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

(Outputs specified in Assignable Outputs at E/127+A+E & F)

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Free Lag	2 6 8	<C/1+F+0>

How to Set Page Access Code:
F/1 – C + 0 + F = 1

Notes:

Row		Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number	9							
1	Veh Set 1 - Phases	1							
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases	2							
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear								
E	Yellow Change	3.4							
F	Red Clear	1.0							

Overlap Assignments <E/29+Column+Row>

	F	Row
Fast Green Flash Phase		0
Green Flash Phases		1
Flashing Walk Phases		2
Guaranteed Passage		3
Simultaneous Gap Term	12345678	4
Sequential Timing		5
Advance Walk Phases	8	6
Delay Walk Phases		7
External Recall		8
Start-up Overlap Green		9
Max Extension		A
Inhibit Ped Reservice		B
Semi-Actuated		C
Start-up Overlap Yellow		D
Start-up Vehicle Calls	12345678	E
Start-up Ped Calls	12345678	F

Specials <F/2+F+Row>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <E/125+F+Row>

	C	Row
EV-A		0
EV-B		1
EV-C		2
EV-D		3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7
		8
		9
		A
		B
		C
		D
		E
		F

<E/125+C+Row>

Preemption Priority

(* RR-1 is always Highest, and RR-2 is always Second Highest)

	2	Row
		0
Phase 1	0	1
Phase 2	0	2
Phase 3	0	3
Phase 4	0	4
Phase 5	0	5
Phase 6	0	6
Phase 7	0	7
Phase 8	0	8
		9
		A
		B
		C
		D
		E
		F

<C/5+2+Row>

Coordination Transition Minimums

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Time and Date

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Daylight Savings Date:
If set to all zeros, standard dates will be used.

Row	Detector Name	0 C1 Pin Number	1 Attributes	2 Phase(s)	3 Assign	1 Delay	3 Carry-Over
0	2I2U	39	45_7_	2	123 8		1.8
1	6J2U	40	45_7_	6	123 8		1.8
2		41	45_7_	4	123 8		
3	8J6U	42	45_7_	8	123 8		1.8
4		43	45_7_	2	123 8		
5		44	45_7_	6	123 8		
6		45	45_7_	4	123 8		
7		46	45_7_	8	123 8		
8		47	67_	2	123 8		
9		48	67_	6	123 8		
A		49	67_	4	123 8		
B		50	67_	8	123 8		
C		55	45_7_	5	123 8		
D		56	45_7_	1	123 8		
E		57	45_7_	7	123 8		
F		58	45_7_	3	123 8		

Program Type:

	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green	35								5
Overlap Yellow	37								6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	30

<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	5	<D/0+0+1>
Max ON (minutes)	60	<D/0+0+2>

Detector Failure Monitor

Row	Detector Name	4 C1 Pin Number	5 Attributes	6 Phase(s)	7 Assign	2 Delay	4 Carry-Over
0		59	45_7_	5	123 8		
1		60	45_7_	1	123 8		
2		61	45_7_	7	123 8		
3		62	45_7_	3	123 8		
4		63	45_7_	2	123 8		
5		64	45_7_	6	123 8		
6		65	45_7_	4	123 8		
7		66	45_7_	8	123 8		
8		67	2	2	123 8		
9		68	2	6	123 8		
A		69	2	4	123 8		
B		70	2	8	123 8		
C		76	45_7_	2	123 8		
D		77	45_7_	6	123 8		
E		78	45_7_	4	123 8		
F		79	45_7_	8	123 8		

Detector Assignments <E/126+Column+Row> <D/0+Column+Row>

Detector Attributes
1 = Full Time Delay
2 = Ped Cali
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Row	D
Output Port 1	
Output Port 2	
Output Port 3	
Output Port 4	
Output Port 5	
Output Port 6	
Output Port 7	

Dimming <E/125+D+Row>

	D
Number of Digits	
1 st Digit	
2 ed Digit	
3 ed Digit	
4 th Digit	
5 th Digit	
6 th Digit	
7 th Digit	
8 th Digit	
9 th Digit	
10 th Digit	
11 th Digit	
12 th Digit	
13 th Digit	
14 th Digit	
15 th Digit	

<C/5+D+Row>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

Row	B
DELAY-A	1
DELAY-B	1
DELAY-C	0
DELAY-D	0
DELAY-E	0
DELAY-F	0

<D/0+B+Row> (seconds)

Delay Logic Times

Omit Alarm	

<C/5+F+0>

Disable Alarm Reporting

Time	0	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

INTERSECTION: FASHION VALLEY RD @ FRIARS RD

233 Program

Row	Time	Plan	Offset	Day of Week
0	07 : 00	7	A	_23456_
1	09 : 00	E	A	_23456_
2	15 : 00	8	A	_23456_
3	18 : 30	E	A	1234567
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Row	Time	Funct.	Day of Week	Column 4 Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <7/0.1+Row> <E/27+4+Row>

Row	Day	Year	Month	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Dates <8/1.1+Row>
(Bank 1)

Row	Time	Plan	Offset	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Events <9/1.1+Row>
(Bank 1)

T.O.D. Functions:
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select:
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Month Select:
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Cycle Timer:
Master: C/0 + A + 0
Ring A: C/0 + B + 0
Ring B: C/0 + D + 0

Interval Timer:
Ring A: F/0 + A + Interval Row
Ring B: F/0 + B + Interval Row

Master Plan: C/0 + A + 2
Current Plan: C/0 + A + 3
TOD Plan: C/0 + A + 5

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.2+Row>
(Bank 2)

Row	Time	Funct.	Holiday Type	Column 4 Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday TOD Function <7/0.2+Row> <E/28+Row>

Row	Day	Year	Month	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Dates <8/1.2+Row>
(Bank 2)

Row	Time	Plan	Offset	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Events <9/1.2+Row>
(Bank 2)

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Plan Name —>	Plan 1	2	3	4	5	6	7 AM	8 PM	9	Row
0	Cycle Length							112	136		0
1	Phase 1 - ForceOff							34	80		1
2	Phase 2 - ForceOff							0	0		2
3	Phase 3 - ForceOff										3
4	Phase 4 - ForceOff										4
5	Phase 5 - ForceOff							87	62		5
6	Phase 6 - ForceOff							0	0		6
7	Phase 7 - ForceOff										7
8	Phase 8 - ForceOff							74	49		8
9	Ring Offset										9
A	Offset 1							82	40		A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End							11	14		D
E	Hold Release							255	255		E
F	Zone Offset							0	0		F

Coordination - Timing Plans <C/1+Plan+Row>

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync		2
3	Plan 3 - Sync		3
4	Plan 4 - Sync		4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync	2 6	7
8	Plan 8 - Sync	2 6	8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C/1+E+Row>

Row											Row
0	Ped Adjustment										0
1	Perm 2 - Start										1
2	Perm 2 - End										2
3	Perm 3 - Start										3
4	Perm 3 - End										4
5	Reservice Time										5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase										A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Parameters <C/2+Plan+Row>

Row		F	Row
0	Free Lag		0
1	Plan 1 - Lag		1
2	Plan 2 - Lag		2
3	Plan 3 - Lag		3
4	Plan 4 - Lag		4
5	Plan 5 - Lag		5
6	Plan 6 - Lag		6
7	Plan 7 - Lag	1 6 8	7
8	Plan 8 - Lag	2 6 8	8
9	Plan 9 - Lag		9
A	External Lag		A
B			B
C			C
D			D
E			E
F			F

Lag Phases <C/1+F+Row>

Coordination Timing By: KH&A
Implemented on: 2/17/2010

Row	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Spec. Funct. 1	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term	0
1	Spec. Funct. 2	NOT-4	System Det 1	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	Spec. Funct. 3	OR-4 (a)	System Det 2	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	Spec. Funct. 4	OR-4 (b)	System Det 3	Plan 3	Dimming	Offset 2 (7-Wire)	EV-C 73	3
4	NAND-3 (a)	OR-5 (a)	System Det 4	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	NAND-3 (b)	OR-5 (b)	System Det 5	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	NAND-4 (a)	OR-6 (a)	System Det 6	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 52	6
7	NAND-4 (b)	OR-6 (b)	System Det 7	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	OR-7 (a)	Fig 3 Diamond	System Det 8	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	OR-7 (b)	Fig 4 Diamond	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs **<E/126+Column+Row>**

Row	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Phase ON - 4	Sp Evnt Out 3	Fig 3 Diamond	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Phase ON - 5	Sp Evnt Out 4	Fig 4 Diamond	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Phase ON - 6	Sp Evnt Out 5		Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Phase ON - 7	Sp Evnt Out 6		Plan 6	AND-3	TOD Out 7	Flash (7-Wire) 81	6
7	Phase ON - 8	Sp Evnt Out 7		Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Ph. Check - 2		NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C		C
D	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D		D
E	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E		E
F	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F		F

Assignable Outputs **<E/127+Column+Row>**

Phase Timing - Bank 2 <C+0+F=2>

Row		Phase 1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Alternate Timing

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Phase Timing - Bank 3 <C+0+F=3>

Row		1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Alternate Timing

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases		<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.5	<F/1+0+6>
Short Failure	0.5	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Min Time (seconds)	0	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	0	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Low Pri. Channel		<E/125+C+8>

Disable Low Priority Channel

INTERSECTION: FASHION VALLEY RD @ FRIARS RD

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

IN RSECTION: FRIARS ROAD @ VIA DE LA MODA

233 F gram

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street: VIA DE LA MODA
E/W Street: FRIARS

Last Database Change:

Timing sheets by: M2S
Approved by: FLG
Timing implemented on: 04/13/10

		FRIARS				FRIARS			VIA DE LA MODA
		Phase							
Phase Numbers---->		1	2	3	4	5	6	7	8
Row		↓	→			↑	←	↓ Dummy	↑
0	Ped Walk		7						7
1	Ped FDW		15						24
2	Min Green	4	10			4	10	4	4
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	3.6			2.0	3.7	2.0	2.0
6	Max Gap	2.0	3.6			2.0	3.7	2.0	2.0
7	Min Gap	2.0	0.2			2.0	0.2	2.0	2.0
8	Max Limit	25	60			30	60	25	30
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every		0.9				0.8		
E	Yellow Change	3.4	4.4			3.4	4.3	3.4	3.4
F	Red Clear	1.0	1.0			1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <F/1+Phase+Row>

Row		E
	RR-1 Delay	
	RR-1 Clear	
	EV-A Delay	0
	EV-A Clear	0
	EV-B Delay	0
	EV-B Clear	0
	EV-C Delay	0
	EV-C Clear	0
	EV-D Delay	0
	EV-D Clear	0
	RR-2 Delay	
	RR-2 Clear	
	View EV Delay	- - -
	View EV Clear	- - -
	View RR Delay	- - -
	View RR Clear	- - -

Preempt Timing <F/1+E+Row>

Row		F
0	Permit	12 56 8
1	Red Lock	
2	Yellow Lock	
3	Min Recall	2 6
4	Ped Recall	
5	*View Set Peds*	
6	Rest In Walk	
7	Red Rest	
8	Double Entry	4 8
9	Max Recall	
A	Soft Recall	
B	Max 2	
C	Cond. Service	
D	Man Cntrl Calls	
E	Yellow Start	2 6
F	First Phases	8

Phase Functions <F/1+F+Row>

Current Calculated Cycle Length: C/0 + B + F

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

Drop Number	2	<C/0+0+0>
Zone Number	2	<C/0+0+1>
Area Number	4	<C/0+0+2>
Area Address	82	<C/0+0+3>
QuicNet Channel	90	(QuicNet)

Communication Addresses

(Outputs specified in Assignable Outputs at E/127+A+E & F)

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>

Start / Revert Times

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Notes:

Free Lag	2 5 8	<C/1+F+0>

How to Set Page Access Code:
F/1 -- C + 0 + F = 1

INTERSECTION: FRIARS ROAD @ VIA DE LA MODA

233 Program

Row		Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number	1	6						
1	Veh Set 1 - Phases	1____7_	____67_						
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases	_2____8	____5__8						
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear								
E	Yellow Change	3.4	4.3						
F	Red Clear	1.0	1.0						

Overlap Assignments <E/29+Column+Row>

	F	Row
Fast Green Flash Phase		0
Green Flash Phases		1
Flashing Walk Phases		2
Guaranteed Passage		3
Simultaneous Gap Term	12345678	4
Sequential Timing		5
Advance Walk Phases		6
Delay Walk Phases		7
External Recall		8
Start-up Overlap Green		9
Max Extension		A
Inhibit Ped Reservice		B
Semi-Actuated		C
Start-up Overlap Yellow		D
Start-up Vehicle Calls	12345678	E
Start-up Ped Calls	12345678	F

Specials <F/2+F+Row>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	_2__5___
B	EV-B Phases	
C	EV-C Phases	1___6__
D	EV-D Phases	_____8
E	Extra 1 Config. Bits	1_345___
F	IC Select (Interconnect)	_2_____

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	12__5678
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	_2_____
Ped for 6P Output	
Ped for 4P Output	
Ped for 8P Output	_____8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <E/125+F+Row>

	C	Row
EV-A		0
EV-B		1
EV-C		2
EV-D		3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7
		8
		9
		A
		B
		C
		D
		E
		F

<E/125+C+Row>

Preemption Priority

(* RR-1 is always Highest, and RR-2 is always Second Highest)

	2	Row
		0
Phase 1	0	1
Phase 2	0	2
Phase 3	0	3
Phase 4	0	4
Phase 5	0	5
Phase 6	0	6
Phase 7	0	7
Phase 8	0	8
		9
		A
		B
		C
		D
		E
		F

<C/5+2+Row>

Coordination Transition Minimums

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = S[illegible]ing

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Time and Date

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Time

Daylight Savings Date:
If set to all zeros, standard date[illegible]e used.

Row	Detector Name	0 C1 Pin Number	1 Attributes	2 Phase(s)	3 Assign	1 Delay	3 Carry-Over
0	2I2U	39	45_7_	2	123 8		1.8
1	6J2U	40	45_7_	6	123 8		1.8
2		41	45_7_	4	123 8		
3		42	45_7_	8	123 8		
4	2I2L	43	45_7_	2	123 8		1.8
5	6J2L	44	45_7_	6	123 8		1.8
6		45	45_7_	4	123 8		
7	8J6L	46	45_7_	8	123 8	5.0	
8		47	67_	2	123 8		
9		48	67_	6	123 8		
A		49	67_	4	123 8		
B		50	67_	8	123 8		
C		55	45_7_	5	123 8		
D		56	45_7_	1 7	123 8		
E		57	45_7_	7	123 8		
F		58	45_7_	3	123 8		

Program Type:

	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	30

<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	5	<D/0+0+1>
Max ON (minutes)	60	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <E/125+D+Row>

Row	Detector Name	4 C1 Pin Number	5 Attributes	6 Phase(s)	7 Assign	2 Delay	4 Carry-Over
0		59	45_7_	5	123 8		
1		60	45_7_	1	123 8		
2		61	45_7_	7	123 8		
3		62	45_7_	3	123 8		
4		63	45_7_	2	123 8		
5		64	45_7_	6	123 8		
6		65	45_7_	4	123 8		
7		66	45_7_	8	123 8		
8		67	2	2	123 8		
9		68	2	6	123 8		
A		69	2	4	123 8		
B		70	2	8	123 8		
C		76	45_7_	2	123 8		
D		77	45_7_	6	123 8		
E		78	45_7_	4	123 8		
F		79	45_7_	8	123 8		

Detector Assignments <E/126+Column+Row> <D/0+Column+Row>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	D
Number of Digits	
1 st Digit	
2 ed Digit	
3 ed Digit	
4 th Digit	
5 th Digit	
6 th Digit	
7 th Digit	
8 th Digit	
9 th Digit	
10 th Digit	
11 th Digit	
12 th Digit	
13 th Digit	
14 th Digit	
15 th Digit	<C/5+D+Row>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	1	A
DELAY-B	1	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

<D/0+B+Row> (seconds)
Delay Logic Times

Omit Alarm	

<C/5+F+0>
Disable Alarm Reporting

Time	0	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	07 : 00	7	A	_23456_
1	09 : 00	E	A	_23456_
2	15 : 00	8	A	_23456_
3	18 : 30	E	A	1234567
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct.	Day of Week

TOD Function <7/0.1+Row>

Row	Column 4 Phases/Bits
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
A	
B	
C	
D	
E	
F	

<E/27+4+Row>

Row	Day	Year	Month	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Dates <8/1.1+Row>
(Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row>
(Bank 1)

Row
0
1
2
3
4
5
6
7
8
9
A
B
C
D
E
F

T.O.D. Functions:
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select:
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Month Select:
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Cycle Timer:
Master: C/0 + A + 0
Ring A: C/0 + B + 0
Ring B: C/0 + D + 0

Interval Timer:
Ring A: F/0 + A + Interval Row
Ring B: F/0 + B + Interval Row

Master Plan: C/0 + A + 2
Current Plan: C/0 + A + 3
TOD Plan: C/0 + A + 5

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.2+Row>
(Bank 2)

Time	Funct.	Holiday Type

Holiday TOD Function <7/0.2+Row>

Row	Column 4 Phases/Bits
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
A	
B	
C	
D	
E	
F	

<E/28+Row>

Row	Day	Year	Month	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Dates <8/1.2+Row>
(Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.2+Row>
(Bank 2)

Row
0
1
2
3
4
5
6
7
8
9
A
B
C
D
E
F

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Plan Name ---->	Plan 1	2	3	4	5	6	7 AM	8 PM	9	Row
0	Cycle Length							112	136		0
1	Phase 1 - ForceOff							48	75		1
2	Phase 2 - ForceOff							0	0		2
3	Phase 3 - ForceOff										3
4	Phase 4 - ForceOff										4
5	Phase 5 - ForceOff							46	70		5
6	Phase 6 - ForceOff							0	0		6
7	Phase 7 - ForceOff								23		7
8	Phase 8 - ForceOff							35	58		8
9	Ring Offset										9
A	Offset 1							105	63		A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End							11	14		D
E	Hold Release							255	255		E
F	Zone Offset							0	0		F

Coordination - Timing Plans **<C/1+Plan+Row>**

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync		2
3	Plan 3 - Sync		3
4	Plan 4 - Sync		4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync	2 6	7
8	Plan 8 - Sync	2 6	8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases **<C/1+E+Row>**

Row	Plan 1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment										0
1	Perm 2 - Start								10		1
2	Perm 2 - End								40		2
3	Perm 3 - Start								40		3
4	Perm 3 - End								55		4
5	Reservice Time								0		5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase								7		A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase								8		C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase								1 5		E
F	Perm 3 Ped Phase										F

Coordination - Parameters **<C/2+Plan+Row>**

Row		F	Row
0	Free Lag		0
1	Plan 1 - Lag		1
2	Plan 2 - Lag		2
3	Plan 3 - Lag		3
4	Plan 4 - Lag		4
5	Plan 5 - Lag		5
6	Plan 6 - Lag		6
7	Plan 7 - Lag	2 6 8	7
8	Plan 8 - Lag	2 6 8	8
9	Plan 9 - Lag		9
A	External Lag		A
B			B
C			C
D			D
E			E
F			F

Lag Phases **<C/1+F+Row>**

Coordination Timing By: KH&A
Implemented on: 2/17/2010

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1		NOT-3		Max 2		Pretimed		Set Monday		Dial 2 (7-Wire)		Sim Term		0
1	Spec. Funct. 2		NOT-4		System Det 1		Plan 1		Ext. Perm 1	210	Dial 3 (7-Wire)		EV-A	71	1
2	Spec. Funct. 3		OR-4 (a)		System Det 2		Plan 2		Ext. Perm 2		Offset 1 (7-Wire)		EV-B	72	2
3	Spec. Funct. 4		OR-4 (b)		System Det 3		Plan 3		Dimming		Offset 2 (7-Wire)		EV-C	73	3
4	NAND-3 (a)		OR-5 (a)		System Det 4		Plan 4		Set Clock		Offset 3 (7-Wire)		EV-D	74	4
5	NAND-3 (b)		OR-5 (b)		System Det 5		Plan 5		Stop Time	82	Free (7-Wire)		RR-1	51	5
6	NAND-4 (a)		OR-6 (a)		System Det 6		Plan 6		Flash Sense	81	Flash (7-Wire)		RR-2	52	6
7	NAND-4 (b)		OR-6 (b)		System Det 7		Plan 7		Manual Enable		Excl. Ped Omit		Spec. Event 1		7
8	OR-7 (a)		Fig 3 Diamond		System Det 8		Plan 8		Man. Advance		NOT-1		Spec. Event 2		8
9	OR-7 (b)		Fig 4 Diamond		Max Inhibit (nema)		Plan 9		External Alarm		NOT-2		External Lag		9
A	OR-7 (c)		AND-4 (a)		Force A (nema)		DELAY-A		Phase Bank 2		OR-1 (a)		AND-1 (a)		A
B	OR-7 (d)		AND-4 (b)		Force B (nema)		DELAY-B		Phase Bank 3		OR-1 (b)		AND-1 (b)		B
C	OR-8 (a)		NAND-1 (a)		C.N.A. (nema)		DELAY-C		Overlap Set 2		OR-2 (a)	203	AND-2 (a)		C
D	OR-8 (b)		NAND-1 (b)		Hold (nema)		DELAY-D		Overlap Set 3		OR-2 (b)	0	AND-2 (b)		D
E	OR-8 (c)		NAND-2 (a)		Max Recall		DELAY-E		Detector Set 2		OR-3 (a)		AND-3 (a)		E
F	OR-8 (d)		NAND-2 (b)		Min Recall		DELAY-F		Detector Set 3		OR-3 (b)		AND-3 (b)		F

Assignable Inputs <E/126+Column+Row>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1		Preempt Fail		Flasher 0		Free		NOT-1		TOD Out 1		Dial 2 (7-Wire)		0
1	Phase ON - 2		Sp Evnt Out 1		Flasher 1		Plan 1		OR-1		TOD Out 2		Dial 3 (7-Wire)		1
2	Phase ON - 3		Sp Evnt Out 2		Fast Flasher		Plan 2		OR-2	210	TOD Out 3		Offset 1 (7-Wire)		2
3	Phase ON - 4		Sp Evnt Out 3		Fig 3 Diamond		Plan 3		OR-3		TOD Out 4		Offset 2 (7-Wire)		3
4	Phase ON - 5		Sp Evnt Out 4		Fig 4 Diamond		Plan 4		AND-1		TOD Out 5		Offset 3 (7-Wire)		4
5	Phase ON - 6		Sp Evnt Out 5				Plan 5		AND-2		TOD Out 6		Free (7-Wire)		5
6	Phase ON - 7		Sp Evnt Out 6				Plan 6		AND-3		TOD Out 7		Flash (7-Wire)	81	6
7	Phase ON - 8		Sp Evnt Out 7				Plan 7		NOT-2		TOD Out 8		Preempt		7
8	Ph. Check - 1		Sp Evnt Out 8		NOT-3		Plan 8	203	EV-A		Adv. Warn - 1		Low Priority A		8
9	Ph. Check - 2				NOT-4		Plan 9		EV-B		Adv. Warn - 2		Low Priority B		9
A	Ph. Check - 3		Detector Fail		OR-4		Spec. Funct. 3		EV-C		DELAY-A		Low Priority C		A
B	Ph. Check - 4		Spec. Funct. 1		OR-5		Spec. Funct. 4		EV-D		DELAY-B		Low Priority D		B
C	Ph. Check - 5		Spec. Funct. 2		OR-6		NAND-3		RR-1		DELAY-C				C
D	Ph. Check - 6		Central Control		AND-4		NAND-4		RR-2		DELAY-D				D
E	Ph. Check - 7		Excl. Ped DW		NAND-1		OR-7		Spec. Event 1		DELAY-E				E
F	Ph. Check - 8		Excl. Ped WK		NAND-2		OR-8		Spec. Event 2		DELAY-F				F

Assignable Outputs <E/127+Column+Row>

Row		Phase 1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases		<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Row		1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Long Failure	0.5	<F/1+0+6>
Short Failure	0.5	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Min Time (seconds)	0	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	0	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Low Pri. Channel	#NAME?	<E/125+C+8>

Disable Low Priority Channel

INTERSECTION: FRIARS ROAD @ VIA DE LA MODA

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

13

INTERSECTION: AVENIDA DE LAS TIENDAS @ FRIARS R

233 Program

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street: AVENIDA DE LAS TIENDAS
E/W Street: FRIARS

Last Database Change:

Timing sheets by: M2S
Approved by: FLG
Timing implemented on: 04/13/10

		FRIARS	AVE DE LAS TIENDAS		FRIARS		AVE DE LAS TIENDAS		
		Phase							
Row	Phase Numbers—>	1	2	3	4	5	6	7	8
		↓	→		↓	↑	←	Dummy	↑
0	Ped Walk		7		5		7		
1	Ped FDW		18		25		9		
2	Min Green	4	10		4	4	10	4	4
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	3.6		2.0	2.0	3.7	2.0	2.0
6	Max Gap	2.0	3.6		2.0	2.0	3.7	2.0	2.0
7	Min Gap	2.0	0.2		2.0	2.0	0.2	2.0	2.0
8	Max Limit	25	60		30	30	60	25	30
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every		0.9				0.8		
E	Yellow Change	3.4	4.4		3.9	3.4	4.3	3.4	3.9
F	Red Clear	1.0	1.0		1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <F/1+Phase+Row>

Row		E
	RR-1 Delay	
	RR-1 Clear	
	EV-A Delay	0
	EV-A Clear	0
	EV-B Delay	0
	EV-B Clear	0
	EV-C Delay	0
	EV-C Clear	0
	EV-D Delay	0
	EV-D Clear	0
	RR-2 Delay	
	RR-2 Clear	
	View EV Delay	- - -
	View EV Clear	- - -
	View RR Delay	- - -
	View RR Clear	- - -

Preempt Timing <F/1+E+Row>

Row		F
0	Permit	12_456_8
1	Red Lock	
2	Yellow Lock	
3	Min Recall	_2___6__
4	Ped Recall	
5	*View Set Peds*	_2_4_6__
6	Rest In Walk	
7	Red Rest	
8	Double Entry	___4___8
9	Max Recall	
A	Soft Recall	
B	Max 2	
C	Cond. Service	
D	Man Cntrl Calls	
E	Yellow Start	___4___8
F	First Phases	1___6__

Phase Functions <F/1+F+Row>

Current Calculated Cycle Length: C/0 + B + F

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

Drop Number	3	<C/0+0+0>
Zone Number	3	<C/0+0+1>
Area Number	4	<C/0+0+2>
Area Address	83	<C/0+0+3>
QuicNet Channel	90	(QuicNet)

Communication Addresses

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

(Outputs specified in Assignable Outputs at E/127+A+E & F)

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>

Start / Revert Times

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Free Lag	2 4 6 8	<C/1+F+0>

How to Set Page Access Code:
F/1 – C + 0 + F = 1

Notes: Yellow Start Must be phases 4 & 8.
Phase 7 is permitted only during plan 8. Phase 7 must be flagged as Exclusive.
Phase 7 must be flagged at E+2+D (Detector Timing).

INTERSECTION: AVENIDA DE LAS TIENDAS @ FRIARS RD

233 Program

Overlap Assignments <E/29+Column+Row>

Row		Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number	1	6						
1	Veh Set 1 - Phases	1 7	67						
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases	2 4 8	45 8						
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear								
E	Yellow Change	3.4	4.3						
F	Red Clear	1.0	1.0						

Specials <F/2+F+Row>

	F	Row
Fast Green Flash Phase		0
Green Flash Phases		1
Flashing Walk Phases		2
Guaranteed Passage		3
Simultaneous Gap Term	12345678	4
Sequential Timing		5
Advance Walk Phases		6
Delay Walk Phases		7
External Recall		8
Start-up Overlap Green		9
Max Extension		A
Inhibit Ped Reservice		B
Semi-Actuated		C
Start-up Overlap Yellow		D
Start-up Vehicle Calls	12345678	E
Start-up Ped Calls	12345678	F

Configuration <E/125+E+Row>

Row		E
0	Exclusive Phases	7
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration <E/125+F+Row>

	F
Ext. Permit 1 Phases	12 45678
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Preemption Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

	C	Row
EV-A		0
EV-B		1
EV-C		2
EV-D		3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7
		8
		9
		A
		B
		C
		D
		E
		F

Coordination Transition Minimums <C/5+2+Row>

	2	Row
		0
Phase 1	0	1
Phase 2	0	2
Phase 3	0	3
Phase 4	0	4
Phase 5	0	5
Phase 6	0	6
Phase 7	0	7
Phase 8	0	8
		9
		A
		B
		C
		D
		E
		F

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Time and Date

Daylight Savings Time

Begin Month	3	<C/5+2+A>
Begin Week	2	<C/5+2+B>
End Month	11	<C/5+2+C>
End Week	1	<C/5+2+D>

Daylight Savings Date:
If set to all zeros, standard dat[illegible] be used.

Row	Detector Name	0 C1 Pin Number	1 Attributes	2 Phase(s)	3 Assign	1 Delay	3 Carry-Over
0	2I2U	39	45_7_	2	123 8		1.8
1	6J2U	40	45_7_	6	123 8		1.8
2		41	45_7_	4	123 8		
3		42	45_7_	8	123 8		
4	2I2L	43	45_7_	2	123 8		1.8
5	6J2L	44	45_7_	6	123 8		1.8
6		45	45_7_	4	123 8		
7		46	45_7_	8	123 8		
8		47	67_	2	123 8		
9		48	67_	6	123 8		
A		49	67_	4	123 8		
B		50	67_	8	123 8		
C		55	45_7_	5	123 8		
D		56	45_7_	1 7_	123 8		
E		57	45_7_	7_	123 8		
F		58	45_7_	3	123 8		

Program Type:

	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	30

<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	5	<D/0+0+1>
Max ON (minutes)	60	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <E/125+D+Row>

Row	Detector Name	4 C1 Pin Number	5 Attributes	6 Phase(s)	7 Assign	2 Delay	4 Carry-Over
0		59	45_7_	5	123 8		
1		60	45_7_	1	123 8		
2		61	45_7_	7_	123 8		
3		62	45_7_	3	123 8		
4		63	45_7_	2	123 8		
5		64	45_7_	6	123 8		
6		65	45_7_	4	123 8		
7		66	45_7_	8	123 8		
8		67	2	2	123 8		
9		68	2	6	123 8		
A		69	2	4	123 8		
B		70	2	8	123 8		
C		76	45_7_	2	123 8		
D		77	45_7_	6	123 8		
E		78	45_7_	4	123 8		
F		79	45_7_	8	123 8		

Detector Assignments <E/126+Column+Row> <D/0+Column+Row>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	D
Number of Digits	
1 st Digit	
2 ed Digit	
3 ed Digit	
4 th Digit	
5 th Digit	
6 th Digit	
7 th Digit	
8 th Digit	
9 th Digit	
10 th Digit	
11 th Digit	
12 th Digit	
13 th Digit	
14 th Digit	
15 th Digit	

<C/5+D+Row>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	1	A
DELAY-B	1	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

<D/0+B+Row> (seconds)

Delay Logic Times

Omit Alarm	#NAME?

<C/5+F+0>

Disable Alarm Reporting

Time	0	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	07 : 00	7	A	_23456_
1	09 : 00	E	A	_23456_
2	15 : 00	8	A	_23456_
3	18 : 30	E	A	1234567
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row> (Bank 1)

Time	Funct.	Day of Week

TOD Function <7/0.1+Row>

Column 4 Phases/Bits

<E/27+4+Row>

Row	Day	Year	Month	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Dates <8/1.1+Row> (Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row> (Bank 1)

Row
0
1
2
3
4
5
6
7
8
9
A
B
C
D
E
F

T.O.D. Functions:
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select:
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Month Select:
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Cycle Timer:
Master: C/0 + A + 0
Ring A: C/0 + B + 0
Ring B: C/0 + D + 0

Interval Timer:
Ring A: F/0 + A + Interval Row
Ring B: F/0 + B + Interval Row

Master Plan: C/0 + A + 2
Current Plan: C/0 + A + 3
TOD Plan: C/0 + A + 5

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.2+Row> (Bank 2)

Time	Funct.	Holiday Type

Holiday TOD Function <7/0.2+Row>

Column 4 Phases/Bits

<E/28+Row>

Row	Day	Year	Month	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Dates <8/1.2+Row> (Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.2+Row> (Bank 2)

Row
0
1
2
3
4
5
6
7
8
9
A
B
C
D
E
F

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Plan Name ---->	1	2	3	4	5	6	7 AM	8 PM	9	Row
0	Cycle Length							112	136		0
1	Phase 1 - ForceOff							55	78		1
2	Phase 2 - ForceOff							0	0		2
3	Phase 3 - ForceOff										3
4	Phase 4 - ForceOff							38	58		4
5	Phase 5 - ForceOff							51	70		5
6	Phase 6 - ForceOff							0	0		6
7	Phase 7 - ForceOff								27		7
8	Phase 8 - ForceOff							38	58		8
9	Ring Offset										9
A	Offset 1							90	71		A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End							11	14		D
E	Hold Release							255	255		E
F	Zone Offset							0	0		F

Coordination - Timing Plans <C/1+Plan+Row>

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync		2
3	Plan 3 - Sync		3
4	Plan 4 - Sync		4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync	_2___6__	7
8	Plan 8 - Sync	_2___6__	8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C/1+E+Row>

Row											Row
0	Ped Adjustment										0
1	Perm 2 - Start								10		1
2	Perm 2 - End								40		2
3	Perm 3 - Start								40		3
4	Perm 3 - End								55		4
5	Reservice Time								0		5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase								_____7_		A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase								___4___8		C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase								1___5___		E
F	Perm 3 Ped Phase										F

Coordination - Parameters <C/2+Plan+Row>

Row		F	Row
0	Free Lag		0
1	Plan 1 - Lag		1
2	Plan 2 - Lag		2
3	Plan 3 - Lag		3
4	Plan 4 - Lag		4
5	Plan 5 - Lag		5
6	Plan 6 - Lag		6
7	Plan 7 - Lag	_2_4_6_8	7
8	Plan 8 - Lag	_2_4_6_8	8
9	Plan 9 - Lag		9
A	External Lag		A
B			B
C			C
D			D
E			E
F			F

Lag Phases <C/1+F+Row>

Coordination Timing By: KH&A
Implemented on: 2/17/2010

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1		NOT-3		Max 2		Pretimed		Set Monday		Dial 2 (7-Wire)		Sim Term		0
1	Spec. Funct. 2		NOT-4		System Det 1		Plan 1		Ext. Perm 1	210	Dial 3 (7-Wire)		EV-A	71	1
2	Spec. Funct. 3		OR-4 (a)		System Det 2		Plan 2		Ext. Perm 2		Offset 1 (7-Wire)		EV-B	72	2
3	Spec. Funct. 4		OR-4 (b)		System Det 3		Plan 3		Dimming		Offset 2 (7-Wire)		EV-C	73	3
4	NAND-3 (a)		OR-5 (a)		System Det 4		Plan 4		Set Clock		Offset 3 (7-Wire)		EV-D	74	4
5	NAND-3 (b)		OR-5 (b)		System Det 5		Plan 5		Stop Time	82	Free (7-Wire)		RR-1	51	5
6	NAND-4 (a)		OR-6 (a)		System Det 6		Plan 6		Flash Sense	81	Flash (7-Wire)		RR-2	52	6
7	NAND-4 (b)		OR-6 (b)		System Det 7		Plan 7		Manual Enable		Excl. Ped Omit		Spec. Event 1		7
8	OR-7 (a)		Fig 3 Diamond		System Det 8		Plan 8		Man. Advance		NOT-1		Spec. Event 2		8
9	OR-7 (b)		Fig 4 Diamond		Max Inhibit (nema)		Plan 9		External Alarm		NOT-2		External Lag		9
A	OR-7 (c)		AND-4 (a)		Force A (nema)		DELAY-A		Phase Bank 2		OR-1 (a)		AND-1 (a)		A
B	OR-7 (d)		AND-4 (b)		Force B (nema)		DELAY-B		Phase Bank 3		OR-1 (b)		AND-1 (b)		B
C	OR-8 (a)		NAND-1 (a)		C.N.A. (nema)		DELAY-C		Overlap Set 2		OR-2 (a)	203	AND-2 (a)		C
D	OR-8 (b)		NAND-1 (b)		Hold (nema)		DELAY-D		Overlap Set 3		OR-2 (b)	0	AND-2 (b)		D
E	OR-8 (c)		NAND-2 (a)		Max Recall		DELAY-E		Detector Set 2		OR-3 (a)		AND-3 (a)		E
F	OR-8 (d)		NAND-2 (b)		Min Recall		DELAY-F		Detector Set 3		OR-3 (b)		AND-3 (b)		F

Assignable Inputs <E/126+Column+Row>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1		Preempt Fail		Flasher 0		Free		NOT-1		TOD Out 1		Dial 2 (7-Wire)		0
1	Phase ON - 2		Sp Evnt Out 1		Flasher 1		Plan 1		OR-1		TOD Out 2		Dial 3 (7-Wire)		1
2	Phase ON - 3		Sp Evnt Out 2		Fast Flasher		Plan 2		OR-2	210	TOD Out 3		Offset 1 (7-Wire)		2
3	Phase ON - 4		Sp Evnt Out 3		Fig 3 Diamond		Plan 3		OR-3		TOD Out 4		Offset 2 (7-Wire)		3
4	Phase ON - 5		Sp Evnt Out 4		Fig 4 Diamond		Plan 4		AND-1		TOD Out 5		Offset 3 (7-Wire)		4
5	Phase ON - 6		Sp Evnt Out 5				Plan 5		AND-2		TOD Out 6		Free (7-Wire)		5
6	Phase ON - 7		Sp Evnt Out 6				Plan 6		AND-3		TOD Out 7		Flash (7-Wire)		6
7	Phase ON - 8		Sp Evnt Out 7				Plan 7		NOT-2		TOD Out 8		Preempt		7
8	Ph. Check - 1		Sp Evnt Out 8		NOT-3		Plan 8	203	EV-A		Adv. Warn - 1		Low Priority A		8
9	Ph. Check - 2				NOT-4		Plan 9		EV-B		Adv. Warn - 2		Low Priority B		9
A	Ph. Check - 3		Detector Fail		OR-4		Spec. Funct. 3		EV-C		DELAY-A		Low Priority C		A
B	Ph. Check - 4		Spec. Funct. 1		OR-5		Spec. Funct. 4		EV-D		DELAY-B		Low Priority D		B
C	Ph. Check - 5		Spec. Funct. 2		OR-6		NAND-3		RR-1		DELAY-C				C
D	Ph. Check - 6		Central Control		AND-4		NAND-4		RR-2		DELAY-D				D
E	Ph. Check - 7		Excl. Ped DW		NAND-1		OR-7		Spec. Event 1		DELAY-E				E
F	Ph. Check - 8		Excl. Ped WK		NAND-2		OR-8		Spec. Event 2		DELAY-F				F

Assignable Outputs <E/127+Column+Row>

Row		Phase 1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases		<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Row		Phase 1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Long Failure	0.5	<F/1+0+6>
Short Failure	0.5	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Min Time (seconds)	0	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	0	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Low Pri. Channel	#NAME?	<E/125+C+8>

Disable Low Priority Channel

INTERSECTION: AVENIDA DE LAS TIENDAS @ FRIARS RD

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

14

TRAFFIC SIGNAL TIMING - BITS 152

PHASE TIMING

PHASE # →		1	2	3	4	5	6	7	8
WALK	0		7		7				
FLASH D/W	1		7		26				
MIN GREEN	2		10	4	4	2	10		
TYPE 3 DET	3								
ADD/VEH	4								
VEH EXTEN	5		3.2	2	2	2	3.2		
MAX GAP	6		3.2	2	2	2	3.2		
MIN GAP	7		0.2	2	2	2	0.2		
MAX EXTEN	8		45	30	30	20	45		
MAX 2	9		45	30	30	20	45		
	A								
	B								
REDUCE BY	C		0.1				0.1		
REDUCE EVERY	D		1.0				1.0		
YELLOW	E		3.5	3.5	3.5	3.0	3.5		
RED CLEAR	F		1.0	1.0	1.0	1.0	1.0		

PREEMPT

	E	
RR1 DELAY		
RR1 CLEAR		
EV A DELAY		
EV A CLEAR		
EV B DELAY	5.	
EV B CLEAR		5
EV C DELAY		6
EV C CLEAR		7
EV D DELAY		8
EV D CLEAR		9
RR2 DELAY		A
RR2 CLEAR		B
EV CLR TMR		C
EV DLY TMR		D
RR CLR TMR		E
RR DLY TMR		F

MAX INITIAL (F-0-E) = 0 KEYSTROKES: F + PHASE + LOCATION RED REVERT (F-0-F) = 5.0

PHASE FUNCTION FLAGS

		PHASE 1	2	3	4	5	6	7	8
PERMIT	0		X	X	X	X	X		
RED LOCK	1								
YELLOW LOCK	2								
VEH RECALL	3		X				X		
PED RECALL	4								
PEDS	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
OVERLAP A	A								
OVERLAP B	B								
OVERLAP C	C								
OVERLAP D	D								
STARTUP	E		X				X		
(RESERVED)	F								

KEYSTROKES: F + F + FUNCTION #

PHASE SEQUENCES

		PHASE 1	2	3	4	5	6	7	8
LAG 0 (FREE)	0		X		X	X			X
LAG 1	1								
LAG 2	2								
LAG 3	3								
LAG 4	4								
LAG 5	5								
LAG 6	6								
LAG 7	7								
LAG 8	8								
LAG 9	9								
COOR MAX RECALL	A								
COOR LAG RECALL	B								
SYNC PHASES	C								
HOLD	D								
NEXT PHASE	E								
FORCE OFF	F								

KEYSTROKES: C + F + FUNCTION #

REMARKS:

LOC: Friars Rd. & Ulric / RT. 163 S/B ramps DATE: 9/30/85

ED-74 (5-83)

PAGE 1 OF ___

DETECTOR TIMES (332 CABINET)

Y \ X	1 SET DELAY	2 SET DELAY	3 SET CARRY	4 SET CARRY	5 OBS COUNT	6 OBS COUNT	7 OBS DELAY	8 OBS DELAY	9 OBS CARRY	A OBS CARRY
0	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1
1	2I2U	6J2U	2I2U 1.8	6J2U 1.8	2I2U	6J2U	2I2U	6J2U	2I2U	6J2U
2	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L
3	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U
4	2I3L	6J3L	2I3L	6J3L			2I3L	6J3L	2I3L	6J3L
5	2I4	6J4	2I4	6J4			2I4	6J4	2I4	6J4
6	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5
7	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U
8	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L
9	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U
A	4I7L	8J7L	4I7L	8J7L			4I7L	8J7L	4I7L	8J7L
B	4I8	8J8	4I8	8J8			4I8	8J8	4I8	8J8
C	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U
D	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L
E										
F										

KEYSTROKES: D + X + Y

TIME OF DAY FUNCTION

	TIME (24 HOUR)	FUN	DAY OF WEEK 1	2	3	4	5	6	7
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									
A									
B									
C									
D									
E									
F									

KEYSTROKES: 7 + EVENT NUMBER

PEDESTRIAN ASSIGNMENTS

LOC	SWITCH-PACK	INPUT CI PIN	PHASE 1	2	3	4	5	6	7	8
EF5	2P	67		X						
EF6	6P	68								
EF7	4P	69				X				
EF8	8P	70								

EMERGENCY VEHICLE PREEMPT ASSIGNMENTS

LOC	PREEM	INPUT CI PIN	PHASE 1	2	3	4	5	6	7	8
EEA	EVA	71								
EEB	EVB	72								
EEC	EVC	73								
EED	EVD	74								

RAILROAD PREEMPTION ASSIGNMENTS

LOC	PHASE	1	2	3	4	5	6	7	8
EE1	RR1 CLEAR								
EE2	RR2 CLEAR								
EE3	RR2 LMT OPS								

CONDITIONAL SERVICE D-F-O _____

LONG POWER FAIL CORRECTION F-O-6 _____

SHORT POWER FAIL CORRECTION F-O-7 _____

CURRENT TIME AND DATE

8-0 HOUR, MINUTE, DAY OF WEEK

8-1 DAY OF MONTH, YEAR, MONTH

C-4-9 SECONDS

15 LOCATION: **RTE 163 NB / FRIARS RD**

CALTRANS C8 Version 3 DATE: 3/4/2015 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	1	1	1	1	1	1	1	CLK RST
1	DONT WALK	1	1	1	1	1	1	1	1	
2	MIN GREEN	1	12	1	5	1	1	1	1	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	0.9	2.0	0.9	2.0	0.9	0.9	0.9	0.9	
6	MAX GAP	0.9	2.0	0.9	2.0	0.9	0.9	0.9	0.9	
7	MIN GAP	0.9	2.0	0.9	2.0	0.9	0.9	0.9	0.9	
8	MAX EXT	9	40	9	40	9	9	9	9	
9	MAX 2									YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.0	5.0	3.0	4.0	3.0	3.0	3.0	3.0	MIN
F	RED	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	SEC
	PED XING FT									
	BIKE XING FT		75							

PRE-EMPTION E		F FLAGS	1	2	3	4	5	6	7	8	
EV SEL	0	PERMIT	1	2	3	4	5	6	7	8	0
RR1 CLR	5	RED LOCK									1
EVA DLY	0	YEL LOCK									2
EVA CLR	5	V RECALL		2							3
EVB DLY	0	P RECALL									4
EVB CLR	5	PED PHASES									5
EVC DLY	0	RT OLA									6
EVC CLR	5	RT OLB									7
EVD DLY	0	DBL ENTRY									8
EVD CLR	5	MAX 2 PHASES									9
MAX EV	255	LAG PHASES	READ ONLY								A
RR2 CLR	5	RED REST									B
		REST-IN-WALK									C
		MAX 3 PHASES									D
		YEL START UP		2							E
		FIRST PHASE				4					F
			1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

NOTES:

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

LOCATION: **RTE 163 NB / FRIARS ROAD**

CALTRANS C8 DATE: 1/31/94

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAG								
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH														LAG FZ FREE		X		X		X		X	0
1	FZ1 GRN FCTR													GAPOUT CP1	LAG FZ CP 1									1
2														GAPOUT CP2	LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3	LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4	LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A										OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		X				X			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRP																							F

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER :
RTE 163 SB @ FRIARS

LOCATION	OFF	ON
1		X
2	X	
3	X	
4	X	
5	X	
6	X	
7	X	
8	X	

COO = 1

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

LOCATION: **RTE 163 NB / FRIARS ROAD**

CALTRANS C8 DATE 1/31/94

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		X							5
6										6 PED						X			6
7										4 PED				X					7
8										8 PED								X	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E

MINUTE = D-B-E

DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)

RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F

MINUTE = D-B-F

DAY = D-C-F

D-E-E = C8 VERSION NUMBER

D-E-F = LITHIUM BATTERY CONDITION

84 = BAD

85 = GOOD

LOCATION: **RTE 163 NB / FRIARS ROAD**

CALTRANS C8 DATE : 1/31/94

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 2

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION

2 MAX 2

3 MAX 3

4 COND SERV (1ST SELECT)

5 COND SERV (2ND SELECT)

6 ENERGIZE AUX OUTPUT-RED

7 ENERGIZE AUX OUTPUT-GREEN

8 ENERGIZE AUX OUTPUT-YELLOW

9 TIME OF DAY MAX RECALL (1ST SELECT)

A TRAFFIC ACT. MAX 2 OPERATION

B TIME OF DAY MAX RECALL (2ND SELECT)

C YELLOW YIELD COORDINATION

D YELLOW YIELD COORDINATION

E TIME OF DAY FREE OPERATION

F FLASHING OPERATION

POLE SCHEDULE									
LOC.	STANDARD TYPE	MASTARM SIG.	MASTARM LUM.	PLACEMENT DIMENSIONS A ft.	PLACEMENT DIMENSIONS B ft.	SIGNAL MOUNTING & PLACEMENT VEHICLE POLE	SIGNAL MOUNTING & PLACEMENT VEHICLE MASTARM	SIGNAL MOUNTING & PLACEMENT PEDESTRIAN SIGNAL	SIGNAL MOUNTING & PLACEMENT PEDESTRIAN P.P.B	REMARKS
(A)	19-4-80	30' [1]	12'	DIM.	6	SV-1-T (LOCATE ON SIDE (1) & ES-3B	MAS (BOTH)			HPS-250 LUMINAIRE PEU
(B)	15 [2]		12' [2]	DIM.						HPS-250 LUMINAIRE (480 VOLT BALLAST)
(C)	23-4-80	35' [3]		10' FROM NOSE	CTR.	SV-2-T8 (LOCATE ON SIDE (4) ES-3B	(4) - MAT SINGLE SECT-MAT SINGLE SECT-MAT			
(D)	PEDESTRIAN BARRICADE - ES-6A. INSTALL STATE-FURNISHED SIGN PANEL R 49-2.									
(E)	PEDESTRIAN BARRICADE - ES-6A. INSTALL STATE-FURNISHED SIGN PANEL R 49-2.									
(F)	STATE-FURNISHED CONTROLLER ASSEMBLY (TYPE -170 FOUNDATION, ES-4B)									

CONDUCTOR SCHEDULE									
AWG SIZE	PHASE	CIRCUIT -	CONDUIT RUN & SIZE 1-1/2 (1)	1-1/2 (2)	2 (3)	1-1/2 (4)	2 (5)	1-1/2 (6)	1-1/2 (7)	1-1/2 (8)
#14	2	VEHICLE SIGNAL		3	3		3			
	4						3			
		CONTROLLER GREEN					1'			
		PHOTOELECTRIC UNIT		3	3		3	3	3	
#14		SPARES		3	3		3			
TOTAL NO. 14				9	9		13	3	3	
#10		SIGNAL COMMON		1	1		1			
		LIGHTING		2	2		2	2	2	
	2	LOOP DLC			1	2	3			
DLC	4		1	1	1		1			
# 8		EXIST. SIGNAL & LTG.						4		
# 4		SIGNAL CONTROLLER						2	2	
# 4		SERVICE								3
TOTAL CONDUCTORS / CABLES			1	13	14	2	20	7	11	3

CIRCUIT BREAKERS	
MAIN - 4P-70 AMP.	D - SPARE
A - SP-50 AMP. SIGNAL # P4.410	E - SPARE
B - SP-40 AMP. SIGNAL # P4.450	F - SPARE
C - SP-15 AMP. PEU	G - 2P-30 AMP. LIGHTING (2P-CONTACTOR)
	H - 2P-30 AMP. LIGHTING (2P-CONTACTOR)

SP TYPE H, EXIST. NO. A 4.44 NEW NO. A 4.42' P# 179930

MP TYPE III SERVICE EQUIPMENT CABINET (ES-2B)

PHASE DIAGRAM

EMERGENCY OPERATION: FLASH ALL SIGNALS RED.

WIRING DIAGRAM

1 SIGNAL # P4.410
2 SIGNAL # P4.450
3 PEU
4 SPARE
5 SPARE
6 LIGHTING

FROM NB RTE 163

TO NB RTE 163

FRIARS ROAD

CONTINUOUS GREEN (I-SECTION)

FROM NB RTE 163

TO 480V. SERVICE A 4.25 / B 4.376 E, FRIARS / ULRIC)

FRAZEE RD.

ROUTE 163 NB ON-RAMP AT FRIARS ROAD IN SAN DIEGO

SIGNAL AND LIGHTING

SIGNAL NO. P 4.410

SCALE IN FEET 0 20 40

SHEET E-1

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
D A GILMOUR	7/79	M A CHASE	7/79	R B FINDLAY	7/79

CU 11359 WO 188921

DISTRICT TRAFFIC ENGINEER — REGISTERED CIVIL ENGINEER NO. 3381

DATE APPROVED

DIST.	COUNTY	ROUTE	POST MILE	TOTAL SHEETS
11	SD	163	4.4	

NEW: A 4.42
EXIST: A 4.44

EXISTING SIGNAL # P4.450

40

16

INTERSECTION: FRAZEE RD & FRIARS RD

223 Pr( )m

Group Assignment: 4097
Field Master Assignment: NONE
N/S Street Name: FRAZEE RD
E/W Street Name: FRIARS RD
Last Database Change:
System Ref. Number: 531



Row	Column # --->	Phase 1	2	3	4	5	6	7	8
	Phase # --->								
0	Ped Walk		7				7		7
1	Ped FDW		20				22		42
2	Min Green	4	10	6	7	6	10	6	7
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	3.9	2.2	2.3	2.0	4.4	2.2	2.0
6	Max Gap	2.0	3.9	2.2	2.3	2.0	4.4	2.2	2.0
7	Min Gap	2.0	2.2	2.2	2.3	2.0	2.2	2.2	2.0
8	Max Limit	30	50	30	30	45	60	30	30
9	Max Limit 2	30	70	30	70	30	70	30	70
A	Bus Adv						7		
B	Call to Phs								
C	Reduce By		0.1				0.1		
D	Every		0.8				1.0		
E	Yellow	3.4	4.5	3.4	3.9	3.4	5.5	3.4	3.9
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Grade								

Phase Timing - Bank 1
F + Phase + Row
<F Page>

	E
RR-1 Delay	0
RR-1 Clear	10
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	10
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	12345678
1	Red Lock	
2	Yellow Lock	
3	Min Recall	_2_4_6__
4	Ped Recall	
5	Peds (View)	_2___6_8
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	___4___8

Phase Functions <F Page>
F + F + Row

Max Initial	20
Red Revert	5.0
All Red Start	5.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	4
Zone Number	4
Area Number	4
Area Address	84
QuicNet Channel	DIGI5:

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6__	0

Lag Phases <C Page>

Overlap Timing

Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A			
Overlap B	B			
Overlap C	C			
Overlap D	D			

<F Page>
F + COLOR +
<D Page>
D + 0 + OVERLAP

Manual Plan	0
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	60	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234___

Disable Communication Ports
D + D + 9

Timing Sheet By:
Approved By: G.P.
Drawing Number: 24306-13-D
Timing Implemented On:

INTERSECTION: FRAZEE RD & FRIARS RD

223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function

7 + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	3 7
F	Assign 5 Outputs	8

Configuration <E Page>

D + F + ROW

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	2 6
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week

8-1 Day-of-Month, Year, Month

8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications

(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program

C + C + F = version

Remote Download

C + 0 + 4 = 1 -255

w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A	10.0	
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3	Bus Detect	
4	10.0	
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: FRAZEE & FRIARS

2: rogram

Group Assignment: 4097
Field Master Assignment: NONE

N/S Street Name: FRAZEE
E/W Street Name: FRIARS

Last Database Change:
Timing Sheet By: EFF
Approved By: MM
System Ref. Number: 531
Drawing Number: 24306-13-D
Timing Implemented On: 1/8/01

Row	Column # → / Phase # →	1 FRIARS	2 FRIARS	3 FRAZEE	4 FRAZEE	5 FRIARS	6 FRIARS	7	8
0	Ped Walk	0	7	7	0	0	7	0	0
1	Ped FDW	0	* 20 ~~17~~	* 42 ~~37~~	0	0	* 22 ~~19~~	0	0
2	Min Green	4	10	⑦ 7 ~~4~~	⑦ 7 ~~4~~	4	10	0	0
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Add/Veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extn	2.0	3.9	2.0	2.0	2.0	3.1	0.0	0.0
6	Max Gap	2.0	3.9	2.0	2.0	2.0	3.1	0.0	0.0
7	Min Gap	2.0	2.2 ~~0.2~~	2.0	2.0	2.0	2.2 ~~0.2~~	0.0	0.0
8	Max Limit	30	40	30	30	40	40	0	0
9	Max Limit 2	30	60	40	40	50	80 MM ~~60~~	0	0
A	Bus Adv	0	0	0	0	0	11/3/02 ~~5~~ 0	7.0	0	0
B	Call to Phs	0	0	0	0	0	0	EFF	0	0
C	Reduce By	0.0	0.1	0.0	0.0	0.0	0.1	8/7/02	0.0	0.0
D	Every	0.0	0.8	0.0	0.0	0.0	1.0	0.0	0.0
E	Yellow	3.4 ① ~~3.0~~	4.5	3.9 ⑧ ~~3.0~~	⑧ 3.7 ~~3.0~~	⑧ 3.4 ~~3.0~~	5.5	0.0	0.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0

Phase Timing - Bank 1
F + Phase + Row
<F Page>

EFF 1/4/02

*12/13/02 JD; ADJUSTED PED FDW USING 3.5 FPS WALK SPEED TO IMPROVE SAFETY FOR DISABLED PEDS.

DWH 6/11/03

Row		E	Preempt Timing F + E + Row
0	RR-1 Delay	0	
1	RR-1 Clear	0	
2	EV-A Delay	0	
3	EV-A Clear	0	
4	EV-B Delay	0	
5	EV-B Clear	0	
6	EV-C Delay	0	
7	EV-C Clear	0	
8	EV-D Delay	0	
9	EV-D Clear	0	
A	RR-2 Delay	0	
B	RR-2 Clear	0	
C	View EV Delay	---	
D	View EV Clear	---	
E	View RR Delay	---	
F	View RR Clear	---	

Row		F	Phase Functions F + F + Row <F Page>
0	Permit	123456__	
1	Red Lock		
2	Yellow Lock		
3	Min Recall	_2__6__	
4	Ped Recall		
5	Peds (View)	_23__6__	
6	Rest In Wal		
7	Red Rest		
8	Dbl Entry		
9	Max Recall		
A	Soft Recall		
B	Max 2		
C	Cond Serv		
D	Ped Lock	12345678	
E	Yellow Start	_2__6__	
F	1st Phases	__3_____	

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	4	C + 0 + 0
Zone Number	4	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	84	C + 0 + 3
QuicNet Channel	DIGI86:	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6__	0

Lag Phases <C Page>

Row		G Green Clear	C Yellow Change	D Red Clear	D Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page>
F + COLOR +
<D Page>
D + 0 + OVERLAP

Downtime Flash	60 (minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Manual Plan	14
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Disable Ports	_234____

Disable Communication Ports
D + D + 9

BUS PRIORITY SIGNAL WESTBOUND DRIVEN BY PHASE 6 PED YELLOW

Printed on 12/06/2000 10:40 AM

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		1I1	14
1	0.0	1.8		2I2U	1
2	0.0	0.0		2I2L	5
3	0.0	0.0		2I3U	21
4	0.0	0.0		2I3L	25
5	0.0	0.0		2I4	9
6	4.0	0.0		3I5	16
7	0.0	0.0		4I6U	3
8	0.0	0.0		4I6L	7
9	0.0	0.0		4I7U	23
A	10.0	0.0		4I7L	27
B	0.0	0.0		4I8	11
C	0.0	0.0		1I9U	18
D	0.0	0.0		3I9L	20
E	---	---	---	---	---
F	---	---	---	---	---

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		5J1	13
1	0.0	1.8		6J2U	2
2	0.0	0.0		6J2L	6
3	Bus Detect	0.0		6J3U	22
4	10.0	0.0		6J3L	26
5	0.0	0.0		6J4	10
6	0.0	0.0		7J5	15
7	0.0	0.0		8J6U	4
8	0.0	0.0		8J6L	8
9	0.0	0.0		8J7U	24
A	0.0	0.0		8J7L	28
B	0.0	0.0		8J8	12
C	0.0	0.0		5J9U	17
D	0.0	0.0		7J9L	19
E	---	---	---	---	---
F	---	---	---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)
(These parameters are NOT downloaded.)

Group Assignment:
Field Master Assignment:

N/S Street Name: Mission C Rd
E/W Street Name: W/B Friar

Last Database Change:
System Ref. Number:

223 Program

N

Mission Center | Mission Center | W/B Friars

Column # --->	Phase							
Phase # --->	1	2	3	4	5	6	7	8
Row		↑			←	↓		←
0	Ped Walk	7				7		7
1	Ped FDW	13				10		23
2	Min Green	10			4	10		4
3	Type 3 Limit							
4	Add/Veh							
5	Veh Extn	2.6			2.0	4.7		3.0
6	Max Gap	2.6			2.0	4.7		3.0
7	Min Gap	0.2			2.0	0.2		3.0
8	Max Limit	60			40	60		40
9	Max Limit 2							
A	Bus Adv							
B	Call to Phs							
C	Reduce By	0.1				0.1		
D	Every	1.2				0.7		
E	Yellow	4.3			3.4	5.3		3.9
F	Red Clear	1.0			1.0	1.0		1.0

Phase Timing - Bank 1 <F Page>
F + Phase + Row

Row	E	
RR-1 Delay		
RR-1 Clear		
EV-A Delay	0	
EV-A Clear	0	
EV-B Delay		
EV-B Clear		
EV-C Delay	0	
EV-C Clear	0	
EV-D Delay	0	
EV-D Clear	0	
RR-2 Delay		
RR-2 Clear		
View EV Delay	---	
View EV Clear	---	
View RR Delay	---	
View RR Clear	---	

Preempt Timing
F + E + Row

Row	F	
Permit	_2__56_8	
Red Lock		
Yellow Lock		
Min Recall	_2___6__	
Ped Recall		
Peds (View)	_2___6_8	
Rest In Walk		
Red Rest		
Dbl Entry		
Max Recall		
Soft Recall		
Max 2		
Cond Serv		
Ped Lock	12345678	
Yellow Start	_2___6__	
1st Phases	_____8	

Phase Functions <F Page>
F + F + Row

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	6	C + 0 + 0
Zone Number	6	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	70	C + 0 + 3
QuicNet Channel	COM89	(QuicNet)

Communication Addresses

C + F + O	P	Row
Free Lag	_2__6_8	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +

<D Page>
D + 0 + OVERLAP

Manual Plan	0	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto **Manual** Flash
F + 0 +8

Disable Ports	_234_

Disable **Communication Ports**
D + D + 9

Timing Sheet By: KT
Approved By: FLG
Drawing Number: 27009-20-D
Timing Implemented On:

ERSECTION: Mission Center Rd @ W/B Friars Rd

Row	Time	Function	Day of Week	Column F Phases/Bits
0	00 : 01	E	1234567	1
1	:			
2	:			
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Leg Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	8
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	2

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		
2		
3		1.8
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7	10.0	
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

ERSECTION: Mission Center Rd @ W/B Friars Rd

223 Program

Row	Column # →	1	2	3	4	5	6	7	8	9
	Plan →		MID	PM	AM					
0	Cycle Length		102	108	90		80			
1	Phase 1 - ForceOff									
2	Phase 2 - ForceOff		0	0	0		0			
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff									
5	Phase 5 - ForceOff		60	59	56		48			
6	Phase 6 - ForceOff		0	0	0		0			
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff		38	36	36		25			
9	Ring Offset									
A	Offset A		48	10	2		76			
B	Offset B									
C	Offset C									
D	Permissive		10	10	10		10			
E	Hold Release		255	255	255		255			
F	Ped Shift		0	0	0		10			

Coordination <C Page>

C + Plan + ROW

Coordination Timing By: KT

Implemented On:

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	07 : 00	4	A	_23456_
1	09 : 00	E	A	_23456_
2	11 : 00	6	A	1____7
3	11 : 30	2	A	_23456_
4	14 : 00	3	A	_23456_
5	17 : 30	E	A	1234567
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

Plan Select

1 thru 9 = Coordination Plan 1 thru 9

14 or E = Free

15 or F = Flash

	F
Plan 1	
Plan 2	2 6
Plan 3	2 6
Plan 4	2 6
Plan 5	
Plan 6	2 6
Plan 7	
Plan 8	
Plan 9	
Coord Ped*	
NEMA Hold	

Sync Phases

C + E + FUNCTION #

Row		F
0	Free Lag	2 6 8
1	Plan 1 - Lag	
2	Plan 2 - Lag	2 6 8
3	Plan 3 - Lag	2 6 8
4	Plan 4 - Lag	2 6 8
5	Plan 5 - Lag	
6	Plan 6 - Lag	2 6 8
7	Plan 7 - Lag	
8	Plan 8 - Lag	
9	Plan 9 - Lag	
A	Coord Max *	
B	Coord Lag *	
C		
D		
E		
F		

Lag Phases <C Page>

C + F + FUNCTION #

Transition Type	0

TBC Transition

C + D + D

Transition Type

0 = Shortway

Non-zero = Lengthen

INT SECTION: MISSION CENTER & W/B FRIARS

223 Pro n

Group Assignment: 4095
Field Master Assignment: None

N/S Street Name: MISSION CENTER
E/W Street Name: W/B FRIARS

Last Change:
Timing Sheet By: EFF
Approved By:

Drawing Number: 25843-12-D
System Ref. Num.: 525
Timing Implemented on: 12/5/01

N

Row	Column # ---->	MISSION CENTER 1	2 ↑	3	4	MISSION CENTER 5 ←	6 ↓	7	W/B FRIARS 8 ←
	Phase # ---->								
0	Ped Walk		7				7		5 7
1	Ped FDW		12				9		24
2	Min Green		10			4	10		6 4
3	Type 3 1 Limit								
4	Add/Veh								
5	Veh Extn		4.8			3 2.0	4.8		3.0
6	Max Gap		4.8			3 ~~2.0~~	4.8		3.0
7	Min Gap		4.8 ~~0.2~~			3 ~~2.0~~	0.2		3.0
8	Max Limit		60			40	60		40
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		~~0.1~~				0.1		
D	Every		~~0.6~~				0.6		
E	Yellow		4.0			3.4 ~~3.0~~	5.0		3.9 ~~3.0~~
F	Red Clear		1.0			1.0	1.0		1.0

Phase Timing - Bank 1
F + Phase + Row

Row	E	Preempt Timing
0		RR-1 Delay
1		RR-1 Clear
2	0	EV-A Delay
3	0	EV-A Clear
4		EV-B Delay
5		EV-B Clear
6	0	EV-C Delay
7	0	EV-C Clear
8	0	EV-D Delay
9	0	EV-D Clear
A		RR-2 Delay
B		RR-2 Clear
C	---	View EV Delay
D	---	View EV Clear
E	---	View RR Delay
F	---	View RR Clear

F + E + Row

Row	F	Phase Functions
0	_2__56_8	Permit
1		Red Lock
2		Yellow Lock
3	_2___6__	Min Recall
4	_2 ___	Ped Recall
5	_2___6_8	Pods (View)
6		Rest in Walk
7		Red Rest
8		Dbl Entry
9		Max Recall
A		Soft Recall
B		Max 2
C		Cond Serv
D	12345678	Ped Lock
E	_2___6__	Yellow Start
F	_____8	1st Phases

F + F + Row

① WH 10/18/03

EFF 12/5/01

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	6	C + 0 + 0
Zone Number	6	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	70	C + 0 + 3
QuicNet Channel	DIGI85:	(QuicNet)

Communication Addresses
C + F + O

Row	Free Lag
0	_2___6_8

Lag Phases <C Page>

Row		9 Green Clear	A Yellow Change	B Red Clear	10 Load-Switch #
A	Overlap A				
B	Overlap B				
C	Overlap C				
D	Overlap D				

Overlap Timing <F Page>
F + COLON +
<D Page>
D + 0 + OVERLAP

Manual Plan	0	C + A + 1
Manual Offset	0	C + D + 1

Manual Selection

Manual Plan
0 = Automatic
1-0 = Plan 1-0
14 = Free
15 = Flash

Manual Offset 0
= Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255 (minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	234

Disable Communications Ports
D + D + 9

(1)

Row	Time	Function	Day of Week	Column F Phases/Bits
0	00:01 ~~00 : 00~~	E 0	1234567	1
1	00 : 00	0		
2	00 : 00	0		
3	00 : 00	0		
4	00 : 00	0		
5	00 : 00	0		
6	00 : 00	0		
7	00 : 00	0		
8	00 : 00	0		
9	00 : 00	0		
A	00 : 00	0		
B	00 : 00	0		
C	00 : 00	0		
D	00 : 00	0		
E	00 : 00	0		
F	00 : 00	0		

TOD Function

7 + ROW

<D Page>

D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest in Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

INTERSECTION: MISSION CENTER & W/B FRIARS

223 Program

Row	1 Delay	3 Carry-over
0		
1		
2		1.8
3		1.8
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E		---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		1.8
3		
4		1.8
5		
6		
7	10.0	
8	10	1.8
9		
A		1.8
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+8
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

(These parameters are NOT downloaded.)

INTERSECTION: MISSION CENTER Rd & WB FRIARS Rd

223 Program

Row	Column # ---> / Plan Name --->	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
0	Cycle Length			70	75	70	80			
1	Phase 1 - ForceOff									
2	Phase 2 - ForceOff			0	0	0	0			
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff									
5	Phase 5 - ForceOff			50	55	50	48			
6	Phase 6 - ForceOff			0	0	0	0			
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff			25	25	25	25			
9	Ring Offset									
A	Offset A			56	18	56	76			
B	Offset B									
C	Offset C									
D	Permissive			10	10	10	10			
E	Hold Release			255	255	255	255			
F	Ped Shift			10	10	10	10			

Coordination <C Page>

C + Plan + ROW

Coordination Timing By: EFF/ WH

Implemented On: 3/15/2005

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	11 : 00	6	A	1234567
1	13 : 00	3	A	_23456_
2	15 : 00	4	A	_23456_
3	17 : 30	E	A	1234567
4	10 : 00	5	A	1____7
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

Plan Select

1 thru 9 = Coordination Plan 1 thru 9

14 or E = Free

15 or F = Flash

	E	Row		F
		0	Free Lag	
Plan 1		1	Plan 1 - Lag	
Plan 2		2	Plan 2 - Lag	
Plan 3	_2___6__	3	Plan 3 - Lag	_2___6_8
Plan 4	_2___6__	4	Plan 4 - Lag	_2___6_8
Plan 5	_2___6__	5	Plan 5 - Lag	_2___6_8
Plan 6	_2___6__	6	Plan 6 - Lag	_2___6_8
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases

C + E + FUNCTION #

Lag Phases <C Page>

C + F + FUNCTION #

Transition Type	0

TBC Transition

C + D + D

Transition Type

0 = Shortway

Non-zero = Lengthen

Coordination Timing By: EFF
Implemented On: 12/5/01

Row	Plan Name --->	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
0	Cycle Length			70	75					
1	Phase 1 - ForceOff									
2	Phase 2 - ForceOff	0	0	0	0					
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff									
5	Phase 5 - ForceOff		0	50 0	55 0					
6	Phase 6 - ForceOff	0		28	28					
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff			25 50	25 50					
9	Ring Offset									
A	Offset A			56	18 4					
B	Offset B									
C	Offset C									
D	Permissive			10	10					
E	Hold Release			255	255					
F	Ped Shift			10 0	10 0					

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Coordination <C Page>
C + Plan + ROW

Row	Time	Plan	Offset	Day of Week
0	11 : 00	3	A	1234567
1	15 : 00	4	A	23456
2	1730 19 : 00	E	A	1234567
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Coordination
<9 Key with C+0+9=1>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

	E
Plan 1	2 6
Plan 2	2 5
Plan 3	2 5 6
Plan 4	2 5 6
Plan 5	
Plan 6	
Plan 7	
Plan 8	
Plan 9	
Coord Ped*	
NEMA Hold	

Sync Phases
C + E + FUNCTION #

Row		F
0	Free Lag	2 6 8
1	Plan 1 - Lag	2 6 8
2	Plan 2 - Lag	2 6 8
3	Plan 3 - Lag	2 6 8
4	Plan 4 - Lag	2 6 8
5	Plan 5 - Lag	
6	Plan 6 - Lag	
7	Plan 7 - Lag	
8	Plan 8 - Lag	
9	Plan 9 - Lag	
A	Coord Max *	
B	Coord Lag *	
C		
D		
E		
F		

Lag Phases <C Page>
C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway.
Non-zero = Lengthen

18

INTERSECTION: E/B Friars Rd @ Mission Center Rd

223 Program

Group Assignment:
Field Master Assignment:

N/S Street Name: Mission Cer
E/W Street Name: E/B Friars R

Last Database Change:
System Ref. Number:

N

Mission Center | E/B Friars | Mission Center

Row	Column # ---> / Phase # --->	Phase 1	2	3	4	5	6	7	8	Row
		L	↑		→		↓			
0	Ped Walk		7				7			0
1	Ped FDW		12				13			1
2	Min Green	4	10		10		10			2
3	Type 3 Limit									3
4	Add/Veh									4
5	Veh Extn	2.0	4.0		3.0		3.5			5
6	Max Gap	2.0	4.0		3.0		3.5			6
7	Min Gap	2.0	4.0		3.0		0.2			7
8	Max Limit	30	60		40		60			8
9	Max Limit 2									9
A	Bus Adv									A
B	Call to Phs									B
C	Reduce By						0.1			C
D	Every						0.9			D
E	Yellow	3.4	4.3		3.9		4.8			E
F	Red Clear	1.0	1.0		1.0		1.0			F

Phase Timing - Bank 1 <F Page>
F + Phase + Row

Row	B	Row
RR-1 Delay		0
RR-1 Clear		1
EV-A Delay	0	2
EV-A Clear	0	3
EV-B Delay	0	4
EV-B Clear	0	5
EV-C Delay	0	6
EV-C Clear	0	7
EV-D Delay		8
EV-D Clear		9
RR-2 Delay		A
RR-2 Clear		B
View EV Delay	---	C
View EV Clear	---	D
View RR Delay	---	E
View RR Clear	---	F

Preempt Timing
F + E + Row

Row	F	Row
Permit	12_4_6__	0
Red Lock		1
Yellow Lock		2
Min Recall	_2___6__	3
Ped Recall		4
Peds (View)	_2___6__	5
Rest In Walk		6
Red Rest		7
Dbl Entry		8
Max Recall		9
Soft Recall		A
Max 2		B
Cond Serv		C
Ped Lock	12345678	D
Yellow Start	_2___6__	E
1st Phases	___4____	F

Phase Functions <F Page>
F + F + Row

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	5
Zone Number	5
Area Number	4
Area Address	69
QuicNet Channel	COM89

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6__	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page> F + COLOR +
<D Page> D + 0 + OVERLAP

Manual Plan	0	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	_234_

Disable Communication Ports
D + D + 9

Timing Sheet By: KT
Approved By: FLG
Drawing Number: 27089-19-D
Timing Implemented On:

INTERSECTION: E/B FRIARS & MISSION CENTER

223 | gram

Group Assignment: 4095
Field Master Assignment: NONE

N/S Street Name: MISSION CENTER
E/W Street Name: E/B FRIARS

Last Database Change: 06/12/200
System Ref. Number: 524
Drawing Number: 25843-11-D
Timing Implemented On: 12/5/01

Timing Sheet By: EFF
Approved By:

Column # --->		MISSION CTR		E/B FRIARS			MISSION CTR		
Phase # --->		1	2	3	4	5	6	7	8
Row		↳	↑		→		↓		
0	Ped Walk	0	7	0	0	0	7	0	0
1	Ped FDW	0	14	0	0	0	13	0	0
2	Min Green	~~8~~ 4	10	0	~~10~~ 4	0	10	0	0
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Add/Veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extn	3 ~~2.0~~	4.0	0.0	3.0	0.0	3.7	0.0	0.0
6	Max Gap	3 ~~2.0~~	4.0	0.0	3.0	0.0	3.7	0.0	0.0
7	Min Gap	3 ~~2.0~~	4.0	0.0	3.0	0.0	0.2	0.0	0.0
8	Max Limit	30	60	0	40	0	60	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Bus Adv	0	0	0	0	0	0	0	0
B	Call to Phs	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
D	Every	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
E	Yellow	3.4 ~~3.0~~	4.0	0.0	3.9 ~~3.0~~	0.0	4.6	0.0	0.0
F	Red Clear	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0

Phase Timing - Bank 1
F + Phase + Row <F Page>

Row		E
0	RR-1 Delay	0
1	RR-1 Clear	0
2	EV-A Delay	0
3	EV-A Clear	0 ~~3~~
4	EV-B Delay	0
5	EV-B Clear	0 ~~3~~
6	EV-C Delay	0
7	EV-C Clear	0 ~~3~~
8	EV-D Delay	0
9	EV-D Clear	0
A	RR-2 Delay	0
B	RR-2 Clear	0
C	View EV Delay	---
D	View EV Clear	---
E	View RR Delay	---
F	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	12_4_6__
1	Red Lock	
2	Yellow Lock	~~3~~ 4
3	Min Recall	_2___6__
4	Ped Recall	
5	Peds (View)	_2___6__
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	___4____

Phase Functions <F Page>
F + F + Row

(1) 10/8/03 WIT

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	5	C + 0 + 0
Zone Number	5	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	69	C + 0 + 3
QuicNet Channel	DIGI85:	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6__	0

Lag Phases <C Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page> F + COLOR + <D Page> D + 0 + OVERLAP

Downtime Flash	255 (minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234___

Disable Communication Ports
D + D + 9

0 EFF 12/5/01

Manual Plan	~~14~~ 0	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

8

Row	1 Delay	3 Carry-over
0		
1		
2		
3		
4		
5		
6		
7	10.0	
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		
2		1.8
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		6 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: MISSION CENTER Rd & EB FRIARS Rd

223 Prog. n

		Plan								
	Column # --->	1	2	3	4	5	6	7	8	9
Row	Plan Name --->									
0	Cycle Length			70	75	70	80			
1	Phase 1 - ForceOff			40	46	40	50			
2	Phase 2 - ForceOff			0	0	0	0			
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff			19	21	19	26			
5	Phase 5 - ForceOff									
6	Phase 6 - ForceOff			0	0	0	0			
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset A			50	1	50	73			
B	Offset B									
C	Offset C									
D	Permissive			10	10	10	10			
E	Hold Release			255	255	255	255			
F	Ped Shift			0	0	0	0			

Coordination <C Page>

C + Plan + ROW

Coordination Timing By: EFF/ WH
Implemented On: 3/15/2005

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	11 : 00	6	A	1234567
1	13 : 00	3	A	_23456_
2	15 : 00	4	A	_23456_
3	17 : 30	E	A	1234567
4	10 : 00	5	A	1____7
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	
Plan 1		1	Plan 1 - Lag	
Plan 2		2	Plan 2 - Lag	
Plan 3	_2___6__	3	Plan 3 - Lag	_2_4_6__
Plan 4	_2___6__	4	Plan 4 - Lag	_2_4_6__
Plan 5	_2___6__	5	Plan 5 - Lag	_2_4_6__
Plan 6	_2___6__	6	Plan 6 - Lag	_2_4_6__
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases

C + E + FUNCTION #

Lag Phases <C Page>

C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

ERSECTION: E/B Friars Rd @ Mission Center Rd

223 Program

Row	Column # / Plan Name	1	2 MID	3 PM	4 AM	5	6	7	8	9
		Plan								
0	Cycle Length		102	108	90		80			
1	Phase 1 - ForceOff		25	32	20		50			
2	Phase 2 - ForceOff		0	0	0		0			
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff		55	66	50		26			
5	Phase 5 - ForceOff									
6	Phase 6 - ForceOff		25	32	20		0			
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset A		45	107	6		73			
B	Offset B									
C	Offset C									
D	Permissive		25	32	20		10			
E	Hold Release		255	102	255		255			
F	Ped Shift		0	0	0		0			

Coordination <C Page>

C + Plan + ROW

Coordination Timing By: KT

Implemented On:

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	07 : 00	4	A	_23456_
1	09 : 00	E	A	_23456_
2	11 : 00	6	A	1____7
3	11 : 30	2	A	_23456_
4	14 : 00	3	A	_23456_
5	17 : 30	E	A	1234567
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	_2_4_6_
Plan 1		1	Plan 1 - Lag	
Plan 2	_2_____	2	Plan 2 - Lag	1__4_6__
Plan 3	_2_____	3	Plan 3 - Lag	1__4_6__
Plan 4	_2_____	4	Plan 4 - Lag	1__4_6__
Plan 5		5	Plan 5 - Lag	
Plan 6	_2___6__	6	Plan 6 - Lag	_2_4_6__
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases

C + E + FUNCTION #

Lag Phases <C Page>

C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Transition Type
0 = Shortway
Non-zero = Lengthen

INTERSECTION: E/B FRIARS & MISSION CENTER

223 Proc n

Row	Time	Function	Day of Week	Column F: Phases/Bits
0	00:01 ~~00:00~~	E 0	1234567	1
1	00 : 00	0		
2	00 : 00	0		
3	00 : 00	0		
4	00 : 00	0		
5	00 : 00	0		
6	00 : 00	0		
7	00 : 00	0		
8	00 : 00	0		
9	00 : 00	0		
A	00 : 00	0		
B	00 : 00	0		
C	00 : 00	0		
D	00 : 00	0		
E	00 : 00	0		
F	00 : 00	0		

TOD Function

7 + ROW

<D Page>

D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration

E + F + ROW

<E Page>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Prelimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

INTERSECTION: E/B FRIARS & MISSION CENTER

223 Program

Row	1 Delay	3 Carry-over
0	0.0	0.0
1	0.0	0.0
2	0.0	0.0
3	0.0	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	10.0	0.0
8	0.0	0.0
9	0.0	0.0
A	0.0	1.8 0.0
B	0.0	0.0
C	0.0	0.0
D	0.0	0.0
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0	0.0	0.0
1	0.0	1.8
2	0.0	0.0
3	0.0	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	0.0	0.0
8	0.0	0.0
9	0.0	0.0
A	0.0	0.0
B	0.0	0.0
C	0.0	0.0
D	0.0	0.0
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.0	F+0+6
Short Failure	0.0	F+0+7

Power Cycle Correction (Default = 0.5)

TRAFFIC SIGNAL TIMING -

PROGRAM 2005

8

N

		Miss Cut	E/B Phase Timing Ramp				Miss Cut		
INTERVAL		1	2	3	4	5	6	7	8
WALK	0		7				7		
FLASH D/W	1		14				13		
MIN GREEN	2	4	10		4		10		
TYPE 3 DET	3								
ADD/VEH	4								
VEH EXTEN *	5	2.0	4.0		3.0		3.4		
MAX GAP *	6	2.0	4.0		3.0		3.4		
MIN GAP *	7	2.0	4.0		3.0		0.2		
MAX EXTEN	8	30	60		40		60		
MAX 2	9								
	A								
CALL TO PHASE	B								
REDUCE BY	C						0.1		
REDUCE EVERY	D						0.9		
YELLOW	E	~~3.4~~ 3.0	4.0		~~3.0~~ 3.0		4.0		
RED CLEAR	F	1.0	1.0		1.0		1.0		

PREEMPT		
	E	
RR1 DELAY		0
RR1 CLEAR		1
EVA DELAY	0	2
EVA CLEAR	3	3
EVB DELAY	0	4
EVB CLEAR	3	5
EVC DELAY	0	6
EVC CLEAR	3	7
EVD DELAY		8
EVD CLEAR		9
RR2 DELAY		A
RR2 CLEAR		B
EV CLR TMR		C
EV DLY TMR		D
RR CLR TMR		E
RR DLY TMR		F

MAX INITIAL (F-0-E) = 0 (KEYSTROKES: F + PHASE + LOCATION)

RED REVERT (F-0-F) = 5.0

ALL RED START (F-C-0) = 0

* MUST BE SAME FOR NON-DENSITY OPERATION

PHASE FUNCTION FLAGS

KEYSTROKES: F+F+FUNCTION#

FUNCTION		PHASE 1	2	3	4	5	6	7	8
PERMIT	0	X	X		X		X		
RED LOCK	1								
YELLOW LOCK	2								
VEH RECALL	3		X				X		
PED RECALL	4								
PEDS	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A								
MAX 2	B								
COND SERVE	C								
RESERVED	D								
STARTUP	E		X				X		
FIRST PHASES	F				X				

OVERLAP TIMING

KEYSTROKE: F+ COLOR CODE+OVERLAP

	9 GREEN	C YELLO	D RED
OVERLAP A			
OVERLAP B			
OVERLAP C			
OVERLAP D			

PHASE SEQUENCES (CFO)

	PHASE 1	2	3	4	5	6	7	8
LAG 0 (FREE)		X		X		X		

DRAWING NO. 25843-11-D

LOC: FRIARS RD (E/B RAMP) & MISSION CENT RD

DATE: T.O. 11:30 10-08-92

PAGE 1 OF 3

DETECTOR TIMES (332 CABINET)

X → / Y ↓	SET DELAY 1	SET DELAY 2	SET CARRY 3	SET CARRY 4	OBS COUNT 5	OBS COUNT 6	OBS DELAY 7	OBS DELAY 8	OBS CARRY 9	OBS CARRY A
0	111	5J1	111	5J1	111	5J1	111	5J1	111	5J1
1	212U	6J2U	212U	6J2U 1.8	212U	6J2U	212U	6J2U	212U	6J2U
2	212L	6J2L	212L	6J2L	212L	6J2L	212L	6J2L	212L	6J2L
3	213U	6J3U	213U	6J3U	213U	6J3U	213U	6J3U	213U	6J3U
4	213L	6J3L	213L	6J3L			213L	6J3L	213L	6J3L
5	214	6J4	214	6J4			214	6J4	214	6J4
6	315	7J5	315	7J5	315	7J5	315	7J5	315	7J5
7	416U 10	8J6U	416U	8J6U	416U	8J6U	416U	8J6U	416U	8J6U
8	416L	8J6L	416L	8J6L	416L	8J6L	416L	8J6L	416L	8J6L
9	417U	8J7U	417U	8J7U	417U	8J7U	417U	8J7U	417U	8J7U
A	417L	8J7L	417L 1.8	8J7L			417L	8J7L	417L	8J7L
B	418	8J8	418	8J8			418	8J8	418	8J8
C	119U	5J9U	119U	5J9U	119U	5J9U	119U	5J9U	119U	5J9U
D	319L	7J9L	319L	7J9L	319L	7J9L	319L	7J9L	319L	7J9L
E										
F										

KEYSTROKES: D + X + Y

TIME OF DAY FEATURES

EVENT	TIME	FUNCT	DAY OF WEEK S	M	T	W	T	F	S
FLG 0	0830	3	X	X	X	X	X	X	X
1	1500	3	X	X	X	X	X	X	X
2									
3									
4									
5									
6									
7									
8									
9									
A									
B									
C									
D									
E									
F									

KEYSTROKES: 7+EVENT#

FUNCTION BY PHASE

	1	2	3	4	5	6	7	8
0	X	X				X		
1		X				X		
2								
3								
4								
5								
6								
7								
8								
9								
A								
B								
C								
D								
E								
F								

KEYSTROKES: D-F-EVENT #

TIME OF DAY LOCAL FUNCTION CODES

0 - PERMIT	7 - PED REST	E - 1 - LOCAL OVERIDE	F - TOD OUTPUTS
1 - PED LOCK	8 - DBL ENTRY	2 - PHASE BANK 2	1 - TOD OUT 1
2 - YELLOW LOCK	9 - VEH MAX RCL	3 - PHASE BANK 3	2 - TOD OUT 2
3 - VEH RECALL	A - SOFT RECALL	7 - DET COUNT	3 - TOD OUT 3
4 - PED RECALL	B - MAX II EXT	8 - SPLIT MONITOR	4 - TOD OUT 4
5 - RESERVED	C - COND SERVE		
6 - REST IN WALK	D - TOD LAG Ø		

CURRENT TIME AND DATE

8-0 HOUR, MINUTE, DAY OF WEEK
8-1 DAY OF MONTH, YEAR, MONTH
8-F SECONDS

CONFIGURATION DATA

NOTE "E" KEY ENABLED (F-9-E ≠ 0)

KEYSTROKES: E+E+INTERVAL

INTERVAL	PHASE 1	2	3	4	5	6	7	8
0 EXCLU PH								
1 RR1 GRN CL								
2 RR2 GRN CL								
3 RR2 LTD								
4								
5 OLA GOMIT								
6 OLB GOMIT								
7 OLC GOMIT								
8 OLD GOMIT			V					
9 OU FL YEL								
A EMVEH A		X						
B EMVEH B				X				
C EMVEH C	X					X		
D EMVEH D								
E EXTRA	X		X	X				
F IC SELECT								

EXTRA. (E+E+E)
1-TBC TYPE
2-NEMA COOD
3-DAYLIGHT SAV
4-EV ADVANCE
6-SPECIAL EVENT
7-PRETIMED
8-SPLIT RING

ICSEL: (E+E+F)
1- SIMPLEX IN
2-2-WAY MODEM
3-7 WIRE IN
4-FLH/FREE
5-SIMPLEX OUT
7-7 WIRE OUT

ASSIGNS (E+F+F)
1-ART OVERLAP
2-TOD OUTPUTS
3-STEADY EV BEAC
4-FLASH EV BEAC

KEYSTROKES: E+F+INTERVAL

INTERVAL	PHASE 1	2	3	4	5	6	7	8
0								
1 RR OLAP A								
2 RR OLAP B								
3 RR OLAP C								
4 RR OLAP D								
5 PED2P		X						
6 PED6P						X		
7 PED4P								
8 PED8P								
9 FLH YELO								
A OVERLAP A								
B OVERLAP B								
C OVERLAP C								
D OVERLAP D								
E RESTRICT								
F ASSIGNS								

COORDINATION TIMING

KEYSTROKES: C+PLAN+FEATURE

200SA

FEATURE		PLAN 1	2	3	4	5	6	7	8	9	
CYCLE	0	60	50	65							0
FORCE1	1	40	25	40							1
FORCE2	2	—	—	—							2
FORCE3	3	/	/	/							3
FORCE4	4	20	13	20							4
FORCE5	5	/	/	/							5
FORCE6	6	—	—	—							6
FORCE7	7	/	/	/							7
FORCE8	8	/	/	/							8
RING OFFSET	9										9
OFFSET A	A	28	5	22							A
OFFSET B	B										B
OFFSET C	C										C
PERMISSIVE	D	10	5	10							D
HOLD RELEASE	E	255	255	255							E
ZONE OFFSET	F	0	0	0							F

ADDRESS (C-0-0)= 0

MANUAL PLAN: (C-A-1)= 0
AUTO = 0
PLAN = 1-9
FREE = 14
FLASH = 15

TRANSITION TYPE (C-D-D)= 0
SHORTWAY = 0
DWELL > 0

FORCEOFF SHIFT FOR PEDESTRIAN (C-D-F)= 0

FOR OBSERVATION ONLY
MASTER PLAN (C-A-2)
CURRENT PLAN (C-A-3)
TOD PLAN (C-A-5)
MASTER CYCLE (C-A-0)
RING A CYCLE (C-B-0)
RING B CYCLE (C-D-0)
MINIMUM CYCLE (C-A-E)
MAXIMUM CYCLE (C-B-E)

TIME BASE COORDINATION

KEYSTROKES: 9+EVENT#

EVENT	TIME	PLAN	OFFSET	DAY OF WEEK S	M	T	W	T	F	S
0	0700	1	A	X	X	X	X	X		
1	0900	2	A	X	X	X	X	X		
2	1500	3	A	X	X	X	X	X		
3	1700	E	A	X	X	X	X	X	X	X
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

PLAN = 1...9 (DIAL)
E (FREE)
F (FLASH)

OFFSET = A...C

SYNCHRONIZED PHASES

KEYSTROKES: C+E+PLAN

PLAN	PHASE 1	2	3	4	5	6	7	8
0								
1 SYNC 1	X				X			
2 SYNC 2	X				X			
3 SYNC 3	X				X			
4 SYNC 4								
5 SYNC 5								
6 SYNC 6								
7 SYNC 7								
8 SYNC 8								
9 SYNC 9								
A CPEDRCL								
B NEMA HLD								
C SCANMEM								
D BADPROM								
E TODFN E								
F TODFN F								

PHASE SEQUENCES

KEYSTROKES: C+F+FUNCTION#

FUNCTION	PHASE 1	2	3	4	5	6	7	8
0 LAG 0 (FREE)		X		X		X		
1 LAG 1		X		X		X		
2 LAG 2		X		X		X		
3 LAG 3		X		X		X		
4 LAG 4								
5 LAG 5								
6 LAG 6								
7 LAG 7								
8 LAG 8								
9 LAG 9								
A COOR MAX RECALL								
B COOR LAG RECALL								
C SYNC PHASES								
D HOLD								
E NEXT PHASE								
F FORCE OFF								

INTERSECTION: Frairs Rd EB Ramps at Mission CTR Rd

by: ARS Date: 3-9-94

(COORDINATION ONLY)

19

INTERSECTION: FRIARS RD (W/B Ramps) & QUALCOMM WY, NORTH

223 Program

Group Assignment:
Field Master Assignment:

N/S Street Name: QUALCOMM
E/W Street Name: FRIARS

Last Change:
Timing Sheet By: BJU
Approved By:

Drawing Number: 33251-4-D
Sys. Ref. Number:
Timing implemented on: 05/26/05 BUrias
10:45

Row	Column # →	QUALCOMM 1	2	3	4	QUALCOMM 5	6	7	FRIARS 8
	Phase # →								
		N	↑			←	↓ video		←
0	Ped Walk		7						7
1	Ped FDW		9						21
2	Min Green		10			4	10		4
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn		3.4			~~2.0~~ 3.4	~~2.0~~ 3.0		2.0
6	Max Gap		3.4			~~2.0~~ 3.4	~~2.0~~ 3.0		2.0
7	Min Gap		0.2			~~2.0~~ 0.2	~~2.0~~ 3.4		2.0
8	Max Limit		60			30	60		30
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1			0.1			
D	Every		1.4			1.4			
E	Yellow		4.1			~~3.4~~ 3.9	3.9		3.9
F	Red Clear		1.0			1.0	1.0		1.0

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row		E
0	RR-1 Delay	
1	RR-1 Clear	
2	EV-A Delay	0
3	EV-A Clear	0
4	EV-B Delay	
5	EV-B Clear	
6	EV-C Delay	0
7	EV-C Clear	0
8	EV-D Delay	0
9	EV-D Clear	0
A	RR-2 Delay	
B	RR-2 Clear	
C	View EV Delay	---
D	View EV Clear	---
E	View RR Delay	---
F	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	2 56 8
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	Peds (View)	2 8
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	~~95~~ 10
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	2 6
F	1st Phases	4

Phase Functions
F + F + Row
<F Page>

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number		C + 0 + 0
Zone Number		C + 0 + 1
Area Number		C + 0 + 2
Area Address		C + 0 + 3
QuicNet Channel		(QuicNet)

Communication Addresses
C + F + O

	F	Row
Free Lag	2 5 8	0
Lag Phases		<C Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A				
B	Overlap B				
C	Overlap C				
D	Overlap D				

Overlap Timing <F Page>
F + COLOR +
<D Page>
D + 0 + OVERLAP

Manual Plan	~~0~~ 14
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset 0
= Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255 (minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	234

Disable Communications Ports
D + D + 9

INTERSECTION: FRIARS RD (W/B Ramps) & QUALCOMM WY, North — 223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	
7	Ped 4P	
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

(This parameter is NOT downloaded)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

INTERSECTION: FRIARS RD (W/B Ramps) & QUALCOMM WY, North — 223 Program

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E		---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1	10.0	
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		1.8
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 – – – –	1234
C	13 14 15 16 17 18 19 20	12345678
D	– – – – 21 22 23 24	5678
E	– – – – – – – –	1234
F	– 25 26 27 28 – – –	2345

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

(These parameters are NOT downloaded.)

INTERSECTION: FRIARS RD (W/B Ramps) & QUALCOMM WY, North

223 Program

Row	Plan Name ⟶	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
0	Cycle Length	80	100	100						
1	Phase 1 - ForceOff									
2	Phase 2 - ForceOff	0								
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff	0	40	40						
5	Phase 5 - ForceOff	0								
6	Phase 6 - ForceOff	54								
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff	33	40	40						
9	Ring Offset									
A	Offset A	10	90	5						
B	Offset B									
C	Offset C									
D	Permissive	10	10	10						
E	Hold Release	255	255	255						
F	Ped Shift	0	0	0						

Coordination <C Page>

C + Plan + ROW

Coordination Timing By: BJU
Implemented On:

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	~~06:30~~	1	A	23456
1	~~10:00~~	E	A	23456
2	~~16:00~~	1	A	23456
3	~~18:00~~	E	A	23456
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	XXXXXXXXXXXXXXXX
Plan 1	2 5	1	Plan 1 - Lag	2 5 8
Plan 2		2	Plan 2 - Lag	
Plan 3		3	Plan 3 - Lag	
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6		6	Plan 6 - Lag	
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases

C + E + FUNCTION #

Lag Phases <C Page>

C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Transition Type
0 = Shortway
Non-zero = Lengthen

20

INTERSECTION: FRIARS RD (E/B Ramps) & QUALCOMM WY, SOUTH

223 Program

Group Assignment:
Field Master Assignment:

N/S Street Name: QUALCOMM
E/W Street Name: FRIARS

Last Change:
Timing Sheet By: BJU
Approved By:

Drawing Number: 33261-5-D
Sys. Ref. Number:
Timing implemented on: 05/26/05 BUrias 10:20

Row	Column # --->	QUALCOMM 1	2	3	FRIARS 4	5	QUALCOMM 6	7	8
	Phase # --->	1	2	3	4	5	6	7	8
		N							
0	Ped Walk				7		7		
1	Ped FDW				27		9		
2	Min Green	4	10		4		10		
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	3.4		2.0		2.0		
6	Max Gap	2.0	3.4		2.0		2.0		
7	Min Gap	2.0	0.2		2.0		2.0		
8	Max Limit	30	60		40		60		
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1						
D	Every		0.9						
E	Yellow	3.4	4.1		3.9		3.9		
F	Red Clear	1.0	1.0		1.0		1.0		

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row		E
0	RR-1 Delay	
1	RR-1 Clear	
2	EV-A Delay	0
3	EV-A Clear	0
4	EV-B Delay	0
5	EV-B Clear	0
6	EV-C Delay	0
7	EV-C Clear	0
8	EV-D Delay	
9	EV-D Clear	
A	RR-2 Delay	
B	RR-2 Clear	
C	View EV Delay	---
D	View EV Clear	---
E	View RR Delay	---
F	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	12_4_6__
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	Peds (View)	___4_6__
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	_2___6__
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	___4____

Phase Functions
F + F + Row
<F Page>

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	
Zone Number	
Area Number	
Area Address	
QuicNet Channel	

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O

Free Lag	F	Row
	_2_4_6__	0

Lag Phases <C Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A				
B	Overlap B				
C	Overlap C				
D	Overlap D				

Overlap Timing <F Page>
F + COLOR +
<D Page>
D + 0 + OVERLAP

Manual Plan	0 (V)
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset 0
= Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255 (minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	234

Disable Communications Ports
D + D + 9

INTERSECTION: FRIARS RD (E/B Ramps) & QUALCOMM WY, South — 223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function — 7 + ROW — <D Page> D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration — E + F + ROW — <E Page>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration
For access, set F + 9 + E = 1 — E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)
(This parameter is NOT downloaded)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

INTERSECTION: FRIARS RD (E/B Ramps) & QUALCOMM WY, South

223 Program

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4	5.0	
5		
6		
7	~~10.0~~ 5.0	
8	10.0	
9		
A		
B		
C		
D		
E		---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 – – – –	1234
C	13 14 15 16 17 18 19 20	12345678
D	– – – – 21 22 23 24	5678
E	– – – – – – – –	1234
F	– 25 26 27 28 – – –	2345

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

(These parameters are NOT downloaded.)

INTERSECTION: FRIARS RD (E/B Ramps) & QUALCOMM WY, South

223 Program

Coordination Timing By: BJU
Implemented On:

Row	Column # → / Plan Name →	Plan 1	2	3	4	5	6	7	8	9
0	Cycle Length	80	100	120						
1	Phase 1 - ForceOff	54								
2	Phase 2 - ForceOff	0								
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff	39	40	40						
5	Phase 5 - ForceOff									
6	Phase 6 - ForceOff	0								
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff		40	40						
9	Ring Offset									
A	Offset A	4	90	5						
B	Offset B									
C	Offset C									
D	Permissive	10	10	10						
E	Hold Release	255	255	255						
F	Ped Shift	0	0	0						

Coordination <C Page>
C + Plan + ROW

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	06:30	1	A	23456
1	13:30	E	A	23456
2	16:00	1	A	23456
3	18:00	E	A	23456
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination
<9 Key with C+0+9=1>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

	E	Row		F
		0	Free Lag	XXXXXXXXXXXXXXXX
Plan 1	2 4 6	1	Plan 1 - Lag	2 4 6
Plan 2		2	Plan 2 - Lag	
Plan 3		3	Plan 3 - Lag	
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6		6	Plan 6 - Lag	
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases
C + E + FUNCTION #

Lag Phases <C Page>
C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

INTERSECTION: FRIARS RD. & RIVER RUN DR.

Group Assignment:
Field Master Assignment:

N/S Street Name: RIVER RUN
E/W Street Name: FRIARS RD

Last Database Change:
System Ref. Number:

N

		FRIARS			private d/w		FRIARS		RIVER RUN
Column # ---->		Phase							
Phase # ---->		1	2	3	4	5	6	7	8
Row		↙	⇄		⇅	↗	⇄		↑
0	Ped Walk		7		7		7		7
1	Ped FDW		14		23		9		23
2	Min Green	4	10		4	4	10		4
3	Type 3 Limit								
4	Add/Veh		2.0				2.0		
5	Veh Extn	2.0	7.2		3.5	2.0	7.0		2.5
6	Max Gap	2.0	7.2		3.5	2.0	7.0		2.5
7	Min Gap	2.0	2.0		3.5	2.0	2.0		2.5
8	Max Limit	30	60		40	40	60		30
9	Max Limit 2				65				
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1				0.1		
D	Every		0.6				0.9		
E	Yellow	3.4	5.2		3.9	3.4	5.2		3.9
F	Red Clear	1.0	1.0		1.0	1.0	1.0		1.0
	Grade								

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row		E
	RR-1 Delay	
	RR-1 Clear	
	EV-A Delay	0
	EV-A Clear	0
	EV-B Delay	0
	EV-B Clear	0
	EV-C Delay	0
	EV-C Clear	0
	EV-D Delay	0
	EV-D Clear	0
	RR-2 Delay	
	RR-2 Clear	
	View EV Delay	---
	View EV Clear	---
	View RR Delay	---
	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
	Permit	12_456_8
	Red Lock	
	Yellow Lock	
	Min Recall	_2___6__
	Ped Recall	
	Peds (View)	_2_4_6_8
	Rest In Walk	
	Red Rest	
	Dbl Entry	___4___8
	Max Recall	
	Soft Recall	
	Max 2	
	Cond Serv	
	Ped Lock	12345678
	Yellow Start	_2___6__
	1st Phases	___4___8

Phase Functions <F Page>
F + F + Row

Max Initial	46
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	1
Zone Number	1
Area Number	4
Area Address	33
QuicNet Channel	DIGI83:

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6_8	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +
<D Page>
D + 0 + OVERLAP

Manual Plan	0
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	234

Disable Communication Ports
D + D + 9

Timing Sheet By: WXH
Approved By:
Drawing Number:
Timing Implemented On:

17

Row	Time	Function	Day of Week	Column F Phases/Bits
0	1600	B	_23456_	___4____
1	1700	B	_23456_	
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	_2_____
6	Ped 6P	_____6__
7	Ped 4P	___4____
8	Ped 8P	_____8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	_2__5__
B	EV-B Phases	___4___8
C	EV-C Phases	1____6__
D	EV-D Phases	
E	Extra 1 Config. Bits	1_345___
F	IC Select (Interconnect)	_2_____

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

ERSECTION: FRIARS RD. & RIVER RUN DR. — 223 Program

Row	1 Delay	3 Carry-over
0		
1		
2		
3		
4		
5		
6		
7	3.0	
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	7J9U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	5678
E	-- -- -- -- -- -- -- --	1234
F	-- 25 26 27 28 -- -- --	2345

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

		Plan								
	Column # --->	1	2	3	4	5	6	7	8	9
Row	Plan Name ---->			Pm Peak						
0	Cycle Length	125	135	135						
1	Phase 1 - ForceOff	70	70	20						
2	Phase 2 - ForceOff	0	0	0						
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff	50	40	70						
5	Phase 5 - ForceOff	70	70	20						
6	Phase 6 - ForceOff	0	0	0						
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff	50	40	70						
9	Ring Offset									
A	Offset A	91	27	27						
B	Offset B									
C	Offset C									
D	Permissive	12	13	13						
E	Hold Release	255	255	255						
F	Ped Shift	0	0	0						

Coordination Timing By: WXH
Implemented On:

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Coordination <C Page>
C + Plan + ROW

Row	Time	Plan	Offset	Day of Week
0	11 : 00	1	A	_23456_
1	15 : 00	2	A	_23456_
2	16 : 00	3	A	_23456_
3	17 : 00	2	A	_23456_
4	20 : 00	E	A	1234567
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination
<9 Key with C+0+9=1>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

	E	Row		F
		0	Free Lag	
Plan 1	2 6	1	Plan 1 - Lag	2 4 6 8
Plan 2	2 6	2	Plan 2 - Lag	2 4 6 8
Plan 3	2 6	3	Plan 3 - Lag	1 45 8
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6		6	Plan 6 - Lag	
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases
C + E + FUNCTION #

Lag Phases <C Page>
C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

22

INTERSECTION: FENTON & FRIARS

223 Program

Group Assignment:
Field Master Assignment:

N/S Street Name: FENTON PKWY
E/W Street Name: FRIARS RD

Last Database Change:
System Ref. Number:

N

Row	Column # ----> / Phase # ---->	1	2	3	4	5	6	7	8
			FRIARS		FENTON		FRIARS		FENTON
				OLA		OLB		OLC	
0	Ped Walk		7		7		7		7
1	Ped FDW		27		35		24		32
2	Min Green	4	10	4	7	4	10	4	7
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	6.2	2.0	7.0	2.0	6.1	2.0	5.4
6	Max Gap	2.0	6.2	2.0	7.0	2.0	6.1	2.0	5.4
7	Min Gap	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
8	Max Limit	30	60	30	40	30	60	30	40
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1		0.1		0.1		0.1
D	Every		0.5		0.4		0.5		0.6
E	Yellow	3.4	5.2	3.4	3.9	3.4	5.2	3.4	3.9
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Grade								

Phase Timing - Bank 1
F + Phase + Row

<F Page>

Row		E
	RR-1 Delay	
	RR-1 Clear	
	EV-A Delay	0
	EV-A Clear	0
	EV-B Delay	0
	EV-B Clear	0
	EV-C Delay	0
	EV-C Clear	0
	EV-D Delay	0
	EV-D Clear	0
	RR-2 Delay	
	RR-2 Clear	
	View EV Delay	---
	View EV Clear	---
	View RR Delay	---
	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
	Permit	12345678
	Red Lock	
	Yellow Lock	
	Min Recall	
	Ped Recall	
	Peds (View)	_2_4_6_8
	Rest In Walk	
	Red Rest	
	Dbl Entry	
	Max Recall	
	Soft Recall	_2___6__
	Max 2	
	Cond Serv	
	Ped Lock	12345678
	Yellow Start	_2___6__
	1st Phases	___4___8

Phase Functions <F Page>
F + F + Row

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	2	C + 0 + 0
Zone Number	2	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	34	C + 0 + 3
QuicNet Channel	DIGI83:	(QuicNet)

Communication Addresses

C + F + O	P	Row
Free Lag	_2_4_6_8	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +

<D Page>
D + 0 + OVERLAP

Manual Plan	0	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	234

Disable Communication Ports
D + D + 9

Timing Sheet By: WXH
Approved By: EFF
Drawing Number:
Timing Implemented On:

(2)

INTERSECTION: FENTON & FRIARS

223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function

7 + ROW

<D Page>

D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	23
B	Overlap B - Phases	45
C	Overlap C - Phases	67
D	Overlap D - Phases	
E	**Restricted Phases**	
F	Assign 5 Outputs	1

Configuration

E + F + ROW

<E Page>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	2
6	Overlap B - Green Omit	4
7	Overlap C - Green Omit	6
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week

8-1 Day-of-Month, Year, Month

8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications

(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program

C + C + F = version

Remote Download

C + 0 + 4 = 1 -255

w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		1.8
3		
4	10.0	
5		
6		
7		1.8
8		
9		
A	5.0	
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		1.8
3		
4	10.0	
5		
6		
7		1.8
8		
9		
A	5.0	
B		
C		
D		
E	---	---
F	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	5678
E	-- -- -- -- -- -- -- --	1234
F	-- 25 26 27 28 -- -- --	2345

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: FENTON & FRIARS

223 Program

DJM 1
6/11/10

Row	Plan Name ---->	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
0	Cycle Length	125	135					110	136	
1	Phase 1 - ForceOff	80	85					72 69	79	
2	Phase 2 - ForceOff	0	0					0	0	
3	Phase 3 - ForceOff	26	21					53	61	
4	Phase 4 - ForceOff	66	65					37	40	
5	Phase 5 - ForceOff	80	85					67	81	
6	Phase 6 - ForceOff	0	0					0	0	
7	Phase 7 - ForceOff	26	21					17	17	
8	Phase 8 - ForceOff	66	65					53 52	61	
9	Ring Offset									
A	Offset A	96	30					46	90	
B	Offset B									
C	Offset C									
D	Permissive	12	13					11	14	
E	Hold Release	255	255					255	255	
F	Ped Shift	6	0					11 10	4	

Coordination Timing By: WXH
Implemented On: 03/29/04

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Coordination <C Page>
C + Plan + ROW

Row	Time	Plan	Offset	Day of Week
0	11 : 00	1	A	_23456_
1	15 : 00	8 2	A	_23456_
2	20 : 00	E	A	1234567
3	7 : 00	7	A	23456
4	9 : 00	E	A	1234567
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination
<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	
Plan 1	_2__6__	1	Plan 1 - Lag	_2_4_6_8
Plan 2	_2__6__	2	Plan 2 - Lag	_2_4_6_8
Plan 3		3	Plan 3 - Lag	
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6		6	Plan 6 - Lag	
Plan 7	2 6	7	Plan 7 - Lag	2360
Plan 8	2 6	8	Plan 8 - Lag	2360
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases
C + E + FUNCTION #

Lag Phases <C Page>
C + F + FUNCTION #

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

23

INTERSECTION: FRIARS & NORTHSIDE

223 Program

Group Assignment:
Field Master Assignment:

N/S Street Name: NORTHSIDE DR
E/W Street Name: FRIARS RD

Last Database Change:
System Ref. Number:

N

Row	Column # --->	1	2	3	4	5	6	7	8
	Phase # --->	1	2	3	4	5	6	7	8
		FRIARS			NORTHSIDE		FRIARS		NORTHSIDE
		OLB						OLA	
0	Ped Walk		7				7		7
1	Ped FDW		22				20		30
2	Min Green	4	10	4	4 WH 8/10/05	4	10	4	7
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	5.4	2.0	8.5	2.0	5.3	2.0	5.6
6	Max Gap	2.0	5.4	2.0	8.5	2.0	5.3	2.0	5.6
7	Min Gap	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
8	Max Limit	35	60	30	15	30	60	30	25 15 MG 4/13/05
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1		0.1		0.1		0.1
D	Every		0.6		0.4		0.6		0.6
E	Yellow	3.4	5.0	3.4	3.9	3.4	5.2	3.4	3.9
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Grade								

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row		E
0	RR-1 Delay	
1	RR-1 Clear	
2	EV-A Delay	0
3	EV-A Clear	0
4	EV-B Delay	0
5	EV-B Clear	0
6	EV-C Delay	0
7	EV-C Clear	0
8	EV-D Delay	0
9	EV-D Clear	0
A	RR-2 Delay	
B	RR-2 Clear	
C	View EV Delay	---
D	View EV Clear	---
E	View RR Delay	---
F	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	12345678
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	Peds (View)	_2___6_8
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	_2___6__
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	___4___8

Phase Functions <F Page>
F + F + Row

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	3
Zone Number	3
Area Number	4
Area Address	35
QuicNet Channel	DIGI83:

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6_8	0

Lag Phases <C Page>

Overlap Timing

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +
<D Page>
D + 0 + OVERLAP

Manual Plan	0
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	234

Disable Communication Ports
D + D + 9

Timing Sheet By: WXH
Approved By: EFF
Drawing Number:
Timing Implemented On: 4/12/05

3

INTERSECTION: FRIARS & NORTHSIDE

223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function 7 + ROW

<D Page> D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	67
B	Overlap B - Phases	1 8
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1

Configuration E + F + ROW

<E Page>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	6
6	Overlap B - Green Omit	8
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 345
F	IC Select (interconnect)	2

Configuration E + E + ROW

For access, set F + 9 + E = 1

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

INTERSECTION: FRIARS & NORTHSIDE — 223 Program

JM1 TEMP 4/29/10

Row	1 Delay	3 Carry-over
0		
1		1.8
2		1.8
3		
4	10.0	
5		
6		
7	10.0	1.8
8		
9		1.8
A	10.0	
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
RT	4I6U	3
LT	4I6L	7
ADV	4I7U	23
THRU	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		1.8
3		
4	10.0	
5		
6		
7		1.8
8		
9		
A	10.0	
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	5678
E	-- -- -- -- -- -- -- --	1234
F	-- 25 26 27 28 -- -- --	2345

Active Detectors <D Page>

Row	0 Detector #
0	
1	System Det. # 1 — 0
2	System Det. # 2 — 0
3	System Det. # 3 — 0
4	System Det. # 4 — 0
5	System Det. # 5 — 0
6	System Det. # 6 — 0
7	System Det. # 7 — 0
8	System Det. # 8 — 0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

0 JM1
4/29/10

Row	Column # ---> / Plan Name --->	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
0	Cycle Length	125	135					110	136	
1	Phase 1 - ForceOff	83	80					76	80	
2	Phase 2 - ForceOff	0	0					0	0	
3	Phase 3 - ForceOff	26	26					17	25	
4	Phase 4 - ForceOff	0 48 ~~63~~	63					52	59	
5	Phase 5 - ForceOff	83	80					65	76	
6	Phase 6 - ForceOff	0	0					0	0	
7	Phase 7 - ForceOff	26	26					21	25	
8	Phase 8 - ForceOff	0 48 ~~63~~	63					52	59	
9	Ring Offset									
A	Offset A	0 90 ~~95~~	35					100	84	
B	Offset B									
C	Offset C									
D	Permissive	12	13					11	14	
E	Hold Release	255	255					255	255	
F	Ped Shift	0 ~~10~~ 5	5					5	4	

Coordination Timing By:
Implemented On:

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Coordination <C Page>
C + Plan + ROW

Row	Time	Plan	Offset	Day of Week
0	11 : 00	1	A	_23456_
1	15 : 00	8	A	_23456_
2	20 : 00	E	A	1234567
3	07 : 00	7	A	_23456_
4	09 : 00	E	A	1234567
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Coordination
<9 Key with C+0+9=1>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

	E	Row		F
		0	Free Lag	
Plan 1	_2__6__	1	Plan 1 - Lag	_2_4_6_8
Plan 2	_2__6__	2	Plan 2 - Lag	_2_4_6_8
Plan 3		3	Plan 3 - Lag	
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6		6	Plan 6 - Lag	
Plan 7	_2__6__	7	Plan 7 - Lag	_2_4_6_8
Plan 8	_2__6__	8	Plan 8 - Lag	_2_4_6_8
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases
C + E + FUNCTION #

Lag Phases <C Page>
C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

INTERSECTION: FRIARS & NORTHSIDE

223 Program

		Plan								
	Column # --->	1	2	3	4	5	6	7	8	9
Row	Plan Name --->									
0	Cycle Length	125	135							
1	Phase 1 - ForceOff	83	80							
2	Phase 2 - ForceOff	0	0							
3	Phase 3 - ForceOff	26	26							
4	Phase 4 - ForceOff	63	63							
5	Phase 5 - ForceOff	83	80							
6	Phase 6 - ForceOff	0	0							
7	Phase 7 - ForceOff	26	26							
8	Phase 8 - ForceOff	63	63							
9	Ring Offset									
A	Offset A	95	35							
B	Offset B									
C	Offset C									
D	Permissive	12	13							
E	Hold Release	255	255							
F	Ped Shift	5	5							

Coordination <C Page>

C + Plan + ROW

Coordination Timing By: WXH

Implemented On: 03/29/04

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	11 : 00	1	A	_23456_
1	15 : 00	2	A	_23456_
2	20 : 00	E	A	1234567
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

Plan Select

1 thru 9 = Coordination Plan 1 thru 9

14 or E = Free

15 or F = Flash

	E
Plan 1	_2__6__
Plan 2	_2__6__
Plan 3	
Plan 4	
Plan 5	
Plan 6	
Plan 7	
Plan 8	
Plan 9	
Coord Ped*	
NEMA Hold	

Sync Phases

C + E + FUNCTION #

Row		F
0	Free Lag	
1	Plan 1 - Lag	_2_4_6_8
2	Plan 2 - Lag	_2_4_6_8
3	Plan 3 - Lag	
4	Plan 4 - Lag	
5	Plan 5 - Lag	
6	Plan 6 - Lag	
7	Plan 7 - Lag	
8	Plan 8 - Lag	
9	Plan 9 - Lag	
A	Coord Max *	
B	Coord Lag *	
C		
D		
E		
F		

Lag Phases <C Page>

C + F + FUNCTION #

Transition Type	0

TBC Transition

C + D + D

Transition Type

0 = Shortway

Non-zero = Lengthen

INTERSECTION: FRIARS RD WB & MISSION VILLAGE

233 Program

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street: MISSION VILLAGE
E/W Street: FRIARS RD WB

Last Database Change:

Timing sheets by: LEM
Approved by: EFF
Timing implemented on:

Row	Phase Numbers---->	1	2	3	4	5	6	7	8
				↑	/	OLA ↑	OLA ↓		←
0	Ped Walk				7	7	7		7
1	Ped FDW				5	5	5		22
2	Min Green			4	4	6	10		4
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension			2.0	2.0	2.0	3.7		2.0
6	Max Gap			2.0	2.0	2.0	3.7		2.0
7	Min Gap			2.0	2.0	2.0	0.2		2.0
8	Max Limit			30	30	60	60		40
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every						0.9		
E	Yellow Change			3.9	3.0	4.3	6.0		3.9
F	Red Clear			1.0		1.0	1.0		1.0

Phase Timing - Bank 1 <F/1+Phase+Row>

Row		E
	RR-1 Delay	
	RR-1 Clear	
	EV-A Delay	0
	EV-A Clear	0
	EV-B Delay	
	EV-B Clear	
	EV-C Delay	0
	EV-C Clear	0
	EV-D Delay	0
	EV-D Clear	0
	RR-2 Delay	
	RR-2 Clear	
	View EV Delay	- - -
	View EV Clear	- - -
	View RR Delay	- - -
	View RR Clear	- - -

Preempt Timing <F/1+E+Row>

Row		F
0	Permit	3456_8
1	Red Lock	
2	Yellow Lock	
3	Min Recall	3 6
4	Ped Recall	
5	*View Set Pads*	4 6 8
6	Rest In Walk	
7	Red Rest	
8	Double Entry	
9	Max Recall	
A	Soft Recall	
B	Max 2	
C	Cond. Service	
D	Man Cntrl Calls	
E	Yellow Start	3 6
F	First Phases	4 8

Phase Functions <F/1+F+Row>

Current Calculated Cycle Length: C/0 + B + F

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

Drop Number	8	<C/0+0+0>
Zone Number	8	<C/0+0+1>
Area Number	4	<C/0+0+2>
Area Address	40	<C/0+0+3>
QuicNet Channel	COM87:	(QuicNet)

Communication Addresses

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

(Outputs specified in Assignable Outputs at E/127+A+E & F)

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>

Start / Revert Times

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B

Manual Plan	0	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Free Lag	3 6 8	<C/1+F+0>

How to Set Page Access Code:
F/1 – C + 0 + F = 1

Notes: Split ring operation, OLA-Full Overlap.

INTERSECTION: FRIARS RD WB & MISSION VILLAGE

233 Program

Row		Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number	2							
1	Veh Set 1 - Phases	56							
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases	8							
5	Neg Ped Phases	8							
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear								
E	Yellow Change	4.3							
F	Red Clear	1.0							

Overlap Assignments <E/29+Column+Row>

	F	Row
Fast Green Flash Phase		0
Green Flash Phases		1
Flashing Walk Phases		2
Guaranteed Passage		3
Simultaneous Gap Term	12345678	4
Sequential Timing		5
Advance Walk Phases		6
Delay Walk Phases		7
External Recall		8
Start-up Overlap Green		9
Max Extension		A
Inhibit Ped Reservice		B
Semi-Actuated		C
Start-up Overlap Yellow		D
Start-up Vehicle Calls	12345678	E
Start-up Ped Calls	12345678	F

Specials <F/2+F+Row>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 45 8
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	6
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	

Configuration <E/125+F+Row>

	C	Row
EV-A		0
EV-B		1
EV-C		2
EV-D		3
RR-1 *	---	4
RR-2 *	---	5
SE-1	0	6
SE-2	0	7
		8
		9
		A
		B
		C
		D
		E
		F

<E/125+C+Row>

Preemption Priority

(* RR-1 is always Highest, and RR-2 is always Second Highest)

	2	Row
		0
Phase 1	0	1
Phase 2	0	2
Phase 3	0	3
Phase 4	0	4
Phase 5	0	5
Phase 6	0	6
Phase 7	0	7
Phase 8	0	8
		9
		A
		B
		C
		D
		E
		F

<C/5+2+Row>

Coordination Transition Minimums

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Time and Date

Begin Month	0	<C/5+2+A>
Begin Week	0	<C/5+2+B>
End Month	0	<C/5+2+C>
End Week	0	<C/5+2+D>

Daylight Savings Time

Daylight Savings Date:
If set to all zeros, standard dates will be used.

INTERSECTION: FRIARS RD WB & MISSION VILLAGE

233 Program

Row	Detector Name	0 C1 Pin Number	1 Attributes	2 Phase(s)	3 Assign	1 Delay	3 Carry-Over
0		39	45_7_	2	123 8		
1	6J2U	40	45_7_	6	123 8		1.8
2		41	45_7_	4	123 8		
3		42	45_7_	8	123 8		
4		43	45_7_	2	123 8		
5		44	45_7_	6	123 8		
6		45	45_7_	4	123 8		
7		46	45_7_	8	123 8		
8		47	67_	2	123 8		
9		48	67_	6	123 8		
A		49	67_	4	123 8		
B		50	67_	8	123 8		
C		55	45_7_	5	123 8		
D		56	45_7_	1 7	123 8		
E		57	45_7_	7	123 8		
F		58	45_7_	3	123 8		

Program Type:

	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	30

<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	5	<D/0+0+1>
Max ON (minutes)	60	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <E/125+D+Row>

Row	Detector Name	4 C1 Pin Number	5 Attributes	6 Phase(s)	7 Assign	2 Delay	4 Carry-Over
0		59	45_7_	5	123 8		
1		60	45_7_	1 7	123 8		
2		61	45_7_	7	123 8		
3		62	45_7_	3	123 8		
4		63	45_7_	2	123 8		
5		64	45_7_	6	123 8		
6		65	45_7_	4	123 8		
7		66	45_7_	8	123 8		
8		67	2	6	123 8		
9		68	2	6	123 8		
A		69	2	4	123 8		
B		70	2	8	123 8		
C		76	45_7_	2	123 8		
D		77	45_7_	6	123 8		
E		78	45_7_	4	123 8		
F		79	45_7_	8	123 8		

Detector Assignments <E/126+Column+Row> <D/0+Column+Row>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	D
Number of Digits	
1 st Digit	
2 ed Digit	
3 ed Digit	
4 th Digit	
5 th Digit	
6 th Digit	
7 th Digit	
8 th Digit	
9 th Digit	
10 th Digit	
11 th Digit	
12 th Digit	
13 th Digit	
14 th Digit	
15 th Digit	

<C/5+D+Row>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	1	A
DELAY-B	1	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

<D/0+B+Row> (seconds)

Delay Logic Times

Omit Alarm	#NAME?

<C/5+F+0>

Disable Alarm Reporting

Time	0	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

INTERSECTION: FRIARS RD WB & MISSION VILLAGE

233 Program

TOD Coordination <9/0.1+Row> (Bank 1)

Row	Time	Plan	Offset	Day of Week
0	16 : 00	2	A	_23456_
1	18 : 15	E	A	1234567
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <7/0.1+Row> <E/27+4+Row>

Row	Time	Funct.	Day of Week	Column 4 Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Dates <8/1.1+Row> (Bank 1)

Row	Day	Year	Month	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Events <9/1.1+Row> (Bank 1)

Row	Time	Plan	Offset	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

T.O.D. Functions:
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select:
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Month Select:
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Cycle Timer:
Master: C/0 + A + 0
Ring A: C/0 + B + 0
Ring B: C/0 + D + 0

Interval Timer:
Ring A: F/0 + A + Interval Row
Ring B: F/0 + B + Interval Row

Master Plan: C/0 + A + 2
Current Plan: C/0 + A + 3
TOD Plan: C/0 + A + 5

TOD Coordination <9/0.2+Row> (Bank 2)

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday TOD Function <7/0.2+Row> <E/28+Row>

Row	Time	Funct.	Holiday Type	Column 4 Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Dates <8/1.2+Row> (Bank 2)

Row	Day	Year	Month	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Holiday Events <9/1.2+Row> (Bank 2)

Row	Time	Plan	Offset	Holiday Type
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Plan Name --->	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9	Row
0	Cycle Length		100								0
1	Phase 1 - ForceOff										1
2	Phase 2 - ForceOff										2
3	Phase 3 - ForceOff		0								3
4	Phase 4 - ForceOff		68								4
5	Phase 5 - ForceOff		67								5
6	Phase 6 - ForceOff		0								6
7	Phase 7 - ForceOff										7
8	Phase 8 - ForceOff		40								8
9	Ring Offset										9
A	Offset 1		39								A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End		10								D
E	Hold Release		255								E
F	Zone Offset		0								F

Coordination - Timing Plans **<C/1+Plan+Row>**

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync	_3__6_	2
3	Plan 3 - Sync		3
4	Plan 4 - Sync		4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync		7
8	Plan 8 - Sync		8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases **<C/1+E+Row>**

Row		Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9	Row
0	Ped Adjustment										0
1	Perm 2 - Start										1
2	Perm 2 - End										2
3	Perm 3 - Start										3
4	Perm 3 - End										4
5	Reservice Time										5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase		12345678								A
B	Perm 1 Ped Phase		12345678								B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Parameters **<C/2+Plan+Row>**

Row		F	Row
0	Free Lag	3 6 8	0
1	Plan 1 - Lag		1
2	Plan 2 - Lag	_3__6_8	2
3	Plan 3 - Lag		3
4	Plan 4 - Lag		4
5	Plan 5 - Lag		5
6	Plan 6 - Lag		6
7	Plan 7 - Lag		7
8	Plan 8 - Lag		8
9	Plan 9 - Lag		9
A	External Lag		A
B			B
C			C
D			D
E			E
F			F

Lag Phases **<C/1+F+Row>**

Coordination Timing By:

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1		NOT-3		Max 2		Pretimed		Set Monday		Dial 2 (7-Wire)		Sim Term		0
1	Spec. Funct. 2		NOT-4		System Det 1		Plan 1		Ext. Perm 1		Dial 3 (7-Wire)		EV-A	71	1
2	Spec. Funct. 3		OR-4 (a)		System Det 2		Plan 2		Ext. Perm 2		Offset 1 (7-Wire)		EV-B	72	2
3	Spec. Funct. 4		OR-4 (b)		System Det 3		Plan 3		Dimming		Offset 2 (7-Wire)		EV-C	73	3
4	NAND-3 (a)		OR-5 (a)		System Det 4		Plan 4		Set Clock		Offset 3 (7-Wire)		EV-D	74	4
5	NAND-3 (b)		OR-5 (b)		System Det 5		Plan 5		Stop Time		Free (7-Wire)		RR-1	51	5
6	NAND-4 (a)		OR-6 (a)		System Det 6		Plan 6		Flash Sense	81	Flash (7-Wire)		RR-2	52	6
7	NAND-4 (b)		OR-6 (b)		System Det 7		Plan 7		Manual Enable		Excl. Ped Omit		Spec. Event 1		7
8	OR-7 (a)		Fig 3 Diamond		System Det 8		Plan 8		Man. Advance		NOT-1		Spec. Event 2		8
9	OR-7 (b)		Fig 4 Diamond		Max Inhibit (nema)		Plan 9		External Alarm		NOT-2		External Lag		9
A	OR-7 (c)		AND-4 (a)		Force A (nema)		DELAY-A		Phase Bank 2		OR-1 (a)		AND-1 (a)		A
B	OR-7 (d)		AND-4 (b)		Force B (nema)		DELAY-B		Phase Bank 3		OR-1 (b)		AND-1 (b)		B
C	OR-8 (a)		NAND-1 (a)		C.N.A. (nema)		DELAY-C		Overlap Set 2		OR-2 (a)		AND-2 (a)		C
D	OR-8 (b)		NAND-1 (b)		Hold (nema)		DELAY-D		Overlap Set 3		OR-2 (b)		AND-2 (b)		D
E	OR-8 (c)		NAND-2 (a)		Max Recall		DELAY-E		Detector Set 2		OR-3 (a)		AND-3 (a)		E
F	OR-8 (d)		NAND-2 (b)		Min Recall		DELAY-F		Detector Set 3		OR-3 (b)		AND-3 (b)		F

Assignable Inputs <E/126+Column+Row>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1		Preempt Fail		Flasher 0		Free		NOT-1		TOD Out 1		Dial 2 (7-Wire)		0
1	Phase ON - 2		Sp Evnt Out 1		Flasher 1		Plan 1		OR-1		TOD Out 2		Dial 3 (7-Wire)		1
2	Phase ON - 3		Sp Evnt Out 2		Fast Flasher		Plan 2		OR-2		TOD Out 3		Offset 1 (7-Wire)		2
3	Phase ON - 4		Sp Evnt Out 3		Fig 3 Diamond		Plan 3		OR-3		TOD Out 4		Offset 2 (7-Wire)		3
4	Phase ON - 5		Sp Evnt Out 4		Fig 4 Diamond		Plan 4		AND-1		TOD Out 5		Offset 3 (7-Wire)		4
5	Phase ON - 6		Sp Evnt Out 5				Plan 5		AND-2		TOD Out 6		Free (7-Wire)		5
6	Phase ON - 7		Sp Evnt Out 6				Plan 6		AND-3		TOD Out 7		Flash (7-Wire)		6
7	Phase ON - 8		Sp Evnt Out 7				Plan 7		NOT-2		TOD Out 8		Preempt		7
8	Ph. Check - 1		Sp Evnt Out 8		NOT-3		Plan 8		EV-A		Adv. Warn - 1		Low Priority A		8
9	Ph. Check - 2				NOT-4		Plan 9		EV-B		Adv. Warn - 2		Low Priority B		9
A	Ph. Check - 3		Detector Fail		OR-4		Spec. Funct. 3		EV-C		DELAY-A		Low Priority C		A
B	Ph. Check - 4		Spec. Funct. 1		OR-5		Spec. Funct. 4		EV-D		DELAY-B		Low Priority D		B
C	Ph. Check - 5		Spec. Funct. 2		OR-6		NAND-3		RR-1		DELAY-C				C
D	Ph. Check - 6		Central Control		AND-4		NAND-4		RR-2		DELAY-D				D
E	Ph. Check - 7		Excl. Ped DW		NAND-1		OR-7		Spec. Event 1		DELAY-E				E
F	Ph. Check - 8		Excl. Ped WK		NAND-2		OR-8		Spec. Event 2		DELAY-F				F

Assignable Outputs <E/127+Column+Row>

'ERSECTION: FRIARS RD & MISSION VILLAGE DR (NORTH INT.) 223 Pro n

Group Assignment: None
Field Master Assignment: None

N/S Street Nam: SION VILLAGE
E/W Street Name: FRIARS

Last Change:
Timing Sheet By: EFF
Approved By:

Drawing Number: 25787-4-D
System Ref. Num.:
Timing implemented on: 11/30/00

N

Row	Column # → / Phase # →	1	2	3	4	5	6	7	8
				↑	↗	OLA ↑	OLA ↑		←
					MISSION VILLAGE				FRIARS
0	Ped Walk				7	7	7		7
1	Ped FDW				5	5	5		21
2	Min Green			4	4	4	10		4
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn			2.0	2.0	2.0	3.9		2.0
6	Max Gap			2.0	2.0	2.0	3.9		2.0
7	Min Gap			2.0	2.0	2.0	0.2		2.0
8	Max Limit			30	30	60	60		40
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By						0.1		
D	Every						0.8		
E	Yellow			4.2	3.0	3.0	6.0		4.2
F	Red Clear			1.0	1.0	1.0	1.0		1.0

Phase Timing - Bank 1
F + Phase + Row

<F Page>

Row	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	3
EV-B Delay	
EV-B Clear	
EV-C Delay	0
EV-C Clear	3
EV-D Delay	0
EV-D Clear	3
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing
F + E + Row

Row	F
Permit	3456_8
Red Lock	
Yellow Lock	
Min Recall	3 6
Ped Recall	
Peds (View)	456_8
Rest In Walk	
Red Rest	
Dbl Entry	
Max Recall	
Soft Recall	
Max 2	
Cond Serv	
Ped Lock	12345678
Yellow Start	3 6
1st Phases	8

Phase Functions
F + F + Row

<F Page>

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	8	C + 0 + 0
Zone Number	8	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	40	C + 0 + 3
QuicNet Channel	DIGI 83:	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	3 6 8	0

Lag Phases <C Page>

Row		B Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A		4.0		2.0
B	Overlap B				
C	Overlap C				
D	Overlap D				

Overlap Timing <F Page>
F + COLOR +

<D Page>
D + 0 + OVERLAP

Manual Plan	0 C + A + 1
Manual Offset	0 C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset 0
= Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	60 (minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	234

Disable Communications Ports
D + D + 9

*NOTE: SPLIT RING OPERATION, OLA-FULL OVERLAP.

INTERSECTION: FRIARS RD & MISSION VILLAGE DR (NORTH INT.) **223 Program**

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Leg Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	6
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	56
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	5
B	EV-B Phases	
C	EV-C Phases	6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 345 8
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications

(If set to a non-zero value, parity will be disabled)

(This parameter is NOT downloaded)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1-255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E		---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3	10.0	
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 – – – –	1234____
C	13 14 15 16 17 18 19 20	12345678
D	– – – – 21 22 23 24	____5678
E	– – – – – – – –	1234____
F	– 25 26 27 28 – – –	_2345___

Active Detectors <D Page>

Row	0 Detector #
0	
1	System Det. # 1 0
2	System Det. # 2 0
3	System Det. # 3 0
4	System Det. # 4 0
5	System Det. # 5 0
6	System Det. # 6 0
7	System Det. # 7 0
8	System Det. # 8 0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

(These parameters are NOT downloaded.)

INTERSECTION: FRIARS RD & MISSION VILLAGE DR (NORTH INT.)

223 Program

Coordination Timing By: EFF
Implemented On: 11/30/00

Row	Column # → / Plan Name →	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
0	Cycle Length	110	100							
1	Phase 1 - ForceOff									
2	Phase 2 - ForceOff									
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff	74	68							
5	Phase 5 - ForceOff	72	67							
6	Phase 6 - ForceOff									
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff	43	40							
9	Ring Offset									
A	Offset A	25	39							
B	Offset B									
C	Offset C									
D	Permissive	15	15							
E	Hold Release	255	255							
F	Ped Shift	0	0							

Coordination <C Page>
C + Plan + ROW

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	16:00	2	A	_23456_
1	18:15	E	A	1234567
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination
<9 Key with C+0+9=1>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

	E	Row		F
		0	Free Lag	_3_6_8
Plan 1	_3_6_	1	Plan 1 - Lag	_3_6_8
Plan 2	_3_6_	2	Plan 2 - Lag	_3_6_8
Plan 3		3	Plan 3 - Lag	
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6		6	Plan 6 - Lag	
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases
C + E + FUNCTION #

Lag Phases <C Page>
C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

25

ERSECTION: FRIARS RD & MISSION VILLAGE DR (SOUTH INT.)

223 Pro m

Group Assignment: None
Field Master Assignment: None

N/S Street Name: SION VILLAGE
E/W Street Name: RIARS/SD MISSION RD

Last Change:
Timing Sheet By: EFF
Approved By: MM
Drawing Number: 25787-4-D
System Ref. Num.:
Timing Implemented on: 11/30/00

N

MISSION VILLAGE | SD MISSSION | FRIARS

Row	Column # → / Phase # →	Phase 1	2	3	4	5	6	7	8
		→	↑	←	→				
0	Ped Walk	5	5	5					
1	Ped FDW	10	18	20					
2	Min Green	4	4	4	4				
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	3.0	3.0	3.0	3.0				
6	Max Gap	3.0	3.0	3.0	3.0				
7	Min Gap	3.0	3.0	3.0	3.0				
8	Max Limit	60	60	40	40				
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By								
D	Every								
E	Yellow	5.2	3.9 ~~3.0~~	4.4	4.2				
F	Red Clear	1.0	1.0	1.0	1.0				

Phase Timing - Bank 1 <F Page>
F + Phase + Row

WH 4/27/05

Row		E
	RR-1 Delay	
	RR-1 Clear	
	EV-A Delay	0
	EV-A Clear	3
	EV-B Delay	0
	EV-B Clear	3
	EV-C Delay	0
	EV-C Clear	3
	EV-D Delay	0
	EV-D Clear	3
	RR-2 Delay	
	RR-2 Clear	
	View EV Delay	---
	View EV Clear	---
	View RR Delay	---
	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
	Permit	1234
	Red Lock	
	Yellow Lock	
	Min Recall	1
	Ped Recall	
	Peds (View)	123
	Rest In Walk	
	Red Rest	
	Dbl Entry	
	Max Recall	
	Soft Recall	
	Max 2	
	Cond Serv	
	Ped Lock	12345678
	Yellow Start	1
	1st Phases	4

Phase Functions <F Page>
F + F + Row

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	7	C + 0 + 0
Zone Number	7	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	39	C + 0 + 3
QuicNet Channel	DIGI 83:	(QuicNet)

Communication Addresses

Row		B Green Clear	C Yellow Change	D Red Clear	O Load-Switch #
A	Overlap A				
B	Overlap B				
C	Overlap C				
D	Overlap D				

Overlap Timing <F Page> <D Page>
F + COLOR + D + 0 + OVERLAP

Manual Plan	0 C + A + 1
Manual Offset	0 C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset 0
= Automatic
1 = Offset A
2 = Offset B
3 = Offset C

C + F + O	FN	Row
Free Lag	23	0

Lag Phases <C Page>

Downtime Flash	60	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	234

Disable Communications Ports
D + D + 9

(2)

INTERSECTION: FRIARS RD & MISSION VILLAGE DR (SOUTH INT.) **223 Program**

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	_2_____
6	Ped 6P	1_____
7	Ped 4P	__3____
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	_2_____
B	EV-B Phases	___4____
C	EV-C Phases	1_____
D	EV-D Phases	___3____
E	Extra 1 Config. Bits	1_345___
F	IC Select (Interconnect)	_2_____

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications

(If set to a non-zero value, parity will be disabled)

(This parameter is NOT downloaded)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E		---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 – – – –	1234____
C	13 14 15 16 17 18 19 20	12345678
D	– – – – 21 22 23 24	____5678
E	– – – – – – – –	1234____
F	– 25 26 27 28 – – –	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

(These parameters are NOT downloaded.)

INTERSECTION: FRIARS RD & MISSION VILLAGE DR (SOUTH INT.)

223 Program

Row	Column # → / Plan Name →	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
0	Cycle Length	110	100							
1	Phase 1 - ForceOff									
2	Phase 2 - ForceOff	31	30							
3	Phase 3 - ForceOff	84	79							
4	Phase 4 - ForceOff	51	49							
5	Phase 5 - ForceOff									
6	Phase 6 - ForceOff									
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset A	0	14							
B	Offset B									
C	Offset C									
D	Permissive	10	10							
E	Hold Release	255	255							
F	Ped Shift	0	0							

Coordination <C Page>

C + Plan + ROW

Coordination Timing By: EFF
Implemented On: 11/30/00

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	16:00	2	A	_23456_
1	18:15	E	A	1234567
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

	E	Row		F
		0	Free Lag	_23_____
Plan 1	1_____	1	Plan 1 - Lag	_23_____
Plan 2	1_____	2	Plan 2 - Lag	_23_____
Plan 3		3	Plan 3 - Lag	
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6		6	Plan 6 - Lag	
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases
C + E + FUNCTION #

Lag Phases <C Page>
C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

LOCATION: **RTE 15 SB / FRIARS ROAD**

CALTRANS C8 Version 3 DATE: 7/15/2010 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	1	1	1	1	1	1	1	CLK RST
1	DONT WALK	1	1	1	1	1	1	1	1	
2	MIN GREEN	5	14	1	5	5	13	1	1	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	1.0	2.0	0.9	1.0	2.0	2.0	0.9	0.9	
6	MAX GAP	1.0	2.0	0.9	1.0	2.0	2.0	0.9	0.9	
7	MIN GAP	1.0	2.0	0.9	1.0	2.0	2.0	0.9	0.9	
8	MAX EXT	35	45	9	60	40	45	9	9	
9	MAX 2									YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.2	5.0	3.0	3.6	3.2	5.0	3.0	3.0	MIN
F	RED	1.0	2.0	1.0	1.5	1.5	2.0	1.0	1.0	SEC
	PED XING FT									
	BIKE XING FT		110				94			

PRE-EMPTION E		F FLAGS	1	2	3	4	5	6	7	8	
EV SEL	0	PERMIT	1	2	3	4	5	6	7	8	0
RR1 CLR	5	RED LOCK				4					1
EVA DLY	0	YEL LOCK									2
EVA CLR	5	V RECALL		2				6			3
EVB DLY	0	P RECALL									4
EVB CLR	5	PED PHASES									5
EVC DLY	0	RT OLA									6
EVC CLR	5	RT OLB									7
EVD DLY	0	DBL ENTRY									8
EVD CLR	5	MAX 2 PHASES									9
MAX EV	255	LAG PHASES	READ ONLY								A
RR2 CLR	5	RED REST									B
		REST-IN-WALK									C
		MAX 3 PHASES									D
		YEL START UP		2				6			E
		FIRST PHASE				4					F
			1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

ENTRIES IN THESE LOCATIONS ARE NOT TO BE CHANGED

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

LOCATION: **RTE 15 SB / FRIARS ROAD**

CALTRANS C8 Version 3 DATE: 9/1/2009

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAGS									
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH	110		136	136										LAG FZ FREE		2		4		6		8	0
1	FZ1 GRN FCTR	33		24	20									GAPOUT CP1	LAG FZ CP 1		2		4	5			8	1
2														GAPOUT CP2	LAG FZ CP 2									2
3	FZ3 GRN FCTR	0		0	0									GAPOUT CP3	LAG FZ CP 3		2		4		6		8	3
4	FZ4 GRN FCTR	33		44	54						PERM TIME			GAPOUT CP4	LAG FZ CP 4		2		4		6		8	4
5	FZ5 GRN FCTR	23		42	36						LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR	0		0	0						LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR	0		0	0						NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A	53		119	119						OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		2				6			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRPT																							F
																1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER:
RE 15 NB RAMP

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8		

LOCATION	OFF	ON
1		
2		1
3		
4		
5		
6		
7		
8		

COO = 2

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

LOCATION: **RTE 15 SB / FRIARS ROAD**

CALTRANS C8 Version 3 DATE: 5/4/2005

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		2							5
6										6 PED						6			6
7										4 PED				4					7
8										8 PED								8	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E

MINUTE = D-B-E

DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES

(CALL ACTIVE LIGHTS)

RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES

(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F

MINUTE = D-B-F

DAY = D-C-F

D-E-E = C8 VERSION NUMBER

D-E-F = LITHIUM BATTERY CONDITION

84 = BAD

85 = GOOD

LOCATION: **RTE 15 SB / FRIARS ROAD**

CALTRANS C8 Version 3 DATE: 9/1/2009

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	06	45	1	A		2	3	4	5	6	
1	09	00	E			2	3	4	5	6	
2	15	00	3	A		2	3	4	5	6	
3	17	00	4	A		2	3	4	5	6	
4	18	00	E			2	3	4	5	6	
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 2

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION
2 MAX 2
3 MAX 3
4 COND SERV (1ST SELECT)
5 COND SERV (2ND SELECT)
6 ENERGIZE AUX OUTPUT-RED
7 ENERGIZE AUX OUTPUT-GREEN
8 ENERGIZE AUX OUTPUT-YELLOW
9 TIME OF DAY MAX RECALL (1ST SELECT)
A TRAFFIC ACT. MAX 2 OPERATION
B TIME OF DAY MAX RECALL (2ND SELECT)
C YELLOW YIELD COORDINATION
D YELLOW YIELD COORDINATION
E TIME OF DAY FREE OPERATION
F FLASHING OPERATION

EQUIPMENT AND POLE SCHEDULE*

Loc	STANDARD TYPE	SMA (m)	LMA (m)	PLACEMENT DIMENSIONS A (m)	PLACEMENT DIMENSIONS B (m)	SIGNAL MOUNTING AND PLACEMENT VEHICLE POLE	VEHICLE MASTARM	PEDESTRIAN SIGNAL	PEDESTRIAN PPB	REMARKS
(A)	TYPE 15	—	3.7	SEE STA	1.0	SV-2-TD	—	—	—	200 W HPS, PEU, E6.783
(B)	26-4-129	13.7	3.7	SEE STA	1.0	SV-2-TD	1-MAT 2-MAS	—	—	310 W HPS, E6.775
(C)	19-3-129	7.6	4.3	5.6	0.6	SV-2-TD	MAS-4B [7]	—	—	200 W HPS, E6.769
(D)	29-5-129	15.2	3.7	4.6	0.6	SV-2-TD	1-MAT 2-MAS	—	—	310 W HPS, E6.779
(E)	STATE-FURNISHED MODEL 170 CONTROLLER ASSEMBLY WITH BATTERY BACK-UP SYSTEM, CONSTRUCT FOUNDATION PER ES-3C.									

*ALL NEW SIGNAL SECTIONS SHALL BE 300 mm.

TRAFFIC PHASE DIAGRAM
STEADY DEMAND SEQUENCE

CONDUIT & SHEET NOTES
SEE SHEET E-9

ROUTE 15 ON/OFF RAMPS & ROUTE 8 EB/WB RAMPS AT FRIARS Rd
SIGNAL No. P6.777

SIGNAL AND LIGHTING

SCALE 1:200

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

E-8

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET TOTAL
11	SD	15	R10.2/R12.3	42

Enrique P Bernal 11-12-02
REGISTERED ELECTRICAL ENGINEER — DATE

5-12-03
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Caltrans now has a web site! To get to the web site, go to http://www.dot.ca.gov

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC ELECTRICAL
PROJECT ENGINEER E. P. BERNAL
CALCULATED/DESIGNED BY M. D. FULLENWIDER DATE 5/02
CHECKED BY
REVISED BY
DATE REVISED

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => trstrk
DGN FILE => b064900008.dgn

CU 11393 EA 064901

27

LOCATION: **RTE 15 NB / FRIARS ROAD**

CALTRANS C8 Version 3 DATE: 7/14/2010 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	1	1	1	1	1	1	1	CLK RST
1	DONT WALK	1	1	1	1	1	1	1	1	
2	MIN GREEN	1	1	1	1	5	14	1	1	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	0.9	0.9	0.9	0.9	2.0	2.0	0.9	0.9	
6	MAX GAP	0.9	0.9	0.9	0.9	2.0	2.0	0.9	0.9	
7	MIN GAP	0.9	0.9	0.9	0.9	2.0	2.0	0.9	0.9	
8	MAX EXT	9	9	9	9	25	50	9	9	
9	MAX 2					40				YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.0	3.0	3.0	3.0	3.5	5.0	3.0	3.0	MIN
F	RED	1.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	SEC
	PED XING FT									
	BIKE XING FT						108			

	PRE-EMPTION E	
EV SEL	0	
RR1 CLR	5	
EVA DLY	0	
EVA CLR	5	
EVB DLY	0	
EVB CLR	5	
EVC DLY	0	
EVC CLR	5	
EVD DLY	0	
EVD CLR	5	
MAX EV	255	
RR2 CLR	5	

F FLAGS	1	2	3	4	5	6	7	8	
PERMIT	1	2	3	4	5	6	7	8	0
RED LOCK					5				1
YEL LOCK									2
V RECALL		2				6			3
P RECALL									4
PED PHASES									5
RT OLA									6
RT OLB									7
DBL ENTRY									8
MAX 2 PHASES					5				9
LAG PHASES	READ ONLY								A
RED REST									B
REST-IN-WALK									C
MAX 3 PHASES									D
YEL START UP		2				6			E
FIRST PHASE				4					F
	1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

ENTRIES IN THESE LOCATIONS ARE NOT TO BE CHANGED

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAGS								
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH	**110**													LAG FZ FREE		**2**		**4**		**6**		**8**	0
1	FZ1 GRN FCTR	**0**												GAPOUT CP1	LAG FZ CP 1		**2**		**4**		**6**		**8**	1
2														GAPOUT CP2	LAG FZ CP 2									2
3	FZ3 GRN FCTR	**0**												GAPOUT CP3	LAG FZ CP 3		**2**		**4**		**6**		**8**	3
4	FZ4 GRN FCTR	**0**									PERM TIME			GAPOUT CP4	LAG FZ CP 4									4
5	FZ5 GRN FCTR	**35**									LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR	**0**									LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR	**0**									NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A	**64**									OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		2				6			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRPT																							F
																1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER:
RTE 15 NB RAMP

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8		

LOCATION	OFF	ON
1		1
2		
3		
4		
5		
6		
7		
8		

COO = **1**

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

LOCATION: RTE 15 NB / FRIARS ROAD

CALTRANS C8 DATE 7/19/94

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		X							5
6										6 PED						X			6
7										4 PED				X					7
8										8 PED								X	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E

MINUTE = D-B-E

DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)

RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F

MINUTE = D-B-F

DAY = D-C-F

D-E-E = C8 VERSION NUMBER

D-E-F = LITHIUM BATTERY CONDITION

84 = BAD

85 = GOOD

LOCATION: **RTE 15 NB / FRIARS ROAD**

CALTRANS C8 Version 3 DATE: 9/1/2009

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
				ON/	S	M	T	W	T	F	S
	HR	MIN	ACT	OFF	1	2	3	4	5	6	7
0	**06**	**45**	**2**	**X**		**2**	**3**	**4**	**5**	**6**	
1	**18**	**00**	**2**			**2**	**3**	**4**	**5**	**6**	
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
					S	M	T	W	T	F	S
	HR	MIN	CP	OS	1	2	3	4	5	6	7
0	**06**	**45**	**1**	**A**		**2**	**3**	**4**	**5**	**6**	
1	**09**	**00**	**E**			**2**	**3**	**4**	**5**	**6**	
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 2

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
					S	M	T	W	T	F	S
	HR	MIN	CP	OS	1	2	3	4	5	6	7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION
2 MAX 2
3 MAX 3
4 COND SERV (1ST SELECT)
5 COND SERV (2ND SELECT)
6 ENERGIZE AUX OUTPUT-RED
7 ENERGIZE AUX OUTPUT-GREEN
8 ENERGIZE AUX OUTPUT-YELLOW
9 TIME OF DAY MAX RECALL (1ST SELECT)
A TRAFFIC ACT. MAX 2 OPERATION
B TIME OF DAY MAX RECALL (2ND SELECT)
C YELLOW YIELD COORDINATION
D YELLOW YIELD COORDINATION
E TIME OF DAY FREE OPERATION
F FLASHING OPERATION

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	15	R6.3/R10.5	81	107

TC Martin
REGISTERED CIVIL ENGINEER

12-30-91
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — T.C. MARTIN — No. 14728 — Exp. 3-31-93 — CIVIL — STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC ELECTRICAL**
PROJECT ENGINEER: DUY T. TON
CALCULATED/DESIGNED BY: HP
CHECKED BY: JFC
DATE REVISED BY: DATE REVISED

CONDUIT SIZE AND RUN						
AWG SIZE OR CABLE TYPE	PHASE	POLE OR CIRCUIT	2" (1)	3" (2)	EX 1½" (3)	EX 2 1½" (4)
NO. 14 CABLES						
CONDUCTORS 3		POLE - A	1	1		1
		B		1		1
		C			1	
CONDUCTORS 12						
TOTAL CABLES-3 CONDUCTOR/12 CONDUCTOR			1	2	1	2
		SIC		1		1
6		RM POWER (240V)		2		
		SIG POWER (240V)		2		2
TYPE B DLC	5	DETECTOR LOOPS			1	
	6		2	8		8
EV-DLC						
TOTAL CONDUCTORS / CABLES			5	15	2	13

CONDUIT NOTES

(5) - EXIST. 1½"C., 1 DLC

(6) - 1½"C., 4 LOOP WIRES

(6A) - 1½"C., 8 LOOP WIRES

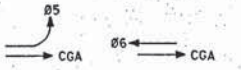
(7) - 1½"C., 2 #6 RM POWER
2 #6 SIGNAL POWER
1 SIC
6 DLC

(8) - 1½"C., 2 #6 RM POWER
2 #6 SIGNAL POWER
1 SIC
4 DLC

(9) - 1½"C., 2 DLC

(10) - EXIST. 1½"C., 2 #6 SIGNAL POWER
4 #14 SPARE
2 DLC
1 SIC
ADD: 2 #6 RM POWER
2 DLC

(11) - 1½"C., 4 DLC



TRAFFIC PHASE DIAGRAM
STEADY DEMAND SEQUENCE →

NOTES

1. NEW RAMP METER CONTROLLER ASSY. SEE SHEET E-2.
2. SEE SHEET E-2 FOR CIRCUIT CONTINUITY.
3. (RL) EXIST. TYPE 18-4-80 SIGNAL STANDARD WITH 30' SMA TO CENTER OF NEW ISLAND AS SHOWN.
4. - TYPE B DETECTOR LOOP. SEE ES-5B.
5. - DETAIL 'U' ES-6T REQUIRED.

(12) - EXIST. 1½"C., 2 #6 SIGNAL POWER
4 #14 SPARE
1 DLC
1 SIC
DISCONNECT 2 #6, 1 DLC
TAPE ENDS.

(13) - EXIST. 1½"C., 2 #6 SIGNAL POWER
4 #14 SPARE
1 SIC
DISCONNECT 2 #6
TAPE ENDS.

SIGNAL AND LIGHTING (MODIFY) LOCATION 1

SCALE: 1" = 20'

NOTE: THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

E-10

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

CU 11206	EA 167361

FORM DC-OE-92-PF (REV. 3/88)

28

INTERSECTION: FRIARS & RANCHO MSN

2' rogram

Group Assignment: 4104
Field Master Assignment: NONE

N/S Street Name: RANCHO MSN
E/W Street Name: FRIARS

Last Database Change: 07/3[illegible] 14:32
Timing Sheet By: MBF
Approved By: mm
System Ref. Number: 570
Drawing Number: 27089-7-D
Timing Implemented On:

Row	Column # ---->	FRIARS RD 1	2	3	4	Phase 5	FRIARS RD 6	7	RANCHO MSN RD 8
	Phase # ---->								
0	Ped Walk		7						7
1	Ped FDW		22						25
2	Min Green	4	10				10		4
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	4.1 (2) ~~3.6~~				5.0 (2) ~~3.6~~		2.0
6	Max Gap	2.0	4.1 (2) ~~3.6~~				5.0 (2) ~~3.6~~		2.0
7	Min Gap	2.0	0.2				0.2		2.0
8	Max Limit	30	60				60		40
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1				0.1		
D	Every		0.8 (2) ~~0.9~~				0.6 (2) ~~0.9~~		4.1 (2)
E	Yellow	3.4 (1) ~~3.0~~	4.8				5.0 (2) ~~4.8~~		3.4 (1) ~~3.0~~
F	Red Clear	1.0	1.0				1.0		1.0

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	
EV-A Clear	
EV-B Delay	
EV-B Clear	
EV-C Delay	
EV-C Clear	
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing
F + E + Row

Row	F
Permit	12 6 8
Red Lock	
Yellow Lock	
Min Recall	2 6
Ped Recall	
Peds (View)	2 8
Rest In Walk	
Red Rest	
Dbl Entry	
Max Recall	
Soft Recall	
Max 2	
Cond Serv	
Ped Lock	12345678
Yellow Start	2 6
1st Phases	8

Phase Functions <F Page>
F + F + Row

(1) LWH 1/24/03
(2) LWH 9/8/04
(2) MJS 7/8/15

Max Initial	0
Red Revert	5.0
All Red Start	0.0

Start / Revert Times

F + 0 + E
F + 0 + F
F + C + O

Drop Number	2
Zone Number	2
Area Number	4
Area Address	18
QuicNet Channel	DIGI82:

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	2 6 8	0

Lag Phases <C Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A				
B	Overlap B				
C	Overlap C				
D	Overlap D				

Overlap Timing <F Page> <D Page>
F + COLOR + D + 0 + OVERLAP

Manual Plan	0
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan	Manual Offset
0 = Automatic	0 = Automatic
1-9 = Plan 1-9	1 = Offset A
14 = Free	2 = Offset B
15 = Flash	3 = Offset C

Downtime Flash	255 (minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	234

Disable Communication Ports
D + D + 9

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function 7 + ROW

<D Page> D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	
7	Ped 4P	
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	2 8
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1

Configuration E + F + ROW

<E Page>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	2
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration E + E + ROW

For access, set F + 9 + E = 1

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7	10.0	
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12_456_8
B	9 10 11 12 -- -- -- --	12_4____
C	13 14 15 16 17 18 19 20	12345_78
D	-- -- -- -- 21 22 23 24	____56_8
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_23_5___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: FRIARS & RANCHO MSN

223 Program

Coordination Timing By: MBF
Implemented On: 6/13/00

Row	Column # → / Plan Name →	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
0	Cycle Length	120	105	120			110		136	
1	Phase 1 - ForceOff	63	54	58			22		59	
2	Phase 2 - ForceOff									
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff									
5	Phase 5 - ForceOff									
6	Phase 6 - ForceOff						22			
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff	42	38	38			63		38	
9	Ring Offset									
A	Offset A	80	45	62			14		20	
B	Offset B									
C	Offset C									
D	Permissive	12	10	12			22		14	
E	Hold Release	255	255	255			255		255	
F	Ped Shift	0	0	0			0		0	

Coordination <C Page>

C + Plan + ROW

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	06 : 45	6 1	A	_23456_
1	09 : 00	2	A	_23456_
2	15 : 00	8 3	A	_23456_
3	18 : 00	E	A	1234567
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	_2_6_8
Plan 1	_2_6_	1	Plan 1 - Lag	_2_6_8
Plan 2	_2_6_	2	Plan 2 - Lag	_2_6_8
Plan 3	_2_6_	3	Plan 3 - Lag	_2_6_8
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6	2	6	Plan 6 - Lag	1 6 8
Plan 7		7	Plan 7 - Lag	
Plan 8	2 6	8	Plan 8 - Lag	2 6 8
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	_____
		C		
		D		
		E		
		F		

Sync Phases C + E + FUNCTION #

Lag Phases <C Page> C + F + FUNCTION #

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

UPDATED COORDINATION - TLSP - 2010

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Longthon

Printed 001 3:00 PM

29

INTERSECTION: FRIARS & SANTO

Group Assignment: 4104
Field Master Assignment: NONE

Street Name: SANTO
E/W Street Name: FRIARS

Last Database Change: 07/2[illegible] 14:14
Timing Sheet By: MBF
Approved By: mm
System Ref. Number: 571
Drawing Number: 25883-7-D
Timing Implemented On:

Row	Column # --->	1	2	3	4	5	6	7	8
	Phase # --->		FRIARS RD →		SANTO RD ↔	4+5 ↑	FRIARS RD ←		
0	Ped Walk				5		7		
1	Ped FDW				32		19		
2	Min Green		10		4	4	10		
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn		3.4		2.0	2.0	3.4		
6	Max Gap		3.4		2.0	2.0	3.4		
7	Min Gap		0.2		2.0	2.0	0.2		
8	Max Limit		60		30	30	60		
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1				0.1		
D	Every		0.9				0.9		
E	Yellow		5.5		3.4① ~~3.0~~	3.4② ~~3.0~~	4.8		
F	Red Clear		1.0		1.0	1.0	1.0		

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	
EV-A Clear	
EV-B Delay	
EV-B Clear	
EV-C Delay	
EV-C Clear	
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing
F + E + Row

Row	F
Permit	_2_456__
Red Lock	
Yellow Lock	
Min Recall	_2___6__
Ped Recall	
Peds (View)	___4_6__
Rest In Walk	
Red Rest	
Dbl Entry	
Max Recall	
Soft Recall	
Max 2	
Cond Serv	
Ped Lock	12345678
Yellow Start	_2___6__
1st Phases	___4____

Phase Functions
<F Page>
F + F + Row

(DLH 7/24/03)

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	3	C + 0 + 0
Zone Number	3	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	19	C + 0 + 3
QuicNet Channel	DIGI82:	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6__	0

Lag Phases <C Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A				
B	Overlap B				
C	Overlap C				
D	Overlap D				

Overlap Timing <F Page> <D Page>
F + COLOR + D + 0 + OVERLAP

Manual Plan	0	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan	Manual Offset
0 = Automatic	0 = Automatic
1-9 = Plan 1-9	1 = Offset A
14 = Free	2 = Offset B
15 = Flash	3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234___

Disable Communication Ports
D + D + 9

(2)

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function

7 + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

<D Page>

D + F + ROW

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	45
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1

Configuration

E + F + ROW

<E Page>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	4
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications

(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9	10.0	
A	10.0	
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	0J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0.0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: FRIARS & SANTO

223 Program

Coordination Timing By: MBF
Implemented On: 6/13/00

Row	Column # ---> / Plan Name --->	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
0	Cycle Length	120	105	120						
1	Phase 1 - ForceOff									
2	Phase 2 - ForceOff									
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff	42	42	32 ~~42~~						
5	Phase 5 - ForceOff	62	58	62						
6	Phase 6 - ForceOff									
7	Phase 7 - ForceOff	20								
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset A	63	36	110						
B	Offset B									
C	Offset C									
D	Permissive	12	10	12						
E	Hold Release	255	255	255						
F	Ped Shift	0	0	0						

WH 4/26/05

Coordination <C Page>

C + Plan + ROW

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	06 : 45	1	A	_23456_
1	09 : 00	2	A	_23456_
2	15 : 00	3	A	_23456_
3	18 : 00	E	A	1234567
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	_2_4_6__
Plan 1	_2___6__	1	Plan 1 - Lag	_2_4_6__
Plan 2	_2___6__	2	Plan 2 - Lag	_2_4_6__
Plan 3	_2___6__	3	Plan 3 - Lag	_2_4_6__
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6		6	Plan 6 - Lag	
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Pod*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases

C + E + FUNCTION #

Lag Phases <C Page>

C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Transition Type
0 = Shortway
Non-zero = Lengthen

Printed ... 01 3:12 PM

30

INTERSECTION: FRIARS @ RIVERDALE

22' Program

Group Assignment: 4104
Field Master Assignment: NONE
N/S Street Name: RIVERDALE
E/W Street Name: FRIARS
Last Database Change: 9/3/2009 10:23
System Ref. Number: 572

N

Column # --->		Phase							
		FRIARS RD			RIVERDALE ST		FRIARS RD		RIVERDALE ST
Row	Phase # --->	1	2	3	4	5	6	7	8
0	Ped Walk		7		5		7		5
1	Ped FDW		16		30		16		30
2	Min Green	4	10		4	4	10		4
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	3.7		2.0	2.0	3.0		2.0
6	Max Gap	2.0	3.7		2.0	2.0	3.0		2.0
7	Min Gap	2.0	0.2		2.0	2.0	0.2		2.0
8	Max Limit	30	60		40	30	60		40
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1				0.1		
D	Every		0.9				1.1		
E	Yellow	3.4	4.7		3.9	3.4	4.9		3.9
F	Red Clear	1.0	1.0		1.0	1.0	1.0		1.0
	Grade								

Phase Timing - Bank 1
F + Phase + Row

Row		E
	RR-1 Delay	
	RR-1 Clear	
	EV-A Delay	
	EV-A Clear	
	EV-B Delay	
	EV-B Clear	
	EV-C Delay	0
	EV-C Clear	0
	EV-D Delay	
	EV-D Clear	
	RR-2 Delay	
	RR-2 Clear	
	View EV Delay	---
	View EV Clear	---
	View RR Delay	---
	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	12_456_8
1	Red Lock	
2	Yellow Lock	
3	Min Recall	_2___6__
4	Ped Recall	
5	Peds (View)	_2_4_6_8
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	___4___8
9	Max Recall	
A	Soft Recall	_2___6__
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	___4___8

Phase Functions <F Page>
F + F + Row

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	4	C + 0 + 0
Zone Number	4	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	20	C + 0 + 3
QuicNet Channel	DIGI82:	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6_8	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page> F + COLOR + <D Page> D + 0 + OVERLAP

Manual Plan	0	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234____

Disable Communication Ports
D + D + 9

Timing Sheet By: MC1
Approved By: EFF
Drawing Number:
Timing Implemented On: 6/25/2010

Row	Time	Function	Day of Week	Column F Phases/Bits
0	:			
1	:			
2	:			
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		
2		
3		1.8
4		
5		
6		
7	10.0	
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

31

INTERSECTION: FRIARS & MSN GORGE

Program

Group Assignment: 4104
Field Master Assignment: NONE

N/S Street Name: MSN GORGE
E/W Street Name: FRIARS

Last Database Change: 8/23/2001 12:29
Timing Sheet By: MBF
Approved By: mm
System Ref. Number: 573
Drawing Number: 27089-10-D
Timing Implemented On:

Row	Column # --->	Msn Gorge Rd 1	Friars Rd 2	Msn Gorge Rd 3	4	5	6	7	8
	Phase # --->	Phase							
0	Ped Walk		7						
1	Ped FDW		18						
2	Min Green	4	10	4					
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	3.3	2.0					
6	Max Gap	2.0	3.3	2.0					
7	Min Gap	2.0	0.2	2.0					
8	Max Limit	30	60	30					
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1						
D	Every		1.0						
E	Yellow	3.4 ~~3.0~~	4.8	3.4 ~~3.0~~					
F	Red Clear	1.0	1.0	1.0					

Phase Timing - Bank 1
F + Phase + Row
<F Page>

AM 3/6/03

Row		E
0	RR-1 Delay	
1	RR-1 Clear	
2	EV-A Delay	
3	EV-A Clear	
4	EV-B Delay	
5	EV-B Clear	
6	EV-C Delay	
7	EV-C Clear	
8	EV-D Delay	
9	EV-D Clear	
A	RR-2 Delay	
B	RR-2 Clear	
C	View EV Delay	---
D	View EV Clear	---
E	View RR Delay	---
F	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	123
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	Peds (View)	2
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	2
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	2
F	1st Phases	3

Phase Functions
F + F + Row
<F Page>

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	5	C + 0 + 0
Zone Number	5	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	21	C + 0 + 3
QuicNet Channel	DIGI82:	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	1_3	0

Lag Phases <C Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A				8
B	Overlap B				
C	Overlap C				
D	Overlap D				

Overlap Timing <F Page> <D Page>
F + COLOR + D + 0 + OVERLAP

Manual Plan	0	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234

Disable Communication Ports
D + D + 9

4

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Rest Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	
7	Ped 4P	
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	1_3
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2
B	EV-B Phases	
C	EV-C Phases	1
D	EV-D Phases	3
E	Extra 1 Config. Bits	1_345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12_456_8
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____56_8
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_23_5___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: FRIARS & MSN GORGE

223 Program

Row	Plan Name --->	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
	Column # --->	1	2	3	4	5	6	7	8	9
0	Cycle Length	120	105	120						
1	Phase 1 - ForceOff	21	21	21						
2	Phase 2 - ForceOff									
3	Phase 3 - ForceOff	~~46~~ 43	52	54						
4	Phase 4 - ForceOff									
5	Phase 5 - ForceOff									
6	Phase 6 - ForceOff									
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset A	10) ~~110~~	94	97						
B	Offset B									
C	Offset C									
D	Permissive	12	10	12						
E	Hold Release	255	255	255						
F	Ped Shift	0	0	0						

Coordination <C Page>

C + Plan + ROW

Coordination Timing By: MBF
Implemented On: 6/13/01

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

3/1/10 DH

Row	Time	Plan	Offset	Day of Week
0	06 : 45	1	A	_23456_
1	09 : 00	2	A	_23456_
2	15 : 00	3	A	_23456_
3	18 : 00	E	A	1234567
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	1_3_____
Plan 1	_2_____	1	Plan 1 - Lag	1_3_____
Plan 2	_2_____	2	Plan 2 - Lag	1_3_____
Plan 3	_2_____	3	Plan 3 - Lag	1_3_____
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6		6	Plan 6 - Lag	
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases

C + E + FUNCTION #

Lag Phases <C Page>

C + F + FUNCTION #

Plan Select
1 thru 9 = Coordination
Plan 1 thru 9
14 or E = Free
15 or F = Flash

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

32

INTERSECTION: Mission Center Rd @ Mission Center Ct

223 Program

Group Assignment:
Field Master Assignment:

N/S Street Name: Mission Ce[illegible]d
E/W Street Name: Mission Ce[illegible]

Last Database Change:
System Ref. Number:

N

Mission Center | Mission Center Ct | Mission Center

Row	Column # ---> / Phase # --->	Phase 1	2	3	4	5	6	7	8
		⌞	↑		⇄	↰	↓		
0	Ped Walk		7		7		7		
1	Ped FDW		11		22		16		
2	Min Green	4	10		4	4	10		
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	2.6		2.0	2.0	4.0		
6	Max Gap	2.0	2.6		2.0	2.0	4.0		
7	Min Gap	2.0	0.2		2.0	2.0	4.0		
8	Max Limit	30	60		40	30	60		
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1						
D	Every		1.2						
E	Yellow	3.4	4.3		3.9	3.4	4.3		
F	Red Clear	1.0	1.0		1.0	1.0	1.0		

Phase Timing - Bank 1 <F Page>
F + Phase + Row

Row		E
0	RR-1 Delay	
1	RR-1 Clear	
2	EV-A Delay	0
3	EV-A Clear	0
4	EV-B Delay	
5	EV-B Clear	
6	EV-C Delay	0
7	EV-C Clear	0
8	EV-D Delay	
9	EV-D Clear	
A	RR-2 Delay	
B	RR-2 Clear	
C	View EV Delay	---
D	View EV Clear	---
E	View RR Delay	---
F	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	12_456__
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	Peds (View)	_2_4_6__
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	_2___6__
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	___4____

Phase Functions <F Page>
F + F + Row

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	4	C + 0 + 0
Zone Number	4	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	68	C + 0 + 3
QuicNet Channel	COM89	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6__	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page> F + COLOR +
<D Page> D + 0 + OVERLAP

Manual Plan	0	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234_

Disable Communication Ports
D + D + 9

Timing Sheet By: KT
Approved By: FLG
Drawing Number: 27089-18-D
Timing Implemented On:

Row	Time	Function	Day of Week	Column F Phases/Bits
0	:			
1	:			
2	:			
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week

8-1 Day-of-Month, Year, Month

8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program

C + C + F = version

Remote Download

C + 0 + 4 = 1 -255

w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	5678
E	-- -- -- -- -- -- -- --	1234
F	-- 25 26 27 28 -- -- --	2345

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

ERSECTION: Mission Center Rd @ Mission Center

223 Program

Row	Column # →	1	2	3	4	5	6	7	8	9
	Plan Name →		MID	PM	AM					
0	Cycle Length		102	108	90		80			
1	Phase 1 - ForceOff		23	26	18		49			
2	Phase 2 - ForceOff		0	0	0		0			
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff		57	62	52		30			
5	Phase 5 - ForceOff		75	79	70		49			
6	Phase 6 - ForceOff		23	26	18		0			
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset A		37	102	79		73			
B	Offset B									
C	Offset C									
D	Permissive		23	26	18		10			
E	Hold Release		255	255	255		255			
F	Ped Shift		0	0	0		0			

Plan

Coordination Timing By: KT
Implemented On:

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Coordination <C Page>

C + Plan + ROW

Row	Time	Plan	Offset	Day of Week
0	07 : 00	4	A	_23456_
1	09 : 00	E	A	_23456_
2	11 : 00	6	A	1____7
3	11 : 30	2	A	_23456_
4	14 : 00	3	A	_23456_
5	17 : 30	E	A	1234567
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	_2_4_6__
Plan 1		1	Plan 1 - Lag	
Plan 2	_2____	2	Plan 2 - Lag	1__4_6__
Plan 3	_2____	3	Plan 3 - Lag	1__4_6__
Plan 4	_2____	4	Plan 4 - Lag	1__4_6__
Plan 5		5	Plan 5 - Lag	
Plan 6	_2___6_	6	Plan 6 - Lag	_2_4_6__
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases

C + E + FUNCTION #

Lag Phases <C Page>

C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

33

INTERSECTION: QUALCOMM & RIO S.D.

22 [illegible]ogram

Group Assignment: 4097
Field Master Assignment: NONE

N/S Street Name: QUALCOMM
E/W Street Name: RIO S.D.

Last Database Change: 06/12/2001 9:36
Timing Sheet By: MDF
System Ref. Number: 548
Approved By: mm
Drawing Number: 27270-107-D
Timing Implemented On:

Row	Phase # ---->	1	2	3	4	5	6	7	8
	Column # ---->	QUALCOMM WY		RIO SAN DIEGO		QUALCOMM WY		RIO SAN DIEGO	
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	24	0	29	0	26	0	29
2	Min Green	4	10	4	4	4	10	4	4
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Add/Veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extn	2.0	4.0	2.0	3.0	2.0	4.5	2.0	3.0
6	Max Gap	2.0	4.0	2.0	3.0	2.0	4.5	2.0	3.0
7	Min Gap	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
8	Max Limit	30	60	30	40	30	60	30	40
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Bus Adv	0	0	0	0	0	0	0	0
B	Call to Phs	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1
D	Every	0.0	0.8	0.0	1.1	0.0	0.7	0.0	1.1
E	Yellow	3.4 (3.0)	4.1	3.4 (3.0)	4.3	3.4 (3.0)	4.0	3.4 (3.0)	4.3
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row		E
	RR-1 Delay	0
	RR-1 Clear	0
	EV-A Delay	0
	EV-A Clear	3
	EV-B Delay	0
	EV-B Clear	3
	EV-C Delay	0
	EV-C Clear	3
	EV-D Delay	0
	EV-D Clear	3
	RR-2 Delay	0
	RR-2 Clear	0
	View EV Delay	---
	View EV Clear	---
	View RR Delay	---
	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	12345678
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	Peds (View)	_2_4_6_8
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	_2___6__
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	___4___8

Phase Functions
<F Page>
F + F + Row

CMH 11/14/03

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	2
Zone Number	2
Area Number	4
Area Address	50
QuicNet Channel	DIGI84:

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6_8	0

Lag Phases <C Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page>
F + COLOR +
<D Page>
D + 0 + OVERLAP

Manual Plan	14
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255

(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	_234___

Disable Communication Ports
D + D + 9

Row	Time	Function	Day of Week	Column F Phases/Bits
0	00 : 00	0		
1	00 : 00	0		
2	00 : 00	0		
3	00 : 00	0		
4	00 : 00	0		
5	00 : 00	0		
6	00 : 00	0		
7	00 : 00	0		
8	00 : 00	0		
9	00 : 00	0		
A	00 : 00	0		
B	00 : 00	0		
C	00 : 00	0		
D	00 : 00	0		
E	00 : 00	0		
F	00 : 00	0		

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest in Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	5
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Prelimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		1I1	14
1	0.0	1.8		2I2U	1
2	0.0	3.6		2I2L	5
3	0.0	0.0		2I3U	21
4	0.0	0.0		2I3L	25
5	0.0	0.0		2I4	9
6	0.0	0.0		3I5	16
7	0.0	1.8		4I6U	3
8	0.0	3.2		4I6L	7
9	0.0	0.0		4I7U	23
A	10.0	0.0		4I7L	27
B	0.0	0.0		4I8	11
C	0.0	0.0		1I9U	18
D	0.0	0.0		3I9L	20
E	---	---	---	---	---
F	---	---	---	---	---

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		5J1	13
1	0.0	1.8		6J2U	2
2	0.0	3.6		6J2L	6
3	0.0	0.0		6J3U	22
4	0.0	0.0		6J3L	26
5	0.0	0.0		6J4	10
6	0.0	0.0		7J5	15
7	0.0	1.8		8J6U	4
8	10.0	0.0		8J6L	8
9	0.0	0.0		8J7U	24
A	0.0	0.0		8J7L	28
B	0.0	0.0		8J8	12
C	0.0	0.0		5J9U	17
D	0.0	0.0		7J9L	19
E	---	---	---	---	---
F	---	---	---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.0	F+0+6
Short Failure	0.0	F+0+7

Power Cycle Correction (Default = 0.5)

0.5
0.5
MBT 8/3/01

INTERSECTION: FENTON Pkwy @ RIO SAN DIEGO Dr

223 Pr am

Group Assignment:
Field Master Assignment:

N/S Street Name: FENTON Pkwy
E/W Street Name: RIO SAN DIEGO Dr

Last Database Change: 12/9/02 10:38
System Ref. Number: 184

N

Column # --->		Phase							
	Phase # --->	1	2	3	4	5	6	7	8
			FENTON Pkwy	RIO SAN DIEGO	RIO SAN DIEGO		FENTON Pkwy		
Row		L	↑	↔	↔	L	↓		
0	Ped Walk		7	7	7		7		
1	Ped FDW		16	23	23		19		
2	Min Green	4	7	4	4	4	7		
3	Type 3 Limit								
4	Add/Veh								
#	Veh Extn	2.0	5.2 ~~4.4~~	2.0	2.3	2.0	5.2 ~~4.4~~		
6	Max Gap	2.0	4.4	2.0	2.3	2.0	4.4		
7	Min Gap	2.0	0.2	2.0	0.2	2.0	0.2		
8	Max Limit	30	60	40	40	30	60		
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1		0.1		0.1		
D	Every		0.4 ~~0.7~~		1.4		0.4 ~~0.7~~		
E	Yellow	3.4	4.3	3.9	4.2	3.4	4.4		
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0		
	Grade		0.0%	0.0%	0.0%		-1.0%		

Phase Timing - Bank 1
F + Phase + Row

<F Page>

	#
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing
F + E + Row

Row		#
0	Permit	123456__
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
#	Peds (View)	_234_0___
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	_2___6__
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	__3_____

Phase Functions <F Page>
F + F + Row

① WH 3/17/03

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number		C + 0 + 0
Zone Number		C + 0 + 1
Area Number		C + 0 + 2
Area Address		C + 0 + 3
QuicNet Channel	DIGI56:	(QuicNet)

Communication Addresses

C + F + O	#	Row
Free Lag	_23__6__	0

Lag Phases <C Page>

Overlap Timing

	Row	# Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +

<D Page>
D + 0 + OVERLAP

Manual Plan	14
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	234

Disable Communication Ports
D + D + 9

Timing Sheet By: WH
Approved By: MM
Drawing Number:
Timing Implemented On:

INTERSECTION: FENTON Parkway & Rio San Diego Drive

223 Program

Row	00			Column F
	Time	Function	Day of Week	Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	3
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

INTERSECTION: FENTON Parkway & Rio San Di[illegible] Drive — 223 Program

Row	1 Delay	3 Carry-over
0		
1		1.8
2		1.8
3		
4		
5		
6		
7		1.8
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		1.8
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	5678
E	-- -- -- -- -- -- -- --	1234
F	-- 25 26 27 28 -- -- --	2345

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.6)

INTERSECTION: FENTON @ NORTHSIDE

Group Assignment: 4097
Field Master Assignment: NONE
N/S Street Name: NORTHSIDE
E/W Street Name: FENTON
Last Database Change: 2/14/03 9:10
System Ref. Number: 547

N

NORTHSIDE — FENTON MARKETPLACE — NORTHSIDE

Row	Column # → / Phase # →	Phase 1	2	3	4	5	6	7	8
		↳	↑ ⋮	---- ←	4+6 ↳ ----	↰	⋮ ↓		
0	Ped Walk		7	7	7		7		
1	Ped FDW		9	23	21		15		
2	Min Green	4	7	4	4	4	7		
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	2.0	2.0	2.0	2.0	5.4		
6	Max Gap	2.0	2.0	2.0	2.0	2.0	5.4		
7	Min Gap	2.0	2.0	2.0	2.0	2.0	0.2		
8	Max Limit	30	60	40	40	30	60		
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By						0.1		
D	Every						0.6		
E	Yellow	3.4	3.9	3.9	3.9	3.4	3.9		
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0		
	Grade		0.0%	-1.0%	-3.0%		-3.0%		

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row	E	Preempt Timing
		RR-1 Delay
		RR-1 Clear
	0	EV-A Delay
	0	EV-A Clear
	0	EV-B Delay
	0	EV-B Clear
	0	EV-C Delay
	0	EV-C Clear
	0	EV-D Delay
	0	EV-D Clear
		RR-2 Delay
		RR-2 Clear
	---	View EV Delay
	---	View EV Clear
	---	View RR Delay
	---	View RR Clear

F + E + Row

Row	F	Phase Functions <F Page>
0	123456__	Permit
1		Red Lock
2		Yellow Lock
3		Min Recall
4		Ped Recall
5		Peds (View)
6		Rest In Walk
7		Red Rest
8		Dbl Entry
9		Max Recall
A	_2___6__	Soft Recall
B		Max 2
C		Cond Serv
D	12345678	Ped Lock
E	_2___6__	Yellow Start
F	___4____	1st Phases

F + F + Row

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page> F + COLOR +
<D Page> D + 0 + OVERLAP

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	5.0	F + C + O

Start / Revert Times

Drop Number	6	C + 0 + 0
Zone Number	6	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	38	C + 0 + 3
QuicNet Channel	DIGI83:	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6_8	0

Lag Phases <C Page>

Manual Plan	14	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234____

Disable Communication Ports
D + D + 9

Timing Sheet By: WXW
Approved By: amm
Drawing Number:
Timing Implemented On:

INTERSECTION: FENTON @ NORTHSIDE

223 Program

Row	Time	Functio	Day of Week	Column F Phases/Bits
0	:			
1	:			
2	:			
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Leg Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	3
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	4 6
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1

Configuration <E Page>

E + F + ROW

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	6
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	3
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 – – – –	1234____
C	13 14 15 16 17 18 19 20	12345678
D	– – – – 21 22 23 24	____5678
E	– – – – – – – –	1234____
F	– 25 26 27 28 – – –	_2345___

Active Detectors <D Page>

Row	0 Detector #
0	
1	System Det. # 1
2	System Det. # 2
3	System Det. # 3
4	System Det. # 4
5	System Det. # 5
6	System Det. # 6
7	System Det. # 7
8	System Det. # 8

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: RANCHO MSN & SAN DIEGO MSN

22 rogram

Group Assignment: NONE
Field Master Assignment: NONE

N/S Street Name: RANCHO MSN
E/W Street Name: SAN DIEGO MSN

Timing Sheet By: MBF
Approved By: mm

Last Database Change: 06/08/2001 9:11
System Ref. Number: 569
Drawing Number: 20268-D
Timing Implemented On: 7/24/01

Row	Column # →	San Diego Msn 1		Rancho Msn 2		San Diego Msn 3		Rancho Msn 4	
	Phase # →	1		2		3		4	
0	Ped Walk	0		10		0		7	
1	Ped FDW	0		19		0		20	
2	Min Green	4		7		4		4	
3	Type 3 Limit	0		0		0		0	
4	Add/Veh	0.0		0.0		0.0		0.0	
5	Veh Extn	2.0		4.2		2.0		2.0	
6	Max Gap	2.0		4.2		2.0		2.0	
7	Min Gap	2.0		0.2		2.0		2.0	
8	Max Limit	35		50		30		50	
9	Max Limit 2	0		0		0		0	
A	Bus Adv	0		0		0		0	
B	Call to Phs	0		0		0		0	
C	Reduce By	0.0		0.1		0.0		0.0	
D	Every	0.0		0.7		0.0		0.0	
E	Yellow	3.0		4.5		3.0		4.1	
F	Red Clear	1.0		1.0		1.0		1.0	

Row	Column # →	San Diego Msn 5		Rancho Msn 6		San Diego Msn 7		Rancho Msn 8	
	Phase # →	5		6		7		8	
0	Ped Walk	0		7		0		10	
1	Ped FDW	0		17		0		19	
2	Min Green	4		7		4		4	
3	Type 3 Limit	0		0		0		0	
4	Add/Veh	0.0		0.0		0.0		0.0	
5	Veh Extn	2.0		4.4		2.0		2.0	
6	Max Gap	2.0		4.4		2.0		2.0	
7	Min Gap	2.0		0.2		2.0		2.0	
8	Max Limit	35		50		30		50	
9	Max Limit 2	0		0		0		0	
A	Bus Adv	0		0		0		0	
B	Call to Phs	0		0		0		0	
C	Reduce By	0.0		0.1		0.0		0.0	
D	Every	0.0		0.7		0.0		0.0	
E	Yellow	3.0		4.3		3.0		3.9	
F	Red Clear	1.0		1.0		1.0		1.0	

Phase Timing - Bank 1
F + Phase + Row

<F Page>

Row		E
	RR-1 Delay	0
	RR-1 Clear	0
	EV-A Delay	0
	EV-A Clear	3
	EV-B Delay	0
	EV-B Clear	3
	EV-C Delay	0
	EV-C Clear	3
	EV-D Delay	0
	EV-D Clear	3
	RR-2 Delay	0
	RR-2 Clear	0
	View EV Delay	---
	View EV Clear	---
	View RR Delay	---
	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	12345678
1	Red Lock	
2	Yellow Lock	
3	Min Recall	2 6
4	Ped Recall	
5	Peds (View)	12345678
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	2 6
F	1st Phases	4 8

Phase Functions <F Page>
F + F + Row

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	1	C + 0 + 0
Zone Number	1	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	17	C + 0 + 3
QuicNet Channel	DIGI82:	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	2 4 6 8	0

Lag Phases <C Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page> F + COLOR +
<D Page> D + 0 + OVERLAP

Manual Plan	14	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 0

Disable Ports	234

Disable Communication Ports
D + D + 0

Row	Time	Function	Day of Week	Column F Phases/Bits
0	00 : 00	0		
1	00 : 00	0		
2	00 : 00	0		
3	00 : 00	0		
4	00 : 00	0		
5	00 : 00	0		
6	00 : 00	0		
7	00 : 00	0		
8	00 : 00	0		
9	00 : 00	0		
A	00 : 00	0		
B	00 : 00	0		
C	00 : 00	0		
D	00 : 00	0		
E	00 : 00	0		
F	00 : 00	0		

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Leg Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1-255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0	0.0	0.0
1	0.0	1.8
2	0.0	0.0
3	0.0	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	0.0	0.0
8	0.0	0.0
9	0.0	0.0
A	10.0	0.0
B	0.0	0.0
C	0.0	0.0
D	0.0	0.0
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0	0.0	0.0
1	0.0	1.8
2	0.0	0.0
3	0.0	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	10.0	0.0
8	0.0	0.0
9	0.0	0.0
A	0.0	0.0
B	0.0	0.0
C	0.0	0.0
D	0.0	0.0
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.0	F+0+6
Short Failure	0.0	F+0+7

Power Cycle Correction (Default = 0.5)

0.5 0.5

mgf 8/3/01

INTERSECTION: HAZARD CTR & MISSION CEN . _R

2: Program

Group Assignment: 4095
Field Master Assignment: NONE

N/S Street Name: MISSION CENTER
E/W Street Name: HAZARD CTR

Last Database Change:
Timing Sheet By: EFF
Approved By: MM
System Ref. Number: 522
Drawing Number: 27089-17-D
Timing Implemented On: 1/8/01

Row	Column # →	MISSION CTR 1	2	HAZARD CTR 3	4	MISSION CTR 5	6	7	8
	Phase # →								
0	Ped Walk	0	7	0	7	0	7	0	0
1	Ped FDW	0	14	0	25	0	19	0	0
2	Min Green	4	10	4	4	4	10	0	0
3	Type 3 Limit	0	0	0	0	0	0	0	0
4	Add/Veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extn	2.0	4.8	2.0	3.7	2.0	4.7	0.0	0.0
6	Max Gap	2.0	4.8	2.0	3.7	2.0	4.7	0.0	0.0
7	Min Gap	2.0	0.2	2.0	0.2	2.0	0.2	0.0	0.0
8	Max Limit	20	60	20	40	40	60	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Bus Adv	0	0	0	0	0	0	0	0
B	Call to Phs	0	0	0	0	0	0	0	0
C	Reduce By	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0
D	Every	0.0	0.6	0.0	0.9	0.0	0.7	0.0	0.0
E	Yellow	3.0	4.3	3.0	3.0	3.0	4.2	0.0	0.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row	E	Preempt Timing
0	0	RR-1 Delay
1	0	RR-1 Clear
2	0	EV-A Delay
3	3	EV-A Clear
4	0	EV-B Delay
5	3	EV-B Clear
6	0	EV-C Delay
7	3	EV-C Clear
8	0	EV-D Delay
9	0	EV-D Clear
A	0	RR-2 Delay
B	0	RR-2 Clear
C	---	View EV Delay
D	---	View EV Clear
E	---	View RR Delay
F	---	View RR Clear

F + E + Row

Row	F	Phase Functions
0	123456__	Permit
1	_____	Red Lock
2	_____	Yellow Lock
3	_2___6__	Min Recall
4	_____	Ped Recall
5	_2_4_6__	Peds (View)
6	_____	Rest In Wal
7	_____	Red Rest
8	_____	Dbl Entry
9	_____	Max Recall
A	_____	Soft Recall
B	_____	Max 2
C	_____	Cond Serv
D	12345678	Ped Lock
E	_2___6__	Yellow Start
F	___4____	1st Phases

<F Page>
F + F + Row

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	3	C + 0 + 0
Zone Number	3	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	67	C + 0 + 3
QuicNet Channel	DIGI85:	(QuicNet)

Communication Addresses

C + F + O

F	Row
_2_4_6_8	0

Free Lag
Lag Phases
<C Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A	0.0	0.0	0.0	0
B	Overlap B	0.0	0.0	0.0	0
C	Overlap C	0.0	0.0	0.0	0
D	Overlap D	0.0	0.0	0.0	0

Overlap Timing <F Page>
F + COLOR +
<D Page>
D + 0 + OVERLAP

Manual Plan	14	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	60 (minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234___

Disable Communication Ports
D + D + 9

INTERSECTION: HAZARD CTR & MISSION CENTER

Row	Time	Function	Day of Week	Column F Phases/Bits
0	00 : 00	0		
1	00 : 00	0		
2	00 : 00	0		
3	00 : 00	0		
4	00 : 00	0		
5	00 : 00	0		
6	00 : 00	0		
7	00 : 00	0		
8	00 : 00	0		
9	00 : 00	0		
A	00 : 00	0		
B	00 : 00	0		
C	00 : 00	0		
D	00 : 00	0		
E	00 : 00	0		
F	00 : 00	0		

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)
(This parameter is NOT downloaded)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

INTERSECTION: HAZARD CTR & MISSION CEN .ER

223 Program

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		1I1	14
1	0.0	1.8		2I2U	1
2	0.0	0.0		2I2L	5
3	0.0	0.0		2I3U	21
4	0.0	0.0		2I3L	25
5	0.0	0.0		2I4	9
6	5.0	0.0		3I5	16
7	0.0	0.0		4I6U	3
8	10.0	0.0		4I6L	7
9	10.0	0.0		4I7U	23
A	0.0	0.0		4I7L	27
B	0.0	0.0		4I8	11
C	0.0	0.0		1I9U	18
D	0.0	0.0		3I9L	20
E	---	---	---	---	---
F	---	---	---	---	---

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0	0.0	0.0		5J1	13
1	0.0	1.8		6J2U	2
2	0.0	0.0		6J2L	6
3	0.0	0.0		6J3U	22
4	0.0	0.0		6J3L	26
5	0.0	0.0		6J4	10
6	0.0	0.0		7J5	15
7	0.0	0.0		8J6U	4
8	0.0	0.0		8J6L	8
9	0.0	0.0		8J7U	24
A	0.0	0.0		8J7L	28
B	0.0	0.0		8J8	12
C	0.0	0.0		5J9U	17
D	0.0	0.0		7J9L	19
E	---	---	---	---	---
F	---	---	---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 – – – –	1234____
C	13 14 15 16 17 18 19 20	12345678
D	– – – – 21 22 23 24	____5678
E	– – – – – – – –	1234____
F	– 25 26 27 28 – – –	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)
(These parameters are NOT downloaded.)

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INTERSECTION: CAMINO DE LA REINA & AVENIDA DEL R 223 ›gram

Group Assignment:
Field Master Assignment:
N/S Street Name: AVENIDA DEL RIO
E/W Street Name: CAMINO DE LA REINA
Last Database Change:
System Ref. Number:

N

Row	Column # ----> / Phase # ---->	Phase 1	2 →	3	4 ↓↑	5 ↑	6 ←	7	8
0	Ped Walk				7		7		
1	Ped FDW				9		17		
2	Min Green		7		4	4	7		
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn		2.0		2.0	2.0	2.0		
6	Max Gap		2.0		2.0	2.0	2.0		
7	Min Gap		2.0		2.0	2.0	2.0		
8	Max Limit		60		40	30	60		
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By								
D	Every								
E	Yellow		3.9		3.9	3.4	3.9		
F	Red Clear		1.0		1.0	1.0	1.0		

Phase Timing - Bank 1 <F Page>
F + Phase + Row

Row		E
0	RR-1 Delay	
1	RR-1 Clear	
2	EV-A Delay	0
3	EV-A Clear	0
4	EV-B Delay	
5	EV-B Clear	
6	EV-C Delay	0
7	EV-C Clear	0
8	EV-D Delay	
9	EV-D Clear	
A	RR-2 Delay	
B	RR-2 Clear	
C	View EV Delay	---
D	View EV Clear	---
E	View RR Delay	---
F	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	_2_456__
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	Peds (View)	___4_6__
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	_2___6__
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	___4_____

Phase Functions <F Page>
F + F + Row

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	
Zone Number	
Area Number	
Area Address	
QuicNet Channel	

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6__	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +
<D Page>
D + 0 + OVERLAP

Manual Plan	14	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	234

Disable Communication Ports
D + D + 9

Timing Sheet By: LEM
Approved By: EFF
Drawing Number:
Timing Implemented On: 3/8/12

INTERSECTION: CAMINO DE LA REINA & AVENIDA DEL RIO

223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0	00 : 01	E	1234567	1
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	4 6
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1

Configuration <E Page>

E + F + ROW

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	6
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	
C	EV-C Phases	6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 = Quicknet
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8	10.0	
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	5678
E	-- -- -- -- -- -- -- --	1234
F	-- 25 26 27 28 -- -- --	2345

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

40

TERSECTION: CMN DE LA REINA & MISSION CENTER

223 P ram

Group Assignment: 4096
Field Master Assignment: NONE

N/S S. ame: MISSION CENTER
E/W Street ame: CMN DE LA REINA

Last Database Change: 08/29/200
Timing Sheet By: EFF
Approved By: MM
System Ref. Number: 5
Drawing Number: 29103-8
Timing Implemented On: 10/17/01

Row	Column # --->	Phase # --->	1	2	3	4	5	6	7	8
				MISSION CTR		CMN DE LA REINA		MISSION CTR		CMN DE LA REINA
				Phase						
0	Ped Walk			7		7		7		7
1	Ped FDW			21 ~~22~~		26 ~~25~~		21		29
2	Min Green		4	10	4	7	4	10	4	7
3	Type 3 Limit									
4	Add/Veh									
5	Veh Extn		2.0	4.6 ~~4.4~~	2.0	3.1	2.0	4.8 ~~4.0~~	2.0	4.8 ~~3.3~~
6	Max Gap		2.0	4.6 ~~4.4~~	2.0	3.1	2.0	4.8 ~~4.0~~	2.0	4.8 ~~3.3~~
7	Min Gap		2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
8	Max Limit		30	60	30	40	30	60	30	40
9	Max Limit 2									
A	Bus Adv									
B	Call to Phs									
C	Reduce By			0.1		0.1		0.1		0.1
D	Every			0.7		1.0		0.7 ~~0.8~~		0.7 ~~1.0~~
E	Yellow		3.4 ~~3.0~~	4.2 ~~3.0~~	3.4 ~~3.0~~	3.9 ~~4.0~~	3.4 ~~3.0~~	4.0 ~~4.1~~	3.4 ~~3.0~~	3.9 ~~4.0~~
F	Red Clear		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing
F + E + Row

Row	F
Permit	12345678
Red Lock	
Yellow Lock	
Min Recall	
Ped Recall	
Peds (View)	_2_4_6_8
Rest In Walk	
Red Rest	
Dbl Entry	
Max Recall	
Soft Recall	_2___6__
Max 2	
Cond Serv	
Ped Lock	12345678
Yellow Start	_2___6__
1st Phases	___4___8

Phase Functions <F Page>
F + F + Row

7/15/08
MC1

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	2	C + 0 + 0
Zone Number	2	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	66	C + 0 + 3
QuicNet Channel	DIGI85:	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6_8	0

Lag Phases <C Page>

Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A			
Overlap B	B			
Overlap C	C			
Overlap D	D			

<F Page> **Overlap Timing** <D Page>
F + COLOR + D + 0 + OVERLAP

Manual Plan	0	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	_234____

Disable Communication Ports
D + D + 9

INTERSECTION: CMN DE LA REINA & MISSION CENTER

223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0	00 : 01	E	1234567	1
1	:			
2	:			
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Function

7 + ROW

<D Page>

D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week

8-1 Day-of-Month, Year, Month

8-F Seconds

Disable Parity	0

D4B40

Dial-Up Telephone Communications

(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program

C + C + F = version

Remote Download

C + 0 + 4 = 1 -255

w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		1.8
3		
4		
5		
6		
7		1.8
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		1.8
3		
4		
5		
6		
7		1.8
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: CMN DE LA REINA & MISSION [illegible]NTER

223 Proc[illegible]

Coordination Timing By: REJ
Implemented On: 11/25/98

Row	Column # ---> / Plan Name --->	Plan 1	2	3	4	5	6	7	8	9
0	Cycle Length	120								
1	Phase 1 - ForceOff	87								
2	Phase 2 - ForceOff									
3	Phase 3 - ForceOff	18								
4	Phase 4 - ForceOff	53								
5	Phase 5 - ForceOff	87								
6	Phase 6 - ForceOff									
7	Phase 7 - ForceOff	18								
8	Phase 8 - ForceOff	53								
9	Ring Offset									
A	Offset A	14								
B	Offset B									
C	Offset C									
D	Permissive	10								
E	Hold Release	255								
F	Ped Shift	0								

Coordination <C Page>
C + Plan + ROW

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + B
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	11 : 30	1	A	1234567
1	19 : 00	E	A	1234567
2	:			
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Coordination
<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	2 4 6 8
Plan 1	2 6	1	Plan 1 - Lag	2 4 6 8
Plan 2		2	Plan 2 - Lag	
Plan 3		3	Plan 3 - Lag	
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6		6	Plan 6 - Lag	
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases
C + E + FUNCTION #

Lag Phases <C Page>
C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Longpath

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

INTERSECTION: CMN DE LA REINA @ MISSION C TER 223 Proc

Coordination Timing By: EFF
Implemented On: 12/3/2001

Row	Plan Name →	Column # → 1	2	3	4	5	6	7	8	9
		Plan								
0	Cycle Length			140	150	140				
1	Phase 1 - ForceOff			103	111	96				
2	Phase 2 - ForceOff			0	0	0				
3	Phase 3 - ForceOff			25	24	25				
4	Phase 4 - ForceOff			64	75	64				
5	Phase 5 - ForceOff			88	101	96				
6	Phase 6 - ForceOff			0	0	0				
7	Phase 7 - ForceOff			25	36	28				
8	Phase 8 - ForceOff			64	75	64				
9	Ring Offset									
A	Offset A			86	6	110				
B	Offset B									
C	Offset C									
D	Permissive			10	10	10				
E	Hold Release			255	255	255				
F	Ped Shift			0	0	0				

Coordination <C Page>
C + Plan + ROW

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	11 : 00	3	A	_23456_
1	15 : 00	4	A	_23456_
2	19 : 00	E	A	1234567
3	10 : 00	5	A	1____7
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Coordination
<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	_2_4_6_8
Plan 1		1	Plan 1 - Lag	
Plan 2		2	Plan 2 - Lag	
Plan 3	_2___6__	3	Plan 3 - Lag	_2_4_6_8
Plan 4	_2___6__	4	Plan 4 - Lag	_2_4_6_8
Plan 5	_2___6__	5	Plan 5 - Lag	_2_4_6_8
Plan 6		6	Plan 6 - Lag	
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases
C + E + FUNCTION #

Lag Phases <C Page>
C + F + FUNCTION #

Plan Select
1 thru 9 = Coordination
Plan 1 thru 9
14 or E = Free
15 or F = Flash

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

MISSION CENTER RD / CAMINO DE LA REINA — MISSION CENTER RD / CAMINO DE LA REINA

200 SA 1.e

PHASE TIMING

INTERVAL		1	2	3	4	5	6	7	8
WALK	0		7		7		7		7
FLASH D/W	1		22		25		20		29
MIN GREEN	2	4	10	4	7	4	10	4	7
TYPE 3 DET	3								
ADD PER VEH	4								
VEH EXTN *	5	2.0	2.7	2.0	3.1	2.0	3.4	2.0	3.8
MAX GAP *	6	2.0	2.7	2.0	3.1	2.0	3.4	2.0	3.8
MIN GAP *	7	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
MAX EXTN	8	30	60	30	40	30	60	30	40
MAX 2	9								
BUS LEAD	A								
CALL TO PHS	B								
REDUCE BY	C		0.1		0.1		0.1		0.1
EVERY	D		1.2		1.0		0.9		0.8
YELLOW	E	3.0	3.6	3.0	3.9	3.0	4.1	3.0	3.6
RED CLEAR	F	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

F + PHASE + LOCATION

* Must be the same for non-density operation

PREEMPT		
	E	
RR 1 DELAY		0
RR 1 CLEAR		1
EVA DELAY	0	2
EVA CLEAR	3	3
EVB DELAY	0	4
EVB CLEAR	3	5
EVC DELAY	0	6
EVC CLEAR	3	7
EVD DELAY	0	8
EVD CLEAR	3	9
RR2 DELAY		A
RR 2 CLEAR		B
EV CLR TMR		C
EV DLY TMR		D
RR CLR TMR		E
RR DLY TMR		F

MAX INITIAL (F-0-E) 0 RED REVERT (F-0-F) 5.0 ALL-RED START (F-C-0) 0.0

PHASE FUNCTION FLAGS

		PHASE 1	2	3	4	5	6	7	8
PERMIT	0	X	X	X	X	X	X	X	X
RED LOCK	1								
YELLOW LOCK	2								
VEHICLE RECALL	3								
PED RECALL	4								
PEDS (VIEW)	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A		X				X		
MAX 2	B								
COND SERVICE	C								
	D								
START-UP	E		X				X		
FIRST PHASES	F				X				X

F + F + FUNCTION

OVERLAP TIMING

LOAD SWITCH		GREEN 9	YELLOW C	RED D
	OLAP A			
	OLAP B			
	OLAP C			
	OLAP D			

D + 0 + OVERLAP

F + COLOR +

PHASE SEQUENCE

	PHASE 1	2	3	4	5	6	7	8
LAG 0 (FREE)		X		X		X		X

C + F + 0

MANUAL (C-A-1) 0

ADDRESS (C-0-0) 1

TURN-ON DATE: 11-15-1971

TIME: 11:30

DRAWING NO. D- 29103-8

LAST CHANGE: 11-25-1998

BY: REJ

LOCATION CAMINO DE LA REINA & MISSION CENTER RD

DETECTOR TIMES

Y \ X	SET DELAY 1	SET DELAY 2	SET CARRY 3	SET CARRY 4	OBS COUNT 5	OBS COUNT 6	OBS DELAY 7	OBS DELAY 8	OBS CARRY 9	OBS CARRY A
0	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1
1	2I2U	6J2U	2I2U 1.8	6J2U 1.8	2I2U	6J2U	2I2U	6J2U	2I2U	6J2U
2	2I2L	6J2L	2I2L 1.8	6J2L 1.8	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L
3	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U
4	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L
5	2I4	6J4	2I4	6J4	2I4	6J4	2I4	6J4	2I4	6J4
6	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5
7	4I6U	8J6U	4I6U 1.8	8J6U 1.8	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U
8	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L
9	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U
A	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L
B	4I8	8J8	4I8	8J8	4I8	8J8	4I8	8J8	4I8	8J8
C	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U
D	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L

D + X (ACROSS) + Y (DOWN)

TIME OF DAY FEATURES

EVENT	TIME	FUNC	DAY OF WEEK S	M	T	W	T	F	S
0	0001	E	X	X	X	X	X	X	X
1									
2									
3									
4									
5									
6									
7									
8									
9									

7 + EVENT #

PHASE OR FUNCTION

	1	2	3	4	5	6	7
	X						

D + F + EVENT

TIME OF DAY FUNCTION CODES

0-PERMIT
1-RED LOCK
2-YELLOW LOCK
3-VEH RECALL
4-PED RECALL
5-[RESERVED]
6-REST IN WALK
7-RED REST
8-DBL ENTRY
9-VEH MAX RCL
A-SOFT RCL
B-MAX 2 EXT
C-COND SERV
D-TOD LAG PHS

E-1-LOCAL OVERRIDE
2-PHASE BANK 2
3-PHASE BANK 3
7-DET COUNT
8-SPLIT MONITOR

F - TOD OUTPUTS
1- TOD OUTPUT 1
2- TOD OUTPUT 2
3- TOD OUTPUT 3
4- TOD OUTPUT 4

TIME AND DATE

8 - 0 HOUR, MINUTE, DAY-OF-WEEK
8 - 1 DAY-OF-MONTH, YEAR, MONTH
8 - F SECONDS

TO ACCESS CONFIGURATION DATA, SET F-9-E = 1

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
EXCLUSIVE	0								
RR1 GN CLR	1								
RR2 GRN CLR	2								
RR2 LTD SRV	3								
PRO/PERM	4								
OLA GN OMIT	5								
OLB GN OMIT	6								
OLC GN OMIT	7								
OLD GN OMIT	8								
OV FL YELLOW	9								
EMVEH A	A		X			X			
EMVEH B	B				X			X	
EMVEH C	C	X				X			
EMVEH D	D			X					X
EXTRA	E	X		X	X				
IC SELECT	F		X						

E + E + INTERVAL

EXTRA (E+E+E)
1-TBC TYPE 1
2-NEMA COORD
3-DAVLIGHT
4-EV ADVANCE
5-REMOTE EVP
6-SPECIAL EVENT
7-PRETIMED
8-SPLIT RING

ICSELECT (E+E+F)
1-SIMPLEX IN
2-2 WAY MODEM
3-7 WIRE IN
4-FLH/FREE
5-SIMPLEX OUT
6-7 WIRE OUT

ASSIGN5 (E+F+F)
1-RT OVERLAP
2-TOD OUTPUTS
3-STEADY EV BEACON
4-FLASH EV BEACON

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
	0								
RR OLAP A	1								
RR OLAP B	2								
RR OLAP C	3								
RR OLAP D	4								
PED 2P	5		X						
PED 6P	6						X		
PED 4P	7				X				
PED 8P	8								X
FLH YELLOW	9								
OVERLAP A	A								
OVERLAP B	B								
OVERLAP C	C								
OVERLAP D	D								
RESTRICT	E								
ASSIGN5	F								

E + F + INTERVAL

LOCATION	CAMINO DE LA REINA & MISSION CENTER RD

COORDINATION PARAMETERS

200 SA 1.e

PLAN

FEATURE		1	2	3	4	5	6	7	8	9
CYCLE	0	120								
FORCE 1	1	87								
FORCE 2	2	-								
FORCE 3	3	18								
FORCE 4	4	53								
FORCE 5	5	87								
FORCE 6	6	-								
FORCE 7	7	18								
FORCE 8	8	53								
RING OFFSET	9									
OFFSET A	A	14								
OFFSET B	B									
OFFSET C	C									
PERMISSIVE	D	10								
HOLD RELEASE	E	255								
ZONE OFFSET	F									

C + PLAN + FEATURE

TRANSITION TYPE
C - D - D = 0

SHORTWAY = 0
DWELL > 0

PEDESTRIAN FORCEOFF SHIFT
C - D - F = 0

FOR OBSERVATION ONLY

MASTER PLAN	C - A - 2
CURRENT PLAN	C - A - 3
T.O.D. PLAN	C - A - 5
MASTER CYCLE	C - A - 0
RING A CYCLE	C - B - 0
RING B CYCLE	C - D - 0
MINIMUM CYCLE	C - A - E
MAXIMUM CYCLE	C - B - E

PLAN TIMETABLE

EVENT	TIME	PLAN	OFFSET	DAY OF WEEK S	M	T	W	T	F	S
				1	2	3	4	5	6	7
0	1130	1	A	X	X	X	X	X	X	X
1	1900	E	A	X	X	X	X	X	X	X
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

9 + EVENT

SYNC PHASES

		PHASE 1	2	3	4	5	6	7	8
	0								
SYNC 1	1	X					X		
SYNC 2	2								
SYNC 3	3								
SYNC 4	4								
SYNC 5	5								
SYNC 6	6								
SYNC 7	7								
SYNC 8	8								
SYNC 9	9								
CPEDRCL	A								
NEMA HLD	B								
SCANMEM	C								
BADPROM	D								
TODFN E	E								
TODFN F	F								

C + E + FUNCTION

PHASE SEQUENCES

		PHASE 1	2	3	4	5	6	7	8
	0								
LAG 1	1	X		X		X		X	
LAG 2	2								
LAG 3	3								
LAG 4	4								
LAG 5	5								
LAG 6	6								
LAG 7	7								
LAG 8	8								
LAG 9	9								
COOR MAX RCL	A								
COOR LAG RCL	B								
SYNC PHASES	C								
HOLD	D								
NEXT PHASE	E								
FORCE OFF	F								

C + F + FUNCTION

Date: 11/25/1998

LOCATION Camino de la Reina & Mission Center Road

41

INTERSECTION: Camino del Este & Camino de la Reina

223 Pr[illegible]am

Group Assignment:
Field Master Assignment:

N/S Street Name: Camino de la Reina
E/W Street Name: Camino del Este

Last Database Change:
System Ref. Number:

N

Row	Column # --->	Phase 1	2	3	4	5	6	7	8
	Phase # --->	↓	→		↓	↑	←		↑
0	Ped Walk		7		7		7		7
1	Ped FDW		21		27		23		25
2	Min Green	4	10		4	4	10		4
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	3.1		2.4	2.0	3.0		2.4
6	Max Gap	2.0	3.1		2.4	2.0	3.0		2.4
7	Min Gap	2.0	0.2		0.2	2.0	0.2		0.2
8	Max Limit	30	60		40	30	60		40
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By								
D	Every		1.0		1.4		1.1		1.4
E	Yellow	3.4	4.0		3.9	3.4	4.1		3.9
F	Red Clear	1.0	1.0		1.0	1.0	1.0		1.0

Phase Timing - Bank 1 <F Page>
F + Phase + Row

Row		E
0	RR-1 Delay	
1	RR-1 Clear	
2	EV-A Delay	0
3	EV-A Clear	0
4	EV-B Delay	0
5	EV-B Clear	0
6	EV-C Delay	0
7	EV-C Clear	0
8	EV-D Delay	0
9	EV-D Clear	0
A	RR-2 Delay	
B	RR-2 Clear	
C	View EV Delay	---
D	View EV Clear	---
E	View RR Delay	---
F	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	12_456_8
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	Peds (View)	_2_4_6_8
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	___4___8
9	Max Recall	
A	Soft Recall	_2___6__
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	___4___8

Phase Functions <F Page>
F + F + Row

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	
Zone Number	
Area Number	
Area Address	
QuicNet Channel	

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6_8	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page> F + COLOR +
<D Page> D + 0 + OVERLAP

Manual Plan	14
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	234

Disable Communication Ports
D + D + 9

Timing Sheet By: FA1
Approved By: EFF
Drawing Number: 28204-12
Timing Implemented On: 10/25/13

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Resi
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 34
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		1.8
8	10.0	
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		1.8
8	10.0	
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 – – – –	1234
C	13 14 15 16 17 18 19 20	12345678
D	– – – – 21 22 23 24	5678
E	– – – – – – – –	1234
F	– 25 26 27 28 – – –	2345

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

42

INTERSECTION: CMN DEL RIO (N) @ QUALCOMM

223 Program

Group Assignment: 4097
Field Master Assignment: NONE
N/S Street Name: QUALCOMM
E/W Street Name: CMN DEL RIO (N)
Last Database Change: 7/7/2003 6:00
System Ref. Number: 549

N

	QUALCOMM	CAM DE LA REINA		QUALCOMM		CAM DEL RIO N.	
Column # →	Phase						
Phase # →	1	2	3	4	5	6	7	8
Row					4+5			
0 Ped Walk		7				7		7
1 Ped FDW		24				25		27
2 Min Green	4	10	4	7	4	10	4	7
3 Type 3 Limit		~~EFF~~						
4 Add/Veh		6/11/09						
5 Veh Extn	2.0	~~2.8~~ 2.0	2.0	2.5	2.0	5.4	2.0	2.0
6 Max Gap	2.0	~~2.8~~ 2.0	2.0	2.5	2.0	5.4	2.0	2.0
7 Min Gap	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
8 Max Limit	30	50	30	30	30	50	30	30
9 Max Limit 2								
A Bus Adv								
B Call to Phs								
C Reduce By		0.1		0.1		0.1		0.1
D Every		~~1.1~~ 1.7		1.3		0.6		1.7
E Yellow	3.4	4.7	3.4	4.1	3.4	3.9	3.4	4.7
F Red Clear	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1
F + Phase + Row

<F Page>

Row	E	Preempt Timing
RR-1 Delay		F + E + Row
RR-1 Clear		
EV-A Delay	0	
EV-A Clear	0	
EV-B Delay	0	
EV-B Clear	0	
EV-C Delay	0	
EV-C Clear	0	
EV-D Delay	0	
EV-D Clear	0	
RR-2 Delay		
RR-2 Clear		
View EV Delay	---	
View EV Clear	---	
View RR Delay	---	
View RR Clear	---	

Row	F	Phase Functions <F Page> F + F + Row
Permit	12345678	
Red Lock		
Yellow Lock		
Min Recall		
Ped Recall		
Peds (View)	_2__6_8	
Rest In Walk		
Red Rest		
Dbl Entry		
Max Recall		
Soft Recall	_2___6__	
Max 2		
Cond Serv		
Ped Lock	12345678	
Yellow Start	_2___6__	
1st Phases	___4___8	

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	1	C + 0 + 0
Zone Number	1	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	49	C + 0 + 3
QuicNet Channel	DIGI84:	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6_8	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page> F + COLOR +

<D Page> D + 0 + OVERLAP

Manual Plan	14	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234___

Disable Communication Ports
D + D + 9

Timing Sheet By: EFF
Approved By: MM
Drawing Number: 27270-25
Timing Implemented On: 7/7/2003

NOTE:
yellow yield operation - this signal phase 2 holds Cam Del Rio N. & I-8 phase 2.

INTERSECTION: CMN DEL RIO (N) @ QUALCOMM

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function

7 + ROW

<D Page>

D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	45
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1

Configuration

E + F + ROW

<E Page>

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Time and Date

8-0 Hour, Minute, Day-of-Week

8-1 Day-of-Month, Year, Month

8-F Seconds

Disable Parity	0

D+B+0

Dial-Up Telephone Communications

(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program

C + C + F = version

Remote Download

C + 0 + 4 = 1 -255

w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		1.8
8		
9		
A	10.0	
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		2.4
3		
4		
5		
6		
7		1.8
8	10.0	
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 – – – –	1234
C	13 14 15 16 17 18 19 20	12345678
D	– – – – 21 22 23 24	5678
E	– – – – – – – –	1234
F	– 25 26 27 28 – – –	2345

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

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INTERSECTION: CAMINO DEL RIO N @ MISSION CITY — 22 — ...ogram

Group Assignment:
Field Master Assignment:
N/S Street Name: MISSION CITY PKWY
E/W Street Name: CAMINO DEL RIO N
Last Database Change: N/A
Timing Sheet By: JD
Approved By: mm
System Ref. Number:
Drawing Number: 23248-14-D
Timing Implemented On:

0 JCM 2/27/09

Row	Column # →	CAMINO DEL RIO N					CAMINO DEL RIO N		MISSION CITY
	Phase # →	1	2	3	4	5	6	7	8
		1+8	→	DUMMY			←		2+3
0	Ped Walk		7						7
1	Ped FDW		19						12
2	Min Green	4	7	4			7		4
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	3.2	2.0			3.2		2.0
6	Max Gap	2.0	3.2	2.0			3.2		2.0
7	Min Gap	2.0	0.2	2.0			0.2		2.0
8	Max Limit	30	60	50			60		50
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1				0.1		
D	Every		1.0				1.0		
E	Yellow	3.4 ~~3.0~~	4.6	3.0			4.3		3.9 ~~3.0~~
F	Red Clear	1.0	1.0	1.0			1.0		1.0

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row		E
0	RR-1 Delay	
1	RR-1 Clear	
2	EV-A Delay	
3	EV-A Clear	
4	EV-B Delay	
5	EV-B Clear	
6	EV-C Delay	
7	EV-C Clear	
8	EV-D Delay	
9	EV-D Clear	
A	RR-2 Delay	
B	RR-2 Clear	
C	View EV Delay	
D	View EV Clear	
E	View RR Delay	
F	View RR Clear	

Preempt Timing
F + E + Row

Row		F
0	Permit	123__6_8
1	Red Lock	
2	Yellow Lock	
3	Min Recall	_2___6__
4	Ped Recall	
5	Peds (View)	_2_____8
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	_3__8
9	Max Recall	
A	Soft Recall	
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	_2___6__
F	1st Phases	_____8

Phase Functions <F Page>
F + F + Row

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	
Zone Number	
Area Number	
Area Address	
QuicNet Channel	

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2___6_8	

Lag Phases <C Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A				
B	Overlap B				
C	Overlap C				
D	Overlap D				

Overlap Timing <F Page> F + COLOR + <D Page> D + 0 + OVERLAP

Manual Plan	14
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan	Manual Offset
0 = Automatic	0 = Automatic
1-9 = Plan 1-9	1 = Offset A
14 = Free	2 = Offset B
15 = Flash	3 = Offset C

Downtime Flash	255 (minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234___

Disable Communication Ports
D + D + 9

*SEE NOTE ON DETECTOR ASSIGNMENTS: PHASE 3 SHALL BE CONNECTED TO PHASE DETECTORS.

INTERSECTION: CAMINO DEL RIO N @ MISSION CITY

223 Program

Row			Column F	
	Time	Function	Day of Week	Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function

7 + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

<D Page>

D + F + ROW

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	_2_____
6	Ped 6P	
7	Ped 4P	
8	Ped 8P	_____8
9	Yellow Flash Phases	
A	Overlap A - Phases	1_____8
B	Overlap B - Phases	_23____
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1_____

Configuration

<E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	_____8
6	Overlap B - Green Omit	_2_____
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1_345___
F	IC Select (Interconnect)	_2_____

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 – – – –	1234____
C	13 14 15 16 17 18 19 20	12345678
D	– – – – 21 22 23 24	____5678
E	– – – – – – – –	1234____
F	– 25 26 27 28 – – –	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

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CAM. DEL RIO N. — WARD — CAM. DEL RIO N.

200 SA 1.e

PHASE TIMING

INTERVAL		1	2	3	4	5	6	7	8	PREEMPT	E	
WALK	0				7		7			RR 1 DELAY		0
FLASH D/W	1				21		17			RR 1 CLEAR		1
MIN GREEN	2		10		4	4	10			EVA DELAY	0	2
TYPE 3 DET	3									EVA CLEAR	3	3
ADD PER VEH	4									EVB DELAY	0	4
VEH EXTN *	5		4.2		2.0	2.0	4.2			EVB CLEAR	3	5
MAX GAP *	6		4.2		2.0	2.0	4.2			EVC DELAY	0	6
MIN GAP *	7		0.2		2.0	2.0	0.2			EVC CLEAR	3	7
MAX EXTN	8		60		40	40	60			EVD DELAY		8
MAX 2	9									EVD CLEAR		9
BUS LEAD	A									RR2 DELAY		A
CALL TO PHS	B									RR 2 CLEAR		B
REDUCE BY	C		0.1			MIN 3.4	0.1			EV CLR TMR		C
EVERY	D		0.7	4.3	3.9	3.4 ⓪	0.7	5.0		EV DLY TMR		D
YELLOW	E		~~4.5~~		~~3.0~~	~~3.0~~	~~4.5~~			RR CLR TMR		E
RED CLEAR	F		1.0		1.0	1.0	1.0			RR DLY TMR		F

* Must be the same for non-density operation

F + PHASE + LOCATION

DJM1 10/13/10

MAX INITIAL (F-0-E) 0 RED REVERT (F-0-F) 5.0 ALL-RED START (F-C-0) 0.0

PHASE FUNCTION FLAGS

		PHASE 1	2	3	4	5	6	7	8
PERMIT	0		X		X	X	X		
RED LOCK	1								
YELLOW LOCK	2								
VEHICLE RECALL	3								
PED RECALL	4								
PEDS (VIEW)	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A		X				X		
MAX 2	B								
COND SERVICE	C								
	D								
START-UP	E		X				X		
FIRST PHASES	F				X				

F + F + FUNCTION #

OVERLAP TIMING

LOAD SWITCH		GREEN 9	YELLOW C	RED D
	OLAP A			
	OLAP B			
	OLAP C			
	OLAP D			

D + 0 + OVERLAP

F + COLOR + OVERLAP

PHASE SEQUENCE

	PHASE 1	2	3	4	5	6	7	8
LAG 0 (FREE)		X		X		X		

C + F + 0

MANUAL (C-A-1) 14

ADDRESS (C-0-0)

TURN-ON DATE: 12-19-95

TIME: 14:15

DRAWING NO. D- 27457-4

LAST CHANGE: 12-04-1995

BY: MPS DRH

LOCATION CAMINO DEL RIO NORTH & WARD ROAD

DETECTOR TIMES

Y \ X	SET DELAY 1	SET DELAY 2	SET CARRY 3	SET CARRY 4	OBS COUNT 5	OBS COUNT 6	OBS DELAY 7	OBS DELAY 8	OBS CARRY 9	OBS CARRY A
0	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1
1	2I2U	6J2U	2I2U 1.8	6J2U 1.8	2I2U	6J2U	2I2U	6J2U	2I2U	6J2U
2	2I2L	6J2L 10.	2I2L 1.8	6J2L	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L
3	2I3U	6J3U	2I3U	6J3U 1.8	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U
4	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L
5	2I4	6J4	2I4	6J4	2I4	6J4	2I4	6J4	2I4	6J4
6	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5
7	4I6U 10.	8J6U	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U
8	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L
9	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U
A	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L
B	4I8	8J8	4I8	8J8	4I8	8J8	4I8	8J8	4I8	8J8
C	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U
D	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L

D + X (ACROSS) + Y (DOWN)

TO ACCESS CONFIGURATION DATA, SET F-9-E = 1

TIME OF DAY FEATURES

EVENT	TIME	FUNC	DAY OF WEEK S	M	T	W	T	F	S	PHASE OR FUNCTION 1	2	3	4	5	6	7
0																
1																
2																
3																
4																
5																
6																
7																
8																
9																

7 + EVENT # | D + F + EVENT

TIME OF DAY FUNCTION CODES

0-PERMIT
1-RED LOCK
2-YELLOW LOCK
3-VEH RECALL
4-PED RECALL
5-[RESERVED]
6-REST IN WALK
7-RED REST
8-DBL ENTRY
9-VEH MAX RCL
A-SOFT RCL
B-MAX 2 EXT
C-COND SERV
D-TOD LAG PHS

E-1-LOCAL OVERRIDE
2-PHASE BANK 2
3-PHASE BANK 3
7-DET COUNT
8-SPLIT MONITOR

F - TOD OUTPUTS
1- TOD OUTPUT 1
2- TOD OUTPUT 2
3- TOD OUTPUT 3
4- TOD OUTPUT 4

TIME AND DATE

8 - 0 HOUR, MINUTE, DAY-OF-WEEK
8 - 1 DAY-OF-MONTH, YEAR, MONTH
8 - F SECONDS

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
EXCLUSIVE	0								
RR1 GN CLR	1								
RR2 GRN CLR	2								
RR2 LTD SRV	3								
PRO/PERM	4								
OLA GN OMIT	5								
OLB GN OMIT	6				X				
OLC GN OMIT	7								
OLD GN OMIT	8								
OV FL YELLOW	9								
EMVEH A	A		X			X			
EMVEH B	B				X				
EMVEH C	C						X		
EMVEH D	D								
EXTRA	E	X		X	X				
IC SELECT	F		X						

E + E + INTERVAL

EXTRA (E+E+E)
1-TBC TYPE 1
2-NEMA COORD
3-DAVLIGHT SAVINGS
4-EV ADVANCE
5-REMOTE EVP
6-SPECIAL EVENT
7-PRETIMED
8-SPLIT RING

ICSELECT (E+E+F)
1-SIMPLEX IN
2-2 WAY MODEM
3-7 WIRE IN
4-FLH/FREE
5-SIMPLEX OUT
6-7 WIRE OUT

ASSIGN5 (E+F+F)
1-RT OVERLAP
2-TOD OUTPUTS
3-STEADY EV BEACON
4-FLASH EV BEACON

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
	0								
RR OLAP A	1								
RR OLAP B	2								
RR OLAP C	3								
RR OLAP D	4								
PED 2P	5								
PED 6P	6						X		
PED 4P	7				X				
PED 8P	8								
FLH YELLOW	9								
OVERLAP A	A				X	X			
OVERLAP B	B								
OVERLAP C	C								
OVERLAP D	D								
RESTRICT	E								
ASSIGN5	F	X							

E + F + INTERVAL

LOCATION: CAMINO DEL RIO NORTH & WARD ROAD

45 LOCATION: **RTE 8 WB @ FAIRMONT AVENUE**

CALTRANS C8 Version 3 DATE: 1/27/2015 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	7	1	1	1	7	1	7	CLK RST
1	DONT WALK	1	36	1	1	1	32	1	29	
2	MIN GREEN	13	15	1	1	13	15	14	14	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	1.0	2.0	0.9	0.9	1.0	2.0	2.0	2.0	
6	MAX GAP	1.0	2.0	0.9	0.9	1.0	2.0	3.0	3.0	
7	MIN GAP	1.0	2.0	0.9	0.9	1.0	2.0	1.0	1.0	
8	MAX EXT	25	45	9	9	25	45	25	25	
9	MAX 2									YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.7	4.1	3.0	3.0	3.7	4.1	4.1	4.1	MIN
F	RED	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	SEC
	PED XING FT		125				113		101	
	BIKE XING FT	95	121			94	130	105	113	

	PRE-EMPTION E		F FLAGS	1	2	3	4	5	6	7	8	
	EV SEL	0	PERMIT	1	2	3	4	5	6	7	8	0
	RR1 CLR	5	RED LOCK					5			8	1
	EVA DLY	0	YEL LOCK							7	8	2
	EVA CLR	5	V RECALL		2				6			3
	EVB DLY	0	P RECALL									4
	EVB CLR	5	PED PHASES		2		4		6		8	5
	EVC DLY	0	RT OLA									6
	EVC CLR	5	RT OLB									7
	EVD DLY	0	DBL ENTRY									8
	EVD CLR	5	MAX 2 PHASES									9
	MAX EV	255	LAG PHASES	READ ONLY								A
	RR2 CLR	5	RED REST									B
			REST-IN-WALK									C
			MAX 3 PHASES									D
			YEL START UP		2				6			E
			FIRST PHASE							7		F
				1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

NOTES:

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

LOCATION: **RTE 8 WB @ FAIRMONT AVENUE**

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C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAGS									
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH	115	125	130	125										LAG FZ FREE		2		4		6		8	0
1	FZ1 GRN FCTR	8	8	10	8									GAPOUT CP1	LAG FZ CP 1		2		4	5			8	1
2														GAPOUT CP2	LAG FZ CP 2		2		4	5			8	2
3	FZ3 GRN FCTR	0	0	0	0									GAPOUT CP3	LAG FZ CP 3		2		4	5			8	3
4	FZ4 GRN FCTR	0	0	0	0						PERM TIME			GAPOUT CP4	LAG FZ CP 4		2		4	5			8	4
5	FZ5 GRN FCTR	27	25	20	20						LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR	10	12	19	12						LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR	25	28	25	20						NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE	0	0	0	0									GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A	90	30	41	30						OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		2				6			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRPT																							F
																1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER:
WB OFF CABINTE

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8		

LOCATION	OFF	ON
1		
2		1
3		
4		
5		
6		
7		
8		

COO = 2

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

D PAGE

	D MAX	FLAGS 1	2	3	4	5	6	7	8	E MIN	FLAGS 1	2	3	4	5	6	7	8	F PED	FLAGS 1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1					5				CP 1								
2	CP 2									CP 2					5				CP 2								
3	CP 3									CP 3					5				CP 3								
4	CP 4									CP 4					5				CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8

E PAGE

	E FUNCTION	FLAGS 1	2	3	4	5	6	7	8	F FUNCTION	FLAGS 1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		2							5
6										6 PED						6			6
7										4 PED				4					7
8										8 PED								8	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E
MINUTE = D-B-E
DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)
RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F
MINUTE = D-B-F
DAY = D-C-F

D-E-E = C8 VERSION NUMBER
D-E-F = LITHIUM BATTERY CONDITION
84 = BAD
85 = GOOD

LOCATION: **RTE 8 WB @ FAIRMONT AVENUE**

CALTRANS C8 Version 3 DATE: 3/10/2004

7 PAGE

9 PAGE C09 = 0 or 1

9 PAGE C09 = 2

TIME OF DAY ACTIVITY TABLE

7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS

	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

CONTROL PLAN TIME OF DAY

9+EVENT+HR+MIN+CP+OS+E+DOW

	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	07	15	1	A		2	3	4	5	6	
1	08	30	2	A		2	3	4	5	6	
2	15	00	3	A		2	3	4	5	6	
3	18	30	E			2	3	4	5	6	
4	10	00	4	A	1						7
5	17	00	E		1						7
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

CONTROL PLAN TIME OF DAY

9+EVENT+HR+MIN+CP+OS+E+DOW

	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION

2 MAX 2

3 MAX 3

4 COND SERV (1ST SELECT)

5 COND SERV (2ND SELECT)

6 ENERGIZE AUX OUTPUT-RED

7 ENERGIZE AUX OUTPUT-GREEN

8 ENERGIZE AUX OUTPUT-YELLOW

9 TIME OF DAY MAX RECALL (1ST SELECT)

A TRAFFIC ACT. MAX 2 OPERATION

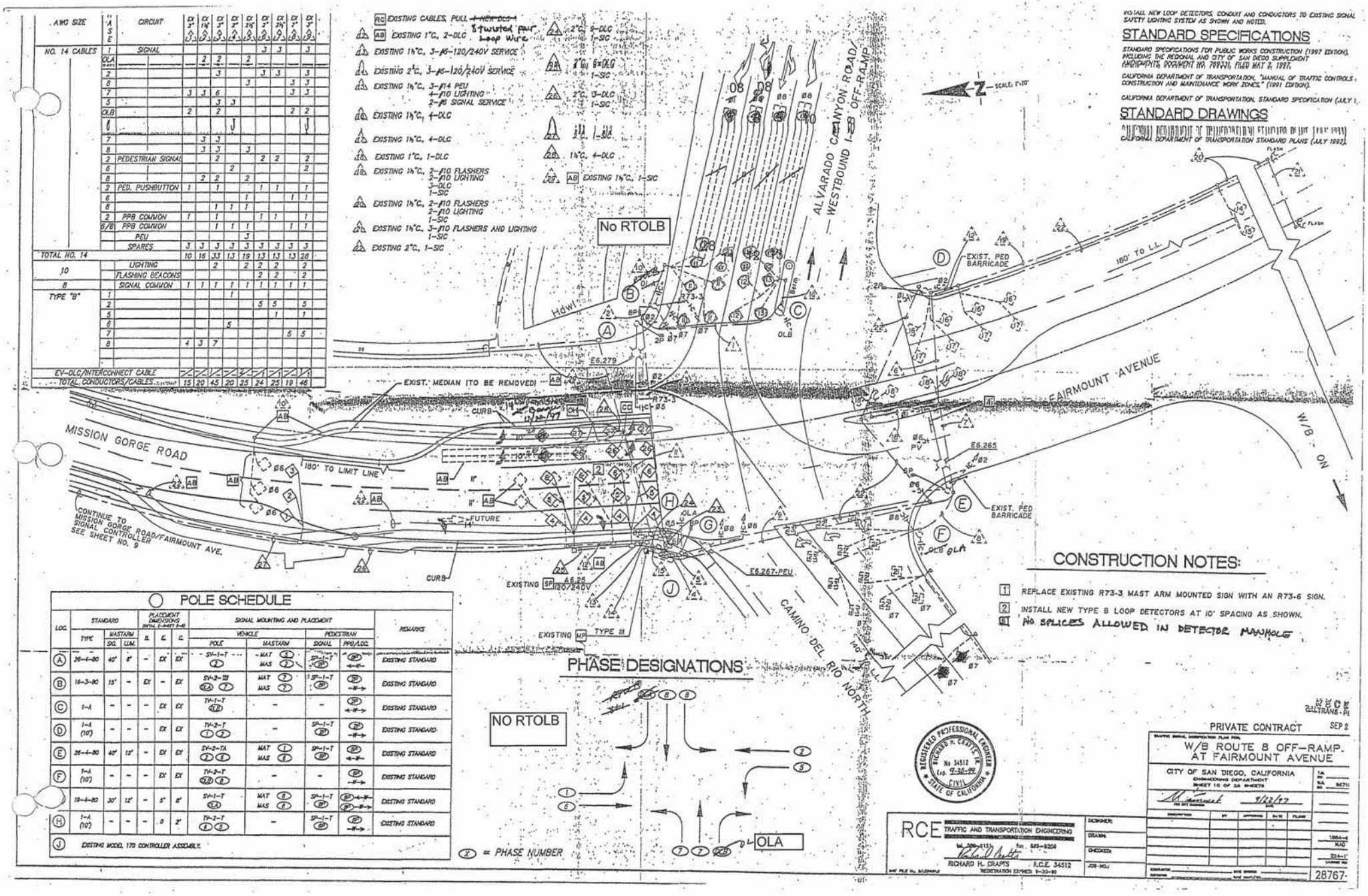
B TIME OF DAY MAX RECALL (2ND SELECT)

C YELLOW YIELD COORDINATION

D YELLOW YIELD COORDINATION

E TIME OF DAY FREE OPERATION

F FLASHING OPERATION


NO. 14 CABLES
TOTAL NO. 14
10
8
TYPE "B"
EV-DLC/INTERCONNECT CABLE
TOTAL CONDUCTORS/CABLES
EXISTING CABLES, PULL & INSTALL NEW DLC-1
EXISTING 1"C, 2-DLC
EXISTING 1½"C, 3-#6-120/240V SERVICE
EXISTING 2"C, 3-#6-120/240V SERVICE
EXISTING 1½"C, 3-#14 PEU 4-#10 LIGHTING 2-#6 SIGNAL SERVICE
EXISTING 1½"C, 4-DLC
EXISTING 1½"C, 4-DLC
EXISTING 1"C, 1-DLC
EXISTING 1½"C, 2-#10 FLASHERS 2-#10 LIGHTING 3-DLC 1-SIC
EXISTING 1½"C, 2-#10 FLASHERS 2-#10 LIGHTING 1-SIC
EXISTING 1½"C, 3-#10 FLASHERS AND LIGHTING 1-SIC
EXISTING 2"C, 1-SIC
2"C, 8-DLC 1-SIC
2"C, 8-DLC 1-SIC
2"C, 3-DLC 1-SIC
1½"C, 4-DLC
EXISTING 1½"C, 1-SIC
No RTOLB
ALVARADO CANYON ROAD — WESTBOUND I-8 OFF-RAMP
MISSION GORGE ROAD
FAIRMOUNT AVENUE
W/B - ON
EXIST. MEDIAN (TO BE REMOVED)
180' TO LIMIT LINE
180' TO LL
CONTINUE TO MISSION GORGE ROAD/FAIRMOUNT AVE. SIGNAL CONTROLLER SEE SHEET NO. 9
FUTURE
EXISTING SP 240/120V
EXISTING MP TYPE III
CAMINO DEL RIO NORTH
EXIST. PED BARRICADE
OLB
OLA
E6.279
E6.265
E6.267-PEU
CURB
SCALE: 1"=20'
INSTALL NEW LOOP DETECTORS, CONDUIT AND CONDUCTORS TO EXISTING SIGNAL SAFETY LIGHTING SYSTEM AS SHOWN AND NOTED.
STANDARD SPECIFICATIONS
STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (1997 EDITION), INCLUDING THE REGIONAL AND CITY OF SAN DIEGO SUPPLEMENT AMENDMENTS, DOCUMENT NO. 769931, FILED MAY 2, 1997.
CALIFORNIA DEPARTMENT OF TRANSPORTATION, "MANUAL OF TRAFFIC CONTROLS, CONSTRUCTION AND MAINTENANCE WORK ZONES," (1996 EDITION).
CALIFORNIA DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATION (JULY 1, 1992).
STANDARD DRAWINGS
CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS (JULY 1992).
CONSTRUCTION NOTES:
1 REPLACE EXISTING R73-3 MAST ARM MOUNTED SIGN WITH AN R73-6 SIGN.
2 INSTALL NEW TYPE B LOOP DETECTORS AT 10' SPACING AS SHOWN.
3 NO SPLICES ALLOWED IN DETECTOR MANHOLE
PHASE DESIGNATIONS
NO RTOLB
OLA
(X) = PHASE NUMBER
POLE SCHEDULE
A 26-4-80 40' 8' - EX EX SV-1-T (1) MAT (4) MAS (4) SP-1-T (8) (P) EXISTING STANDARD
B 16-3-80 15' - EX - EX SV-2-TB (4A) (7) MAT (2) MAS (7) SP-1-T (8) (P) EXISTING STANDARD
C 1-A - - - EX EX TV-1-T (4B) - - (P) EXISTING STANDARD
D 1-A (10') - - - EX EX TV-2-T (1) (2) - SP-1-T (8) (P) EXISTING STANDARD
E 26-4-80 40' 12' - EX EX SV-2-TA (2) (4) MAT (1) MAS (4) SP-1-T (8) (P) EXISTING STANDARD
F 1-A (10') - - - EX EX TV-2-T (4B) (8) - SP-1-T (8) (P) EXISTING STANDARD
G 19-4-80 30' 12' - 5' 8' SV-1-T (4A) MAT (6) MAS (6) SP-1-T (8) (P) EXISTING STANDARD
H 1-A (10') - - - 0 2' TV-2-T (1) (3) - SP-1-T (8) (P) EXISTING STANDARD
J EXISTING MODEL 170 CONTROLLER ASSEMBLY.
PRIVATE CONTRACT SEP 2
W/B ROUTE 8 OFF-RAMP AT FAIRMOUNT AVENUE
CITY OF SAN DIEGO, CALIFORNIA ENGINEERING DEPARTMENT SHEET 10 OF 24 SHEETS
RICHARD H. CRAPPS R.C.E. 34512 REGISTRATION EXPIRES 9-30-92
RCE TRAFFIC AND TRANSPORTATION ENGINEERING
28767-

LOCATION: **RTE 8 WB @ HOTEL CIRCLE NORTH (TAYLOR STREET)**

CALTRANS C8 Version 3 DATE: 1/27/2015 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9	PRE-EMPTION E		FLAGS	F 1	2	3	4	5	6	7	8	
0	WALK	1	1	1	1	1	1	1	1	CLK RST	EV SEL	0	PERMIT	1	2	3	4	5	6	7	8	0
1	DONT WALK	1	1	1	1	1	1	1	1		RR1 CLR	5	RED LOCK	1	2	3	4	5	6	7	8	1
2	MIN GREEN	1	1	1	5	1	5	5	5		EVA DLY	0	YEL LOCK								8	2
3	TYPE 3 DET	0	0	0	0	0	60	0	0		EVA CLR	5	V RECALL		2				6			3
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		EVB DLY	0	P RECALL									4
5	PASSAGE	0.9	0.9	0.9	1.0	0.9	4.0	1.0	1.0		EVB CLR	5	PED PHASES									5
6	MAX GAP	0.9	0.9	0.9	1.0	0.9	6.0	1.0	1.0		EVC DLY	0	RT OLA									6
7	MIN GAP	0.9	0.9	0.9	1.0	0.9	2.0	1.0	1.0		EVC CLR	5	RT OLB									7
8	MAX EXT	9	9	9	25	9	35	25	25		EVD DLY	0	DBL ENTRY				4				8	8
9	MAX 2									YR	EVD CLR	5	MAX 2 PHASES									9
A	MAX 3									MO	MAX EV	255	LAG PHASES	READ ONLY								A
B										DAY	RR2 CLR	5	RED REST									B
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	DOW			REST-IN-WALK									C
D	EVERY	1.0	1.0	1.0	1.0	1.0	0.6	1.0	1.0	HR			MAX 3 PHASES									D
E	YELLOW	3.0	3.0	3.0	4.0	3.0	5.5	4.0	4.0	MIN			YEL START UP		2				6			E
F	RED	0.0	0.0	0.0	1.0	0.0	2.0	1.0	1.0	SEC			FIRST PHASE				4			7		F
	PED XING FT													1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

ENTRIES IN THESE LOCATIONS ARE NOT TO BE CHANGED

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

LOCATION: **RTE 8 WB @ HOTEL CIRCLE NORTH (TAYLOR STREET)**

CALTRANS C8 DATE: 9/11/95

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE		FLAG									
		1	2	3	4	5	6	7	8	9		C	D	E		F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH															LAG FZ FREE		X		X		X		X	0
1	FZ1 GRN FCTR													GAPOUT CP1	0	LAG FZ CP 1									1
2														GAPOUT CP2	0	LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3	0	LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4	0	LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5	0	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	0	LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7	0	LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8	0	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	0	LAG FZ CP 9									9
A	OFFSET A										OFFSET					LAG C COORD									A
B	OFFSET B															LAG D COORD									B
C	OFFSET C															COORD FAZES		X				X			C
D	FZ 3 EXT																								D
E	FZ 7 EXT																								E
F	OFFSET INTRP																								F

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER :
WB @ HOTEL CIRCLE

LOCATION	OFF	ON
1		X
2	X	
3	X	
4	X	
5	X	
6	X	
7	X	
8	X	

COO = 1

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

LOCATION: RTE 8 WB @ HOTEL CIRCLE NORTH (TAYLOR STREET)

CALTRANS C8 DATE 9/11/95

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		X							5
6										6 PED						X			6
7										4 PED				X					7
8										8 PED								X	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E

MINUTE = D-B-E

DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)

RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F

MINUTE = D-B-F

DAY = D-C-F

D-E-E = C8 VERSION NUMBER

D-E-F = LITHIUM BATTERY CONDITION

84 = BAD

85 = GOOD

LOCATION: **RTE 8 WB @ HOTEL CIRCLE NORTH (TAYLOR STREET)**

CALTRANS C8 DATE : 9/11/95

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
				ON/	S	M	T	W	T	F	S
	HR	MIN	ACT	OFF	1	2	3	4	5	6	7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
					S	M	T	W	T	F	S
	HR	MIN	CP	OS	1	2	3	4	5	6	7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 2

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
					S	M	T	W	T	F	S
	HR	MIN	CP	OS	1	2	3	4	5	6	7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION

2 MAX 2

3 MAX 3

4 COND SERV (1ST SELECT)

5 COND SERV (2ND SELECT)

6 ENERGIZE AUX OUTPUT-RED

7 ENERGIZE AUX OUTPUT-GREEN

8 ENERGIZE AUX OUTPUT-YELLOW

9 TIME OF DAY MAX RECALL (1ST SELECT)

A TRAFFIC ACT. MAX 2 OPERATION

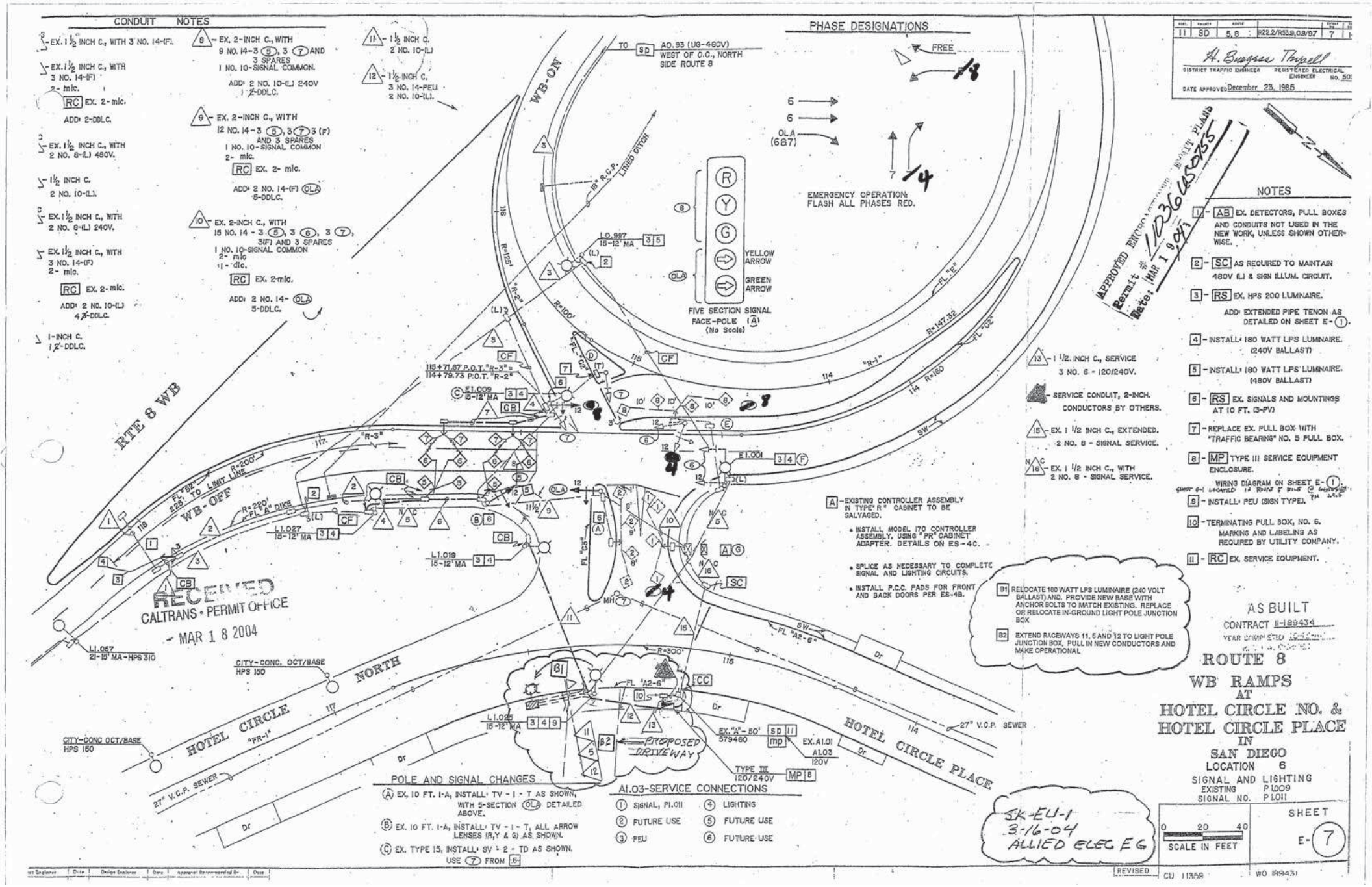
B TIME OF DAY MAX RECALL (2ND SELECT)

C YELLOW YIELD COORDINATION

D YELLOW YIELD COORDINATION

E TIME OF DAY FREE OPERATION

F FLASHING OPERATION



- 1 - AB EX. DETECTORS, PULL BOXES AND CONDUITS NOT USED IN THE NEW WORK, UNLESS SHOWN OTHERWISE.
- 2 - SC AS REQUIRED TO MAINTAIN 480V (L) & SIGN ILLUM. CIRCUIT.
- 3 - RS EX. HPS 200 LUMINAIRE. ADD: EXTENDED PIPE TENON AS DETAILED ON SHEET E-(1).
- 4 - INSTALL: 180 WATT LPS LUMINAIRE. (240V BALLAST)
- 5 - INSTALL: 180 WATT LPS LUMINAIRE. (480V BALLAST)
- 6 - RS EX. SIGNALS AND MOUNTINGS AT 10 FT. (3-PV)
- 7 - REPLACE EX. PULL BOX WITH "TRAFFIC BEARING" NO. 5 PULL BOX.
- 8 - MP TYPE III SERVICE EQUIPMENT ENCLOSURE. WIRING DIAGRAM ON SHEET E-(1) LOCATED IN ROUTE 5 PLANS (2 SHEETS)
- 9 - INSTALL: PEU (SIGN TYPE).
- 10 - TERMINATING PULL BOX, NO. 6. MARKING AND LABELING AS REQUIRED BY UTILITY COMPANY.
- 11 - RC EX. SERVICE EQUIPMENT.

- A - EXISTING CONTROLLER ASSEMBLY IN TYPE "R" CABINET TO BE SALVAGED.
  - INSTALL MODEL 170 CONTROLLER ASSEMBLY, USING "PR" CABINET ADAPTER. DETAILS ON ES-4C.
  - SPLICE AS NECESSARY TO COMPLETE SIGNAL AND LIGHTING CIRCUITS.
  - INSTALL P.C.C. PADS FOR FRONT AND BACK DOORS PER ES-4B.

- B1 RELOCATE 180 WATT LPS LUMINAIRE (240 VOLT BALLAST) AND PROVIDE NEW BASE WITH ANCHOR BOLTS TO MATCH EXISTING. REPLACE OR RELOCATE IN-GROUND LIGHT POLE JUNCTION BOX
- B2 EXTEND RACEWAYS 11, 5 AND 12 TO LIGHT POLE JUNCTION BOX, PULL IN NEW CONDUCTORS AND MAKE OPERATIONAL

- (A) EX. 10 FT. I-A, INSTALL: TV - 1 - T AS SHOWN, WITH 5-SECTION (OLA) DETAILED ABOVE.
- (B) EX. 10 FT. I-A, INSTALL: TV - 1 - T, ALL ARROW LENSES (R,Y & G) AS SHOWN.
- (C) EX. TYPE 15, INSTALL: SV 1 2 - TD AS SHOWN. USE (7) FROM 16

(1) SIGNAL, PI.011 (4) LIGHTING
(2) FUTURE USE (5) FUTURE USE
(3) PEU (6) FUTURE USE

48

INTERSECTION: FASHION VALLEY RD @ HOTEL CIRCLE N

223 Program

Group Assignment:
Field Master Assignment:

N/S Street Name: FASHION VALLEY
E/W Street Name: HOTEL CIRCLE N

HOTEL CIRCLE N | FASHION VALLEY | HOTEL CIRCLE N

Row	Column # / Phase #	1	2 →	3	4	5	6 ←	7	8
0	Ped Walk				7		7		
1	Ped FDW				10		12		
2	Min Green		4		4	4	4		
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn		2.8		2.0	2.0	3.9		
6	Max Gap		2.8		2.0	2.0	3.9		
7	Min Gap		0.2		2.0	2.0	0.2		
8	Max Limit		40		40	30	40		
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs						2		
C	Reduce By		0.1				0.1		
D	Every		1.1				0.8		
E	Yellow		3.9		3.9	3.4	3.9		
F	Red Clear		1.0		1.0	1.0	1.0		

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row		E
	RR-1 Delay	
	RR-1 Clear	
	EV-A Delay	0
	EV-A Clear	0
	EV-B Delay	0
	EV-B Clear	0
	EV-C Delay	0
	EV-C Clear	0
	EV-D Delay	0
	EV-D Clear	0
	RR-2 Delay	
	RR-2 Clear	
	View EV Delay	---
	View EV Clear	---
	View RR Delay	---
	View RR Clear	---

F + E + Row

Row		F
0	Permit	2 456
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	Peds (View)	4 6
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	2 6
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	2 6
F	1st Phases	4

F + F + Row

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number		C + 0 + 0
Zone Number		C + 0 + 1
Area Number		C + 0 + 2
Area Address		C + 0 + 3
QuicNet Channel		(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	2 4 6	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +
<D Page>
D + 0 + OVERLAP

Manual Plan	14	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	234

Disable Communication Ports
D + D + 9

Timing Sheet By: M2S
Approved By: FLG
Drawing Number: 27700-4-D
Timing Implemented On:

Sent to Street Div. for implementation
Mariana

INTERSECTION: FASHION VALLEY RD @ HOTEL CIRCLE N

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function 7 + ROW

<D Page> D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration E + F + ROW <E Page>

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1_345
F	IC Select (Interconnect)	2

Configuration E + E + ROW

For access, set F + 9 + E = 1

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 = Bus Advance

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5	10.0	
6		
7		
8		
9		1.8
A		
B		
C		
D		
E		
F	---	---

Note: 336 Controller Cabinet

Detector Name	336 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	3I3U	21
	3I3L	25
	4I4U	9
	4I4L	16
	5I5U	3
	5I5L	7
	6I6U	23
	6I6L	27
	7I7U	11
	7I7L	18
	8I8U	20
	8I8L	
---	---	---

Row	2 Delay	4 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row	0 Detector #
0	
1	System Det. # 1
2	System Det. # 2
3	System Det. # 3
4	System Det. # 4
5	System Det. # 5
6	System Det. # 6
7	System Det. # 7
8	System Det. # 8

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

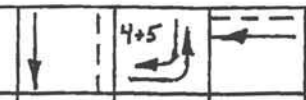
Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

200 SA 1.e

PHASE TIMING

Hotel Circle — Fashion Valley — Hotel Circle



INTERVAL		1	2	3	4	5	6	7	8
WALK	0				7		7		
FLASH D/W	1				9		12		
MIN GREEN	2		4		4	4	4		
TYPE 3 DET	3								
ADD PER VEH	4								
VEH EXTN *	5		3.1		2.0	2.0	3.1		
MAX GAP *	6		3.1		2.0	2.0	3.1		
MIN GAP *	7		0.2		2.0	2.0	0.2		
MAX EXTN	8		40		40	30	40		
MAX 2	9								
BUS LEAD	A								
CALL TO PHS	B					2			
REDUCE BY	C		0.1				0.1		
EVERY	D		1.0				1.0		
YELLOW	E		3.9		4.2	3.0	3.9		
RED CLEAR	F		1.0		1.0	1.0	1.0		

F + PHASE + LOCATION

PREEMPT		
	E	
RR 1 DELAY		0
RR 1 CLEAR		1
EVA DELAY		2
EVA CLEAR		3
EVB DELAY		4
EVB CLEAR		5
EVC DELAY		6
EVC CLEAR		7
EVD DELAY		8
EVD CLEAR		9
RR2 DELAY		A
RR 2 CLEAR		B
EV CLR TMR		C
EV DLY TMR		D
RR CLR TMR		E
RR DLY TMR		F

* Must be the same for non-density operation

MAX INITIAL (F-0-E) 0 RED REVERT (F-0-F) 5.0 ALL-RED START (F-C-0) 0.0

PHASE FUNCTION FLAGS

		PHASE 1	2	3	4	5	6	7	8
PERMIT	0		X		X	X	X		
RED LOCK	1								
YELLOW LOCK	2								
VEHICLE RECALL	3								
PED RECALL	4								
PEDS (VIEW)	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A		X				X		
MAX 2	B								
COND SERVICE	C								
	D								
START-UP	E		X				X		
FIRST PHASES	F				X				

F + F + FUNCTION

OVERLAP TIMING

LOAD SWITCH		GREEN 9	YELLOW C	RED D
	OLAP A			
	OLAP B			
	OLAP C			
	OLAP D			

D + 0 + OVERLAP

F + COLOR +

PHASE SEQUENCE

	PHASE 1	2	3	4	5	6	7	8
LAG 0 (FREE)		X		X		X		

C + F + 0

MANUAL (C-A-1) 14

ADDRESS (C-0-0)

TURN-ON DATE: 03-14-1978

TIME:

DRAWING NO. D- 27700-4-D

LAST CHANGE: 11-24-1998

BY: BJU

W.O. #620027 T.O. 10:00

LOCATION Fashion Valley Rd & Hotel Circle North

DETECTOR TIMES (Type 336 Cabinet)

Y \ X	1 SET DELAY	2 SET DELAY	3 SET CARRY	4 SET CARRY	5 OBS COUNT	6 OBS COUNT	7 OBS DELAY	8 OBS DELAY	9 OBS CARRY	A OBS CARRY
0	1I1U	5I5U	1I1U	5I5U	1I1U	5I5U	1I1U	5I5U	1I1U	5I5U
1	2I2U	6I6U	2I2U 1.8	6I6U 1.8	2I2U	6I6U	2I2U	6I6U	2I2U	6I6U
2	2I2L	6I6L	2I2L	6I6L	2I2L	6I6L	2I2L	6I6L	2I2L	6I6L
3										
4										
5	2I1L	6I5L	2I1L	6I5L	2I1L	6I5L	2I1L	6I5L	2I1L	6I5L
6	3I3U	7I7U	3I3U	7I7U	3I3U	7I7U	3I3U	7I7U	3I3U	7I7U
7	4I4U 10.	8I8U	4I4U	8I8U	4I4U	8I8U	4I4U	8I8U	4I4U	8I8U
8	4I4L	8I8L	4I4L	8I8L	4I4L	8I8L	4I4L	8I8L	4I4L	8I8L
9										
A										
B	4I3L	8I7L	4I3L	8I7L	4I3L	8I7L	4I3L	8I7L	4I3L	8I7L
C										
D										

D + X (ACROSS) + Y (DOWN)

TO ACCESS CONFIGURATION DATA, SET F-9-E = 1

TIME OF DAY FEATURES

EVENT	TIME	FUNC	DAY OF WEEK S	M	T	W	T	F	S
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									

7 + EVENT #

PHASE OR FUNCTION

1	2	3	4	5	6	7	8

D + F + EVENT

TIME OF DAY FUNCTION CODES

0-PERMIT	E-1-LOCAL OVERRIDE
1-RED LOCK	2-PHASE BANK 2
2-YELLOW	3-PHASE BANK 3
3-VEH RECALL	7-DET COUNT
4-PED RECALL	8-SPLIT MONITOR
5-[RESERVED]	
6-REST IN WALK	F - TOD OUTPUTS
7-RED REST	1- TOD OUTPUT 1
8-DBL ENTRY	2- TOD OUTPUT 2
9-VEH MAX RCL	3- TOD OUTPUT 3
A-SOFT RCL	4- TOD OUTPUT 4
B-MAX 2 EXT	
C-COND SERV	
D-TOD LAG PHS	

TIME AND DATE

8 - 0 HOUR, MINUTE, DAY-OF-WEEK
8 - 1 DAY-OF-MONTH, YEAR, MONTH
8 - F SECONDS

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
EXCLUSIVE	0								
RR1 GN CLR	1								
RR2 GRN CLR	2								
RR2 LTD SRV	3								
PRO/PERM	4								
OLA GN OMIT	5				X				
OLB GN OMIT	6								
OLC GN OMIT	7								
OLD GN OMIT	8								
OV FL YELLOW	9								
EMVEH A	A								
EMVEH B	B								
EMVEH C	C								
EMVEH D	D								
EXTRA	E	X		X					
IC SELECT	F		X						

E + E + INTERVAL

EXTRA (E+E+E)
1-TBC TYPE 1
2-NEMA COORD
3-DAYLIGHT
4-EV ADVANCE
5-REMOTE EVP
6-SPECIAL EVENT
7-PRETIMED
8-SPLIT RING

ICSELECT (E+E+F)
1-SIMPLEX IN
2-2 WAY MODEM
3-7 WIRE IN
4-FLH/FREE
5-SIMPLEX OUT
6-7 WIRE OUT

ASSIGN5 (E+F+F)
1-RT OVERLAP
2-TOD OUTPUTS
3-STEADY EV BEACON
4-FLASH EV BEACON

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
	0								
RR OLAP A	1								
RR OLAP B	2								
RR OLAP C	3								
RR OLAP D	4								
PED 2P	5								
PED 6P	6						X		
PED 4P	7				X				
PED 8P	8								
FLH YELLOW	9								
OVERLAP A	A				X	X			
OVERLAP B	B								
OVERLAP C	C								
OVERLAP D	D								
RESTRICT	E								
ASSIGN5	F	X							

E + F + INTERVAL

LOCATION	Fashion Valley Rd	&	Hotel Circle North

INTERSECTION: CMN DEL RIO (N) @ MISSION CENTER

223 Program

Group Assignment: 4096
Field Master Assignment: NONE
N/S Street Name: MISSION CENTER
E/W Street Name: CMN DEL RIO (N)
Last Database Change:
System Ref. Number: 520

N

	AUTO CIRCLE	CAM DEL RIO (N)		MISSION CENTER		CAM DEL RIO (N)	
Column # ---->	Phase						
Phase # ---->	1	2	3	4	5	6	7	8
Row								
0	Ped Walk					7		7
1	Ped FDW					16		24
2	Min Green	4	10	4	7	4	10	4	7
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	3.0	2.0	2.0	3.0	2.0	4.4	2.0	2.0
6	Max Gap	3.0	2.0	2.0	3.0	2.0	4.4	2.0	2.0
7	Min Gap	3.0	2.0	2.0	3.0	2.0	0.2	2.0	2.0
8	Max Limit	30	60	30	35	30	60	30	35
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By						0.1		
D	Every						0.7		
E	Yellow	3.4	3.9	3.4	3.9	3.4	3.9	3.4	4.3
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Grade								

Phase Timing - Bank 1
F + Phase + Row

Row		E
	RR-1 Delay	
	RR-1 Clear	
	EV-A Delay	0
	EV-A Clear	0
	EV-B Delay	0
	EV-B Clear	0
	EV-C Delay	0
	EV-C Clear	0
	EV-D Delay	0
	EV-D Clear	0
	RR-2 Delay	
	RR-2 Clear	
	View EV Delay	---
	View EV Clear	---
	View RR Delay	---
	View RR Clear	---

Preempt Timing
F + E + Row

Row		F
0	Permit	12345678
1	Red Lock	
2	Yellow Lock	
3	Min Recall	
4	Ped Recall	
5	Peds (View)	6 8
6	Rest In Walk	
7	Red Rest	
8	Dbl Entry	
9	Max Recall	
A	Soft Recall	2 6
B	Max 2	
C	Cond Serv	
D	Ped Lock	12345678
E	Yellow Start	2 6
F	1st Phases	4 8

Phase Functions <F Page>
F + F + Row

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	1
Zone Number	1
Area Number	4
Area Address	65
QuicNet Channel	DIGI85:

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	2 4 6 8	0

Lag Phases <C Page>

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +

<D Page>
D + 0 + OVERLAP

Manual Plan	0
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	234

Disable Communication Ports
D + D + 9

Timing Sheet By: EFF
Approved By: EFF
Drawing Number:
Timing Implemented On: 11/14/06

INTERSECTION: CMN DEL RIO (N) @ MISSION CENTER

223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0	:			
1	:			
2	:			
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	
6	Ped 6P	6
7	Ped 4P	
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

For access, set F + 9 + E = 1

Configuration

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		1.8
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: CMN DEL RIO (N) @ MISSION CENTER

223 Program

Row	Column # ---> / Plan Name --->	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
0	Cycle Length			140	150	140				
1	Phase 1 - ForceOff			102	115	107				
2	Phase 2 - ForceOff			0	0	0				
3	Phase 3 - ForceOff			38	32	30				
4	Phase 4 - ForceOff			71	68	64				
5	Phase 5 - ForceOff			102	104	102				
6	Phase 6 - ForceOff			0	0	0				
7	Phase 7 - ForceOff			34	32	28				
8	Phase 8 - ForceOff			71	68	64				
9	Ring Offset									
A	Offset A			98	6	114				
B	Offset B									
C	Offset C									
D	Permissive			10	10	10				
E	Hold Release			255	255	255				
F	Ped Shift			0	0	0				

Coordination <C Page>

C + Plan + ROW

Coordination Timing By: EFF

Implemented On: 12/5/2001

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	11 : 00	3	A	_23456_
1	15 : 00	4	A	_23456_
2	19 : 00	E	A	1234567
3	10 : 00	5	A	1____7
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Coordination

<9 Key with C+0+9=1>

Plan Select

1 thru 9 = Coordination Plan 1 thru 9

14 or E = Free

15 or F = Flash

	E	Row		F
		0	Free Lag	_2_4_6_8
Plan 1		1	Plan 1 - Lag	
Plan 2		2	Plan 2 - Lag	
Plan 3	_2___6__	3	Plan 3 - Lag	_2_4_6_8
Plan 4	_2___6__	4	Plan 4 - Lag	_2_4_6_8
Plan 5	_2___6__	5	Plan 5 - Lag	_2_4_6_8
Plan 6		6	Plan 6 - Lag	
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases

C + E + FUNCTION #

Lag Phases <C Page>

C + F + FUNCTION #

Transition Type	0

TBC Transition

C + D + D

Transition Type

0 = Shortway

Non-zero = Lengthen

INTERSECTION: CMN DEL RIO (N) & MISSION CENTER / AUTO CIRCLE

223 gram

Group Assignment: 4096
Field Master Assignment: NONE

N/S Street Name: MISSION CENTER / AUTO CIRCLE
E/W Street Name: CMN DEL RIO (N)

Last Database Change: 08/28/200
Timing Sheet By: EFF
Approved By: MM
System Ref. Number: 520
Drawing Number: 29103-25
Timing Implemented On: 10/17/01

EFF 8/5/02

11-8-06 9am

Row	Phase # →	1	2	3	4	5	6	7	8
	Column # →	AUTO CIRCLE		CMN DEL RIO N.			MISSION CTR		CMN DEL RIO N.
0	Ped Walk						7		7
1	Ped FDW						16		24
2	Min Green	4	10	4	7	4	10	4	7
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	3.0 ~~2.0~~	2.0	2.0	3.0 ~~2.0~~	2.0	4.4	2.0	2.0
6	Max Gap	3.0 ~~2.0~~	2.0	2.0	3.0 ~~2.0~~	2.0	4.4	2.0	2.0
7	Min Gap	3.0 ~~2.0~~	2.0	2.0	3.0 ~~2.0~~	2.0	0.2	2.0	2.0
8	Max Limit	30	60	30	35 ~~40~~	30	60	30	35 ~~40~~
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs								
C	Reduce By						0.1		
D	Every						0.7		
E	Yellow	3.4 ~~3.0~~	3.9 ~~3.2~~	3.4 ~~3.0~~	3.9	3.4 ~~3.0~~	3.9 ~~3.0~~	3.4 ~~3.0~~	4.3
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <F Page>
F + Phase + Row

Row	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing
F + E + Row

Row	F
Permit	12345678
Red Lock	
Yellow Lock	
Min Recall	
Ped Recall	
Peds (View)	_____6_8
Rest In Walk	
Red Rest	
Dbl Entry	
Max Recall	
Soft Recall	_2___6__
Max 2	
Cond Serv	
Ped Lock	12345678
Yellow Start	_2___6__
1st Phases	___4___8

Phase Functions <F Page>
F + F + Row

Max Initial	0
Red Revert	5.0
All Red Start	0.0

Start / Revert Times — F + 0 + E / F + 0 + F / F + C + O

Drop Number	1
Zone Number	1
Area Number	4
Area Address	65
QuicNet Channel	DIGI85:

C + 0 + 0 / C + 0 + 1 / C + 0 + 2 / C + 0 + 3 / (QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2_4_6_8	0

Lag Phases <C Page>

Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A			
Overlap B	B			
Overlap C	C			
Overlap D	D			

<F Page> **Overlap Timing** <D Page>
F + COLOR + D + 0 + OVERLAP

Manual Plan	0
Manual Offset	0

C + A + 1 / C + B + 1

Manual Selection

Manual Plan: 0 = Automatic; 1-9 = Plan 1-9; 14 = Free; 15 = Flash

Manual Offset: 0 = Automatic; 1 = Offset A; 2 = Offset B; 3 = Offset C

Downtime Flash	255 (minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	_234___

Disable Communication Ports
D + D + 9

(2)

INTERSECTION: CMN DEL RIO (N) & MISSION CENTER

223 Program

Row	Time	Function	Day of Week	Column F Phases/Bits
0	00 : 01	E	1234567	1_____
1	:			
2	:			
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	
6	Ped 6P	6
7	Ped 4P	
8	Ped 8P	8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

For access, set F + 9 + E = 1

Configuration

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Prelimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week

8-1 Day-of-Month, Year, Month

8-F Seconds

Disable Parity	0

D+B+0

Dial-Up Telephone Communications

(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program

C + C + F = version

Remote Download

C + 0 + 4 = 1 -255

w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		1.8
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 – – – –	1234____
C	13 14 15 16 17 18 19 20	12345678
D	– – – – 21 22 23 24	____5678
E	– – – – – – – –	1234____
F	– 25 26 27 28 – – –	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: CMN DEL RIO (N) & MISSION CENTER

223 Program

Row	Column # ---> / Plan Name --->	Plan 1	2	3	4	5	6	7	8	9
0	Cycle Length	120								
1	Phase 1 - ForceOff	92								
2	Phase 2 - ForceOff									
3	Phase 3 - ForceOff	31								
4	Phase 4 - ForceOff	60								
5	Phase 5 - ForceOff	92								
6	Phase 6 - ForceOff									
7	Phase 7 - ForceOff	31								
8	Phase 8 - ForceOff	60								
9	Ring Offset									
A	Offset A	19								
B	Offset B									
C	Offset C									
D	Permissive	10								
E	Hold Release	255								
F	Ped Shift	6								

Coordination <C Page>

C + Plan + ROW

Coordination Timing By: ARS
Implemented On: 5/17/94

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	11 : 30	1	A	1234567
1	19 : 00	E	A	1234567
2	:			
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Coordination

<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	2 4 6 8
Plan 1	2 6	1	Plan 1 - Lag	2 4 6 8
Plan 2		2	Plan 2 - Lag	
Plan 3		3	Plan 3 - Lag	
Plan 4		4	Plan 4 - Lag	
Plan 5		5	Plan 5 - Lag	
Plan 6		6	Plan 6 - Lag	
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases

C + E + FUNCTION #

Lag Phases <C Page>

C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

50 LOCATION: **RTE 8 WB @ CAMINO DEL RIO NORTH**

CALTRANS C8 Version 3 DATE: 1/27/2015 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	1	1	40	1	1	1	1	CLK RST
1	DONT WALK	1	1	1	1	1	1	1	1	
2	MIN GREEN	5	12	1	8	6	10	1	1	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	
5	PASSAGE	2.0	3.0	0.9	4.0	0.9	3.0	0.9	0.9	
6	MAX GAP	2.0	3.0	0.9	4.0	0.9	3.0	0.9	0.9	
7	MIN GAP	2.0	3.0	0.9	4.0	0.9	3.0	0.9	0.9	
8	MAX EXT	30	20	9	45	20	20	9	9	
9	MAX 2									YR
A	MAX 3				75					MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.7	5.0	3.0	5.0	3.0	5.0	3.0	3.0	MIN
F	RED	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	SEC
	PED XING FT									
	BIKE XING FT		81				56			

PRE-EMPTION E		F FLAGS	1	2	3	4	5	6	7	8	
EV SEL	0	PERMIT	1	2		4	5	6			0
RR1 CLR	5	RED LOCK	1								1
EVA DLY	0	YEL LOCK		2				6			2
EVA CLR	5	V RECALL				4					3
EVB DLY	0	P RECALL									4
EVB CLR	5	PED PHASES				4					5
EVC DLY	0	RT OLA									6
EVC CLR	5	RT OLB									7
EVD DLY	0	DBL ENTRY		2				6			8
EVD CLR	5	MAX 2 PHASES									9
MAX EV	255	LAG PHASES	READ ONLY								A
RR2 CLR	5	RED REST									B
		REST-IN-WALK									C
		MAX 3 PHASES				4					D
		YEL START UP		2				6			E
		FIRST PHASE				4					F
			1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	15
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

NOTES:

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY ▒

LOCATION: **RTE 8 WB @ CAMINO DEL RIO NORTH**

CALTRANS C8 Version 3 DATE: 12/14/2004

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAGS									
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH	140	150												LAG FZ FREE		2		4		6		8	0
1	FZ1 GRN FCTR	25	30											GAPOUT CP1	LAG FZ CP 1		2		4	5			8	1
2														GAPOUT CP2	LAG FZ CP 2		2		4	5			8	2
3	FZ3 GRN FCTR	0	0											GAPOUT CP3	LAG FZ CP 3									3
4	FZ4 GRN FCTR	70	70								PERM TIME			GAPOUT CP4	LAG FZ CP 4									4
5	FZ5 GRN FCTR	20	25								LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR	0	0								LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR	0	0								NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE	0	0											GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A	65	85								OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		2				6			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRPT																							F
																1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP *SYSTEM MASTER:*
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8		

LOCATION	OFF	ON
1		1
2		
3		
4		
5		
6		
7		
8		

COO = 1

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS								
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8	
0	RCL									RCL									RCL									0
1	CP 1					5				CP 1		2				6			CP 1				4					1
2	CP 2					5				CP 2		2				6			CP 2				4					2
3	CP 3									CP 3									CP 3									3
4	CP 4									CP 4									CP 4									4
5	CP 5									CP 5									CP 5									5
6	CP 6									CP 6									CP 6									6
7	CP 7									CP 7									CP 7									7
8	CP 8									CP 8									CP 8									8
9	CP 9									CP 9									CP 9									9
A																			RCL 1									A
B																			RCL 2									B
C																												C
D																												D
E																												E
F																												F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		2							5
6										6 PED						6			6
7										4 PED				4					7
8										8 PED								8	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E
MINUTE = D-B-E
DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)
RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F
MINUTE = D-B-F
DAY = D-C-F

D-E-E = C8 VERSION NUMBER
D-E-F = LITHIUM BATTERY CONDITION
84 = BAD
85 = GOOD

LOCATION: **RTE 8 WB @ CAMINO DEL RIO NORTH**

CALTRANS C8 Version 3 DATE: 12/4/2001

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	11	00	3	X	1	2	3	4	5	6	7
1	19	00	3		1	2	3	4	5	6	7
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	11	00	1	A		2	3	4	5	6	
1	15	00	2	A		2	3	4	5	6	
2	19	00	E	A		2	3	4	5	6	
3	11	00	1	A	1						7
4	18	00	E	A	1						7
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE CO9 = 2

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION

2 MAX 2

3 MAX 3

4 COND SERV (1ST SELECT)

5 COND SERV (2ND SELECT)

6 ENERGIZE AUX OUTPUT-RED

7 ENERGIZE AUX OUTPUT-GREEN

8 ENERGIZE AUX OUTPUT-YELLOW

9 TIME OF DAY MAX RECALL (1ST SELECT)

A TRAFFIC ACT. MAX 2 OPERATION

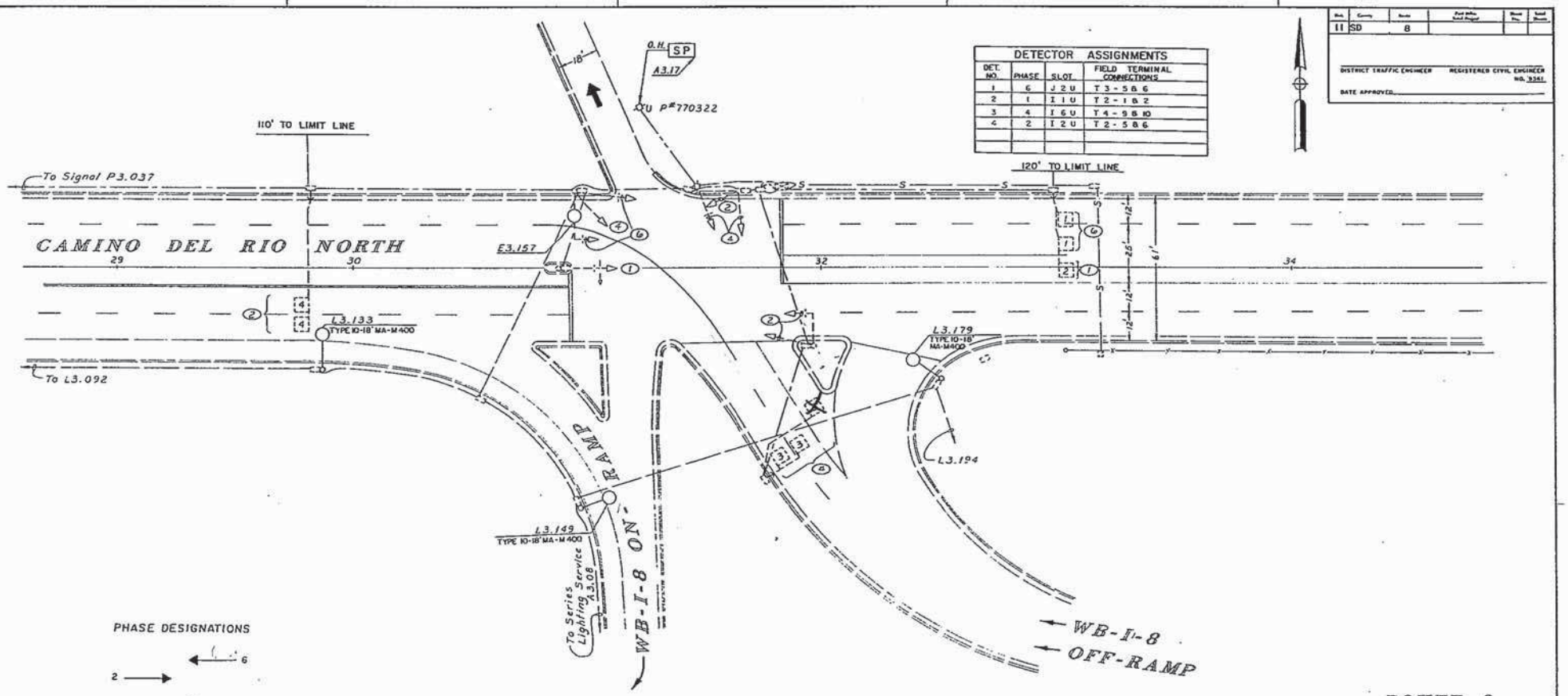
B TIME OF DAY MAX RECALL (2ND SELECT)

C YELLOW YIELD COORDINATION

D YELLOW YIELD COORDINATION

E TIME OF DAY FREE OPERATION

F FLASHING OPERATION



ROUTE 8
AT
W. B. RAMPS
TO
CAMINO DEL RIO NORTH
IN
SAN DIEGO

SIGNAL AND LIGHTING
SIGNAL NO. P 3.157

SCALE IN FEET 0 20 40

SHEET E-

CU 11359 WO 182811

FORM WH 23A-PF

51

200 SA 1.e

CAM DEL RIO N — CAM DEL ESTE — CAM DEL RIO N

PHASE TIMING

INTERVAL		1	2	3	4	5	6	7	8
WALK	0				7		7		
FLASH D/W	1				10		23		
MIN GREEN	2		4		4	4	4		
TYPE 3 DET	3								
ADD PER VEH	4				3.8				
VEH EXTN *	5		~~3.0~~ 3.5		~~3.0~~ 3.8	2.0	~~3.0~~ 3.5		
MAX GAP *	6		~~3.0~~ 3.5		~~3.0~~ 3.8	2.0	~~3.0~~ 3.5		
MIN GAP *	7		0.2		0.2	2.0	0.2		
MAX EXTN	8		60		40	30	60		
MAX 2	9								
BUS LEAD	A								
CALL TO PHS	B								
REDUCE BY	C		0.1		0.1		0.1		
EVERY	D		~~1.1~~ 1.3		~~1.1~~ 1.0.8		~~1.1~~ 1.3		
YELLOW	E		3.5		3.5	3.0	3.5		
RED CLEAR	F		1.0		1.0	1.0	1.0		

F + PHASE + LOCATION

PREEMPT		
RR 1 DELAY		0
RR 1 CLEAR		1
EVA DELAY	0	2
EVA CLEAR	3	3
EVB DELAY	0	4
EVB CLEAR	3	5
EVC DELAY	0	6
EVC CLEAR	3	7
EVD DELAY		8
EVD CLEAR		9
RR2 DELAY		A
RR 2 CLEAR		B
EV CLR TMR		C
EV DLY TMR		D
RR CLR TMR		E
RR DLY TMR		F

* Must be the same for non-density operation

MAX INITIAL (F-0-E) 0 RED REVERT (F-0-F) 5.0 ALL-RED START (F-C-0) 0.0

PHASE FUNCTION FLAGS

		PHASE 1	2	3	4	5	6	7	8
PERMIT	0		X		X	X	X		
RED LOCK	1								
YELLOW LOCK	2								
VEHICLE RECALL	3								
PED RECALL	4								
PEDS (VIEW)	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A		X				X		
MAX 2	B								
COND SERVICE	C								
	D								
START-UP	E		X				X		
FIRST PHASES	F				X				

F + F + FUNCTION

OVERLAP TIMING

LOAD SWITCH		GREEN 9	YELLOW C	RED D
	OLAP A			
	OLAP B			
	OLAP C			
	OLAP D			

D + 0 + OVERLAP

F + COLOR +

PHASE SEQUENCE

LAG 0 (FREE)

PHASE 1	2	3	4	5	6	7	8
	X		X		X		

C + F + 0

MANUAL (C-A-1) 14

ADDRESS (C-0-0) 0

TURN-ON DATE: 02-04-1998

TIME: 10:40

DRAWING NO. D- 28634-2-D

LAST CHANGE: 01-21-1998

BY: JMV

WO 967082

LOCATION CAMINO DEL ESTE & CAMINO DEL RIO N

DETECTOR TIMES

Y \ X	SET DELAY 1	2	SET CARRY 3	4	OBS COUNT 5	6	OBS DELAY 7	8	OBS CARRY 9	A
0	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1	1I1	5J1
1	2I2U	6J2U	2I2U 1.8	6J2U 1.8	2I2U	6J2U	2I2U	6J2U	2I2U	6J2U
2	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L	2I2L	6J2L
3	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U	2I3U	6J3U
4	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L	2I3L	6J3L
5	2I4	6J4	2I4	6J4	2I4	6J4	2I4	6J4	2I4	6J4
6	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5	3I5	7J5
7	4I6U	8J6U	4I6U 1.8	8J6U	4I6U	8J6U	4I6U	8J6U	4I6U	8J6U
8	4I6L 10.	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L	4I6L	8J6L
9	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U	4I7U	8J7U
A	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L	4I7L	8J7L
B	4I8	8J8	4I8	8J8	4I8	8J8	4I8	8J8	4I8	8J8
C	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U	1I9U	5J9U
D	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L	3I9L	7J9L

D + X (ACROSS) + Y (DOWN)

TIME OF DAY FEATURES

EVENT	TIME	FUNC	DAY OF WEEK S	M	T	W	T	F	S
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									

7 + EVENT #

PHASE OR FUNCTION

1	2	3	4	5	6	7	8

D + F + EVENT

TIME OF DAY FUNCTION CODES

0-PERMIT
1-RED LOCK
2-YELLOW LOCK
3-VEH RECALL
4-PED RECALL
5-[RESERVED]
6-REST IN WALK
7-RED REST
8-DBL ENTRY
9-VEH MAX RCL
A-SOFT RCL
B-MAX 2 EXT
C-COND SERV
D-TOD LAG PHS

E-1-LOCAL OVERRIDE
2-PHASE BANK 2
3-PHASE BANK 3
7-DET COUNT
8-SPLIT MONITOR

F - TOD OUTPUTS
1- TOD OUTPUT 1
2- TOD OUTPUT 2
3- TOD OUTPUT 3
4- TOD OUTPUT 4

TIME AND DATE

8 - 0 HOUR, MINUTE, DAY-OF-WEEK
8 - 1 DAY-OF-MONTH, YEAR, MONTH
8 - F SECONDS

TO ACCESS CONFIGURATION DATA, SET F-9-E = 1

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
EXCLUSIVE	0								
RR1 GN CLR	1								
RR2 GRN CLR	2								
RR2 LTD SRV	3								
PRO/PERM	4								
OLA GN OMIT	5								
OLB GN OMIT	6								
OLC GN OMIT	7								
OLD GN OMIT	8								
OV FL YELLOW	9								
EMVEH A	A		X			X			
EMVEH B	B				X				
EMVEH C	C						X		
EMVEH D	D								
EXTRA	E	X		X	X				
IC SELECT	F		X						

E + E + INTERVAL

EXTRA (E+E+E)
1-TBC TYPE 1
2-NEMA COORD
3-DAVLIGHT
4-EV ADVANCE
5-REMOTE EVP
6-SPECIAL EVENT
7-PRETIMED
8-SPLIT RING

ICSELECT (E+E+F)
1-SIMPLEX IN
2-2 WAY MODEM
3-7 WIRE IN
4-FLH/FREE
5-SIMPLEX OUT
6-7 WIRE OUT

ASSIGN5 (E+F+F)
1-RT OVERLAP
2-TOD OUTPUTS
3-STEADY EV BEACON
4-FLASH EV BEACON

CONFIGURATION DATA

		PHASE 1	2	3	4	5	6	7	8
	0								
RR OLAP A	1								
RR OLAP B	2								
RR OLAP C	3								
RR OLAP D	4								
PED 2P	5								
PED 6P	6						X		
PED 4P	7				X				
PED 8P	8								
FLH YELLOW	9								
OVERLAP A	A								
OVERLAP B	B								
OVERLAP C	C								
OVERLAP D	D								
RESTRICT	E								
ASSIGN5	F								

E + F + INTERVAL

LOCATION	CAMINO DEL ESTE & CAMINO DEL RIO N

LOCATION: **RTE 8 WB @ TEXAS ST. / QUALCOMM WAY**

CALTRANS C8 Version 3 DATE: 1/27/2015 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	7	7	7	1	7	1	1	CLK RST
1	DONT WALK	1	10	30	34	1	23	1	1	
2	MIN GREEN	1	12	15	5	14	13	1	1	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	0.9	2.0	2.0	2.0	1.0	5.0	0.9	0.9	
6	MAX GAP	0.9	2.0	2.0	2.0	1.0	3.0	0.9	0.9	
7	MIN GAP	0.9	2.0	2.0	2.0	1.0	3.0	0.9	0.9	
8	MAX EXT	30	45	30	30	20	45	9	9	
9	MAX 2									YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.0	5.0	4.1	4.1	3.7	5.0	3.0	3.0	MIN
F	RED	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0	SEC
	PED XING FT		32	104	120		80			
	BIKE XING FT		86	122		106	89			

PRE-EMPTION E	
EV SEL	0
RR1 CLR	5
EVA DLY	0
EVA CLR	5
EVB DLY	0
EVB CLR	5
EVC DLY	0
EVC CLR	5
EVD DLY	0
EVD CLR	5
MAX EV	255
RR2 CLR	5

F FLAGS	1	2	3	4	5	6	7	8	
PERMIT	1	2	3	4	5	6	7	8	0
RED LOCK	1								1
YEL LOCK									2
V RECALL		2				6			3
P RECALL									4
PED PHASES		2	3	4		6			5
RT OLA									6
RT OLB									7
DBL ENTRY									8
MAX 2 PHASES									9
LAG PHASES	READ ONLY								A
RED REST									B
REST-IN-WALK									C
MAX 3 PHASES									D
YEL START UP		2				6			E
FIRST PHASE			3						F
	1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

NOTES:

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

LOCATION: **RTE 8 WB @ TEXAS ST. / QUALCOMM WAY**

CALTRANS C8 Version 3 DATE: 1/27/2015

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE		FLAGS									
		1	2	3	4	5	6	7	8	9		C	D	E		F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH															LAG FZ FREE		2		4		6		8	0
1	FZ1 GRN FCTR													GAPOUT CP1		LAG FZ CP 1									1
2														GAPOUT CP2		LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3		LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME		5	GAPOUT CP4		LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET		5	GAPOUT CP5		LAG FZ CP 5									5
6											FORCE OFF		230	GAPOUT CP6		LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN		100	GAPOUT CP7		LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN		200	GAPOUT CP8		LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9		LAG FZ CP 9									9
A	OFFSET A										OFFSET		5			LAG C COORD									A
B	OFFSET B															LAG D COORD	1			4		6		8	B
C	OFFSET C															COORD FAZES		2				6			C
D	FZ 3 EXT																								D
E	FZ 7 EXT																								E
F	OFFSET INTRPT																								F
																	1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER:
WB @ QUALCOMM WAY

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8		

LOCATION	OFF	ON
1		1
2		
3		
4		
5		
6		
7		
8		

COO = 1

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL	1								3
4										EXCLUSIVE									4
5										2 PED		2							5
6										6 PED						6			6
7										4 PED				4					7
8										8 PED			3						8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E
MINUTE = D-B-E
DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)
RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F
MINUTE = D-B-F
DAY = D-C-F

D-E-E = C8 VERSION NUMBER
D-E-F = LITHIUM BATTERY CONDITION
84 = BAD
85 = GOOD

LOCATION: **RTE 8 WB @ TEXAS ST. / QUALCOMM WAY**

CALTRANS C8 Version 3 DATE: 3/3/2005

7 PAGE

9 PAGE C09 = 0 or 1

9 PAGE C09 = 2

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	06	45	D	X	1	2	3	4	5	6	7
1	21	00	D		1	2	3	4	5	6	7
2	10	00	9	X	1	2	3	4	5	6	7
3	18	45	9		1	2	3	4	5	6	7
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION
2 MAX 2
3 MAX 3
4 COND SERV (1ST SELECT)
5 COND SERV (2ND SELECT)
6 ENERGIZE AUX OUTPUT-RED
7 ENERGIZE AUX OUTPUT-GREEN
8 ENERGIZE AUX OUTPUT-YELLOW
9 TIME OF DAY MAX RECALL (1ST SELECT)
A TRAFFIC ACT. MAX 2 OPERATION
B TIME OF DAY MAX RECALL (2ND SELECT)
C YELLOW YIELD COORDINATION
D YELLOW YIELD COORDINATION
E TIME OF DAY FREE OPERATION
F FLASHING OPERATION

POLE SCHEDULE

LOC.	STANDARD TYPE	MASTARM SIG.	MASTARM LUM.	PLACEMENT DIMENSIONS A ft.	PLACEMENT DIMENSIONS B ft.	SIGNAL MOUNTING & PLACEMENT VEHICLE POLE	VEHICLE MASTARM	PEDESTRIAN SIGNAL	PEDESTRIAN P.P.B.	REMARKS
Ⓐ	26-4-80	[1] 45'	12'		2-1/2	SV-1-T	MAT – (5) MAS – (2)	SP-1-T	←W–(8P)	150 W. HPS LUMINAIRE
Ⓑ	[3] 1-A				2-1/2	TV-2-T		SP-1-T	(2P)–W→	
Ⓒ	15-1-70	15'		STA.	2-1/2	SV-1-T [B]	MAS – [5]	SP-2-T	(2P)–W→ (4P)–W→	
Ⓓ	24-4-80	[2] 35'	12'		2-1/2	SV-1-T	MAS – [5]	SP-1-T	←W–(4P)	150 W. HPS LUMINAIRE
Ⓔ	[3] 1-A				2-1/2	TV-2-T [B]		SP-1-T	(6P)–W→	
Ⓕ	[4] 17-1-70	16' EXIST.	12' EXIST.	EXIST.	EXIST.	SV-1-T	MAS (EXIST)	SP-1-T	←W–(6P) (EXIST)	150 W. HPS LUMINAIRE (USE EXIST. Pau)
Ⓖ	1-A			6	2-1/2	TV-1-T [A]		SP-1-T	(8P)–W→	
Ⓗ	STATE-FURNISHED MODEL 170 CONTROLLER ASSEMBLY. (FOUNDATION DETAILS ES-4B).									

[A] "FAR LEFT" LEFT TURN FACES SHALL BE ALL 12 INCH ARROW LENSES (RYG).

LEGEND

■ = (LTTC) LEFT-TURN TERMINATION CONDUIT, ES-8.

= MODEL 170 CONTROLLER ASSEMBLY. ORIENT DOORS PER PLAN SITE.

EV-DLC = EMERGENCY VEHICLE DETECTOR LEAD-IN CABLE. TERMINATE CABLE IN GREEN SECTION ON END OF MAST ARM SIGNAL HEAD. LEAVE ONE FOOT OF SLACK.

CONDUCTOR SCHEDULE

AWG SIZE	PHASE	CIRCUIT	CONDUIT RUN & SIZE 2" (1)	2" (2)	2" (3)	1-1/4" (4)	2" (5)	2-1/2" (6)	3" (7)	1-1/4" (8)	2" (9)	2" (10)	2" (11)	3" (12)
#14	2	VEHICLE SIGNAL					3	3	3					3
	8									3	3	3		
	4		3	3	3	3		6	6	3	3	3		3
	DLA		2	2				2	2	2	2	2		2
	5						3	3	3				3	3
	6									3	3			3
	8													
	2P	WALK/DON'T WALK	2	2			2	2	2					
	8P				2	2		2	2					2
	4P		2	2				2	2	2	2	2		2
	6P										2	2	2	4
	2P	PED. PUSH BUTTON	1	1	1	1		2	2					
	8P						1	1	1				1	1
	4P		1	1				1	1		1	1		1
	6P									1	1	1		1
	2/4	P.P.B. COMM. #6	1	1	1	1	1	1	1		1	1	1	1
	6/8	P.P.B. COMM. #9								1	1	1		1
		PHOTOELECTRIC UNIT												3
#14		SPARES	3	3	3	3	3	3	3	3	3	3	3	3
		TOTAL NO. 14	15	15	10	10	13	28	28	15	22	22	10	33
#8		SIGNAL COMMON	1	1	1	1	1	1	1	1	1	1	1	1
#10		LIGHTING					2	2	2		2	2		2
TYPE "B"	2	LOOP-DLC	6	6				6	6					
	8				1	3		4	4					
	4									3	3	4		4
	5		1	1				1	1					
DLC	6								4					
EV-DLC		EMERG. VEH.-DLC	1	1				1	1		1	1		1
#6		SIGNAL CONTROLLER												
		INTERCONNECT CABLE							1					
TOTAL CONDUCTORS/CABLES			23	24	11	14	16	43	48	19	29	30	11	41

CONDUIT NOTES

13 – EXIST. 1 INCH C., 1-DLC. [RC] EXIST. DLC. INSTALL 2-DLC.

14 – EXIST. 1 INCH C., 1-DLC. [RC] EXIST. DLC. INSTALL 3-DLC.

15 – EXIST. 1 INCH C., 1-DLC. [RC] EXIST. DLC. INSTALL: 2-DLC, 1-INTERCONNECT CABLE.

16 – EXIST. 1-1/4 INCH C., 1-DLC, [RC] EXIST. DLC. INSTALL: 2-DLC, 1-INTERCONNECT CABLE.

17 – 1 INCH C., 3-DLC.

18 – 1-1/2 INCH C., 2-DLC.

19 – 2 INCH C., 5-DLC.

20 – 1 INCH C., 1-DLC.

21 – 1-1/2 INCH C., 1-DLC.

22 – 1-1/2 INCH C., 2 NO. 6-SIGNAL CONTROLLER, 4 NO. 10-LIGHTING, 3 NO. 14-PEU.

NOTES

1 – DETAIL "U" (ES-6T) REQUIRED. INSTALL STATE-FURNISHED SIGN PANEL.

2 – DETAIL "U" (ES-6T), NOT REQUIRED.

3 – RELOCATE SALVAGED 1-A POLE.

4 – EXISTING TYPE 17 POLE TO REMAIN IN PLACE. [RC] EXIST. LUMINAIRE & BALLAST.

5 – SEE "LEGEND", EV-DLC, NOTE.

6 – TYPE III SERVICE EQUIP. CABINET ES-2C/D. WIRING DIAGRAM, E-(1).

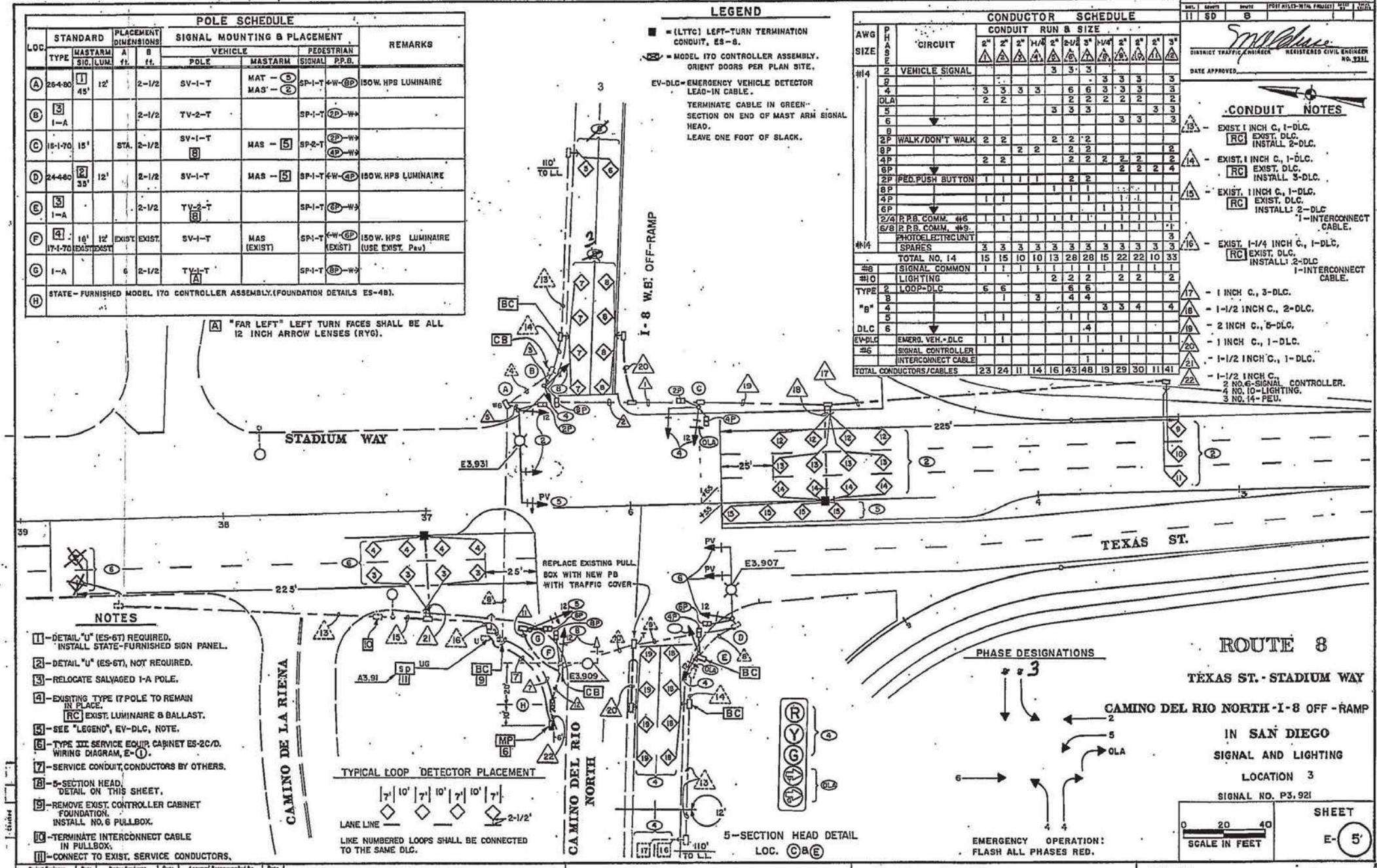
7 – SERVICE CONDUIT, CONDUCTORS BY OTHERS.

8 – 5-SECTION HEAD. DETAIL ON THIS SHEET.

9 – REMOVE EXIST. CONTROLLER CABINET FOUNDATION. INSTALL NO. 6 PULLBOX.

10 – TERMINATE INTERCONNECT CABLE IN PULLBOX.

11 – CONNECT TO EXIST. SERVICE CONDUCTORS.



ROUTE 8

TEXAS ST. - STADIUM WAY

CAMINO DEL RIO NORTH - I-8 OFF - RAMP

IN SAN DIEGO

SIGNAL AND LIGHTING

LOCATION 3

SIGNAL NO. P3, 921

SCALE IN FEET 0 20 40

SHEET E-5'

DIST.	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8			

STATE OF CALIF. 7

DISTRICT TRAFFIC ENGINEER — REGISTERED CIVIL ENGINEER NO. 9331

DATE APPROVED

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
W.J. FRENDO	3/82	M.A. CHASE	3/82	R.B. FINDLAY	3/82

CU 11203 WO 111801

REV: 4/82

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		1.8
8		
9		
A	10.0	
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row	0 Detector #
0	
1	System Det. # 1
2	System Det. # 2
3	System Det. # 3
4	System Det. # 4
5	System Det. # 5
6	System Det. # 6
7	System Det. # 7
8	System Det. # 8

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: Morena Bl & Taylor St

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function

7 + ROW

<D Page>

D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	6
7	Ped 4P	4
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	45
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	4
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 345
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week

8-1 Day-of-Month, Year, Month

8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications

(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program

C + C + F = version

Remote Download

C + 0 + 4 = 1 -255

w/ E + E + E bit 5 on

LOCATION: **RTE 8 EB @ TAYLOR STREET**

CALTRANS C8 Version 3 DATE: 1/28/2015 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	1	1	7	1	7	1	1	CLK RST
1	DONT WALK	1	1	1	15	1	23	1	1	
2	MIN GREEN	1	10	1	5	5	15	1	1	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	0.9	2.0	0.9	1.0	1.0	2.0	0.9	0.9	
6	MAX GAP	0.9	2.0	0.9	1.0	1.0	2.0	0.9	0.9	
7	MIN GAP	0.9	2.0	0.9	1.0	1.0	2.0	0.9	0.9	
8	MAX EXT	9	25	9	35	45	25	9	9	
9	MAX 2					20				YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.0	4.5	3.0	5.0	3.7	4.5	3.0	3.0	MIN
F	RED	0.0	1.0	0.0	1.0	1.0	1.0	0.0	0.0	SEC
	PED XING FT				52		81			
	BIKE XING FT		38				121			

PRE-EMPTION E		F FLAGS	1	2	3	4	5	6	7	8	
EV SEL	0	PERMIT		2		4	5	6			0
RR1 CLR	5	RED LOCK				4	5				1
EVA DLY	0	YEL LOCK									2
EVA CLR	5	V RECALL		2				6			3
EVB DLY	0	P RECALL									4
EVB CLR	5	PED PHASES				4		6			5
EVC DLY	0	RT OLA									6
EVC CLR	5	RT OLB									7
EVD DLY	0	DBL ENTRY									8
EVD CLR	5	MAX 2 PHASES					5				9
MAX EV	255	LAG PHASES	READ ONLY								A
RR2 CLR	5	RED REST									B
		REST-IN-WALK									C
		MAX 3 PHASES									D
		YEL START UP		2				6			E
		FIRST PHASE				4					F
			1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FD0 TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

ENTRIES IN THESE LOCATIONS ARE NOT TO BE CHANGED

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

54

LOCATION: **RTE 8 EB @ TAYLOR ST.**

CALTRANS C8 DATE: 1/18/95 PAGE 2

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE		FLAG								
		1	2	3	4	5	6	7	8	9		C	D	E		F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH															LAG FZ FREE		X		X		X		X	0
1	FZ1 GRN FCTR													GAPOUT CP1	0	LAG FZ CP 1									1
2														GAPOUT CP2	0	LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3	0	LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4	0	LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5	0	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	0	LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7	0	LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8	0	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	0	LAG FZ CP 9									9
A	OFFSET A										OFFSET					LAG C COORD									A
B	OFFSET B															LAG D COORD									B
C	OFFSET C															COORD FAZES		X				X			C
D	FZ 3 EXT																								D
E	FZ 7 EXT																								E
F	OFFSET INTRP																								F

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER :
EB OFF

LOCATION	OFF	ON
1		X
2	X	
3	X	
4	X	
5	X	
6	X	
7	X	
8	X	

COO = 1

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		X							5
6										6 PED						X			6
7										4 PED				X					7
8										8 PED								X	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E

MINUTE = D-B-E

DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)

RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F

MINUTE = D-B-F

DAY = D-C-F

D-E-E = C8 VERSION NUMBER

D-E-F = LITHIUM BATTERY CONDITION

84 = BAD

85 = GOOD

LOCATION: **RTE 8 EB @ TAYLOR ST.**

CALTRANS C8 DATE : 10/21/93

7 PAGE

9 PAGE C09 = 0 or 1

9 PAGE C09 = 2

TIME OF DAY ACTIVITY TABLE

7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS

	HR	MIN	ACT	ON/OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	15	20	2	X		X	X	X	X	X	
1	17	40	2			X	X	X	X	X	
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

CONTROL PLAN TIME OF DAY

9+EVENT+HR+MIN+CP+OS+E+DOW

	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

CONTROL PLAN TIME OF DAY

9+EVENT+HR+MIN+CP+OS+E+DOW

	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION

2 MAX 2

3 MAX 3

4 COND SERV (1ST SELECT)

5 COND SERV (2ND SELECT)

6 ENERGIZE AUX OUTPUT-RED

7 ENERGIZE AUX OUTPUT-GREEN

8 ENERGIZE AUX OUTPUT-YELLOW

9 TIME OF DAY MAX RECALL (1ST SELECT)

A TRAFFIC ACT. MAX 2 OPERATION

B TIME OF DAY MAX RECALL (2ND SELECT)

C YELLOW YIELD COORDINATION

D YELLOW YIELD COORDINATION

E TIME OF DAY FREE OPERATION

F FLASHING OPERATION

POLE SCHEDULE

LOC	STANDARD TYPE	MASTARM SIG.	MASTARM LUM.	PLACEMENT DIMENSIONS A ft.	PLACEMENT DIMENSIONS B ft.	SIGNAL MOUNTING & PLACEMENT VEHICLE POLE	VEHICLE MASTARM	PEDESTRIAN SIGNAL	PEDESTRIAN P.P.B.	REMARKS
(A)	EXIST. 17	18'	15'			EXIST. SV-1-T	EXIST. MAS	2	EXIST. 4 ⟶ ⟵ 6	EXIST. 200 WATT HPS LUMINAIRE
(B)	EXIST. PPB POST	—	—			—	—	—	EXIST. ⟵6⟶	
(C)	1-A (10')	—	—	8 1/2 E. OF NOSE	3	TV-1-T 3	—	SP-1-T	6 ⟶	
(D)	79-4-BC	25' 1	12'	PER PLAN	2-1/2	SV-2-TD	2 - MAS 5 - MAT 3	—	—	4 PEU - SIGN TYPE
(E)	1-A (10')	—	—	PER PLAN I	2-1/2	TV-1-T	—	—	—	
(F)	1-A (10')	—	—	PER PLAN	3	TV-1-T 5	—	SP-1-T	4 ⟶	
(G)	1-A (10')	—	—	PER PLAN	3	TV-1-T 5	—	—	—	
(H)	STATE-FURNISHED, MODEL 170 CONTROLLER ASSEMBLY. FOUNDATION DETAILS, ES-4B.									

4 R Y G OLA — YELLOW ARROW, GREEN ARROW

5 FIVE SECTION SIGNAL FACE POLES (F) & (G) (No Scale)

NOTES

1 - DETAIL "U", ES-6T, REQUIRED. INSTALL: STATE-FURNISHED SIGN PANEL.

2 - RS EXISTING SP-2-T PEDESTRIAN HEADS. INSTALL: NEW SP-2-T PEDESTRIAN HEADS.

3 - LEFT TURN SIGNAL FACE SHALL CONSIST OF 3-12 INCH ARROW SECTIONS (R,Y &G).

4 - INSTALL SALVAGED HPS 200 LUMINAIRE.

5 - INSTALL 5-SECTION SIGNAL FACE PER DETAIL THIS PLAN.

CONTINUED BELOW

CONDUIT NOTES

9 - 1-INCH C. 1-DLC.

10 - EXISTING 1 1/2 INCH C. WITH 2 NO.8-LIGHTING & ILLUM. SIGNS (480V).

11 - EXISTING 1-INCH C. WITH 1-dlc. RC 1-dlc. INSTALL: 1-DLC.

12 - 1 1/2 INCH C. 2 NO. 6-SIGNAL SERVICE 2 NO. 8-LIGHTING. 3 NO. 14-PEU.

13 - 1 1/2 INCH C. 4-DLC.

14 - SERVICE CONDUIT, 2-INCH C. 3 NO.6 - 120/240V SERVICE.

15 - 1-INCH C. 2-DLC.

16 - SERVICE CONDUIT, 2-INCH C. CONDUCTORS BY OTHERS.

17 - 1 1/2 INCH C. 2 NO.8-LIGHTING & ILLUM. SIGNS (480V).

18 - EXISTING 1-INCH C. WITH 1-dlc. RC 1-dlc. INSTALL: 2-DLC.

19 - EXISTING 1-INCH C. WITH 2 NO. 10-LIGHTING.

CONDUCTOR SCHEDULE

AWG SIZE	PHASE	CIRCUIT	CONDUIT SIZE & RUN 2 (1)	2 (2)	2 1/2 (3)	2 (4)	1 1/2 (5)	2 (6)	2 (11)	2 1/2 (8)
14	2	SIGNAL				3	3	3	3	3
	4					3	3	3	3	3
	OLA							2	2	2
	5		3	3	3	3	3	3	3	3
	6				3					
	4	PED SIGNAL			2			2	2	2
	6		2	2	2					
	4	PED PUSH BUTTON			1			1	1	1
	6		1	1	1					
	4/6	PPB COMMON	/1	/1	/1	/	/	1/	1/	1/
14-		SPARES	3	3	3	3	3	3	3	3
TOTAL NO. 14			10	10	17	12	12	18	18	18
10		SIGNAL COMMON	1	1	1	1	1	1	1	1
		LIGHTING	2	2	2	2				
8		LIGHTING				2	2	2	2	2
6		SIGNAL SERVICE				2	2	2	2	2
TYPE "D" DLC	2	LOOP LEAD-IN						1	2	2
	4				1	2				
	5							1	1	1
	6		4	4	4					
		EV-DLC				2	2	2	2	2
TOTAL CONDUCTORS/CABLES			17	18	26	19	19	27	28	28

LEGEND

EV-DLC= EMERGENCY VEHICLE DETECTOR LEAD IN CABLE (FUTURE USE). TERMINATE CABLES IN GREEN SECTION ON END OF MASTARM SIGNAL HEAD. LEAVE ONE FOOT OF SLACK.

* ANGLE VISORS, SHALL BE: 12" 16"

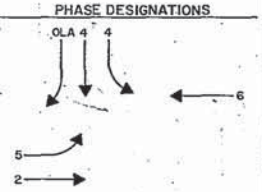
(SETS REQUIRED: 1-LEFT & 1-RIGHT)

TYPICAL LOOP DETECTOR PLACEMENT



LIKE NUMBERED LOOPS SHALL BE CONNECTED TO THE SAME DLC.

PHASE DESIGNATIONS



EMERGENCY OPERATION: FLASH ALL PHASES RED.

6 - AB EXISTING PULL BOX. CC EXISTING CONDUITS AND EXTEND TO NEW PULL BOX. INSTALL: NO. 5 PULL BOX, 4-FT. FROM EXISTING F/L.

7 - PEDESTRIAN BARRICADE, ES-6A. INSTALL: STATE-FURNISHED SIGN PANEL.

8 - MP TYPE III SERVICE EQUIPMENT CABINET, ES-2C & ES-2D. WIRING DIAGRAM ON SHEET E-1.

9 - RS EXISTING SERVICE EQUIPMENT. INSTALL: TYPE "H" SERVICE.

10 - EXISTING 480V, "UG". SP FOR ILLUM. SIGNS AND HIGHWAY LIGHTING LOCATED ON MOTEL WALL AT SE CORNER OF PROPERTY (N. OF ROUTE 8& W. OF PRESIDIO O.C. U-XFMR 490-52-SERVICE NO. AO.93).

11 - INSTALL NEW CONDUCTORS IN EXISTING 2-INCH C.

12 - TERMINATING PULL BOX. MARKING AND LABELING AS REQUIRED BY UTILITY COMPANY.

P.P.R. NO.	STATE
7	CALIF.

DIST	COUNTY	ROUTE	POST MILES-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8			

DISTRICT TRAFFIC ENGINEER — REGISTERED CIVIL ENGINEER NO. 9261

DATE APPROVED

ROUTE 8 AT TAYLOR STREET-HOTEL CIRCLE SO. IN SAN DIEGO

SIGNAL AND LIGHTING

SIGNAL NO. PO.830

SCALE IN FEET 0 20 40

SHEET E-2

Project Engineer	Date	Design Engineer	Date	Approved Recommended By	Date

CU 11212 WO 185831

REV. 3/83

FORM WH23A PF

Bach[illegible]n Place @ Hotel Circle South

223 Pr[illegible]am

Group Assignment:
Field Master Assignment: None

N/S Street Name: Bachman Place
E/W Street Name: Hotel Circle south

Last Change:
Timing Sheet By: Dino
Approved By:

Drawing Number: 31015-D
System Rel. Number:
Timing implemented on:

Row	Column # ---->	Hotel Circle South 1	2	3	4	5	Hotel Circle South 6	7	Bachman Place 8
	Phase # ---->	1	2	3	4	5	6	7	8
0	Ped Walk		7						7
1	Ped FDW		9						10
2	Min Green	4	10				10		4
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.4 ~~2.0~~	3.7				3.7		2.4 ~~2.0~~
6	Max Gap	2.4 ~~2.0~~	3.7				3.7		2.4 ~~2.0~~
7	Min Gap	2.4 ~~2.0~~	0.2				0.2		2.4 ~~2.0~~
8	Max Limit	30	60				60		40
9	Max Limit 2								
A	Bus Adv								
B	Call to Phs	6							
C	Reduce By		0.1				0.1		
D	Every		0.9				0.9		
E	Yellow	3.0	4.0				4.0		3.0
F	Red Clear	1.0	1.0				1.0		1.0

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row	E	Preempt Timing
		F + E + Row
RR-1 Delay		
RR-1 Clear		
EV-A Delay	0	
EV-A Clear	0	
EV-B Delay	0	
EV-B Clear	0	
EV-C Delay	0	
EV-C Clear	0	
EV-D Delay	0	
EV-D Clear	0	
RR-2 Delay		
RR-2 Clear		
View EV Delay	---	
View EV Clear	---	
View RR Delay	---	
View RR Clear	---	

Row	F	Phase Functions
		F + F + Row
Permit	12___6_8	
Red Lock		
Yellow Lock		
Min Recall		
Ped Recall		
Peds (View)		
Rest In Walk		
Red Rest		
Dbl Entry		
Max Recall		
Soft Recall	_2___6__	
Max 2		
Cond Serv		
Ped Lock	12345678	
Yellow Start	_2___6__	
1st Phases	_____8	

<F Page>

Max Initial	F + 0 + E
Red Revert 5.0	F + 0 + F
All Red Start 0.0	F + C + O

Start / Revert Times

Drop Number	C + 0 + 0
Zone Number	C + 0 + 1
Area Number	C + 0 + 2
Area Address	C + 0 + 3
QuicNet Channel	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2___6_8	0

Lag Phases <C Page>

Row		9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
A	Overlap A				
B	Overlap B				
C	Overlap C				
D	Overlap D				

Overlap Timing <F Page>
F + COLOR +
<D Page>
D + 0 + OVERLAP

Downtime Flash	255 (minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Manual Plan	14	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset 0
= Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Disable Ports	234

Disable Communications Ports
D + D + 9

Ø1 + Ø3 loops cut too close ∴ Gap timing increased 2 → 4"

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0				1I1	14
1		1.8		2I2U	1
2		1.8		2I2L	5
3				2I3U	21
4				2I3L	25
5				2I4	9
6				3I5	16
7				4I6U	3
8				4I6L	7
9				4I7U	23
A				4I7L	27
B				4I8	11
C				1I9U	18
D				3I9L	20
E		---	---	---	---
F	---	---	---	---	---

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0				5J1	13
1		1.8		6J2U	2
2		1.8		6J2L	6
3				6J3U	22
4				6J3L	26
5				6J4	10
6				7J5	15
7	12.0			8J6U	4
8				8J6L	8
9				8J7U	24
A				8J7L	28
B				8J8	12
C				5J9U	17
D				7J9L	19
E	---	---	---	---	---
F	---	---	---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	5678
E	-- -- -- -- -- -- -- --	1234
F	-- 25 26 27 28 -- -- --	2345

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	0
2	System Det. # 2	0
3	System Det. # 3	0
4	System Det. # 4	0
5	System Det. # 5	0
6	System Det. # 6	0
7	System Det. # 7	0
8	System Det. # 8	0

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number	0	F+C+1
Time Before Yellow	0.0	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	0	F+D+1
Time Before Yellow	0.0	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)
(These parameters are NOT downloaded.)

Row	Time	Function	Day of Week	Column F Phases/Bits
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	_2_____
6	Ped 6P	_____
7	Ped 4P	_____
8	Ped 8P	_____8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	_2_____
B	EV-B Phases	_____8
C	EV-C Phases	1___6__
D	EV-D Phases	__3_____
E	Extra 1 Config. Bits	1_345___
F	IC Select (Interconnect)	_2_____

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)
(This parameter is NOT downloaded)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

LOCATION: RTE 8 EB @ MISSION CENTER ROAD / CAMINO DEL RIO SOUTH

CALTRANS C8 Version 3 DATE: 1/27/2015 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	7	1	1	1	1	7	1	1	CLK RST
1	DONT WALK	31	1	1	1	1	20	1	1	
2	MIN GREEN	18	5	1	1	5	5	16	10	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	
5	PASSAGE	2.0	2.0	0.9	0.9	3.0	2.0	2.0	2.0	
6	MAX GAP	4.0	4.0	0.9	0.9	2.0	4.0	3.0	4.0	
7	MIN GAP	1.0	1.0	0.9	0.9	2.0	1.0	1.0	1.0	
8	MAX EXT	45	30	9	9	7	30	15	35	
9	MAX 2	55	60				60			YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	DOW
D	EVERY	0.6	0.6	1.0	1.0	1.0	0.6	0.6	0.6	HR
E	YELLOW	4.1	4.1	3.0	3.0	4.1	4.1	4.1	4.1	MIN
F	RED	2.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	SEC
	PED XING FT	108					69			
	BIKE XING FT	170						140	70	

PRE-EMPTION E	
EV SEL	0
RR1 CLR	5
EVA DLY	0
EVA CLR	5
EVB DLY	0
EVB CLR	5
EVC DLY	0
EVC CLR	5
EVD DLY	0
EVD CLR	5
MAX EV	255
RR2 CLR	5

F FLAGS	1	2	3	4	5	6	7	8	
PERMIT	1	2			5	6	7	8	0
RED LOCK		2			5		7	8	1
YEL LOCK									2
V RECALL	1					6			3
P RECALL									4
PED PHASES	1					6			5
RT OLA									6
RT OLB									7
DBL ENTRY									8
MAX 2 PHASES	1	2				6			9
LAG PHASES	READ ONLY								A
RED REST									B
REST-IN-WALK									C
MAX 3 PHASES									D
YEL START UP		2				6			E
FIRST PHASE							7		F
	1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

NOTES:

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY ▒

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAGS									
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH	140	150	140	140										LAG FZ FREE		2		4		6		8	0
1	FZ1 GRN FCTR	40	50	46	36									GAPOUT CP1	LAG FZ CP 1		2		4		6		8	1
2														GAPOUT CP2	LAG FZ CP 2		2		4		6		8	2
3	FZ3 GRN FCTR	0	0	0	0									GAPOUT CP3	LAG FZ CP 3		2		4		6		8	3
4	FZ4 GRN FCTR	0	0	0	0						PERM TIME			GAPOUT CP4	LAG FZ CP 4		2		4		6		8	4
5	FZ5 GRN FCTR	8	8	8	8						LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR	10	10	10	10						LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR	22	32	18	18						NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE	0	0	0	0									GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A	130	15	14	18						OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		2				6			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRPT																							F
																1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER:

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8		

LOCATION	OFF	ON
1		1
2		
3		
4		
5		
6		
7		
8		

COO = 1

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1	1								CP 1		2				6			CP 1								
2	CP 2	1								CP 2		2				6			CP 2								
3	CP 3	1								CP 3		2				6			CP 3								
4	CP 4	1								CP 4		2				6			CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED	1								5
6										6 PED						6			6
7										4 PED				4					7
8										8 PED								8	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT	1	2			5	6			OLB ON							7	8	B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E
MINUTE = D-B-E
DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)
RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F
MINUTE = D-B-F
DAY = D-C-F

D-E-E = C8 VERSION NUMBER
D-E-F = LITHIUM BATTERY CONDITION
84 = BAD
85 = GOOD

LOCATION: **RTE 8 EB @ MISSION CENTER ROAD / CAMINO DEL RIO SOUTH**

CALTRANS C8 Version 3 DATE: 4/30/2002 PAGE 4

7 PAGE

TIME OF DAY ACTIVITY TABLE

7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS

	HR	MIN	ACT	ON/OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	10	00	2	X	1	2	3	4	5	6	7
1	19	00	2		1	2	3	4	5	6	7
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION
2 MAX 2
3 MAX 3
4 COND SERV (1ST SELECT)
5 COND SERV (2ND SELECT)
6 ENERGIZE AUX OUTPUT-RED
7 ENERGIZE AUX OUTPUT-GREEN

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY

9+EVENT+HR+MIN+CP+OS+E+DOW

	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	11	00	1	A		2	3	4	5	6	
1	15	00	2	A		2	3	4	5	6	
2	19	00	E			2	3	4	5	6	
3	10	00	4	A	1						7
4	14	00	3	A	1						7
5	18	00	E		1						7
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

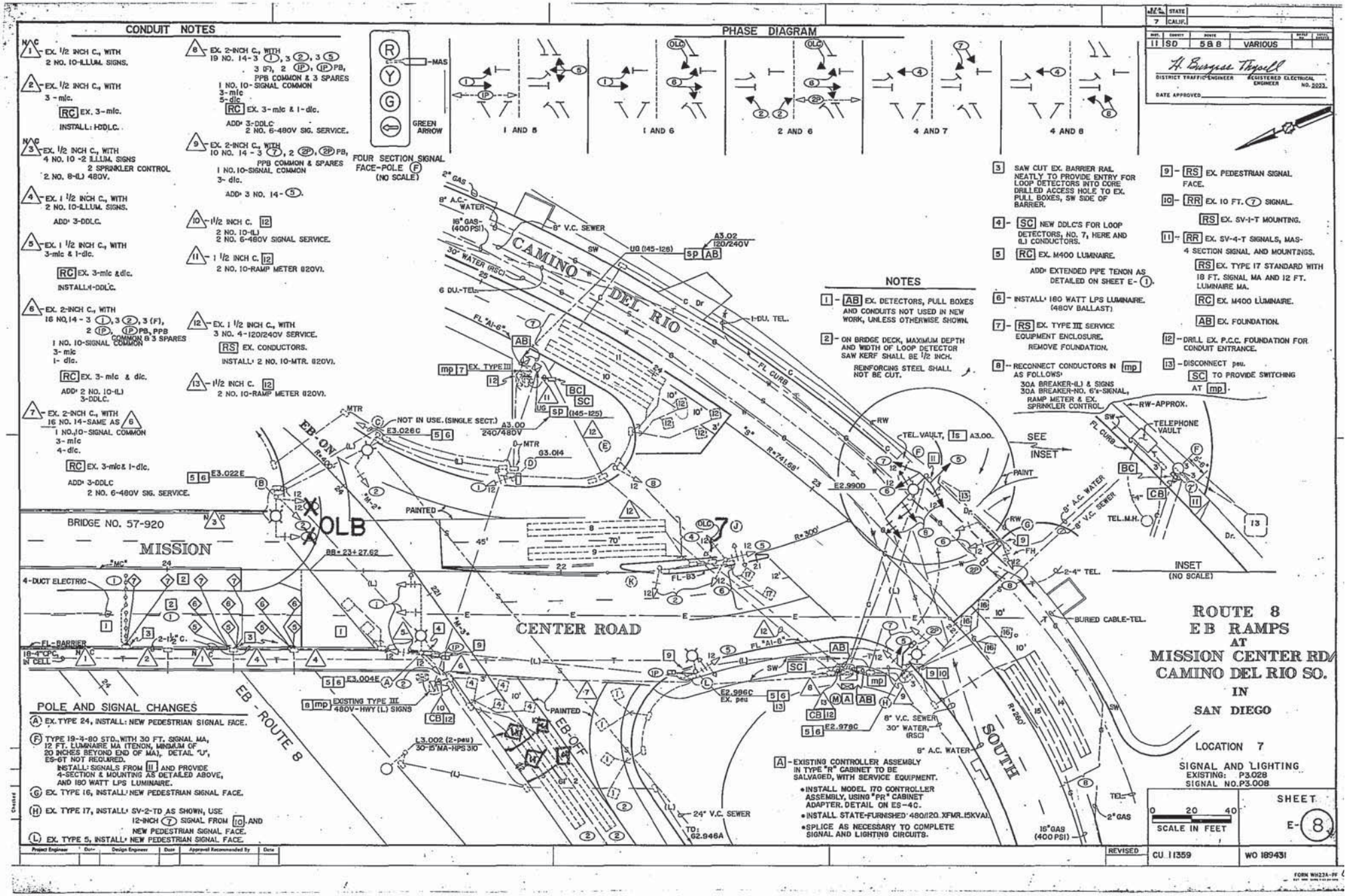
8 ENERGIZE AUX OUTPUT-YELLOW
9 TIME OF DAY MAX RECALL (1ST SELECT)
A TRAFFIC ACT. MAX 2 OPERATION
B TIME OF DAY MAX RECALL (2ND SELECT)
C YELLOW YIELD COORDINATION
D YELLOW YIELD COORDINATION
E TIME OF DAY FREE OPERATION
F FLASHING OPERATION

9 PAGE C09 = 2

CONTROL PLAN TIME OF DAY

9+EVENT+HR+MIN+CP+OS+E+DOW

	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											


CONDUIT NOTES
PHASE DIAGRAM
1 AND 5
1 AND 6
2 AND 6
4 AND 7
4 AND 8
FOUR SECTION SIGNAL FACE-POLE (F) (NO SCALE)
NOTES
CAMINO DEL RIO
MISSION CENTER ROAD
BRIDGE NO. 57-920
EB-ON
EB-OFF
EB - ROUTE 8
SOUTH
POLE AND SIGNAL CHANGES
INSET (NO SCALE)
ROUTE 8
EB RAMPS
AT
MISSION CENTER RD/
CAMINO DEL RIO SO.
IN
SAN DIEGO
LOCATION 7
SIGNAL AND LIGHTING
EXISTING: P3.028
SIGNAL NO.P3.008
SHEET
E-8
SCALE IN FEET
REVISED
CU 11359
WO 189431

60

LOCATION: **RTE 8 EB @ TEXAS ST**

CALTRANS C8 Version 3 DATE: 1/27/2015 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9	PRE-EMPTION E		F FLAGS	1	2	3	4	5	6	7	8	
0	WALK	1	1	1	1	1	7	1	1	CLK RST	EV SEL	0	PERMIT		2		4		6			0
1	DONT WALK	1	1	1	1	1	14	1	1		RR1 CLR	5	RED LOCK				4					1
2	MIN GREEN	1	1	1	5	1	15	1	1		EVA DLY	0	YEL LOCK									2
3	TYPE 3 DET	0	0	0	0	0	0	0	0		EVA CLR	5	V RECALL		2				6			3
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		EVB DLY	0	P RECALL									4
5	PASSAGE	0.9	0.9	0.9	2.0	0.9	2.0	0.9	0.9		EVB CLR	5	PED PHASES						6			5
6	MAX GAP	0.9	0.9	0.9	2.0	0.9	2.0	0.9	0.9		EVC DLY	0	RT OLA									6
7	MIN GAP	0.9	0.9	0.9	2.0	0.9	2.0	0.9	0.9		EVC CLR	5	RT OLB									7
8	MAX EXT	9	9	9	40	9	45	9	9		EVD DLY	0	DBL ENTRY									8
9	MAX 2									YR	EVD CLR	5	MAX 2 PHASES									9
A	MAX 3									MO	MAX EV	255	LAG PHASES	READ ONLY								A
B										DAY	RR2 CLR	5	RED REST									B
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW			REST-IN-WALK									C
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR			MAX 3 PHASES									D
E	YELLOW	3.0	3.0	3.0	4.1	3.0	4.5	3.0	3.0	MIN			YEL START UP		2				6			E
F	RED	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	SEC			FIRST PHASE				4					F
	PED XING FT						48							1	2	3	4	5	6	7	8	
	BIKE XING FT						54															

NOTES:

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY ▒

LOCATION: **RTE 8 EB @ TEXAS ST**

CALTRANS C8 DATE: 11/20/95

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE		FLAG								
		1	2	3	4	5	6	7	8	9		C	D	E		F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH															LAG FZ FREE		X		X		X		X	0
1	FZ1 GRN FCTR													GAPOUT CP1	0	LAG FZ CP 1									1
2														GAPOUT CP2	0	LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3	0	LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4	0	LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5	0	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	0	LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7	0	LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8	0	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	0	LAG FZ CP 9									9
A	OFFSET A										OFFSET					LAG C COORD									A
B	OFFSET B															LAG D COORD									B
C	OFFSET C															COORD FAZES		X				X			C
D	FZ 3 EXT																								D
E	FZ 7 EXT																								E
F	OFFSET INTRP																								F

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER :
WB @ STADIUM WAY

LOCATION	OFF	ON
1	X	
2		X
3	X	
4	X	
5	X	
6	X	
7	X	
8	X	

COO = 2

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

LOCATION: **RTE 8 EB @ TEXAS ST**

CALTRANS C8 DATE 11/20/95

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		X							5
6										6 PED						X			6
7										4 PED				X					7
8										8 PED								X	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E

MINUTE = D-B-E

DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)

RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F

MINUTE = D-B-F

DAY = D-C-F

D-E-E = C8 VERSION NUMBER

D-E-F = LITHIUM BATTERY CONDITION

84 = BAD

85 = GOOD

LOCATION: **RTE 8 EB @ TEXAS ST**

CALTRANS C8 DATE : 11/20/95 PAGE 4

7 PAGE

TIME OF DAY ACTIVITY TABLE

7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS

	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY

9+EVENT+HR+MIN+CP+OS+E+DOW

	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 2

CONTROL PLAN TIME OF DAY

9+EVENT+HR+MIN+CP+OS+E+DOW

	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION

2 MAX 2

3 MAX 3

4 COND SERV (1ST SELECT)

5 COND SERV (2ND SELECT)

6 ENERGIZE AUX OUTPUT-RED

7 ENERGIZE AUX OUTPUT-GREEN

8 ENERGIZE AUX OUTPUT-YELLOW

9 TIME OF DAY MAX RECALL (1ST SELECT)

A TRAFFIC ACT. MAX 2 OPERATION

B TIME OF DAY MAX RECALL (2ND SELECT)

C YELLOW YIELD COORDINATION

D YELLOW YIELD COORDINATION

E TIME OF DAY FREE OPERATION

F FLASHING OPERATION

POLE SCHEDULE

LOC.	STANDARD TYPE	MASTARM SIG.	MASTARM LUM.	PLACEMENT DIMENSIONS A ft.	PLACEMENT DIMENSIONS B ft.	SIGNAL MOUNTING & PLACEMENT VEHICLE POLE	VEHICLE MASTARM	PEDESTRIAN SIGNAL	PEDESTRIAN P.P.B.	REMARKS
(A)	1-A (10')	–	–	PER PLAN	2-1/2	TV-1	–	SP-1-T	(6) W	
(B)	18-4-80	30' [1]	–	PER PLAN	5	SV-1-T [A]	MAS-2 [3A]	–	–	
(C)	19-4-80	30' [2]	15'	PER PLAN	2-1/2	SV-1-T	MAS-2 [3]	SP-1-T	(6) W	200 WATT HPS LUMINAIRE PEU
(D)	STATE-FURNISHED, MODEL 170 CONTROLLER ASSEMBLY. FOUNDATION DETAILS: ES-4B, TYPE 170. LOCATE PER PLAN DIMENSIONS.									

[A] 3-12" SECTIONS WITH RIGHT GREEN ARROW.

CONDUCTOR SCHEDULE

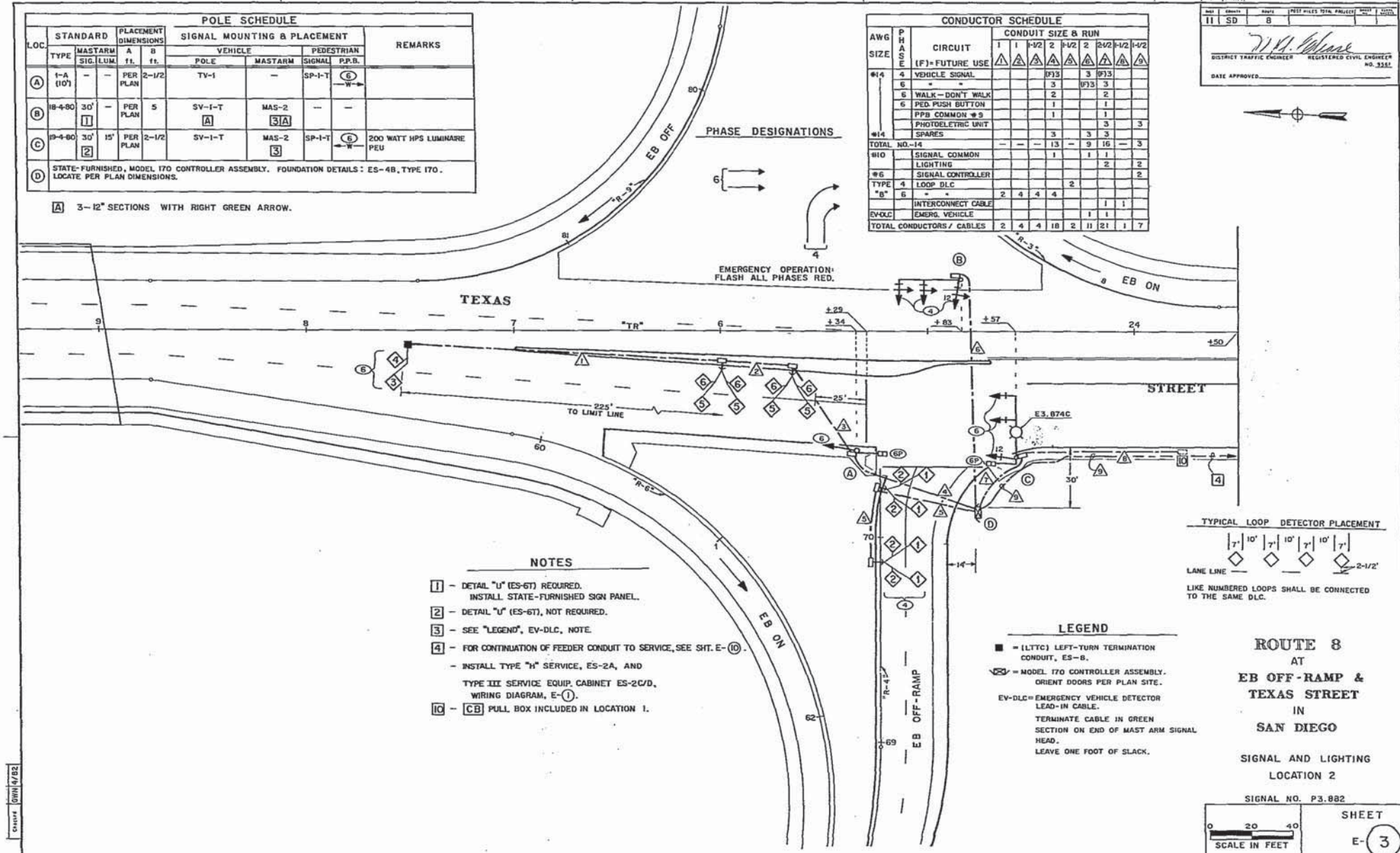
AWG SIZE	PHASE	CIRCUIT (F)=FUTURE USE	CONDUIT SIZE & RUN 1 (1)	1 (2)	1-1/2 (3)	2 (4)	1-1/2 (5)	2 (6)	2-1/2 (7)	1-1/2 (8)	1-1/2 (9)
#14	4	VEHICLE SIGNAL				(F)3		3	(F)3		
	6	" "				3		(F)3	3		
	6	WALK – DON'T WALK				2			2		
	6	PED. PUSH BUTTON				1			1		
		PPB COMMON #9				1			1		
		PHOTOELETRIC UNIT							3		3
#14		SPARES				3		3	3		
TOTAL NO.-14			–	–	–	13	–	9	16	–	3
#10		SIGNAL COMMON				1		1	1		
		LIGHTING							2		2
#6		SIGNAL CONTROLLER									2
TYPE "B"	4	LOOP DLC					2				
	6	" "	2	4	4	4					
		INTERCONNECT CABLE							1	1	
EV-DLC		EMERG. VEHICLE						1	1		
TOTAL CONDUCTORS / CABLES			2	4	4	18	2	11	21	1	7

PHASE DESIGNATIONS

6

4

EMERGENCY OPERATION: FLASH ALL PHASES RED.



NOTES

[1] – DETAIL "U" (ES-6T) REQUIRED. INSTALL STATE-FURNISHED SIGN PANEL.

[2] – DETAIL "U" (ES-6T), NOT REQUIRED.

[3] – SEE "LEGEND", EV-DLC, NOTE.

[4] – FOR CONTINUATION OF FEEDER CONDUIT TO SERVICE, SEE SHT. E-(10).

– INSTALL TYPE "H" SERVICE, ES-2A, AND TYPE III SERVICE EQUIP. CABINET ES-2C/D, WIRING DIAGRAM, E-(1).

[10] – [CB] PULL BOX INCLUDED IN LOCATION 1.

LEGEND

■ = (LTTC) LEFT-TURN TERMINATION CONDUIT, ES-8.

= MODEL 170 CONTROLLER ASSEMBLY. ORIENT DOORS PER PLAN SITE.

EV-DLC = EMERGENCY VEHICLE DETECTOR LEAD-IN CABLE. TERMINATE CABLE IN GREEN SECTION ON END OF MAST ARM SIGNAL HEAD. LEAVE ONE FOOT OF SLACK.

TYPICAL LOOP DETECTOR PLACEMENT

LIKE NUMBERED LOOPS SHALL BE CONNECTED TO THE SAME DLC.

D.P.W. REG. NO.	STATE
7	CALIF.

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	8			

DISTRICT TRAFFIC ENGINEER — REGISTERED CIVIL ENGINEER NO. 33611

DATE APPROVED

ROUTE 8 AT EB OFF-RAMP & TEXAS STREET IN SAN DIEGO

SIGNAL AND LIGHTING LOCATION 2

SIGNAL NO. P3.882

SCALE IN FEET 0 20 40

SHEET E-3

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
W.J. FRENDO	3/82	M.A. CHASE	3/82	R.B. FINDLAY	3/82

CU 11203 WO 111801

REV. 4/82, 10/82

DRAWN DWH 4/82

CHECKED

61

INTERSECTION: CAMINO DEL RIO SOUTH @ TEXAS

22 ogram

Group Assignment: 4087 | N/S Street Name: TEXAS | Last Database Change: n/a
Field Master Assignment: NONE | E/W Street Name: CAMINO DEL RIO SOUTH | System Ref. Number: n/a

N

TEXAS St | CAMINO DEL RIO SOUTH | TEXAS St

Row	Column # ---> / Phase # --->	Phase 1 (1+3)	Phase 2	Phase 3	Phase 4	Phase 5 (4+5)	Phase 6	Phase 7	Phase 8
0	Ped Walk		7	7	7		7		
1	Ped FDW		15	23	20		23		
2	Min Green	4	10	4	4	4	10		
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	②5.5 ~~4.8~~	2.0	3.0 ② ~~2.0~~	2.0	3.7		
6	Max Gap	2.0	②3.5 ~~4.8~~	2.0	3.0 ② ~~2.0~~	2.0	3.7		
7	Min Gap	2.0	②0.5 ~~0.2~~	2.0	3.0 ② ~~2.0~~	2.0	0.2		
8	Max Limit	35	40	30	30	25	~~90~~ 60		
9	Max Limit 2		50		④ 40				
A	Bus Adv								
B	Call to Phs	③ 6							
C	Reduce By		0.1				0.1		
D	Every		0.6				0.9		
E	Yellow	3.4	6.0 ③ ~~5.8~~	4.2	3.9	3.4	3.9		
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0		
	Grade		-10%	0%	0%		0%		

Phase Timing - Bank 1 <F Page>
F + Phase + Row

① WH 1/5/04
③ WH 2/10/04
④ WH 1/20/04
② WH 1/29/04

Row	E	RR-1 Delay	RR-1 Clear	EV-A Delay	EV-A Clear	EV-B Delay	EV-B Clear	EV-C Delay	EV-C Clear	EV-D Delay	EV-D Clear	RR-2 Delay	RR-2 Clear	View EV Delay	View EV Clear	View RR Delay	View RR Clear
				0	0									---	---	---	---

Preempt Timing
F + E + Row

Row	F	Permit	Red Lock	Yellow Lock	Min Recall	Ped Recall	Peds (View)	Rest In Walk	Red Rest	Dbl Entry	Max Recall	Soft Recall	Max 2	Cond Serv	Ped Lock	Yellow Start	1st Phases
		123456					_234_6_					_2___6_		1	12345678	_2___6_	__3____

Phase Functions <F Page>
F + F + Row

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number		C + 0 + 0
Zone Number		C + 0 + 1
Area Number		C + 0 + 2
Area Address		C + 0 + 3
QuicNet Channel	DIGI56:	(QuicNet)

Communication Addresses

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page> F + COLOR +
<D Page> D + 0 + OVERLAP

Manual Plan	14
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

C + F + O	F	Row
Free Lag	_2_4_6__	0

Lag Phases <C Page>

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234____

Disable Communication Ports
D + D + 9

Timing Sheet By: JD
Approved By:
Drawing Number: 24525-10-D
Timing Implemented On: 4/2/03

INTERSECTION: CAMINO DEL RIO SOUTH @ TEXAS

223 Program

Row	Time	Function	Day of Week	Column F: Phases/Bits
0	16 : 00	B	_23456_	_2_____
1	18 : 00	B	_23456_	
2	19:00	B	.23456.	____4____
3	21:00	B	.23456.	
4	09:00	B	1____7	____4____
5	19:00	B	1____7	
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

(4)

TOD Function

7 + ROW

<D Page>

D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	_2_____
6	Ped 6P	____6__
7	Ped 4P	___4___
8	Ped 8P	__3____
9	Yellow Flash Phases	
A	Overlap A - Phases	1_3____
B	Overlap B - Phases	___45__
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1_____

Configuration

<E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	__3____
6	Overlap B - Green Omit	___4___
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	_2__5___
B	EV-B Phases	
C	EV-C Phases	
D	EV-D Phases	
E	Extra 1 Config. Bits	1_345___
F	IC Select (Interconnect)	_2_____

Configuration

For access, set F + 9 + E = 1

E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week

8-1 Day-of-Month, Year, Month

8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications

(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program

C + C + F = version

Remote Download

C + 0 + 4 = 1 -255

w/ E + E + E bit 5 on

Row	1 Delay	3 Carry over
0		
1		1.8
2		1.8
3		2.0
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
BIKE LOOP	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		1.8
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 – – – –	1234____
C	13 14 15 16 17 18 19 20	12345678
D	– – – – 21 22 23 24	____5678
E	– – – – – – – –	1234____
F	– 25 26 27 28 – – –	_2345___

Active Detectors <D Page>

Row	0 Detector #
0	
1	System Det. # 1
2	System Det. # 2
3	System Det. # 3
4	System Det. # 4
5	System Det. # 5
6	System Det. # 6
7	System Det. # 7
8	System Det. # 8

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

TRAFFIC SIGNAL TIMING - PROGRAM 2005

PHASE TIMING — Camino Del Rio South / Camino Del Rio South / Mission City Pkwy

INTERVAL		1 NOT USED	2 →	3 NOT USED	4 NOT USED	5 ↑	6 ←→	7	8 NOT USED	PREEMPT	E	
WALK	0						7	7		RR1 DELAY		0
FLASH D/W	1						16	10		RR1 CLEAR		1
MIN GREEN	2		10			4	10	4		EVA DELAY	0	2
TYPE 3 DET	3									EVA CLEAR	3	3
ADD/VEH	4									EVB DELAY	0	4
VEH EXTEN *	5		3.4			2.0	3.4	2.0		EVB CLEAR	3	5
MAX GAP *	6		3.4			2.0	3.4	2.0		EVC DELAY	0	6
MIN GAP *	7		0.2			2.0	0.2	2.0		EVC CLEAR	3	7
MAX EXTEN	8		60			30	60	40		EVD DELAY		8
MAX 2	9									EVD CLEAR		9
	A									RR2 DELAY		A
CALL TO PHASE	B									RR2 CLEAR		B
REDUCE BY	C		0.1				0.1			EV CLR TMR		C
REDUCE EVERY	D		0.9				0.9			EV DLY TMR		D
YELLOW	E		4.0			~~3.4~~ 3.0	4.0	~~3.4~~ 3.0		RR CLR TMR		E
RED CLEAR	F		1.0			1.0	1.0	1.0		RR DLY TMR		F

MAX INITIAL (F-0-E) = 0 (KEYSTROKES: F + PHASE + LOCATION)

RED REVERT (F-0-F) = 5

ALL RED START (F-C-0) = 0

* MUST BE SAME FOR NON-DENSITY OPERATION

DNH 4/18/03

PHASE FUNCTION FLAGS

KEYSTROKES: F+F+FUNCTION#

FUNCTION		PHASE 1	2	3	4	5	6	7	8
PERMIT	0		X			X	X	X	
RED LOCK	1								
YELLOW LOCK	2								
VEH RECALL	3		X				X		
PED RECALL	4								
PEDS	5								
REST IN WALK	6								
RED REST	7								
DOUBLE ENTRY	8								
MAX RECALL	9								
SOFT RECALL	A								
MAX 2	B								
COND SERVE	C								
RESERVED	D								
STARTUP	E		X				X		
FIRST PHASES	F							X	

OVERLAP TIMING

KEYSTROKE: F+ COLOR CODE+OVERLAP

	9 GREEN	C YELLO	D RED
OVERLAP A			
OVERLAP B			
OVERLAP C			
OVERLAP D			

PHASE SEQUENCES (CFO)

	PHASE 1	2	3	4	5	6	7	8
LAG 0 (FREE)		X				X	X	

DWG 26357-2-D

LOC Camino Del Rio South + Mission City Parkway

DATE: 12/23/92

DETECTOR TIMES (332 CABINET)

Y \ X	1 SET DELAY	2 SET CARRY	3 OBS COUNT	4 OBS DELAY	5 OBS CARRY	6	7	8	9	A
0	111	5J1	111	5J1	111	5J1	111	5J1	111	5J1
1	212U	6J2U	212U 1.8	6J2U 1.8	212U	6J2U	212U	6J2U	212U	6J2U
2	212L	6J2L	212L	6J2L 1.8	212L	6J2L	212L	6J2L	212L	6J2L
3	213U	6J3U	213U 1.8	6J3U	213U	6J3U	213U	6J3U	213U	6J3U
4	213L	6J3L	213L	6J3L			213L	6J3L	213L	6J3L
5	214	6J4	214	6J4			214	6J4	214	6J4
6	315	7J5	315	7J5	315	7J5	315	7J5	315	7J5
7	416U	8J6U	416U	8J6U	416U	8J6U	416U	8J6U	416U	8J6U
8	416L	8J6L	416L	8J6L	416L	8J6L	416L	8J6L	416L	8J6L
9	417U	8J7U	417U	8J7U	417U	8J7U	417U	8J7U	417U	8J7U
A	417L	8J7L	417L	8J7L			417L	8J7L	417L	8J7L
B	418	8J8	418	8J8			418	8J8	418	8J8
C	119U	5J9U	119U	5J9U	119U	5J9U	119U	5J9U	119U	5J9U
D	319L	7J9L	319L	7J9L	319L	7J9L	319L	7J9L	319L	7J9L
E										
F										

KEYSTROKES: D + X + Y

TIME OF DAY FEATURES

EVENT	TIME	FUNCT	DAY OF WEEK S	M	T	W	T	F	S
0			1	2	3	4	5	6	7
1									
2									
3									
4									
5									
6									
7									
8									
9									
A									
B									
C									
D									
E									
F									

KEYSTROKES: 7+EVENT#

FUNCTION BY PHASE

EVENT	1	2	3	4	5	6	7	8
0								
1								
2								
3								
4								
5								
6								
7								
8								
9								
A								
B								
C								
D								
E								
F								

KEYSTROKES: D-F-EVENT #

TIME OF DAY LOCAL FUNCTION CODES

0 - PERMIT	7 - PED REST	E - 1 - LOCAL OVERIDE	F - TOD OUTPUTS
1 - PED LOCK	8 - DBL ENTRY	2 - PHASE BANK 2	1 - TOD OUT 1
2 - YELLOW LOCK	9 - VEH MAX RCL	3 - PHASE BANK 3	2 - TOD OUT 2
3 - VEH RECALL	A - SOFT RECALL	7 - DET COUNT	3 - TOD OUT 3
4 - PED RECALL	B - MAX II EXT	8 - SPLIT MONITOR	4 - TOD OUT 4
5 - RESERVED	C - COND SERVE		
6 - REST IN WALK	D - TOD LAG Ø		

CURRENT TIME AND DATE

8-0 HOUR, MINUTE, DAY OF WEEK

8-1 DAY OF MONTH, YEAR, MONTH

8-F SECONDS

CONFIGURATION DATA

NOTE "E" KEY ENABLED (F-9-E ≠ 0)

KEYSTROKES: E+E+INTERVAL

INTERVAL	PHASE 1	2	3	4	5	6	7	8
0 EXCLU PH								
1 RR1 GRN CL								
2 RR2 GRN CL								
3 RR2 LTD								
4								
5 OLA GOMIT						X		
6 OLB GOMIT								
7 OLC GOMIT								
8 OLD GOMIT								
9 OU FL YEL								
A EMUEH A		X		X				
B EMUEH B							X	
C EMUEH C						X		
D EMUEH D								
E EXTRA	X		X	X				
F TC SELECT		X						

EXTRA (E+E+E)
- 1-TBC TYPE 1
- 2-NEMA COOD
- 3-DAYLIGHT SAV
- 4-EV ADVANCE
- 6-SPECIAL EVENT
- 7-PRETIMED
- 8-SPLIT RING

TCSEL (E+E+F)
- 1- SIMPLEX IN
- 2-2-WAY MODEM
- 3-7 WIRE IN
- 4-FLH/FREE
- 5-SIMPLEX OUT
- 7-7 WIRE OUT

ASSIGNS (E+F+F)
- 1-RT OVERLAP
- 2-TOD OUTPUTS
- 3-STEADY EV BEAC
- 4-FLASH EV BEAC

KEYSTROKES: E+F+INTERVAL

INTERVAL	PHASE 1	2	3	4	5	6	7	8
0								
1 RR OLAP A								
2 RR OLAP B								
3 RR OLAP C								
4 RR OLAP D								
5 PED2P								
6 PED6P						X		
7 PED4P							X	
8 PED8P								
9 FLH YELO								
A OVERLAP A					X			
B OVERLAP B					X	X		
C OVERLAP C								
D OVERLAP D								
E RESTRICT								
F ASSIGNS	X							

63 64

LOCATION: RTE 15 SB @ CAMINO DEL RIO SOUTH

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F PAGE

	INTERVAL	PHASE TIMING -1	2	3	4	5	6	7	8	9
0	WALK	1	7	1	1	1	1	1	1	CLK RST
1	DONT WALK	1	15	1	1	1	1	1	1	
2	MIN GREEN	5	20	5	5	1	11	1	1	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	1.0	2.0	2.0	1.0	0.9	2.0	0.9	0.9	
6	MAX GAP	1.0	2.0	2.0	1.0	0.9	2.0	0.9	0.9	
7	MIN GAP	1.0	2.0	2.0	1.0	0.9	2.0	0.9	0.9	
8	MAX EXT	15	40	15	20	9	40	9	9	
9	MAX 2									YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.2	4.5	3.5	3.6	3.0	4.5	3.0	3.0	MIN
F	RED	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	SEC
	PED XING FT		54							
	BIKE XING FT		192				64			

	PRE-EMPTION E	
EV SEL		0
RR1 CLR		5
EVA DLY		0
EVA CLR		5
EVB DLY		0
EVB CLR		5
EVC DLY		0
EVC CLR		5
EVD DLY		0
EVD CLR		5
MAX EV		255
RR2 CLR		5

	F FLAGS	1	2	3	4	5	6	7	8	
	PERMIT	1	2	3	4		6			0
	RED LOCK	1		3	4					1
	YEL LOCK									2
	V RECALL		2				6			3
	P RECALL									4
	PED PHASES		2							5
	RT OLA									6
	RT OLB									7
	DBL ENTRY									8
	MAX 2 PHASES									9
	LAG PHASES	READ ONLY								A
	RED REST									B
	REST-IN-WALK									C
	MAX 3 PHASES									D
	YEL START UP		2				6			E
	FIRST PHASE			3						F
		1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FD0 TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

ENTRIES IN THESE LOCATIONS ARE NOT TO BE CHANGED

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

LOCATION: **RTE 15 SB @ CAMINO DEL RIO SOUTH**

CALTRANS C8 DATE: 6/13/96

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAG								
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH														LAG FZ FREE		X		X		X		X	0
1	FZ1 GRN FCTR													GAPOUT CP1	LAG FZ CP 1									1
2														GAPOUT CP2	LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3	LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4	LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A										OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		X				X			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRP																							F

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER :
SB OFF

LOCATION	OFF	ON
1		X
2	X	
3	X	
4	X	
5	X	
6	X	
7	X	
8	X	

COO = 1

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

LOCATION: **RTE 15 SB @ CAMINO DEL RIO SOUTH**

CALTRANS C8 DATE 6/13/96

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		X							5
6										6 PED						X			6
7										4 PED				X					7
8										8 PED								X	8
9																			9
A	OLA NOT	X								OLA ON		X	X	X		X			A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E

MINUTE = D-B-E

DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)

RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F

MINUTE = D-B-F

DAY = D-C-F

D-E-E = C8 VERSION NUMBER

D-E-F = LITHIUM BATTERY CONDITION

84 = BAD

85 = GOOD

LOCATION: **RTE 15 SB @ CAMINO DEL RIO SOUTH**

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7 PAGE 9 PAGE C09 = 0 or 1 9 PAGE C09 = 2

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION

2 MAX 2

3 MAX 3

4 COND SERV (1ST SELECT)

5 COND SERV (2ND SELECT)

6 ENERGIZE AUX OUTPUT-RED

7 ENERGIZE AUX OUTPUT-GREEN

8 ENERGIZE AUX OUTPUT-YELLOW

9 TIME OF DAY MAX RECALL (1ST SELECT)

A TRAFFIC ACT. MAX 2 OPERATION

B TIME OF DAY MAX RECALL (2ND SELECT)

C YELLOW YIELD COORDINATION

D YELLOW YIELD COORDINATION

E TIME OF DAY FREE OPERATION

F FLASHING OPERATION

POLE SCHEDULE

LOC.	STANDARD TYPE	MASTARM SIG.	MASTARM LUM.	PLACEMENT DIMENSIONS A ft.	PLACEMENT DIMENSIONS B ft.	SIGNAL MOUNTING & PLACEMENT VEHICLE POLE	VEHICLE MASTARM	PEDESTRIAN SIGNAL	PEDESTRIAN P.P.B.	REMARKS
(A)	19-4-80	30' [1]	12'	3½	2½	SV-1-T	MAS-(7) MAT-(5)-4			150 WATT HPS LUMINAIRE, [5]
(B)	16-2-80	15		-23	5½	SV-1-T	MAS			
(C)	1-A			CTR. IN ISLD.	CTR. IN ISLD.	TV-1 [5]				
(D)	19-4-80	25' [2]	12'	8	2½	SV-1-T	MAS MAS	SP-1-T	←W-(2P)	150 WATT HPS LUMINAIRE,
(E)	15 [3]		12'	STA.	8					150 WATT HPS LUMINAIRE,
(F)	15		12'	3	5½					150 WATT HPS LUMINAIRE,
(G)	1-A			8	2½	TV-1-T [5]		SP-1-T	(2P)-W→	
(H)	19-4-80	30' [2]	12'	DIM.	5½	SV-2-TB (1)	MAS MAS [4]	SP-1-T	(6P)-W→	150 WATT HPS LUMINAIRE, PEU.
(J)	1-A			DIM.	5½	TV-3-T [5]		SP-1-T	←W-(6P)	
(K)	15-2-80	18'		DIM.	5½	SV-1-T	MAS [4]			
(L)	STATE-FURNISHED MODEL 170 CONTROLLER ASSEMBLY. (FOUNDATION DETAILS ES-4B, ORIENT DOORS AS INDICATED).									

CONDUCTOR SCHEDULE

AWG SIZE	PHASE	CIRCUIT	CONDUIT SIZE & RUN NO. 2" (1)	2" (2)	2½" (3)	2" (4)	2" (5)	1½" (6)	2½" (7)	2½" (8)	2½" (9)	3" (10)	3" (11)	3" (12)	1½" (13)
14	1	VEHICLE SIGNAL						3	3	3	3	3	3		
	2					3	3		3	3	3	3	3		
	3		3	3	3							3	3	3	
	4												3	3	
	5				3										
	6											3	3	3	
	7				3										
	2P	PED. INTERVAL SIGNAL				2	2		2	2	2	2	2		
	4P	(F)			2							3	3	3	
	6P											2	2	2	
	2 P	PED. PUSHBUTTON				1	1		1	1	1	1	1	1	
	4 P				1										
	6 P											1	1	1	
	2/4	PPB COMMON				1	1	1		1	1	1	1	1	
	6/8											1	1	1	
		PHOTOELECTRIC UNIT										3	3	3	3
14		SPARES	3	3	3	3	3	3	3	3	3	3	3	3	3
		TOTAL NO. 14	6	6	16	10	10	6	13	13	26	29	29	3	
8		SIGNAL COMMON	1	1	1	1	1	1	1	1	1	1	1		
10		LIGHTING			2	2	2		2	2	2	2	2	4	
		SPRINKLER CONTROL					2		2	2	2	2	2	2	
2		SIGNAL CONTROLLER												2	
TYPE	1	LOOP-DLC				1	1		1	1	1	1	1		
	2										2	2	2	2	
	3											1	1	1	
8	4				1	1									
	5										1	1	1	1	
	6														
DLC	7		4	4	4										
DDLC	4	MAGNETOMETER			2										
EV-DLC		EMERG. VEH. PREEMPT.			1							1	1	2	
TOTAL CONDUCTORS/CABLES			11	12	27	14	16	7	19	22	37	40	41	11	

CONDUIT NOTES

(13) - 2"C., 4 TWISTED PAIR, (LOOP CONDUCTORS).
(14) - 1"C., 2-8DLC
(15) - 1"C., 1-8DLC
(16) - 1½"C., 1-8DLC
(17) - 1"C., 2 #10-LTG.
(18) - SERVICE CONDUIT, 2"C., 3 #4.
(19) - 2"C., 4-8DLC
(20) - 1"C., 2 #10-SC.
(21) - 3"C., 2 #2-SIGNAL. 4-DLC. 4 #10-LTG., 2 #10-S.C. 3 #14-PEU.
(22) - 1"C., 1-DDLC
(23) - 1"C., 2-DDLC
(24) - 1"C., 3-DDLC
(25) - 1"C., 4-DDLC
(26) - 2"C., 2-DDLC
(27) - 2"C., 2-DDLC 1-8DLC
(F) - FUTURE USE.

I-15 SB OFF-RAMP

PHASE DESIGNATIONS

EMERGENCY OPERATION: FLASH ALL PHASES RED.

CAMINO DEL RIO SOUTH

E6.747 E6.727 E6.721 L6.717 L6.701 S6.737

SB-15 ON RAMP

REDUCED PLAN
USE SCALE BELOW
0 1 2 3
3 INCHES ON ORIGINAL PLAN

NOTES

1 - DETAIL "U" (ES-6T) REQUIRED. INSTALL STATE-FURNISHED SIGN PANEL.
2 - DETAIL "U" (ES-6T) NOT REQUIRED.
3 - RELOCATE LIGHTING STANDARD WITH SLIP-BASE, REMOVED FROM E-(1).
4 - TERMINATE EMERGENCY VEHICLE PREEMPTOR DETECTOR LEAD-IN CABLE (EV-DLC), IN GREEN SECTION OF SIGNAL HEAD ON THE END OF THE MASTARM. (LEAVE 1 FOOT OF SLACK).
5 - LEFT-TURN SIGNAL FACE SHALL HAVE 3-12" ARROWS: RED, YELLOW & GREEN.
6 - SPECIAL DETECTOR HANDHOLE, (ES-5D).
7 - SEE BRIDGE PLAN FOR MAGNETOMETER INSTALLATION DETAILS. E-(8).
8 - TYPE III SERVICE EQUIPMENT CABINET, (ES-2 C/D). WIRING DIAGRAM, SHEET E-(4).
9 - TERMINATING PULL BOX, LABELING AND MARKING AS REQUIRED BY SERVING UTILITY.

A6.73 120/240V

CONDUIT NOTES

(28) - 2"C., 2 #2-SIGNAL. 2-DLC. 4 #10-LTG. 2 #10-SC. 3 #14-PEU.
(29) - 2"C., 2 #2-SIGNAL. 4-DLC. 4 #10-LTG. 2 #10-SC. 3 #14-PEU.

TYPICAL LOOP DETECTOR PLACEMENT

| 7' | 10' | 7' | 10' | 7' | 10' | 7' |

LANE LINE — 2½', OR CENTER.

LIKE NUMBERED LOOPS SHALL BE CONNECTED TO THE SAME DLC.

DIST.	STATE		
7	CALIF.		170

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
11	SD	15	R5.2/R6.2	171	282

M.C. Guiness
DISTRICT TRAFFIC ENGINEER — REGISTERED CIVIL ENGINEER NO. 9261

DATE APPROVED August 22, 1983

ROUTE 8/15 AT CAMINO DEL RIO SO. & I-15 SB-RAMPS IN CITY OF SAN DIEGO SIGNAL AND LIGHTING

LOCATION 1

SIGNAL NO. P6.737

SCALE IN FEET 0 20 40

SHEET E-(2)

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
M.C. GUINESS	6/83	M.A. CHASE	6/83	J.O. GRASBERGER	6/83

REVISED 8/83

CU 11206 5

WO 169611

FORM BH 714 M

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LOCATION: RTE 15 NB @ CAMINO DEL RIO SOUTH

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F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	7	1	1	1	1	1	1	CLK RST
1	DONT WALK	1	15	1	1	1	1	1	1	
2	MIN GREEN	1	12	1	5	5	14	1	1	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	0.9	2.0	0.9	2.0	1.0	2.0	0.9	0.9	
6	MAX GAP	0.9	2.0	0.9	2.0	1.0	2.0	0.9	0.9	
7	MIN GAP	0.9	2.0	0.9	2.0	1.0	2.0	0.9	0.9	
8	MAX EXT	9	40	9	25	20	40	9	9	
9	MAX 2									YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	3.0	4.5	3.0	4.0	3.2	4.0	3.0	3.0	MIN
F	RED	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	SEC
	PED XING FT		56							
	BIKE XING FT		70				102			

PRE-EMPTION E		F FLAGS	1	2	3	4	5	6	7	8	
EV SEL	0	PERMIT		2		4	5	6			0
RR1 CLR	5	RED LOCK				4	5				1
EVA DLY	0	YEL LOCK									2
EVA CLR	5	V RECALL		2				6			3
EVB DLY	0	P RECALL									4
EVB CLR	5	PED PHASES		2							5
EVC DLY	0	RT OLA									6
EVC CLR	5	RT OLB									7
EVD DLY	0	DBL ENTRY									8
EVD CLR	5	MAX 2 PHASES									9
MAX EV	255	LAG PHASES	READ ONLY								A
RR2 CLR	5	RED REST									B
		REST-IN-WALK									C
		MAX 3 PHASES									D
		YEL START UP		2				6			E
		FIRST PHASE				4					F
			1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FD0 TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

ENTRIES IN THESE LOCATIONS ARE NOT TO BE CHANGED

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

LOCATION: **RTE 15 NB @ CAMINO DEL RIO SOUTH**

CALTRANS C8 Version 3 DATE: 5/2/2001

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAGS									
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH														LAG FZ FREE		2		4		6		8	0
1	FZ1 GRN FCTR													GAPOUT CP1	LAG FZ CP 1									1
2														GAPOUT CP2	LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3	LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4	LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A										OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		2				6			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRPT																							F
																1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER:
RTE 15 NB RAMP

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8		

LOCATION	OFF	ON
1		
2		1
3		
4		
5		
6		
7		
8		

COO = 2

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4					X				0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		X							5
6										6 PED						X			6
7										4 PED					X				7
8										8 PED								X	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E
MINUTE = D-B-E
DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)
RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F
MINUTE = D-B-F
DAY = D-C-F

D-E-E = C8 VERSION NUMBER
D-E-F = LITHIUM BATTERY CONDITION
84 = BAD
85 = GOOD

LOCATION: **RTE 15 NB @ CAMINO DEL RIO SOUTH**

CALTRANS C8 DATE : 12/6/94 PAGE 4

7 PAGE

TIME OF DAY ACTIVITY TABLE

7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS

	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	15	00	4	X		X	X	X	X	X	
1	18	30	4			X	X	X	X	X	
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION

2 MAX 2

3 MAX 3

4 COND SERV (1ST SELECT)

5 COND SERV (2ND SELECT)

6 ENERGIZE AUX OUTPUT-RED

7 ENERGIZE AUX OUTPUT-GREEN

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY

9+EVENT+HR+MIN+CP+OS+E+DOW

	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

8 ENERGIZE AUX OUTPUT-YELLOW

9 TIME OF DAY MAX RECALL (1ST SELECT)

A TRAFFIC ACT. MAX 2 OPERATION

B TIME OF DAY MAX RECALL (2ND SELECT)

C YELLOW YIELD COORDINATION

D YELLOW YIELD COORDINATION

E TIME OF DAY FREE OPERATION

F FLASHING OPERATION

9 PAGE C09 = 2

CONTROL PLAN TIME OF DAY

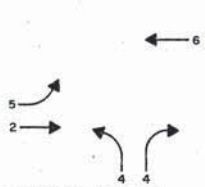
9+EVENT+HR+MIN+CP+OS+E+DOW

	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

POLE SCHEDULE

LOC	STANDARD TYPE	MASTARM SIG.	MASTARM LUM.	PLACEMENT DIMENSIONS A ft.	PLACEMENT DIMENSIONS B ft.	SIGNAL MOUNTING & PLACEMENT VEHICLE POLE	VEHICLE MASTARM	PEDESTRIAN SIGNAL	PEDESTRIAN P.P.B.	REMARKS
(A)	17-2-80	20' [2]	12'	-5	2 1/2	SV-2-TB	MAS [4]			150 WATT HPS LUMINAIRE,
(B)	15 [3]		12'	STA.	6					150 WATT HPS LUMINAIRE,
(C)	15		12'	1	5 1/2	SV-1-T (17' MTG. HT.)				150 WATT HPS LUMINAIRE,
(D)	1-A			23	2 1/2	TV-3-T [5]				
(E)	26-4-80	40 [1]	12'	-1	2 1/2	SV-2-TB	MAT- (5) [4] MAS- (2) [5]	SP-I-T	→W-(2P)	150 WATT HPS LUMINAIRE, PEU
(F)	1-A			5	2 1/2	TV-1		SP-I-T	(2P)-W→	
○										
○										
(G)	STATE-FURNISHED MODEL 170 CONTROLLER ASSEMBLY. (FOUNDATION DETAILS ES-4B, ORIENT DOORS AS INDICATED).									

PHASE DESIGNATIONS



EMERGENCY OPERATION: FLASH ALL PHASES RED.

CONDUCTOR SCHEDULE

AWG SIZE	PHASE	CIRCUIT	CONDUIT SIZE & RUN NO. 1 1/2" (1)	2" (2)	2" (3)	2 1/2" (4)	2 1/2" (5)	3" (6)	2 1/2" (7)	1 1/2" (8)	2" (9)	2" (10)	2 1/2" (11)	3" (12)
14	2	VEHICLE SIGNAL					3	3						
	4	↓	3			3	3		3					
	5	↓				3	3							
	6	↓				3	3		3					
	2P	PED. INTER. SIGNAL					2	2						
	4P	↓ (F)				2	2	2	2					
	6P	↓ (F)				2	2		2					
	2P	PED. PUSHBUTTON					1	1						
	4P	↓					1	1		1				
	6P	↓	1				1	1		1				
	2/4	P.P.B. COMMON					1	1	1	1				
	6/8	↓	1				1	1		1				
		PHOTOELECTRIC UNIT						3			3	3	3	3
14		SPARES	3			3	3	3	3					
TOTAL NO. 14			8			20	29	12	17		3	3	3	3
8		SIGNAL COMMON	1			1	1	1	1					
10		LIGHTING	2			2	2		2		4	4	4	4
2		SIGNAL CONTROLLER									2	2	2	2
EV-DLC		EMERG. VEH. PREEMPT.					2		1					
TYPE B DLC	2	LOOP DLC										2	4	4
	4	↓					1			3				
	5	↓												1
	6	↓		4	4	4	4							
TOTAL CONDUCTORS/CABLES			11	4	4	27	39	14	21	3	9	11	13	14

CONDUIT NOTES

(13) - 2"C., 4 TWISTED PAIR, (LOOP CONDUCTORS).

(14) - 1 1/2"C., 2-BDLC

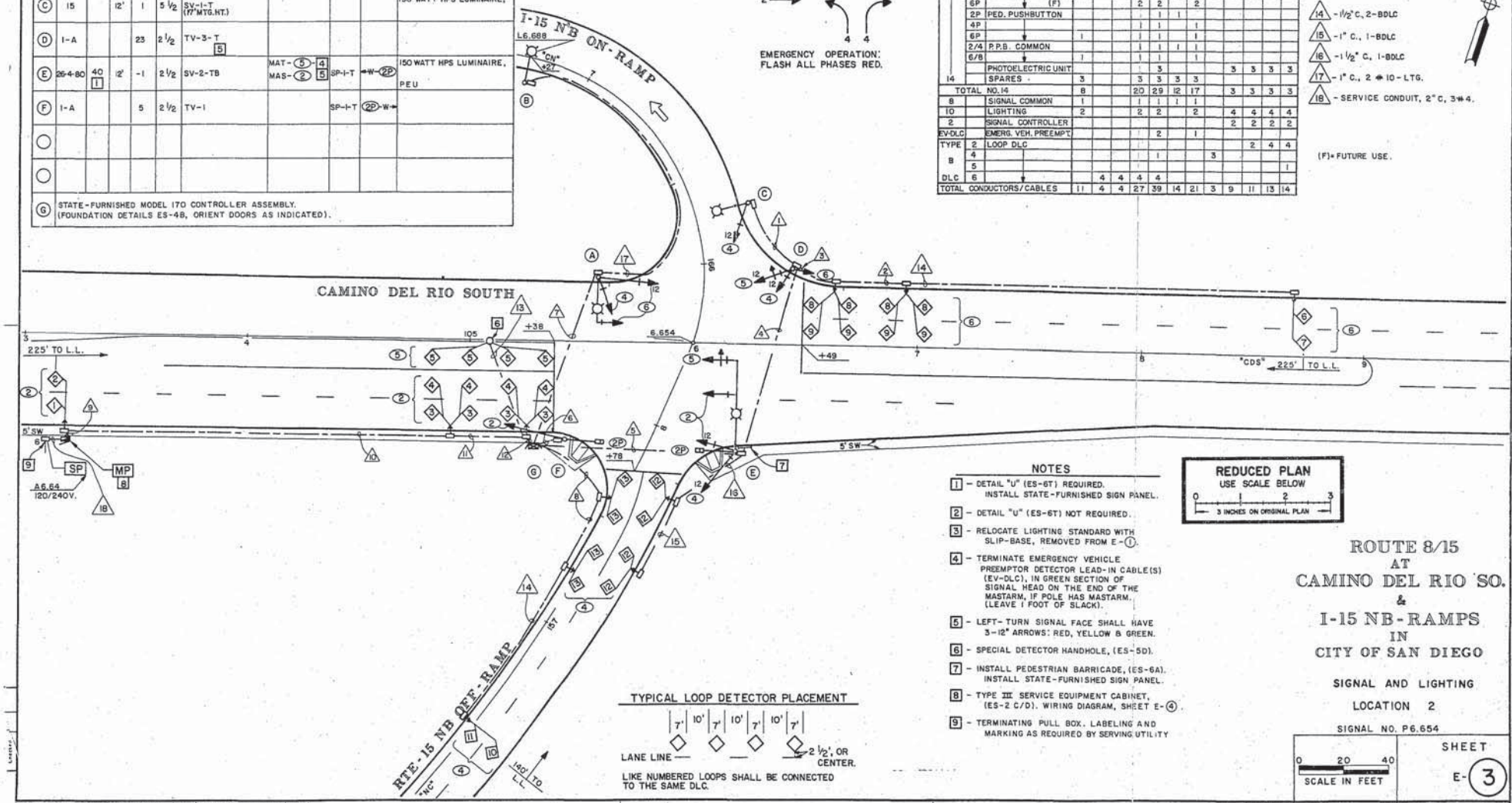
(15) - 1"C., 1-BDLC

(16) - 1 1/2"C., 1-BDLC

(17) - 1"C., 2 #10-LTG.

(18) - SERVICE CONDUIT, 2"C., 3#4.

(F)= FUTURE USE.



TYPICAL LOOP DETECTOR PLACEMENT

LIKE NUMBERED LOOPS SHALL BE CONNECTED TO THE SAME DLC.

NOTES

1 - DETAIL "U" (ES-6T) REQUIRED. INSTALL STATE-FURNISHED SIGN PANEL.

2 - DETAIL "U" (ES-6T) NOT REQUIRED.

3 - RELOCATE LIGHTING STANDARD WITH SLIP-BASE, REMOVED FROM E-(1).

4 - TERMINATE EMERGENCY VEHICLE PREEMPTOR DETECTOR LEAD-IN CABLE(S) (EV-DLC), IN GREEN SECTION OF SIGNAL HEAD ON THE END OF THE MASTARM, IF POLE HAS MASTARM. (LEAVE 1 FOOT OF SLACK).

5 - LEFT-TURN SIGNAL FACE SHALL HAVE 3-12" ARROWS: RED, YELLOW & GREEN.

6 - SPECIAL DETECTOR HANDHOLE, (ES-5D).

7 - INSTALL PEDESTRIAN BARRICADE, (ES-6A). INSTALL STATE-FURNISHED SIGN PANEL.

8 - TYPE III SERVICE EQUIPMENT CABINET, (ES-2 C/D). WIRING DIAGRAM, SHEET E-(4).

9 - TERMINATING PULL BOX. LABELING AND MARKING AS REQUIRED BY SERVING UTILITY

REDUCED PLAN
USE SCALE BELOW
0 1 2 3
3 INCHES ON ORIGINAL PLAN

ROUTE 8/15 AT CAMINO DEL RIO SO. & I-15 NB-RAMPS IN CITY OF SAN DIEGO

SIGNAL AND LIGHTING

LOCATION 2

SIGNAL NO. P6.654

0 20 40
SCALE IN FEET

SHEET E-3

REG. NO.	DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
	11	SD	15	R5.2/R6.2	172	282

DISTRICT TRAFFIC ENGINEER — REGISTERED CIVIL ENGINEER NO. 9381

DATE APPROVED August 22, 1983

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
M.C. GUINESS	6/83	M.A. CHASE	6/83	J.O. GRASSBERGER	6/83

REVISED 7/83

CU 11206

WO 169611

LOCATION: **RTE 8 EB @ FAIRMONT AVENUE**

CALTRANS C8 Version 3 DATE: 4/21/2011 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	1	1	1	1	1	1	1	CLK RST
1	DONT WALK	1	1	1	1	1	1	1	1	
2	MIN GREEN	5	1	5	12	1	5	1	1	
3	TYPE 3 DET	0	0	0	0	0	0	0	0	
4	ADD/VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	PASSAGE	2.0	1.0	1.0	2.0	0.9	2.0	0.9	0.9	
6	MAX GAP	2.0	1.0	1.0	2.0	0.9	2.0	0.9	0.9	
7	MIN GAP	2.0	1.0	1.0	2.0	0.9	2.0	0.9	0.9	
8	MAX EXT	40	9	15	40	9	65	9	9	
9	MAX 2									YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	DOW
D	EVERY	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	HR
E	YELLOW	4.1	3.0	3.7	5.0	3.0	5.0	3.0	3.0	MIN
F	RED	1.0	1.0	1.0	1.0	0.0	1.0	0.0	0.0	SEC
	PED XING FT									
	BIKE XING FT				86					

	PRE-EMPTION E		F FLAGS	1	2	3	4	5	6	7	8	
	EV SEL	0	PERMIT	1	2	3	4		6			0
	RR1 CLR	5	RED LOCK			3						1
	EVA DLY	0	YEL LOCK	1			4					2
	EVA CLR	5	V RECALL		2				6			3
	EVB DLY	0	P RECALL									4
	EVB CLR	5	PED PHASES									5
	EVC DLY	0	RT OLA									6
	EVC CLR	5	RT OLB									7
	EVD DLY	0	DBL ENTRY									8
	EVD CLR	5	MAX 2 PHASES									9
	MAX EV	255	LAG PHASES	READ ONLY								A
	RR2 CLR	5	RED REST									B
			REST-IN-WALK									C
			MAX 3 PHASES									D
			YEL START UP		2				6			E
			FIRST PHASE				4					F
				1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	0
FOF	5

FCO	3
FC1	3
FC2	10
FCA	0.0
FCB	0.0
FCC	0.0
FCD	0.0

FDO TB SELECT	1
FD3 PED SELECT	0
FD4 7 WIRE	0
FD5 PERMISSIVE	0
FD8 OS SEEKING	1

CO5 FLASH TYPE	1
CC2 DOWNLOAD	1

ENTRIES IN THESE LOCATIONS ARE NOT TO BE CHANGED

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

LOCATION: **RTE 8 EB @ FAIRMONT AVENUE**

CALTRANS C8 Version 3 DATE: 6/2/00

C PAGE

		CONTROL PLANS									Y-COORD			LAG PHASE		FLAG									
		1	2	3	4	5	6	7	8	9		C	D	E		F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH															LAG FZ FREE	1			4		6		8	0
1	FZ1 GRN FCTR													GAPOUT CP1		LAG FZ CP 1									1
2														GAPOUT CP2		LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3		LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4		LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5		LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6		LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7		LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8		LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9		LAG FZ CP 9									9
A	OFFSET A										OFFSET					LAG C COORD									A
B	OFFSET B															LAG D COORD									B
C	OFFSET C															COORD FAZES		2				6			C
D	FZ 3 EXT																								D
E	FZ 7 EXT																								E
F	OFFSET INTRPT																								F
																	1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

SYSTEM MASTER:
WB OFF CABINTE

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8		

LOCATION	OFF	ON
1		1
2		
3		
4		
5		
6		
7		
8		

COO = 1

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		X							5
6										6 PED						X			6
7										4 PED				X					7
8										8 PED								X	8
9																			9
A	OLA NOT	X					X			OLA ON			X	X					A
B	OLB NOT	X					X			OLB ON			X	X					B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E
MINUTE = D-B-E
DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)
RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F
MINUTE = D-B-F
DAY = D-C-F

D-E-E = C8 VERSION NUMBER
D-E-F = LITHIUM BATTERY CONDITION
84 = BAD
85 = GOOD

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
				ON/	S	M	T	W	T	F	S
	HR	MIN	ACT	OFF	1	2	3	4	5	6	7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

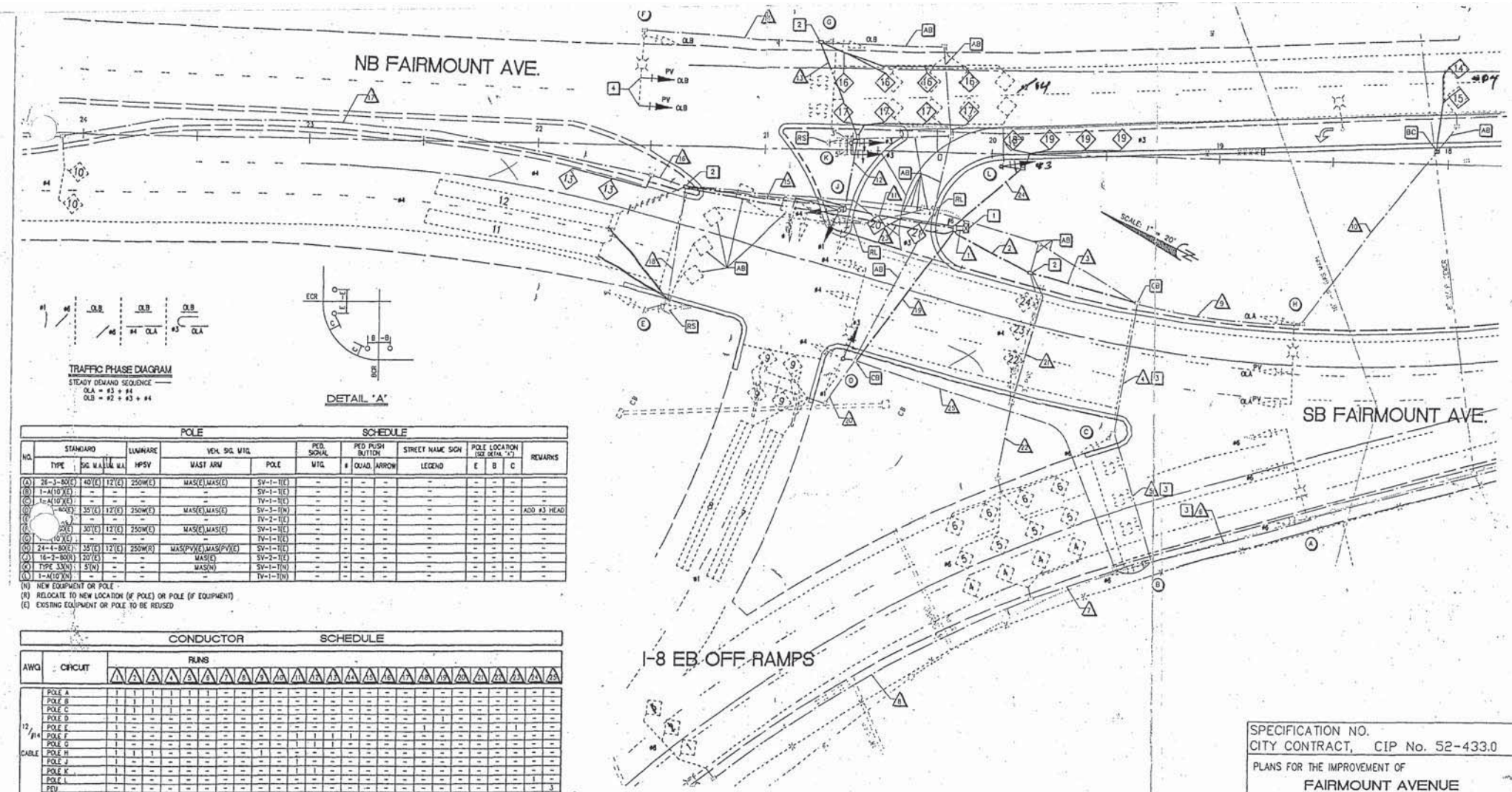
1 TYPE OF MAX TERMINATION
2 MAX 2
3 MAX 3
4 COND SERV (1ST SELECT)
5 COND SERV (2ND SELECT)
6 ENERGIZE AUX OUTPUT-RED
7 ENERGIZE AUX OUTPUT-GREEN
8 ENERGIZE AUX OUTPUT-YELLOW
9 TIME OF DAY MAX RECALL (1ST SELECT)
A TRAFFIC ACT. MAX 2 OPERATION
B TIME OF DAY MAX RECALL (2ND SELECT)
C YELLOW YIELD COORDINATION
D YELLOW YIELD COORDINATION
E TIME OF DAY FREE OPERATION
F FLASHING OPERATION

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
					S	M	T	W	T	F	S
	HR	MIN	CP	OS	1	2	3	4	5	6	7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 2

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
					S	M	T	W	T	F	S
	HR	MIN	CP	OS	1	2	3	4	5	6	7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											



TRAFFIC PHASE DIAGRAM

STEADY DEMAND SEQUENCE

OLA = #3 + #4

OLB = #2 + #3 + #4

DETAIL "A"

POLE SCHEDULE

NO.	STANDARD TYPE	STD. MA.	LUM. MA.	LUMINAIRE HPSV	VEH. SIG. MTG. MAST ARM	VEH. SIG. MTG. POLE	PED. SIGNAL MTG.	PED PUSH BUTTON #	PED PUSH BUTTON QUAD.	PED PUSH BUTTON ARROW	STREET NAME SIGN LEGEND	POLE LOCATION (SEE DETAIL "A") E	B	C	REMARKS
(A)	26-3-80(E)	40'(E)	12'(E)	250W(E)	MAS(E)	MAS(E)	SV-1-T(E)	-	-	-	-	-	-	-	-
(B)	1-A(10'X)(E)	-	-	-	-	-	SV-1-T(E)	-	-	-	-	-	-	-	-
(C)	1-A(10'X)(E)	-	-	-	-	-	TV-1-T(E)	-	-	-	-	-	-	-	-
(D)	1-80(E)	35'(E)	12'(E)	250W(E)	MAS(E)	MAS(E)	SV-3-T(N)	-	-	-	-	-	-	-	ADD #3 HEAD
(E)	1-80(E)	-	-	-	-	-	FV-2-T(E)	-	-	-	-	-	-	-	-
(F)	1-80(E)	30'(E)	12'(E)	250W(E)	MAS(E)	MAS(E)	SV-1-T(E)	-	-	-	-	-	-	-	-
(G)	1-A(10'X)(E)	-	-	-	-	-	TV-1-T(E)	-	-	-	-	-	-	-	-
(H)	24-4-80(E)	35'(E)	12'(E)	250W(R)	MAS(PV)(E)	MAS(PV)(E)	SV-1-T(E)	-	-	-	-	-	-	-	-
(J)	16-2-80(R)	20'(E)	-	-	MAS(E)	-	SV-2-T(E)	-	-	-	-	-	-	-	-
(K)	TYPE 33(N)	5'(N)	-	-	MAS(N)	-	SV-1-T(N)	-	-	-	-	-	-	-	-
(L)	1-A(10'X)(N)	-	-	-	-	-	TV-1-T(N)	-	-	-	-	-	-	-	-

(N) NEW EQUIPMENT OR POLE

(R) RELOCATE TO NEW LOCATION (IF POLE) OR POLE (IF EQUIPMENT)

(E) EXISTING EQUIPMENT OR POLE TO BE REUSED

CONDUCTOR SCHEDULE

AWG.	CIRCUIT	RUNS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
12/#14 CABLE	POLE A	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	POLE B	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	POLE C	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	POLE D	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
	POLE E	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-
	POLE F	1	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	POLE G	1	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	POLE H	1	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	POLE J	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
	POLE K	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	POLE L	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
	PEU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
	TOTAL	11	4	4	3	2	1	-	-	1	-	4	3	2	1	-	-	-	1	1	-	-	-	-	1	3
#10	LUMINAIRE	-	2	2	2	2	2	-	-	2	-	2	2	2	2	-	-	-	-	2	-	-	-	-	-	-
	TOTAL	-	2	2	2	2	2	-	-	2	-	2	2	2	2	-	-	-	-	2	-	-	-	-	-	-
#2	SIGNAL SERVICE	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2
TYPE B DLC	#1 DETECTOR	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-
	#2 DETECTOR	4	2	2	-	-	-	-	-	2	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-
	#3 DETECTOR	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
	#4 DETECTOR	7	3	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	1	-	4	-	-	-	-
	#6 DETECTOR	6	6	4	4	4	-	4	3	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
	TOTAL	24	11	6	4	4	-	4	3	2	2	2	2	1	-	-	2	1	-	4	3	3	2	4	2	-
	INTERCONNECT	8	4	4	4	4	-	-	-	-	-	4	-	-	4	4	-	-	-	-	-	-	-	-	-	-
	SIZE	3-3" (N)	3" (N)	3" (N)	2" (E)	2" (E)	1 1/2" (E)	1/2" (E)	1/2" (E)	1/2" (E)	1/2" (E)	3" (N)	3" (N)	3" (N)	1" (E)	2" (N)	1 1/2" (E)	1 1/2" (E)	1/2" (E)	3" (N)	1 1/2" (E)	1/2" (E)	1/2" (E)	3" (N)	3" (N)	1/2" (E)

(N) NEW EQUIPMENT OR POLE

(E) EXISTING EQUIPMENT OR POLE TO BE REUSED

STANDARD NOTES:

- AB – ABANDON. IF APPLIED TO CONDUIT REMOVE CONDUCTORS.
- BC – INSTALL PULLBOX IN EXISTING CONDUIT RUN.
- CB – INSTALL CONDUIT INTO EXISTING PULLBOX.
- RL – RELOCATE EQUIPMENT.
- RS – REMOVE AND SALVAGE EQUIPMENT.

CONSTRUCTION NOTES (THIS SHEET):

1. INSTALL EXISTING TYPE 170 CONTROLLER AND CABINET COMPLETE ON NEW FOUNDATION.
2. INSTALL NEW PULLBOX IN SAME LOCATION AS EXISTING PULLBOX.
3. REMOVE DISCRETE #14 SIGNAL CONDUCTOR. ADD 12/14 CABLE AS SHOWN.
4. RS EXISTING SIGNAL HEADS. FURNISH AND INSTALL PROGRAMMED VISIBILITY TYPE.

REGISTERED PROFESSIONAL ENGINEER — JAMES L. CHURCH — No. 04318 — Exp. 3-31-96 — STATE OF CALIFORNIA — CIVIL

Prepared in the office of
Church Engineering, Inc.
Consulting Engineers
Planners
Surveyors
2501 Alton Ave.
Irvine
CA 92714
(714)660-8800

SPECIFICATION NO.
CITY CONTRACT, CIP No. 52-433.0

PLANS FOR THE IMPROVEMENT OF
FAIRMOUNT AVENUE
MONTEZUMA ROAD TO INTERSTATE 8

SIGNAL MODIFICATION PLAN

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING AND DEVELOPMENT DEPARTMENT
SHEET 28 OF 72 SHEETS

W.O. NO. 119446

FOR CITY ENGINEER — DATE: APR. 28, 1995 — SECTION HEAD

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL				

PROJECT MANAGER

CONTROL CERTIFICATION
220-1739
LAMBERT COORDINATES
27276-28-D

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

4-5-95

N:\T\35111367\1367-T28.DWG DATE: FEB 06, 1995 TIME: 1:43 PM

67

INTERSECTION: MADISON @ TEXAS

223 P[illegible]am

Group Assignment: 4027
Field Master Assignment: NONE

N/S Street Name: TEXAS
E/W Street Name: MADISON

Timing Sheet By:
Approved By:

Last Database Change: 5/10/01 11:[illegible]
System Ref. Number: 281
Drawing Number:
Timing Implemented On:

N

Row	Phase # →	1	2	3	4	5	6	7	8
	Column # →								
0	Ped Walk		7				7	7	7
1	Ped FDW		13				12	13	12
2	Min Green	4	10			4	10	4	4
3	Type 3 Limit								
4	Add/Veh								
5	Veh Extn	2.0	3.9			2.0	3.9	2.0	2.0
6	Max Gap	2.0	3.9			2.0	3.9	2.0	2.0
7	Min Gap	2.0	0.5			2.0	0.2	2.0	2.0
8	Max Limit	20	70 ~~60~~			20	70 ~~50~~	25	25
9	Max Limit 2	20	50			20	50	25	25
A	Bus Adv								
B	Call to Phs								
C	Reduce By		0.1				0.1		
D	Every		0.8				0.8		
E	Yellow	3.4 ~~3.0~~	3.9 ~~3.3~~			3.4 ~~3.0~~	3.9 ~~3.5~~	3.9 ~~3.0~~	3.9 ~~4.2~~
F	Red Clear	1.0	1.0			1.0	1.0	1.0	1.0

Phase Timing - Bank 1
F + Phase + Row
<F Page>

Row	E	Preempt Timing
		F + E + Row
RR-1 Delay		
RR-1 Clear		
EV-A Delay	0	
EV-A Clear	3	
EV-B Delay		
EV-B Clear		
EV-C Delay	0	
EV-C Clear	3	
EV-D Delay		
EV-D Clear		
RR-2 Delay		
RR-2 Clear		
View EV Delay	---	
View EV Clear	---	
View RR Delay	---	
View RR Clear	---	

Row	F	Phase Functions
		F + F + Row <F Page>
Permit	12__5678	
Red Lock		
Yellow Lock		
Min Recall	_2___6__	
Ped Recall		
Peds (View)	_2___678	
Rest In Walk		
Red Rest		
Dbl Entry		
Max Recall		
Soft Recall		
Max 2		
Cond Serv		
Ped Lock	12345678	
Yellow Start	_2___6__	
1st Phases	_____7_	

Max Initial	0
Red Revert	5.0
All Red Start	0.0

F + 0 + E
F + 0 + F
F + C + O

Start / Revert Times

Drop Number	9
Zone Number	9
Area Number	2
Area Address	13
QuicNet Channel	DIGI66:

C + 0 + 0
C + 0 + 1
C + 0 + 2
C + 0 + 3
(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_2___67_	0

Lag Phases <C Page>

Overlap Timing

Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A			
Overlap B	B			
Overlap C	C			
Overlap D	D			

<F Page> F + COLOR +
<D Page> D + 0 + OVERLAP

Manual Plan	14 ~~0~~
Manual Offset	0

C + A + 1
C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255 (minutes)

Downtime Before Auto Manual Flash
F + 0 + 8

Disable Ports	_234____

Disable Communication Ports
D + D + 9

Row	Time	Functio	Day of Week	Column F Phases/Bits
0	:			
1	:			
2	:			
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Leg Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	_2_____
6	Ped 6P	_____6__
7	Ped 4P	_____7_
8	Ped 8P	_____8
9	Yellow Flash Phases	
A	Overlap A - Phases	
B	Overlap B - Phases	
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	

Configuration <E Page>

E + F + ROW

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	
6	Overlap B - Green Omit	
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	_2__5___
B	EV-B Phases	
C	EV-C Phases	1____6__
D	EV-D Phases	
E	Extra 1 Config. Bits	1_345___
F	IC Select (Interconnect)	_2_____

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Time and Date

8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information

C + C + 0 = program
C + C + F = version

Remote Download

C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	1I1	14
	2I2U	1
	2I2L	5
	2I3U	21
	2I3L	25
	2I4	9
	3I5	16
	4I6U	3
	4I6L	7
	4I7U	23
	4I7L	27
	4I8	11
	1I9U	18
	3I9L	20
---	---	---
---	---	---

Row	2 Delay	4 Carry-over
0		
1		1.8
2		
3		
4		
5		
6		
7		
8		
9		
A		
B		
C		
D		
E	---	---
F	---	---

Detector Name	332 Input File	Detector Number
	5J1	13
	6J2U	2
	6J2L	6
	6J3U	22
	6J3L	26
	6J4	10
	7J5	15
	8J6U	4
	8J6L	8
	8J7U	24
	8J7L	28
	8J8	12
	5J9U	17
	7J9L	19
---	---	---
---	---	---

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	12345678
B	9 10 11 12 -- -- -- --	1234____
C	13 14 15 16 17 18 19 20	12345678
D	-- -- -- -- 21 22 23 24	____5678
E	-- -- -- -- -- -- -- --	1234____
F	-- 25 26 27 28 -- -- --	_2345___

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	
2	System Det. # 2	
3	System Det. # 3	
4	System Det. # 4	
5	System Det. # 5	
6	System Det. # 6	
7	System Det. # 7	
8	System Det. # 8	

System Detectors <D Page>

Max ON (min)	5	D+A+E
Max OFF (min)	60	D+A+F

Detector Failure Monitor

Phase Number		F+C+1
Time Before Yellow		F+C+3

Advance Warning Beacon - Sign 1

Phase Number		F+D+1
Time Before Yellow		F+D+3

Advance Warning Beacon - Sign 2

Long Failure	0.5	F+0+6
Short Failure	0.5	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: MADISON @ TEXAS

223 Program

Row	Column # → / Plan Name →	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
0	Cycle Length	110	122							
1	Phase 1 - ForceOff	61	67							
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0
3	Phase 3 - ForceOff	255	255							
4	Phase 4 - ForceOff	255	255							
5	Phase 5 - ForceOff	61	67							
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0
7	Phase 7 - ForceOff	47	51							
8	Phase 8 - ForceOff	24	26							
9	Ring Offset									
A	Offset A	108	67		75					
B	Offset B									
C	Offset C									
D	Permissive	11	12							
E	Hold Release	255	255							
F	Ped Shift	0	0							

Coordination <C Page>

C + Plan + ROW

Coordination Timing By:
Implemented On:

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	07 : 00	1	A	_23456_
1	10 : 00	2	A	_23456_
2	15 : 00	E	A	1234567
3	:			
4	:			
5	:			
6	:			
7	:			
8	:			
9	:			
A	:			
B	:			
C	:			
D	:			
E	:			
F	:			

TOD Coordination

<9 Key with C+0+9=1>

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

	E	Row		F
		0	Free Lag	_2___67_
Plan 1	_2___6__	1	Plan 1 - Lag	_2_4_67_
Plan 2	_2___6__	2	Plan 2 - Lag	_2_4_67_
Plan 3	_2___6__	3	Plan 3 - Lag	_2_4_6_8
Plan 4	_2___6__	4	Plan 4 - Lag	_2_4_6_8
Plan 5	_2___6__	5	Plan 5 - Lag	_2_4_6_8
Plan 6	_2___6__	6	Plan 6 - Lag	_2_4_6_8
Plan 7	_2___6__	7	Plan 7 - Lag	_2_4_6_8
Plan 8	_2___6__	8	Plan 8 - Lag	_2_4_6_8
Plan 9	_2___6__	9	Plan 9 - Lag	_2_4_6_8
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases
C + E + FUNCTION #

Lag Phases <C Page>
C + F + FUNCTION #

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

Ramp Metering Rates

Location (I.D.)	Route	Dir	Period	Cars per green	Sec./ Cycle	(per lane) Veh./hr	Total # lanes	HOV
Sea World Dr (16210)	5	NB	0530 - 0630	2	7.2 - 10.5	996 - 684	2	No
			0630 - 0930		7.5	965		
			1500 - 1830		7.4	972		
			1830 - 1900		7.2 - 10.9	996 - 660		
Sea World Dr (16201)	5	SB	0530 - 0930	1	6.3 - 11.3	570 - 318	2	Lt
(not communicating since 12/2/14			1500 - 1900		6.3 - 11.3	570 - 318		
due to construction)								
Fairmount Ave NB/SB (11308)	8	EB	1500 - 1900	2	7.2 - 13.3	996 - 493	2	No
SB Texas St (11105)	8	EB	1500 - 1900	1	6.3 - 11.3	570 - 318	2	Lt
NB Texas St (11107)	8	EB	1500 - 1900	2	7.2 - 11.5	996 - 624	1	No
Friars Rd (11405)	15	NB	0530 - 0930	2	12.0 - 14.0	600 - 516	3	Lt
			1500 - 1900		10.7 - 18.6	672 - 386		
Friars Rd (11404)	15/8	SB	1500 - 1800	2	7.2 - 10.9	996 - 660	1	No
Friars Rd (11401)	15	SB	1500 - 1900	2	7.2	996	1	No
Murray Ridge Rd (11205)	805	NB	0530 - 0930	1	7.5 - 9.7	960 - 742	1	No
Phyllis Place (11203)	805	SB	1500 - 1900	2	7.5 - 17.0	960 - 422	2	Lt

The meters normally operate in a traffic responsive mode.
There are 15 separate rates or steps between the slowest and the fastest discharge rate that depend on mainlane volumes.

Appendix C
Synchro HCM 2010
Adjustment Documentation

Project: Mission Valley Community Plan Update

Analyst: Phuong Nguyen, PE

Existing Geometrics:

Intersection 1: I-5 SB Ramps / Sea World Drive



Description of issue:

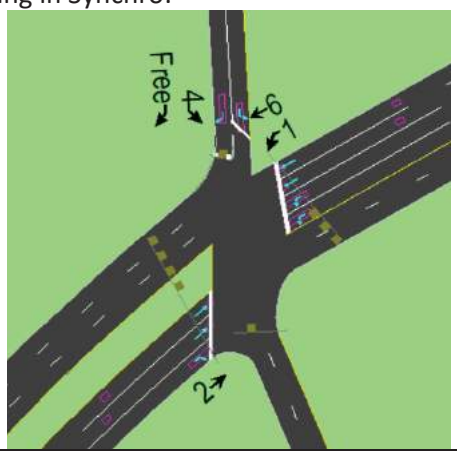
The southbound right-turn movement (SBR) for this intersection have a signal head that turn red whenever the eastbound pedestrian phase is activate. However due to the lack of pedestrians along this area, the pedestrian phase rarely activates. This results in the SBR acting similar to a free movement. Setting the intersection as "yield" or "permissive" results in failing LOS F during the PM peak hour, which does not reflect field conditions.

Solution:

- Set SBR to "free" to reflect field conditions

Date of confirmation from Trafficware: 5/2016

Intersection Geometrics & Phasing in Synchro:



Project: Mission Valley Community Plan Update

Analyst: Phuong Nguyen, PE

Existing Geometrics:

Intersection 8: Napa Street / Friars Road



Description of issue:

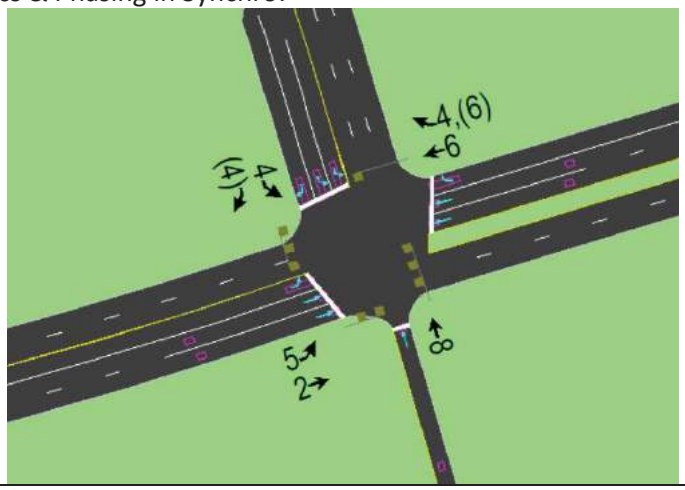
The signal timing for this intersection indicates that there is an exclusive pedestrian only phase. HCM 2010 / NEMA does not support pedestrian only phase or hold phase.

Solution:

- A dummy northbound connection was created and assign phase 8 (split phasing) to mimic the pedestrian only phase.

Date of confirmation from Trafficware: 5/2016

Intersection Geometrics & Phasing in Synchro:



Project: Mission Valley Community Plan Update

Analyst: Phuong Nguyen, PE

Existing Geometrics:

Intersection 25: Friars Road EB / Mission Village Drive



Description of issue:

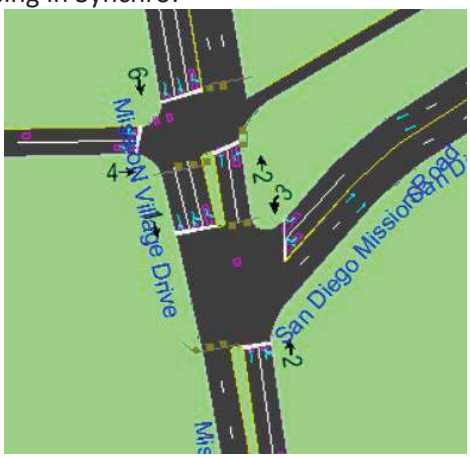
This actuated-uncoordinated intersection is clustered with the intersection of Mission Village Drive / San Diego Mission Road. HCM 2010 / NEMA does not allow clustered intersections.

Solution:

- The two intersections were "unclustered" and optimized together so that they have the same cycle length and their off-set mimics the clustered effect.

Date of confirmation from Trafficware: 5/2016

Intersection Geometrics & Phasing in Synchro:



Project: Mission Valley Community Plan Update

Analyst: Phuong Nguyen, PE

Existing Geometrics:

Intersection 42: Qualcomm Way & Camino De La Reina and Intersection 52: Qualcomm Way & I-8 WB Off-Ramp



Description of issue:

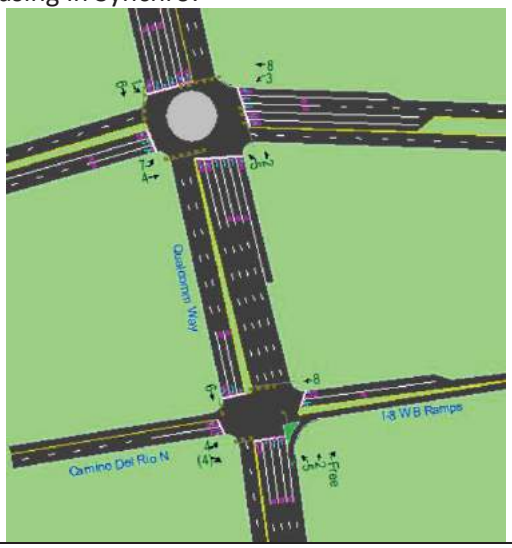
The intersection of Qualcomm Way & Camino De La Reina is clustered with the intersection of Qualcomm Way & I-8 WB Off-Ramp. Both intersections are under the jurisdiction of the City of San Diego.

Solution:

- The two intersections were "unclustered" and optimized together so that they have the same cycle length and their off-set mimics the clustered effect.

Date of confirmation from Trafficware: 5/2016

Intersection Geometrics & Phasing in Synchro:

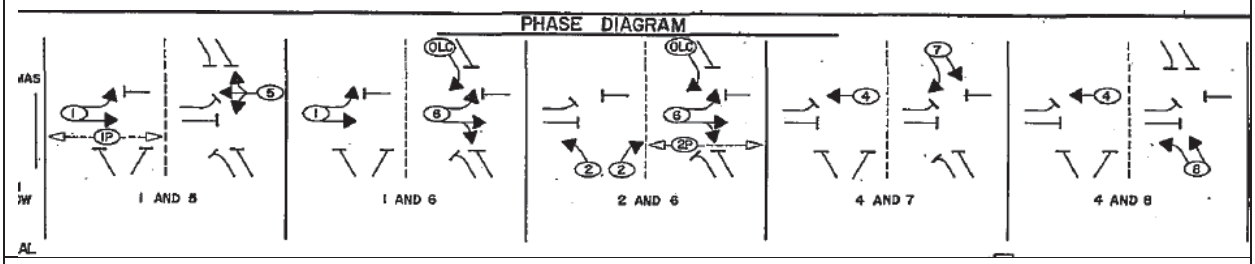


Project: Mission Valley Community Plan Update

Analyst: Phuong Nguyen, PE

Signal timing phasing (see below for geometrics):

Intersection 58: Mission Center Road & I-8 EB Ramps and Mission Center Road & Camino Del Rio South



Description of issue:

The intersection of Mission Center Road & I-8 EB Ramps is clustered with the intersection of Mission Center Road & Camino Del Rio South. Both intersections are under the jurisdiction of Caltrans.

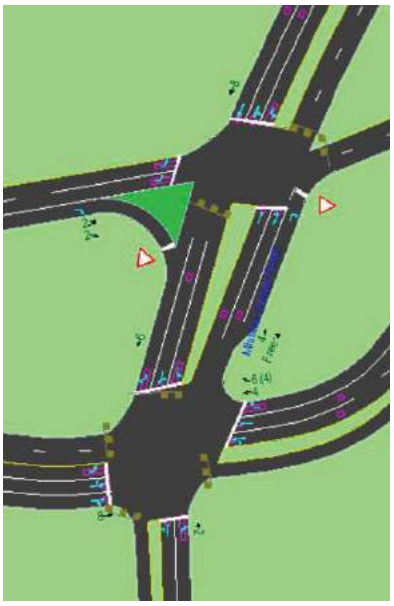
Solution:

- The two intersections were "unclustered" and optimized together so that they have the same cycle length and their off-set mimic the clustered effect.
- Intersection phasing at each intersection were set so that they act in conjunction with each other, mimicking the phasing diagram provides above.

Date of confirmation from Trafficware: 5/2016

Intersection Geometrics & Phasing:





Project: Mission Valley Community Plan Update

Analyst: Phuong Nguyen, PE

Existing Geometrics:

Intersection 63: I-15 SB Off-Ramp & Camino Del Rio South and I-15 SB On-Ramp & Camino Del Rio South



Description of issue:

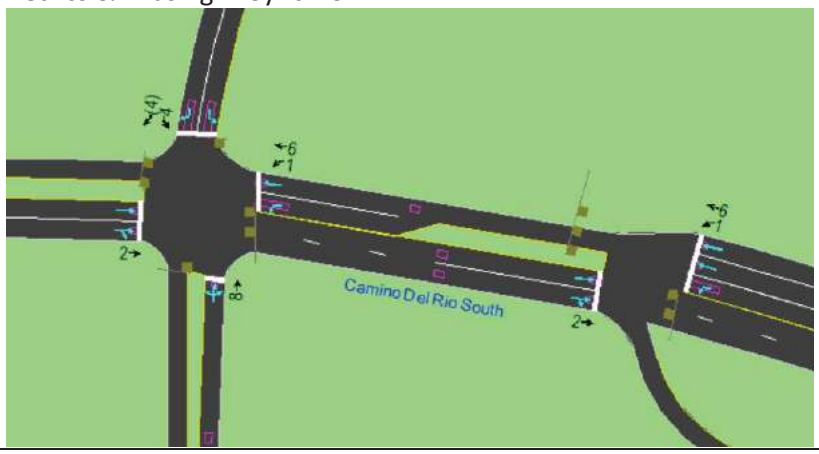
The intersection of I-15 SB Off-Ramp & Camino Del Rio South is clustered with the intersection of I-15 SB On-Ramp & Camino Del Rio South. Both intersections are under the jurisdiction of Caltrans.

Solution:

- The two intersections were "unclustered" and optimized together so that they have the same cycle length and their off-set mimic the clustered effect.

Date of confirmation from Trafficware: 5/2016

Intersection Geometrics & Phasing in Synchro:



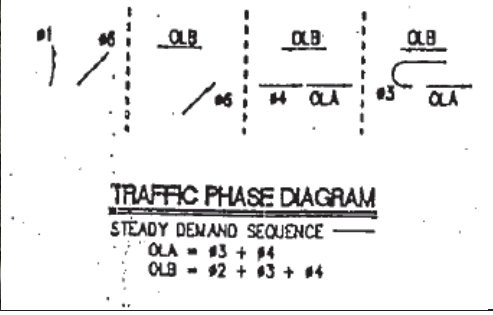
Project: Mission Valley Community Plan Update

Analyst: Phuong Nguyen, PE

Existing Geometrics:

Intersection 63: Fairmount Avenue & I-8 EB Off-Ramp





Description of issue:

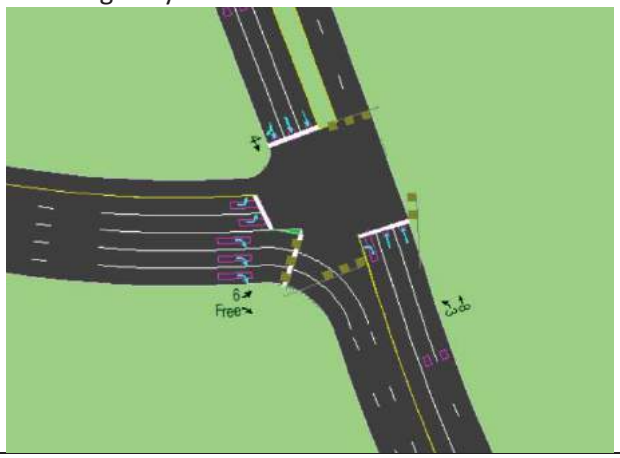
The EBR movement at this intersection overlap with the NBT movement, the NB U-turn movement is protective and operate concurrently with the NBT movement. The NBT and SBT movement operate concurrently, except for when the EBR movement is overlapping with the NBT movement (the SBT movement stop at this point). The EBL movement is protective and operate independently of the other phases.

Solution:

- The NB U-turn movement was converted and assumed to be operating as a protective left turn movement.
- The EBR movement is converted to a free phase, as field observation show that this phase were allocated the majority of the time and operate similar to a "free" phase.
- Final intersection delay were compared to field observation to make sure that the result mimic field condition.

Date of confirmation from Trafficware: 5/2016

Intersection Geometrics & Phasing in Synchro:



Appendix D
Peak Hour Intersection Worksheets
Existing Conditions

AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		400	120		0	0		0	0		180
Storage Lanes	0		1	2		0	0		0	1		0
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor				1.00								
Frt												0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3539	1863	3433	3539	0	0	0	0	1770	0	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3539	1863	3431	3539	0	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												745
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		1242			540			840			941	
Travel Time (s)		18.8			8.2			12.7			14.3	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	1373	0	317	238	0	0	0	0	262	0	685
Confl. Peds. (#/hr)			2	2								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.79	0.79	0.79	0.25	0.25	0.25	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1560	0	401	301	0	0	0	0	285	0	745
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1560	0	401	301	0	0	0	0	285	0	745

Intersection Summary

Lane Group	EBT	WBL	WBT	SBL	SBR
Lane Configurations					
Volume (vph)	1373	317	238	262	685
Turn Type	NA	Prot	NA	Prot	Free
Protected Phases	2	1	6	4	
Permitted Phases					Free
Detector Phase	2	1	6	4	
Switch Phase					
Minimum Initial (s)	14.0	5.0	13.0	5.0	
Minimum Split (s)	26.5	9.7	18.5	10.1	
Total Split (s)	55.0	15.0	70.0	30.0	
Total Split (%)	55.0%	15.0%	70.0%	30.0%	
Yellow Time (s)	4.5	3.7	4.5	4.1	
All-Red Time (s)	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	4.7	5.5	5.1	
Lead/Lag	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	C-Min	None	C-Min	None	
Act Effct Green (s)	50.8	14.7	70.2	19.2	100.0
Actuated g/C Ratio	0.51	0.15	0.70	0.19	1.00
v/c Ratio	0.87	0.79	0.12	0.84	0.47
Control Delay	28.3	64.7	6.4	60.1	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.3	64.7	6.4	60.1	1.0
LOS	C	E	A	E	A
Approach Delay	28.3		39.7		
Approach LOS	C		D		

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 27.3	Intersection LOS: C
Intersection Capacity Utilization 77.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: I-5 SB Ramps & Seaworld Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1373	0	317	238	0	0	0	0	262	0	685
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	0	1863
Adj Flow Rate, veh/h	0	1560	0	401	301	0				285	0	0
Adj No. of Lanes	0	2	1	2	2	0				1	0	1
Peak Hour Factor	0.88	0.88	0.88	0.79	0.79	0.79				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	1671	747	650	2534	0				316	0	282
Arrive On Green	0.00	0.47	0.00	0.32	1.00	0.00				0.18	0.00	0.00
Sat Flow, veh/h	0	3632	1583	3442	3632	0				1774	0	1583
Grp Volume(v), veh/h	0	1560	0	401	301	0				285	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	41.6	0.0	9.9	0.0	0.0				15.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	41.6	0.0	9.9	0.0	0.0				15.7	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1671	747	650	2534	0				316	0	282
V/C Ratio(X)	0.00	0.93	0.00	0.62	0.12	0.00				0.90	0.00	0.00
Avail Cap(c_a), veh/h	0	1752	784	650	2534	0				442	0	394
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.45	0.45	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	24.9	0.0	31.1	0.0	0.0				40.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	11.1	0.0	0.6	0.0	0.0				13.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	22.7	0.0	4.7	0.0	0.0				8.9	0.0	0.0
LnGrp Delay(d),s/veh	0.0	36.0	0.0	31.7	0.0	0.0				54.2	0.0	0.0
LnGrp LOS		D		C	A					D		
Approach Vol, veh/h		1560			702						285	
Approach Delay, s/veh		36.0			18.1						54.2	
Approach LOS		D			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	24.4	52.7		22.9		77.1		
Change Period (Y+Rc), s	5.5	* 5.5		5.1		5.5		
Max Green Setting (Gmax), s	10.3	* 50		24.9		64.5		
Max Q Clear Time (g_c+I1), s	11.9	43.6		17.7		2.0		
Green Ext Time (p_c), s	0.0	3.6		0.1		1.9		

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	225		0	0		150	0		0	0		0
Storage Lanes	2		0	0		0	0		1	0		0
Taper Length (ft)	25			0			0			0		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.925				0.850			
Flt Protected	0.950							0.964				
Satd. Flow (prot)	3433	3539	0	0	3274	0	0	1796	1583	0	0	0
Flt Permitted	0.950							0.964				
Satd. Flow (perm)	3433	3539	0	0	3274	0	0	1796	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					281				301			
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		540			1262			985			725	
Travel Time (s)		8.2			19.1			14.9			11.0	

Intersection Summary	
Area Type:	Other



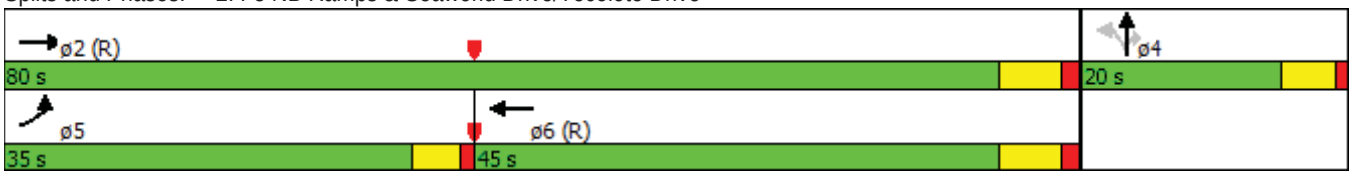
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	1063	552	0	0	478	476	72	25	247	0	0	0
Confl. Peds. (#/hr)			4	4								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.82	0.82	0.82	0.25	0.25	0.25
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1181	613	0	0	525	523	88	30	301	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1181	613	0	0	1048	0	0	118	301	0	0	0

Intersection Summary

Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Configurations					
Volume (vph)	1063	552	478	25	247
Turn Type	Prot	NA	NA	NA	Perm
Protected Phases	5	2	6	4	
Permitted Phases					4
Detector Phase	5	2	6	4	4
Switch Phase					
Minimum Initial (s)	5.0	10.0	14.0	5.0	5.0
Minimum Split (s)	34.7	24.0	29.0	10.1	10.1
Total Split (s)	35.0	80.0	45.0	20.0	20.0
Total Split (%)	35.0%	80.0%	45.0%	20.0%	20.0%
Yellow Time (s)	3.7	4.5	4.5	4.1	4.1
All-Red Time (s)	1.0	1.5	1.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	6.0	6.0	5.1	5.1
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	41.3	78.9	32.9	10.0	10.0
Actuated g/C Ratio	0.41	0.79	0.33	0.10	0.10
v/c Ratio	0.83	0.22	0.83	0.66	0.70
Control Delay	26.3	6.5	28.2	60.1	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	6.5	28.2	60.1	14.4
LOS	C	A	C	E	B
Approach Delay		19.5	28.2	27.2	
Approach LOS		B	C	C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 70 (70%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 23.3	Intersection LOS: C
Intersection Capacity Utilization 77.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: I-5 NB Ramps & Seaworld Drive/Tecolote Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1063	552	0	0	478	476	72	25	247	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	1181	613	0	0	525	336	88	30	0			
Adj No. of Lanes	2	2	0	0	2	0	0	1	1			
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91	0.82	0.82	0.82			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	1043	2856	0	0	947	605	110	37	130			
Arrive On Green	0.10	0.27	0.00	0.00	0.46	0.46	0.08	0.08	0.00			
Sat Flow, veh/h	3442	3632	0	0	2167	1325	1339	457	1583			
Grp Volume(v), veh/h	1181	613	0	0	448	413	118	0	0			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1770	1629	1796	0	1583			
Q Serve(g_s), s	30.3	13.5	0.0	0.0	18.4	18.5	6.5	0.0	0.0			
Cycle Q Clear(g_c), s	30.3	13.5	0.0	0.0	18.4	18.5	6.5	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.81	0.75		1.00			
Lane Grp Cap(c), veh/h	1043	2856	0	0	808	744	147	0	130			
V/C Ratio(X)	1.13	0.21	0.00	0.00	0.55	0.56	0.80	0.00	0.00			
Avail Cap(c_a), veh/h	1043	2856	0	0	808	744	268	0	236			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.39	0.39	0.00	0.00	1.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	45.0	12.0	0.0	0.0	19.7	19.8	45.1	0.0	0.0			
Incr Delay (d2), s/veh	64.9	0.1	0.0	0.0	2.7	3.0	3.8	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	23.8	6.7	0.0	0.0	9.6	8.9	3.4	0.0	0.0			
LnGrp Delay(d),s/veh	109.9	12.1	0.0	0.0	22.5	22.7	48.8	0.0	0.0			
LnGrp LOS	F	B			C	C	D					
Approach Vol, veh/h		1794			861			118				
Approach Delay, s/veh		76.5			22.6			48.8				
Approach LOS		E			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		86.7		13.3	35.0	51.7		
Change Period (Y+Rc), s		6.0		5.1	* 4.7	6.0		
Max Green Setting (Gmax), s		74.0		14.9	* 30	39.0		
Max Q Clear Time (g_c+I1), s		15.5		8.5	32.3	20.5		
Green Ext Time (p_c), s		6.9		0.1	0.0	5.8		

Intersection Summary	
HCM 2010 Ctrl Delay	58.6
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	250		0	0		0	0		600
Storage Lanes	0		1	1		0	0		0	0		1
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850									0.850
Flt Protected				0.950							0.953	
Satd. Flow (prot)	0	1863	1583	1770	1863	0	0	0	0	0	1775	1583
Flt Permitted				0.950							0.953	
Satd. Flow (perm)	0	1863	1583	1770	1863	0	0	0	0	0	1775	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			87									91
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		560			604			1740			1266	
Travel Time (s)		10.9			11.8			26.4			19.2	

Intersection Summary	
Area Type:	Other



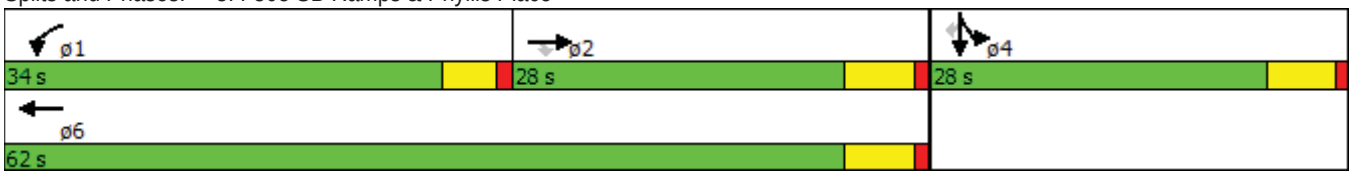
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	64	33	432	35	0	0	0	0	308	1	19
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.87	0.87	0.87	0.25	0.25	0.25	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	66	34	497	40	0	0	0	0	371	1	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	34	497	40	0	0	0	0	0	372	23

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations						
Volume (vph)	64	33	432	35	1	19
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	5.0	11.0	5.0	5.0
Minimum Split (s)	27.8	27.8	9.7	24.8	21.5	21.5
Total Split (s)	28.0	28.0	34.0	62.0	28.0	28.0
Total Split (%)	31.1%	31.1%	37.8%	68.9%	31.1%	31.1%
Yellow Time (s)	4.8	4.8	3.7	4.8	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.7	5.8	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	Min	None	None
Act Effct Green (s)	13.4	13.4	24.4	35.8	19.3	19.3
Actuated g/C Ratio	0.20	0.20	0.36	0.53	0.28	0.28
v/c Ratio	0.18	0.09	0.78	0.04	0.74	0.04
Control Delay	30.7	0.5	31.6	7.4	34.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.7	0.5	31.6	7.4	34.8	0.2
LOS	C	A	C	A	C	A
Approach Delay	20.4			29.8	32.8	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 67.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 30.0	Intersection LOS: C
Intersection Capacity Utilization 64.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: I-805 SB Ramps & Phyllis Place



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	64	33	432	35	0	0	0	0	308	1	19
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	66	0	497	40	0				371	1	0
Adj No. of Lanes	0	1	1	1	1	0				0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.87	0.87	0.87				0.83	0.83	0.83
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	259	220	559	1008	0				445	1	398
Arrive On Green	0.00	0.14	0.00	0.32	0.54	0.00				0.25	0.25	0.00
Sat Flow, veh/h	0	1863	1583	1774	1863	0				1770	5	1583
Grp Volume(v), veh/h	0	66	0	497	40	0				372	0	0
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	1863	0				1774	0	1583
Q Serve(g_s), s	0.0	1.7	0.0	14.5	0.5	0.0				10.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.7	0.0	14.5	0.5	0.0				10.8	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	259	220	559	1008	0				446	0	398
V/C Ratio(X)	0.00	0.25	0.00	0.89	0.04	0.00				0.83	0.00	0.00
Avail Cap(c_a), veh/h	0	760	646	955	1923	0				733	0	655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	20.9	0.0	17.7	5.9	0.0				19.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	2.9	0.0	0.0				1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.9	0.0	7.5	0.3	0.0				5.5	0.0	0.0
LnGrp Delay(d),s/veh	0.0	21.1	0.0	20.6	5.9	0.0				21.1	0.0	0.0
LnGrp LOS		C		C	A					C		
Approach Vol, veh/h		66			537						372	
Approach Delay, s/veh		21.1			19.5						21.1	
Approach LOS		C			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	21.9	13.4		19.2		35.2		
Change Period (Y+Rc), s	* 4.7	5.8		5.5		5.8		
Max Green Setting (Gmax), s	* 29	22.2		22.5		56.2		
Max Q Clear Time (g_c+I1), s	16.5	3.7		12.8		2.5		
Green Ext Time (p_c), s	0.7	0.3		0.9		0.4		

Intersection Summary	
HCM 2010 Ctrl Delay	20.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		1	0		0
Taper Length (ft)	25			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850			0.850			
Flt Protected	0.950							0.966				
Satd. Flow (prot)	1770	1863	0	0	3539	1583	0	1799	1583	0	0	0
Flt Permitted	0.950							0.966				
Satd. Flow (perm)	1770	1863	0	0	3539	1583	0	1799	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						370			361			
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		604			1266			1836			1231	
Travel Time (s)		11.8			24.7			27.8			18.7	

Intersection Summary	
Area Type:	Other



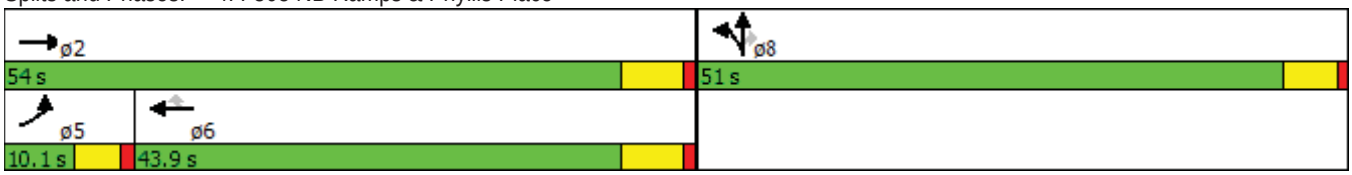
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	42	325	0	0	453	300	19	8	603	0	0	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.81	0.81	0.81	0.87	0.87	0.87	0.25	0.25	0.25
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	51	392	0	0	559	370	22	9	693	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	392	0	0	559	370	0	31	693	0	0	0

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Volume (vph)	42	325	453	300	8	603
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	11.0	17.0	17.0	5.0	5.0
Minimum Split (s)	9.7	27.8	41.8	41.8	49.1	49.1
Total Split (s)	10.1	54.0	43.9	43.9	51.0	51.0
Total Split (%)	9.6%	51.4%	41.8%	41.8%	48.6%	48.6%
Yellow Time (s)	3.7	4.8	4.8	4.8	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	5.8	5.8	5.8	5.1	5.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	5.9	25.8	20.7	20.7	21.9	21.9
Actuated g/C Ratio	0.10	0.43	0.35	0.35	0.37	0.37
v/c Ratio	0.29	0.49	0.46	0.47	0.05	0.86
Control Delay	38.4	17.0	20.4	5.1	12.7	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	17.0	20.4	5.1	12.7	19.9
LOS	D	B	C	A	B	B
Approach Delay		19.5	14.3		19.6	
Approach LOS		B	B		B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 59.8	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 64.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: I-805 NB Ramps & Phyllis Place



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	42	325	0	0	453	300	19	8	603	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	51	392	0	0	559	80	22	9	457			
Adj No. of Lanes	1	1	0	0	2	1	0	1	1			
Peak Hour Factor	0.83	0.83	0.83	0.81	0.81	0.81	0.87	0.87	0.87			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	89	865	0	0	1149	514	418	171	519			
Arrive On Green	0.05	0.46	0.00	0.00	0.32	0.32	0.33	0.33	0.33			
Sat Flow, veh/h	1774	1863	0	0	3632	1583	1277	522	1583			
Grp Volume(v), veh/h	51	392	0	0	559	80	31	0	457			
Grp Sat Flow(s),veh/h/ln	1774	1863	0	0	1770	1583	1799	0	1583			
Q Serve(g_s), s	1.5	7.5	0.0	0.0	6.6	1.9	0.6	0.0	14.3			
Cycle Q Clear(g_c), s	1.5	7.5	0.0	0.0	6.6	1.9	0.6	0.0	14.3			
Prop In Lane	1.00		0.00	0.00		1.00	0.71		1.00			
Lane Grp Cap(c), veh/h	89	865	0	0	1149	514	589	0	519			
V/C Ratio(X)	0.57	0.45	0.00	0.00	0.49	0.16	0.05	0.00	0.88			
Avail Cap(c_a), veh/h	183	1714	0	0	2575	1152	1577	0	1388			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	24.3	9.5	0.0	0.0	14.2	12.6	12.0	0.0	16.6			
Incr Delay (d2), s/veh	2.2	0.1	0.0	0.0	0.1	0.1	0.0	0.0	2.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.8	3.8	0.0	0.0	3.2	0.8	0.3	0.0	6.5			
LnGrp Delay(d),s/veh	26.5	9.7	0.0	0.0	14.3	12.6	12.1	0.0	18.6			
LnGrp LOS	C	A			B	B	B		B			
Approach Vol, veh/h		443			639			488				
Approach Delay, s/veh		11.6			14.1			18.2				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		30.1			7.3	22.8		22.3
Change Period (Y+Rc), s		5.8			* 4.7	5.8		5.1
Max Green Setting (Gmax), s		48.2			* 5.4	38.1		45.9
Max Q Clear Time (g_c+I1), s		9.5			3.5	8.6		16.3
Green Ext Time (p_c), s		4.5			0.0	4.4		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	170		0	290		200	240		0	200		200
Storage Lanes	1		1	2		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	0.97			1.00		0.98	1.00		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	3433	1863	1583	3433	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1555	3326	1863	1583	3416	3539	1557	1764	3539	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163			163			112			335
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		326			1405			675			1199	
Travel Time (s)		7.4			38.3			11.5			20.4	

Intersection Summary	
Area Type:	Other



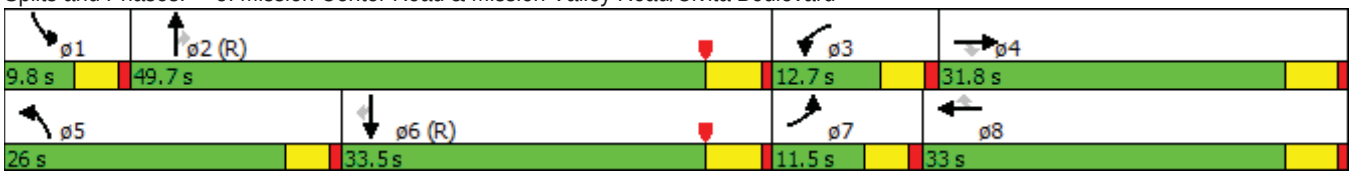
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	35	3	58	113	8	65	404	176	45	18	286	295
Confl. Peds. (#/hr)			5	5			4		4	4		4
Confl. Bikes (#/hr)												
Peak Hour Factor	0.71	0.71	0.71	0.86	0.86	0.86	0.86	0.86	0.86	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	49	4	82	131	9	76	470	205	52	20	325	335
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	4	82	131	9	76	470	205	52	20	325	335

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	3	58	113	8	65	404	176	45	18	286	295
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	8.4	20.9	20.9	8.4	32.9	32.9	8.4	33.3	33.3	8.4	32.3	32.3
Total Split (s)	11.5	31.8	31.8	12.7	33.0	33.0	26.0	49.7	49.7	9.8	33.5	33.5
Total Split (%)	11.1%	30.6%	30.6%	12.2%	31.7%	31.7%	25.0%	47.8%	47.8%	9.4%	32.2%	32.2%
Yellow Time (s)	3.4	3.9	3.9	3.4	3.9	3.9	3.4	4.3	4.3	3.4	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.9	4.4	4.9	4.9	4.4	5.3	5.3	4.4	5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	6.9	12.0	12.0	8.8	13.4	13.4	18.2	67.0	67.0	5.4	48.6	48.6
Actuated g/C Ratio	0.07	0.12	0.12	0.08	0.13	0.13	0.18	0.64	0.64	0.05	0.47	0.47
v/c Ratio	0.42	0.02	0.25	0.45	0.04	0.22	0.78	0.09	0.05	0.22	0.20	0.37
Control Delay	56.9	35.3	1.9	50.1	35.0	1.5	50.7	10.4	0.1	53.0	20.1	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	35.3	1.9	50.1	35.0	1.5	50.7	10.4	0.1	53.0	20.1	4.4
LOS	E	D	A	D	C	A	D	B	A	D	C	A
Approach Delay		22.8			32.4			35.7			13.3	
Approach LOS		C			C			D			B	

Intersection Summary	
Cycle Length: 104	
Actuated Cycle Length: 104	
Offset: 103 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 56.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Mission Center Road & Mission Valley Road/Civita Boulevard



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	3	58	113	8	65	404	176	45	18	286	295
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	49	4	0	131	9	0	470	205	0	20	325	57
Adj No. of Lanes	1	1	1	2	1	1	2	2	1	1	2	1
Peak Hour Factor	0.71	0.71	0.71	0.86	0.86	0.86	0.86	0.86	0.86	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	63	12	10	193	51	43	542	2611	1168	30	2113	944
Arrive On Green	0.04	0.01	0.00	0.06	0.03	0.00	0.16	0.74	0.00	0.02	0.60	0.60
Sat Flow, veh/h	1774	1863	1583	3442	1863	1583	3442	3539	1583	1774	3539	1580
Grp Volume(v), veh/h	49	4	0	131	9	0	470	205	0	20	325	57
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1863	1583	1721	1770	1583	1774	1770	1580
Q Serve(g_s), s	2.8	0.2	0.0	3.9	0.5	0.0	13.9	1.7	0.0	1.2	4.2	1.6
Cycle Q Clear(g_c), s	2.8	0.2	0.0	3.9	0.5	0.0	13.9	1.7	0.0	1.2	4.2	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	63	12	10	193	51	43	542	2611	1168	30	2113	944
V/C Ratio(X)	0.78	0.33	0.00	0.68	0.18	0.00	0.87	0.08	0.00	0.67	0.15	0.06
Avail Cap(c_a), veh/h	121	482	410	275	503	428	715	2611	1168	92	2113	944
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.98	0.98	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	51.4	0.0	48.2	49.4	0.0	42.7	3.8	0.0	50.8	9.3	8.8
Incr Delay (d2), s/veh	7.6	39.3	0.0	4.1	4.3	0.0	7.0	0.1	0.0	9.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.2	0.0	2.0	0.3	0.0	7.1	0.8	0.0	0.6	2.1	0.7
LnGrp Delay(d),s/veh	57.4	90.7	0.0	52.3	53.7	0.0	49.7	3.9	0.0	60.0	9.4	8.9
LnGrp LOS	E	F		D	D		D	A		E	A	A
Approach Vol, veh/h		53			140			675			402	
Approach Delay, s/veh		59.9			52.4			35.8			11.9	
Approach LOS		E			D			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	82.0	10.2	5.6	20.8	67.4	8.1	7.7
Change Period (Y+Rc), s	4.4	5.3	4.4	4.9	4.4	5.3	4.4	4.9
Max Green Setting (Gmax), s	5.4	44.4	8.3	26.9	21.6	28.2	7.1	28.1
Max Q Clear Time (g_c+I1), s	3.2	3.7	5.9	2.2	15.9	6.2	4.8	2.5
Green Ext Time (p_c), s	0.0	8.3	0.1	0.1	0.5	6.7	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.1
HCM 2010 LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		70	120		0	120		200	150		200
Storage Lanes	0		1	1		0	2		1	1		1
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.95	0.99			0.99		0.99	1.00		0.98
Frt			0.850		0.929				0.850			0.850
Flt Protected		0.957		0.950			0.950			0.950		
Satd. Flow (prot)	0	1783	1583	1770	1730	0	3433	5085	1583	1770	3539	1583
Flt Permitted		0.957		0.950			0.950			0.950		
Satd. Flow (perm)	0	1783	1502	1745	1730	0	3409	5085	1562	1769	3539	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			203		27				136			136
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		331			1101			342			675	
Travel Time (s)		9.0			30.0			5.8			11.5	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	53	6	148	126	24	22	229	537	38	3	366	70
Confl. Peds. (#/hr)			18	18			4		1	1		4
Confl. Bikes (#/hr)												
Peak Hour Factor	0.73	0.73	0.73	0.81	0.81	0.81	0.83	0.83	0.83	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	73	8	203	156	30	27	276	647	46	3	389	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	81	203	156	57	0	276	647	46	3	389	74

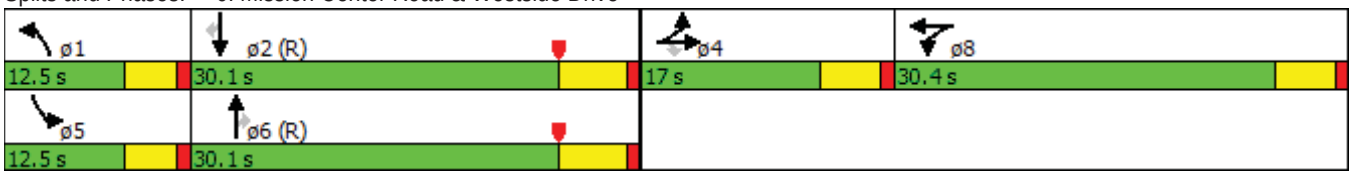
Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	6	148	126	24	229	537	38	3	366	70
Turn Type	NA	Perm	Split	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4		8	8	1	6		5	2	
Permitted Phases		4					6			2
Detector Phase	4	4	8	8	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	7.0	7.0	4.0	7.0	7.0
Minimum Split (s)	8.9	8.9	35.9	35.9	8.4	24.5	24.5	8.4	20.5	20.5
Total Split (s)	17.0	17.0	30.4	30.4	12.5	30.1	30.1	12.5	30.1	30.1
Total Split (%)	18.9%	18.9%	33.8%	33.8%	13.9%	33.4%	33.4%	13.9%	33.4%	33.4%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.4	4.5	4.5	3.4	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	4.9	4.4	5.5	5.5	4.4	5.5	5.5
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	8.5	8.5	19.0	19.0	10.7	45.3	45.3	4.8	32.2	32.2
Actuated g/C Ratio	0.09	0.09	0.21	0.21	0.12	0.50	0.50	0.05	0.36	0.36
v/c Ratio	0.48	0.62	0.42	0.15	0.68	0.25	0.05	0.03	0.31	0.12
Control Delay	47.4	14.7	31.9	15.5	49.4	13.8	0.7	41.0	24.9	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	14.7	31.9	15.5	49.4	13.8	0.7	41.0	24.9	0.9
LOS	D	B	C	B	D	B	A	D	C	A
Approach Delay	24.0			27.5		23.3			21.2	
Approach LOS	C			C		C			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 10 (11%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 23.4 — Intersection LOS: C
Intersection Capacity Utilization 45.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Mission Center Road & Westside Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	53	6	148	126	24	22	229	537	38	3	366	70
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	73	8	0	156	30	2	276	647	0	3	389	0
Adj No. of Lanes	0	1	1	1	1	0	2	3	1	1	2	1
Peak Hour Factor	0.73	0.73	0.73	0.81	0.81	0.81	0.83	0.83	0.83	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	10	94	261	253	17	310	2908	905	6	1717	768
Arrive On Green	0.06	0.06	0.00	0.15	0.15	0.15	0.18	1.00	0.00	0.00	0.49	0.00
Sat Flow, veh/h	1606	176	1583	1774	1722	115	3442	5085	1583	1774	3539	1583
Grp Volume(v), veh/h	81	0	0	156	0	32	276	647	0	3	389	0
Grp Sat Flow(s),veh/h/ln	1782	0	1583	1774	0	1837	1721	1695	1583	1774	1770	1583
Q Serve(g_s), s	4.0	0.0	0.0	7.4	0.0	1.4	7.0	0.0	0.0	0.2	5.7	0.0
Cycle Q Clear(g_c), s	4.0	0.0	0.0	7.4	0.0	1.4	7.0	0.0	0.0	0.2	5.7	0.0
Prop In Lane	0.90		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	0	94	261	0	270	310	2908	905	6	1717	768
V/C Ratio(X)	0.77	0.00	0.00	0.60	0.00	0.12	0.89	0.22	0.00	0.53	0.23	0.00
Avail Cap(c_a), veh/h	240	0	213	503	0	521	310	2908	905	160	1717	768
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.93	0.93	0.00	0.97	0.97	0.00
Uniform Delay (d), s/veh	41.7	0.0	0.0	35.9	0.0	33.3	36.5	0.0	0.0	44.8	13.4	0.0
Incr Delay (d2), s/veh	4.4	0.0	0.0	2.9	0.0	0.3	23.9	0.2	0.0	24.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	3.9	0.0	0.7	4.3	0.0	0.0	0.1	2.9	0.0
LnGrp Delay(d),s/veh	46.1	0.0	0.0	38.8	0.0	33.6	60.3	0.2	0.0	69.4	13.7	0.0
LnGrp LOS	D			D		C	E	A		E	B	
Approach Vol, veh/h		81			188			923			392	
Approach Delay, s/veh		46.1			37.9			18.2			14.1	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	49.2		10.2	4.7	57.0		18.1
Change Period (Y+Rc), s	4.4	5.5		4.9	4.4	5.5		4.9
Max Green Setting (Gmax), s	8.1	24.6		12.1	8.1	24.6		25.5
Max Q Clear Time (g_c+I1), s	9.0	7.7		6.0	2.2	2.0		9.4
Green Ext Time (p_c), s	0.0	8.6		0.1	0.0	10.1		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	230		0	280	
Storage Lanes	2	1		1	2	
Taper Length (ft)	0				25	
Lane Util. Factor	0.97	0.91	0.95	1.00	0.97	0.95
Ped Bike Factor						
Frt	0.993	0.850		0.850		
Flt Protected	0.955				0.950	
Satd. Flow (prot)	3427	1441	3539	1583	3433	3539
Flt Permitted	0.955				0.950	
Satd. Flow (perm)	3427	1441	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	7	151		59		
Link Speed (mph)	45		45			45
Link Distance (ft)	1586		646			1193
Travel Time (s)	24.0		9.8			18.1

Intersection Summary	
Area Type:	Other



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	512	264	1136	397	115	702
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.80	0.80	0.90	0.90	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	640	330	1262	441	125	763
Shared Lane Traffic (%)		10%				
Lane Group Flow (vph)	673	297	1262	441	125	763

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	512	264	1136	397	115	702
Turn Type	Prot	Perm	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	8	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	7.0	4.0	4.0	7.0
Minimum Split (s)	33.2	33.2	34.2	33.2	8.4	21.4
Total Split (s)	33.2	33.2	37.8	33.2	9.0	46.8
Total Split (%)	41.5%	41.5%	47.3%	41.5%	11.3%	58.5%
Yellow Time (s)	5.2	5.2	5.2	5.2	3.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	4.4	5.4
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	Min	None	None	Min
Act Effct Green (s)	19.1	19.1	29.0	56.4	4.8	36.6
Actuated g/C Ratio	0.28	0.28	0.43	0.83	0.07	0.54
v/c Ratio	0.69	0.58	0.83	0.33	0.52	0.40
Control Delay	26.3	15.9	24.9	2.4	43.2	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	15.9	24.9	2.4	43.2	10.2
LOS	C	B	C	A	D	B
Approach Delay	23.1		19.1			14.9
Approach LOS	C		B			B

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 67.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 19.1	Intersection LOS: B
Intersection Capacity Utilization 66.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Seaworld Drive & Friar Roads





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	512	264	1136	397	115	702
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	640	205	1262	397	125	763
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.80	0.80	0.90	0.90	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	790	352	1648	1089	203	2091
Arrive On Green	0.22	0.22	0.47	0.47	0.06	0.59
Sat Flow, veh/h	3548	1583	3632	1583	3442	3632
Grp Volume(v), veh/h	640	205	1262	397	125	763
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1583	1721	1770
Q Serve(g_s), s	11.4	7.7	19.7	6.9	2.4	7.5
Cycle Q Clear(g_c), s	11.4	7.7	19.7	6.9	2.4	7.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	790	352	1648	1089	203	2091
V/C Ratio(X)	0.81	0.58	0.77	0.36	0.61	0.36
Avail Cap(c_a), veh/h	1442	643	1683	1105	238	2205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	23.1	14.8	4.3	30.5	7.1
Incr Delay (d2), s/veh	0.8	0.6	2.3	0.3	1.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	3.4	10.0	5.3	1.2	3.7
LnGrp Delay(d),s/veh	25.3	23.6	17.0	4.6	32.3	7.3
LnGrp LOS	C	C	B	A	C	A
Approach Vol, veh/h	845		1659			888
Approach Delay, s/veh	24.9		14.1			10.9
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.3	37.1				45.5		21.0
Change Period (Y+Rc), s	4.4	6.2				* 6.2		6.2
Max Green Setting (Gmax), s	4.6	31.6				* 41		27.0
Max Q Clear Time (g_c+I1), s	4.4	21.7				9.5		13.4
Green Ext Time (p_c), s	0.0	9.2				26.8		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	220		0	0		190	0		0	0		120
Storage Lanes	1		0	0		1	0		0	2		1
Taper Length (ft)	25			0			25			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	1.00					0.99				0.97		
Frt						0.850					0.850	0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	3539	0	0	3539	1583	0	1863	0	3261	0	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1768	3539	0	0	3539	1561	0	1863	0	3152	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						747					187	131
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		3030			1815			225			747	
Travel Time (s)		45.9			27.5			5.1			20.4	

Intersection Summary	
Area Type:	Other



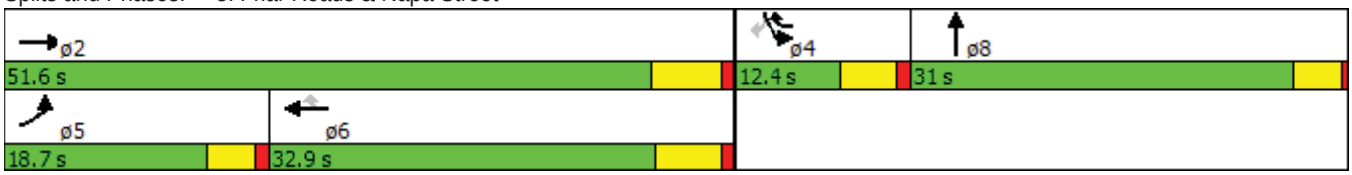
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	217	309	0	0	787	734	0	0	0	206	0	86
Confl. Peds. (#/hr)	2					2				19		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.79	0.79	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.95	0.92	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)										0		
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	275	391	0	0	865	807	0	0	0	217	0	91
Shared Lane Traffic (%)												10%
Lane Group Flow (vph)	275	391	0	0	865	807	0	0	0	217	9	82

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBT	SBR	ø8
Lane Configurations								
Volume (vph)	217	309	787	734	206	0	86	
Turn Type	Prot	NA	NA	pm+ov	Prot		Perm	
Protected Phases	5	2	6	4	4			8
Permitted Phases				6			4	
Detector Phase	5	2	6	4	4		4	
Switch Phase								
Minimum Initial (s)	4.0	7.0	7.0	4.0	4.0		4.0	4.0
Minimum Split (s)	8.4	30.0	32.6	8.9	8.9		8.9	31.0
Total Split (s)	18.7	51.6	32.9	12.4	12.4		12.4	31.0
Total Split (%)	19.7%	54.3%	34.6%	13.1%	13.1%		13.1%	33%
Yellow Time (s)	3.4	5.0	4.6	3.9	3.9		3.9	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.4	6.0	5.6	4.9	4.9		4.9	
Lead/Lag	Lead		Lag					
Lead-Lag Optimize?	Yes		Yes					
Recall Mode	None	Min	Min	None	None		None	None
Act Effct Green (s)	15.4	41.8	22.2	31.0	8.1	0.0	8.1	
Actuated g/C Ratio	0.22	0.59	0.31	0.44	0.11	0.00	0.11	
v/c Ratio	0.72	0.19	0.78	0.73	0.58	0.05	0.28	
Control Delay	44.2	9.7	30.3	6.9	42.5	0.0	4.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	44.2	9.7	30.3	6.9	42.5	0.0	4.6	
LOS	D	A	C	A	D	A	A	
Approach Delay		24.0	19.0			31.2		
Approach LOS		C	B			C		

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 70.9	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization 65.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Friar Roads & Napa Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	217	309	0	0	787	734	0	0	0	206	0	86
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	0	1863	0	1863	0	1863
Adj Flow Rate, veh/h	275	391	0	0	865	686	0	0	0	200	10	64514368
Adj No. of Lanes	1	2	0	0	2	1	0	1	0	7600803	6	60731776
Peak Hour Factor	0.79	0.79	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.95	0.92	0.95
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0	2	0	2
Cap, veh/h	329	2612	0	0	1679	858	0	3	91	17853312	0	0
Arrive On Green	0.19	0.74	0.00	0.00	0.47	0.47	0.00	0.00	0.00	0.07	0.00	0.00
Sat Flow, veh/h	1774	3632	0	0	3632	1581	0	-74510	1343	84151808	200	
Grp Volume(v), veh/h	275	391	0	0	865	686	0	0	0	200	0.0	
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1581	0	1863	0	1774	A	
Q Serve(g_s), s	8.4	1.8	0.0	0.0	9.6	19.7	0.0	0.0	0.0	0.0		
Cycle Q Clear(g_c), s	8.4	1.8	0.0	0.0	9.6	19.7	0.0	0.0	0.0	0.0		
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		
Lane Grp Cap(c), veh/h	329	2612	0	0	1679	858	0	3	91	17853312		
V/C Ratio(X)	0.84	0.15	0.00	0.00	0.52	0.80	0.00	0.00	0.00	0.00		
Avail Cap(c_a), veh/h	452	2873	0	0	1720	876	0	895	180	00430464		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	22.1	2.2	0.0	0.0	10.3	10.4	0.0	0.0	0.0	0.0		
Incr Delay (d2), s/veh	7.2	0.0	0.0	0.0	0.4	5.6	0.0	0.0	0.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.8	0.9	0.0	0.0	4.7	11.1	0.0	0.0	0.0	0.0		
LnGrp Delay(d),s/veh	29.2	2.2	0.0	0.0	10.7	16.0	0.0	0.0	0.0	0.0		
LnGrp LOS	C	A			B	B				A		
Approach Vol, veh/h		666			1551			0				
Approach Delay, s/veh		13.4			13.0			0.0				
Approach LOS		B			B							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6	7	8
Phs Duration (G+Y+Rc), s		47.4			14.8	32.6	8.7	0.0
Change Period (Y+Rc), s		6.0			4.4	* 6	4.9	4.0
Max Green Setting (Gmax), s		45.6			14.3	* 27	7.5	27.0
Max Q Clear Time (g_c+I1), s		3.8			10.4	21.7	2.0	0.0
Green Ext Time (p_c), s		25.3			0.2	4.9	0.6	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	160		0	200		0	60		0	40		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.99	1.00			0.99			0.98	
Frt		0.993			0.992				0.850		0.860	
Flt Protected	0.950			0.950				0.957		0.950		
Satd. Flow (prot)	1770	3506	0	1770	3501	0	0	1783	1583	1770	1572	0
Flt Permitted	0.950			0.950				0.714		0.714		
Satd. Flow (perm)	1765	3506	0	1746	3501	0	0	1320	1583	1330	1572	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			7				73		41	
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1815			947			569			1557	
Travel Time (s)		27.5			14.3			15.5			42.5	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	39	382	19	13	1521	81	53	5	34	55	2	32
Confl. Peds. (#/hr)	10		13	13		10	8					8
Confl. Bikes (#/hr)												
Peak Hour Factor	0.71	0.71	0.71	0.85	0.85	0.85	0.88	0.88	0.88	0.79	0.79	0.79
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	55	538	27	15	1789	95	60	6	39	70	3	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	565	0	15	1884	0	0	66	39	70	44	0

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	39	382	13	1521	53	5	34	55	2
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2	1	6		8			4
Permitted Phases					8		8	4	
Detector Phase	5	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	29.7	8.4	24.0	20.0	20.0	20.0	35.9	35.9
Total Split (s)	9.2	65.5	8.5	64.8	36.0	36.0	36.0	36.0	36.0
Total Split (%)	8.4%	59.5%	7.7%	58.9%	32.7%	32.7%	32.7%	32.7%	32.7%
Yellow Time (s)	3.4	4.7	3.4	5.0	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.7	4.4	6.0		4.9	4.9	4.9	4.9
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.0	66.0	4.3	60.1		11.5	11.5	11.6	11.6
Actuated g/C Ratio	0.06	0.77	0.05	0.70		0.13	0.13	0.14	0.14
v/c Ratio	0.53	0.21	0.17	0.76		0.37	0.14	0.39	0.18
Control Delay	64.4	5.6	50.4	16.1		40.4	2.8	40.9	12.8
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	64.4	5.6	50.4	16.1		40.4	2.8	40.9	12.8
LOS	E	A	D	B		D	A	D	B
Approach Delay		10.9		16.4		26.4			30.0
Approach LOS		B		B		C			C

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 85.4	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 16.1	Intersection LOS: B
Intersection Capacity Utilization 67.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Colusa Street & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	39	382	19	13	1521	81	53	5	34	55	2	32
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		1.00	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	55	538	20	15	1789	89	60	6	0	70	3	3
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.71	0.71	0.71	0.85	0.85	0.85	0.88	0.88	0.88	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	2419	90	25	2298	113	222	19	181	257	97	97
Arrive On Green	0.04	0.70	0.70	0.01	0.67	0.67	0.11	0.11	0.00	0.11	0.11	0.11
Sat Flow, veh/h	1774	3479	129	1774	3431	169	1246	162	1583	1381	846	846
Grp Volume(v), veh/h	55	273	285	15	916	962	66	0	0	70	0	6
Grp Sat Flow(s),veh/h/ln	1774	1770	1839	1774	1770	1831	1408	0	1583	1381	0	1692
Q Serve(g_s), s	2.7	4.8	4.8	0.7	30.8	31.8	3.5	0.0	0.0	0.0	0.0	0.3
Cycle Q Clear(g_c), s	2.7	4.8	4.8	0.7	30.8	31.8	3.8	0.0	0.0	3.2	0.0	0.3
Prop In Lane	1.00		0.07	1.00		0.09	0.91		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	70	1231	1278	25	1185	1226	240	0	181	257	0	194
V/C Ratio(X)	0.78	0.22	0.22	0.60	0.77	0.78	0.27	0.00	0.00	0.27	0.00	0.03
Avail Cap(c_a), veh/h	98	1231	1278	84	1198	1239	583	0	567	593	0	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.4	4.8	4.8	42.6	9.8	10.0	35.7	0.0	0.0	35.5	0.0	34.2
Incr Delay (d2), s/veh	15.6	0.3	0.3	8.5	4.9	5.0	0.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.5	2.6	0.4	16.4	17.5	1.5	0.0	0.0	1.6	0.0	0.1
LnGrp Delay(d),s/veh	56.9	5.1	5.1	51.1	14.7	15.0	36.0	0.0	0.0	35.7	0.0	34.2
LnGrp LOS	E	A	A	D	B	B	D			D		C
Approach Vol, veh/h		613			1893			66			76	
Approach Delay, s/veh		9.8			15.2			36.0			35.6	
Approach LOS		A			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.6	66.4		14.9	7.8	64.2		14.9
Change Period (Y+Rc), s	4.4	* 6		4.9	4.4	6.0		4.9
Max Green Setting (Gmax), s	4.1	* 60		31.1	4.8	58.8		31.1
Max Q Clear Time (g_c+I1), s	2.7	6.8		5.2	4.7	33.8		5.8
Green Ext Time (p_c), s	0.0	51.1		0.3	0.0	24.4		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	190			200	115	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.96	1.00	
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1766	3539	3539	1516	1768	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				344		147
Link Speed (mph)		45	45		25	
Link Distance (ft)		1011	1038		405	
Travel Time (s)		15.3	15.7		11.0	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	87	378	1500	465	159	115
Confl. Peds. (#/hr)	11			11	1	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.74	0.74	0.87	0.87	0.73	0.73
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	118	511	1724	534	218	158
Shared Lane Traffic (%)						
Lane Group Flow (vph)	118	511	1724	534	218	158

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	87	378	1500	465	159	115
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	4.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	8.4	21.7	31.9	31.9	37.1	37.1
Total Split (s)	12.4	72.9	60.5	60.5	37.1	37.1
Total Split (%)	11.3%	66.3%	55.0%	55.0%	33.7%	33.7%
Yellow Time (s)	3.4	4.7	4.9	4.9	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.7	5.9	5.9	5.1	5.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	8.2	62.9	50.0	50.0	17.2	17.2
Actuated g/C Ratio	0.09	0.69	0.55	0.55	0.19	0.19
v/c Ratio	0.75	0.21	0.89	0.54	0.65	0.38
Control Delay	72.7	6.2	26.1	7.1	44.3	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.7	6.2	26.1	7.1	44.3	9.3
LOS	E	A	C	A	D	A
Approach Delay		18.7	21.6		29.6	
Approach LOS		B	C		C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 91.1	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 21.9	Intersection LOS: C
Intersection Capacity Utilization 67.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: Friar Roads & Via Las Cumbres





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	87	378	1500	465	159	115
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	118	511	1724	333	218	14
Adj No. of Lanes	1	2	2	1	1	1
Peak Hour Factor	0.74	0.74	0.87	0.87	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	148	2550	2066	916	260	232
Arrive On Green	0.08	0.72	0.58	0.58	0.15	0.15
Sat Flow, veh/h	1774	3632	3632	1568	1774	1583
Grp Volume(v), veh/h	118	511	1724	333	218	14
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1568	1774	1583
Q Serve(g_s), s	5.4	3.9	32.8	9.3	9.9	0.6
Cycle Q Clear(g_c), s	5.4	3.9	32.8	9.3	9.9	0.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	148	2550	2066	916	260	232
V/C Ratio(X)	0.80	0.20	0.83	0.36	0.84	0.06
Avail Cap(c_a), veh/h	171	2869	2331	1033	685	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	3.8	14.0	9.1	34.4	30.4
Incr Delay (d2), s/veh	17.1	0.0	2.4	0.2	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	1.9	16.5	4.0	5.0	0.6
LnGrp Delay(d),s/veh	54.4	3.8	16.4	9.3	37.1	30.5
LnGrp LOS	D	A	B	A	D	C
Approach Vol, veh/h		629	2057		232	
Approach Delay, s/veh		13.3	15.2		36.7	
Approach LOS		B	B		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		65.6		17.3	11.3	54.3		
Change Period (Y+Rc), s		* 5.9		5.1	4.4	5.9		
Max Green Setting (Gmax), s		* 67		32.0	8.0	54.6		
Max Q Clear Time (g_c+I1), s		5.9		11.9	7.4	34.8		
Green Ext Time (p_c), s		24.7		0.3	0.0	13.6		

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	200		0	0		190	0		0
Storage Lanes	1		0	2		0	0		1	0		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.91	0.91	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00			0.99	0.99		1.00	
Frt		0.976			0.999				0.850		0.971	
Flt Protected	0.950			0.950				0.952			0.966	
Satd. Flow (prot)	1770	4946	0	3433	3535	0	0	1773	1583	0	1740	0
Flt Permitted	0.950			0.950				0.702			0.657	
Satd. Flow (perm)	1765	4946	0	3416	3535	0	0	1299	1560	0	1183	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			1				71		7	
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1079			674			1337			329	
Travel Time (s)		16.3			10.2			36.5			9.0	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	2	538	103	173	1541	8	280	1	81	17	2	5
Confl. Peds. (#/hr)	8		5	5		8	7		3	3		7
Confl. Bikes (#/hr)			3			3						
Peak Hour Factor	0.88	0.88	0.88	0.85	0.85	0.85	0.70	0.70	0.70	0.75	0.75	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	2	611	117	204	1813	9	400	1	116	23	3	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	728	0	204	1822	0	0	401	116	0	33	0

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	2	538	173	1541	280	1	81	17	2
Turn Type	Prot	NA	Prot	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases	5	2	1	6		8	1		4
Permitted Phases					8		8	4	
Detector Phase	5	2	1	6	8	8	1	4	4
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	26.9	8.4	19.3	39.9	39.9	8.4	39.9	39.9
Total Split (s)	12.5	39.0	32.5	59.0	40.5	40.5	32.5	40.5	40.5
Total Split (%)	11.2%	34.8%	29.0%	52.7%	36.2%	36.2%	29.0%	36.2%	36.2%
Yellow Time (s)	3.4	4.9	3.4	4.3	3.9	3.9	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	4.4	5.9	4.4	5.3		4.9	4.4		4.9
Lead/Lag	Lead	Lead	Lag	Lag			Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	4.7	21.2	40.2	64.4		35.5	76.1		23.4
Actuated g/C Ratio	0.04	0.19	0.36	0.58		0.32	0.68		0.21
v/c Ratio	0.03	0.76	0.17	0.90		0.98	0.11		0.13
Control Delay	52.0	46.0	24.5	28.0		77.9	2.7		25.2
Queue Delay	0.0	0.0	0.0	14.6		0.0	0.0		0.0
Total Delay	52.0	46.0	24.5	42.6		77.9	2.7		25.2
LOS	D	D	C	D		E	A		C
Approach Delay		46.0		40.8		61.0			25.2
Approach LOS		D		D		E			C

Intersection Summary	
Cycle Length: 112	
Actuated Cycle Length: 112	
Offset: 82 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 44.9	Intersection LOS: D
Intersection Capacity Utilization 79.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Fashion Valley Road & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	538	103	173	1541	8	280	1	81	17	2	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	611	89	204	1813	9	400	1	16	23	3	0
Adj No. of Lanes	1	3	0	2	2	0	0	1	1	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.85	0.85	0.85	0.70	0.70	0.70	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	4	816	117	1391	2158	11	501	1	1064	103	10	0
Arrive On Green	0.00	0.18	0.18	0.81	1.00	1.00	0.27	0.27	0.27	0.27	0.27	0.00
Sat Flow, veh/h	1774	4475	642	3442	3611	18	1621	4	1571	158	37	0
Grp Volume(v), veh/h	2	461	239	204	888	934	401	0	16	26	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1727	1721	1770	1859	1625	0	1571	195	0	0
Q Serve(g_s), s	0.1	14.4	14.7	1.4	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
Cycle Q Clear(g_c), s	0.1	14.4	14.7	1.4	0.0	0.0	26.4	0.0	0.0	28.1	0.0	0.0
Prop In Lane	1.00		0.37	1.00		0.01	1.00		1.00	0.88		0.00
Lane Grp Cap(c), veh/h	4	618	315	1391	1058	1111	503	0	1064	113	0	0
V/C Ratio(X)	0.52	0.74	0.76	0.15	0.84	0.84	0.80	0.00	0.02	0.23	0.00	0.00
Avail Cap(c_a), veh/h	128	1002	510	1391	1058	1111	570	0	1139	182	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.74	0.74	0.74	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	55.8	43.3	43.5	6.5	0.0	0.0	39.5	0.0	6.0	48.6	0.0	0.0
Incr Delay (d2), s/veh	35.6	7.9	15.8	0.0	6.1	5.8	6.3	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	7.4	8.4	0.7	1.8	1.8	12.8	0.0	0.2	0.8	0.0	0.0
LnGrp Delay(d),s/veh	91.4	51.3	59.2	6.6	6.1	5.8	45.8	0.0	6.0	49.1	0.0	0.0
LnGrp LOS	F	D	E	A	A	A	D		A	D		
Approach Vol, veh/h		702			2026			417			26	
Approach Delay, s/veh		54.1			6.0			44.3			49.1	
Approach LOS		D			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	50.6	26.3		35.1	4.6	72.2		35.1
Change Period (Y+Rc), s	5.3	* 5.9		4.9	4.4	5.3		4.9
Max Green Setting (Gmax), s	28.1	* 33		35.6	8.1	53.7		35.6
Max Q Clear Time (g_c+I1), s	3.4	16.7		30.1	2.1	2.0		28.4
Green Ext Time (p_c), s	18.0	3.6		1.0	0.0	29.2		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	300		0	0		0	0		0
Storage Lanes	1		0	2		0	1		1	0		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.91	0.91	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.99					0.98			
Frt		0.997							0.850			
Flt Protected				0.950			0.950					
Satd. Flow (prot)	1863	5067	0	3433	3539	0	1770	0	1583	0	0	0
Flt Permitted				0.950			0.950					
Satd. Flow (perm)	1863	5067	0	3407	3539	0	1770	0	1549	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4							66			
Link Speed (mph)		45			45			25			30	
Link Distance (ft)		674			1326			591			337	
Travel Time (s)		10.2			20.1			16.1			7.7	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	653	15	84	1756	0	4	0	23	0	0	0
Confl. Peds. (#/hr)			8	8					9			
Confl. Bikes (#/hr)			4									
Peak Hour Factor	0.92	0.93	0.93	0.90	0.90	0.92	0.96	0.92	0.96	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	702	16	93	1951	0	4	0	24	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	718	0	93	1951	0	4	0	24	0	0	0

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR	ø5
Lane Configurations						
Volume (vph)	653	84	1756	4	23	
Turn Type	NA	Prot	NA	Prot	Perm	
Protected Phases	2	1	6	8		5
Permitted Phases					8	
Detector Phase	2	1	6	8	8	
Switch Phase						
Minimum Initial (s)	10.0	4.0	10.0	4.0	4.0	4.0
Minimum Split (s)	27.4	20.4	21.3	35.4	35.4	8.4
Total Split (s)	65.0	13.0	66.9	34.0	34.0	11.0
Total Split (%)	58.0%	11.6%	59.7%	30.4%	30.4%	10%
Yellow Time (s)	4.4	3.4	4.3	3.4	3.4	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.4	4.4	5.3	4.4	4.4	
Lead/Lag	Lag	Lead	Lag			Lead
Lead-Lag Optimize?	Yes	Yes	Yes			Yes
Recall Mode	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	87.5	7.2	98.3	9.7	9.7	
Actuated g/C Ratio	0.78	0.06	0.88	0.09	0.09	
v/c Ratio	0.18	0.42	0.63	0.03	0.12	
Control Delay	1.4	59.0	5.0	39.8	1.3	
Queue Delay	0.0	0.0	0.2	0.0	0.0	
Total Delay	1.4	59.0	5.2	39.8	1.3	
LOS	A	E	A	D	A	
Approach Delay	1.4		7.7			
Approach LOS	A		A			

Intersection Summary

Cycle Length: 112
Actuated Cycle Length: 112
Offset: 105 (94%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 6.1 — Intersection LOS: A
Intersection Capacity Utilization 60.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 12: Via De La Moda & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	653	15	84	1756	0	4	0	23	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	0	1863	0	1863			
Adj Flow Rate, veh/h	0	702	16	93	1951	0	4	0	3			
Adj No. of Lanes	1	3	0	2	2	0	1	0	1			
Peak Hour Factor	0.92	0.93	0.93	0.90	0.90	0.92	0.96	0.92	0.96			
Percent Heavy Veh, %	2	2	2	2	2	0	2	0	2			
Cap, veh/h	2	4214	96	144	3205	0	12	0	11			
Arrive On Green	0.00	1.00	1.00	0.08	1.00	0.00	0.01	0.00	0.01			
Sat Flow, veh/h	1774	5112	116	3442	3632	0	1774	0	1583			
Grp Volume(v), veh/h	0	465	253	93	1951	0	4	0	3			
Grp Sat Flow(s),veh/h/ln	1774	1695	1838	1721	1770	0	1774	0	1583			
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	0.3	0.0	0.2			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.9	0.0	0.0	0.3	0.0	0.2			
Prop In Lane	1.00		0.06	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	2	2795	1516	144	3205	0	12	0	11			
V/C Ratio(X)	0.00	0.17	0.17	0.64	0.61	0.00	0.32	0.00	0.27			
Avail Cap(c_a), veh/h	105	2795	1516	264	3205	0	469	0	418			
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.69	0.69	0.89	0.89	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	50.5	0.0	0.0	55.3	0.0	55.3			
Incr Delay (d2), s/veh	0.0	0.1	0.2	1.6	0.8	0.0	5.5	0.0	4.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	1.4	0.3	0.0	0.1	0.0	0.1			
LnGrp Delay(d),s/veh	0.0	0.1	0.2	52.1	0.8	0.0	60.8	0.0	60.1			
LnGrp LOS		A	A	D	A		E		E			
Approach Vol, veh/h		718			2044			7				
Approach Delay, s/veh		0.1			3.1			60.5				
Approach LOS		A			A			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	9.1	97.7			0.0	106.8		5.2
Change Period (Y+Rc), s	4.4	5.4			4.4	* 5.4		4.4
Max Green Setting (Gmax), s	8.6	59.6			6.6	* 62		29.6
Max Q Clear Time (g_c+I1), s	4.9	2.0			0.0	2.0		2.3
Green Ext Time (p_c), s	0.0	45.1			0.0	46.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	2.5
HCM 2010 LOS	A

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	410		0	0		0	0		0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.91	0.91	0.97	0.91	0.91	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00	1.00			0.98	0.98	1.00		
Frt		0.995						0.850	0.850		0.850	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1863	5057	0	3433	5085	0	1770	1482	1504	1770	1583	0
Flt Permitted				0.950			0.755			0.749		
Satd. Flow (perm)	1863	5057	0	3430	5085	0	1406	1482	1482	1391	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6						278	278		151	
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1326			818			332			302	
Travel Time (s)		20.1			12.4			9.1			8.2	

Intersection Summary	
Area Type:	Other
Description: mv2000	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	649	21	159	1839	2	3	0	15	27	0	3
Confl. Peds. (#/hr)			1	1					3	3		
Confl. Bikes (#/hr)			4			6						
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.64	0.64	0.64	0.75	0.75	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	698	23	173	1999	2	5	0	23	36	0	4
Shared Lane Traffic (%)									50%			
Lane Group Flow (vph)	0	721	0	173	2001	0	5	12	11	36	4	0

Intersection Summary
Description: mv2000

Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	ø5
Lane Configurations									
Volume (vph)	649	159	1839	3	0	15	27	0	
Turn Type	NA	Prot	NA	Perm	NA	Perm	Perm	NA	
Protected Phases	2	1	6		8			4	5
Permitted Phases				8		8	4		
Detector Phase	2	1	6	8	8	8	4	4	
Switch Phase									
Minimum Initial (s)	10.0	4.0	10.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	30.4	8.4	23.3	20.9	20.9	20.9	34.9	34.9	8.4
Total Split (s)	57.4	17.0	61.9	37.6	37.6	37.6	37.6	37.6	12.5
Total Split (%)	51.3%	15.2%	55.3%	33.6%	33.6%	33.6%	33.6%	33.6%	11%
Yellow Time (s)	4.4	3.4	4.3	3.9	3.9	3.9	3.9	3.9	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.4	4.4	5.3	4.9	4.9	4.9	4.9	4.9	
Lead/Lag	Lag	Lead	Lag						Lead
Lead-Lag Optimize?	Yes	Yes	Yes						Yes
Recall Mode	C-Min	None	C-Min	None	None	None	None	None	None
Act Effct Green (s)	80.0	10.0	96.7	11.0	11.0	11.0	11.3	11.3	
Actuated g/C Ratio	0.71	0.09	0.86	0.10	0.10	0.10	0.10	0.10	
v/c Ratio	0.20	0.57	0.46	0.04	0.03	0.03	0.26	0.01	
Control Delay	14.5	55.9	4.5	39.0	0.1	0.1	46.6	0.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	14.5	55.9	4.5	39.0	0.1	0.1	46.6	0.0	
LOS	B	E	A	D	A	A	D	A	
Approach Delay	14.5		8.6		7.1			42.0	
Approach LOS	B		A		A			D	

Intersection Summary	
Cycle Length: 112	
Actuated Cycle Length: 112	
Offset: 90 (80%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 10.5	Intersection LOS: B
Intersection Capacity Utilization 59.2%	ICU Level of Service B
Analysis Period (min) 15	
Description: mv2000	

Splits and Phases: 13: Avenida De Las Tiendas & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	649	21	159	1839	2	3	0	15	27	0	3
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.98		1.00	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	0	698	18	173	1999	2	5	0	0	36	0	0
Adj No. of Lanes	1	3	0	2	3	0	1	1	1	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.64	0.64	0.64	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	3812	98	234	4487	4	138	98	84	138	98	0
Arrive On Green	0.00	1.00	1.00	0.07	0.86	0.86	0.05	0.00	0.00	0.05	0.00	0.00
Sat Flow, veh/h	1774	5097	131	3442	5247	5	1388	1863	1583	1388	1863	0
Grp Volume(v), veh/h	0	464	252	173	1292	709	5	0	0	36	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1837	1721	1695	1862	1388	1863	1583	1388	1863	0
Q Serve(g_s), s	0.0	0.0	0.0	5.5	10.0	10.0	0.4	0.0	0.0	2.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	5.5	10.0	10.0	0.4	0.0	0.0	2.8	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	2	2536	1374	234	2899	1592	138	98	84	138	98	0
V/C Ratio(X)	0.00	0.18	0.18	0.74	0.45	0.45	0.04	0.00	0.00	0.26	0.00	0.00
Avail Cap(c_a), veh/h	128	2536	1374	387	2899	1592	469	544	462	469	544	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.99	0.99	0.51	0.51	0.51	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	51.2	1.9	1.9	50.4	0.0	0.0	51.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.3	0.9	0.3	0.5	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.1	2.6	4.6	5.1	0.1	0.0	0.0	1.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.2	0.3	52.1	2.2	2.4	50.5	0.0	0.0	52.0	0.0	0.0
LnGrp LOS		A	A	D	A	A	D			D		
Approach Vol, veh/h		716			2174			5			36	
Approach Delay, s/veh		0.2			6.2			50.5			52.0	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	89.2		10.8	0.0	101.2		10.8
Change Period (Y+Rc), s	4.4	5.4		4.9	4.4	* 5.4		4.9
Max Green Setting (Gmax), s	12.6	52.0		32.7	8.1	* 57		32.7
Max Q Clear Time (g_c+I1), s	7.5	2.0		4.8	0.0	12.0		2.4
Green Ext Time (p_c), s	0.1	38.5		0.0	0.0	35.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	5.4
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	0		300	0		260
Storage Lanes	1		1	0		1	0		1	1		1
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor			0.98									
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950							0.955		0.950	0.954	
Satd. Flow (prot)	1770	5085	1583	0	5085	1583	0	3380	1583	1681	1688	1583
Flt Permitted	0.950							0.955		0.950	0.954	
Satd. Flow (perm)	1770	5085	1551	0	5085	1583	0	3380	1583	1681	1688	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			173			340			470			95
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		818			1167			458			1120	
Travel Time (s)		12.4			17.7			7.8			19.1	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	52	485	205	0	1394	397	446	33	770	307	6	77
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.91	0.91	0.91	0.91	0.91	0.91	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	59	551	233	0	1532	436	490	36	846	345	7	87
Shared Lane Traffic (%)										49%		
Lane Group Flow (vph)	59	551	233	0	1532	436	0	526	846	176	176	87

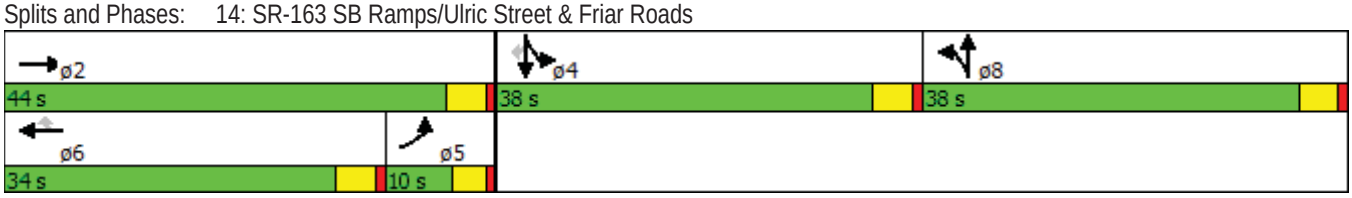
Intersection Summary

Lane Group	EBL	EBT	EBR	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	52	485	205	1394	397	33	770	307	6	77
Turn Type	Prot	NA	Free	NA	Perm	NA	Free	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases			Free		6		Free			4
Detector Phase	5	2		6	6	8		4	4	4
Switch Phase										
Minimum Initial (s)	2.0	10.0		10.0	10.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	22.5		20.0	20.0	20.0		37.5	37.5	37.5
Total Split (s)	10.0	44.0		34.0	34.0	38.0		38.0	38.0	38.0
Total Split (%)	8.3%	36.7%		28.3%	28.3%	31.7%		31.7%	31.7%	31.7%
Yellow Time (s)	3.0	3.5		3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5		4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag			Lead	Lead					
Lead-Lag Optimize?	Yes			Yes	Yes					
Recall Mode	None	Min		Min	Min	None		None	None	None
Act Effct Green (s)	5.9	37.8	82.6	30.2	30.2	17.4	82.6	13.5	13.5	13.5
Actuated g/C Ratio	0.07	0.46	1.00	0.37	0.37	0.21	1.00	0.16	0.16	0.16
v/c Ratio	0.47	0.24	0.15	0.82	0.55	1.31dl	0.53	0.64	0.64	0.26
Control Delay	54.2	15.3	0.2	31.0	9.3	38.0	1.3	45.0	44.8	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.2	15.3	0.2	31.0	9.3	38.0	1.3	45.0	44.8	8.4
LOS	D	B	A	C	A	D	A	D	D	A
Approach Delay		13.8		26.2		15.4			37.7	
Approach LOS		B		C		B			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 82.6	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 21.8	Intersection LOS: C
Intersection Capacity Utilization 72.5%	ICU Level of Service C
Analysis Period (min) 15	

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 14: SR-163 SB Ramps/Ulric Street & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	52	485	205	0	1394	397	446	33	770	307	6	77
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	59	551	0	0	1532	101	490	36	0	350	0	3
Adj No. of Lanes	1	3	1	0	3	1	0	2	1	2	0	1
Peak Hour Factor	0.88	0.88	0.88	0.91	0.91	0.91	0.91	0.91	0.91	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	82	2146	668	0	1657	516	537	536	480	443	0	198
Arrive On Green	0.05	0.42	0.00	0.00	0.33	0.33	0.30	0.30	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	1774	1770	1583	3548	0	1583
Grp Volume(v), veh/h	59	551	0	0	1532	101	490	36	0	350	0	3
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	1770	1583	1774	0	1583
Q Serve(g_s), s	2.9	6.3	0.0	0.0	26.1	4.1	23.9	1.3	0.0	8.6	0.0	0.1
Cycle Q Clear(g_c), s	2.9	6.3	0.0	0.0	26.1	4.1	23.9	1.3	0.0	8.6	0.0	0.1
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	2146	668	0	1657	516	537	536	480	443	0	198
V/C Ratio(X)	0.72	0.26	0.00	0.00	0.92	0.20	0.91	0.07	0.00	0.79	0.00	0.02
Avail Cap(c_a), veh/h	119	2237	696	0	1670	520	662	660	591	1323	0	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.3	16.8	0.0	0.0	29.2	21.8	30.2	22.3	0.0	38.2	0.0	34.5
Incr Delay (d2), s/veh	4.5	0.1	0.0	0.0	9.1	0.2	13.5	0.0	0.0	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.0	0.0	0.0	13.6	1.8	13.7	0.6	0.0	4.3	0.0	0.1
LnGrp Delay(d),s/veh	46.8	16.9	0.0	0.0	38.3	22.0	43.7	22.3	0.0	39.4	0.0	34.5
LnGrp LOS	D	B			D	C	D	C		D		C
Approach Vol, veh/h		610			1633			526			353	
Approach Delay, s/veh		19.8			37.3			42.2			39.3	
Approach LOS		B			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		42.4		15.7	8.6	33.8		31.7
Change Period (Y+Rc), s		4.5		4.5	4.5	* 4.5		4.5
Max Green Setting (Gmax), s		39.5		33.5	6.0	* 30		33.5
Max Q Clear Time (g_c+I1), s		8.3		10.6	4.9	28.1		25.9
Green Ext Time (p_c), s		3.9		0.6	0.4	1.2		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	35.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	260			0	0	0
Storage Lanes	1			1	0	0
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	1770	5085	3539	1583	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	5085	3539	1583	0	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				428		
Link Speed (mph)		45	45		45	
Link Distance (ft)		1167	746		946	
Travel Time (s)		17.7	11.3		14.3	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	399	1166	1488	703	0	0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.95	0.95	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	434	1267	1566	740	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	434	1267	1566	740	0	0

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR
Lane Configurations				
Volume (vph)	399	1166	1488	703
Turn Type	Prot	NA	NA	Free
Protected Phases	5	2	6	
Permitted Phases				Free
Detector Phase	5	2	6	
Switch Phase				
Minimum Initial (s)	5.0	12.0	12.0	
Minimum Split (s)	10.0	22.0	22.0	
Total Split (s)	29.0	83.0	54.0	
Total Split (%)	34.9%	100.0%	65.1%	
Yellow Time (s)	4.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.0	6.0	
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	Min	Min	
Act Effct Green (s)	20.5	68.9	37.0	68.9
Actuated g/C Ratio	0.30	1.00	0.54	1.00
v/c Ratio	0.83	0.25	0.83	0.47
Control Delay	39.3	0.1	17.8	1.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	39.3	0.1	17.8	1.0
LOS	D	A	B	A
Approach Delay		10.1	12.4	
Approach LOS		B	B	

Intersection Summary	
Cycle Length: 83	
Actuated Cycle Length: 68.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 72.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 15: Friar Roads & SR-163 NB Ramps





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	399	1166	1488	703	0	0
Number	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	434	1267	1566	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.92	0.92	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	479	4654	2035	910		
Arrive On Green	0.27	0.92	0.57	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	434	1267	1566	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	16.8	2.0	23.9	0.0		
Cycle Q Clear(g_c), s	16.8	2.0	23.9	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	479	4654	2035	910		
V/C Ratio(X)	0.91	0.27	0.77	0.00		
Avail Cap(c_a), veh/h	601	5529	2399	1073		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	25.0	0.3	11.5	0.0		
Incr Delay (d2), s/veh	13.5	0.0	1.1	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	10.0	0.8	11.8	0.0		
LnGrp Delay(d),s/veh	38.5	0.4	12.5	0.0		
LnGrp LOS	D	A	B			
Approach Vol, veh/h		1701	1566			
Approach Delay, s/veh		10.1	12.5			
Approach LOS		B	B			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		70.8			24.1	46.7		
Change Period (Y+Rc), s		6.0			5.0	6.0		
Max Green Setting (Gmax), s		77.0			24.0	48.0		
Max Q Clear Time (g_c+I1), s		4.0			18.8	25.9		
Green Ext Time (p_c), s		26.2			0.4	14.8		

Intersection Summary	
HCM 2010 Ctrl Delay	11.3
HCM 2010 LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	130		0	200		0	140		0
Storage Lanes	2		1	1		1	2		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00		0.97	0.89					0.96
Frt			0.850			0.850		0.967				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	1770	5085	1583	3433	3422	0	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3431	5085	1539	1765	5085	1540	3071	3422	0	3433	1863	1520
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			474			147		27				299
Link Speed (mph)		45			50			25			25	
Link Distance (ft)		746			633			685			884	
Travel Time (s)		11.3			8.6			18.7			24.1	

Intersection Summary	
Area Type:	Other



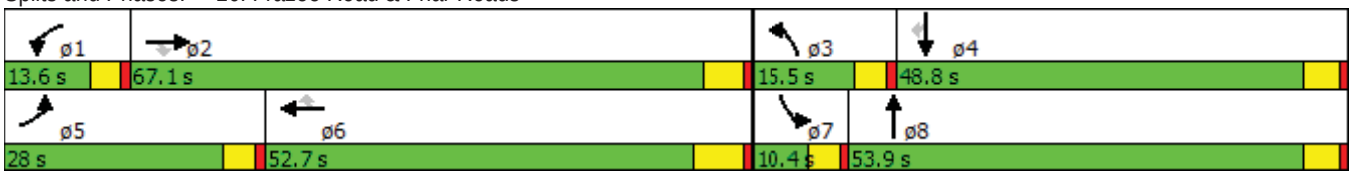
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	632	851	460	43	1729	42	137	106	30	29	43	263
Confl. Peds. (#/hr)	3		3	3		3	29					29
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.98	0.98	0.98	0.96	0.96	0.96	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	652	877	474	44	1764	43	143	110	31	36	54	329
Shared Lane Traffic (%)												
Lane Group Flow (vph)	652	877	474	44	1764	43	143	141	0	36	54	329

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	632	851	460	43	1729	42	137	106	29	43	263
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases			2			6					4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	10.0	10.0	4.0	10.0	10.0	6.0	7.0	6.0	7.0	7.0
Minimum Split (s)	10.4	32.5	32.5	8.4	35.5	35.5	10.4	53.9	10.4	20.0	20.0
Total Split (s)	28.0	67.1	67.1	13.6	52.7	52.7	15.5	53.9	10.4	48.8	48.8
Total Split (%)	19.3%	46.3%	46.3%	9.4%	36.3%	36.3%	10.7%	37.2%	7.2%	33.7%	33.7%
Yellow Time (s)	3.4	4.5	4.5	3.4	5.5	5.5	3.4	3.9	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.5	5.5	4.4	6.5	6.5	4.4	4.9	4.4	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	Min	Min
Act Effct Green (s)	24.2	67.6	67.6	7.3	47.4	47.4	9.4	35.3	6.2	26.9	26.9
Actuated g/C Ratio	0.19	0.53	0.53	0.06	0.37	0.37	0.07	0.27	0.05	0.21	0.21
v/c Ratio	1.01	0.33	0.46	0.44	0.94	0.07	0.57	0.15	0.22	0.14	0.59
Control Delay	90.4	22.3	3.7	77.7	52.1	0.2	70.2	27.4	68.7	38.7	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.4	22.3	3.7	77.7	52.1	0.2	70.2	27.4	68.7	38.7	10.7
LOS	F	C	A	E	D	A	E	C	E	D	B
Approach Delay		40.1			51.5			48.9		19.3	
Approach LOS		D			D			D		B	

Intersection Summary	
Cycle Length: 145	
Actuated Cycle Length: 128.7	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 43.4	Intersection LOS: D
Intersection Capacity Utilization 77.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 16: Frazee Road & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	632	851	460	43	1729	42	137	106	30	29	43	263
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	652	877	190	44	1764	0	143	110	10	36	54	67
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	1	1
Peak Hour Factor	0.97	0.97	0.97	0.98	0.98	0.98	0.96	0.96	0.96	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	702	2843	883	56	1968	613	201	647	58	123	326	263
Arrive On Green	0.20	0.56	0.56	0.03	0.39	0.00	0.06	0.20	0.20	0.04	0.17	0.17
Sat Flow, veh/h	3442	5085	1579	1774	5085	1583	3442	3272	293	3442	1863	1505
Grp Volume(v), veh/h	652	877	190	44	1764	0	143	59	61	36	54	67
Grp Sat Flow(s),veh/h/ln	1721	1695	1579	1774	1695	1583	1721	1770	1795	1721	1863	1505
Q Serve(g_s), s	21.4	10.6	6.9	2.8	37.4	0.0	4.7	3.2	3.3	1.2	2.8	4.4
Cycle Q Clear(g_c), s	21.4	10.6	6.9	2.8	37.4	0.0	4.7	3.2	3.3	1.2	2.8	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	702	2843	883	56	1968	613	201	350	355	123	326	263
V/C Ratio(X)	0.93	0.31	0.22	0.78	0.90	0.00	0.71	0.17	0.17	0.29	0.17	0.25
Avail Cap(c_a), veh/h	707	2843	883	142	2045	637	332	755	766	180	712	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	13.5	12.7	55.2	33.1	0.0	53.1	38.3	38.3	54.0	40.3	40.9
Incr Delay (d2), s/veh	18.3	0.1	0.2	8.4	5.8	0.0	2.5	0.1	0.1	0.7	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	5.0	3.0	1.5	18.5	0.0	2.3	1.6	1.6	0.6	1.5	1.9
LnGrp Delay(d),s/veh	63.2	13.6	12.9	63.6	38.8	0.0	55.6	38.3	38.4	54.7	40.4	41.3
LnGrp LOS	E	B	B	E	D		E	D	D	D	D	D
Approach Vol, veh/h		1719			1808			263			157	
Approach Delay, s/veh		32.3			39.4			47.8			44.1	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	70.7	11.1	25.0	27.8	51.0	8.5	27.6
Change Period (Y+Rc), s	4.4	* 6.5	4.4	4.9	4.4	6.5	4.4	4.9
Max Green Setting (Gmax), s	9.2	* 62	11.1	43.9	23.6	46.2	6.0	49.0
Max Q Clear Time (g_c+I1), s	4.8	12.6	6.7	6.4	23.4	39.4	3.2	5.3
Green Ext Time (p_c), s	0.0	42.2	0.1	0.9	0.0	5.1	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	37.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	370		370	0		0	0		0
Storage Lanes	0		0	1		1	2		0	0		1
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor				1.00	1.00		1.00					0.98
Frt						0.850						0.850
Flt Protected				0.950	0.950		0.950					
Satd. Flow (prot)	0	0	0	1681	1681	1583	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.950		0.950					
Satd. Flow (perm)	0	0	0	1678	1678	1583	3427	3539	0	0	3539	1547
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						332						281
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		844			939			398			342	
Travel Time (s)		19.2			21.3			6.8			5.8	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	147	0	329	142	466	0	0	363	267
Confl. Peds. (#/hr)			2	2			1		2	2		1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.25	0.25	0.25	0.98	0.98	0.98	0.94	0.94	0.94	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	150	0	336	151	496	0	0	382	281
Shared Lane Traffic (%)				50%								
Lane Group Flow (vph)	0	0	0	75	75	336	151	496	0	0	382	281

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (vph)	147	0	329	142	466	363	267
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	6.0	6.0	6.0	4.0	10.0	10.0	10.0
Minimum Split (s)	33.9	33.9	33.9	8.4	24.0	24.0	24.0
Total Split (s)	35.9	35.9	35.9	19.5	54.1	34.6	34.6
Total Split (%)	39.9%	39.9%	39.9%	21.7%	60.1%	38.4%	38.4%
Yellow Time (s)	3.9	3.9	3.9	3.4	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	4.4	5.0	6.0	6.0
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	13.0	13.0	13.0	9.3	67.1	52.4	52.4
Actuated g/C Ratio	0.14	0.14	0.14	0.10	0.75	0.58	0.58
v/c Ratio	0.31	0.31	0.65	0.43	0.19	0.19	0.28
Control Delay	34.7	34.7	10.0	49.4	1.9	17.3	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	34.7	34.7	10.0	49.4	1.9	17.3	10.8
LOS	C	C	B	D	A	B	B
Approach Delay		17.6			13.0	14.6	
Approach LOS		B			B	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 2 (2%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 14.8	Intersection LOS: B
Intersection Capacity Utilization 44.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Mission Center Road & Friar WB



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	147	0	329	142	466	0	0	363	267
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				150	0	112	151	496	0	0	382	81
Adj No. of Lanes				2	0	1	2	2	0	0	2	1
Peak Hour Factor				0.98	0.98	0.98	0.94	0.94	0.94	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				375	0	166	226	2737	0	0	2332	1042
Arrive On Green				0.11	0.00	0.11	0.13	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h				3548	0	1574	3442	3632	0	0	3632	1582
Grp Volume(v), veh/h				150	0	112	151	496	0	0	382	81
Grp Sat Flow(s),veh/h/ln				1774	0	1574	1721	1770	0	0	1770	1582
Q Serve(g_s), s				3.6	0.0	6.2	3.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				3.6	0.0	6.2	3.8	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				375	0	166	226	2737	0	0	2332	1042
V/C Ratio(X)				0.40	0.00	0.67	0.67	0.18	0.00	0.00	0.16	0.08
Avail Cap(c_a), veh/h				1222	0	542	577	2737	0	0	2332	1042
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	0.95	0.95	0.00	0.00	0.91	0.91
Uniform Delay (d), s/veh				37.6	0.0	38.8	38.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				0.7	0.0	4.7	3.2	0.1	0.0	0.0	0.1	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.8	0.0	2.9	1.9	0.1	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh				38.3	0.0	43.4	41.4	0.1	0.0	0.0	0.1	0.1
LnGrp LOS				D		D	D	A			A	A
Approach Vol, veh/h					262			647			463	
Approach Delay, s/veh					40.5			9.8			0.1	
Approach LOS					D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		75.6			10.3	65.3		14.4
Change Period (Y+Rc), s		* 6			4.4	6.0		4.9
Max Green Setting (Gmax), s		* 49			15.1	28.6		31.0
Max Q Clear Time (g_c+I1), s		2.0			5.8	2.0		8.2
Green Ext Time (p_c), s		13.7			0.3	11.1		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		100	0		0	0		0	120		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	25			0			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor									0.97	1.00		
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	1583	0	0	0	0	3539	1541	3420	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			216						80			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		654			949			247			398	
Travel Time (s)		14.9			21.6			4.2			6.8	

Intersection Summary	
Area Type:	Other



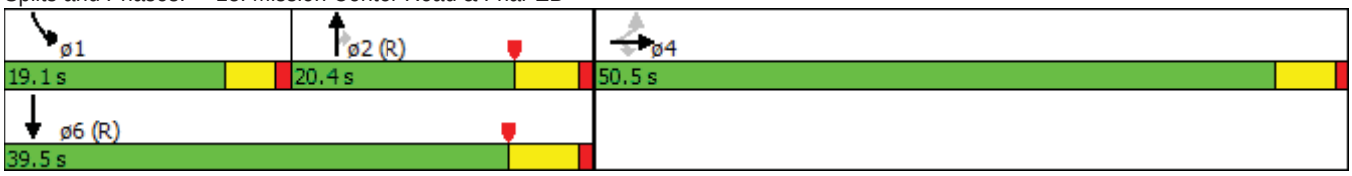
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	155	3	173	0	0	0	0	425	78	122	381	0
Confl. Peds. (#/hr)									3	3		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.25	0.25	0.25	0.97	0.97	0.97	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	194	4	216	0	0	0	0	438	80	133	414	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	194	4	216	0	0	0	0	438	80	133	414	0

Intersection Summary

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	155	3	173	425	78	122	381
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA
Protected Phases		4		2		1	6
Permitted Phases	4		4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	4.0	10.0
Minimum Split (s)	20.9	20.9	20.9	24.3	24.3	15.1	25.8
Total Split (s)	50.5	50.5	50.5	20.4	20.4	19.1	39.5
Total Split (%)	56.1%	56.1%	56.1%	22.7%	22.7%	21.2%	43.9%
Yellow Time (s)	3.9	3.9	3.9	4.3	4.3	3.4	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	5.3	5.3	4.4	5.8
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	16.1	16.1	16.1	51.4	51.4	7.9	63.2
Actuated g/C Ratio	0.18	0.18	0.18	0.57	0.57	0.09	0.70
v/c Ratio	0.61	0.01	0.47	0.22	0.09	0.44	0.17
Control Delay	41.7	27.0	7.7	16.7	9.8	42.8	2.9
Queue Delay	0.0	0.0	0.0	0.9	0.0	0.0	0.0
Total Delay	41.7	27.0	7.7	17.6	9.8	42.8	2.9
LOS	D	C	A	B	A	D	A
Approach Delay		23.8		16.4			12.6
Approach LOS		C		B			B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 6 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 44.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 18: Mission Center Road & Friar EB



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	155	3	173	0	0	0	0	425	78	122	381	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	194	4	85				0	438	13	133	414	0
Adj No. of Lanes	1	1	1				0	2	1	2	2	0
Peak Hour Factor	0.80	0.80	0.80				0.97	0.97	0.97	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	244	257	218				0	2248	1003	204	2631	0
Arrive On Green	0.14	0.14	0.14				0.00	0.21	0.21	0.06	0.74	0.00
Sat Flow, veh/h	1774	1863	1583				0	3632	1580	3442	3632	0
Grp Volume(v), veh/h	194	4	85				0	438	13	133	414	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583				0	1770	1580	1721	1770	0
Q Serve(g_s), s	9.5	0.2	4.4				0.0	9.2	0.6	3.4	3.1	0.0
Cycle Q Clear(g_c), s	9.5	0.2	4.4				0.0	9.2	0.6	3.4	3.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	244	257	218				0	2248	1003	204	2631	0
V/C Ratio(X)	0.79	0.02	0.39				0.00	0.19	0.01	0.65	0.16	0.00
Avail Cap(c_a), veh/h	899	944	802				0	2248	1003	562	2631	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.99	0.99	0.99	0.99	0.00
Uniform Delay (d), s/veh	37.6	33.5	35.4				0.0	16.6	13.2	41.4	3.4	0.0
Incr Delay (d2), s/veh	5.8	0.0	1.1				0.0	0.2	0.0	1.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.1	2.0				0.0	4.6	0.3	1.7	1.5	0.0
LnGrp Delay(d),s/veh	43.3	33.6	36.5				0.0	16.8	13.2	42.7	3.5	0.0
LnGrp LOS	D	C	D					B	B	D	A	
Approach Vol, veh/h		283						451			547	
Approach Delay, s/veh		41.1						16.7			13.0	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	9.7	63.0		17.3		72.7		
Change Period (Y+Rc), s	4.4	* 5.8		4.9		5.8		
Max Green Setting (Gmax), s	14.7	* 15		45.6		33.7		
Max Q Clear Time (g_c+I1), s	5.4	11.2		11.5		5.1		
Green Ext Time (p_c), s	0.1	2.2		0.9		7.8		

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	320		0	0		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.995						0.994	
Flt Protected				0.950	0.954		0.950					
Satd. Flow (prot)	0	0	0	1681	1680	0	1770	1863	0	0	1852	0
Flt Permitted				0.950	0.954		0.950					
Satd. Flow (perm)	0	0	0	1681	1680	0	1770	1863	0	0	1852	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					3						1	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		411			696			308			522	
Travel Time (s)		9.3			15.8			4.7			7.9	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	182	1	3	470	8	0	0	20	1
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.25	0.25	0.25	0.82	0.82	0.82	0.93	0.93	0.93	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	222	1	4	505	9	0	0	23	1
Shared Lane Traffic (%)				49%								
Lane Group Flow (vph)	0	0	0	113	114	0	505	9	0	0	24	0

Intersection Summary

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	182	1	470	8	20
Turn Type	Perm	NA	Prot	NA	NA
Protected Phases		8	5	2	6
Permitted Phases	8				
Detector Phase	8	8	5	2	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	10.0	10.0
Minimum Split (s)	32.9	32.9	8.9	23.1	20.9
Total Split (s)	32.9	32.9	26.0	47.1	21.1
Total Split (%)	41.1%	41.1%	32.5%	58.9%	26.4%
Yellow Time (s)	3.9	3.9	3.9	4.1	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	5.1	4.9
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	Min	None	None
Act Effct Green (s)	7.6	7.6	25.7	17.2	10.2
Actuated g/C Ratio	0.18	0.18	0.60	0.40	0.24
v/c Ratio	0.38	0.38	0.47	0.01	0.05
Control Delay	20.0	19.7	11.5	7.2	15.6
Queue Delay	0.0	0.0	0.1	0.0	0.0
Total Delay	20.0	19.7	11.7	7.2	15.6
LOS	C	B	B	A	B
Approach Delay		19.9		11.6	15.6
Approach LOS		B		B	B

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 42.5	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 41.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 19: Qualcomm Way & WB Friar





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	182	1	3	470	8	0	0	20	1
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				226	0	0	505	9	0	0	23	1
Adj No. of Lanes				2	1	0	1	1	0	0	1	0
Peak Hour Factor				0.82	0.82	0.82	0.93	0.93	0.93	0.88	0.88	0.88
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				414	217	0	644	1070	0	0	106	5
Arrive On Green				0.12	0.00	0.00	0.36	0.57	0.00	0.00	0.06	0.06
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	1772	77
Grp Volume(v), veh/h				226	0	0	505	9	0	0	0	24
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	0	1849
Q Serve(g_s), s				1.9	0.0	0.0	8.2	0.1	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s				1.9	0.0	0.0	8.2	0.1	0.0	0.0	0.0	0.4
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.04
Lane Grp Cap(c), veh/h				414	217	0	644	1070	0	0	0	111
V/C Ratio(X)				0.55	0.00	0.00	0.78	0.01	0.00	0.00	0.00	0.22
Avail Cap(c_a), veh/h				3070	1612	0	1157	2418	0	0	0	926
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				13.5	0.0	0.0	9.2	2.9	0.0	0.0	0.0	14.5
Incr Delay (d2), s/veh				0.4	0.0	0.0	2.5	0.0	0.0	0.0	0.0	1.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.2
LnGrp Delay(d),s/veh				13.9	0.0	0.0	11.7	2.9	0.0	0.0	0.0	15.5
LnGrp LOS				B			B	A				B
Approach Vol, veh/h					226			514			24	
Approach Delay, s/veh					13.9			11.5			15.5	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		23.7			16.6	7.0		8.7
Change Period (Y+Rc), s		5.1			4.9	* 5.1		4.9
Max Green Setting (Gmax), s		42.0			21.1	* 16		28.0
Max Q Clear Time (g_c+I1), s		2.1			10.2	2.4		3.9
Green Ext Time (p_c), s		0.1			1.5	0.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		360	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850						0.850			
Flt Protected		0.950								0.950		
Satd. Flow (prot)	0	1770	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted		0.950								0.950		
Satd. Flow (perm)	0	1770	1583	0	0	0	0	3539	1583	1770	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			137						205			
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		366			590			785			308	
Travel Time (s)		8.3			13.4			11.9			4.7	

Intersection Summary	
Area Type:	Other



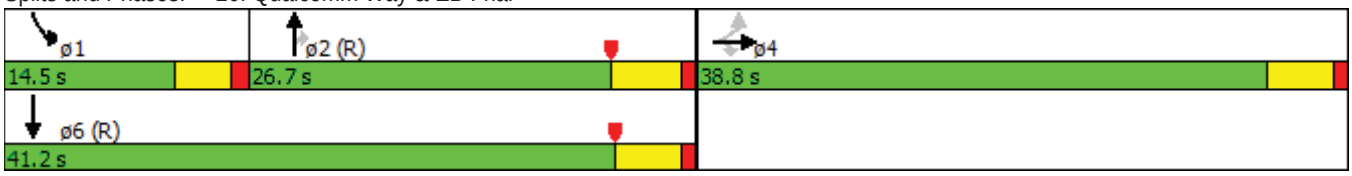
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	50	0	118	0	0	0	0	425	187	4	188	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.25	0.25	0.25	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	58	0	137	0	0	0	0	467	205	4	207	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	137	0	0	0	0	467	205	4	207	0

Intersection Summary

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	118	425	187	4	188
Turn Type	NA	Perm	NA	Perm	Prot	NA
Protected Phases	4		2		1	6
Permitted Phases		4		2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0	10.0	4.0	10.0
Minimum Split (s)	38.9	38.9	15.1	15.1	8.4	20.9
Total Split (s)	38.8	38.8	26.7	26.7	14.5	41.2
Total Split (%)	48.5%	48.5%	33.4%	33.4%	18.1%	51.5%
Yellow Time (s)	3.9	3.9	4.1	4.1	3.4	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	5.1	5.1	4.4	4.9
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	7.1	7.1	60.9	60.9	4.8	63.1
Actuated g/C Ratio	0.09	0.09	0.76	0.76	0.06	0.79
v/c Ratio	0.37	0.52	0.17	0.16	0.04	0.07
Control Delay	40.2	13.9	3.5	1.1	36.0	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	13.9	3.5	1.1	36.0	2.2
LOS	D	B	A	A	D	A
Approach Delay	21.7		2.8			2.8
Approach LOS	C		A			A

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 4 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 6.2	Intersection LOS: A
Intersection Capacity Utilization 41.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 20: Qualcomm Way & EB Friar



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	0	118	0	0	0	0	425	187	4	188	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	58	0	44				0	467	40	4	207	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.86	0.86	0.86				0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	96	0	85				0	2696	1206	8	2906	0
Arrive On Green	0.05	0.00	0.05				0.00	0.76	0.76	0.00	0.82	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	58	0	44				0	467	40	4	207	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	2.6	0.0	2.2				0.0	2.9	0.5	0.2	0.9	0.0
Cycle Q Clear(g_c), s	2.6	0.0	2.2				0.0	2.9	0.5	0.2	0.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	96	0	85				0	2696	1206	8	2906	0
V/C Ratio(X)	0.61	0.00	0.52				0.00	0.17	0.03	0.53	0.07	0.00
Avail Cap(c_a), veh/h	752	0	671				0	2696	1206	224	2906	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.96	0.96	0.96	0.96	0.00
Uniform Delay (d), s/veh	37.0	0.0	36.8				0.0	2.6	2.3	39.8	1.4	0.0
Incr Delay (d2), s/veh	2.3	0.0	1.8				0.0	0.1	0.0	19.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	1.0				0.0	1.4	0.2	0.1	0.4	0.0
LnGrp Delay(d),s/veh	39.3	0.0	38.6				0.0	2.7	2.4	58.7	1.4	0.0
LnGrp LOS	D		D					A	A	E	A	
Approach Vol, veh/h		102						507			211	
Approach Delay, s/veh		39.0						2.7			2.5	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	4.7	66.0		9.2		70.8		
Change Period (Y+Rc), s	4.4	5.1		4.9		* 5.1		
Max Green Setting (Gmax), s	10.1	21.6		33.9		* 36		
Max Q Clear Time (g_c+I1), s	2.2	4.9		4.6		2.9		
Green Ext Time (p_c), s	0.0	3.8		0.3		4.5		

Intersection Summary	
HCM 2010 Ctrl Delay	7.2
HCM 2010 LOS	A

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	220		0	240		0	0		60	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.98	1.00	1.00			0.99	0.98		0.98	
Frt			0.850		0.983				0.850		0.921	
Flt Protected	0.950			0.950				0.965			0.988	
Satd. Flow (prot)	1770	5085	1583	1770	4985	0	0	1798	1583	0	1670	0
Flt Permitted	0.950			0.950				0.762			0.917	
Satd. Flow (perm)	1769	5085	1546	1767	4985	0	0	1406	1553	0	1548	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			146		30				164		21	
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		1866			1172			844			533	
Travel Time (s)		25.4			16.0			23.0			14.5	

Intersection Summary	
Area Type:	Other



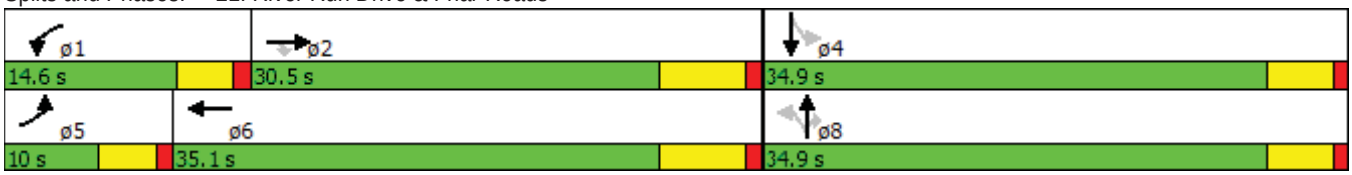
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	83	645	38	148	1430	178	127	47	65	6	4	14
Confl. Peds. (#/hr)	2		2	2		2	17		9	9		17
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.95	0.95	0.95	0.91	0.91	0.91	0.67	0.67	0.67
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	92	717	42	156	1505	187	140	52	71	9	6	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	92	717	42	156	1692	0	0	192	71	0	36	0

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	83	645	38	148	1430	127	47	65	6	4
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	27.2	27.2	8.4	24.2	34.9	34.9	34.9	34.9	34.9
Total Split (s)	10.0	30.5	30.5	14.6	35.1	34.9	34.9	34.9	34.9	34.9
Total Split (%)	12.5%	38.1%	38.1%	18.3%	43.9%	43.6%	43.6%	43.6%	43.6%	43.6%
Yellow Time (s)	3.4	5.2	5.2	3.4	5.2	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	4.4	6.2	6.2	4.4	6.2		4.9	4.9		4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.8	22.4	22.4	9.1	28.6		14.7	14.7		14.7
Actuated g/C Ratio	0.09	0.36	0.36	0.15	0.46		0.24	0.24		0.24
v/c Ratio	0.56	0.39	0.06	0.60	0.73		0.58	0.14		0.09
Control Delay	47.4	16.8	0.2	40.0	18.5		29.0	0.6		11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	47.4	16.8	0.2	40.0	18.5		29.0	0.6		11.4
LOS	D	B	A	D	B		C	A		B
Approach Delay		19.3			20.3		21.3			11.4
Approach LOS		B			C		C			B

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 62.4	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 20.0	Intersection LOS: C
Intersection Capacity Utilization 67.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 21: River Run Drive & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	83	645	38	148	1430	178	127	47	65	6	4	14
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.98		1.00	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	92	717	0	156	1505	166	140	52	0	9	6	0
Adj No. of Lanes	1	3	1	1	3	0	0	1	1	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.95	0.95	0.95	0.91	0.91	0.91	0.67	0.67	0.67
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	2061	642	196	2090	230	343	113	377	295	175	0
Arrive On Green	0.07	0.41	0.00	0.11	0.45	0.45	0.24	0.24	0.00	0.24	0.24	0.00
Sat Flow, veh/h	1774	5085	1583	1774	4649	512	1025	473	1583	854	735	0
Grp Volume(v), veh/h	92	717	0	156	1097	574	192	0	0	15	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1771	1499	0	1583	1589	0	0
Q Serve(g_s), s	3.2	6.1	0.0	5.4	16.6	16.6	6.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.2	6.1	0.0	5.4	16.6	16.6	6.9	0.0	0.0	0.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.29	0.73		1.00	0.60		0.00
Lane Grp Cap(c), veh/h	118	2061	642	196	1524	796	455	0	377	470	0	0
V/C Ratio(X)	0.78	0.35	0.00	0.80	0.72	0.72	0.42	0.00	0.00	0.03	0.00	0.00
Avail Cap(c_a), veh/h	158	2061	642	287	1556	813	808	0	754	827	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.9	13.0	0.0	27.3	14.1	14.1	20.9	0.0	0.0	18.4	0.0	0.0
Incr Delay (d2), s/veh	11.5	0.5	0.0	5.4	3.0	5.6	0.5	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	2.9	0.0	2.9	8.2	9.2	2.9	0.0	0.0	0.2	0.0	0.0
LnGrp Delay(d),s/veh	40.4	13.4	0.0	32.7	17.1	19.7	21.3	0.0	0.0	18.5	0.0	0.0
LnGrp LOS	D	B		C	B	B	C			B		
Approach Vol, veh/h		809			1827			192			15	
Approach Delay, s/veh		16.5			19.2			21.3			18.5	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.4	31.7		19.9	8.6	34.5		19.9
Change Period (Y+Rc), s	4.4	6.2		4.9	4.4	6.2		4.9
Max Green Setting (Gmax), s	10.2	24.3		30.0	5.6	28.9		30.0
Max Q Clear Time (g_c+I1), s	7.4	8.1		2.4	5.2	18.6		8.9
Green Ext Time (p_c), s	0.0	15.9		1.1	0.0	9.7		1.0

Intersection Summary		
HCM 2010 Ctrl Delay		18.6
HCM 2010 LOS		B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	240		240	260		260	200		0	210		210
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	1.00	1.00	0.97	0.95	0.95
Ped Bike Factor	1.00					0.99	1.00		0.98	1.00	0.99	0.99
Frt			0.850			0.850			0.850		0.870	0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	3433	5085	1583	3433	1863	1583	3433	1521	1504
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1769	5085	1583	3433	5085	1563	3428	1863	1559	3422	1521	1484
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106			62			178		104	119
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		1172			1541			740			798	
Travel Time (s)		16.0			21.0			20.2			21.8	

Intersection Summary	
Area Type:	Other



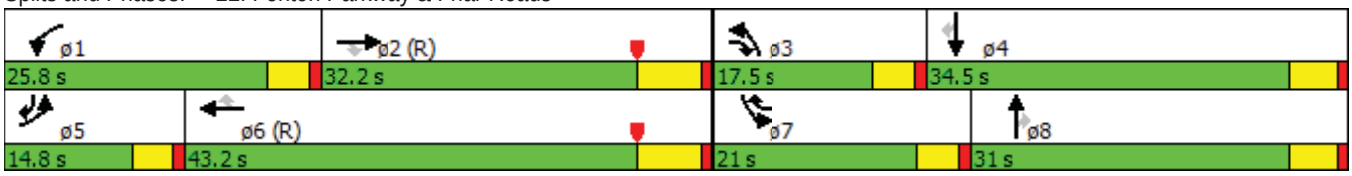
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	32	590	39	169	1419	12	82	8	164	65	13	179
Confl. Peds. (#/hr)	1					1	2		4	4		2
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.93	0.93	0.93	0.92	0.92	0.92	0.81	0.81	0.81
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	36	670	44	182	1526	13	89	9	178	80	16	221
Shared Lane Traffic (%)												47%
Lane Group Flow (vph)	36	670	44	182	1526	13	89	9	178	80	120	117

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	590	39	169	1419	12	82	8	164	65	13	179
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	4.0	10.0	4.0	4.0	10.0	4.0	4.0	7.0	7.0	4.0	7.0	4.0
Minimum Split (s)	8.4	40.2	8.4	8.4	37.2	8.4	8.4	43.9	43.9	8.4	46.9	8.4
Total Split (s)	14.8	32.2	17.5	25.8	43.2	21.0	17.5	31.0	31.0	21.0	34.5	14.8
Total Split (%)	13.5%	29.3%	15.9%	23.5%	39.3%	19.1%	15.9%	28.2%	28.2%	19.1%	31.4%	13.5%
Yellow Time (s)	3.4	5.2	3.4	3.4	5.2	3.4	3.4	3.9	3.9	3.4	3.9	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	6.2	4.4	4.4	6.2	4.4	4.4	4.9	4.9	4.4	4.9	4.4
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	6.7	59.3	72.8	10.2	62.8	71.6	7.3	15.4	15.4	7.0	15.2	22.4
Actuated g/C Ratio	0.06	0.54	0.66	0.09	0.57	0.65	0.07	0.14	0.14	0.06	0.14	0.20
v/c Ratio	0.33	0.24	0.04	0.57	0.53	0.01	0.39	0.03	0.48	0.37	0.40	0.29
Control Delay	57.1	16.6	0.1	43.3	25.8	3.4	53.9	34.9	9.5	53.7	13.4	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	16.6	0.1	43.3	25.8	3.4	53.9	34.9	9.5	53.7	13.4	6.1
LOS	E	B	A	D	C	A	D	C	A	D	B	A
Approach Delay		17.5			27.5			24.7			20.9	
Approach LOS		B			C			C			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 46 (42%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization 55.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 22: Fenton Parkway & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	590	39	169	1419	12	82	8	164	65	13	179
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	36	670	0	182	1526	0	89	9	31	80	0	84
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	0	2
Peak Hour Factor	0.88	0.88	0.88	0.93	0.93	0.93	0.92	0.92	0.92	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	3222	1069	250	3461	1137	142	140	117	133	0	304
Arrive On Green	0.03	0.63	0.00	0.02	0.22	0.00	0.04	0.08	0.08	0.04	0.00	0.07
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1558	3548	0	3113
Grp Volume(v), veh/h	36	670	0	182	1526	0	89	9	31	80	0	84
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1558	1774	0	1557
Q Serve(g_s), s	2.2	6.1	0.0	5.8	28.4	0.0	2.8	0.5	2.1	2.4	0.0	2.8
Cycle Q Clear(g_c), s	2.2	6.1	0.0	5.8	28.4	0.0	2.8	0.5	2.1	2.4	0.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	46	3222	1069	250	3461	1137	142	140	117	133	0	304
V/C Ratio(X)	0.79	0.21	0.00	0.73	0.44	0.00	0.62	0.06	0.26	0.60	0.00	0.28
Avail Cap(c_a), veh/h	168	3222	1069	670	3461	1137	410	442	370	535	0	919
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.00	0.90	0.90	0.00	0.99	0.99	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.3	8.5	0.0	52.6	24.6	0.0	51.9	47.3	48.0	52.1	0.0	46.1
Incr Delay (d2), s/veh	10.2	0.1	0.0	1.4	0.4	0.0	1.7	0.5	3.1	1.6	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.9	0.0	2.8	13.5	0.0	1.4	0.3	1.0	1.2	0.0	1.3
LnGrp Delay(d),s/veh	63.5	8.6	0.0	54.0	25.0	0.0	53.5	47.8	51.1	53.7	0.0	48.3
LnGrp LOS	E	A		D	C		D	D	D	D		D
Approach Vol, veh/h		706			1708			129			164	
Approach Delay, s/veh		11.4			28.1			52.5			51.0	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	75.9	9.0	12.8	7.2	81.1	8.5	13.2
Change Period (Y+Rc), s	4.4	6.2	4.4	4.9	4.4	6.2	4.4	4.9
Max Green Setting (Gmax), s	21.4	26.0	13.1	29.6	10.4	37.0	16.6	26.1
Max Q Clear Time (g_c+I1), s	7.8	8.1	4.8	4.8	4.2	30.4	4.4	4.1
Green Ext Time (p_c), s	0.2	17.1	0.1	1.4	0.0	6.4	0.1	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		300	260		260	180		0	190		300
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor			0.99	1.00			0.99					0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	3433	5085	1583	3433	1863	1583	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1563	3431	5085	1583	3384	1863	1583	3433	1863	1556
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			150			62			97			163
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		1541			1521			578			725	
Travel Time (s)		21.0			20.7			15.8			19.8	

Intersection Summary	
Area Type:	Other



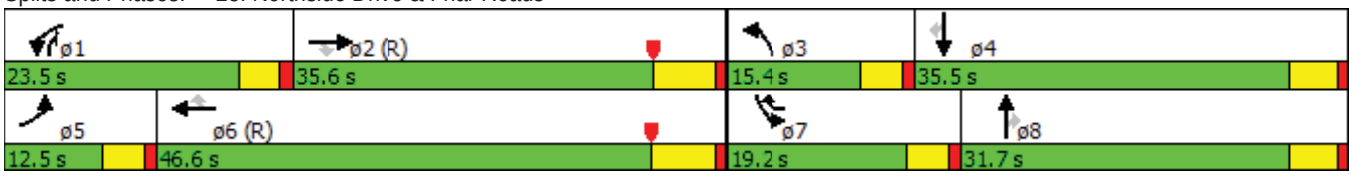
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	25	669	127	447	1276	39	93	9	237	121	27	143
Confl. Peds. (#/hr)			1	1			5					5
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.97	0.97	0.97	0.81	0.81	0.81	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	28	743	141	461	1315	40	115	11	293	138	31	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	743	141	461	1315	40	115	11	293	138	31	162

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	669	127	447	1276	39	93	9	237	121	27	143
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	4.0	4.0	7.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	35.0	35.0	8.4	33.2	8.4	8.4	41.9	8.4	8.4	20.9	20.9
Total Split (s)	12.5	35.6	35.6	23.5	46.6	19.2	15.4	31.7	23.5	19.2	35.5	35.5
Total Split (%)	11.4%	32.4%	32.4%	21.4%	42.4%	17.5%	14.0%	28.8%	21.4%	17.5%	32.3%	32.3%
Yellow Time (s)	3.4	5.0	5.0	3.4	5.2	3.4	3.4	3.9	3.4	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	6.0	6.0	4.4	6.2	4.4	4.4	4.9	4.4	4.4	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	5.4	48.4	48.4	18.1	64.6	90.7	8.1	13.5	28.6	18.2	15.6	15.6
Actuated g/C Ratio	0.05	0.44	0.44	0.16	0.59	0.82	0.07	0.12	0.26	0.17	0.14	0.14
v/c Ratio	0.17	0.33	0.18	0.81	0.44	0.03	0.46	0.05	0.61	0.24	0.12	0.45
Control Delay	39.2	26.2	13.1	56.5	15.7	1.4	54.3	37.4	26.4	43.2	38.6	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	26.2	13.1	56.5	15.7	1.4	54.3	37.4	26.4	43.2	38.6	9.5
LOS	D	C	B	E	B	A	D	D	C	D	D	A
Approach Delay		24.5			25.7			34.4			26.2	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 100 (91%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 26.5	Intersection LOS: C
Intersection Capacity Utilization 59.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 23: Northside Drive & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	669	127	447	1276	39	93	9	237	121	27	143
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	28	743	19	461	1315	0	115	11	176	138	31	26
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.90	0.90	0.90	0.97	0.97	0.97	0.81	0.81	0.81	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	2406	749	523	3073	1048	173	253	454	199	268	225
Arrive On Green	0.01	0.16	0.16	0.15	0.60	0.00	0.05	0.14	0.14	0.06	0.14	0.14
Sat Flow, veh/h	3442	5085	1582	3442	5085	1583	3442	1863	1566	3442	1863	1567
Grp Volume(v), veh/h	28	743	19	461	1315	0	115	11	176	138	31	26
Grp Sat Flow(s),veh/h/ln	1721	1695	1582	1721	1695	1583	1721	1863	1566	1721	1863	1567
Q Serve(g_s), s	0.9	14.2	1.1	14.4	15.2	0.0	3.6	0.6	9.9	4.3	1.6	1.6
Cycle Q Clear(g_c), s	0.9	14.2	1.1	14.4	15.2	0.0	3.6	0.6	9.9	4.3	1.6	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	2406	749	523	3073	1048	173	253	454	199	268	225
V/C Ratio(X)	0.39	0.31	0.03	0.88	0.43	0.00	0.67	0.04	0.39	0.69	0.12	0.12
Avail Cap(c_a), veh/h	253	2406	749	598	3073	1048	344	454	622	463	518	436
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	0.00	0.84	0.84	0.84	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	30.5	24.9	45.7	11.6	0.0	51.3	41.3	31.4	50.8	41.0	41.0
Incr Delay (d2), s/veh	1.2	0.3	0.1	12.1	0.4	0.0	1.4	0.2	1.3	1.6	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.8	0.5	7.7	7.2	0.0	1.8	0.3	4.4	2.1	0.9	0.8
LnGrp Delay(d),s/veh	55.1	30.8	25.0	57.8	12.1	0.0	52.7	41.5	32.7	52.5	41.9	42.0
LnGrp LOS	E	C	C	E	B		D	D	C	D	D	D
Approach Vol, veh/h		790			1776			302			195	
Approach Delay, s/veh		31.5			23.9			40.7			49.4	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.1	58.2	9.9	20.7	6.7	72.7	10.8	19.9
Change Period (Y+Rc), s	4.4	* 6.2	4.4	4.9	4.4	6.2	4.4	4.9
Max Green Setting (Gmax), s	19.1	* 30	11.0	30.6	8.1	40.4	14.8	26.8
Max Q Clear Time (g_c+I1), s	16.4	16.2	5.6	3.6	2.9	17.2	6.3	11.9
Green Ext Time (p_c), s	0.3	12.4	0.1	2.8	0.0	20.6	0.1	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	29.2
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt						0.850						0.850
Flt Protected					0.953		0.950					
Satd. Flow (prot)	0	0	0	0	1775	1583	1770	3539	0	0	3539	1583
Flt Permitted					0.953		0.950					
Satd. Flow (perm)	0	0	0	0	1775	1583	1770	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						389						218
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		872			777			546			762	
Travel Time (s)		19.8			17.7			12.4			17.3	

Intersection Summary	
Area Type:	Other



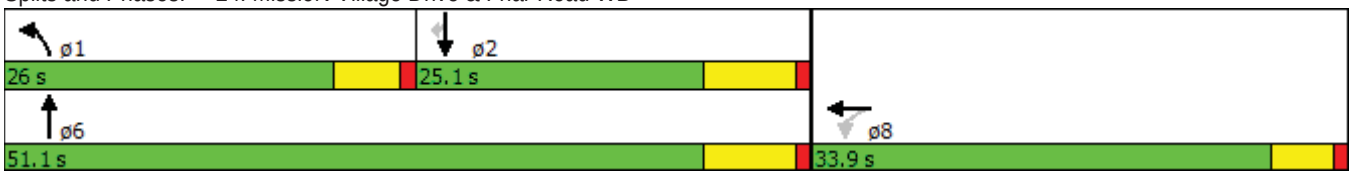
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	62	1	311	236	552	0	0	378	203
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.25	0.25	0.25	0.80	0.80	0.80	0.83	0.83	0.83	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	78	1	389	284	665	0	0	406	218
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	79	389	284	665	0	0	406	218

Intersection Summary

Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	1	311	236	552	378	203
Turn Type	NA	Free	Prot	NA	NA	Perm
Protected Phases	8		1	6	2	
Permitted Phases		Free				2
Detector Phase	8		1	6	2	2
Switch Phase						
Minimum Initial (s)	4.0		6.0	10.0	10.0	10.0
Minimum Split (s)	33.9		23.3	25.0	25.0	25.0
Total Split (s)	33.9		26.0	51.1	25.1	25.1
Total Split (%)	39.9%		30.6%	60.1%	29.5%	29.5%
Yellow Time (s)	3.9		4.3	6.0	6.0	6.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9		5.3	7.0	7.0	7.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	Min	Min	Min
Act Effct Green (s)	7.1	45.6	12.7	35.5	13.0	13.0
Actuated g/C Ratio	0.16	1.00	0.28	0.78	0.29	0.29
v/c Ratio	0.29	0.25	0.58	0.24	0.40	0.36
Control Delay	23.7	0.4	21.1	3.7	17.1	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	0.4	21.1	3.7	17.1	5.3
LOS	C	A	C	A	B	A
Approach Delay	4.3			8.9	13.0	
Approach LOS	A			A	B	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 45.6	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 24: MissioN Village Drive & Friar Road WB



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	62	1	311	236	552	0	0	378	203
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				78	1	0	284	665	0	0	406	35
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.80	0.80	0.80	0.83	0.83	0.83	0.93	0.93	0.93
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				102	1	92	358	2282	0	0	1101	492
Arrive On Green				0.06	0.06	0.00	0.20	0.64	0.00	0.00	0.31	0.31
Sat Flow, veh/h				1753	22	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				79	0	0	284	665	0	0	406	35
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				1.8	0.0	0.0	6.1	3.3	0.0	0.0	3.6	0.6
Cycle Q Clear(g_c), s				1.8	0.0	0.0	6.1	3.3	0.0	0.0	3.6	0.6
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				104	0	92	358	2282	0	0	1101	492
V/C Ratio(X)				0.76	0.00	0.00	0.79	0.29	0.00	0.00	0.37	0.07
Avail Cap(c_a), veh/h				1284	0	1145	916	3892	0	0	1598	715
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.6	0.0	0.0	15.2	3.1	0.0	0.0	10.8	9.7
Incr Delay (d2), s/veh				4.3	0.0	0.0	1.5	0.1	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.0	0.0	0.0	3.1	1.6	0.0	0.0	1.8	0.3
LnGrp Delay(d),s/veh				22.9	0.0	0.0	16.7	3.2	0.0	0.0	11.0	9.8
LnGrp LOS				C			B	A			B	A
Approach Vol, veh/h					79			949			441	
Approach Delay, s/veh					22.9			7.3			10.9	
Approach LOS					C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.4	19.5				32.9		7.2
Change Period (Y+Rc), s	5.3	7.0				7.0		4.9
Max Green Setting (Gmax), s	20.7	18.1				44.1		29.0
Max Q Clear Time (g_c+I1), s	8.1	5.6				5.3		3.8
Green Ext Time (p_c), s	0.3	6.9				12.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	9.2
HCM 2010 LOS	A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Ped Bike Factor									0.98	1.00		
Frt			0.850						0.850			
Flt Protected		0.950								0.950		
Satd. Flow (prot)	0	1770	1583	0	0	0	0	1863	1583	1770	3539	0
Flt Permitted		0.950								0.950		
Satd. Flow (perm)	0	1770	1583	0	0	0	0	1863	1547	1768	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			127						97			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		731			746			159			546	
Travel Time (s)		16.6			17.0			3.6			12.4	

Intersection Summary	
Area Type:	Other



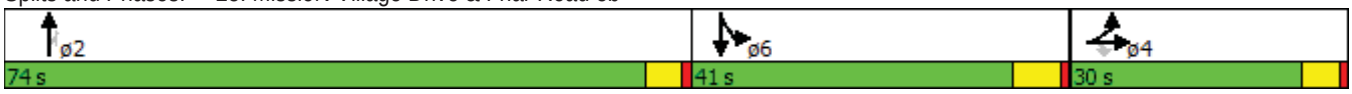
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	156	0	89	0	0	0	0	625	117	277	168	0
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.70	0.70	0.70	0.25	0.25	0.25	0.87	0.87	0.87	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	223	0	127	0	0	0	0	718	134	322	195	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	223	127	0	0	0	0	718	134	322	195	0

Intersection Summary

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	89	625	117	277	168
Turn Type	NA	Perm	NA	Perm	Split	NA
Protected Phases	4		2		6	6
Permitted Phases		4		2		
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.2	21.2	27.9	27.9	23.2	23.2
Total Split (s)	30.0	30.0	74.0	74.0	41.0	41.0
Total Split (%)	20.7%	20.7%	51.0%	51.0%	28.3%	28.3%
Yellow Time (s)	4.2	4.2	3.9	3.9	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.2	5.2	4.9	4.9	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	Min	Min
Act Effct Green (s)	21.0	21.0	69.5	69.5	28.9	28.9
Actuated g/C Ratio	0.15	0.15	0.51	0.51	0.21	0.21
v/c Ratio	0.82	0.36	0.75	0.16	0.86	0.26
Control Delay	79.3	11.2	34.6	7.3	73.2	45.4
Queue Delay	0.0	0.0	53.7	3.1	0.0	0.0
Total Delay	79.3	11.2	88.2	10.4	73.2	45.4
LOS	E	B	F	B	E	D
Approach Delay	54.6		76.0			62.8
Approach LOS	D		E			E

Intersection Summary	
Cycle Length: 145	
Actuated Cycle Length: 135.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 67.7	Intersection LOS: E
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 25: MissioN Village Drive & Friar Road eb



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	156	0	89	0	0	0	0	625	117	277	168	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	223	0	0				0	718	59	322	195	0
Adj No. of Lanes	0	1	1				0	1	1	1	2	0
Peak Hour Factor	0.70	0.70	0.70				0.87	0.87	0.87	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	254	0	227				0	984	835	362	722	0
Arrive On Green	0.14	0.00	0.00				0.00	0.53	0.53	0.20	0.20	0.00
Sat Flow, veh/h	1774	0	1583				0	1863	1582	1774	3632	0
Grp Volume(v), veh/h	223	0	0				0	718	59	322	195	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1863	1582	1774	1770	0
Q Serve(g_s), s	16.1	0.0	0.0				0.0	38.7	2.4	23.1	6.1	0.0
Cycle Q Clear(g_c), s	16.1	0.0	0.0				0.0	38.7	2.4	23.1	6.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	254	0	227				0	984	835	362	722	0
V/C Ratio(X)	0.88	0.00	0.00				0.00	0.73	0.07	0.89	0.27	0.00
Avail Cap(c_a), veh/h	336	0	300				0	984	835	472	941	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.9	0.0	0.0				0.0	23.7	15.1	50.6	43.9	0.0
Incr Delay (d2), s/veh	18.0	0.0	0.0				0.0	4.8	0.2	15.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	0.0	0.0				0.0	21.0	1.1	12.9	3.0	0.0
LnGrp Delay(d),s/veh	72.9	0.0	0.0				0.0	28.5	15.3	66.0	44.1	0.0
LnGrp LOS	E							C	B	E	D	
Approach Vol, veh/h		223						777			517	
Approach Delay, s/veh		72.9						27.5			57.7	
Approach LOS		E						C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		74.0		24.0		32.9		
Change Period (Y+Rc), s		4.9		5.2		6.2		
Max Green Setting (Gmax), s		69.1		24.8		34.8		
Max Q Clear Time (g_c+I1), s		40.7		18.1		25.1		
Green Ext Time (p_c), s		5.9		0.6		1.6		

Intersection Summary	
HCM 2010 Ctrl Delay	44.5
HCM 2010 LOS	D



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	600		600
Storage Lanes	1		1	1		1	0		0	2		1
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	0.97	1.00	0.88
Ped Bike Factor												
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	0	0	0	3433	0	2787
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	0	0	0	3433	0	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			274			310						81
Link Speed (mph)		50			50			45			45	
Link Distance (ft)		760			1297			422			768	
Travel Time (s)		10.4			17.7			6.4			11.6	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	217	541	219	314	1484	467	0	0	0	655	0	555
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.95	0.95	0.95	0.25	0.25	0.25	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	271	676	274	331	1562	492	0	0	0	712	0	603
Shared Lane Traffic (%)												
Lane Group Flow (vph)	271	676	274	331	1562	492	0	0	0	712	0	603

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR
Lane Configurations								
Volume (vph)	217	541	219	314	1484	467	655	555
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	pm+ov
Protected Phases	5	2		1	6		4	5
Permitted Phases			2			Free		4
Detector Phase	5	2	2	1	6		4	5
Switch Phase								
Minimum Initial (s)	5.0	14.0	14.0	5.0	13.0		5.0	5.0
Minimum Split (s)	9.7	21.0	21.0	9.2	20.0		10.1	9.7
Total Split (s)	23.0	44.0	44.0	33.0	54.0		33.0	23.0
Total Split (%)	20.9%	40.0%	40.0%	30.0%	49.1%		30.0%	20.9%
Yellow Time (s)	3.2	5.0	5.0	3.2	5.0		3.6	3.2
All-Red Time (s)	1.5	2.0	2.0	1.0	2.0		1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.2	7.0		5.1	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag			Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None
Act Effct Green (s)	19.9	44.8	44.8	23.4	47.8	110.0	25.5	50.5
Actuated g/C Ratio	0.18	0.41	0.41	0.21	0.43	1.00	0.23	0.46
v/c Ratio	0.85	0.33	0.34	0.88	0.71	0.31	0.89	0.46
Control Delay	67.7	24.2	4.4	57.1	23.0	0.4	55.5	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.7	24.2	4.4	57.1	23.0	0.4	55.5	18.2
LOS	E	C	A	E	C	A	E	B
Approach Delay		29.4			23.1			
Approach LOS		C			C			

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 12 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 28.8 — Intersection LOS: C
Intersection Capacity Utilization 72.5% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 26: I-15 SB Ramps & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	217	541	219	314	1484	467	0	0	0	655	0	555
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	271	676	49	331	1562	0				712	0	516
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.80	0.80	0.80	0.95	0.95	0.95				0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2				2	0	2
Cap, veh/h	295	2151	670	360	2315	721				777	0	1092
Arrive On Green	0.17	0.42	0.42	0.14	0.31	0.00				0.23	0.00	0.23
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3442	0	2787
Grp Volume(v), veh/h	271	676	49	331	1562	0				712	0	516
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1721	0	1393
Q Serve(g_s), s	16.5	9.7	2.0	20.3	29.6	0.0				22.2	0.0	15.2
Cycle Q Clear(g_c), s	16.5	9.7	2.0	20.3	29.6	0.0				22.2	0.0	15.2
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	295	2151	670	360	2315	721				777	0	1092
V/C Ratio(X)	0.92	0.31	0.07	0.92	0.67	0.00				0.92	0.00	0.47
Avail Cap(c_a), veh/h	295	2151	670	464	2315	721				873	0	1170
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.58	0.58	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	45.1	21.1	18.9	46.6	31.1	0.0				41.6	0.0	25.0
Incr Delay (d2), s/veh	31.4	0.4	0.2	11.6	0.9	0.0				12.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	4.6	0.9	11.1	14.1	0.0				11.9	0.0	12.6
LnGrp Delay(d),s/veh	76.5	21.5	19.1	58.2	32.0	0.0				54.2	0.0	25.1
LnGrp LOS	E	C	B	E	C					D		C
Approach Vol, veh/h		996			1893						1228	
Approach Delay, s/veh		36.3			36.6						42.0	
Approach LOS		D			D						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	26.5	53.5		29.9	23.0	57.1		
Change Period (Y+Rc), s	* 4.2	7.0		5.1	* 4.7	7.0		
Max Green Setting (Gmax), s	* 29	37.0		27.9	* 18	47.0		
Max Q Clear Time (g_c+I1), s	22.3	11.7		24.2	18.5	31.6		
Green Ext Time (p_c), s	0.1	11.7		0.6	0.0	9.0		

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	520		0	0		0	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	25			0			0			0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.979	0.850						
Flt Protected	0.950											
Satd. Flow (prot)	1770	5085	0	0	4705	1362	0	0	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1770	5085	0	0	4705	1362	0	0	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					51	215						
Link Speed (mph)		50			50			30			30	
Link Distance (ft)		1297			893			951			840	
Travel Time (s)		17.7			12.2			21.6			19.1	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	330	862	0	0	1920	969	0	0	0	0	0	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.91	0.91	0.91	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	344	898	0	0	2065	1042	0	0	0	0	0	0
Shared Lane Traffic (%)						33%						
Lane Group Flow (vph)	344	898	0	0	2409	698	0	0	0	0	0	0

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR
Lane Configurations				
Volume (vph)	330	862	1920	969
Turn Type	Prot	NA	NA	Perm
Protected Phases	5	2	6	
Permitted Phases				6
Detector Phase	5	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	2.0	14.0	14.0
Minimum Split (s)	9.5	6.0	20.0	20.0
Total Split (s)	35.0	110.0	75.0	75.0
Total Split (%)	31.8%	100.0%	68.2%	68.2%
Yellow Time (s)	3.5	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes
Recall Mode	None	C-Min	C-Min	C-Min
Act Effct Green (s)	25.0	110.0	74.5	74.5
Actuated g/C Ratio	0.23	1.00	0.68	0.68
v/c Ratio	0.86	0.18	0.75	0.70
Control Delay	58.9	0.1	8.7	7.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	58.9	0.1	8.7	7.2
LOS	E	A	A	A
Approach Delay		16.4	8.4	
Approach LOS		B	A	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 64 (58%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 10.7	Intersection LOS: B
Intersection Capacity Utilization 70.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 27: I-15 NB Ramps & Friar Roads



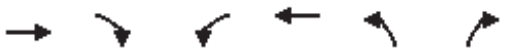
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	330	862	0	0	1920	969	0	0	0	0	0	0
Number	5	2	12	1	6	16						
Initial Q (Qb), veh	0	0	0	0	0	0						
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00						
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00						
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863						
Adj Flow Rate, veh/h	344	898	0	0	2065	0						
Adj No. of Lanes	1	3	0	0	3	1						
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93						
Percent Heavy Veh, %	2	2	0	0	2	2						
Cap, veh/h	367	4808	0	0	3899	1105						
Arrive On Green	0.41	1.00	0.00	0.00	1.00	0.00						
Sat Flow, veh/h	1774	5253	0	0	5588	1583						
Grp Volume(v), veh/h	344	898	0	0	2065	0						
Grp Sat Flow(s),veh/h/ln	1774	1695	0	0	1863	1583						
Q Serve(g_s), s	20.4	0.0	0.0	0.0	0.0	0.0						
Cycle Q Clear(g_c), s	20.4	0.0	0.0	0.0	0.0	0.0						
Prop In Lane	1.00		0.00	0.00		1.00						
Lane Grp Cap(c), veh/h	367	4808	0	0	3899	1105						
V/C Ratio(X)	0.94	0.19	0.00	0.00	0.53	0.00						
Avail Cap(c_a), veh/h	492	4900	0	0	3899	1105						
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	2.00						
Upstream Filter(I)	0.75	0.75	0.00	0.00	0.70	0.00						
Uniform Delay (d), s/veh	31.6	0.0	0.0	0.0	0.0	0.0						
Incr Delay (d2), s/veh	15.8	0.1	0.0	0.0	0.4	0.0						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	11.5	0.0	0.0	0.0	0.1	0.0						
LnGrp Delay(d),s/veh	47.4	0.1	0.0	0.0	0.4	0.0						
LnGrp LOS	D	A			A							
Approach Vol, veh/h		1242			2065							
Approach Delay, s/veh		13.2			0.4							
Approach LOS		B			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		110.0			27.3	82.7		
Change Period (Y+Rc), s		* 6			4.5	6.0		
Max Green Setting (Gmax), s		* 1.1E2			30.5	69.0		
Max Q Clear Time (g_c+I1), s		2.0			22.4	2.0		
Green Ext Time (p_c), s		22.1			0.3	21.0		

Intersection Summary	
HCM 2010 Ctrl Delay	5.2
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		400	160		160	0
Storage Lanes		1	1		2	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	1.00	1.00	0.86	0.97	0.91
Ped Bike Factor					1.00	0.99
Frt		0.850			0.999	0.850
Flt Protected			0.950		0.953	
Satd. Flow (prot)	5085	1583	1770	6408	3440	1441
Flt Permitted			0.950		0.953	
Satd. Flow (perm)	5085	1583	1770	6408	3440	1422
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		267			1	56
Link Speed (mph)	50			50	45	
Link Distance (ft)	893			357	577	
Travel Time (s)	12.2			4.9	8.7	

Intersection Summary	
Area Type:	Other



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	976	248	86	2367	539	50
Confl. Peds. (#/hr)						1
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.90	0.90	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1049	267	96	2630	674	62
Shared Lane Traffic (%)						10%
Lane Group Flow (vph)	1049	267	96	2630	680	56

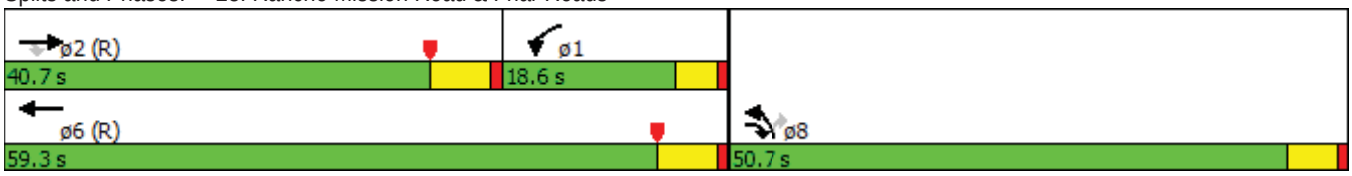
Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	976	248	86	2367	539	50
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0	4.0	4.0	10.0	4.0	4.0
Minimum Split (s)	34.8	37.1	8.4	22.0	37.1	37.1
Total Split (s)	40.7	50.7	18.6	59.3	50.7	50.7
Total Split (%)	37.0%	46.1%	16.9%	53.9%	46.1%	46.1%
Yellow Time (s)	4.8	4.1	3.4	5.0	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.1	4.4	6.0	5.1	5.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min	None	None	C-Min	None	None
Act Effct Green (s)	56.9	89.7	10.8	71.9	27.0	27.0
Actuated g/C Ratio	0.52	0.82	0.10	0.65	0.25	0.25
v/c Ratio	0.40	0.20	0.55	0.63	0.81	0.14
Control Delay	13.2	0.4	58.6	12.6	46.7	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	0.4	58.6	12.6	46.7	8.6
LOS	B	A	E	B	D	A
Approach Delay	10.6			14.2	43.8	
Approach LOS	B			B	D	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 14 (13%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 17.8 — Intersection LOS: B
Intersection Capacity Utilization 59.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 28: Rancho Mission Road & Friar Roads



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	976	248	86	2367	539	50
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1049	100	96	2630	674	18
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.93	0.93	0.90	0.90	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1359	762	648	4390	759	339
Arrive On Green	0.36	0.36	0.37	0.69	0.21	0.21
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	1049	100	96	2630	674	18
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	20.2	3.5	4.0	24.1	20.3	1.0
Cycle Q Clear(g_c), s	20.2	3.5	4.0	24.1	20.3	1.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1359	762	648	4390	759	339
V/C Ratio(X)	0.77	0.13	0.15	0.60	0.89	0.05
Avail Cap(c_a), veh/h	1613	841	648	4390	1471	656
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	13.8	23.4	9.3	41.9	34.4
Incr Delay (d2), s/veh	4.3	0.4	0.0	0.6	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	2.2	2.0	10.8	10.1	0.4
LnGrp Delay(d),s/veh	36.7	14.2	23.5	9.9	43.4	34.4
LnGrp LOS	D	B	C	A	D	C
Approach Vol, veh/h	1149			2726	692	
Approach Delay, s/veh	34.8			10.3	43.2	
Approach LOS	C			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	46.2	35.2				81.4		28.6
Change Period (Y+Rc), s	6.0	* 5.8				6.0		5.1
Max Green Setting (Gmax), s	14.2	* 35				53.3		45.6
Max Q Clear Time (g_c+I1), s	6.0	22.2				26.1		22.3
Green Ext Time (p_c), s	8.1	7.2				26.2		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	200			190	200	0
Storage Lanes	2			0	2	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	0.91	0.86	0.86	0.97	1.00
Ped Bike Factor						
Frt			0.997			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	5085	6389	0	3433	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	5085	6389	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			3			1
Link Speed (mph)		50	50		25	
Link Distance (ft)		828	1698		1636	
Travel Time (s)		11.3	23.2		44.6	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	107	914	2205	39	42	197
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.94	0.94	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	115	983	2346	41	48	226
Shared Lane Traffic (%)						
Lane Group Flow (vph)	115	983	2387	0	48	226

Intersection Summary

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Volume (vph)	107	914	2205	42	197
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	5	2	6	4	5
Permitted Phases					4
Detector Phase	5	2	6	4	5
Switch Phase					
Minimum Initial (s)	4.0	10.0	10.0	4.0	4.0
Minimum Split (s)	8.4	16.5	31.8	41.4	8.4
Total Split (s)	20.0	79.4	59.4	40.6	20.0
Total Split (%)	16.7%	66.2%	49.5%	33.8%	16.7%
Yellow Time (s)	3.4	5.5	4.8	3.4	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	6.5	5.8	4.4	4.4
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	16.6	106.1	84.4	6.1	25.4
Actuated g/C Ratio	0.14	0.88	0.70	0.05	0.21
v/c Ratio	0.24	0.22	0.53	0.27	0.67
Control Delay	46.2	1.5	9.8	58.3	52.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	1.5	9.8	58.3	52.3
LOS	D	A	A	E	D
Approach Delay		6.2	9.8	53.3	
Approach LOS		A	A	D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 63 (53%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 11.9 — Intersection LOS: B
Intersection Capacity Utilization 53.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 29: Friar Roads & Santo Road





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	107	914	2205	39	42	197
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	115	983	2346	41	48	226
Adj No. of Lanes	2	3	4	0	2	1
Peak Hour Factor	0.93	0.93	0.94	0.94	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	170	3844	4378	76	527	321
Arrive On Green	0.05	0.76	0.67	0.67	0.15	0.15
Sat Flow, veh/h	3442	5253	6795	114	3442	1583
Grp Volume(v), veh/h	115	983	1725	662	48	226
Grp Sat Flow(s),veh/h/ln	1721	1695	1602	1843	1721	1583
Q Serve(g_s), s	3.9	7.0	22.2	22.2	1.4	15.9
Cycle Q Clear(g_c), s	3.9	7.0	22.2	22.2	1.4	15.9
Prop In Lane	1.00			0.06	1.00	1.00
Lane Grp Cap(c), veh/h	170	3844	3220	1234	527	321
V/C Ratio(X)	0.68	0.26	0.54	0.54	0.09	0.70
Avail Cap(c_a), veh/h	447	3844	3220	1234	1038	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.47	0.47	1.00	1.00
Uniform Delay (d), s/veh	56.1	4.4	10.2	10.2	43.6	44.5
Incr Delay (d2), s/veh	1.8	0.2	0.3	0.8	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.3	9.8	11.5	0.7	13.6
LnGrp Delay(d),s/veh	57.9	4.6	10.5	11.0	43.7	45.6
LnGrp LOS	E	A	B	B	D	D
Approach Vol, veh/h		1098	2387		274	
Approach Delay, s/veh		10.2	10.6		45.2	
Approach LOS		B	B		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		97.2		22.8	10.3	86.9		
Change Period (Y+Rc), s		6.5		4.4	4.4	* 6.5		
Max Green Setting (Gmax), s		72.9		36.2	15.6	* 54		
Max Q Clear Time (g_c+I1), s		9.0		17.9	5.9	24.2		
Green Ext Time (p_c), s		52.6		0.5	0.1	26.7		

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	220		315	190		0	150		0	130		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00				1.00		1.00	0.99		1.00	0.99	
Frt			0.850		0.998			0.936			0.931	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	5073	0	1770	1733	0	1770	1723	0
Flt Permitted	0.950			0.950			0.234			0.696		
Satd. Flow (perm)	1769	5085	1583	1770	5073	0	435	1733	0	1293	1723	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			260		2			39			45	
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		1698			655			1012			895	
Travel Time (s)		23.2			8.9			27.6			24.4	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	94	584	237	176	1956	31	104	42	31	17	151	129
Confl. Peds. (#/hr)	2					2	2		3	3		2
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.97	0.97	0.97	0.78	0.78	0.78	0.79	0.79	0.79
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	103	642	260	181	2016	32	133	54	40	22	191	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	642	260	181	2048	0	133	94	0	22	354	0

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	94	584	237	176	1956	104	42	17	151
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	28.7	28.7	8.4	28.9	39.9	39.9	39.9	39.9
Total Split (s)	23.5	45.3	45.3	17.5	39.3	42.0	42.0	42.2	42.2
Total Split (%)	22.4%	43.1%	43.1%	16.7%	37.4%	40.0%	40.0%	40.2%	40.2%
Yellow Time (s)	3.4	4.7	4.7	3.4	4.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.7	5.7	4.4	5.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
Act Effct Green (s)	10.5	50.2	50.2	14.5	54.0	25.4	25.4	25.4	25.4
Actuated g/C Ratio	0.10	0.48	0.48	0.14	0.51	0.24	0.24	0.24	0.24
v/c Ratio	0.59	0.26	0.29	0.74	0.79	1.27	0.21	0.07	0.79
Control Delay	57.8	18.4	3.7	62.6	25.9	211.8	18.2	27.1	44.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	18.4	3.7	62.6	25.9	211.8	18.2	27.1	44.1
LOS	E	B	A	E	C	F	B	C	D
Approach Delay		18.6			28.9		131.6		43.1
Approach LOS		B			C		F		D

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 10 (10%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay: 33.7	Intersection LOS: C
Intersection Capacity Utilization 83.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 30: Riverdale Street & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	94	584	237	176	1956	31	104	42	31	17	151	129
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	103	642	84	181	2016	32	133	54	8	22	191	125
Adj No. of Lanes	1	3	1	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.97	0.97	0.97	0.78	0.78	0.78	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	2180	677	211	2446	39	232	488	72	446	324	212
Arrive On Green	0.07	0.43	0.43	0.12	0.47	0.47	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1774	5085	1580	1774	5157	82	1058	1586	235	1331	1051	688
Grp Volume(v), veh/h	103	642	84	181	1325	723	133	0	62	22	0	316
Grp Sat Flow(s),veh/h/ln	1774	1695	1580	1774	1695	1848	1058	0	1820	1331	0	1739
Q Serve(g_s), s	6.0	8.7	3.4	10.5	35.4	35.5	12.8	0.0	2.6	1.3	0.0	16.1
Cycle Q Clear(g_c), s	6.0	8.7	3.4	10.5	35.4	35.5	28.9	0.0	2.6	3.8	0.0	16.1
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.13	1.00		0.40
Lane Grp Cap(c), veh/h	130	2180	677	211	1608	877	232	0	560	446	0	535
V/C Ratio(X)	0.79	0.29	0.12	0.86	0.82	0.82	0.57	0.00	0.11	0.05	0.00	0.59
Avail Cap(c_a), veh/h	323	2180	677	221	1608	877	280	0	643	509	0	618
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.59	0.59	0.59	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.9	19.6	18.1	45.4	23.8	23.8	43.0	0.0	26.0	27.4	0.0	30.7
Incr Delay (d2), s/veh	4.1	0.3	0.4	16.3	3.0	5.4	0.8	0.0	0.0	0.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	4.1	1.5	6.1	17.0	19.4	3.8	0.0	1.3	0.5	0.0	7.8
LnGrp Delay(d),s/veh	51.9	20.0	18.5	61.7	26.8	29.2	43.8	0.0	26.1	27.4	0.0	31.2
LnGrp LOS	D	B	B	E	C	C	D		C	C		C
Approach Vol, veh/h		829			2229			195			338	
Approach Delay, s/veh		23.8			30.4			38.2			31.0	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.9	50.9		37.2	12.1	55.7		37.2
Change Period (Y+Rc), s	4.4	* 5.9		4.9	4.4	5.9		4.9
Max Green Setting (Gmax), s	13.1	* 40		37.3	19.1	33.4		37.1
Max Q Clear Time (g_c+I1), s	12.5	10.7		18.1	8.0	37.5		30.9
Green Ext Time (p_c), s	0.0	22.7		2.0	0.1	0.0		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	29.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		90	190		140	0
Storage Lanes		1	1		1	2
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	1.00	0.97	1.00	1.00	0.88
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	5085	1583	3433	0	1770	2787
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	5085	1583	3433	0	1770	2787
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		99				272
Link Speed (mph)	50			50	45	
Link Distance (ft)	655			989	1463	
Travel Time (s)	8.9			13.5	22.2	

Intersection Summary	
Area Type:	Other



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	502	132	395	0	161	242
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.97	0.97	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	564	148	407	0	181	272
Shared Lane Traffic (%)						
Lane Group Flow (vph)	564	148	407	0	181	272

Intersection Summary

Lane Group	EBT	EBR	WBL	NBL	NBR
Lane Configurations					
Volume (vph)	502	132	395	161	242
Turn Type	NA	Free	Prot	Prot	pm+ov
Protected Phases	2		1	3	1
Permitted Phases		Free			3
Detector Phase	2		1	3	1
Switch Phase					
Minimum Initial (s)	10.0		4.0	4.0	4.0
Minimum Split (s)	30.8		8.4	8.4	8.4
Total Split (s)	75.4		19.6	25.0	19.6
Total Split (%)	62.8%		16.3%	20.8%	16.3%
Yellow Time (s)	4.8		3.4	3.4	3.4
All-Red Time (s)	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.8		4.4	4.4	4.4
Lead/Lag	Lead		Lag		Lag
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	C-Min		None	None	None
Act Effct Green (s)	69.1	120.0	19.7	16.6	40.7
Actuated g/C Ratio	0.58	1.00	0.16	0.14	0.34
v/c Ratio	0.19	0.09	0.72	0.74	0.24
Control Delay	13.3	0.1	55.2	67.3	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.3	0.1	55.2	67.3	3.2
LOS	B	A	E	E	A
Approach Delay	10.5			28.8	
Approach LOS	B			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 47 (39%), Referenced to phase 2:EBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 27.4	Intersection LOS: C
Intersection Capacity Utilization 41.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 31: Mission Gorge Road & Friar Roads



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	502	132	395	0	161	242
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	564	0	407	0	181	0
Adj No. of Lanes	3	1	2	0	1	2
Peak Hour Factor	0.89	0.89	0.97	0.97	0.89	0.89
Percent Heavy Veh, %	2	2	2	0	2	2
Cap, veh/h	800	249	2076	0	209	2009
Arrive On Green	0.16	0.00	0.60	0.00	0.12	0.00
Sat Flow, veh/h	5253	1583	3442	407	1774	2787
Grp Volume(v), veh/h	564	0	407	10.7	181	0
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	B	1774	1393
Q Serve(g_s), s	12.6	0.0	6.4		12.0	0.0
Cycle Q Clear(g_c), s	12.6	0.0	6.4		12.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	800	249	2076		209	2009
V/C Ratio(X)	0.70	0.00	0.20		0.87	0.00
Avail Cap(c_a), veh/h	2949	918	2076		305	2160
HCM Platoon Ratio	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	0.98	0.00	1.00		1.00	0.00
Uniform Delay (d), s/veh	47.9	0.0	10.7		52.0	0.0
Incr Delay (d2), s/veh	5.0	0.0	0.0		11.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.0	3.0		6.6	0.0
LnGrp Delay(d),s/veh	53.0	0.0	10.7		63.9	0.0
LnGrp LOS	D		B		E	
Approach Vol, veh/h	564				181	
Approach Delay, s/veh	53.0				63.9	
Approach LOS	D				E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2						8
Phs Duration (G+Y+Rc), s	76.8	24.7						18.5
Change Period (Y+Rc), s	4.4	5.8						4.4
Max Green Setting (Gmax), s	15.2	69.6						20.6
Max Q Clear Time (g_c+I1), s	8.4	14.6						14.0
Green Ext Time (p_c), s	0.5	4.3						0.1

Intersection Summary	
HCM 2010 Ctrl Delay	39.8
HCM 2010 LOS	D



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	0		200	120		0	120		0
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.99		1.00		1.00					0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.954			0.954		0.950			0.950		
Satd. Flow (prot)	0	1777	1583	0	1777	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.704			0.714		0.950			0.950		
Satd. Flow (perm)	0	1311	1560	0	1327	1583	1768	3539	1583	1770	3539	1549
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			145			145			87			76
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		371			388			1038			247	
Travel Time (s)		8.4			8.8			17.7			4.2	

Intersection Summary	
Area Type:	Other



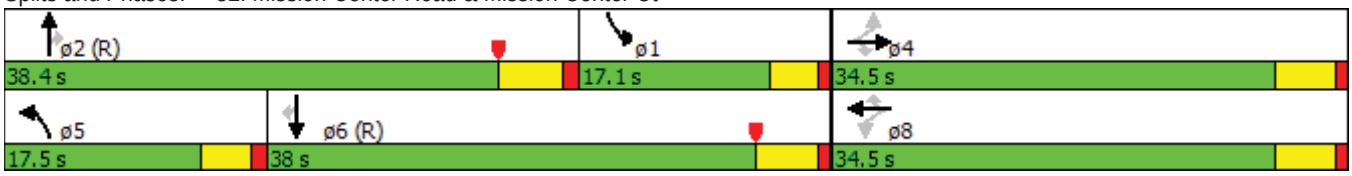
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	23	1	14	74	3	89	52	368	23	46	356	38
Confl. Peds. (#/hr)			3	3			1					1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	27	1	16	76	3	92	57	404	25	49	379	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	16	0	79	92	57	404	25	49	379	40

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1	14	74	3	89	52	368	23	46	356	38
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	33.9	33.9	33.9	33.9	33.9	33.9	8.4	23.3	23.3	8.4	28.3	28.3
Total Split (s)	34.5	34.5	34.5	34.5	34.5	34.5	17.5	38.4	38.4	17.1	38.0	38.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	38.3%	19.4%	42.7%	42.7%	19.0%	42.2%	42.2%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.9	3.4	4.3	4.3	3.4	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.9	4.9		4.9	4.9	4.4	5.3	5.3	4.4	5.3	5.3
Lead/Lag							Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		11.9	11.9		12.5	12.5	7.3	59.5	59.5	10.2	60.4	60.4
Actuated g/C Ratio		0.13	0.13		0.14	0.14	0.08	0.66	0.66	0.11	0.67	0.67
v/c Ratio		0.16	0.05		0.43	0.27	0.40	0.17	0.02	0.24	0.16	0.04
Control Delay		31.8	0.3		39.6	3.0	46.6	10.7	0.0	33.3	6.9	0.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay		31.8	0.3		39.6	3.0	46.6	10.7	0.0	33.3	7.0	0.8
LOS		C	A		D	A	D	B	A	C	A	A
Approach Delay		20.3			19.9			14.4			9.3	
Approach LOS		C			B			B			A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 79 (88%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 45.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 32: Mission Center Road & Mission Center Ct



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	1	14	74	3	89	52	368	23	46	356	38
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	27	1	0	76	3	0	57	404	0	49	379	0
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.86	0.86	0.86	0.97	0.97	0.97	0.91	0.91	0.91	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	6	120	186	4	120	73	547	245	1060	2551	1141
Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.00	0.04	0.15	0.00	1.00	1.00	0.00
Sat Flow, veh/h	1571	78	1583	1421	56	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	28	0	0	79	0	0	57	404	0	49	379	0
Grp Sat Flow(s),veh/h/ln	1649	0	1583	1478	0	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	0.0	3.3	0.0	0.0	2.9	9.8	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.3	0.0	0.0	4.6	0.0	0.0	2.9	9.8	0.0	0.0	0.0	0.0
Prop In Lane	0.96		1.00	0.96		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	0	120	190	0	120	73	547	245	1060	2551	1141
V/C Ratio(X)	0.14	0.00	0.00	0.41	0.00	0.00	0.78	0.74	0.00	0.05	0.15	0.00
Avail Cap(c_a), veh/h	560	0	521	547	0	521	258	1302	582	1060	2551	1141
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.96	0.96	0.00	0.97	0.97	0.00
Uniform Delay (d), s/veh	39.1	0.0	0.0	40.5	0.0	0.0	42.7	36.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.5	0.0	0.0	6.3	8.4	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	1.9	0.0	0.0	1.5	5.4	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	39.2	0.0	0.0	41.0	0.0	0.0	49.0	44.7	0.0	0.0	0.1	0.0
LnGrp LOS	D			D			D	D		A	A	
Approach Vol, veh/h		28			79			461			428	
Approach Delay, s/veh		39.2			41.0			45.2			0.1	
Approach LOS		D			D			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	59.1	19.2		11.7	8.1	70.2		11.7
Change Period (Y+Rc), s	5.3	* 5.3		4.9	4.4	5.3		4.9
Max Green Setting (Gmax), s	12.7	* 33		29.6	13.1	32.7		29.6
Max Q Clear Time (g_c+I1), s	2.0	11.8		3.3	4.9	2.0		6.6
Green Ext Time (p_c), s	2.2	2.0		0.3	0.0	3.4		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		120	120		160	335		200	180		200
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor	0.99		0.98	0.99		0.98			0.98	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1583	3433	3539	1583	3433	5085	1583	3433	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3412	1863	1551	3407	3539	1554	3433	5085	1547	3427	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			119			634			121
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1364			1297			1368			785	
Travel Time (s)		23.3			22.1			20.7			11.9	

Intersection Summary	
Area Type:	Other



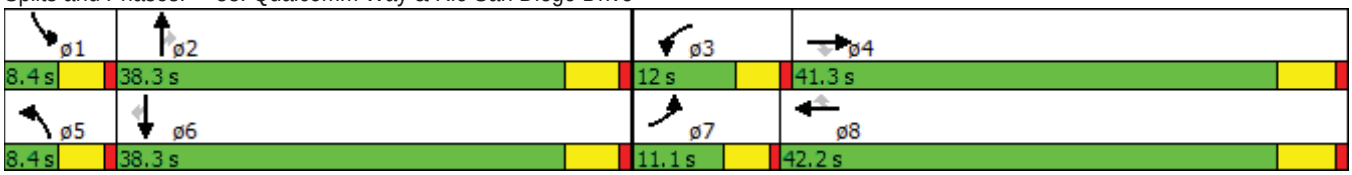
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	85	57	88	189	39	76	59	428	558	50	199	50
Confl. Peds. (#/hr)	8		10	10		8			2	2		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	99	66	102	212	44	85	67	486	634	54	216	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	99	66	102	212	44	85	67	486	634	54	216	54

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	57	88	189	39	76	59	428	558	50	199	50
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	8.4	41.3	41.3	8.4	41.3	41.3	8.4	36.1	36.1	8.4	38.0	38.0
Total Split (s)	11.1	41.3	41.3	12.0	42.2	42.2	8.4	38.3	38.3	8.4	38.3	38.3
Total Split (%)	11.1%	41.3%	41.3%	12.0%	42.2%	42.2%	8.4%	38.3%	38.3%	8.4%	38.3%	38.3%
Yellow Time (s)	3.4	4.3	4.3	3.4	4.3	4.3	3.4	4.1	4.1	3.4	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.3	5.3	4.4	5.3	5.3	4.4	5.1	5.1	4.4	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	6.7	11.1	11.1	8.4	12.3	12.3	4.9	15.1	15.1	4.9	15.2	15.2
Actuated g/C Ratio	0.13	0.21	0.21	0.16	0.23	0.23	0.09	0.29	0.29	0.09	0.29	0.29
v/c Ratio	0.23	0.17	0.24	0.38	0.05	0.19	0.21	0.33	0.71	0.17	0.15	0.10
Control Delay	30.2	20.5	5.1	29.7	18.2	3.0	33.0	17.8	7.1	33.0	17.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	20.5	5.1	29.7	18.2	3.0	33.0	17.8	7.1	33.0	17.4	0.4
LOS	C	C	A	C	B	A	C	B	A	C	B	A
Approach Delay		18.2			21.6			13.0			17.2	
Approach LOS		B			C			B			B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 52.6	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 33: Qualcomm Way & Rio San Diego Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	85	57	88	189	39	76	59	428	558	50	199	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	99	66	15	212	44	1	67	486	151	54	216	0
Adj No. of Lanes	2	1	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.86	0.86	0.86	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	194	160	343	493	216	176	1560	484	152	1524	474
Arrive On Green	0.06	0.10	0.10	0.10	0.14	0.14	0.05	0.31	0.31	0.04	0.30	0.00
Sat Flow, veh/h	3442	1863	1538	3442	3539	1549	3442	5085	1578	3442	5085	1583
Grp Volume(v), veh/h	99	66	15	212	44	1	67	486	151	54	216	0
Grp Sat Flow(s),veh/h/ln	1721	1863	1538	1721	1770	1549	1721	1695	1578	1721	1695	1583
Q Serve(g_s), s	1.2	1.4	0.4	2.5	0.5	0.0	0.8	3.2	3.2	0.7	1.3	0.0
Cycle Q Clear(g_c), s	1.2	1.4	0.4	2.5	0.5	0.0	0.8	3.2	3.2	0.7	1.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	194	160	343	493	216	176	1560	484	152	1524	474
V/C Ratio(X)	0.45	0.34	0.09	0.62	0.09	0.00	0.38	0.31	0.31	0.36	0.14	0.00
Avail Cap(c_a), veh/h	535	1556	1284	607	3030	1326	319	3917	1216	319	3929	1223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.4	17.9	17.5	18.6	16.2	16.0	19.8	11.5	11.5	20.0	11.0	0.0
Incr Delay (d2), s/veh	0.5	1.0	0.3	0.7	0.1	0.0	0.5	0.2	0.5	0.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.8	0.2	1.2	0.2	0.0	0.4	1.5	1.4	0.3	0.6	0.0
LnGrp Delay(d),s/veh	19.9	19.0	17.7	19.3	16.2	16.0	20.3	11.6	12.0	20.5	11.1	0.0
LnGrp LOS	B	B	B	B	B	B	C	B	B	C	B	
Approach Vol, veh/h		180			257			704			270	
Approach Delay, s/veh		19.4			18.8			12.5			13.0	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	18.3	8.7	9.8	6.6	18.0	7.2	11.3
Change Period (Y+Rc), s	4.4	5.1	4.4	5.3	4.4	* 5.1	4.4	5.3
Max Green Setting (Gmax), s	4.0	33.2	7.6	36.0	4.0	* 33	6.7	36.9
Max Q Clear Time (g_c+I1), s	2.7	5.2	4.5	3.4	2.8	3.3	3.2	2.5
Green Ext Time (p_c), s	0.0	7.8	0.1	0.6	0.0	8.0	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		200	110		200	0		200	0		200
Storage Lanes	1		1	1		1	0		1	0		1
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950							0.958	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	0	1863	1583	0	1785	1583
Flt Permitted	0.950			0.950							0.958	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	0	1863	1583	0	1785	1583
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1618			1168			369			844	
Travel Time (s)		27.6			19.9			10.1			23.0	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	86	57	4	7	134	60	0	4	1	17	2	145
Confl. Peds. (#/hr)	7		3	3		7			3	3		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.89	0.89	0.89	0.31	0.31	0.31	0.79	0.79	0.79
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	104	69	5	8	151	67	0	13	3	22	3	184
Shared Lane Traffic (%)												
Lane Group Flow (vph)	104	69	5	8	151	67	0	13	3	0	25	184

Intersection Summary

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	86	57	4	0	7	134	60	0	0	4	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.92	0.89	0.89	0.89	0.31	0.31	0.31	0.31
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	104	69	5	0	8	151	67	0	0	13	3
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	3
HCM Control Delay	9.7	9.4	8.8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	0%	100%	0%	0%	89%	0%
Vol Thru, %	100%	0%	0%	100%	0%	0%	100%	0%	11%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	1	86	57	4	7	134	60	19	145
LT Vol	0	0	86	0	0	7	0	0	17	0
Through Vol	4	0	0	57	0	0	134	0	2	0
RT Vol	0	1	0	0	4	0	0	60	0	145
Lane Flow Rate	13	3	104	69	5	8	151	67	24	184
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.022	0.005	0.176	0.107	0.007	0.013	0.232	0.091	0.041	0.253
Departure Headway (Hd)	6.136	5.434	6.109	5.606	4.901	6.05	5.547	4.843	6.102	4.956
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	587	663	582	633	721	587	641	732	583	718
Service Time	3.836	3.134	3.899	3.396	2.691	3.833	3.33	2.625	3.876	2.73
HCM Lane V/C Ratio	0.022	0.005	0.179	0.109	0.007	0.014	0.236	0.092	0.041	0.256
HCM Control Delay	9	8.2	10.2	9.1	7.7	8.9	10	8.1	9.1	9.4
HCM Lane LOS	A	A	B	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0	0.6	0.4	0	0	0.9	0.3	0.1	1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	17	2	145
Peak Hour Factor	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	22	3	184
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	9.4
HCM LOS	A

Lane



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		0	0		0	160		200	300		200
Storage Lanes	1		1	0		0	1		1	2		1
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	0.99	1.00	0.99		0.99		0.99		0.95	0.98		0.97
Frt			0.850		0.946				0.850			0.850
Flt Protected	0.950	0.996					0.950			0.950		
Satd. Flow (prot)	1681	1763	1583	0	3322	0	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950	0.996					0.950			0.950		
Satd. Flow (perm)	1671	1762	1561	0	3322	0	1748	3539	1507	3348	3539	1532
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			116		65				114			134
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1168			1523			533			740	
Travel Time (s)		19.9			26.0			14.5			20.2	

Intersection Summary	
Area Type:	Other



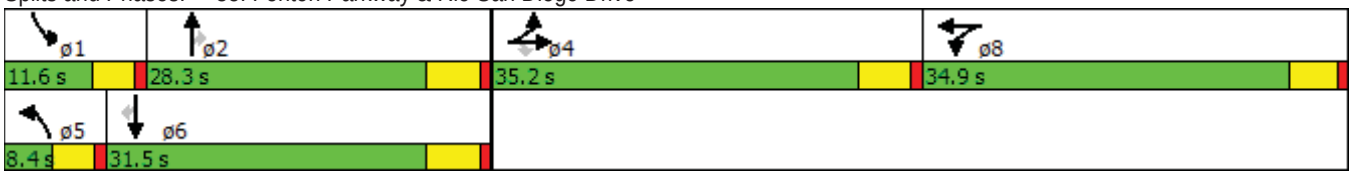
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	69	79	21	1	103	59	12	80	2	92	36	118
Confl. Peds. (#/hr)	7		2	2		7	6		12	12		6
Confl. Bikes (#/hr)						2						
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.76	0.76	0.76	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	80	92	24	1	113	65	16	105	3	105	41	134
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	72	100	24	0	179	0	16	105	3	105	41	134

Intersection Summary

Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	69	79	21	103	12	80	2	92	36	118
Turn Type	Split	NA	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	5	2		1	6	
Permitted Phases			4				2			6
Detector Phase	4	4	4	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	7.0	7.0	4.0	7.0	7.0
Minimum Split (s)	35.2	35.2	35.2	34.9	8.4	28.3	28.3	8.4	31.4	31.4
Total Split (s)	35.2	35.2	35.2	34.9	8.4	28.3	28.3	11.6	31.5	31.5
Total Split (%)	32.0%	32.0%	32.0%	31.7%	7.6%	25.7%	25.7%	10.5%	28.6%	28.6%
Yellow Time (s)	4.2	4.2	4.2	3.9	3.4	4.3	4.3	3.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.2	5.2	5.2	4.9	4.4	5.3	5.3	4.4	5.4	5.4
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	10.7	10.7	10.7	9.5	4.8	15.5	15.5	6.9	23.0	23.0
Actuated g/C Ratio	0.18	0.18	0.18	0.16	0.08	0.27	0.27	0.12	0.39	0.39
v/c Ratio	0.23	0.31	0.06	0.30	0.11	0.11	0.01	0.26	0.03	0.20
Control Delay	26.0	26.8	0.3	17.8	38.6	23.9	0.0	33.2	19.0	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	26.8	0.3	17.8	38.6	23.9	0.0	33.2	19.0	6.1
LOS	C	C	A	B	D	C	A	C	B	A
Approach Delay		23.3		17.8		25.2			18.2	
Approach LOS		C		B		C			B	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 58.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.31	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 39.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 35: Fenton Parkway & Rio San Diego Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	69	79	21	1	103	59	12	80	2	92	36	118
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	80	92	0	1	113	16	16	105	0	105	41	20
Adj No. of Lanes	1	1	1	0	2	0	1	2	1	2	2	1
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.76	0.76	0.76	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	218	185	3	324	47	29	723	323	239	911	398
Arrive On Green	0.12	0.12	0.00	0.10	0.10	0.10	0.02	0.20	0.00	0.07	0.26	0.26
Sat Flow, veh/h	1774	1863	1583	27	3137	458	1774	3539	1583	3442	3539	1546
Grp Volume(v), veh/h	80	92	0	69	0	61	16	105	0	105	41	20
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1861	0	1762	1774	1770	1583	1721	1770	1546
Q Serve(g_s), s	1.6	1.8	0.0	1.3	0.0	1.3	0.4	1.0	0.0	1.2	0.3	0.4
Cycle Q Clear(g_c), s	1.6	1.8	0.0	1.3	0.0	1.3	0.4	1.0	0.0	1.2	0.3	0.4
Prop In Lane	1.00		1.00	0.01		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	218	185	192	0	182	29	723	323	239	911	398
V/C Ratio(X)	0.39	0.42	0.00	0.36	0.00	0.34	0.55	0.15	0.00	0.44	0.05	0.05
Avail Cap(c_a), veh/h	1353	1421	1208	1420	0	1344	180	2070	926	630	2349	1026
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	16.1	0.0	16.4	0.0	16.4	19.2	12.8	0.0	17.6	11.0	11.0
Incr Delay (d2), s/veh	0.7	0.8	0.0	0.4	0.0	0.4	6.0	0.4	0.0	0.5	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.0	0.0	0.7	0.0	0.6	0.2	0.5	0.0	0.6	0.2	0.2
LnGrp Delay(d),s/veh	16.8	16.9	0.0	16.8	0.0	16.8	25.2	13.3	0.0	18.0	11.1	11.2
LnGrp LOS	B	B		B		B	C	B		B	B	B
Approach Vol, veh/h		172			130			121			166	
Approach Delay, s/veh		16.9			16.8			14.8			15.5	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.1	13.4		9.8	5.0	15.5		9.0
Change Period (Y+Rc), s	4.4	* 5.4		5.2	4.4	5.4		4.9
Max Green Setting (Gmax), s	7.2	* 23		30.0	4.0	26.1		30.0
Max Q Clear Time (g_c+I1), s	3.2	3.0		3.8	2.4	2.4		3.3
Green Ext Time (p_c), s	0.1	2.5		0.4	0.0	2.7		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		200	70		200	100		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00				0.99	1.00					0.99
Frt		0.993				0.850			0.850			0.850
Flt Protected	0.950	0.974					0.950			0.950		
Satd. Flow (prot)	1681	1712	0	0	1863	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.950	0.974					0.950			0.950		
Satd. Flow (perm)	1679	1710	0	0	1863	1563	1765	3539	1583	1770	1863	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				148			148			63
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1523			649			624			578	
Travel Time (s)		26.0			11.1			17.0			15.8	

Intersection Summary	
Area Type:	Other



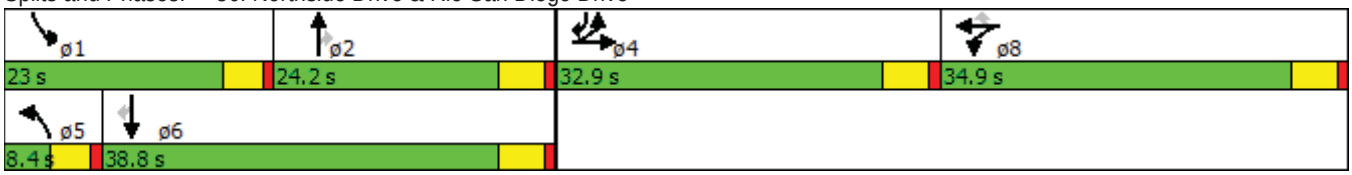
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	247	67	7	0	3	15	2	52	5	336	86	58
Confl. Peds. (#/hr)	1					1	2					2
Confl. Bikes (#/hr)												
Peak Hour Factor	0.66	0.66	0.66	0.41	0.41	0.41	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	374	102	11	0	7	37	2	57	5	365	93	63
Shared Lane Traffic (%)	35%											
Lane Group Flow (vph)	243	244	0	0	7	37	2	57	5	365	93	63

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	247	67	3	15	2	52	5	336	86	58
Turn Type	Split	NA	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	4	4	8		5	2		1	6	4
Permitted Phases				8			2			6
Detector Phase	4	4	8	8	5	2	2	1	6	4
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	7.0	7.0	4.0	7.0	4.0
Minimum Split (s)	32.9	32.9	34.9	34.9	8.4	22.9	22.9	8.4	26.9	32.9
Total Split (s)	32.9	32.9	34.9	34.9	8.4	24.2	24.2	23.0	38.8	32.9
Total Split (%)	28.6%	28.6%	30.3%	30.3%	7.3%	21.0%	21.0%	20.0%	33.7%	28.6%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.4	3.9	3.9	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	4.9	4.4	4.9	4.9	4.4	4.9	4.9
Lead/Lag					Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	Min	Min	None	Min	None
Act Effct Green (s)	14.4	14.4	8.2	8.2	4.4	8.8	8.8	20.4	32.9	47.3
Actuated g/C Ratio	0.21	0.21	0.12	0.12	0.07	0.13	0.13	0.30	0.49	0.70
v/c Ratio	0.68	0.67	0.03	0.12	0.02	0.12	0.01	0.68	0.10	0.06
Control Delay	37.0	36.0	29.3	0.7	41.5	32.5	0.0	34.4	17.7	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	36.0	29.3	0.7	41.5	32.5	0.0	34.4	17.7	2.4
LOS	D	D	C	A	D	C	A	C	B	A
Approach Delay		36.5	5.3			30.2			27.5	
Approach LOS		D	A			C			C	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 67.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 30.7	Intersection LOS: C
Intersection Capacity Utilization 48.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 36: Northside Drive & Rio San Diego Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	247	67	7	0	3	15	2	52	5	336	86	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	244	285	11	0	7	0	2	57	0	365	93	9
Adj No. of Lanes	1	1	0	0	1	1	1	2	1	1	1	1
Peak Hour Factor	0.66	0.66	0.66	0.41	0.41	0.41	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	385	386	15	0	22	18	4	509	228	430	715	951
Arrive On Green	0.22	0.22	0.22	0.00	0.01	0.00	0.00	0.14	0.00	0.24	0.38	0.38
Sat Flow, veh/h	1774	1782	69	0	1863	1583	1774	3539	1583	1774	1863	1581
Grp Volume(v), veh/h	244	0	296	0	7	0	2	57	0	365	93	9
Grp Sat Flow(s),veh/h/ln	1774	0	1850	0	1863	1583	1774	1770	1583	1774	1863	1581
Q Serve(g_s), s	6.2	0.0	7.4	0.0	0.2	0.0	0.1	0.7	0.0	9.7	1.6	0.1
Cycle Q Clear(g_c), s	6.2	0.0	7.4	0.0	0.2	0.0	0.1	0.7	0.0	9.7	1.6	0.1
Prop In Lane	1.00		0.04	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	0	401	0	22	18	4	509	228	430	715	951
V/C Ratio(X)	0.63	0.00	0.74	0.00	0.32	0.00	0.51	0.11	0.00	0.85	0.13	0.01
Avail Cap(c_a), veh/h	1002	0	1045	0	1127	958	143	1378	616	666	1274	1424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	18.1	0.0	24.3	0.0	24.7	18.5	0.0	17.9	9.9	4.0
Incr Delay (d2), s/veh	0.6	0.0	1.0	0.0	3.2	0.0	34.0	0.0	0.0	3.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	3.9	0.0	0.1	0.0	0.1	0.3	0.0	5.2	0.9	0.1
LnGrp Delay(d),s/veh	18.3	0.0	19.1	0.0	27.5	0.0	58.7	18.5	0.0	21.7	10.1	4.0
LnGrp LOS	B		B		C		E	B		C	B	A
Approach Vol, veh/h		540			7			59			467	
Approach Delay, s/veh		18.7			27.5			19.9			19.0	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.4	12.0		15.7	4.5	23.9		5.5
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	18.6	19.3		28.0	4.0	33.9		30.0
Max Q Clear Time (g_c+I1), s	11.7	2.7		9.4	2.1	3.6		2.2
Green Ext Time (p_c), s	0.4	1.1		1.2	0.0	1.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	80		0	200		200	70		0	120		120
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		1.00		0.97	0.99		0.98	0.99		0.98
Frt		0.921				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3231	0	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1762	3231	0	1763	3539	1539	1759	1863	1551	1758	1863	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		108				177			121			121
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2011			1623			1851			555	
Travel Time (s)		39.2			31.6			28.0			8.4	

Intersection Summary	
Area Type:	Other



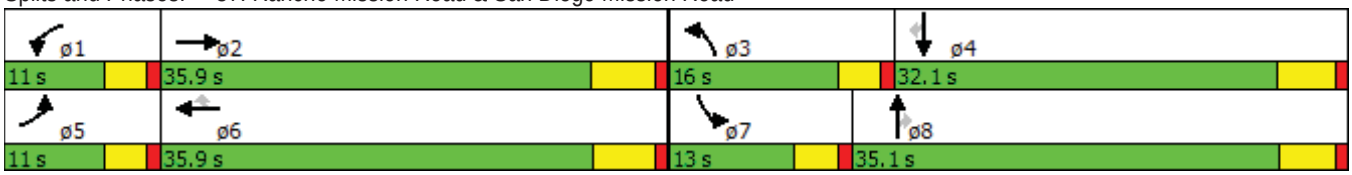
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	41	71	80	155	381	149	243	170	48	88	158	74
Confl. Peds. (#/hr)	4		5	5		4	8		9	9		8
Confl. Bikes (#/hr)												
Peak Hour Factor	0.74	0.74	0.74	0.84	0.84	0.84	0.81	0.81	0.81	0.74	0.74	0.74
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	55	96	108	185	454	177	300	210	59	119	214	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	204	0	185	454	177	300	210	59	119	214	100

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	41	71	155	381	149	243	170	48	88	158	74
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	4.0	7.0	4.0	7.0	7.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	34.5	8.0	29.3	29.3	8.0	33.9	33.9	8.0	32.1	32.1
Total Split (s)	11.0	35.9	11.0	35.9	35.9	16.0	35.1	35.1	13.0	32.1	32.1
Total Split (%)	11.6%	37.8%	11.6%	37.8%	37.8%	16.8%	36.9%	36.9%	13.7%	33.8%	33.8%
Yellow Time (s)	3.0	4.5	3.0	4.3	4.3	3.0	3.9	3.9	3.0	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.5	4.0	5.3	5.3	4.0	4.9	4.9	4.0	5.1	5.1
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	6.2	13.8	7.3	19.6	19.6	12.5	20.2	20.2	8.3	13.2	13.2
Actuated g/C Ratio	0.09	0.21	0.11	0.30	0.30	0.19	0.30	0.30	0.13	0.20	0.20
v/c Ratio	0.33	0.27	0.95	0.43	0.31	0.90	0.37	0.11	0.54	0.58	0.25
Control Delay	38.9	11.9	90.2	22.3	5.6	62.1	23.3	0.4	41.9	31.3	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	11.9	90.2	22.3	5.6	62.1	23.3	0.4	41.9	31.3	5.3
LOS	D	B	F	C	A	E	C	A	D	C	A
Approach Delay		17.6		34.1			41.4			28.2	
Approach LOS		B		C			D			C	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 66.3	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 32.8	Intersection LOS: C
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 37: Rancho Mission Road & San Diego Mission Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	71	80	155	381	149	243	170	48	88	158	74
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	55	96	7	185	454	34	300	210	0	119	214	0
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.74	0.74	0.74	0.84	0.84	0.84	0.81	0.81	0.81	0.74	0.74	0.74
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	595	43	216	916	406	350	542	461	153	335	285
Arrive On Green	0.04	0.18	0.18	0.12	0.26	0.26	0.20	0.29	0.00	0.09	0.18	0.00
Sat Flow, veh/h	1774	3346	241	1774	3539	1568	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	55	50	53	185	454	34	300	210	0	119	214	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1818	1774	1770	1568	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.8	1.4	1.4	5.9	6.3	0.9	9.4	5.2	0.0	3.8	6.1	0.0
Cycle Q Clear(g_c), s	1.8	1.4	1.4	5.9	6.3	0.9	9.4	5.2	0.0	3.8	6.1	0.0
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	315	323	216	916	406	350	542	461	153	335	285
V/C Ratio(X)	0.76	0.16	0.16	0.86	0.50	0.08	0.86	0.39	0.00	0.78	0.64	0.00
Avail Cap(c_a), veh/h	216	936	961	216	1884	835	370	978	832	278	875	744
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.3	20.0	20.0	24.8	18.1	16.1	22.3	16.3	0.0	25.7	21.8	0.0
Incr Delay (d2), s/veh	6.1	0.4	0.4	26.1	0.7	0.1	16.1	0.2	0.0	3.2	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.7	0.7	4.4	3.1	0.4	6.2	2.7	0.0	2.0	3.2	0.0
LnGrp Delay(d),s/veh	33.4	20.4	20.4	50.8	18.8	16.3	38.4	16.5	0.0	29.0	22.6	0.0
LnGrp LOS	C	C	C	D	B	B	D	B		C	C	
Approach Vol, veh/h		158			673			510			333	
Approach Delay, s/veh		24.9			27.5			29.4			24.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	15.7	15.3	15.4	6.3	20.4	8.9	21.8
Change Period (Y+Rc), s	4.0	5.5	4.0	5.1	4.0	* 5.5	4.0	* 5.1
Max Green Setting (Gmax), s	7.0	30.4	12.0	27.0	7.0	* 31	9.0	* 30
Max Q Clear Time (g_c+I1), s	7.9	3.4	11.4	8.1	3.8	8.3	5.8	7.2
Green Ext Time (p_c), s	0.0	6.0	0.0	1.3	0.0	5.6	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	27.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	230		0	0		200	200		200	240		0
Storage Lanes	1		1	0		1	2		1	1		0
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor			0.97		0.99		1.00		0.95	0.99	1.00	
Frt			0.850			0.850			0.850		0.984	
Flt Protected	0.950	0.968			0.958		0.950			0.950		
Satd. Flow (prot)	1681	1713	1583	0	1785	1583	3433	3539	1583	1770	4994	0
Flt Permitted	0.950	0.968			0.958		0.950			0.950		
Satd. Flow (perm)	1681	1713	1540	0	1762	1583	3419	3539	1511	1750	4994	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			198			112			98		21	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		471			685			996			1038	
Travel Time (s)		12.8			18.7			17.0			17.7	

Intersection Summary	
Area Type:	Other



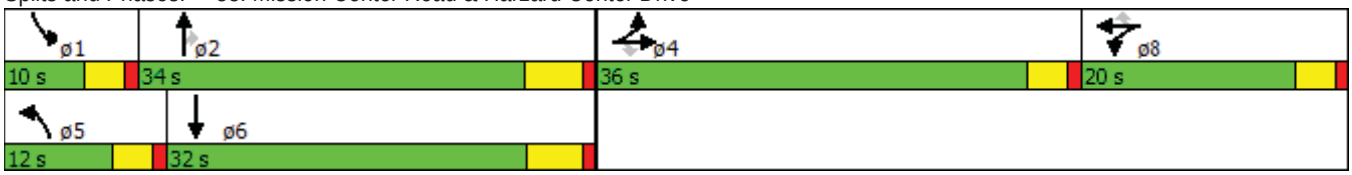
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	41	8	166	15	2	3	249	504	66	32	418	51
Confl. Peds. (#/hr)			16	16			5		10	10		5
Confl. Bikes (#/hr)			1						2			1
Peak Hour Factor	0.84	0.84	0.84	0.71	0.71	0.71	0.93	0.93	0.93	0.78	0.78	0.78
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	49	10	198	21	3	4	268	542	71	41	536	65
Shared Lane Traffic (%)	40%											
Lane Group Flow (vph)	29	30	198	0	24	4	268	542	71	41	601	0

Intersection Summary

Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	41	8	166	2	3	249	504	66	32	418
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		8		5	2		1	6
Permitted Phases			4		8			2		
Detector Phase	4	4	4	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	10.0	10.0	4.0	10.0
Minimum Split (s)	36.0	36.0	36.0	20.0	20.0	8.0	26.3	26.3	8.0	31.2
Total Split (s)	36.0	36.0	36.0	20.0	20.0	12.0	34.0	34.0	10.0	32.0
Total Split (%)	36.0%	36.0%	36.0%	20.0%	20.0%	12.0%	34.0%	34.0%	10.0%	32.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.3	4.3	3.0	4.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.3	5.3	4.0	5.2
Lead/Lag						Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	10.6	10.6	10.6	5.9	5.9	9.0	25.6	25.6	5.9	15.2
Actuated g/C Ratio	0.20	0.20	0.20	0.11	0.11	0.17	0.48	0.48	0.11	0.29
v/c Ratio	0.09	0.09	0.42	0.12	0.01	0.46	0.32	0.09	0.21	0.41
Control Delay	19.9	19.9	6.8	31.1	0.0	29.0	13.6	3.2	32.2	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	19.9	6.8	31.1	0.0	29.0	13.6	3.2	32.2	17.0
LOS	B	B	A	C	A	C	B	A	C	B
Approach Delay		9.8		26.6			17.4			17.9
Approach LOS		A		C			B			B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 52.8	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 16.7	Intersection LOS: B
Intersection Capacity Utilization 45.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 38: Mission Center Road & Harzard Center Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	8	166	15	2	3	249	504	66	32	418	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	56	0	37	21	3	0	268	542	0	41	536	46
Adj No. of Lanes	2	0	1	0	1	1	2	2	1	1	3	0
Peak Hour Factor	0.84	0.84	0.84	0.71	0.71	0.71	0.93	0.93	0.93	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	433	0	183	36	5	36	399	1614	722	62	1789	152
Arrive On Green	0.12	0.00	0.12	0.02	0.02	0.00	0.12	0.46	0.00	0.04	0.38	0.38
Sat Flow, veh/h	3548	0	1501	1562	223	1583	3442	3539	1583	1774	4767	405
Grp Volume(v), veh/h	56	0	37	24	0	0	268	542	0	41	379	203
Grp Sat Flow(s),veh/h/ln	1774	0	1501	1785	0	1583	1721	1770	1583	1774	1695	1781
Q Serve(g_s), s	0.7	0.0	1.1	0.6	0.0	0.0	3.6	4.7	0.0	1.1	3.7	3.8
Cycle Q Clear(g_c), s	0.7	0.0	1.1	0.6	0.0	0.0	3.6	4.7	0.0	1.1	3.7	3.8
Prop In Lane	1.00		1.00	0.87		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	433	0	183	41	0	36	399	1614	722	62	1272	669
V/C Ratio(X)	0.13	0.00	0.20	0.59	0.00	0.00	0.67	0.34	0.00	0.66	0.30	0.30
Avail Cap(c_a), veh/h	2387	0	1010	600	0	533	579	2135	955	224	1910	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	0.0	18.8	23.0	0.0	0.0	20.2	8.3	0.0	22.7	10.5	10.5
Incr Delay (d2), s/veh	0.2	0.0	0.7	4.9	0.0	0.0	0.7	0.2	0.0	4.3	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	0.4	0.0	0.0	1.7	2.3	0.0	0.6	1.8	1.9
LnGrp Delay(d),s/veh	18.8	0.0	19.5	28.0	0.0	0.0	20.9	8.5	0.0	27.0	10.7	10.9
LnGrp LOS	B		B	C			C	A		C	B	B
Approach Vol, veh/h		93			24			810			623	
Approach Delay, s/veh		19.1			28.0			12.6			11.8	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.7	27.0		9.8	9.5	23.2		5.1
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	* 5.3		4.0
Max Green Setting (Gmax), s	6.0	28.7		32.0	8.0	* 27		16.0
Max Q Clear Time (g_c+I1), s	3.1	6.7		3.1	5.6	5.8		2.6
Green Ext Time (p_c), s	0.0	11.8		0.4	0.1	11.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	130			220	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00			0.98	0.97	
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1769	1863	1863	1544	1723	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				228		25
Link Speed (mph)		30	30		30	
Link Distance (ft)		834	642		429	
Travel Time (s)		19.0	14.6		9.8	

Intersection Summary	
Area Type:	Other



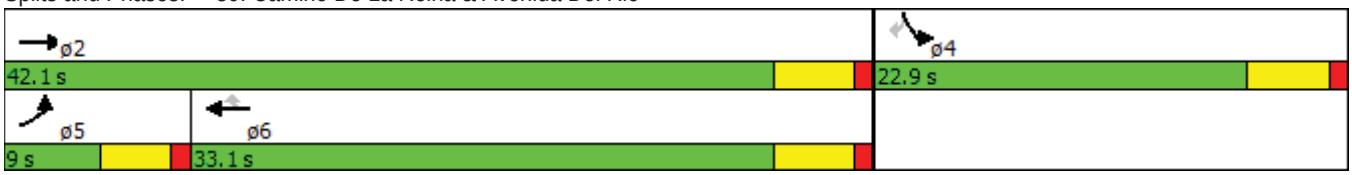
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	35	178	500	194	55	18
Confl. Peds. (#/hr)	1			1	13	
Confl. Bikes (#/hr)				4		
Peak Hour Factor	0.95	0.95	0.85	0.85	0.73	0.73
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	37	187	588	228	75	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	187	588	228	75	25

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	35	178	500	194	55	18
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	4.0	7.0	7.0	7.0	4.0	4.0
Minimum Split (s)	8.4	20.9	28.9	28.9	22.9	22.9
Total Split (s)	9.0	42.1	33.1	33.1	22.9	22.9
Total Split (%)	13.8%	64.8%	50.9%	50.9%	35.2%	35.2%
Yellow Time (s)	3.4	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	5.1	31.8	29.2	29.2	7.7	7.7
Actuated g/C Ratio	0.12	0.76	0.70	0.70	0.19	0.19
v/c Ratio	0.17	0.13	0.45	0.20	0.23	0.08
Control Delay	25.1	4.2	9.7	2.3	19.1	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	4.2	9.7	2.3	19.1	9.3
LOS	C	A	A	A	B	A
Approach Delay		7.7	7.7		16.7	
Approach LOS		A	A		B	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 41.6	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 40.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 39: Camino De La Reina & Avenida Del Rio





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	35	178	500	194	55	18
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	37	187	588	75	75	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.85	0.85	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	63	1148	813	674	109	98
Arrive On Green	0.04	0.62	0.44	0.44	0.06	0.00
Sat Flow, veh/h	1774	1863	1863	1545	1774	1583
Grp Volume(v), veh/h	37	187	588	75	75	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1545	1774	1583
Q Serve(g_s), s	0.6	1.3	7.9	0.9	1.3	0.0
Cycle Q Clear(g_c), s	0.6	1.3	7.9	0.9	1.3	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	63	1148	813	674	109	98
V/C Ratio(X)	0.59	0.16	0.72	0.11	0.69	0.00
Avail Cap(c_a), veh/h	268	2277	1726	1431	1049	937
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.5	2.5	7.1	5.1	14.0	0.0
Incr Delay (d2), s/veh	3.3	0.0	0.5	0.0	2.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.6	4.0	0.4	0.7	0.0
LnGrp Delay(d),s/veh	17.7	2.5	7.5	5.1	16.8	0.0
LnGrp LOS	B	A	A	A	B	
Approach Vol, veh/h		224	663		75	
Approach Delay, s/veh		5.0	7.3		16.8	
Approach LOS		A	A		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		23.7		6.8	5.5	18.2		
Change Period (Y+Rc), s		4.9		4.9	4.4	4.9		
Max Green Setting (Gmax), s		37.2		18.0	4.6	28.2		
Max Q Clear Time (g_c+I1), s		3.3		3.3	2.6	9.9		
Green Ext Time (p_c), s		3.7		0.1	0.0	3.3		

Intersection Summary	
HCM 2010 Ctrl Delay	7.5
HCM 2010 LOS	A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	290		0	140		200	160		200	320		0
Storage Lanes	2		0	2		0	2		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	0.95	0.97	0.91	0.91	0.97	0.91	1.00
Ped Bike Factor	1.00	0.99		0.99	0.99		0.99	1.00		1.00		0.97
Frt		0.938			0.940			0.982				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3293	0	3433	3300	0	3433	4983	0	3433	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3418	3293	0	3413	3300	0	3406	4983	0	3420	5085	1529
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		69			115			16				151
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		2210			1926			473			996	
Travel Time (s)		50.2			43.8			8.1			17.0	

Intersection Summary	
Area Type:	Other



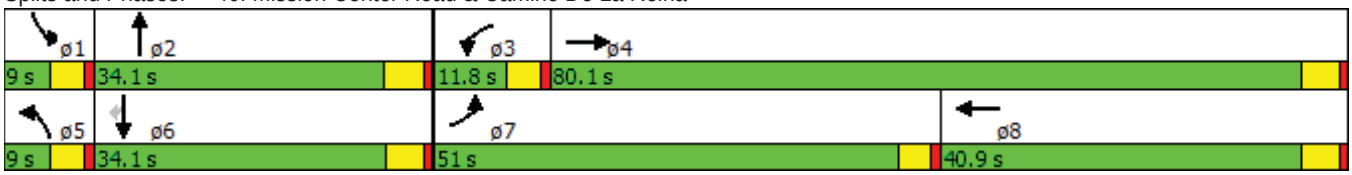
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	78	72	51	85	302	201	160	528	70	128	333	118
Confl. Peds. (#/hr)	5		6	6		5	6		4	4		6
Confl. Bikes (#/hr)			1			3						
Peak Hour Factor	0.74	0.74	0.74	0.95	0.95	0.95	0.88	0.88	0.88	0.78	0.78	0.78
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	105	97	69	89	318	212	182	600	80	164	427	151
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	166	0	89	530	0	182	680	0	164	427	151

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	78	72	85	302	160	528	128	333	118
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	4.0	7.0	4.0	7.0	4.0	10.0	4.0	10.0	10.0
Minimum Split (s)	51.0	37.9	8.4	40.9	8.4	33.2	8.4	33.0	33.0
Total Split (s)	51.0	80.1	11.8	40.9	9.0	34.1	9.0	34.1	34.1
Total Split (%)	37.8%	59.3%	8.7%	30.3%	6.7%	25.3%	6.7%	25.3%	25.3%
Yellow Time (s)	3.4	3.9	3.4	3.9	3.4	4.2	3.4	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.4	4.9	4.4	5.2	4.4	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	7.1	18.9	6.5	18.4	4.9	17.4	4.9	17.6	17.6
Actuated g/C Ratio	0.11	0.29	0.10	0.28	0.08	0.27	0.08	0.27	0.27
v/c Ratio	0.28	0.17	0.26	0.52	0.70	0.51	0.63	0.31	0.29
Control Delay	33.6	11.7	34.4	17.7	51.0	22.5	47.4	21.2	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.6	11.7	34.4	17.7	51.0	22.5	47.4	21.2	6.2
LOS	C	B	C	B	D	C	D	C	A
Approach Delay		20.2		20.1		28.5		23.9	
Approach LOS		C		C		C		C	

Intersection Summary	
Cycle Length: 135	
Actuated Cycle Length: 65.1	
Natural Cycle: 135	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization 53.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 40: Mission Center Road & Camino De La Reina



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	78	72	51	85	302	201	160	528	70	128	333	118
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	105	97	28	89	318	123	182	600	63	164	427	0
Adj No. of Lanes	2	2	0	2	2	0	2	3	0	2	3	1
Peak Hour Factor	0.74	0.74	0.74	0.95	0.95	0.95	0.88	0.88	0.88	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	707	196	173	638	241	253	1471	153	253	1599	498
Arrive On Green	0.05	0.26	0.26	0.05	0.26	0.26	0.07	0.31	0.31	0.07	0.31	0.00
Sat Flow, veh/h	3442	2726	755	3442	2497	945	3442	4678	486	3442	5085	1583
Grp Volume(v), veh/h	105	62	63	89	223	218	182	433	230	164	427	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1712	1721	1770	1672	1721	1695	1774	1721	1695	1583
Q Serve(g_s), s	1.9	1.7	1.8	1.6	6.7	7.0	3.2	6.3	6.4	2.9	3.9	0.0
Cycle Q Clear(g_c), s	1.9	1.7	1.8	1.6	6.7	7.0	3.2	6.3	6.4	2.9	3.9	0.0
Prop In Lane	1.00		0.44	1.00		0.57	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	187	459	444	173	452	427	253	1066	558	253	1599	498
V/C Ratio(X)	0.56	0.13	0.14	0.51	0.49	0.51	0.72	0.41	0.41	0.65	0.27	0.00
Avail Cap(c_a), veh/h	2564	2127	2058	407	1018	962	253	1566	819	253	2366	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.9	17.8	17.8	29.0	19.8	19.9	28.3	16.8	16.9	28.2	16.0	0.0
Incr Delay (d2), s/veh	1.0	0.1	0.2	0.9	1.6	1.8	8.3	0.4	0.9	4.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.8	0.9	0.8	3.5	3.4	1.8	3.0	3.3	1.5	1.8	0.0
LnGrp Delay(d),s/veh	29.8	17.9	18.0	29.8	21.5	21.8	36.6	17.3	17.8	32.7	16.2	0.0
LnGrp LOS	C	B	B	C	C	C	D	B	B	C	B	
Approach Vol, veh/h		230			530			845			591	
Approach Delay, s/veh		23.4			23.0			21.6			20.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	24.9	7.5	21.1	9.0	24.9	7.8	20.9
Change Period (Y+Rc), s	4.4	5.2	4.4	4.9	4.4	* 5.2	4.4	4.9
Max Green Setting (Gmax), s	4.6	28.9	7.4	75.2	4.6	* 29	46.6	36.0
Max Q Clear Time (g_c+I1), s	4.9	8.4	3.6	3.8	5.2	5.9	3.9	9.0
Green Ext Time (p_c), s	0.0	10.8	0.0	6.9	0.0	11.6	0.2	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		200	260		200	160		200	160		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.628			0.722		
Satd. Flow (perm)	1765	3539	1556	1764	3539	1545	1167	3539	1561	1342	3539	1558
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			81			81			83			83
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1318			1328			752			1348	
Travel Time (s)		30.0			30.2			20.5			36.8	

Intersection Summary	
Area Type:	Other



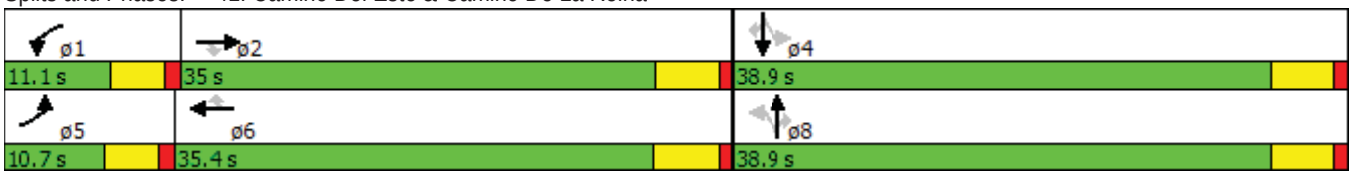
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	36	95	28	43	267	14	37	38	17	41	173	63
Confl. Peds. (#/hr)	3		4	4		3	4		3	3		4
Confl. Bikes (#/hr)			3									2
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.74	0.74	0.74	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	43	114	34	51	318	17	50	51	23	47	197	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	114	34	51	318	17	50	51	23	47	197	72

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	95	28	43	267	14	37	38	17	41	173	63
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	33.0	33.0	8.4	35.1	35.1	36.9	36.9	36.9	38.9	38.9	38.9
Total Split (s)	10.7	35.0	35.0	11.1	35.4	35.4	38.9	38.9	38.9	38.9	38.9	38.9
Total Split (%)	12.6%	41.2%	41.2%	13.1%	41.6%	41.6%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%
Yellow Time (s)	3.4	4.0	4.0	3.4	4.1	4.1	3.9	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.0	5.0	4.4	5.1	5.1	4.9	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	6.2	16.9	16.9	6.4	19.2	19.2	10.5	10.5	10.5	10.5	10.5	10.5
Actuated g/C Ratio	0.14	0.39	0.39	0.15	0.45	0.45	0.25	0.25	0.25	0.25	0.25	0.25
v/c Ratio	0.17	0.08	0.05	0.19	0.20	0.02	0.17	0.06	0.05	0.14	0.23	0.16
Control Delay	24.8	12.1	0.4	24.5	9.9	0.1	14.6	12.7	0.2	14.0	13.1	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	12.1	0.4	24.5	9.9	0.1	14.6	12.7	0.2	14.0	13.1	4.5
LOS	C	B	A	C	A	A	B	B	A	B	B	A
Approach Delay		12.9			11.4			11.2			11.3	
Approach LOS		B			B			B			B	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 42.8	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.23	
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 40.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 41: Camino Del Este & Camino De La Reina



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	95	28	43	267	14	37	38	17	41	173	63
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	43	114	0	51	318	0	50	51	0	47	197	15
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.74	0.74	0.74	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	1096	490	80	1116	499	410	758	339	487	758	332
Arrive On Green	0.04	0.31	0.00	0.05	0.32	0.00	0.21	0.21	0.00	0.21	0.21	0.21
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1160	3539	1583	1341	3539	1552
Grp Volume(v), veh/h	43	114	0	51	318	0	50	51	0	47	197	15
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1160	1770	1583	1341	1770	1552
Q Serve(g_s), s	0.8	0.8	0.0	0.9	2.3	0.0	1.3	0.4	0.0	1.0	1.5	0.3
Cycle Q Clear(g_c), s	0.8	0.8	0.0	0.9	2.3	0.0	2.8	0.4	0.0	1.4	1.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	1096	490	80	1116	499	410	758	339	487	758	332
V/C Ratio(X)	0.62	0.10	0.00	0.64	0.28	0.00	0.12	0.07	0.00	0.10	0.26	0.05
Avail Cap(c_a), veh/h	335	3180	1422	356	3211	1437	1343	3603	1612	1566	3603	1581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	8.2	0.0	15.7	8.6	0.0	12.1	10.5	0.0	11.0	10.9	10.4
Incr Delay (d2), s/veh	3.2	0.0	0.0	3.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.0	0.5	1.1	0.0	0.4	0.2	0.0	0.4	0.8	0.1
LnGrp Delay(d),s/veh	19.0	8.3	0.0	18.8	8.7	0.0	12.2	10.5	0.0	11.1	11.0	10.5
LnGrp LOS	B	A		B	A		B	B		B	B	B
Approach Vol, veh/h		157			369			101			259	
Approach Delay, s/veh		11.2			10.1			11.3			11.0	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	15.4		12.0	5.7	15.6		12.0
Change Period (Y+Rc), s	4.4	* 5.1		4.9	4.4	5.1		4.9
Max Green Setting (Gmax), s	6.7	* 30		34.0	6.3	30.3		34.0
Max Q Clear Time (g_c+I1), s	2.9	2.8		3.5	2.8	4.3		4.8
Green Ext Time (p_c), s	0.0	3.0		1.6	0.0	2.9		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		0	250		200	0		200	250		200
Storage Lanes	1		0	2		1	2		1	2		1
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor	1.00	0.99				0.98	1.00		0.99	1.00		0.99
Frt		0.925				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3252	0	3433	3539	1583	3433	5085	1583	3433	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1764	3252	0	3433	3539	1557	3430	5085	1562	3431	5085	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		91				170			269			132
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		1328			1080			469			1368	
Travel Time (s)		30.2			24.5			7.1			20.7	

Intersection Summary	
Area Type:	Other



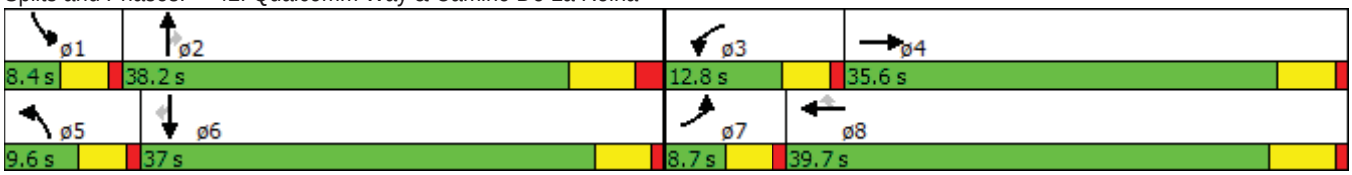
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	33	78	77	122	182	143	109	822	264	68	401	60
Confl. Peds. (#/hr)	5					5	1		1	1		1
Confl. Bikes (#/hr)			2			1			1			1
Peak Hour Factor	0.85	0.85	0.85	0.84	0.84	0.84	0.98	0.98	0.98	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	39	92	91	145	217	170	111	839	269	70	413	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	183	0	145	217	170	111	839	269	70	413	62

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	33	78	122	182	143	109	822	264	68	401	60
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	7.0	4.0	7.0	7.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	8.4	23.1	8.4	39.7	39.7	8.4	37.7	37.7	8.4	36.9	36.9
Total Split (s)	8.7	35.6	12.8	39.7	39.7	9.6	38.2	38.2	8.4	37.0	37.0
Total Split (%)	9.2%	37.5%	13.5%	41.8%	41.8%	10.1%	40.2%	40.2%	8.8%	38.9%	38.9%
Yellow Time (s)	3.4	4.1	3.4	4.7	4.7	3.4	4.7	4.7	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.1	4.4	5.7	5.7	4.4	6.7	6.7	4.4	4.9	4.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	4.9	11.1	7.4	16.4	16.4	5.9	17.8	17.8	4.6	17.0	17.0
Actuated g/C Ratio	0.09	0.20	0.13	0.29	0.29	0.11	0.32	0.32	0.08	0.30	0.30
v/c Ratio	0.25	0.25	0.32	0.21	0.29	0.31	0.52	0.40	0.25	0.27	0.11
Control Delay	37.0	12.8	30.2	17.4	5.4	32.9	18.6	5.0	33.9	17.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	12.8	30.2	17.4	5.4	32.9	18.6	5.0	33.9	17.2	0.4
LOS	D	B	C	B	A	C	B	A	C	B	A
Approach Delay		17.1		17.0			16.9			17.5	
Approach LOS		B		B			B			B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 55.8	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 17.1	Intersection LOS: B
Intersection Capacity Utilization 49.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 42: Qualcomm Way & Camino De La Reina



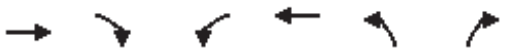
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	33	78	77	122	182	143	109	822	264	68	401	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	39	92	20	145	217	39	111	839	85	70	413	0
Adj No. of Lanes	1	2	0	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.85	0.85	0.85	0.84	0.84	0.84	0.98	0.98	0.98	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	374	79	242	590	258	206	1836	564	166	1775	553
Arrive On Green	0.03	0.13	0.13	0.07	0.17	0.17	0.06	0.36	0.36	0.05	0.35	0.00
Sat Flow, veh/h	1774	2896	609	3442	3539	1548	3442	5085	1562	3442	5085	1583
Grp Volume(v), veh/h	39	55	57	145	217	39	111	839	85	70	413	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1736	1721	1770	1548	1721	1695	1562	1721	1695	1583
Q Serve(g_s), s	1.2	1.5	1.6	2.2	2.9	1.2	1.7	6.8	2.0	1.1	3.1	0.0
Cycle Q Clear(g_c), s	1.2	1.5	1.6	2.2	2.9	1.2	1.7	6.8	2.0	1.1	3.1	0.0
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	58	228	224	242	590	258	206	1836	564	166	1775	553
V/C Ratio(X)	0.67	0.24	0.25	0.60	0.37	0.15	0.54	0.46	0.15	0.42	0.23	0.00
Avail Cap(c_a), veh/h	141	997	977	534	2222	972	330	2958	909	254	3014	939
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.9	21.2	21.2	24.4	20.0	19.3	24.7	13.2	11.7	25.0	12.5	0.0
Incr Delay (d2), s/veh	4.9	0.4	0.4	0.9	0.1	0.1	0.8	0.2	0.1	0.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.8	0.8	1.1	1.5	0.5	0.8	3.2	0.9	0.5	1.5	0.0
LnGrp Delay(d),s/veh	30.8	21.6	21.7	25.3	20.2	19.4	25.5	13.4	11.8	25.7	12.7	0.0
LnGrp LOS	C	C	C	C	C	B	C	B	B	C	B	
Approach Vol, veh/h		151			401			1035			483	
Approach Delay, s/veh		24.0			22.0			14.6			14.5	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	26.2	8.2	12.7	7.6	25.6	6.2	14.7
Change Period (Y+Rc), s	4.4	6.7	4.4	* 5.7	4.4	* 6.7	4.4	5.7
Max Green Setting (Gmax), s	4.0	31.5	8.4	* 31	5.2	* 32	4.3	34.0
Max Q Clear Time (g_c+I1), s	3.1	8.8	4.2	3.6	3.7	5.1	3.2	4.9
Green Ext Time (p_c), s	0.0	10.6	0.1	1.5	0.0	11.6	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	70		80	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98	1.00			
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1863	1549	1768	1863	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		54				54
Link Speed (mph)	35			35	25	
Link Distance (ft)	1295			433	1067	
Travel Time (s)	25.2			8.4	29.1	

Intersection Summary	
Area Type:	Other



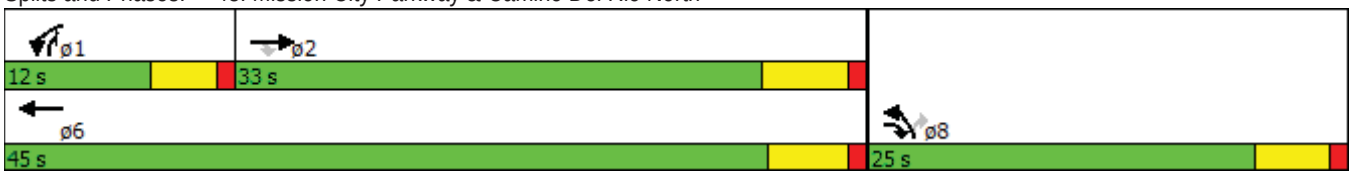
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	96	44	128	496	404	49
Confl. Peds. (#/hr)		1	1			
Confl. Bikes (#/hr)						
Peak Hour Factor	0.81	0.81	0.85	0.85	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	119	54	151	584	444	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	119	54	151	584	444	54

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	96	44	128	496	404	49
Turn Type	NA	pm+ov	Prot	NA	Prot	pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	1
Switch Phase						
Minimum Initial (s)	7.0	4.0	4.0	7.0	4.0	4.0
Minimum Split (s)	31.6	23.9	8.4	21.3	23.9	8.4
Total Split (s)	33.0	25.0	12.0	45.0	25.0	12.0
Total Split (%)	47.1%	35.7%	17.1%	64.3%	35.7%	17.1%
Yellow Time (s)	4.6	3.9	3.4	4.3	3.9	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	4.9	4.4	5.3	4.9	4.4
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	11.5	29.4	7.5	23.9	17.2	29.8
Actuated g/C Ratio	0.22	0.57	0.15	0.46	0.33	0.58
v/c Ratio	0.29	0.06	0.59	0.68	0.76	0.06
Control Delay	18.4	1.0	36.3	15.6	27.5	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	1.0	36.3	15.6	27.5	3.0
LOS	B	A	D	B	C	A
Approach Delay	13.0			19.8	24.9	
Approach LOS	B			B	C	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 51.6	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 57.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 43: Mission City Parkway & Camino Del Rio North



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	96	44	128	496	404	49
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	119	0	151	584	444	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.81	0.81	0.85	0.85	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	423	828	193	829	525	641
Arrive On Green	0.23	0.00	0.11	0.44	0.30	0.00
Sat Flow, veh/h	1863	1583	1774	1863	1774	1583
Grp Volume(v), veh/h	119	0	151	584	444	0
Grp Sat Flow(s),veh/h/ln	1863	1583	1774	1863	1774	1583
Q Serve(g_s), s	2.1	0.0	3.4	10.3	9.5	0.0
Cycle Q Clear(g_c), s	2.1	0.0	3.4	10.3	9.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	423	828	193	829	525	641
V/C Ratio(X)	0.28	0.00	0.78	0.70	0.85	0.00
Avail Cap(c_a), veh/h	1261	1540	333	1827	881	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.9	0.0	17.6	9.1	13.4	0.0
Incr Delay (d2), s/veh	0.4	0.0	2.6	1.2	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.8	5.5	4.8	0.0
LnGrp Delay(d),s/veh	13.3	0.0	20.2	10.3	15.0	0.0
LnGrp LOS	B		C	B	B	
Approach Vol, veh/h	119			735	444	
Approach Delay, s/veh	13.3			12.3	15.0	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.8	14.8				23.6		16.9
Change Period (Y+Rc), s	4.4	5.6				* 5.6		4.9
Max Green Setting (Gmax), s	7.6	27.4				* 40		20.1
Max Q Clear Time (g_c+I1), s	5.4	4.1				12.3		11.5
Green Ext Time (p_c), s	0.0	5.0				5.2		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	95			80	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00			0.99		
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1768	3539	3539	1561	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				365		121
Link Speed (mph)		35	35		45	
Link Distance (ft)		1490	1635		1851	
Travel Time (s)		29.0	31.9		28.0	

Intersection Summary	
Area Type:	Other



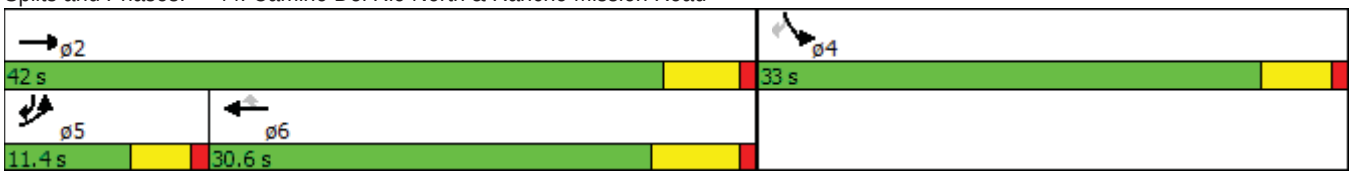
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	52	34	477	321	236	247
Confl. Peds. (#/hr)	2			2		
Confl. Bikes (#/hr)						
Peak Hour Factor	0.80	0.80	0.88	0.88	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	65	42	542	365	281	294
Shared Lane Traffic (%)						
Lane Group Flow (vph)	65	42	542	365	281	294

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	52	34	477	321	236	247
Turn Type	Prot	NA	NA	Perm	Prot	pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	5
Switch Phase						
Minimum Initial (s)	4.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	8.4	21.3	30.0	30.0	32.9	8.4
Total Split (s)	11.4	42.0	30.6	30.6	33.0	11.4
Total Split (%)	15.2%	56.0%	40.8%	40.8%	44.0%	15.2%
Yellow Time (s)	3.4	4.3	5.0	5.0	3.9	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.3	6.0	6.0	4.9	4.4
Lead/Lag	Lead		Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes	Yes		Yes
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	6.1	26.1	14.7	14.7	12.5	23.7
Actuated g/C Ratio	0.12	0.53	0.30	0.30	0.25	0.48
v/c Ratio	0.30	0.02	0.51	0.51	0.63	0.36
Control Delay	26.9	6.4	16.7	4.8	23.9	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	6.4	16.7	4.8	23.9	6.5
LOS	C	A	B	A	C	A
Approach Delay		18.8	11.9		15.0	
Approach LOS		B	B		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 49.2	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 13.5	Intersection LOS: B
Intersection Capacity Utilization 42.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 44: Camino Del Rio North & Rancho Mission Road





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	52	34	477	321	236	247
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	65	42	542	87	281	151
Adj No. of Lanes	1	2	2	1	1	1
Peak Hour Factor	0.80	0.80	0.88	0.88	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	93	1755	1156	516	380	422
Arrive On Green	0.05	0.50	0.33	0.33	0.21	0.21
Sat Flow, veh/h	1774	3632	3632	1578	1774	1583
Grp Volume(v), veh/h	65	42	542	87	281	151
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1578	1774	1583
Q Serve(g_s), s	1.4	0.2	4.6	1.5	5.6	2.9
Cycle Q Clear(g_c), s	1.4	0.2	4.6	1.5	5.6	2.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	1755	1156	516	380	422
V/C Ratio(X)	0.70	0.02	0.47	0.17	0.74	0.36
Avail Cap(c_a), veh/h	330	3452	2314	1032	1325	1265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	4.8	10.1	9.0	13.8	11.2
Incr Delay (d2), s/veh	3.5	0.0	0.5	0.2	1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	2.3	0.7	2.8	2.7
LnGrp Delay(d),s/veh	21.1	4.8	10.5	9.3	14.9	11.4
LnGrp LOS	C	A	B	A	B	B
Approach Vol, veh/h		107	629		432	
Approach Delay, s/veh		14.7	10.4		13.6	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		24.7		13.0	6.4	18.3		
Change Period (Y+Rc), s		* 6		4.9	4.4	6.0		
Max Green Setting (Gmax), s		* 37		28.1	7.0	24.6		
Max Q Clear Time (g_c+I1), s		2.2		7.6	3.4	6.6		
Green Ext Time (p_c), s		7.0		0.6	0.0	5.6		

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	520		140	220		200	90		150
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	0.91	0.86	0.91	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor			0.99	1.00	1.00				0.98	1.00		
Frt			0.850		0.994	0.850			0.850			0.850
Flt Protected	0.950	0.985		0.950	0.989		0.950			0.950		
Satd. Flow (prot)	1681	1743	1583	1610	3150	1441	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950	0.985		0.950	0.989		0.950			0.950		
Satd. Flow (perm)	1681	1743	1562	1608	3148	1441	1770	3539	1558	3429	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68		3	165			168			165
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		1214			1000			780			968	
Travel Time (s)		23.6			15.2			11.8			14.7	

Intersection Summary	
Area Type:	Other
Description: min green reduce to match split	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	44	24	322	409	412	249	380	1286	169	14	754	102
Confl. Peds. (#/hr)			1	1					5	5		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.85	0.85	0.85	0.91	0.91	0.91	0.96	0.96	0.96	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	52	28	379	449	453	274	396	1340	176	15	811	110
Shared Lane Traffic (%)	24%			32%		10%						
Lane Group Flow (vph)	40	40	379	305	624	247	396	1340	176	15	811	110

Intersection Summary
Description: min green reduce to match split

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	24	322	409	412	249	380	1286	169	14	754	102
Turn Type	Split	NA	pm+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	4	4	5	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.9	4.9	13.0	14.0	14.0	14.0	13.0	15.0	15.0	2.9	15.0	15.0
Minimum Split (s)	10.0	10.0	18.1	25.0	25.0	25.0	18.1	48.1	48.1	8.0	44.1	44.1
Total Split (s)	10.0	10.0	27.0	25.0	25.0	25.0	27.0	72.0	72.0	8.0	53.0	53.0
Total Split (%)	8.7%	8.7%	23.5%	21.7%	21.7%	21.7%	23.5%	62.6%	62.6%	7.0%	46.1%	46.1%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Lead/Lag			Lead				Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	4.9	4.9	25.8	21.9	21.9	21.9	21.9	71.7	71.7	2.9	47.9	47.9
Actuated g/C Ratio	0.04	0.04	0.22	0.19	0.19	0.19	0.19	0.62	0.62	0.03	0.42	0.42
v/c Ratio	0.56	0.54	0.93	1.00	1.04	0.61	1.18	0.61	0.17	0.17	0.55	0.15
Control Delay	83.4	80.2	62.4	98.7	92.6	22.4	147.0	15.2	2.2	59.5	27.2	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.4	80.2	62.4	98.7	92.6	22.4	147.0	15.2	2.2	59.5	27.2	1.1
LOS	F	F	E	F	F	C	F	B	A	E	C	A
Approach Delay		65.8			79.4			41.3			24.6	
Approach LOS		E			E			D			C	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 115	
Offset: 90 (78%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 50.3	Intersection LOS: D
Intersection Capacity Utilization 76.3%	ICU Level of Service D
Analysis Period (min) 15	
Description: min green reduce to match split	

Splits and Phases: 45: Mission Gorge Road & Camino Del Rio North/I-8 WB Off Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	44	24	322	409	412	249	380	1286	169	14	754	102
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	40	45	73	299	662	126	396	1340	103	15	811	8
Adj No. of Lanes	1	1	1	1	2	1	1	2	1	2	2	1
Peak Hour Factor	0.85	0.85	0.85	0.91	0.91	0.91	0.96	0.96	0.96	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	79	369	307	645	274	338	2114	943	33	1474	657
Arrive On Green	0.04	0.04	0.04	0.17	0.17	0.17	0.19	0.60	0.60	0.01	0.42	0.42
Sat Flow, veh/h	1774	1863	1572	1774	3725	1581	1774	3539	1579	3442	3539	1578
Grp Volume(v), veh/h	40	45	73	299	662	126	396	1340	103	15	811	8
Grp Sat Flow(s),veh/h/ln	1774	1863	1572	1774	1863	1581	1774	1770	1579	1721	1770	1578
Q Serve(g_s), s	2.5	2.7	4.3	19.3	19.9	8.2	21.9	28.2	3.2	0.5	19.9	0.3
Cycle Q Clear(g_c), s	2.5	2.7	4.3	19.3	19.9	8.2	21.9	28.2	3.2	0.5	19.9	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	76	79	369	307	645	274	338	2114	943	33	1474	657
V/C Ratio(X)	0.53	0.57	0.20	0.97	1.03	0.46	1.17	0.63	0.11	0.45	0.55	0.01
Avail Cap(c_a), veh/h	76	79	369	307	645	274	338	2114	943	87	1474	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.62	0.62	0.62	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	54.0	35.5	47.3	47.5	42.7	46.5	15.0	10.0	56.6	25.4	19.7
Incr Delay (d2), s/veh	3.5	5.9	0.1	44.0	42.5	0.5	95.8	0.9	0.1	3.6	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.5	1.9	13.2	14.0	3.6	19.7	14.0	1.4	0.3	10.0	0.2
LnGrp Delay(d),s/veh	57.4	59.9	35.6	91.3	90.0	43.2	142.3	15.9	10.1	60.2	26.9	19.7
LnGrp LOS	E	E	D	F	F	D	F	B	B	E	C	B
Approach Vol, veh/h		158			1087			1839			834	
Approach Delay, s/veh		48.0			84.9			42.8			27.4	
Approach LOS		D			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.2	73.8		10.0	27.0	53.0		25.0
Change Period (Y+Rc), s	5.1	5.1		5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	2.9	66.9		4.9	21.9	47.9		19.9
Max Q Clear Time (g_c+I1), s	2.5	30.2		6.3	23.9	21.9		21.9
Green Ext Time (p_c), s	0.0	13.6		0.0	0.0	11.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		140	90		0
Storage Lanes	0		0	0		1	0		1	1		1
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850			0.850			0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	0	0	0	1863	1583	0	3539	1583	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	0	0	0	1863	1583	0	3539	1583	1770	0	1583
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)						478			132			210
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		599			191			329			288	
Travel Time (s)		11.7			4.3			7.5			6.5	

Intersection Summary	
Area Type:	Other



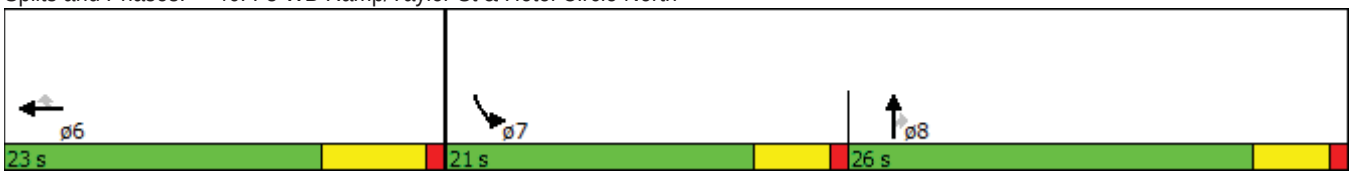
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	0	231	438	0	811	43	137	0	137
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.25	0.25	0.25	0.79	0.79	0.79	0.82	0.82	0.82	0.67	0.67	0.67
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	292	554	0	989	52	204	0	204
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	292	554	0	989	52	204	0	204

Intersection Summary

Lane Group	WBT	WBR	NBT	NBR	SBL	SBR
Lane Configurations						
Volume (vph)	231	438	811	43	137	137
Turn Type	NA	Perm	NA	Perm	Prot	Free
Protected Phases	6		8		7	
Permitted Phases		6		8		Free
Detector Phase	6	6	8	8	7	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	21.0	21.0	21.0	
Total Split (s)	23.0	23.0	26.0	26.0	21.0	
Total Split (%)	32.9%	32.9%	37.1%	37.1%	30.0%	
Yellow Time (s)	5.5	5.5	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	5.0	5.0	5.0	
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	Min	Min	None	None	None	
Act Effct Green (s)	14.7	14.7	19.8	19.8	10.5	61.8
Actuated g/C Ratio	0.24	0.24	0.32	0.32	0.17	1.00
v/c Ratio	0.66	0.75	0.87	0.09	0.68	0.13
Control Delay	30.8	12.0	31.6	0.3	36.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.8	12.0	31.6	0.3	36.7	0.2
LOS	C	B	C	A	D	A
Approach Delay	18.5		30.1			
Approach LOS	B		C			

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 61.8	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 59.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 46: I-8 WB Ramp/Taylor St & Hotel Circle North





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	231	438	0	811	43	137	0	137
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				0	1863	1863	0	1863	1863	1863	0	1863
Adj Flow Rate, veh/h				0	292	92	0	989	0	204	0	0
Adj No. of Lanes				0	1	1	0	2	1	1	0	1
Peak Hour Factor				0.79	0.79	0.79	0.82	0.82	0.82	0.67	0.67	0.67
Percent Heavy Veh, %				0	2	2	0	2	2	2	0	2
Cap, veh/h				0	0	0	0	1487	665	277	0	0
Arrive On Green				0.00	0.00	0.00	0.00	0.42	0.00	0.16	0.00	0.00
Sat Flow, veh/h					0		0	3632	1583	1774	204	
Grp Volume(v), veh/h					0.0		0	989	0	204	10.9	
Grp Sat Flow(s),veh/h/ln							0	1770	1583	1774	B	
Q Serve(g_s), s							0.0	5.3	0.0	2.6		
Cycle Q Clear(g_c), s							0.0	5.3	0.0	2.6		
Prop In Lane							0.00		1.00	1.00		
Lane Grp Cap(c), veh/h							0	1487	665	277		
V/C Ratio(X)							0.00	0.67	0.00	0.74		
Avail Cap(c_a), veh/h							0	3149	1409	1203		
HCM Platoon Ratio							1.00	1.00	1.00	1.00		
Upstream Filter(I)							0.00	1.00	0.00	1.00		
Uniform Delay (d), s/veh							0.0	5.5	0.0	9.5		
Incr Delay (d2), s/veh							0.0	0.2	0.0	1.4		
Initial Q Delay(d3),s/veh							0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln							0.0	2.5	0.0	1.4		
LnGrp Delay(d),s/veh							0.0	5.7	0.0	10.9		
LnGrp LOS								A		B		
Approach Vol, veh/h								989				
Approach Delay, s/veh								5.7				
Approach LOS								A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs							7	8
Phs Duration (G+Y+Rc), s							8.7	14.9
Change Period (Y+Rc), s							5.0	5.0
Max Green Setting (Gmax), s							16.0	21.0
Max Q Clear Time (g_c+I1), s							4.6	7.3
Green Ext Time (p_c), s							0.1	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	6.6
HCM 2010 LOS	A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	90		0	0		230	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.992			0.988				0.850		0.984	
Flt Protected				0.950				0.954			0.963	
Satd. Flow (prot)	0	1848	0	1770	1840	0	0	1777	1583	0	1765	0
Flt Permitted				0.950				0.954			0.963	
Satd. Flow (perm)	0	1848	0	1770	1840	0	0	1777	1583	0	1765	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1334			890			500			305	
Travel Time (s)		26.0			17.3			11.4			6.9	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	111	7	89	174	15	343	16	672	8	1	1
Confl. Peds. (#/hr)	8		9	9		8			2	2		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.90	0.90	0.90	0.91	0.91	0.91	0.62	0.62	0.62
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	139	9	99	193	17	377	18	738	13	2	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	0	99	210	0	0	395	738	0	17	0

Intersection Summary

Intersection	
Intersection Delay, s/veh	36.6
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	0	111	7	0	89	174	15	0	343	16	672
Peak Hour Factor	0.80	0.80	0.80	0.80	0.92	0.90	0.90	0.90	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	139	9	0	99	193	17	0	377	18	738
Number of Lanes	0	0	1	0	0	1	1	0	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	13	14.1	46.2
HCM LOS	B	B	E

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	96%	0%	0%	100%	0%	80%
Vol Thru, %	4%	0%	94%	0%	92%	10%
Vol Right, %	0%	100%	6%	0%	8%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	359	672	118	89	189	10
LT Vol	343	0	0	89	0	8
Through Vol	16	0	111	0	174	1
RT Vol	0	672	7	0	15	1
Lane Flow Rate	395	738	148	99	210	16
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.726	1	0.291	0.211	0.416	0.033
Departure Headway (Hd)	6.622	5.43	7.097	7.696	7.13	7.394
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	548	672	510	466	504	487
Service Time	4.322	3.13	5.089	5.452	4.898	5.394
HCM Lane V/C Ratio	0.721	1.098	0.29	0.212	0.417	0.033
HCM Control Delay	24.9	57.6	13	12.5	14.9	10.6
HCM Lane LOS	C	F	B	B	B	B
HCM 95th-tile Q	6	15.8	1.2	0.8	2	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	8	1	1
Peak Hour Factor	0.92	0.62	0.62	0.62
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	13	2	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.6
HCM LOS	B

Lane



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			150	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	0				0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99			0.97	1.00	
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1760	1863	1863	1536	1763	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				160		97
Link Speed (mph)		35	35		25	
Link Distance (ft)		890	756		1554	
Travel Time (s)		17.3	14.7		42.4	

Intersection Summary	
Area Type:	Other



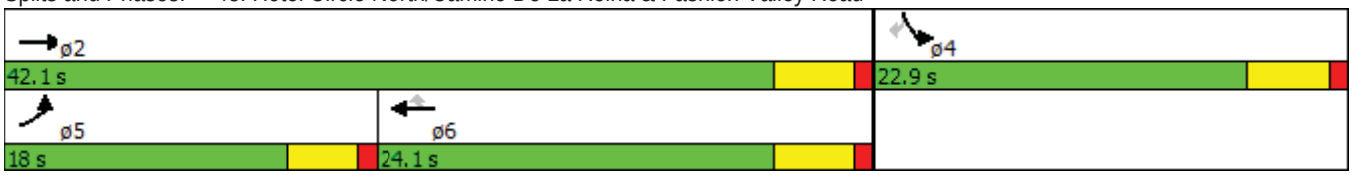
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	279	572	203	109	117	86
Confl. Peds. (#/hr)	5			5	2	
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.89	0.89	0.68	0.68	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	313	643	299	160	131	97
Shared Lane Traffic (%)						
Lane Group Flow (vph)	313	643	299	160	131	97

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	279	572	203	109	117	86
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	20.9	23.9	23.9	22.9	22.9
Total Split (s)	18.0	42.1	24.1	24.1	22.9	22.9
Total Split (%)	27.7%	64.8%	37.1%	37.1%	35.2%	35.2%
Yellow Time (s)	3.4	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	12.5	33.8	15.1	15.1	8.9	8.9
Actuated g/C Ratio	0.26	0.70	0.31	0.31	0.18	0.18
v/c Ratio	0.69	0.50	0.52	0.27	0.40	0.26
Control Delay	29.5	7.5	19.9	4.9	23.0	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	7.5	19.9	4.9	23.0	7.0
LOS	C	A	B	A	C	A
Approach Delay		14.7	14.6		16.2	
Approach LOS		B	B		B	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 48.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 45.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 48: Hotel Circle North/Camino De La Reina & Fashion Valley Road





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	279	572	203	109	117	86
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	313	643	299	0	131	18
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.89	0.89	0.68	0.68	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	386	1206	591	503	181	161
Arrive On Green	0.22	0.65	0.32	0.00	0.10	0.10
Sat Flow, veh/h	1774	1863	1863	1583	1774	1583
Grp Volume(v), veh/h	313	643	299	0	131	18
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1583	1774	1583
Q Serve(g_s), s	6.5	7.3	5.1	0.0	2.8	0.4
Cycle Q Clear(g_c), s	6.5	7.3	5.1	0.0	2.8	0.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	386	1206	591	503	181	161
V/C Ratio(X)	0.81	0.53	0.51	0.00	0.73	0.11
Avail Cap(c_a), veh/h	618	1774	916	778	817	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	3.7	10.8	0.0	17.0	15.9
Incr Delay (d2), s/veh	1.8	0.3	0.9	0.0	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	3.7	2.7	0.0	1.5	0.4
LnGrp Delay(d),s/veh	16.4	4.0	11.8	0.0	19.1	16.1
LnGrp LOS	B	A	B		B	B
Approach Vol, veh/h		956	299		149	
Approach Delay, s/veh		8.1	11.8		18.7	
Approach LOS		A	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		30.2		8.9	12.9	17.3		
Change Period (Y+Rc), s		4.9		4.9	4.4	4.9		
Max Green Setting (Gmax), s		37.2		18.0	13.6	19.2		
Max Q Clear Time (g_c+I1), s		9.3		4.8	8.5	7.1		
Green Ext Time (p_c), s		7.1		0.2	0.2	4.9		

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	70		70	160		0	190		190	150		0
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	1.00		0.99	0.97		0.98			0.99			0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	1863	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1766	3539	1561	3336	1863	1559	3433	3539	1564	3433	3539	1558
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			262			497			262			199
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		730			461			758			473	
Travel Time (s)		19.9			12.6			12.9			8.1	

Intersection Summary	
Area Type:	Other



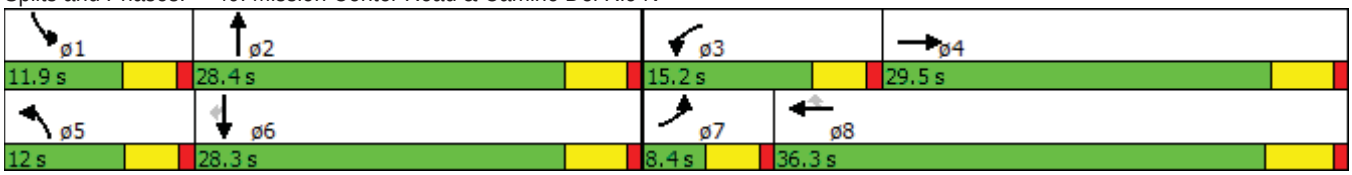
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	3	66	69	219	263	467	154	246	253	140	272	24
Confl. Peds. (#/hr)	4		8	8		4						
Confl. Bikes (#/hr)									2			5
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.98	0.98	0.98	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	4	79	82	233	280	497	157	251	258	146	283	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	79	82	233	280	497	157	251	258	146	283	25

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	66	69	219	263	467	154	246	253	140	272	24
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	7.0		4.0	7.0	7.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	8.4	20.9		8.4	36.3	36.3	8.4	20.9		8.4	27.9	27.9
Total Split (s)	8.4	29.5		15.2	36.3	36.3	12.0	28.4		11.9	28.3	28.3
Total Split (%)	9.9%	34.7%		17.9%	42.7%	42.7%	14.1%	33.4%		14.0%	33.3%	33.3%
Yellow Time (s)	3.4	3.9		3.4	4.3	4.3	3.4	3.9		3.4	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9		4.4	5.3	5.3	4.4	4.9		4.4	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes				Yes	Yes
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Act Effct Green (s)	4.5	10.2	50.4	10.3	16.7	16.7	7.1	12.4	50.4	7.7	12.7	12.7
Actuated g/C Ratio	0.09	0.20	1.00	0.20	0.33	0.33	0.14	0.25	1.00	0.15	0.25	0.25
v/c Ratio	0.03	0.11	0.05	0.33	0.46	0.59	0.33	0.29	0.16	0.28	0.32	0.05
Control Delay	30.0	19.6	0.1	23.6	16.6	4.8	26.6	20.5	0.2	26.1	20.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	19.6	0.1	23.6	16.6	4.8	26.6	20.5	0.2	26.1	20.5	0.2
LOS	C	B	A	C	B	A	C	C	A	C	C	A
Approach Delay		10.1			12.4			14.1			21.2	
Approach LOS		B			B			B			C	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 50.4	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 53.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 49: Mission Center Road & Camino Del Rio N



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	66	69	219	263	467	154	246	253	140	272	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	4	79	0	233	280	162	157	251	0	146	283	0
Adj No. of Lanes	1	2	1	2	1	1	2	2	1	2	2	1
Peak Hour Factor	0.84	0.84	0.84	0.94	0.94	0.94	0.98	0.98	0.98	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	8	501	224	376	459	387	270	826	369	263	819	366
Arrive On Green	0.00	0.14	0.00	0.11	0.25	0.25	0.08	0.23	0.00	0.08	0.23	0.00
Sat Flow, veh/h	1774	3539	1583	3442	1863	1568	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	4	79	0	233	280	162	157	251	0	146	283	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1863	1568	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	0.1	0.8	0.0	2.8	5.8	3.8	1.9	2.5	0.0	1.8	2.9	0.0
Cycle Q Clear(g_c), s	0.1	0.8	0.0	2.8	5.8	3.8	1.9	2.5	0.0	1.8	2.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	8	501	224	376	459	387	270	826	369	263	819	366
V/C Ratio(X)	0.52	0.16	0.00	0.62	0.61	0.42	0.58	0.30	0.00	0.55	0.35	0.00
Avail Cap(c_a), veh/h	164	2014	901	860	1335	1124	605	1924	861	597	1915	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.5	16.3	0.0	18.4	14.4	13.7	19.2	13.7	0.0	19.3	13.9	0.0
Incr Delay (d2), s/veh	18.7	0.1	0.0	0.6	0.5	0.3	0.7	0.1	0.0	1.8	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.4	0.0	1.4	3.0	1.6	0.9	1.2	0.0	0.9	1.5	0.0
LnGrp Delay(d),s/veh	40.2	16.4	0.0	19.0	14.9	14.0	20.0	13.8	0.0	21.1	14.3	0.0
LnGrp LOS	D	B		B	B	B	B	B		C	B	
Approach Vol, veh/h		83			675			408			429	
Approach Delay, s/veh		17.6			16.1			16.2			16.6	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	15.0	9.1	11.4	7.8	14.9	4.6	16.0
Change Period (Y+Rc), s	4.4	4.9	4.4	* 5.3	4.4	4.9	4.4	5.3
Max Green Setting (Gmax), s	7.5	23.5	10.8	* 25	7.6	23.4	4.0	31.0
Max Q Clear Time (g_c+I1), s	3.8	4.5	4.8	2.8	3.9	4.9	2.1	7.8
Green Ext Time (p_c), s	0.1	3.4	0.2	1.9	0.1	3.4	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	110		0	560		560	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	0			25			25			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850						0.850			
Flt Protected				0.950			0.950	0.960				
Satd. Flow (prot)	0	3539	1583	1770	3539	0	1681	1699	1583	0	0	0
Flt Permitted				0.950			0.950	0.960				
Satd. Flow (perm)	0	3539	1583	1770	3539	0	1681	1699	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			469						166			
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		461			859			441			281	
Travel Time (s)		12.6			23.4			10.0			6.4	

Intersection Summary	
Area Type:	Other



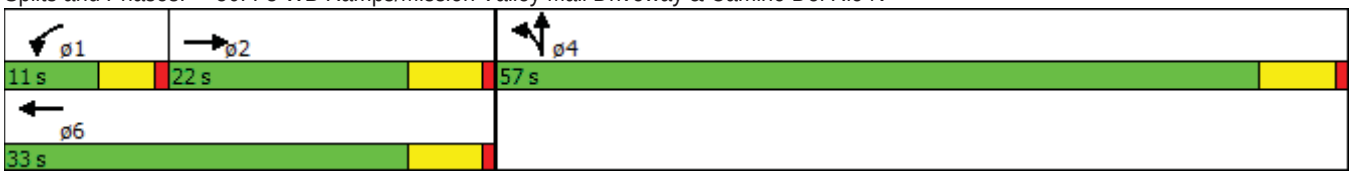
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	89	380	114	93	0	840	73	109	0	0	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.81	0.81	0.81	0.86	0.86	0.86	0.92	0.92	0.92	0.25	0.25	0.25
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	110	469	133	108	0	913	79	118	0	0	0
Shared Lane Traffic (%)							46%					
Lane Group Flow (vph)	0	110	469	133	108	0	493	499	118	0	0	0

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR
Lane Configurations							
Volume (vph)	89	380	114	93	840	73	109
Turn Type	NA	Free	Prot	NA	Split	NA	Free
Protected Phases	2		1	6	4	4	
Permitted Phases		Free					Free
Detector Phase	2		1	6	4	4	
Switch Phase							
Minimum Initial (s)	12.0		5.0	10.0	8.0	8.0	
Minimum Split (s)	22.0		9.7	22.0	57.0	57.0	
Total Split (s)	22.0		11.0	33.0	57.0	57.0	
Total Split (%)	24.4%		12.2%	36.7%	63.3%	63.3%	
Yellow Time (s)	5.0		3.7	5.0	5.0	5.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0		4.7	6.0	6.0	6.0	
Lead/Lag	Lag		Lead				
Lead-Lag Optimize?	Yes		Yes				
Recall Mode	Max		None	None	Min	Min	
Act Effct Green (s)	16.4	71.2	6.4	27.6	31.3	31.3	71.2
Actuated g/C Ratio	0.23	1.00	0.09	0.39	0.44	0.44	1.00
v/c Ratio	0.14	0.30	0.83	0.08	0.67	0.67	0.07
Control Delay	26.0	0.5	76.7	17.5	19.9	19.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	0.5	76.7	17.5	19.9	19.8	0.1
LOS	C	A	E	B	B	B	A
Approach Delay	5.3			50.2		17.8	
Approach LOS	A			D		B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 71.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 48.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 50: I-8 WB Ramps/Mission Valley Mall Driveway & Camino Del Rio N



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	89	380	114	93	0	840	73	109	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	0	110	0	133	108	0	969	0	0			
Adj No. of Lanes	0	2	1	1	2	0	2	0	1			
Peak Hour Factor	0.81	0.81	0.81	0.86	0.86	0.86	0.92	0.92	0.92			
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2			
Cap, veh/h	0	911	408	168	1515	0	1345	0	600			
Arrive On Green	0.00	0.26	0.00	0.09	0.43	0.00	0.38	0.00	0.00			
Sat Flow, veh/h	0	3632	1583	1774	3632	0	3548	0	1583			
Grp Volume(v), veh/h	0	110	0	133	108	0	969	0	0			
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0	1774	0	1583			
Q Serve(g_s), s	0.0	1.5	0.0	4.6	1.1	0.0	14.5	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	1.5	0.0	4.6	1.1	0.0	14.5	0.0	0.0			
Prop In Lane	0.00		1.00	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	911	408	168	1515	0	1345	0	600			
V/C Ratio(X)	0.00	0.12	0.00	0.79	0.07	0.00	0.72	0.00	0.00			
Avail Cap(c_a), veh/h	0	911	408	180	1537	0	2911	0	1299			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	17.7	0.0	27.5	10.5	0.0	16.5	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.3	0.0	17.6	0.0	0.0	1.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.0	3.0	0.5	0.0	7.2	0.0	0.0			
LnGrp Delay(d),s/veh	0.0	18.0	0.0	45.2	10.5	0.0	17.5	0.0	0.0			
LnGrp LOS		B		D	B		B					
Approach Vol, veh/h		110			241			969				
Approach Delay, s/veh		18.0			29.6			17.5				
Approach LOS		B			C			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.6	22.0		29.6		32.6		
Change Period (Y+Rc), s	* 4.7	6.0		6.0		6.0		
Max Green Setting (Gmax), s	* 6.3	16.0		51.0		27.0		
Max Q Clear Time (g_c+I1), s	6.6	3.5		16.5		3.1		
Green Ext Time (p_c), s	0.0	1.0		7.1		1.4		

Intersection Summary	
HCM 2010 Ctrl Delay	19.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	200			90	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	3539	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				78		57
Link Speed (mph)		25	25		25	
Link Distance (ft)		1900	707		752	
Travel Time (s)		51.8	19.3		20.5	

Intersection Summary	
Area Type:	Other



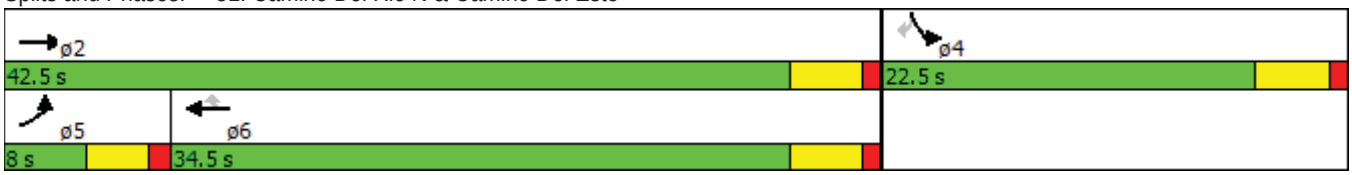
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	81	79	161	61	152	50
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.85	0.85	0.78	0.78	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	95	93	206	78	175	57
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	93	206	78	175	57

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	81	79	161	61	152	50
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.5	34.5	34.5	22.5	22.5
Total Split (s)	8.0	42.5	34.5	34.5	22.5	22.5
Total Split (%)	12.3%	65.4%	53.1%	53.1%	34.6%	34.6%
Yellow Time (s)	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	4.0	41.4	32.4	32.4	11.7	11.7
Actuated g/C Ratio	0.07	0.71	0.55	0.55	0.20	0.20
v/c Ratio	0.79	0.07	0.11	0.09	0.50	0.16
Control Delay	72.9	4.8	8.1	2.9	25.8	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.9	4.8	8.1	2.9	25.8	7.3
LOS	E	A	A	A	C	A
Approach Delay		39.2	6.7		21.3	
Approach LOS		D	A		C	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 58.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 20.2	Intersection LOS: C
Intersection Capacity Utilization 28.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 51: Camino Del Rio N & Camino Del Este





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	81	79	161	61	152	50
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	93	206	27	175	11
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.85	0.85	0.78	0.78	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	121	1306	1978	885	236	211
Arrive On Green	0.07	0.70	0.56	0.56	0.13	0.13
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	95	93	206	27	175	11
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	2.9	0.9	1.5	0.4	5.1	0.3
Cycle Q Clear(g_c), s	2.9	0.9	1.5	0.4	5.1	0.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	121	1306	1978	885	236	211
V/C Ratio(X)	0.79	0.07	0.10	0.03	0.74	0.05
Avail Cap(c_a), veh/h	131	1306	1978	885	589	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	2.6	5.6	5.4	22.6	20.5
Incr Delay (d2), s/veh	22.0	0.1	0.1	0.1	6.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.5	0.7	0.2	2.9	0.3
LnGrp Delay(d),s/veh	46.9	2.7	5.7	5.4	28.6	20.6
LnGrp LOS	D	A	A	A	C	C
Approach Vol, veh/h		188	233		186	
Approach Delay, s/veh		25.0	5.7		28.1	
Approach LOS		C	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		42.5		11.7	7.7	34.8		
Change Period (Y+Rc), s		4.5		4.5	4.0	4.5		
Max Green Setting (Gmax), s		38.0		18.0	4.0	30.0		
Max Q Clear Time (g_c+I1), s		2.9		7.1	4.9	3.5		
Green Ext Time (p_c), s		1.8		0.5	0.0	1.7		

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		200	0		0	0		0
Storage Lanes	1		1	0		1	1		1	0		1
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98		1.00							
Frt			0.850			0.850						0.850
Flt Protected	0.950				0.995		0.950					
Satd. Flow (prot)	1770	0	1583	0	1853	1583	1770	5085	1863	0	3539	1583
Flt Permitted	0.950				0.995		0.950					
Satd. Flow (perm)	1770	0	1558	0	1853	1583	1770	5085	1863	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			421						315
Link Speed (mph)		35			30			45			45	
Link Distance (ft)		378			430			672			469	
Travel Time (s)		7.4			9.8			10.2			7.1	

Intersection Summary	
Area Type:	Other



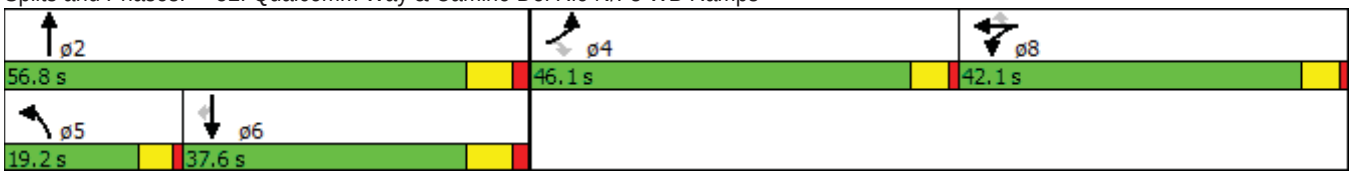
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	33	0	80	17	166	383	88	812	0	0	262	296
Confl. Peds. (#/hr)			4	4								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.89	0.89	0.89	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	40	0	96	19	182	421	99	912	0	0	279	315
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	0	96	0	201	421	99	912	0	0	279	315

Intersection Summary

Lane Group	EBL	EBR	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations								
Volume (vph)	33	80	166	383	88	812	262	296
Turn Type	Prot	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		8		5	2	6	
Permitted Phases		4		8				6
Detector Phase	4	4	8	8	5	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	15.0	15.0	14.0	12.0	13.0	13.0
Minimum Split (s)	46.1	46.1	42.1	42.1	18.7	25.0	37.0	37.0
Total Split (s)	46.1	46.1	42.1	42.1	19.2	56.8	37.6	37.6
Total Split (%)	31.8%	31.8%	29.0%	29.0%	13.2%	39.2%	25.9%	25.9%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.7	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.7	7.0	7.0	7.0
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Recall Mode	None	None	None	None	None	Min	Min	Min
Act Effct Green (s)	10.8	10.8	18.7	18.7	16.1	32.0	17.7	17.7
Actuated g/C Ratio	0.14	0.14	0.24	0.24	0.21	0.41	0.23	0.23
v/c Ratio	0.16	0.31	0.45	0.60	0.27	0.43	0.34	0.52
Control Delay	32.9	8.6	35.8	8.0	38.4	18.8	31.6	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	8.6	35.8	8.0	38.4	18.8	31.6	8.0
LOS	C	A	D	A	D	B	C	A
Approach Delay			17.0			20.7	19.1	
Approach LOS			B			C	B	

Intersection Summary	
Cycle Length: 145	
Actuated Cycle Length: 77.3	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 19.0	Intersection LOS: B
Intersection Capacity Utilization 57.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 52: Qualcomm Way & Camino Del Rio N/I-8 WB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	33	0	80	17	166	383	88	812	0	0	262	296
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	40	0	6	19	182	75	99	912	0	0	279	49
Adj No. of Lanes	1	0	1	0	1	1	1	3	1	0	2	1
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.89	0.89	0.89	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	48	458	430	345	2616	814	0	839	375
Arrive On Green	0.00	0.00	0.00	0.27	0.27	0.27	0.19	0.51	0.00	0.00	0.24	0.24
Sat Flow, veh/h		0		175	1679	1576	1774	5085	1583	0	3632	1583
Grp Volume(v), veh/h		0.0		201	0	75	99	912	0	0	279	49
Grp Sat Flow(s),veh/h/ln				1854	0	1576	1774	1695	1583	0	1770	1583
Q Serve(g_s), s				5.0	0.0	2.1	2.7	6.0	0.0	0.0	3.7	1.4
Cycle Q Clear(g_c), s				5.0	0.0	2.1	2.7	6.0	0.0	0.0	3.7	1.4
Prop In Lane				0.09		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				506	0	430	345	2616	814	0	839	375
V/C Ratio(X)				0.40	0.00	0.17	0.29	0.35	0.00	0.00	0.33	0.13
Avail Cap(c_a), veh/h				1207	0	1026	452	4454	1387	0	1905	852
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				16.9	0.0	15.8	19.5	8.2	0.0	0.0	18.0	17.1
Incr Delay (d2), s/veh				0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.5	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.6	0.0	0.9	1.3	2.8	0.0	0.0	1.9	0.6
LnGrp Delay(d),s/veh				17.0	0.0	15.9	19.7	8.2	0.0	0.0	18.5	17.4
LnGrp LOS				B		B	B	A			B	B
Approach Vol, veh/h					276			1011			328	
Approach Delay, s/veh					16.7			9.3			18.3	
Approach LOS					B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		36.2			15.8	20.5		20.6
Change Period (Y+Rc), s		7.0			* 4.7	7.0		5.1
Max Green Setting (Gmax), s		49.8			* 15	30.6		37.0
Max Q Clear Time (g_c+I1), s		8.0			4.7	5.7		7.0
Green Ext Time (p_c), s		8.7			0.0	7.8		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		0	90		140	0		0	140		0
Storage Lanes	2		0	1		0	0		0	1		1
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor	1.00	1.00		0.99	0.99			0.97		1.00	1.00	0.97
Frt		0.996			0.947			0.865				0.850
Flt Protected	0.950			0.950						0.950	0.953	
Satd. Flow (prot)	3433	3522	0	1770	3332	0	0	1565	0	1681	1686	1583
Flt Permitted	0.950			0.950						0.950	0.953	
Satd. Flow (perm)	3431	3522	0	1751	3332	0	0	1565	0	1678	1683	1530
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			114			746				174
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		1245			572			282			437	
Travel Time (s)		24.3			11.1			4.8			7.4	

Intersection Summary	
Area Type:	Other



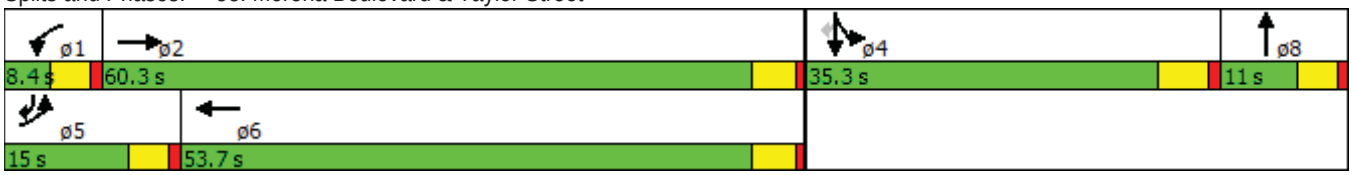
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	285	112	3	3	834	462	0	0	15	88	1	221
Confl. Peds. (#/hr)	3		3	3		3	19		1	1		19
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.86	0.86	0.86	0.62	0.62	0.62	0.81	0.81	0.81
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	306	120	3	3	970	537	0	0	24	109	1	273
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	306	123	0	3	1507	0	0	24	0	54	56	273

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Configurations								
Volume (vph)	285	112	3	834	0	88	1	221
Turn Type	Prot	NA	Prot	NA	NA	Split	NA	pm+ov
Protected Phases	5	2	1	6	8	4	4	5
Permitted Phases								4
Detector Phase	5	2	1	6	8	4	4	5
Switch Phase								
Minimum Initial (s)	2.0	7.0	4.0	7.0	2.0	7.0	7.0	2.0
Minimum Split (s)	11.0	22.9	8.4	26.9	11.0	35.3	35.3	11.0
Total Split (s)	15.0	60.3	8.4	53.7	11.0	35.3	35.3	15.0
Total Split (%)	13.0%	52.4%	7.3%	46.7%	9.6%	30.7%	30.7%	13.0%
Yellow Time (s)	3.4	3.9	3.4	3.9	3.4	4.3	4.3	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.4	4.9	4.4	5.3	5.3	4.4
Lead/Lag	Lead	Lag	Lead	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	11.2	64.3	4.2	48.3	4.8	15.6	15.6	25.4
Actuated g/C Ratio	0.12	0.72	0.05	0.54	0.05	0.17	0.17	0.28
v/c Ratio	0.71	0.05	0.04	0.82	0.03	0.18	0.19	0.48
Control Delay	52.6	9.2	52.0	24.5	0.1	33.9	34.0	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.6	9.2	52.0	24.5	0.1	33.9	34.0	10.3
LOS	D	A	D	C	A	C	C	B
Approach Delay		40.1		24.5	0.1		17.1	
Approach LOS		D		C	A		B	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 89.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 25.9	Intersection LOS: C
Intersection Capacity Utilization 74.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 53: Morena Boulevard & Taylor Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	285	112	3	3	834	462	0	0	15	88	1	221
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	0	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	306	120	3	3	970	537	0	0	0	110	0	273
Adj No. of Lanes	2	2	0	1	2	0	0	1	0	2	0	1
Peak Hour Factor	0.93	0.93	0.93	0.86	0.86	0.86	0.62	0.62	0.62	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	2
Cap, veh/h	376	2178	54	6	1136	611	0	2	0	777	0	512
Arrive On Green	0.11	0.62	0.62	0.00	0.51	0.51	0.00	0.00	0.00	0.22	0.00	0.22
Sat Flow, veh/h	3442	3529	88	1774	2222	1196	0	-81961	0	3540	0	1542
Grp Volume(v), veh/h	306	60	63	3	767	740	0	0	0	110	0	273
Grp Sat Flow(s),veh/h/ln	1721	1770	1847	1774	1770	1649	0	1863	0	1770	0	1542
Q Serve(g_s), s	7.9	1.2	1.2	0.2	34.1	36.3	0.0	0.0	0.0	2.3	0.0	13.2
Cycle Q Clear(g_c), s	7.9	1.2	1.2	0.2	34.1	36.3	0.0	0.0	0.0	2.3	0.0	13.2
Prop In Lane	1.00		0.05	1.00		0.73	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	376	1092	1140	6	904	843	0	2	0	777	0	512
V/C Ratio(X)	0.81	0.05	0.06	0.53	0.85	0.88	0.00	0.00	0.00	0.14	0.00	0.53
Avail Cap(c_a), veh/h	400	1092	1140	78	948	883	0	135	0	1165	0	681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.7	6.9	6.9	45.4	19.2	19.8	0.0	0.0	0.0	28.7	0.0	24.9
Incr Delay (d2), s/veh	10.5	0.0	0.0	25.2	7.3	10.0	0.0	0.0	0.0	0.1	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.6	0.6	0.1	18.2	18.8	0.0	0.0	0.0	1.1	0.0	11.7
LnGrp Delay(d),s/veh	50.1	6.9	6.9	70.6	26.5	29.8	0.0	0.0	0.0	28.8	0.0	26.4
LnGrp LOS	D	A	A	E	C	C				C		C
Approach Vol, veh/h		429			1510			0			383	
Approach Delay, s/veh		37.8			28.2			0.0			27.1	
Approach LOS		D			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.7	61.1		25.3	14.4	51.5		0.0
Change Period (Y+Rc), s	4.4	4.9		5.3	4.4	4.9		4.4
Max Green Setting (Gmax), s	4.0	55.4		30.0	10.6	48.8		6.6
Max Q Clear Time (g_c+I1), s	2.2	3.2		15.2	9.9	38.3		0.0
Green Ext Time (p_c), s	0.0	25.4		2.1	0.1	8.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	170			140	0	280
Storage Lanes	1			0	2	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.97	1.00
Ped Bike Factor						0.98
Frt			0.992			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	3511	0	3433	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	3511	0	3433	1557
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			8			12
Link Speed (mph)		35	35		30	
Link Distance (ft)		532	730		439	
Travel Time (s)		10.4	14.2		10.0	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	183	106	1341	74	196	114
Confl. Peds. (#/hr)						4
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	208	120	1474	81	215	125
Shared Lane Traffic (%)						
Lane Group Flow (vph)	208	120	1555	0	215	125

Intersection Summary

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Volume (vph)	183	106	1341	196	114
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	5	2	6	4	5
Permitted Phases					4
Detector Phase	5	2	6	4	5
Switch Phase					
Minimum Initial (s)	5.0	10.0	15.0	5.0	5.0
Minimum Split (s)	9.7	21.5	35.5	28.0	9.7
Total Split (s)	16.4	62.0	45.6	28.0	16.4
Total Split (%)	18.2%	68.9%	50.7%	31.1%	18.2%
Yellow Time (s)	3.7	4.5	4.5	5.0	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	5.5	5.5	6.0	4.7
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	Max	Max	None	None
Act Effct Green (s)	11.3	56.8	40.7	10.0	22.7
Actuated g/C Ratio	0.14	0.72	0.52	0.13	0.29
v/c Ratio	0.82	0.09	0.85	0.49	0.27
Control Delay	59.5	4.4	23.5	35.0	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	4.4	23.5	35.0	17.2
LOS	E	A	C	C	B
Approach Delay		39.3	23.5	28.5	
Approach LOS		D	C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 26.6	Intersection LOS: C
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 54: Taylor Street & I-8 EB Ramp





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	183	106	1341	74	196	114
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	208	120	1474	0	215	114
Adj No. of Lanes	1	1	2	0	2	1
Peak Hour Factor	0.88	0.88	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	247	1408	1960	0	310	363
Arrive On Green	0.14	0.76	0.55	0.00	0.09	0.09
Sat Flow, veh/h	1774	1863	3725	0	3442	1583
Grp Volume(v), veh/h	208	120	1474	0	215	114
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	0	1721	1583
Q Serve(g_s), s	8.5	1.3	23.8	0.0	4.5	4.5
Cycle Q Clear(g_c), s	8.5	1.3	23.8	0.0	4.5	4.5
Prop In Lane	1.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	247	1408	1960	0	310	363
V/C Ratio(X)	0.84	0.09	0.75	0.00	0.69	0.31
Avail Cap(c_a), veh/h	278	1408	1960	0	1013	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	2.4	12.7	0.0	33.0	23.9
Incr Delay (d2), s/veh	16.8	0.1	2.7	0.0	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.7	12.2	0.0	2.2	4.2
LnGrp Delay(d),s/veh	48.2	2.5	15.5	0.0	34.0	24.1
LnGrp LOS	D	A	B		C	C
Approach Vol, veh/h		328	1474		329	
Approach Delay, s/veh		31.4	15.5		30.6	
Approach LOS		C	B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		62.0		12.7	15.1	46.9		
Change Period (Y+Rc), s		5.5		6.0	* 4.7	5.5		
Max Green Setting (Gmax), s		56.5		22.0	* 12	40.1		
Max Q Clear Time (g_c+I1), s		3.3		6.5	10.5	25.8		
Green Ext Time (p_c), s		10.7		0.2	0.0	7.0		

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	360			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.929			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1730	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1730	0	1770	1583
Link Speed (mph)		35	35		35	
Link Distance (ft)		730	3613		599	
Travel Time (s)		14.2	70.4		11.7	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	146	120	88	99	140	604
Confl. Peds. (#/hr)	3			3	2	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.82	0.82	0.92	0.92	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	178	146	96	108	151	649
Shared Lane Traffic (%)						
Lane Group Flow (vph)	178	146	204	0	151	649

Intersection Summary

Intersection	
Intersection Delay, s/veh	34.2
Intersection LOS	D

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Vol, veh/h	0	146	120	0	88	99	0	140	604
Peak Hour Factor	0.82	0.82	0.82	0.92	0.92	0.92	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	178	146	0	96	108	0	151	649
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	13.8	13.6	47.7
HCM LOS	B	B	E

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	47%	0%	0%
Vol Right, %	0%	0%	53%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	146	120	187	140	604
LT Vol	146	0	0	140	0
Through Vol	0	120	88	0	0
RT Vol	0	0	99	0	604
Lane Flow Rate	178	146	203	151	649
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.374	0.286	0.373	0.28	0.991
Departure Headway (Hd)	7.556	7.045	6.606	6.707	5.493
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	474	508	543	534	656
Service Time	5.33	4.819	4.676	4.464	3.249
HCM Lane V/C Ratio	0.376	0.287	0.374	0.283	0.989
HCM Control Delay	14.8	12.6	13.6	12.1	56
HCM Lane LOS	B	B	B	B	F
HCM 95th-tile Q	1.7	1.2	1.7	1.1	15.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	180			90	0	60
Storage Lanes	1			1	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1863	1583	1770	1583
Link Speed (mph)		30	35		30	
Link Distance (ft)		806	1103		432	
Travel Time (s)		18.3	21.5		9.8	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	162	87	356	368	247	23
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.86	0.86	0.87	0.87	0.71	0.71
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	188	101	409	423	348	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	188	101	409	423	348	32

Intersection Summary

Intersection	
Intersection Delay, s/veh	23.3
Intersection LOS	C

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Vol, veh/h	0	162	87	0	356	368	0	247	23
Peak Hour Factor	0.86	0.86	0.86	0.92	0.87	0.87	0.92	0.71	0.71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	188	101	0	409	423	0	348	32
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	14.5	23.9	28.7
HCM LOS	B	C	D

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	162	87	356	368	247	23
LT Vol	162	0	0	0	247	0
Through Vol	0	87	356	0	0	0
RT Vol	0	0	0	368	0	23
Lane Flow Rate	188	101	409	423	348	32
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.41	0.206	0.75	0.691	0.75	0.059
Departure Headway (Hd)	7.844	7.329	6.598	5.883	7.76	6.539
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	462	493	544	609	463	544
Service Time	5.544	5.029	4.396	3.68	5.546	4.324
HCM Lane V/C Ratio	0.407	0.205	0.752	0.695	0.752	0.059
HCM Control Delay	15.9	11.9	26.8	21	30.5	9.7
HCM Lane LOS	C	B	D	C	D	A
HCM 95th-tile Q	2	0.8	6.5	5.4	6.3	0.2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	110		300	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00			0.97
Frt	0.935					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1723	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1723	0	1768	1863	1770	1534
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	73					189
Link Speed (mph)	35			35	40	
Link Distance (ft)	1103			674	947	
Travel Time (s)	21.5			13.1	16.1	

Intersection Summary	
Area Type:	Other



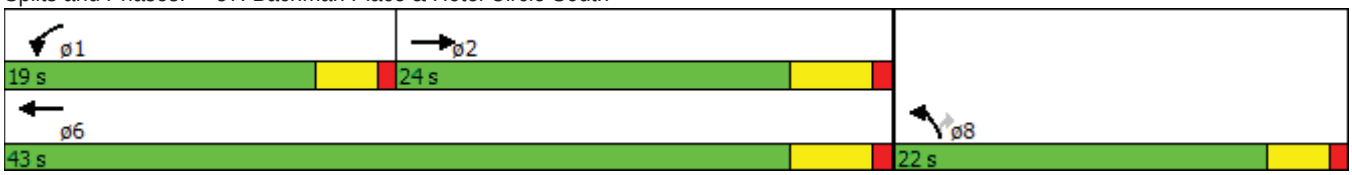
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	190	177	320	500	228	119
Confl. Peds. (#/hr)		1	1			6
Confl. Bikes (#/hr)						
Peak Hour Factor	0.78	0.78	0.85	0.85	0.63	0.63
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	244	227	376	588	362	189
Shared Lane Traffic (%)						
Lane Group Flow (vph)	471	0	376	588	362	189

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Volume (vph)	190	320	500	228	119
Turn Type	NA	Prot	NA	Prot	Perm
Protected Phases	2	1	6	8	
Permitted Phases					8
Detector Phase	2	1	6	8	8
Switch Phase					
Minimum Initial (s)	10.0	4.0	10.0	4.0	4.0
Minimum Split (s)	23.0	8.0	21.0	22.0	22.0
Total Split (s)	24.0	19.0	43.0	22.0	22.0
Total Split (%)	36.9%	29.2%	66.2%	33.8%	33.8%
Yellow Time (s)	4.0	3.0	4.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	5.0	4.0	4.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	Min	None	Min	None	None
Act Effct Green (s)	17.8	14.7	36.6	15.8	15.8
Actuated g/C Ratio	0.29	0.24	0.60	0.26	0.26
v/c Ratio	0.85	0.89	0.53	0.80	0.35
Control Delay	35.5	50.1	10.0	36.6	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	50.1	10.0	36.6	5.5
LOS	D	D	A	D	A
Approach Delay	35.5		25.6	25.9	
Approach LOS	D		C	C	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 61.4	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 28.0	Intersection LOS: C
Intersection Capacity Utilization 62.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 57: Bachman Place & Hotel Circle South



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	190	177	320	500	228	119
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	244	163	376	588	362	0
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.78	0.78	0.85	0.85	0.63	0.63
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	311	208	427	1133	419	374
Arrive On Green	0.30	0.30	0.24	0.61	0.24	0.00
Sat Flow, veh/h	1042	696	1774	1863	1774	1583
Grp Volume(v), veh/h	0	407	376	588	362	0
Grp Sat Flow(s),veh/h/ln	0	1739	1774	1863	1774	1583
Q Serve(g_s), s	0.0	12.4	11.8	10.4	11.3	0.0
Cycle Q Clear(g_c), s	0.0	12.4	11.8	10.4	11.3	0.0
Prop In Lane		0.40	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	519	427	1133	419	374
V/C Ratio(X)	0.00	0.78	0.88	0.52	0.86	0.00
Avail Cap(c_a), veh/h	0	572	461	1226	553	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	18.6	21.1	6.5	21.2	0.0
Incr Delay (d2), s/veh	0.0	6.9	16.4	0.5	9.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.9	7.7	5.4	6.7	0.0
LnGrp Delay(d),s/veh	0.0	25.4	37.6	7.0	30.9	0.0
LnGrp LOS		C	D	A	C	
Approach Vol, veh/h	407			964	362	
Approach Delay, s/veh	25.4			18.9	30.9	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.9	22.2				40.1		17.6
Change Period (Y+Rc), s	4.0	5.0				5.0		4.0
Max Green Setting (Gmax), s	15.0	19.0				38.0		18.0
Max Q Clear Time (g_c+I1), s	13.8	14.4				12.4		13.3
Green Ext Time (p_c), s	0.1	2.9				9.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		220	0		0	0		80	330		0
Storage Lanes	2		1	0		0	0		1	1		0
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.91	0.91	1.00
Ped Bike Factor									0.99	1.00	1.00	
Frt			0.850						0.850			
Flt Protected	0.950									0.950	0.991	
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1610	3360	0
Flt Permitted	0.950									0.950	0.991	
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1561	1606	3358	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			456						182			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		791			343			273			758	
Travel Time (s)		18.0			7.8			4.7			12.9	

Intersection Summary	
Area Type:	Other



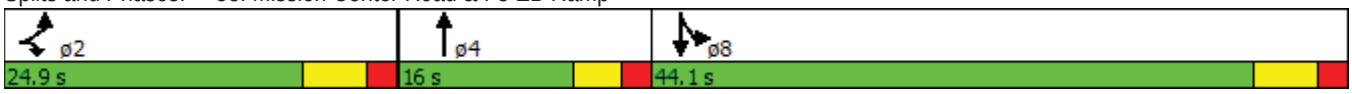
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	360	0	401	0	0	0	0	304	108	222	279	0
Confl. Peds. (#/hr)									7	7		
Confl. Bikes (#/hr)									1			3
Peak Hour Factor	0.88	0.88	0.88	0.25	0.25	0.25	0.83	0.83	0.83	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	409	0	456	0	0	0	0	366	130	244	307	0
Shared Lane Traffic (%)										27%		
Lane Group Flow (vph)	409	0	456	0	0	0	0	366	130	178	373	0

Intersection Summary

Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	360	401	304	108	222	279
Turn Type	Prot	Prot	NA	Free	Split	NA
Protected Phases	2	2	4		8	8
Permitted Phases				Free		
Detector Phase	2	2	4		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	2.0		18.0	18.0
Minimum Split (s)	11.1	11.1	7.0		44.1	44.1
Total Split (s)	24.9	24.9	16.0		44.1	44.1
Total Split (%)	29.3%	29.3%	18.8%		51.9%	51.9%
Yellow Time (s)	4.1	4.1	3.0		4.1	4.1
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.1	6.1	5.0		6.1	6.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None		Min	Min
Act Effct Green (s)	11.0	11.0	9.3	55.6	18.1	18.1
Actuated g/C Ratio	0.20	0.20	0.17	1.00	0.33	0.33
v/c Ratio	0.61	0.67	0.62	0.08	0.34	0.34
Control Delay	24.6	8.1	26.9	0.1	17.8	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	8.1	26.9	0.1	17.8	16.2
LOS	C	A	C	A	B	B
Approach Delay			19.9			16.7
Approach LOS			B			B

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 55.6	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 50.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 58: Mission Center Road & I-8 EB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	360	0	401	0	0	0	0	304	108	222	279	0
Number	5	2	12				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	409	0	0				0	366	0	184	391	0
Adj No. of Lanes	2	0	1				0	2	1	1	2	0
Peak Hour Factor	0.88	0.88	0.88				0.83	0.83	0.83	0.91	0.91	0.91
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	561	0	258				0	505	226	647	1358	0
Arrive On Green	0.16	0.00	0.00				0.00	0.14	0.00	0.36	0.36	0.00
Sat Flow, veh/h	3442	0	1583				0	3632	1583	1774	3725	0
Grp Volume(v), veh/h	409	0	0				0	366	0	184	391	0
Grp Sat Flow(s),veh/h/ln	1721	0	1583				0	1770	1583	1774	1863	0
Q Serve(g_s), s	5.9	0.0	0.0				0.0	5.2	0.0	3.8	3.9	0.0
Cycle Q Clear(g_c), s	5.9	0.0	0.0				0.0	5.2	0.0	3.8	3.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	561	0	258				0	505	226	647	1358	0
V/C Ratio(X)	0.73	0.00	0.00				0.00	0.72	0.00	0.28	0.29	0.00
Avail Cap(c_a), veh/h	1241	0	571				0	746	334	1292	2714	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.7	0.0	0.0				0.0	21.4	0.0	11.8	11.8	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0				0.0	0.7	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0				0.0	2.5	0.0	1.9	2.0	0.0
LnGrp Delay(d),s/veh	21.4	0.0	0.0				0.0	22.1	0.0	11.8	11.8	0.0
LnGrp LOS	C							C		B	B	
Approach Vol, veh/h		409						366			575	
Approach Delay, s/veh		21.4						22.1			11.8	
Approach LOS		C						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		14.6		12.4				25.1
Change Period (Y+Rc), s		6.1		5.0				6.1
Max Green Setting (Gmax), s		18.8		11.0				38.0
Max Q Clear Time (g_c+I1), s		7.9		7.2				5.9
Green Ext Time (p_c), s		0.6		0.3				1.8

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	280		0	0		220	0		100	0		0
Storage Lanes	1		0	0		1	0		1	1		1
Taper Length (ft)	25			0			0			0		
Lane Util. Factor	0.91	0.91	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor									0.97	1.00	1.00	0.99
Frt		0.994				0.850			0.850			0.850
Flt Protected	0.950	0.964			0.995			0.992		0.950	0.973	
Satd. Flow (prot)	1610	3249	0	0	3522	1583	0	1848	1583	1681	1722	1583
Flt Permitted	0.950	0.964			0.995			0.992		0.950	0.973	
Satd. Flow (perm)	1610	3249	0	0	3522	1583	0	1848	1538	1679	1720	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				272			196			398
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		473			544			384			273	
Travel Time (s)		9.2			10.6			6.5			4.7	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	197	27	5	10	94	223	2	11	1	262	76	346
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)												2
Peak Hour Factor	0.83	0.83	0.83	0.82	0.82	0.82	0.50	0.50	0.50	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	237	33	6	12	115	272	4	22	2	301	87	398
Shared Lane Traffic (%)	50%									36%		
Lane Group Flow (vph)	118	158	0	0	127	272	0	26	2	193	195	398

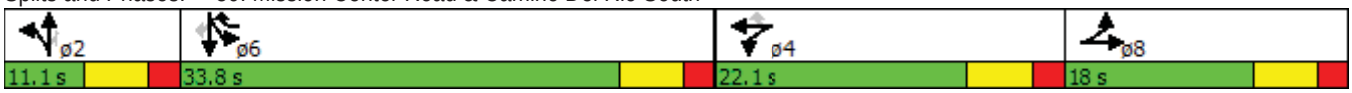
Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	197	27	94	223	11	1	262	76	346
Turn Type	Split	NA	NA	pm+ov	NA	Perm	Split	NA	Perm
Protected Phases	8	8	4	6	2		6	6	
Permitted Phases				4		2			6
Detector Phase	8	8	4	6	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	16.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	16.1	16.1	22.1	33.1	11.1	11.1	33.1	33.1	33.1
Total Split (s)	18.0	18.0	22.1	33.8	11.1	11.1	33.8	33.8	33.8
Total Split (%)	21.2%	21.2%	26.0%	39.8%	13.1%	13.1%	39.8%	39.8%	39.8%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	Min	None	None	Min	Min	Min
Act Effct Green (s)	12.1	12.1	18.7	38.4	5.8	5.8	22.3	22.3	22.3
Actuated g/C Ratio	0.21	0.21	0.32	0.66	0.10	0.10	0.38	0.38	0.38
v/c Ratio	0.35	0.23	0.11	0.24	0.14	0.01	0.30	0.30	0.47
Control Delay	31.1	26.8	22.5	1.8	35.0	0.0	23.6	23.4	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.1	26.8	22.5	1.8	35.0	0.0	23.6	23.5	4.9
LOS	C	C	C	A	C	A	C	C	A
Approach Delay		28.6	8.4		32.5			14.1	
Approach LOS		C	A		C			B	

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 58.4
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 15.6 — Intersection LOS: B
Intersection Capacity Utilization 54.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 59: Mission Center Road & Camino Del Rio South



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	197	27	5	10	94	223	2	11	1	262	76	346
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	237	33	6	12	115	272	4	22	2	194	237	398
Adj No. of Lanes	2	1	0	0	2	1	0	1	1	1	1	1
Peak Hour Factor	0.83	0.83	0.83	0.82	0.82	0.82	0.50	0.50	0.50	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	477	206	37	38	744	388	8	46	47	517	543	450
Arrive On Green	0.13	0.13	0.13	0.22	0.22	0.22	0.03	0.03	0.03	0.29	0.29	0.29
Sat Flow, veh/h	3548	1535	279	175	3448	1583	284	1564	1576	1774	1863	1545
Grp Volume(v), veh/h	237	0	39	127	0	272	26	0	2	194	237	398
Grp Sat Flow(s),veh/h/ln	1774	0	1814	1854	1770	1583	1849	0	1576	1774	1863	1545
Q Serve(g_s), s	4.6	0.0	1.4	4.3	0.0	11.6	1.0	0.0	0.1	6.5	7.7	18.2
Cycle Q Clear(g_c), s	4.6	0.0	1.4	4.3	0.0	11.6	1.0	0.0	0.1	6.5	7.7	18.2
Prop In Lane	1.00		0.15	0.09		1.00	0.15		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	477	0	244	400	382	388	55	0	47	517	543	450
V/C Ratio(X)	0.50	0.00	0.16	0.32	0.00	0.70	0.48	0.00	0.04	0.38	0.44	0.88
Avail Cap(c_a), veh/h	569	0	291	400	382	388	125	0	106	663	696	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	28.4	24.5	0.0	25.5	35.4	0.0	35.0	20.9	21.3	25.1
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.2	0.0	4.7	6.3	0.0	0.4	0.2	0.2	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.7	2.2	0.0	5.8	0.6	0.0	0.0	3.1	4.0	9.1
LnGrp Delay(d),s/veh	30.1	0.0	28.5	24.7	0.0	30.2	41.7	0.0	35.3	21.1	21.5	35.9
LnGrp LOS	C		C	C		C	D		D	C	C	D
Approach Vol, veh/h		276			399			28			829	
Approach Delay, s/veh		29.8			28.4			41.3			28.4	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		8.3		22.1		27.7		16.1
Change Period (Y+Rc), s		6.1		6.1		6.1		6.1
Max Green Setting (Gmax), s		5.0		16.0		27.7		11.9
Max Q Clear Time (g_c+I1), s		3.0		13.6		20.2		6.6
Green Ext Time (p_c), s		0.0		0.3		1.3		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	28.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		2	0		1	0		0	0		0
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor											1.00	
Frt			0.850			0.865		0.962			0.973	
Flt Protected												
Satd. Flow (prot)	0	0	2787	0	0	1611	0	3405	0	0	3431	0
Flt Permitted												
Satd. Flow (perm)	0	0	2787	0	0	1611	0	3405	0	0	3431	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			265			75		127			69	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		550			209			411			198	
Travel Time (s)		12.5			4.8			6.2			3.0	

Intersection Summary	
Area Type:	Other



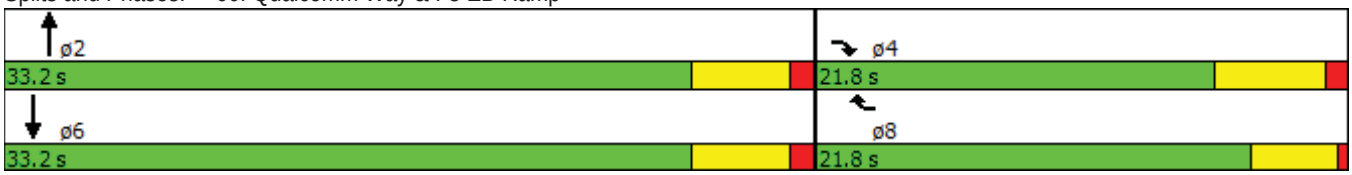
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	453	0	0	341	0	932	321	0	622	136
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.83	0.92	0.83	0.90	0.90	0.90	0.91	0.91	0.91	0.92	0.81	0.81
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	546	0	0	379	0	1024	353	0	768	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	546	0	0	379	0	1377	0	0	936	0

Intersection Summary

Lane Group	EBR	WBR	NBT	SBT
Lane Configurations				
Volume (vph)	453	341	932	622
Turn Type	Prot	Prot	NA	NA
Protected Phases	4	8	2	6
Permitted Phases				
Detector Phase	4	8	2	6
Switch Phase				
Minimum Initial (s)	5.0	4.0	15.0	15.0
Minimum Split (s)	21.5	20.0	21.1	26.1
Total Split (s)	21.8	21.8	33.2	33.2
Total Split (%)	39.6%	39.6%	60.4%	60.4%
Yellow Time (s)	4.5	3.5	4.1	4.1
All-Red Time (s)	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.0	5.1	5.1
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	Min	Min
Act Effct Green (s)	12.0	13.5	22.8	22.8
Actuated g/C Ratio	0.26	0.29	0.50	0.50
v/c Ratio	0.59	0.72	0.78	0.54
Control Delay	10.6	20.9	12.8	8.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	20.9	12.8	8.9
LOS	B	C	B	A
Approach Delay			12.8	8.9
Approach LOS			B	A

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 45.8	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 64.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 60: Qualcomm Way & I-8 EB Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	453	0	0	341	0	932	321	0	622	136
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	0	1863	0	0	1863	0	1863	1900	0	1863	1900
Adj Flow Rate, veh/h	0	0	323	0	0	0	0	1024	0	0	768	125
Adj No. of Lanes	0	0	2	0	0	1	0	2	0	0	2	0
Peak Hour Factor	0.83	0.92	0.83	0.90	0.90	0.90	0.91	0.91	0.91	0.92	0.81	0.81
Percent Heavy Veh, %	0	0	2	0	0	2	0	2	2	0	2	2
Cap, veh/h	0	0	0	0	0	0	0	2641	0	0	2268	369
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.75	0.75
Sat Flow, veh/h		0			0		0	3725	0	0	3132	494
Grp Volume(v), veh/h		0.0			0.0		0	1024	0	0	447	446
Grp Sat Flow(s),veh/h/ln							0	1770	0	0	1770	1763
Q Serve(g_s), s							0.0	2.1	0.0	0.0	1.7	1.7
Cycle Q Clear(g_c), s							0.0	2.1	0.0	0.0	1.7	1.7
Prop In Lane							0.00		0.00	0.00		0.28
Lane Grp Cap(c), veh/h							0	2641	0	0	1321	1316
V/C Ratio(X)							0.00	0.39	0.00	0.00	0.34	0.34
Avail Cap(c_a), veh/h							0	4948	0	0	2474	2465
HCM Platoon Ratio							1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)							0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh							0.0	0.9	0.0	0.0	0.9	0.9
Incr Delay (d2), s/veh							0.0	0.0	0.0	0.0	0.1	0.1
Initial Q Delay(d3),s/veh							0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln							0.0	0.9	0.0	0.0	0.8	0.8
LnGrp Delay(d),s/veh							0.0	0.9	0.0	0.0	0.9	0.9
LnGrp LOS								A			A	A
Approach Vol, veh/h								1024			893	
Approach Delay, s/veh								0.9			0.9	
Approach LOS								A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		20.1				20.1		
Change Period (Y+Rc), s		5.1				5.1		
Max Green Setting (Gmax), s		28.1				28.1		
Max Q Clear Time (g_c+I1), s		4.1				3.7		
Green Ext Time (p_c), s		8.9				8.9		

Intersection Summary	
HCM 2010 Ctrl Delay	0.9
HCM 2010 LOS	A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	80		35	60		60	100		0	0		160
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	0.99		0.98	1.00		0.98		1.00		1.00		0.98
Frt			0.850			0.850		0.982				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3464	0	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1760	1863	1555	1762	1863	1554	1770	3464	0	1768	3539	1550
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135			133		10				287
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		536			618			1151			411	
Travel Time (s)		10.4			12.0			17.4			6.2	

Intersection Summary	
Area Type:	Other



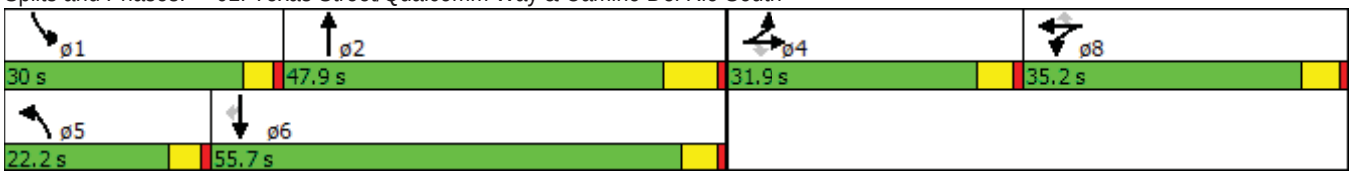
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	86	56	59	38	54	101	109	1023	142	442	410	247
Confl. Peds. (#/hr)	4		3	3		4			2	2		
Confl. Bikes (#/hr)			1			1			1			1
Peak Hour Factor	0.76	0.76	0.76	0.88	0.88	0.88	0.92	0.92	0.92	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	113	74	78	43	61	115	118	1112	154	514	477	287
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	74	78	43	61	115	118	1266	0	514	477	287

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	86	56	59	38	54	101	109	1023	442	410	247
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	10.0	10.0
Minimum Split (s)	31.9	31.9	31.9	35.2	35.2	35.2	8.4	29.0	8.4	34.9	34.9
Total Split (s)	31.9	31.9	31.9	35.2	35.2	35.2	22.2	47.9	30.0	55.7	55.7
Total Split (%)	22.0%	22.0%	22.0%	24.3%	24.3%	24.3%	15.3%	33.0%	20.7%	38.4%	38.4%
Yellow Time (s)	3.9	3.9	3.9	4.2	4.2	4.2	3.4	6.0	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	5.2	5.2	5.2	4.4	7.0	4.4	4.9	4.9
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	13.8	13.8	13.8	10.9	10.9	10.9	11.7	41.6	26.0	58.0	58.0
Actuated g/C Ratio	0.12	0.12	0.12	0.10	0.10	0.10	0.10	0.36	0.23	0.51	0.51
v/c Ratio	0.53	0.33	0.25	0.26	0.34	0.43	0.65	1.00	1.28	0.27	0.31
Control Delay	57.2	50.9	2.0	51.5	53.5	10.4	68.2	61.6	178.8	19.8	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4
Total Delay	57.2	50.9	2.0	51.5	53.5	10.4	68.2	61.6	178.8	20.1	4.3
LOS	E	D	A	D	D	B	E	E	F	C	A
Approach Delay		39.2			30.5			62.2		80.4	
Approach LOS		D			C			E		F	

Intersection Summary	
Cycle Length: 145	
Actuated Cycle Length: 114.1	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.28	
Intersection Signal Delay: 65.5	Intersection LOS: E
Intersection Capacity Utilization 83.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 61: Texas Street/Qualcomm Way & Camino Del Rio South



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	86	56	59	38	54	101	109	1023	142	442	410	247
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	113	74	0	43	61	0	118	1112	149	514	477	72
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.76	0.76	0.76	0.88	0.88	0.88	0.92	0.92	0.92	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	179	152	114	119	101	147	1202	161	439	1944	850
Arrive On Green	0.10	0.10	0.00	0.06	0.06	0.00	0.08	0.38	0.38	0.25	0.55	0.55
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	3128	418	1774	3539	1548
Grp Volume(v), veh/h	113	74	0	43	61	0	118	628	633	514	477	72
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1777	1774	1770	1548
Q Serve(g_s), s	6.4	3.9	0.0	2.4	3.3	0.0	6.8	35.0	35.2	25.6	7.3	2.3
Cycle Q Clear(g_c), s	6.4	3.9	0.0	2.4	3.3	0.0	6.8	35.0	35.2	25.6	7.3	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	171	179	152	114	119	101	147	680	683	439	1944	850
V/C Ratio(X)	0.66	0.41	0.00	0.38	0.51	0.00	0.81	0.92	0.93	1.17	0.25	0.08
Avail Cap(c_a), veh/h	463	487	414	515	541	460	306	700	703	439	1944	850
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	44.0	0.0	46.4	46.8	0.0	46.6	30.4	30.5	38.9	12.1	11.0
Incr Delay (d2), s/veh	4.3	1.5	0.0	0.8	1.3	0.0	3.9	19.0	19.5	98.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	2.1	0.0	1.2	1.7	0.0	3.5	20.7	20.9	24.4	3.5	1.0
LnGrp Delay(d),s/veh	49.4	45.5	0.0	47.2	48.1	0.0	50.5	49.4	49.9	137.2	12.2	11.1
LnGrp LOS	D	D		D	D		D	D	D	F	B	B
Approach Vol, veh/h		187			104			1379			1063	
Approach Delay, s/veh		47.9			47.7			49.7			72.6	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	30.0	46.7		14.8	12.9	63.8		11.8
Change Period (Y+Rc), s	4.4	7.0		4.9	4.4	* 7		5.2
Max Green Setting (Gmax), s	25.6	40.9		27.0	17.8	* 51		30.0
Max Q Clear Time (g_c+I1), s	27.6	37.2		8.4	8.8	9.3		5.3
Green Ext Time (p_c), s	0.0	2.5		0.6	0.1	29.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	58.4
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	160			230	75	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						0.97
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1863	1583	1770	1535
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				399		135
Link Speed (mph)		35	45		25	
Link Distance (ft)		1857	2146		1067	
Travel Time (s)		36.2	32.5		29.1	

Intersection Summary	
Area Type:	Other



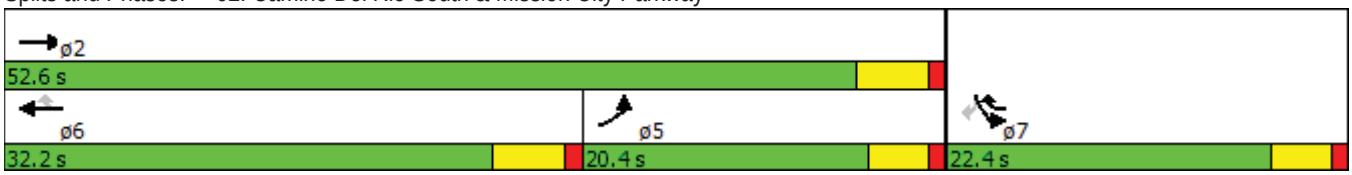
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	28	165	418	359	71	119
Confl. Peds. (#/hr)						5
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.90	0.90	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	31	181	464	399	81	135
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	181	464	399	81	135

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	28	165	418	359	71	119
Turn Type	Prot	NA	NA	pm+ov	Prot	Perm
Protected Phases	5	2	6	7	7	
Permitted Phases				6		7
Detector Phase	5	2	6	7	7	7
Switch Phase						
Minimum Initial (s)	4.0	10.0	10.0	4.0	4.0	4.0
Minimum Split (s)	20.4	21.0	28.0	22.4	22.4	22.4
Total Split (s)	20.4	52.6	32.2	22.4	22.4	22.4
Total Split (%)	27.2%	70.1%	42.9%	29.9%	29.9%	29.9%
Yellow Time (s)	3.4	4.0	4.0	3.4	3.4	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.0	5.0	4.4	4.4	4.4
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	6.0	18.9	15.8	33.4	7.9	7.9
Actuated g/C Ratio	0.16	0.50	0.42	0.89	0.21	0.21
v/c Ratio	0.11	0.19	0.59	0.28	0.22	0.32
Control Delay	21.4	5.5	13.8	0.8	17.1	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	5.5	13.8	0.8	17.1	6.6
LOS	C	A	B	A	B	A
Approach Delay		7.8	7.8		10.6	
Approach LOS		A	A		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 37.7	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 8.3	Intersection LOS: A
Intersection Capacity Utilization 38.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 62: Camino Del Rio South & Mission City Parkway





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	28	165	418	359	71	119
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	31	181	464	0	81	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.90	0.90	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	54	1106	712	712	119	106
Arrive On Green	0.03	0.59	0.38	0.00	0.07	0.00
Sat Flow, veh/h	1774	1863	1863	1583	1774	1583
Grp Volume(v), veh/h	31	181	464	0	81	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1583	1774	1583
Q Serve(g_s), s	0.5	1.2	5.7	0.0	1.2	0.0
Cycle Q Clear(g_c), s	0.5	1.2	5.7	0.0	1.2	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	54	1106	712	712	119	106
V/C Ratio(X)	0.57	0.16	0.65	0.00	0.68	0.00
Avail Cap(c_a), veh/h	1025	3201	1829	1661	1153	1029
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	13.2	2.5	7.0	0.0	12.6	0.0
Incr Delay (d2), s/veh	3.5	0.1	1.2	0.0	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.6	3.1	0.0	0.7	0.0
LnGrp Delay(d),s/veh	16.7	2.6	8.2	0.0	15.2	0.0
LnGrp LOS	B	A	A		B	
Approach Vol, veh/h		212	464		81	
Approach Delay, s/veh		4.7	8.2		15.2	
Approach LOS		A	A		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		21.4		6.3	5.8	15.6		
Change Period (Y+Rc), s		5.0		4.4	5.0	* 5		
Max Green Setting (Gmax), s		47.6		18.0	16.0	* 27		
Max Q Clear Time (g_c+I1), s		3.2		3.2	2.5	7.7		
Green Ext Time (p_c), s		1.2		0.1	0.9	2.9		

Intersection Summary	
HCM 2010 Ctrl Delay	8.0
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	80		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		1
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00				0.99		1.00		
Frt		0.982						0.955				0.850
Flt Protected				0.950				0.968		0.950		
Satd. Flow (prot)	0	3465	0	1770	1863	0	0	1710	0	1770	0	1583
Flt Permitted				0.950				0.968		0.950		
Satd. Flow (perm)	0	3465	0	1762	1863	0	0	1710	0	1765	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19						164				241
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		1152			264			335			589	
Travel Time (s)		17.5			4.0			5.1			8.9	

Intersection Summary	
Area Type:	Other



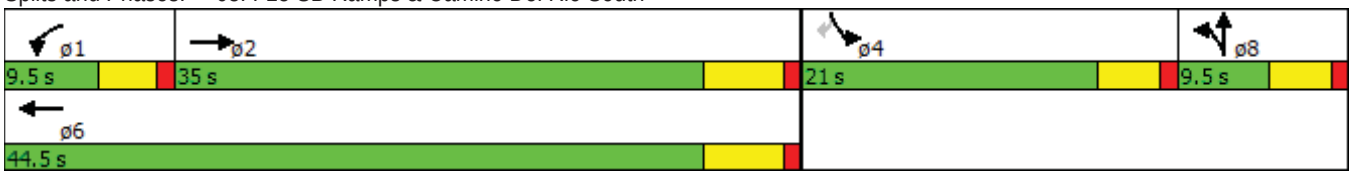
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	118	16	21	728	0	4	0	2	63	0	418
Confl. Peds. (#/hr)	4		3	3		4			2	2		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.50	0.50	0.50	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	137	19	23	800	0	8	0	4	70	0	464
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	156	0	23	800	0	0	12	0	70	0	464

Intersection Summary

Lane Group	EBT	WBL	WBT	NBT	SBL	SBR
Lane Configurations						
Volume (vph)	118	21	728	0	63	418
Turn Type	NA	Prot	NA	NA	Prot	Perm
Protected Phases	2	1	6	8	4	
Permitted Phases						4
Detector Phase	2	1	6	8	4	4
Switch Phase						
Minimum Initial (s)	20.0	5.0	11.0	5.0	5.0	5.0
Minimum Split (s)	27.5	9.2	21.5	9.5	20.6	20.6
Total Split (s)	35.0	9.5	44.5	9.5	21.0	21.0
Total Split (%)	46.7%	12.7%	59.3%	12.7%	28.0%	28.0%
Yellow Time (s)	4.5	3.2	4.5	3.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.2	5.5	4.5	4.6	4.6
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	Min	None	Min	None	None	None
Act Effct Green (s)	27.3	5.4	28.6	5.3	13.2	13.2
Actuated g/C Ratio	0.51	0.10	0.53	0.10	0.24	0.24
v/c Ratio	0.09	0.13	0.81	0.04	0.16	0.82
Control Delay	8.5	30.9	19.8	0.2	20.1	24.5
Queue Delay	0.0	0.0	0.7	0.0	0.0	0.0
Total Delay	8.5	30.9	20.5	0.2	20.1	24.5
LOS	A	C	C	A	C	C
Approach Delay	8.5		20.8	0.2		
Approach LOS	A		C	A		

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 54	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 80.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 63: I-15 SB Ramps & Camino Del Rio South



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	118	16	21	728	0	4	0	2	63	0	418
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0	1900	1863	1900	1863	0	1863
Adj Flow Rate, veh/h	0	137	7	23	800	0	8	0	0	70	0	253
Adj No. of Lanes	0	2	0	1	1	0	0	1	0	1	0	1
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.50	0.50	0.50	0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	0	2
Cap, veh/h	0	1927	98	51	1320	0	19	0	0	0	0	0
Arrive On Green	0.00	0.56	0.56	0.03	0.71	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	0	3520	174	1774	1863	0	1774	0	0		0	
Grp Volume(v), veh/h	0	70	74	23	800	0	8	0	0		0.0	
Grp Sat Flow(s),veh/h/ln	0	1770	1831	1774	1863	0	1774	0	0			
Q Serve(g_s), s	0.0	0.6	0.7	0.5	7.8	0.0	0.2	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.6	0.7	0.5	7.8	0.0	0.2	0.0	0.0			
Prop In Lane	0.00		0.10	1.00		0.00	1.00		0.00			
Lane Grp Cap(c), veh/h	0	995	1030	51	1320	0	19	0	0			
V/C Ratio(X)	0.00	0.07	0.07	0.45	0.61	0.00	0.42	0.00	0.00			
Avail Cap(c_a), veh/h	0	1465	1516	264	2039	0	249	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	3.6	3.6	17.0	2.7	0.0	17.5	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.3	0.2	0.0	5.5	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.3	0.3	3.8	0.0	0.1	0.0	0.0			
LnGrp Delay(d),s/veh	0.0	3.6	3.6	19.4	2.8	0.0	23.0	0.0	0.0			
LnGrp LOS		A	A	B	A		C					
Approach Vol, veh/h		144			823			8				
Approach Delay, s/veh		3.6			3.3			23.0				
Approach LOS		A			A			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	5.2	25.5				30.7		4.9
Change Period (Y+Rc), s	* 4.2	5.5				5.5		4.5
Max Green Setting (Gmax), s	* 5.3	29.5				39.0		5.0
Max Q Clear Time (g_c+I1), s	2.5	2.7				9.8		2.2
Green Ext Time (p_c), s	0.0	3.9				3.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	3.5
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	350		0	0
Storage Lanes		0	1		0	0
Taper Length (ft)			25		0	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.960					
Flt Protected			0.950			
Satd. Flow (prot)	3398	0	1770	3539	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	3398	0	1770	3539	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	51					
Link Speed (mph)	45			45	45	
Link Distance (ft)	264			1252	814	
Travel Time (s)	4.0			19.0	12.3	

Intersection Summary	
Area Type:	Other



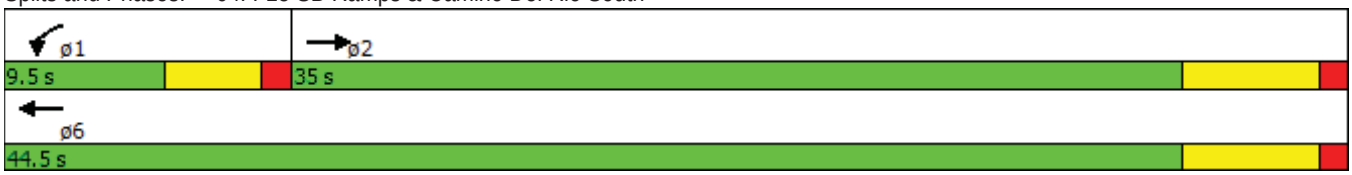
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	132	47	24	750	0	0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.97	0.97	0.25	0.25
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	142	51	25	773	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	193	0	25	773	0	0

Intersection Summary

Lane Group	EBT	WBL	WBT
Lane Configurations			
Volume (vph)	132	24	750
Turn Type	NA	Prot	NA
Protected Phases	2	1	6
Permitted Phases			
Detector Phase	2	1	6
Switch Phase			
Minimum Initial (s)	20.0	5.0	11.0
Minimum Split (s)	27.5	9.2	21.5
Total Split (s)	35.0	9.5	44.5
Total Split (%)	78.7%	21.3%	100.0%
Yellow Time (s)	4.5	3.2	4.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.2	5.5
Lead/Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	
Recall Mode	Min	None	Min
Act Effct Green (s)	38.0	5.1	40.9
Actuated g/C Ratio	0.93	0.12	1.00
v/c Ratio	0.06	0.11	0.22
Control Delay	1.0	17.6	0.1
Queue Delay	0.0	0.0	0.0
Total Delay	1.0	17.6	0.1
LOS	A	B	A
Approach Delay	1.0		0.7
Approach LOS	A		A

Intersection Summary	
Cycle Length: 44.5	
Actuated Cycle Length: 40.9	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.22	
Intersection Signal Delay: 0.7	Intersection LOS: A
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 64: I-15 SB Ramps & Camino Del Rio South



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	132	47	24	750	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863		
Adj Flow Rate, veh/h	142	0	25	773		
Adj No. of Lanes	2	0	1	2		
Peak Hour Factor	0.93	0.93	0.97	0.97		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2309	0	55	2904		
Arrive On Green	0.65	0.00	0.03	0.82		
Sat Flow, veh/h	3725	0	1774	3632		
Grp Volume(v), veh/h	142	0	25	773		
Grp Sat Flow(s),veh/h/ln	1770	0	1774	1770		
Q Serve(g_s), s	0.4	0.0	0.4	1.5		
Cycle Q Clear(g_c), s	0.4	0.0	0.4	1.5		
Prop In Lane		0.00	1.00			
Lane Grp Cap(c), veh/h	2309	0	55	2904		
V/C Ratio(X)	0.06	0.00	0.45	0.27		
Avail Cap(c_a), veh/h	3405	0	307	4502		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	1.9	0.0	14.6	0.6		
Incr Delay (d2), s/veh	0.0	0.0	2.1	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.7		
LnGrp Delay(d),s/veh	1.9	0.0	16.7	0.6		
LnGrp LOS	A		B	A		
Approach Vol, veh/h	142			798		
Approach Delay, s/veh	1.9			1.2		
Approach LOS	A			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	5.2	25.5				30.7		
Change Period (Y+Rc), s	* 4.2	5.5				5.5		
Max Green Setting (Gmax), s	* 5.3	29.5				39.0		
Max Q Clear Time (g_c+I1), s	2.4	2.4				3.5		
Green Ext Time (p_c), s	0.0	3.9				4.0		

Intersection Summary	
HCM 2010 Ctrl Delay	1.3
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	115		0	0		180	190		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	25			0			25			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850		0.859				
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1770	3539	0	0	1863	1583	1770	1600	0	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1770	3539	0	0	1863	1583	1770	1600	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						113		109				
Link Speed (mph)		45			40			45			45	
Link Distance (ft)		1252			1666			833			375	
Travel Time (s)		19.0			28.4			12.6			5.7	

Intersection Summary	
Area Type:	Other



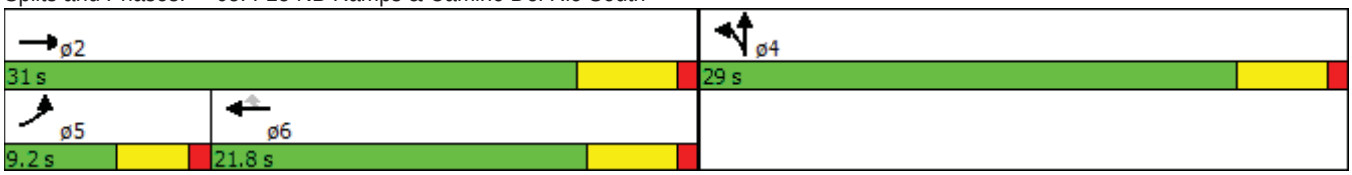
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	27	110	0	0	258	49	508	6	98	0	0	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.90	0.90	0.90	0.90	0.90	0.90	0.25	0.25	0.25
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	29	118	0	0	287	54	564	7	109	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	118	0	0	287	54	564	116	0	0	0	0

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT
Lane Configurations						
Volume (vph)	27	110	258	49	508	6
Turn Type	Prot	NA	NA	Perm	Split	NA
Protected Phases	5	2	6		4	4
Permitted Phases				6		
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	14.0	14.0	5.0	5.0
Minimum Split (s)	9.2	27.5	21.0	21.0	21.0	21.0
Total Split (s)	9.2	31.0	21.8	21.8	29.0	29.0
Total Split (%)	15.3%	51.7%	36.3%	36.3%	48.3%	48.3%
Yellow Time (s)	3.2	4.5	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.2	5.5	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	5.2	17.7	15.3	15.3	18.3	18.3
Actuated g/C Ratio	0.11	0.38	0.33	0.33	0.39	0.39
v/c Ratio	0.15	0.09	0.47	0.09	0.82	0.17
Control Delay	25.7	10.4	18.5	1.1	25.7	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.7	10.4	18.5	1.1	25.7	3.9
LOS	C	B	B	A	C	A
Approach Delay		13.4	15.7			22.0
Approach LOS		B	B			C

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 47	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 19.1	Intersection LOS: B
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 65: I-15 NB Ramps & Camino Del Rio South





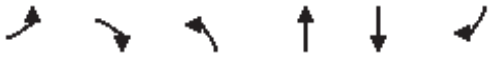
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	27	110	0	0	258	49	508	6	98	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1900			
Adj Flow Rate, veh/h	29	118	0	0	287	0	564	7	37			
Adj No. of Lanes	1	2	0	0	1	1	1	1	0			
Peak Hour Factor	0.93	0.93	0.93	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	59	1486	0	0	553	470	634	92	488			
Arrive On Green	0.03	0.42	0.00	0.00	0.30	0.00	0.36	0.36	0.36			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1774	258	1364			
Grp Volume(v), veh/h	29	118	0	0	287	0	564	0	44			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1863	1583	1774	0	1622			
Q Serve(g_s), s	0.8	0.9	0.0	0.0	6.0	0.0	14.1	0.0	0.8			
Cycle Q Clear(g_c), s	0.8	0.9	0.0	0.0	6.0	0.0	14.1	0.0	0.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.84			
Lane Grp Cap(c), veh/h	59	1486	0	0	553	470	634	0	580			
V/C Ratio(X)	0.49	0.08	0.00	0.00	0.52	0.00	0.89	0.00	0.08			
Avail Cap(c_a), veh/h	188	1915	0	0	664	564	904	0	826			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	22.4	8.2	0.0	0.0	13.8	0.0	14.3	0.0	10.0			
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.0	0.3	0.0	6.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	0.5	0.0	0.0	3.2	0.0	7.8	0.0	0.4			
LnGrp Delay(d),s/veh	24.7	8.2	0.0	0.0	14.0	0.0	20.5	0.0	10.0			
LnGrp LOS	C	A			B		C		B			
Approach Vol, veh/h		147			287			608				
Approach Delay, s/veh		11.5			14.0			19.8				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		25.3		21.8	5.8	19.5		
Change Period (Y+Rc), s		5.5		5.0	* 4.2	* 5.5		
Max Green Setting (Gmax), s		25.5		24.0	* 5	* 17		
Max Q Clear Time (g_c+I1), s		2.9		16.1	2.8	8.0		
Green Ext Time (p_c), s		1.4		0.7	0.0	1.0		

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

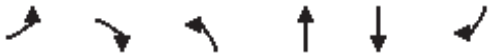
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	180			0
Storage Lanes	2	3	1			0
Taper Length (ft)	0		25			
Lane Util. Factor	0.97	0.76	1.00	0.95	0.91	0.91
Ped Bike Factor						
Frt		0.850			0.959	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	3610	1770	3539	4877	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	3610	1770	3539	4877	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		1220			174	
Link Speed (mph)	45			50	45	
Link Distance (ft)	797			948	780	
Travel Time (s)	12.1			12.9	11.8	

Intersection Summary	
Area Type:	Other



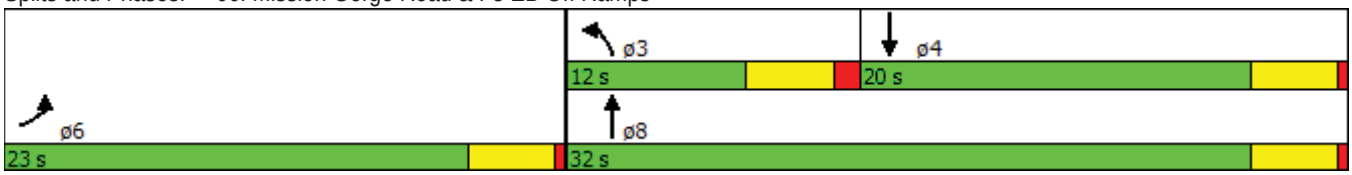
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Volume (vph)	957	1183	168	1000	613	231
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.97	0.97	0.92	0.92	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	987	1220	183	1087	626	236
Shared Lane Traffic (%)						
Lane Group Flow (vph)	987	1220	183	1087	862	0

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	957	1183	168	1000	613
Turn Type	Prot	Free	Prot	NA	NA
Protected Phases	6		3	8	4
Permitted Phases		Free			
Detector Phase	6		3	8	4
Switch Phase					
Minimum Initial (s)	4.0		5.0	4.0	4.0
Minimum Split (s)	20.0		9.7	20.0	20.0
Total Split (s)	23.0		12.0	32.0	20.0
Total Split (%)	41.8%		21.8%	58.2%	36.4%
Yellow Time (s)	3.5		3.7	3.5	3.5
All-Red Time (s)	0.5		1.0	0.5	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0		4.7	4.0	4.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	Min		None	Min	Min
Act Effct Green (s)	17.8	51.1	6.9	25.2	13.6
Actuated g/C Ratio	0.35	1.00	0.14	0.49	0.27
v/c Ratio	0.83	0.34	0.76	0.62	0.61
Control Delay	23.6	0.3	47.0	11.5	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	0.3	47.0	11.5	15.1
LOS	C	A	D	B	B
Approach Delay	10.7			16.6	15.1
Approach LOS	B			B	B

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 51.1	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 13.3	Intersection LOS: B
Intersection Capacity Utilization 64.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 66: Mission Gorge Road & I-8 EB Off Ramps



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	957	1183	168	1000	613	231
Number	1	16	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	987	978	183	1087	626	144
Adj No. of Lanes	2	3	1	2	3	0
Peak Hour Factor	0.97	0.97	0.92	0.92	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1203	1261	229	1754	1144	259
Arrive On Green	0.35	0.35	0.13	0.50	0.28	0.28
Sat Flow, veh/h	3442	3610	1774	3632	4316	939
Grp Volume(v), veh/h	987	978	183	1087	510	260
Grp Sat Flow(s),veh/h/ln	1721	1203	1774	1770	1695	1697
Q Serve(g_s), s	13.5	12.5	5.2	11.5	6.6	6.8
Cycle Q Clear(g_c), s	13.5	12.5	5.2	11.5	6.6	6.8
Prop In Lane	1.00	1.00	1.00			0.55
Lane Grp Cap(c), veh/h	1203	1261	229	1754	935	468
V/C Ratio(X)	0.82	0.78	0.80	0.62	0.55	0.56
Avail Cap(c_a), veh/h	1266	1328	251	1919	1050	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.3	15.0	21.8	9.5	15.9	16.0
Incr Delay (d2), s/veh	4.3	2.8	13.8	0.5	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	4.4	3.4	5.7	3.1	3.3
LnGrp Delay(d),s/veh	19.6	17.8	35.6	10.0	16.4	17.0
LnGrp LOS	B	B	D	B	B	B
Approach Vol, veh/h	1965			1270	770	
Approach Delay, s/veh	18.7			13.7	16.6	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			11.4	18.2		22.0		29.6
Change Period (Y+Rc), s			* 4.7	4.0		4.0		4.0
Max Green Setting (Gmax), s			* 7.3	16.0		19.0		28.0
Max Q Clear Time (g_c+I1), s			7.2	8.8		15.5		13.5
Green Ext Time (p_c), s			0.0	5.5		2.5		9.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	110		110	85		200	190		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	1.00		0.98	0.99		0.98	0.99		0.97	1.00	0.99	
Frt			0.850			0.850			0.850		0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	3443	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1763	1863	1556	1760	1863	1558	1753	1863	1532	1762	3443	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			98			151			98		20	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1000			781			1255			1135	
Travel Time (s)		19.5			15.2			19.0			17.2	

Intersection Summary	
Area Type:	Other



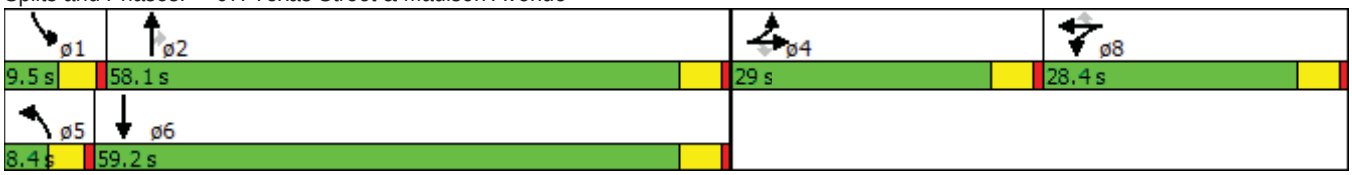
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	278	37	26	11	45	400	13	728	10	52	286	50
Confl. Peds. (#/hr)	2		3	3		2	5		4	4		5
Confl. Bikes (#/hr)												
Peak Hour Factor	0.84	0.84	0.84	0.93	0.93	0.93	0.95	0.95	0.95	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	331	44	31	12	48	430	14	766	11	60	329	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	331	44	31	12	48	430	14	766	11	60	386	0

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Volume (vph)	278	37	26	11	45	400	13	728	10	52	286
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		8	8		5	2		1	6
Permitted Phases			4			8			2		
Detector Phase	4	4	4	8	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	10.0	4.0	10.0
Minimum Split (s)	24.9	24.9	24.9	23.9	23.9	23.9	8.4	24.9	24.9	8.4	23.9
Total Split (s)	29.0	29.0	29.0	28.4	28.4	28.4	8.4	58.1	58.1	9.5	59.2
Total Split (%)	23.2%	23.2%	23.2%	22.7%	22.7%	22.7%	6.7%	46.5%	46.5%	7.6%	47.4%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.9	3.4	3.9	3.9	3.4	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	4.9	4.9	4.9	4.4	4.9	4.9	4.4	4.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	24.1	24.1	24.1	23.5	23.5	23.5	4.0	52.3	52.3	5.1	58.5
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19	0.19	0.03	0.42	0.42	0.04	0.47
v/c Ratio	0.97	0.12	0.08	0.04	0.14	1.03	0.25	0.98	0.02	0.83	0.24
Control Delay	90.3	42.9	0.4	42.0	43.6	84.6	69.8	62.7	0.0	124.8	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.3	42.9	0.4	42.0	43.6	84.6	69.8	62.7	0.0	124.8	19.5
LOS	F	D	A	D	D	F	E	E	A	F	B
Approach Delay		78.3			79.5			61.9			33.7
Approach LOS		E			E			E			C

Intersection Summary	
Cycle Length: 125	
Actuated Cycle Length: 124.1	
Natural Cycle: 125	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay: 63.2	Intersection LOS: E
Intersection Capacity Utilization 91.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 67: Texas Street & Madison Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	278	37	26	11	45	400	13	728	10	52	286	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	331	44	0	12	48	296	14	766	0	60	329	46
Adj No. of Lanes	1	1	1	1	1	1	1	1	1	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.93	0.93	0.93	0.95	0.95	0.95	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	343	361	306	335	352	297	22	789	670	73	1410	195
Arrive On Green	0.19	0.19	0.00	0.19	0.19	0.19	0.01	0.42	0.00	0.04	0.45	0.45
Sat Flow, veh/h	1774	1863	1583	1774	1863	1576	1774	1863	1583	1774	3121	432
Grp Volume(v), veh/h	331	44	0	12	48	296	14	766	0	60	185	190
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1576	1774	1863	1583	1774	1770	1784
Q Serve(g_s), s	23.0	2.4	0.0	0.7	2.7	23.4	1.0	50.1	0.0	4.2	8.0	8.1
Cycle Q Clear(g_c), s	23.0	2.4	0.0	0.7	2.7	23.4	1.0	50.1	0.0	4.2	8.0	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	343	361	306	335	352	297	22	789	670	73	800	806
V/C Ratio(X)	0.96	0.12	0.00	0.04	0.14	1.00	0.64	0.97	0.00	0.83	0.23	0.24
Avail Cap(c_a), veh/h	343	361	306	335	352	297	57	796	677	73	800	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	41.5	0.0	41.3	42.1	50.4	61.2	35.2	0.0	59.3	20.9	20.9
Incr Delay (d2), s/veh	38.7	0.1	0.0	0.0	0.1	50.8	11.0	25.0	0.0	49.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	1.3	0.0	0.3	1.4	14.4	0.5	31.2	0.0	3.0	4.0	4.1
LnGrp Delay(d),s/veh	88.4	41.5	0.0	41.3	42.1	101.2	72.2	60.1	0.0	108.3	21.1	21.1
LnGrp LOS	F	D		D	D	F	E	E		F	C	C
Approach Vol, veh/h		375			356			780			435	
Approach Delay, s/veh		82.9			91.2			60.4			33.1	
Approach LOS		F			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	57.6		29.0	5.9	61.2		28.4
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	5.1	53.2		24.1	4.0	54.3		23.5
Max Q Clear Time (g_c+I1), s	6.2	52.1		25.0	3.0	10.1		25.4
Green Ext Time (p_c), s	0.0	0.6		0.0	0.0	13.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.3
HCM 2010 LOS	E

Midday Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	200		0	0		190	0		0
Storage Lanes	1		0	2		0	0		1	0		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.91	0.91	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00			1.00	0.98		1.00	
Frt		0.969			0.997				0.850		0.972	
Flt Protected	0.950			0.950				0.953			0.972	
Satd. Flow (prot)	1770	4911	0	3433	3527	0	0	1775	1583	0	1755	0
Flt Permitted	0.950			0.950				0.716			0.832	
Satd. Flow (perm)	1765	4911	0	3429	3527	0	0	1332	1559	0	1500	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		78			2				100		4	
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1079			674			1337			329	
Travel Time (s)		16.3			10.2			36.5			9.0	

Intersection Summary	
Area Type:	Other



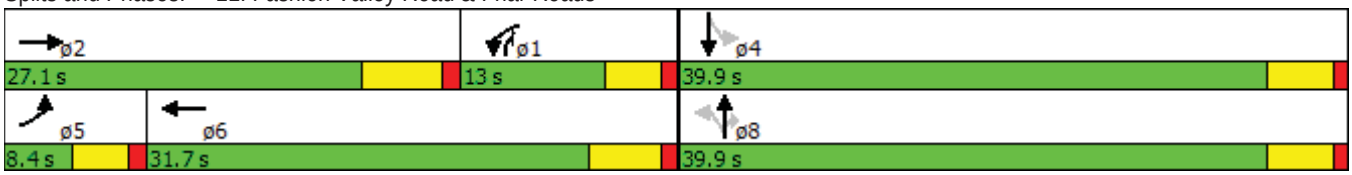
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	4	637	165	171	528	9	174	3	236	5	2	2
Confl. Peds. (#/hr)	2		2	2		2	2		5	5		2
Confl. Bikes (#/hr)			3			3						
Peak Hour Factor	0.98	0.98	0.98	0.90	0.90	0.90	0.90	0.90	0.90	0.45	0.45	0.45
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	4	650	168	190	587	10	193	3	262	11	4	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	818	0	190	597	0	0	196	262	0	19	0

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	4	637	171	528	174	3	236	5	2
Turn Type	Prot	NA	Prot	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases	5	2	1	6		8	1		4
Permitted Phases					8		8	4	
Detector Phase	5	2	1	6	8	8	1	4	4
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	26.9	8.4	19.3	39.9	39.9	8.4	39.9	39.9
Total Split (s)	8.4	27.1	13.0	31.7	39.9	39.9	13.0	39.9	39.9
Total Split (%)	10.5%	33.9%	16.3%	39.6%	49.9%	49.9%	16.3%	49.9%	49.9%
Yellow Time (s)	3.4	4.9	3.4	4.3	3.9	3.9	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	4.4	5.9	4.4	5.3		4.9	4.4		4.9
Lead/Lag	Lead	Lead	Lag	Lag			Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	4.3	13.7	7.4	25.4		14.3	22.3		11.0
Actuated g/C Ratio	0.08	0.26	0.14	0.49		0.28	0.43		0.21
v/c Ratio	0.03	0.60	0.39	0.35		0.53	0.36		0.06
Control Delay	30.2	18.3	26.2	11.5		21.2	5.8		13.0
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	30.2	18.3	26.2	11.5		21.2	5.8		13.0
LOS	C	B	C	B		C	A		B
Approach Delay		18.4		15.0		12.4			13.0
Approach LOS		B		B		B			B

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 51.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 51.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Fashion Valley Road & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	637	165	171	528	9	174	3	236	5	2	2
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.99		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	4	650	112	190	587	10	193	3	151	11	4	4
Adj No. of Lanes	1	3	0	2	2	0	0	1	1	0	1	0
Peak Hour Factor	0.98	0.98	0.98	0.90	0.90	0.90	0.90	0.90	0.90	0.45	0.45	0.45
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	8	1190	202	440	1541	26	482	5	523	217	77	41
Arrive On Green	0.00	0.27	0.27	0.13	0.43	0.43	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1774	4366	742	3442	3559	61	1504	23	1572	377	378	201
Grp Volume(v), veh/h	4	503	259	190	292	305	196	0	151	19	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1717	1721	1770	1850	1527	0	1572	957	0	0
Q Serve(g_s), s	0.1	5.2	5.3	2.1	4.6	4.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	5.2	5.3	2.1	4.6	4.6	4.4	0.0	0.0	4.4	0.0	0.0
Prop In Lane	1.00		0.43	1.00		0.03	0.98		1.00	0.58		0.21
Lane Grp Cap(c), veh/h	8	924	468	440	766	801	487	0	523	335	0	0
V/C Ratio(X)	0.52	0.54	0.55	0.43	0.38	0.38	0.40	0.00	0.29	0.06	0.00	0.00
Avail Cap(c_a), veh/h	174	1766	894	727	1148	1200	1405	0	1554	1245	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.2	12.6	12.7	16.4	7.8	7.8	14.7	0.0	10.0	13.1	0.0	0.0
Incr Delay (d2), s/veh	18.6	0.5	1.0	0.2	0.4	0.4	0.3	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.4	2.6	1.0	2.3	2.4	2.0	0.0	1.2	0.2	0.0	0.0
LnGrp Delay(d),s/veh	38.8	13.1	13.7	16.6	8.2	8.2	14.9	0.0	10.2	13.2	0.0	0.0
LnGrp LOS	D	B	B	B	A	A	B		B	B		
Approach Vol, veh/h		766			787			347			19	
Approach Delay, s/veh		13.4			10.3			12.9			13.2	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.5	17.0		13.2	4.6	22.9		13.2
Change Period (Y+Rc), s	5.3	* 5.9		4.9	4.4	5.3		4.9
Max Green Setting (Gmax), s	8.6	* 21		35.0	4.0	26.4		35.0
Max Q Clear Time (g_c+I1), s	4.1	7.3		6.4	2.1	6.6		6.4
Green Ext Time (p_c), s	1.8	3.7		1.3	0.0	4.3		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	300		0	0		0	0		0
Storage Lanes	1		0	2		0	1		1	0		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.91	0.91	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00			0.99					
Frt		0.991							0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	5034	0	3433	3539	0	1770	0	1583	0	0	0
Flt Permitted	0.950			0.950			0.950					
Satd. Flow (perm)	1770	5034	0	3430	3539	0	1759	0	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12							246			
Link Speed (mph)		45			45			25			30	
Link Distance (ft)		674			1326			591			158	
Travel Time (s)		10.2			20.1			16.1			3.6	

Intersection Summary	
Area Type:	Other



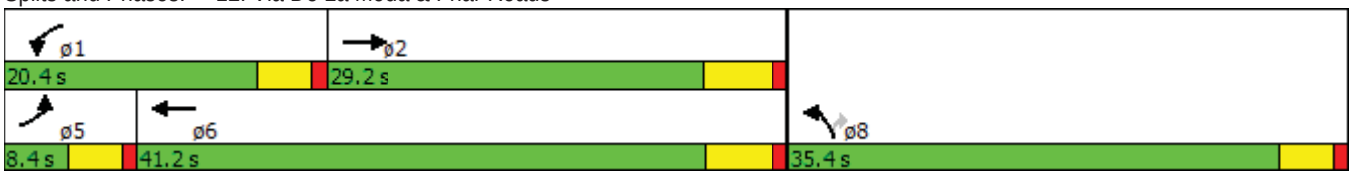
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	6	857	56	351	637	0	55	0	239	0	0	0
Confl. Peds. (#/hr)			2	2			7					
Confl. Bikes (#/hr)			4									
Peak Hour Factor	0.92	0.95	0.95	0.88	0.88	0.92	0.97	0.92	0.97	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	7	902	59	399	724	0	57	0	246	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	961	0	399	724	0	57	0	246	0	0	0

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	6	857	351	637	55	239
Turn Type	Prot	NA	Prot	NA	Prot	Perm
Protected Phases	5	2	1	6	8	
Permitted Phases						8
Detector Phase	5	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	4.0
Minimum Split (s)	8.4	27.4	20.4	21.3	35.4	35.4
Total Split (s)	8.4	29.2	20.4	41.2	35.4	35.4
Total Split (%)	9.9%	34.4%	24.0%	48.5%	41.6%	41.6%
Yellow Time (s)	3.4	4.4	3.4	4.3	3.4	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.4	4.4	5.3	4.4	4.4
Lead/Lag	Lead	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		
Recall Mode	None	Min	None	Min	None	None
Act Effct Green (s)	4.3	16.0	10.9	30.8	9.3	9.3
Actuated g/C Ratio	0.08	0.31	0.21	0.60	0.18	0.18
v/c Ratio	0.05	0.61	0.55	0.34	0.18	0.51
Control Delay	31.0	18.4	23.6	8.2	19.5	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	18.4	23.6	8.2	19.5	7.0
LOS	C	B	C	A	B	A
Approach Delay		18.5		13.7		
Approach LOS		B		B		

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 51.6	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 15.1	Intersection LOS: B
Intersection Capacity Utilization 42.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Via De La Moda & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	857	56	351	637	0	55	0	239	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	0	1863	0	1863			
Adj Flow Rate, veh/h	7	902	48	399	724	0	57	0	86			
Adj No. of Lanes	1	3	0	2	2	0	1	0	1			
Peak Hour Factor	0.92	0.95	0.95	0.88	0.88	0.92	0.97	0.92	0.97			
Percent Heavy Veh, %	2	2	2	2	2	0	2	0	2			
Cap, veh/h	13	2088	111	572	2059	0	151	0	135			
Arrive On Green	0.01	0.42	0.42	0.17	0.58	0.00	0.09	0.00	0.09			
Sat Flow, veh/h	1774	4936	262	3442	3632	0	1774	0	1583			
Grp Volume(v), veh/h	7	619	331	399	724	0	57	0	86			
Grp Sat Flow(s),veh/h/ln	1774	1695	1808	1721	1770	0	1774	0	1583			
Q Serve(g_s), s	0.2	5.6	5.6	4.8	4.7	0.0	1.3	0.0	2.3			
Cycle Q Clear(g_c), s	0.2	5.6	5.6	4.8	4.7	0.0	1.3	0.0	2.3			
Prop In Lane	1.00		0.14	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	13	1434	765	572	2059	0	151	0	135			
V/C Ratio(X)	0.53	0.43	0.43	0.70	0.35	0.00	0.38	0.00	0.64			
Avail Cap(c_a), veh/h	163	1851	987	1263	2915	0	1262	0	1126			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	21.6	8.9	8.9	17.1	4.8	0.0	18.9	0.0	19.3			
Incr Delay (d2), s/veh	11.6	0.3	0.5	0.6	0.1	0.0	0.6	0.0	1.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.1	2.6	2.9	2.3	2.2	0.0	0.7	0.0	1.1			
LnGrp Delay(d),s/veh	33.2	9.1	9.4	17.7	4.9	0.0	19.4	0.0	21.2			
LnGrp LOS	C	A	A	B	A		B		C			
Approach Vol, veh/h		957			1123			143				
Approach Delay, s/veh		9.4			9.5			20.5				
Approach LOS		A			A			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	11.6	23.8			4.7	30.8		8.1
Change Period (Y+Rc), s	4.4	5.4			4.4	* 5.4		4.4
Max Green Setting (Gmax), s	16.0	23.8			4.0	* 36		31.0
Max Q Clear Time (g_c+I1), s	6.8	7.6			2.2	6.7		4.3
Green Ext Time (p_c), s	0.5	10.7			0.0	15.8		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	410		0	0		0	0		0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.91	0.91	0.97	0.91	0.91	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00		1.00				0.99	
Frt		0.993			0.999			0.850	0.850		0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5046	0	3433	5079	0	1770	1504	1504	1770	1562	0
Flt Permitted	0.950			0.950			0.757			0.677		
Satd. Flow (perm)	1770	5046	0	3433	5079	0	1408	1504	1504	1261	1562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			2			424	424		148	
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1326			818			332			302	
Travel Time (s)		20.1			12.4			9.1			8.2	

Intersection Summary	
Area Type:	Other



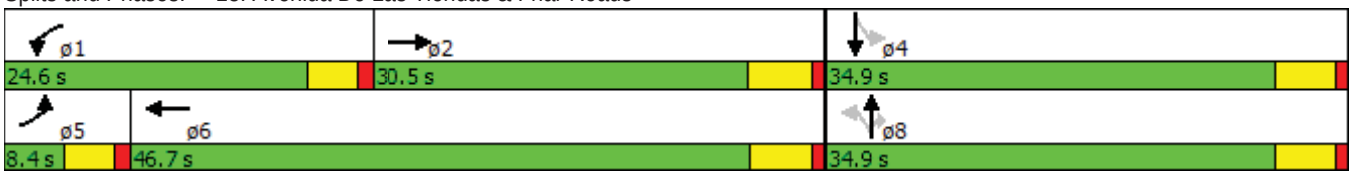
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	10	1046	54	705	1041	9	32	0	195	12	0	1
Confl. Peds. (#/hr)							2					2
Confl. Bikes (#/hr)			4			6						
Peak Hour Factor	0.93	0.93	0.93	0.96	0.96	0.96	0.83	0.83	0.83	0.65	0.65	0.65
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	11	1125	58	734	1084	9	39	0	235	18	0	2
Shared Lane Traffic (%)									50%			
Lane Group Flow (vph)	11	1183	0	734	1093	0	39	118	117	18	2	0

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	10	1046	705	1041	32	0	195	12	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2	1	6		8			4
Permitted Phases					8		8	4	
Detector Phase	5	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	30.4	8.4	23.3	20.9	20.9	20.9	34.9	34.9
Total Split (s)	8.4	30.5	24.6	46.7	34.9	34.9	34.9	34.9	34.9
Total Split (%)	9.3%	33.9%	27.3%	51.9%	38.8%	38.8%	38.8%	38.8%	38.8%
Yellow Time (s)	3.4	4.4	3.4	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.4	4.4	5.3	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	4.2	20.1	19.3	42.9	9.4	9.4	9.4	9.4	9.4
Actuated g/C Ratio	0.07	0.31	0.30	0.67	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.10	0.75	0.71	0.32	0.19	0.20	0.20	0.10	0.01
Control Delay	36.9	24.3	27.2	6.9	25.8	0.8	0.8	24.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	24.3	27.2	6.9	25.8	0.8	0.8	24.2	0.0
LOS	D	C	C	A	C	A	A	C	A
Approach Delay		24.4		15.0		4.3			21.8
Approach LOS		C		B		A			C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 64.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 13: Avenida De Las Tiendas & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	1046	54	705	1041	9	32	0	195	12	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		1.00	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	11	1125	53	734	1084	9	39	0	0	18	0	0
Adj No. of Lanes	1	3	0	2	3	0	1	0	2	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.96	0.96	0.96	0.83	0.83	0.83	0.65	0.65	0.65
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	20	2074	98	883	3445	29	212	0	183	212	108	0
Arrive On Green	0.01	0.42	0.42	0.26	0.66	0.66	0.06	0.00	0.00	0.06	0.00	0.00
Sat Flow, veh/h	1774	4974	234	3442	5201	43	1397	0	3167	1397	1863	0
Grp Volume(v), veh/h	11	767	411	734	707	386	39	0	0	18	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1817	1721	1695	1854	1397	0	1583	1397	1863	0
Q Serve(g_s), s	0.3	9.3	9.3	11.0	4.9	4.9	1.5	0.0	0.0	0.7	0.0	0.0
Cycle Q Clear(g_c), s	0.3	9.3	9.3	11.0	4.9	4.9	1.5	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		0.13	1.00		0.02	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	20	1414	758	883	2245	1228	212	0	183	212	108	0
V/C Ratio(X)	0.55	0.54	0.54	0.83	0.31	0.31	0.18	0.00	0.00	0.08	0.00	0.00
Avail Cap(c_a), veh/h	130	1555	834	1271	2565	1403	898	0	1736	898	1021	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.9	12.0	12.0	19.2	3.9	3.9	25.0	0.0	0.0	24.6	0.0	0.0
Incr Delay (d2), s/veh	8.5	0.4	0.8	2.2	0.1	0.2	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.4	4.8	5.5	2.3	2.5	0.6	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	35.4	12.4	12.8	21.4	4.0	4.1	25.1	0.0	0.0	24.7	0.0	0.0
LnGrp LOS	D	B	B	C	A	A	C			C		
Approach Vol, veh/h		1189			1827			39			18	
Approach Delay, s/veh		12.8			11.0			25.1			24.7	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.4	28.2		8.1	5.0	41.6		8.1
Change Period (Y+Rc), s	4.4	5.4		4.9	4.4	* 5.4		4.9
Max Green Setting (Gmax), s	20.2	25.1		30.0	4.0	* 41		30.0
Max Q Clear Time (g_c+I1), s	13.0	11.3		2.7	2.3	6.9		3.5
Green Ext Time (p_c), s	1.0	11.5		0.1	0.0	23.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	0		300	0		260
Storage Lanes	1		1	0		1	0		1	1		1
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950							0.957		0.950	0.954	
Satd. Flow (prot)	1770	5085	1583	0	5085	1583	0	3387	1583	1681	1688	1583
Flt Permitted	0.950							0.957		0.950	0.954	
Satd. Flow (perm)	1770	5085	1583	0	5085	1583	0	3387	1583	1681	1688	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			393			431			557			109
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		818			1167			458			1120	
Travel Time (s)		12.4			17.7			7.8			19.1	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	69	848	539	0	1112	414	388	39	671	224	5	69
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.96	0.96	0.96	0.92	0.92	0.92	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	73	902	573	0	1158	431	422	42	729	260	6	80
Shared Lane Traffic (%)										49%		
Lane Group Flow (vph)	73	902	573	0	1158	431	0	464	729	133	133	80

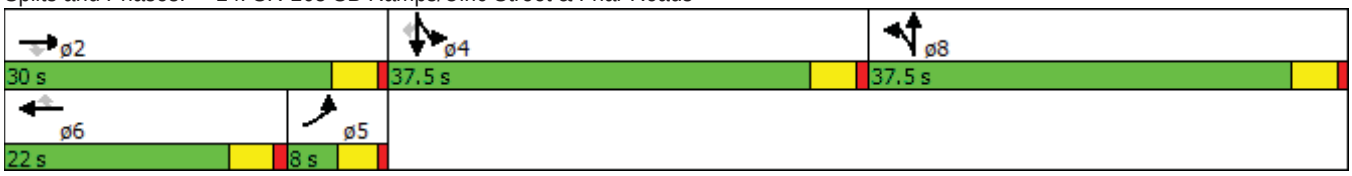
Intersection Summary

Lane Group	EBL	EBT	EBR	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	69	848	539	1112	414	39	671	224	5	69
Turn Type	Prot	NA	Perm	NA	Perm	NA	Free	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases			2		6		Free			4
Detector Phase	5	2	2	6	6	8		4	4	4
Switch Phase										
Minimum Initial (s)	2.0	10.0	10.0	10.0	10.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	22.5	22.5	20.0	20.0	37.5		37.5	37.5	37.5
Total Split (s)	8.0	30.0	30.0	22.0	22.0	37.5		37.5	37.5	37.5
Total Split (%)	7.6%	28.6%	28.6%	21.0%	21.0%	35.7%		35.7%	35.7%	35.7%
Yellow Time (s)	3.0	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag			Lead	Lead					
Lead-Lag Optimize?	Yes			Yes	Yes					
Recall Mode	None	Min	Min	Min	Min	None		None	None	None
Act Effct Green (s)	4.0	25.7	25.7	17.6	17.6	12.8	61.6	9.5	9.5	9.5
Actuated g/C Ratio	0.06	0.42	0.42	0.29	0.29	0.21	1.00	0.15	0.15	0.15
v/c Ratio	0.63	0.43	0.64	0.80	0.57	1.14dl	0.46	0.52	0.51	0.24
Control Delay	57.8	14.5	9.2	27.0	5.9	27.5	1.0	32.0	31.9	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	14.5	9.2	27.0	5.9	27.5	1.0	32.0	31.9	5.1
LOS	E	B	A	C	A	C	A	C	C	A
Approach Delay		14.5		21.3		11.3			25.8	
Approach LOS		B		C		B			C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 61.6	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 64.3%	ICU Level of Service C
Analysis Period (min) 15	

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 14: SR-163 SB Ramps/Ulric Street & Friar Roads





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	69	848	539	0	1112	414	388	39	671	224	5	69
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	73	902	0	0	1158	129	422	42	0	264	0	4
Adj No. of Lanes	1	3	1	0	3	1	0	2	1	2	0	1
Peak Hour Factor	0.94	0.94	0.94	0.96	0.96	0.96	0.92	0.92	0.92	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	93	2003	624	0	1372	427	499	498	446	389	0	174
Arrive On Green	0.05	0.39	0.00	0.00	0.27	0.27	0.28	0.28	0.00	0.11	0.00	0.11
Sat Flow, veh/h	1774	5085	1583	0	5253	1583	1774	1770	1583	3548	0	1583
Grp Volume(v), veh/h	73	902	0	0	1158	129	422	42	0	264	0	4
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1583	1774	1770	1583	1774	0	1583
Q Serve(g_s), s	2.6	8.2	0.0	0.0	13.5	4.1	14.1	1.1	0.0	4.5	0.0	0.1
Cycle Q Clear(g_c), s	2.6	8.2	0.0	0.0	13.5	4.1	14.1	1.1	0.0	4.5	0.0	0.1
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	2003	624	0	1372	427	499	498	446	389	0	174
V/C Ratio(X)	0.79	0.45	0.00	0.00	0.84	0.30	0.85	0.08	0.00	0.68	0.00	0.02
Avail Cap(c_a), veh/h	113	2066	643	0	1418	441	933	930	833	1866	0	833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	14.0	0.0	0.0	21.7	18.2	21.3	16.6	0.0	26.9	0.0	24.9
Incr Delay (d2), s/veh	20.7	0.2	0.0	0.0	4.8	0.4	1.5	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.9	0.0	0.0	6.9	1.8	7.0	0.5	0.0	2.2	0.0	0.1
LnGrp Delay(d),s/veh	50.1	14.2	0.0	0.0	26.4	18.6	22.8	16.6	0.0	27.6	0.0	25.0
LnGrp LOS	D	B			C	B	C	B		C		C
Approach Vol, veh/h		975			1287			464			268	
Approach Delay, s/veh		16.9			25.7			22.3			27.6	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		29.2		11.4	7.8	21.4		22.2
Change Period (Y+Rc), s		4.5		4.5	4.5	* 4.5		4.5
Max Green Setting (Gmax), s		25.5		33.0	4.0	* 18		33.0
Max Q Clear Time (g_c+I1), s		10.2		6.5	4.6	15.5		16.1
Green Ext Time (p_c), s		5.5		0.5	0.0	1.4		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	130		0	200		200	140		0
Storage Lanes	2		1	1		1	2		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850		0.919				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	1770	5085	1583	3433	3253	0	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1583	1770	5085	1583	3433	3253	0	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			577			170		113				254
Link Speed (mph)		45			50			25			25	
Link Distance (ft)		746			633			685			884	
Travel Time (s)		11.3			8.6			18.7			24.1	

Intersection Summary	
Area Type:	Other



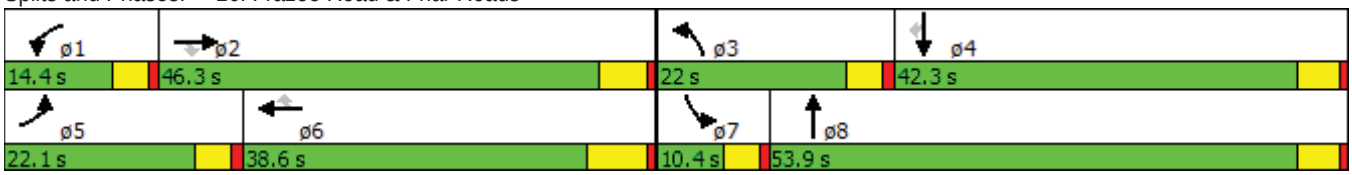
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	402	1117	502	82	1105	44	345	86	101	77	129	421
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.89	0.89	0.89	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	484	1346	605	99	1331	53	388	97	113	91	152	495
Shared Lane Traffic (%)												
Lane Group Flow (vph)	484	1346	605	99	1331	53	388	210	0	91	152	495

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	402	1117	502	82	1105	44	345	86	77	129	421
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases			2			6					4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	10.0	10.0	4.0	10.0	10.0	6.0	7.0	6.0	7.0	7.0
Minimum Split (s)	10.4	32.5	32.5	8.4	35.5	35.5	10.4	53.9	10.4	20.0	20.0
Total Split (s)	22.1	46.3	46.3	14.4	38.6	38.6	22.0	53.9	10.4	42.3	42.3
Total Split (%)	17.7%	37.0%	37.0%	11.5%	30.9%	30.9%	17.6%	43.1%	8.3%	33.8%	33.8%
Yellow Time (s)	3.4	4.5	4.5	3.4	5.5	5.5	3.4	3.9	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.5	5.5	4.4	6.5	6.5	4.4	4.9	4.4	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	Min	Min
Act Effct Green (s)	17.9	42.3	42.3	9.1	32.5	32.5	15.8	36.9	6.1	24.7	24.7
Actuated g/C Ratio	0.16	0.38	0.38	0.08	0.29	0.29	0.14	0.33	0.05	0.22	0.22
v/c Ratio	0.88	0.70	0.63	0.69	0.90	0.09	0.80	0.18	0.49	0.37	0.90
Control Delay	65.2	33.5	6.7	76.5	48.4	0.3	60.3	12.3	63.7	38.4	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	33.5	6.7	76.5	48.4	0.3	60.3	12.3	63.7	38.4	40.8
LOS	E	C	A	E	D	A	E	B	E	D	D
Approach Delay		33.2			48.6			43.4		43.1	
Approach LOS		C			D			D		D	

Intersection Summary	
Cycle Length: 125	
Actuated Cycle Length: 111.3	
Natural Cycle: 125	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 40.1	Intersection LOS: D
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 16: Frazee Road & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	402	1117	502	82	1105	44	345	86	101	77	129	421
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	484	1346	135	99	1331	0	388	97	34	91	152	283
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	1	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.89	0.89	0.89	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	546	2004	624	124	1554	484	458	750	252	184	388	330
Arrive On Green	0.16	0.39	0.39	0.07	0.31	0.00	0.13	0.29	0.29	0.05	0.21	0.21
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	3442	2604	874	3442	1863	1583
Grp Volume(v), veh/h	484	1346	135	99	1331	0	388	65	66	91	152	283
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	1721	1770	1708	1721	1863	1583
Q Serve(g_s), s	14.3	22.7	5.9	5.7	25.6	0.0	11.5	2.8	3.0	2.7	7.3	17.9
Cycle Q Clear(g_c), s	14.3	22.7	5.9	5.7	25.6	0.0	11.5	2.8	3.0	2.7	7.3	17.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		1.00
Lane Grp Cap(c), veh/h	546	2004	624	124	1554	484	458	510	492	184	388	330
V/C Ratio(X)	0.89	0.67	0.22	0.80	0.86	0.00	0.85	0.13	0.13	0.49	0.39	0.86
Avail Cap(c_a), veh/h	586	2004	624	171	1569	489	582	834	805	199	670	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	26.0	20.9	47.6	34.0	0.0	44.0	27.4	27.4	47.9	35.5	39.7
Incr Delay (d2), s/veh	13.8	1.0	0.2	11.4	5.2	0.0	7.9	0.0	0.0	1.1	0.4	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	10.8	2.6	3.2	12.7	0.0	5.9	1.4	1.4	1.3	3.8	8.2
LnGrp Delay(d),s/veh	56.6	27.0	21.1	59.1	39.1	0.0	52.0	27.4	27.5	49.0	35.9	43.7
LnGrp LOS	E	C	C	E	D		D	C	C	D	D	D
Approach Vol, veh/h		1965			1430			519			526	
Approach Delay, s/veh		33.9			40.5			45.8			42.4	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	47.5	18.3	26.6	20.9	38.3	10.0	34.9
Change Period (Y+Rc), s	4.4	* 6.5	4.4	4.9	4.4	6.5	4.4	4.9
Max Green Setting (Gmax), s	10.0	* 41	17.6	37.4	17.7	32.1	6.0	49.0
Max Q Clear Time (g_c+I1), s	7.7	24.7	13.5	19.9	16.3	27.6	4.7	5.0
Green Ext Time (p_c), s	0.0	15.1	0.4	1.8	0.2	4.2	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	38.4
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	240		240	260		260	200		0	210		210
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	1.00	1.00	0.97	0.95	0.95
Ped Bike Factor	1.00		0.99	1.00		0.98	0.99		0.98	0.99	0.99	0.98
Frt			0.850			0.850			0.850		0.915	0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	3433	5085	1583	3433	1863	1583	3433	1601	1504
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1767	5085	1563	3432	5085	1557	3409	1863	1551	3403	1601	1475
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			366			102			223		29	114
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		1172			1541			740			798	
Travel Time (s)		16.0			21.0			20.2			21.8	

Intersection Summary	
Area Type:	Other



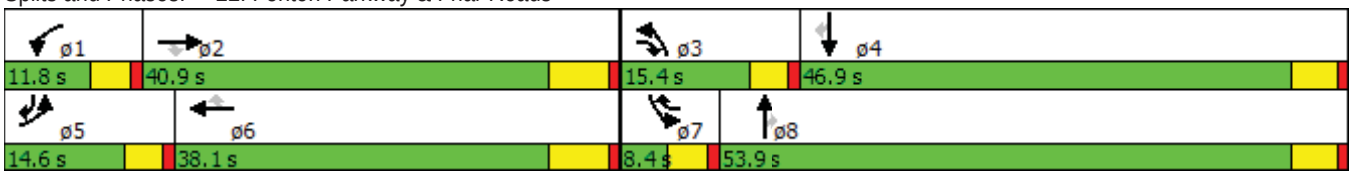
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	66	1057	333	205	830	19	310	16	327	25	18	62
Confl. Peds. (#/hr)	4		1	1		4	9		10	10		9
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.95	0.95	0.95	0.94	0.94	0.94	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	73	1162	366	216	874	20	330	17	348	30	22	76
Shared Lane Traffic (%)												38%
Lane Group Flow (vph)	73	1162	366	216	874	20	330	17	348	30	51	47

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	1057	333	205	830	19	310	16	327	25	18	62
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	4.0	10.0	4.0	4.0	10.0	4.0	4.0	7.0	7.0	4.0	7.0	4.0
Minimum Split (s)	8.4	40.2	8.4	8.4	37.2	8.4	8.4	43.9	43.9	8.4	46.9	8.4
Total Split (s)	14.6	40.9	15.4	11.8	38.1	8.4	15.4	53.9	53.9	8.4	46.9	14.6
Total Split (%)	12.7%	35.6%	13.4%	10.3%	33.1%	7.3%	13.4%	46.9%	46.9%	7.3%	40.8%	12.7%
Yellow Time (s)	3.4	5.2	3.4	3.4	5.2	3.4	3.4	3.9	3.9	3.4	3.9	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	6.2	4.4	4.4	6.2	4.4	4.4	4.9	4.9	4.4	4.9	4.4
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	None	Min	None	None	None	None	None	None	None
Act Effct Green (s)	7.7	24.2	38.3	8.1	27.3	33.6	12.2	19.5	19.5	4.4	15.1	17.6
Actuated g/C Ratio	0.11	0.33	0.52	0.11	0.37	0.46	0.17	0.27	0.27	0.06	0.21	0.24
v/c Ratio	0.39	0.69	0.37	0.57	0.46	0.03	0.58	0.03	0.60	0.15	0.14	0.11
Control Delay	44.0	25.6	2.9	43.3	22.5	0.1	38.2	20.7	13.4	44.1	15.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	25.6	2.9	43.3	22.5	0.1	38.2	20.7	13.4	44.1	15.7	0.5
LOS	D	C	A	D	C	A	D	C	B	D	B	A
Approach Delay		21.3			26.1			25.3			16.8	
Approach LOS		C			C			C			B	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 73.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 61.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 22: Fenton Parkway & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	1057	333	205	830	19	310	16	327	25	18	62
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	73	1162	0	216	874	0	330	17	210	30	22	0
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.91	0.91	0.91	0.95	0.95	0.95	0.94	0.94	0.94	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	2102	846	299	2275	747	417	402	337	87	222	272
Arrive On Green	0.05	0.41	0.00	0.09	0.45	0.00	0.12	0.22	0.22	0.02	0.12	0.00
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1561	3548	1863	1583
Grp Volume(v), veh/h	73	1162	0	216	874	0	330	17	210	30	22	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1561	1774	1863	1583
Q Serve(g_s), s	3.1	13.3	0.0	4.7	8.8	0.0	7.1	0.6	9.3	0.6	0.8	0.0
Cycle Q Clear(g_c), s	3.1	13.3	0.0	4.7	8.8	0.0	7.1	0.6	9.3	0.6	0.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	2102	846	299	2275	747	417	402	337	87	222	272
V/C Ratio(X)	0.78	0.55	0.00	0.72	0.38	0.00	0.79	0.04	0.62	0.34	0.10	0.00
Avail Cap(c_a), veh/h	236	2303	909	332	2275	747	494	1191	998	185	1021	951
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.8	17.1	0.0	34.1	14.1	0.0	32.7	23.8	27.2	36.8	30.1	0.0
Incr Delay (d2), s/veh	5.1	0.9	0.0	5.4	0.4	0.0	6.0	0.1	4.9	0.9	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	6.4	0.0	2.4	4.1	0.0	3.7	0.3	4.5	0.3	0.5	0.0
LnGrp Delay(d),s/veh	41.0	18.0	0.0	39.5	14.5	0.0	38.7	23.9	32.1	37.6	31.0	0.0
LnGrp LOS	D	B		D	B		D	C	C	D	C	
Approach Vol, veh/h		1235			1090			557			52	
Approach Delay, s/veh		19.4			19.5			35.8			34.8	
Approach LOS		B			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	37.9	13.7	14.0	8.5	40.5	6.3	21.4
Change Period (Y+Rc), s	4.4	6.2	4.4	4.9	4.4	6.2	4.4	4.9
Max Green Setting (Gmax), s	7.4	34.7	11.0	42.0	10.2	31.9	4.0	49.0
Max Q Clear Time (g_c+I1), s	6.7	15.3	9.1	2.8	5.1	10.8	2.6	11.3
Green Ext Time (p_c), s	0.0	16.3	0.1	2.7	0.0	19.6	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		300	260		260	180		0	190		300
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor			0.99	1.00					0.99	1.00		
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	3433	5085	1583	3433	1863	1583	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1561	3430	5085	1583	3433	1863	1563	3430	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			340			106			75			206
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		1541			1521			578			725	
Travel Time (s)		21.0			20.7			15.8			19.8	

Intersection Summary	
Area Type:	Other



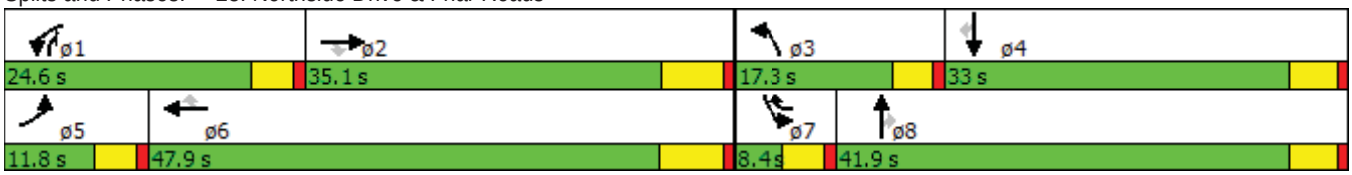
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	103	964	316	625	748	52	225	21	614	95	13	93
Confl. Peds. (#/hr)			2	2					1	1		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	111	1037	340	665	796	55	234	22	640	100	14	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	111	1037	340	665	796	55	234	22	640	100	14	98

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	964	316	625	748	52	225	21	614	95	13	93
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	4.0	4.0	7.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	35.0	35.0	8.4	33.2	8.4	8.4	41.9	8.4	8.4	20.9	20.9
Total Split (s)	11.8	35.1	35.1	24.6	47.9	8.4	17.3	41.9	24.6	8.4	33.0	33.0
Total Split (%)	10.7%	31.9%	31.9%	22.4%	43.5%	7.6%	15.7%	38.1%	22.4%	7.6%	30.0%	30.0%
Yellow Time (s)	3.4	5.0	5.0	3.4	5.2	3.4	3.4	3.9	3.4	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	6.0	6.0	4.4	6.2	4.4	4.4	4.9	4.4	4.4	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None	None	None
Act Effct Green (s)	6.8	23.9	23.9	21.1	40.8	62.3	10.2	15.3	30.7	13.7	14.0	14.0
Actuated g/C Ratio	0.08	0.28	0.28	0.25	0.48	0.73	0.12	0.18	0.36	0.16	0.16	0.16
v/c Ratio	0.40	0.73	0.50	0.78	0.33	0.05	0.57	0.07	1.04	0.18	0.05	0.23
Control Delay	46.7	32.5	6.2	41.1	17.5	0.2	44.3	28.6	71.6	40.3	32.9	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.7	32.5	6.2	41.1	17.5	0.2	44.3	28.6	71.6	40.3	32.9	1.2
LOS	D	C	A	D	B	A	D	C	E	D	C	A
Approach Delay		27.5			27.2			63.4			21.8	
Approach LOS		C			C			E			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 85.3	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 34.9	Intersection LOS: C
Intersection Capacity Utilization 72.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 23: Northside Drive & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	103	964	316	625	748	52	225	21	614	95	13	93
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	111	1037	71	665	796	0	234	22	562	100	14	0
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	169	1341	417	660	2066	703	300	592	806	131	501	426
Arrive On Green	0.05	0.26	0.26	0.19	0.41	0.00	0.09	0.32	0.32	0.04	0.27	0.00
Sat Flow, veh/h	3442	5085	1580	3442	5085	1583	3442	1863	1582	3442	1863	1583
Grp Volume(v), veh/h	111	1037	71	665	796	0	234	22	562	100	14	0
Grp Sat Flow(s),veh/h/ln	1721	1695	1580	1721	1695	1583	1721	1863	1582	1721	1863	1583
Q Serve(g_s), s	3.3	19.9	3.7	20.2	11.6	0.0	7.0	0.9	28.5	3.0	0.6	0.0
Cycle Q Clear(g_c), s	3.3	19.9	3.7	20.2	11.6	0.0	7.0	0.9	28.5	3.0	0.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	169	1341	417	660	2066	703	300	592	806	131	501	426
V/C Ratio(X)	0.66	0.77	0.17	1.01	0.39	0.00	0.78	0.04	0.70	0.77	0.03	0.00
Avail Cap(c_a), veh/h	242	1404	436	660	2066	703	421	654	859	131	501	426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.3	35.9	29.9	42.6	22.0	0.0	47.1	24.8	19.7	50.2	28.4	0.0
Incr Delay (d2), s/veh	1.6	3.4	0.5	37.1	0.3	0.0	3.8	0.1	3.7	21.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	9.7	1.6	12.9	5.5	0.0	3.5	0.5	13.1	1.8	0.3	0.0
LnGrp Delay(d),s/veh	50.9	39.3	30.4	79.7	22.3	0.0	50.9	24.9	23.4	71.6	28.5	0.0
LnGrp LOS	D	D	C	F	C		D	C	C	E	C	
Approach Vol, veh/h		1219			1461			818			114	
Approach Delay, s/veh		39.9			48.4			31.3			66.3	
Approach LOS		D			D			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.6	34.0	13.6	33.2	9.6	49.0	8.4	38.4
Change Period (Y+Rc), s	4.4	* 6.2	4.4	4.9	4.4	6.2	4.4	4.9
Max Green Setting (Gmax), s	20.2	* 29	12.9	28.1	7.4	41.7	4.0	37.0
Max Q Clear Time (g_c+I1), s	22.2	21.9	9.0	2.6	5.3	13.6	5.0	30.5
Green Ext Time (p_c), s	0.0	5.9	0.2	7.0	0.0	23.2	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	42.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		0	0		0	160		200	300		200
Storage Lanes	1		1	0		0	1		1	2		1
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	0.99	1.00	0.97		0.99		0.98		0.97	1.00		0.97
Frt			0.850		0.945				0.850			0.850
Flt Protected	0.950	0.998			0.999		0.950			0.950		
Satd. Flow (prot)	1513	1589	1425	0	2969	0	1593	3185	1425	3090	3185	1425
Flt Permitted	0.950	0.998			0.999		0.950			0.950		
Satd. Flow (perm)	1498	1589	1389	0	2968	0	1564	3185	1387	3074	3185	1379
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			124		73				116			84
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1168			1523			533			740	
Travel Time (s)		19.9			26.0			14.5			20.2	

Intersection Summary	
Area Type:	CBD



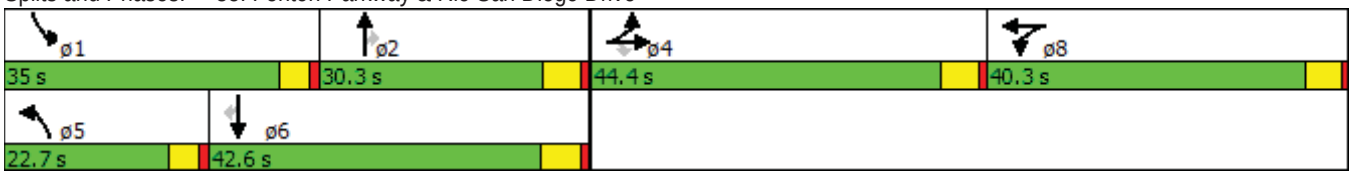
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	101	239	113	9	304	183	86	157	1	406	102	54
Confl. Peds. (#/hr)	14		9	9		14	12		2	2		12
Confl. Bikes (#/hr)						2						
Peak Hour Factor	0.91	0.91	0.91	0.90	0.90	0.90	0.81	0.81	0.81	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	111	263	124	10	338	203	106	194	1	441	111	59
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	100	274	124	0	551	0	106	194	1	441	111	59

Intersection Summary

Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	101	239	113	304	86	157	1	406	102	54
Turn Type	Split	NA	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	5	2		1	6	
Permitted Phases			4				2			6
Detector Phase	4	4	4	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	7.0	7.0	4.0	7.0	7.0
Minimum Split (s)	35.2	35.2	35.2	34.9	8.4	28.3	28.3	8.4	31.4	31.4
Total Split (s)	44.4	44.4	44.4	40.3	22.7	30.3	30.3	35.0	42.6	42.6
Total Split (%)	29.6%	29.6%	29.6%	26.9%	15.1%	20.2%	20.2%	23.3%	28.4%	28.4%
Yellow Time (s)	4.2	4.2	4.2	3.9	3.4	4.3	4.3	3.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.2	5.2	5.2	4.9	4.4	5.3	5.3	4.4	5.4	5.4
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	24.0	24.0	24.0	22.9	11.5	16.6	16.6	20.2	25.2	25.2
Actuated g/C Ratio	0.23	0.23	0.23	0.22	0.11	0.16	0.16	0.19	0.24	0.24
v/c Ratio	0.29	0.75	0.30	0.78	0.61	0.38	0.00	0.74	0.15	0.15
Control Delay	39.1	53.9	8.8	43.7	65.3	46.5	0.0	50.6	36.6	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	53.9	8.8	43.7	65.3	46.5	0.0	50.6	36.6	4.5
LOS	D	D	A	D	E	D	A	D	D	A
Approach Delay		39.7		43.7		53.0			43.6	
Approach LOS		D		D		D			D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 104.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 44.1	Intersection LOS: D
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 35: Fenton Parkway & Rio San Diego Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	101	239	113	9	304	183	86	157	1	406	102	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1676	1676	1676	1710	1676	1710	1676	1676	1676	1676	1676	1676
Adj Flow Rate, veh/h	111	263	25	10	338	142	106	194	0	441	111	0
Adj No. of Lanes	1	1	1	0	2	0	1	2	1	2	2	1
Peak Hour Factor	0.91	0.91	0.91	0.90	0.90	0.90	0.81	0.81	0.81	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	356	297	14	470	207	132	496	222	532	780	349
Arrive On Green	0.21	0.21	0.21	0.22	0.22	0.22	0.08	0.16	0.00	0.17	0.24	0.00
Sat Flow, veh/h	1597	1676	1397	62	2140	944	1597	3185	1425	3097	3185	1425
Grp Volume(v), veh/h	111	263	25	268	0	222	106	194	0	441	111	0
Grp Sat Flow(s),veh/h/ln	1597	1676	1397	1673	0	1472	1597	1593	1425	1549	1593	1425
Q Serve(g_s), s	4.9	12.1	1.2	12.3	0.0	11.4	5.4	4.5	0.0	11.4	2.3	0.0
Cycle Q Clear(g_c), s	4.9	12.1	1.2	12.3	0.0	11.4	5.4	4.5	0.0	11.4	2.3	0.0
Prop In Lane	1.00		1.00	0.04		0.64	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	356	297	368	0	323	132	496	222	532	780	349
V/C Ratio(X)	0.33	0.74	0.08	0.73	0.00	0.69	0.80	0.39	0.00	0.83	0.14	0.00
Avail Cap(c_a), veh/h	756	794	662	716	0	630	353	962	431	1145	1432	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.6	30.4	26.1	30.0	0.0	29.7	37.3	31.4	0.0	33.1	24.4	0.0
Incr Delay (d2), s/veh	0.3	1.9	0.1	1.1	0.0	1.0	4.3	2.3	0.0	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	5.8	0.5	5.8	0.0	4.7	2.5	2.2	0.0	4.9	1.0	0.0
LnGrp Delay(d),s/veh	27.9	32.3	26.2	31.1	0.0	30.6	41.6	33.7	0.0	34.4	24.8	0.0
LnGrp LOS	C	C	C	C		C	D	C		C	C	
Approach Vol, veh/h		399			490			300			552	
Approach Delay, s/veh		30.7			30.9			36.5			32.5	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.6	18.3		22.8	11.2	25.7		23.1
Change Period (Y+Rc), s	4.4	* 5.4		5.2	4.4	5.4		4.9
Max Green Setting (Gmax), s	30.6	* 25		39.2	18.3	37.2		35.4
Max Q Clear Time (g_c+I1), s	13.4	6.5		14.1	7.4	4.3		14.3
Green Ext Time (p_c), s	0.8	4.8		1.2	0.1	6.5		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		200	70		200	100		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96	0.96			1.00	0.95	1.00		0.97	0.99		0.99
Frt		0.995				0.850			0.850			0.850
Flt Protected	0.950	0.957			0.984		0.950			0.950		
Satd. Flow (prot)	1681	1684	0	0	1833	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.950	0.957			0.984		0.950			0.950		
Satd. Flow (perm)	1616	1625	0	0	1830	1501	1768	3539	1536	1757	1863	1563
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				162			162			337
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1523			649			624			578	
Travel Time (s)		26.0			11.1			17.0			15.8	

Intersection Summary	
Area Type:	Other



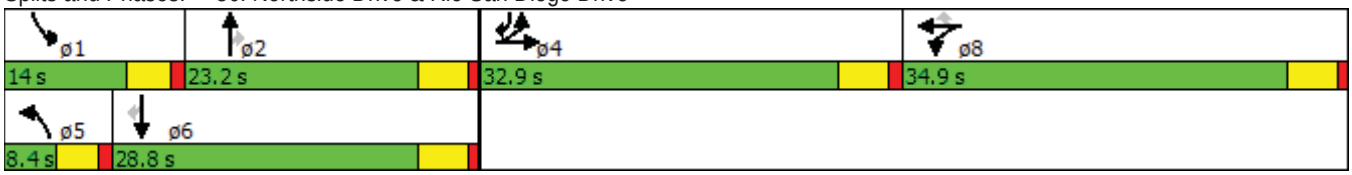
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	492	19	8	11	23	122	4	193	15	130	223	313
Confl. Peds. (#/hr)	39		4	4		39	1		3	3		1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.78	0.78	0.78	0.85	0.85	0.85	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	529	20	9	14	29	156	5	227	18	140	240	337
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	280	278	0	0	43	156	5	227	18	140	240	337

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	492	19	23	122	4	193	15	130	223	313
Turn Type	Split	NA	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	4	4	8		5	2		1	6	4
Permitted Phases				8			2			6
Detector Phase	4	4	8	8	5	2	2	1	6	4
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	7.0	7.0	4.0	7.0	4.0
Minimum Split (s)	32.9	32.9	34.9	34.9	8.4	22.9	22.9	8.4	26.9	32.9
Total Split (s)	32.9	32.9	34.9	34.9	8.4	23.2	23.2	14.0	28.8	32.9
Total Split (%)	31.3%	31.3%	33.2%	33.2%	8.0%	22.1%	22.1%	13.3%	27.4%	31.3%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.4	3.9	3.9	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	4.9	4.4	4.9	4.9	4.4	4.9	4.9
Lead/Lag					Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	Min	Min	None	Min	None
Act Effct Green (s)	18.2	18.2	17.6	17.6	4.4	10.9	10.9	10.0	24.5	42.7
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.06	0.14	0.14	0.13	0.31	0.55
v/c Ratio	0.71	0.70	0.10	0.34	0.05	0.46	0.05	0.62	0.41	0.33
Control Delay	41.0	40.3	25.0	6.5	47.2	38.1	0.3	53.2	30.0	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	40.3	25.0	6.5	47.2	38.1	0.3	53.2	30.0	2.3
LOS	D	D	C	A	D	D	A	D	C	A
Approach Delay		40.6	10.5			35.5			21.5	
Approach LOS		D	B			D			C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 77.9	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 28.5	Intersection LOS: C
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 36: Northside Drive & Rio San Diego Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	492	19	8	11	23	122	4	193	15	130	223	313
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	552	0	0	14	29	0	5	227	0	140	240	74
Adj No. of Lanes	2	1	0	0	1	1	1	2	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.78	0.78	0.78	0.85	0.85	0.85	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	937	492	0	99	204	262	9	542	243	178	463	810
Arrive On Green	0.26	0.00	0.00	0.17	0.17	0.00	0.01	0.15	0.00	0.10	0.25	0.25
Sat Flow, veh/h	3548	1863	0	597	1236	1583	1774	3539	1583	1774	1863	1578
Grp Volume(v), veh/h	552	0	0	43	0	0	5	227	0	140	240	74
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1833	0	1583	1774	1770	1583	1774	1863	1578
Q Serve(g_s), s	8.2	0.0	0.0	1.2	0.0	0.0	0.2	3.5	0.0	4.6	6.7	1.4
Cycle Q Clear(g_c), s	8.2	0.0	0.0	1.2	0.0	0.0	0.2	3.5	0.0	4.6	6.7	1.4
Prop In Lane	1.00		0.00	0.33		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	937	492	0	303	0	262	9	542	243	178	463	810
V/C Ratio(X)	0.59	0.00	0.00	0.14	0.00	0.00	0.53	0.42	0.00	0.79	0.52	0.09
Avail Cap(c_a), veh/h	1648	865	0	912	0	788	118	1074	481	282	738	1044
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	0.0	0.0	21.5	0.0	0.0	29.9	23.1	0.0	26.5	19.6	7.5
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	0.0	15.9	0.2	0.0	2.9	2.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	0.6	0.0	0.0	0.1	1.7	0.0	2.4	3.7	1.0
LnGrp Delay(d),s/veh	19.6	0.0	0.0	21.6	0.0	0.0	45.9	23.3	0.0	29.4	21.9	7.6
LnGrp LOS	B			C			D	C		C	C	A
Approach Vol, veh/h		552			43			232			454	
Approach Delay, s/veh		19.6			21.6			23.8			21.9	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.5	14.1		20.8	4.7	19.9		14.9
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	9.6	18.3		28.0	4.0	23.9		30.0
Max Q Clear Time (g_c+I1), s	6.6	5.5		10.2	2.2	8.7		3.2
Green Ext Time (p_c), s	0.1	3.6		1.0	0.0	3.9		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	230		0	0		200	200		200	240		0
Storage Lanes	1		1	0		1	2		1	1		0
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor			0.97		0.99		0.99		0.96	1.00	1.00	
Frt			0.850			0.850			0.850		0.994	
Flt Protected	0.950	0.962			0.969		0.950			0.950		
Satd. Flow (prot)	1681	1702	1583	0	1805	1583	3433	3539	1583	1770	5049	0
Flt Permitted	0.950	0.962			0.969		0.950			0.950		
Satd. Flow (perm)	1681	1702	1540	0	1789	1583	3404	3539	1526	1762	5049	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			375			112			98		6	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		471			685			996			1038	
Travel Time (s)		12.8			18.7			17.0			17.7	

Intersection Summary	
Area Type:	Other



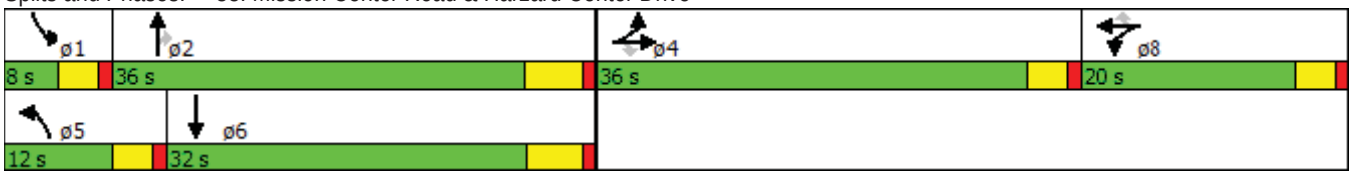
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	74	9	326	24	13	10	286	709	47	63	732	29
Confl. Peds. (#/hr)			16	16			13		6	6		13
Confl. Bikes (#/hr)			1						2			1
Peak Hour Factor	0.87	0.87	0.87	0.78	0.78	0.78	0.83	0.83	0.83	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	85	10	375	31	17	13	345	854	57	65	755	30
Shared Lane Traffic (%)	44%											
Lane Group Flow (vph)	48	47	375	0	48	13	345	854	57	65	785	0

Intersection Summary

Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	74	9	326	13	10	286	709	47	63	732
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		8		5	2		1	6
Permitted Phases			4		8			2		
Detector Phase	4	4	4	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	10.0	10.0	4.0	10.0
Minimum Split (s)	36.0	36.0	36.0	20.0	20.0	8.0	26.3	26.3	8.0	31.2
Total Split (s)	36.0	36.0	36.0	20.0	20.0	12.0	36.0	36.0	8.0	32.0
Total Split (%)	36.0%	36.0%	36.0%	20.0%	20.0%	12.0%	36.0%	36.0%	8.0%	32.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.3	4.3	3.0	4.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.3	5.3	4.0	5.2
Lead/Lag						Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	11.4	11.4	11.4	6.8	6.8	8.9	22.6	22.6	4.5	18.3
Actuated g/C Ratio	0.19	0.19	0.19	0.11	0.11	0.15	0.38	0.38	0.08	0.31
v/c Ratio	0.15	0.14	0.63	0.23	0.05	0.67	0.63	0.09	0.49	0.50
Control Delay	23.6	23.5	8.1	34.0	0.3	37.7	19.5	1.7	49.5	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	23.5	8.1	34.0	0.3	37.7	19.5	1.7	49.5	19.3
LOS	C	C	A	C	A	D	B	A	D	B
Approach Delay		11.2		26.8			23.7			21.7
Approach LOS		B		C			C			C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 59.3	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 20.9	Intersection LOS: C
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 38: Mission Center Road & Harzard Center Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	74	9	326	24	13	10	286	709	47	63	732	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	92	0	82	31	17	0	345	854	0	65	755	25
Adj No. of Lanes	2	0	1	0	1	1	2	2	1	1	3	0
Peak Hour Factor	0.87	0.87	0.87	0.78	0.78	0.78	0.83	0.83	0.83	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	524	0	223	43	24	59	450	1681	752	82	1971	65
Arrive On Green	0.15	0.00	0.15	0.04	0.04	0.00	0.13	0.48	0.00	0.05	0.39	0.39
Sat Flow, veh/h	3548	0	1512	1165	639	1583	3442	3539	1583	1774	5052	167
Grp Volume(v), veh/h	92	0	82	48	0	0	345	854	0	65	506	274
Grp Sat Flow(s),veh/h/ln	1774	0	1512	1804	0	1583	1721	1770	1583	1774	1695	1829
Q Serve(g_s), s	1.3	0.0	2.9	1.5	0.0	0.0	5.7	9.8	0.0	2.1	6.3	6.3
Cycle Q Clear(g_c), s	1.3	0.0	2.9	1.5	0.0	0.0	5.7	9.8	0.0	2.1	6.3	6.3
Prop In Lane	1.00		1.00	0.65		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	524	0	223	67	0	59	450	1681	752	82	1323	713
V/C Ratio(X)	0.18	0.00	0.37	0.72	0.00	0.00	0.77	0.51	0.00	0.80	0.38	0.38
Avail Cap(c_a), veh/h	1932	0	823	491	0	431	469	1849	827	121	1546	834
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	0.0	22.6	28.0	0.0	0.0	24.7	10.7	0.0	27.8	12.8	12.9
Incr Delay (d2), s/veh	0.2	0.0	1.3	5.3	0.0	0.0	6.4	0.5	0.0	11.6	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.3	0.9	0.0	0.0	3.1	4.9	0.0	1.3	3.0	3.3
LnGrp Delay(d),s/veh	22.1	0.0	23.9	33.3	0.0	0.0	31.0	11.1	0.0	39.3	13.2	13.5
LnGrp LOS	C		C	C			C	B		D	B	B
Approach Vol, veh/h		174			48			1199			845	
Approach Delay, s/veh		22.9			33.3			16.9			15.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.7	33.2		12.7	11.7	28.2		6.2
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	* 5.3		4.0
Max Green Setting (Gmax), s	4.0	30.7		32.0	8.0	* 27		16.0
Max Q Clear Time (g_c+I1), s	4.1	11.8		4.9	7.7	8.3		3.5
Green Ext Time (p_c), s	0.0	14.5		0.8	0.0	14.3		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	130			220	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99			0.97		0.92
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1758	1863	1863	1531	1770	1457
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				405		75
Link Speed (mph)		30	30		30	
Link Distance (ft)		834	642		429	
Travel Time (s)		19.0	14.6		9.8	

Intersection Summary	
Area Type:	Other



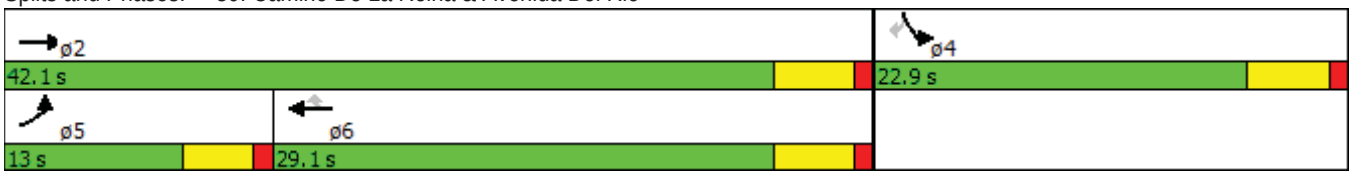
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	89	272	229	356	226	65
Confl. Peds. (#/hr)	7			7		30
Confl. Bikes (#/hr)				4		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	101	309	260	405	260	75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	101	309	260	405	260	75

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	89	272	229	356	226	65
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	4.0	7.0	7.0	7.0	4.0	4.0
Minimum Split (s)	8.4	20.9	28.9	28.9	22.9	22.9
Total Split (s)	13.0	42.1	29.1	29.1	22.9	22.9
Total Split (%)	20.0%	64.8%	44.8%	44.8%	35.2%	35.2%
Yellow Time (s)	3.4	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	7.1	21.8	15.5	15.5	11.4	11.4
Actuated g/C Ratio	0.16	0.50	0.35	0.35	0.26	0.26
v/c Ratio	0.35	0.34	0.40	0.51	0.57	0.17
Control Delay	24.2	7.8	15.5	4.4	21.4	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	7.8	15.5	4.4	21.4	6.2
LOS	C	A	B	A	C	A
Approach Delay		11.9	8.7		18.0	
Approach LOS		B	A		B	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 44	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 43.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 39: Camino De La Reina & Avenida Del Rio





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	89	272	229	356	226	65
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	101	309	260	115	260	12
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	133	914	509	417	342	305
Arrive On Green	0.07	0.49	0.27	0.27	0.19	0.19
Sat Flow, veh/h	1774	1863	1863	1523	1774	1583
Grp Volume(v), veh/h	101	309	260	115	260	12
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1523	1774	1583
Q Serve(g_s), s	1.7	3.1	3.6	1.8	4.3	0.2
Cycle Q Clear(g_c), s	1.7	3.1	3.6	1.8	4.3	0.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	133	914	509	417	342	305
V/C Ratio(X)	0.76	0.34	0.51	0.28	0.76	0.04
Avail Cap(c_a), veh/h	493	2238	1456	1191	1031	921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	4.8	9.5	8.8	11.8	10.2
Incr Delay (d2), s/veh	3.3	0.1	0.3	0.1	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.6	1.8	0.8	2.2	0.2
LnGrp Delay(d),s/veh	17.4	4.9	9.8	9.0	13.1	10.2
LnGrp LOS	B	A	A	A	B	B
Approach Vol, veh/h		410	375		272	
Approach Delay, s/veh		8.0	9.5		13.0	
Approach LOS		A	A		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		20.1		10.9	6.7	13.4		
Change Period (Y+Rc), s		4.9		4.9	4.4	4.9		
Max Green Setting (Gmax), s		37.2		18.0	8.6	24.2		
Max Q Clear Time (g_c+I1), s		5.1		6.3	3.7	5.6		
Green Ext Time (p_c), s		2.5		0.3	0.0	2.3		

Intersection Summary	
HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	290		0	140		0	160		0	320		0
Storage Lanes	2		0	2		0	2		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	0.95	0.97	0.91	0.91	0.97	0.91	1.00
Ped Bike Factor	0.99	0.99		0.99	0.99		1.00	0.99		0.99		0.97
Frt		0.943			0.922			0.952				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3305	0	3433	3222	0	3433	4804	0	3433	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3411	3305	0	3413	3222	0	3421	4804	0	3408	5085	1540
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		111			182			74				218
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		2210			1926			473			996	
Travel Time (s)		50.2			43.8			8.1			17.0	

Intersection Summary	
Area Type:	Other



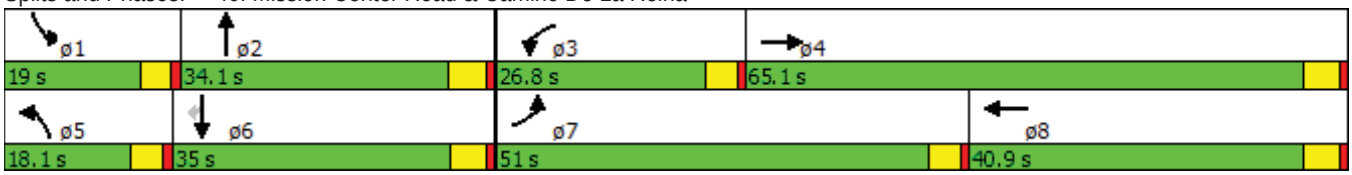
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	255	348	214	327	289	316	181	487	230	374	514	194
Confl. Peds. (#/hr)	8		10	10		8	3		8	8		3
Confl. Bikes (#/hr)			1			3						
Peak Hour Factor	0.93	0.93	0.93	0.91	0.91	0.91	0.96	0.96	0.96	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	274	374	230	359	318	347	189	507	240	420	578	218
Shared Lane Traffic (%)												
Lane Group Flow (vph)	274	604	0	359	665	0	189	747	0	420	578	218

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	255	348	327	289	181	487	374	514	194
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	4.0	7.0	4.0	7.0	4.0	10.0	4.0	10.0	10.0
Minimum Split (s)	51.0	37.9	8.4	40.9	8.4	33.2	8.4	33.0	33.0
Total Split (s)	51.0	65.1	26.8	40.9	18.1	34.1	19.0	35.0	35.0
Total Split (%)	35.2%	44.9%	18.5%	28.2%	12.5%	23.5%	13.1%	24.1%	24.1%
Yellow Time (s)	3.4	3.9	3.4	3.9	3.4	4.2	3.4	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.4	4.9	4.4	5.2	4.4	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	12.4	21.3	14.5	23.4	9.9	20.4	15.0	25.6	25.6
Actuated g/C Ratio	0.14	0.24	0.16	0.26	0.11	0.23	0.17	0.28	0.28
v/c Ratio	0.58	0.70	0.65	0.69	0.50	0.66	0.74	0.40	0.37
Control Delay	43.7	30.8	43.1	25.9	45.3	32.5	47.5	29.0	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.7	30.8	43.1	25.9	45.3	32.5	47.5	29.0	6.4
LOS	D	C	D	C	D	C	D	C	A
Approach Delay		34.9		31.9		35.0		31.4	
Approach LOS		C		C		D		C	

Intersection Summary	
Cycle Length: 145	
Actuated Cycle Length: 90.5	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 33.1	Intersection LOS: C
Intersection Capacity Utilization 72.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 40: Mission Center Road & Camino De La Reina



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	255	348	214	327	289	316	181	487	230	374	514	194
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	274	374	160	359	318	199	189	507	178	420	578	21
Adj No. of Lanes	2	2	0	2	2	0	2	3	0	2	3	1
Peak Hour Factor	0.93	0.93	0.93	0.91	0.91	0.91	0.96	0.96	0.96	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	356	694	292	440	654	399	260	929	315	486	1595	490
Arrive On Green	0.10	0.29	0.29	0.13	0.31	0.31	0.08	0.25	0.25	0.14	0.31	0.31
Sat Flow, veh/h	3442	2411	1014	3442	2094	1277	3442	3743	1271	3442	5085	1563
Grp Volume(v), veh/h	274	273	261	359	267	250	189	458	227	420	578	21
Grp Sat Flow(s),veh/h/ln	1721	1770	1656	1721	1770	1601	1721	1695	1624	1721	1695	1563
Q Serve(g_s), s	7.5	12.6	12.9	9.8	11.9	12.3	5.2	11.4	11.9	11.6	8.5	0.9
Cycle Q Clear(g_c), s	7.5	12.6	12.9	9.8	11.9	12.3	5.2	11.4	11.9	11.6	8.5	0.9
Prop In Lane	1.00		0.61	1.00		0.80	1.00		0.78	1.00		1.00
Lane Grp Cap(c), veh/h	356	509	477	440	552	500	260	841	403	486	1595	490
V/C Ratio(X)	0.77	0.54	0.55	0.82	0.48	0.50	0.73	0.54	0.56	0.86	0.36	0.04
Avail Cap(c_a), veh/h	1655	1099	1029	796	657	595	487	1011	484	519	1595	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	29.1	29.2	41.1	27.0	27.2	43.8	31.7	31.8	40.7	25.7	23.1
Incr Delay (d2), s/veh	1.3	0.9	1.0	1.4	1.3	1.5	1.5	1.0	2.2	12.7	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	6.3	6.0	4.8	6.0	5.6	2.5	5.5	5.6	6.3	4.1	0.4
LnGrp Delay(d),s/veh	43.7	30.0	30.2	42.6	28.3	28.7	45.3	32.6	34.1	53.4	26.0	23.2
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		808			876			874			1019	
Approach Delay, s/veh		34.7			34.2			35.7			37.2	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	29.2	16.8	32.8	11.7	35.6	14.4	35.2
Change Period (Y+Rc), s	4.4	5.2	4.4	4.9	4.4	* 5.2	4.4	4.9
Max Green Setting (Gmax), s	14.6	28.9	22.4	60.2	13.7	* 30	46.6	36.0
Max Q Clear Time (g_c+I1), s	13.6	13.9	11.8	14.9	7.2	10.5	9.5	14.3
Green Ext Time (p_c), s	0.1	9.8	0.5	12.2	0.2	12.2	0.5	9.3

Intersection Summary	
HCM 2010 Ctrl Delay	35.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		200	260		200	160		200	160		200
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	1.00		0.97	0.99		0.98	0.99		0.97
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.620			0.696		
Satd. Flow (perm)	1761	3539	1551	1764	3539	1538	1143	3539	1545	1282	3539	1541
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			226			81			83			236
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1318			1328			752			1348	
Travel Time (s)		30.0			30.2			20.5			36.8	

Intersection Summary	
Area Type:	Other



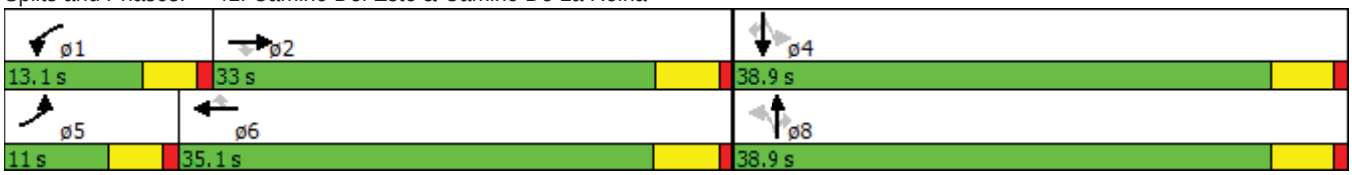
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	164	505	201	161	409	12	126	84	76	64	185	208
Confl. Peds. (#/hr)	6		7	7		6	19		16	16		19
Confl. Bikes (#/hr)			3									2
Peak Hour Factor	0.89	0.89	0.89	0.94	0.94	0.94	0.94	0.94	0.94	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	184	567	226	171	435	13	134	89	81	73	210	236
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	567	226	171	435	13	134	89	81	73	210	236

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	505	201	161	409	12	126	84	76	64	185	208
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	33.0	33.0	8.4	35.1	35.1	36.9	36.9	36.9	38.9	38.9	38.9
Total Split (s)	11.0	33.0	33.0	13.1	35.1	35.1	38.9	38.9	38.9	38.9	38.9	38.9
Total Split (%)	12.9%	38.8%	38.8%	15.4%	41.3%	41.3%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%
Yellow Time (s)	3.4	4.0	4.0	3.4	4.1	4.1	3.9	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.0	5.0	4.4	5.1	5.1	4.9	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	7.1	15.7	15.7	9.4	17.8	17.8	13.0	13.0	13.0	13.0	13.0	13.0
Actuated g/C Ratio	0.13	0.29	0.29	0.18	0.33	0.33	0.24	0.24	0.24	0.24	0.24	0.24
v/c Ratio	0.78	0.55	0.37	0.55	0.37	0.02	0.48	0.10	0.18	0.23	0.24	0.43
Control Delay	54.5	18.8	4.9	35.0	15.5	0.1	23.7	15.8	5.4	18.2	16.7	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.5	18.8	4.9	35.0	15.5	0.1	23.7	15.8	5.4	18.2	16.7	5.3
LOS	D	B	A	D	B	A	C	B	A	B	B	A
Approach Delay		22.3			20.6			16.5			11.8	
Approach LOS		C			C			B			B	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 53.5	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 63.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 41: Camino Del Este & Camino De La Reina



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	164	505	201	161	409	12	126	84	76	64	185	208
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	0.99		0.98	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	184	567	57	171	435	0	134	89	28	73	210	77
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.94	0.94	0.94	0.94	0.94	0.94	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	1078	472	215	1088	487	423	1121	492	503	1121	486
Arrive On Green	0.12	0.30	0.30	0.12	0.31	0.00	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1774	3539	1550	1774	3539	1583	1075	3539	1555	1251	3539	1534
Grp Volume(v), veh/h	184	567	57	171	435	0	134	89	28	73	210	77
Grp Sat Flow(s),veh/h/ln	1774	1770	1550	1774	1770	1583	1075	1770	1555	1251	1770	1534
Q Serve(g_s), s	5.7	7.4	1.5	5.2	5.4	0.0	5.8	1.0	0.7	2.4	2.4	2.0
Cycle Q Clear(g_c), s	5.7	7.4	1.5	5.2	5.4	0.0	8.2	1.0	0.7	3.4	2.4	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	209	1078	472	215	1088	487	423	1121	492	503	1121	486
V/C Ratio(X)	0.88	0.53	0.12	0.80	0.40	0.00	0.32	0.08	0.06	0.15	0.19	0.16
Avail Cap(c_a), veh/h	209	1773	777	276	1900	850	737	2153	946	868	2153	933
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	16.1	14.0	23.9	15.3	0.0	16.8	13.4	13.3	14.6	13.9	13.7
Incr Delay (d2), s/veh	30.8	0.4	0.1	9.0	0.2	0.0	0.3	0.0	0.0	0.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	3.7	0.6	3.1	2.7	0.0	1.7	0.5	0.3	0.8	1.2	0.9
LnGrp Delay(d),s/veh	55.0	16.5	14.1	32.8	15.5	0.0	17.1	13.4	13.3	14.7	13.9	13.8
LnGrp LOS	E	B	B	C	B		B	B	B	B	B	B
Approach Vol, veh/h		808			606			251			360	
Approach Delay, s/veh		25.1			20.4			15.4			14.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.2	22.1		22.6	11.0	22.3		22.6
Change Period (Y+Rc), s	4.4	* 5.1		4.9	4.4	5.1		4.9
Max Green Setting (Gmax), s	8.7	* 28		34.0	6.6	30.0		34.0
Max Q Clear Time (g_c+I1), s	7.2	9.4		5.4	7.7	7.4		10.2
Green Ext Time (p_c), s	0.0	7.0		2.6	0.0	7.6		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		0	250		200	0		200	250		200
Storage Lanes	1		0	2		1	2		1	2		1
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor	0.99	0.99				0.98	1.00		0.99	1.00		0.99
Frt		0.918				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3225	0	3433	3539	1583	3433	5085	1583	3433	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1759	3225	0	3433	3539	1550	3431	5085	1560	3430	5085	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		199				144			132			153
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		1328			1080			469			1368	
Travel Time (s)		30.2			24.5			7.1			20.7	

Intersection Summary

Area Type: Other



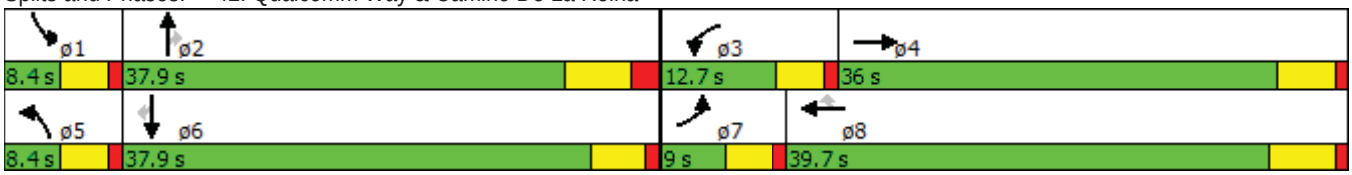
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	169	237	287	126	214	130	186	763	128	91	611	147
Confl. Peds. (#/hr)	10					10	1		2	2		1
Confl. Bikes (#/hr)			2			1			1			1
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.97	0.97	0.97	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	186	260	315	142	240	146	192	787	132	95	636	153
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	575	0	142	240	146	192	787	132	95	636	153

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	169	237	126	214	130	186	763	128	91	611	147
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	7.0	4.0	7.0	7.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	8.4	23.1	8.4	39.7	39.7	8.4	37.7	37.7	8.4	36.9	36.9
Total Split (s)	9.0	36.0	12.7	39.7	39.7	8.4	37.9	37.9	8.4	37.9	37.9
Total Split (%)	9.5%	37.9%	13.4%	41.8%	41.8%	8.8%	39.9%	39.9%	8.8%	39.9%	39.9%
Yellow Time (s)	3.4	4.1	3.4	4.7	4.7	3.4	4.7	4.7	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.1	4.4	5.7	5.7	4.4	6.7	6.7	4.4	4.9	4.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	4.8	15.1	7.0	14.2	14.2	4.2	18.3	18.3	4.2	18.0	18.0
Actuated g/C Ratio	0.08	0.25	0.11	0.23	0.23	0.07	0.30	0.30	0.07	0.29	0.29
v/c Ratio	1.35	0.61	0.36	0.29	0.31	0.82	0.52	0.24	0.41	0.43	0.27
Control Delay	229.1	17.9	31.1	20.9	6.6	62.5	20.1	5.1	37.8	18.4	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	229.1	17.9	31.1	20.9	6.6	62.5	20.1	5.1	37.8	18.4	4.7
LOS	F	B	C	C	A	E	C	A	D	B	A
Approach Delay		69.5		19.7			25.7			18.1	
Approach LOS		E		B			C			B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 61.2	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay: 32.8	Intersection LOS: C
Intersection Capacity Utilization 58.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 42: Qualcomm Way & Camino De La Reina





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	169	237	287	126	214	130	186	763	128	91	611	147
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	186	260	167	142	240	45	192	787	39	95	636	49
Adj No. of Lanes	1	2	0	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.97	0.97	0.97	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	434	268	228	727	316	209	1795	551	172	1741	534
Arrive On Green	0.07	0.21	0.21	0.07	0.21	0.21	0.06	0.35	0.35	0.05	0.34	0.34
Sat Flow, veh/h	1774	2079	1283	3442	3539	1540	3442	5085	1561	3442	5085	1561
Grp Volume(v), veh/h	186	220	207	142	240	45	192	787	39	95	636	49
Grp Sat Flow(s),veh/h/ln	1774	1770	1593	1721	1770	1540	1721	1695	1561	1721	1695	1561
Q Serve(g_s), s	4.6	7.4	7.8	2.6	3.8	1.6	3.7	7.8	1.1	1.8	6.2	1.4
Cycle Q Clear(g_c), s	4.6	7.4	7.8	2.6	3.8	1.6	3.7	7.8	1.1	1.8	6.2	1.4
Prop In Lane	1.00		0.81	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	370	333	228	727	316	209	1795	551	172	1741	534
V/C Ratio(X)	1.50	0.59	0.62	0.62	0.33	0.14	0.92	0.44	0.07	0.55	0.37	0.09
Avail Cap(c_a), veh/h	124	830	747	434	1826	795	209	2408	739	209	2547	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	23.5	23.7	30.0	22.3	21.4	30.8	16.3	14.1	30.6	16.3	14.7
Incr Delay (d2), s/veh	263.1	1.1	1.4	1.0	0.1	0.1	39.8	0.2	0.0	1.0	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	3.7	3.5	1.3	1.9	0.7	2.9	3.7	0.5	0.9	2.9	0.6
LnGrp Delay(d),s/veh	293.7	24.7	25.1	31.0	22.4	21.5	70.5	16.5	14.2	31.6	16.6	14.9
LnGrp LOS	F	C	C	C	C	C	E	B	B	C	B	B
Approach Vol, veh/h		613			427			1018			780	
Approach Delay, s/veh		106.5			25.2			26.6			18.3	
Approach LOS		F			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	30.0	8.8	19.5	8.4	29.3	9.0	19.2
Change Period (Y+Rc), s	4.4	6.7	4.4	* 5.7	4.4	* 6.7	4.4	5.7
Max Green Setting (Gmax), s	4.0	31.2	8.3	* 31	4.0	* 33	4.6	34.0
Max Q Clear Time (g_c+I1), s	3.8	9.8	4.6	9.8	5.7	8.2	6.6	5.8
Green Ext Time (p_c), s	0.0	12.8	0.1	3.3	0.0	14.0	0.0	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	41.4
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			150	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	0				0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98			0.96		
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1742	1863	1863	1518	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				152		168
Link Speed (mph)		35	35		25	
Link Distance (ft)		890	756		1554	
Travel Time (s)		17.3	14.7		42.4	

Intersection Summary	
Area Type:	Other



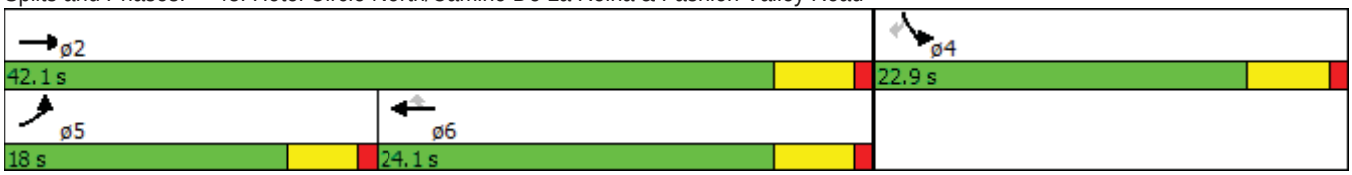
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	322	335	193	146	132	143
Confl. Peds. (#/hr)	12			12		
Confl. Bikes (#/hr)				1		
Peak Hour Factor	0.92	0.92	0.96	0.96	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	350	364	201	152	155	168
Shared Lane Traffic (%)						
Lane Group Flow (vph)	350	364	201	152	155	168

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	322	335	193	146	132	143
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	20.9	23.9	23.9	22.9	22.9
Total Split (s)	18.0	42.1	24.1	24.1	22.9	22.9
Total Split (%)	27.7%	64.8%	37.1%	37.1%	35.2%	35.2%
Yellow Time (s)	3.4	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	13.4	29.7	11.8	11.8	8.7	8.7
Actuated g/C Ratio	0.28	0.61	0.24	0.24	0.18	0.18
v/c Ratio	0.71	0.32	0.44	0.31	0.49	0.40
Control Delay	29.2	5.7	19.3	5.4	24.5	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	5.7	19.3	5.4	24.5	7.2
LOS	C	A	B	A	C	A
Approach Delay		17.2	13.3		15.5	
Approach LOS		B	B		B	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 48.4	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 49.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 48: Hotel Circle North/Camino De La Reina & Fashion Valley Road





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	322	335	193	146	132	143
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	350	364	201	43	155	27
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.96	0.96	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	426	1151	485	394	216	192
Arrive On Green	0.24	0.62	0.26	0.26	0.12	0.12
Sat Flow, veh/h	1774	1863	1863	1514	1774	1583
Grp Volume(v), veh/h	350	364	201	43	155	27
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1514	1774	1583
Q Serve(g_s), s	7.0	3.5	3.4	0.8	3.2	0.6
Cycle Q Clear(g_c), s	7.0	3.5	3.4	0.8	3.2	0.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	426	1151	485	394	216	192
V/C Ratio(X)	0.82	0.32	0.41	0.11	0.72	0.14
Avail Cap(c_a), veh/h	642	1843	951	773	849	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	3.4	11.5	10.6	15.9	14.8
Incr Delay (d2), s/veh	3.0	0.1	0.8	0.2	1.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	1.8	1.8	0.4	1.7	0.5
LnGrp Delay(d),s/veh	16.6	3.6	12.3	10.7	17.6	14.9
LnGrp LOS	B	A	B	B	B	B
Approach Vol, veh/h		714	244		182	
Approach Delay, s/veh		9.9	12.0		17.2	
Approach LOS		A	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		28.1		9.5	13.4	14.7		
Change Period (Y+Rc), s		4.9		4.9	4.4	4.9		
Max Green Setting (Gmax), s		37.2		18.0	13.6	19.2		
Max Q Clear Time (g_c+I1), s		5.5		5.2	9.0	5.4		
Green Ext Time (p_c), s		4.1		0.2	0.3	3.2		

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	70		70	160		0	190		190	150		0
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	1.00		0.97	0.99		0.99	1.00		0.98	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	1863	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1768	3539	1538	3393	1863	1562	3424	3539	1554	3411	3539	1552
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			194			369			378			199
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		730			461			758			473	
Travel Time (s)		19.9			12.6			12.9			8.1	

Intersection Summary	
Area Type:	Other



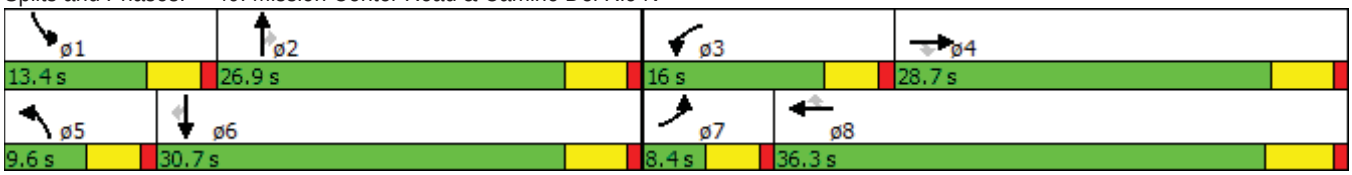
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	14	262	144	251	247	511	115	370	445	251	733	33
Confl. Peds. (#/hr)	2		5	5		2	4		4	4		4
Confl. Bikes (#/hr)									2			5
Peak Hour Factor	0.82	0.82	0.82	0.95	0.95	0.95	0.94	0.94	0.94	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	17	320	176	264	260	538	122	394	473	259	756	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	320	176	264	260	538	122	394	473	259	756	34

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	262	144	251	247	511	115	370	445	251	733	33
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	7.0	7.0	4.0	7.0	7.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	8.4	20.9	20.9	8.4	36.3	36.3	8.4	20.9	20.9	8.4	27.9	27.9
Total Split (s)	8.4	28.7	28.7	16.0	36.3	36.3	9.6	26.9	26.9	13.4	30.7	30.7
Total Split (%)	9.9%	33.8%	33.8%	18.8%	42.7%	42.7%	11.3%	31.6%	31.6%	15.8%	36.1%	36.1%
Yellow Time (s)	3.4	3.9	3.9	3.4	4.3	4.3	3.4	3.9	3.9	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.9	4.4	5.3	5.3	4.4	4.9	4.9	4.4	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	4.1	13.4	13.4	9.4	25.6	25.6	5.3	16.2	16.2	8.9	22.2	22.2
Actuated g/C Ratio	0.06	0.20	0.20	0.14	0.38	0.38	0.08	0.24	0.24	0.13	0.33	0.33
v/c Ratio	0.16	0.45	0.38	0.55	0.37	0.65	0.45	0.46	0.72	0.57	0.64	0.05
Control Delay	39.1	26.3	5.9	33.5	17.9	10.2	39.2	24.6	12.8	35.9	24.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	26.3	5.9	33.5	17.9	10.2	39.2	24.6	12.8	35.9	24.0	0.2
LOS	D	C	A	C	B	B	D	C	B	D	C	A
Approach Delay		19.7			17.9			20.8			26.2	
Approach LOS		B			B			C			C	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 67.1	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 21.3	Intersection LOS: C
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 49: Mission Center Road & Camino Del Rio N



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	262	144	251	247	511	115	370	445	251	733	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	17	320	0	264	260	291	122	394	0	259	756	0
Adj No. of Lanes	1	2	1	2	1	1	2	2	1	2	2	1
Peak Hour Factor	0.82	0.82	0.82	0.95	0.95	0.95	0.94	0.94	0.94	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	29	628	281	380	505	427	204	1005	450	373	1179	527
Arrive On Green	0.02	0.18	0.00	0.11	0.27	0.27	0.06	0.28	0.00	0.11	0.33	0.00
Sat Flow, veh/h	1774	3539	1583	3442	1863	1575	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	17	320	0	264	260	291	122	394	0	259	756	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1863	1575	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	0.6	4.9	0.0	4.4	7.0	9.8	2.1	5.3	0.0	4.3	10.8	0.0
Cycle Q Clear(g_c), s	0.6	4.9	0.0	4.4	7.0	9.8	2.1	5.3	0.0	4.3	10.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	29	628	281	380	505	427	204	1005	450	373	1179	527
V/C Ratio(X)	0.58	0.51	0.00	0.70	0.51	0.68	0.60	0.39	0.00	0.69	0.64	0.00
Avail Cap(c_a), veh/h	119	1417	634	672	971	821	301	1310	586	521	1536	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.0	22.1	0.0	25.5	18.3	19.4	27.3	17.1	0.0	25.5	16.8	0.0
Incr Delay (d2), s/veh	6.6	0.6	0.0	0.9	0.3	0.7	1.0	0.1	0.0	2.3	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.4	0.0	2.1	3.7	4.3	1.0	2.6	0.0	2.2	5.4	0.0
LnGrp Delay(d),s/veh	35.7	22.7	0.0	26.3	18.6	20.1	28.3	17.2	0.0	27.9	17.8	0.0
LnGrp LOS	D	C		C	B	C	C	B		C	B	
Approach Vol, veh/h		337			815			516			1015	
Approach Delay, s/veh		23.4			21.6			19.9			20.3	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	21.8	11.0	15.9	7.9	24.7	5.4	21.4
Change Period (Y+Rc), s	4.4	4.9	4.4	* 5.3	4.4	4.9	4.4	5.3
Max Green Setting (Gmax), s	9.0	22.0	11.6	* 24	5.2	25.8	4.0	31.0
Max Q Clear Time (g_c+I1), s	6.3	7.3	6.4	6.9	4.1	12.8	2.6	11.8
Green Ext Time (p_c), s	0.2	7.5	0.2	3.5	0.0	6.9	0.0	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	110		0	560		560	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	0			25			25			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850						0.850			
Flt Protected				0.950			0.950	0.972				
Satd. Flow (prot)	0	3539	1583	1770	3539	0	1681	1720	1583	0	0	0
Flt Permitted				0.950			0.950	0.972				
Satd. Flow (perm)	0	3539	1583	1770	3539	0	1681	1720	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			813						261			
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		461			859			441			281	
Travel Time (s)		12.6			23.4			10.0			6.4	

Intersection Summary	
Area Type:	Other



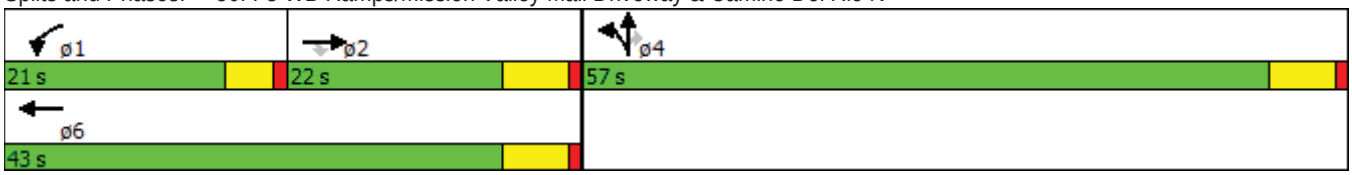
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	335	683	317	261	0	756	203	240	0	0	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.84	0.84	0.84	0.87	0.87	0.87	0.92	0.92	0.92	0.25	0.25	0.25
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	399	813	364	300	0	822	221	261	0	0	0
Shared Lane Traffic (%)							37%					
Lane Group Flow (vph)	0	399	813	364	300	0	518	525	261	0	0	0

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR
Lane Configurations							
Volume (vph)	335	683	317	261	756	203	240
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	12.0	12.0	5.0	10.0	8.0	8.0	8.0
Minimum Split (s)	22.0	22.0	9.7	22.0	57.0	57.0	57.0
Total Split (s)	22.0	22.0	21.0	43.0	57.0	57.0	57.0
Total Split (%)	22.0%	22.0%	21.0%	43.0%	57.0%	57.0%	57.0%
Yellow Time (s)	5.0	5.0	3.7	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.7	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	Max	Max	None	None	Min	Min	Min
Act Effct Green (s)	16.2	16.2	16.5	37.5	39.7	39.7	39.7
Actuated g/C Ratio	0.18	0.18	0.18	0.42	0.44	0.44	0.44
v/c Ratio	0.62	0.85	1.11	0.20	0.69	0.69	0.31
Control Delay	40.6	13.2	121.5	19.0	24.8	24.4	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.6	13.2	121.5	19.0	24.8	24.4	2.7
LOS	D	B	F	B	C	C	A
Approach Delay	22.2			75.2		20.2	
Approach LOS	C			E		C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 89.4	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 32.5	Intersection LOS: C
Intersection Capacity Utilization 68.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 50: I-8 WB Ramps/Mission Valley Mall Driveway & Camino Del Rio N



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	335	683	317	261	0	756	203	240	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	0	399	0	364	300	0	522	642	0			
Adj No. of Lanes	0	2	1	1	2	0	1	1	1			
Peak Hour Factor	0.84	0.84	0.84	0.87	0.87	0.87	0.92	0.92	0.92			
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2			
Cap, veh/h	0	654	293	334	1513	0	770	808	687			
Arrive On Green	0.00	0.18	0.00	0.19	0.43	0.00	0.43	0.43	0.00			
Sat Flow, veh/h	0	3632	1583	1774	3632	0	1774	1863	1583			
Grp Volume(v), veh/h	0	399	0	364	300	0	522	642	0			
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0	1774	1863	1583			
Q Serve(g_s), s	0.0	9.0	0.0	16.3	4.6	0.0	20.4	25.8	0.0			
Cycle Q Clear(g_c), s	0.0	9.0	0.0	16.3	4.6	0.0	20.4	25.8	0.0			
Prop In Lane	0.00		1.00	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	654	293	334	1513	0	770	808	687			
V/C Ratio(X)	0.00	0.61	0.00	1.09	0.20	0.00	0.68	0.79	0.00			
Avail Cap(c_a), veh/h	0	654	293	334	1513	0	1045	1098	933			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00			
Uniform Delay (d), s/veh	0.0	32.4	0.0	35.1	15.5	0.0	19.7	21.2	0.0			
Incr Delay (d2), s/veh	0.0	4.2	0.0	75.3	0.1	0.0	1.5	3.5	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	4.8	0.0	14.9	2.3	0.0	10.3	14.0	0.0			
LnGrp Delay(d),s/veh	0.0	36.6	0.0	110.5	15.6	0.0	21.2	24.7	0.0			
LnGrp LOS		D		F	B		C	C				
Approach Vol, veh/h		399			664			1164				
Approach Delay, s/veh		36.6			67.6			23.1				
Approach LOS		D			E			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	21.0	22.0		43.6		43.0		
Change Period (Y+Rc), s	* 4.7	6.0		6.0		6.0		
Max Green Setting (Gmax), s	* 16	16.0		51.0		37.0		
Max Q Clear Time (g_c+I1), s	18.3	11.0		27.8		6.6		
Green Ext Time (p_c), s	0.0	2.1		9.8		5.4		

Intersection Summary	
HCM 2010 Ctrl Delay	38.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	200			90	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor					1.00	
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	3539	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	3539	1583	1762	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				175		134
Link Speed (mph)		25	25		25	
Link Distance (ft)		1900	707		752	
Travel Time (s)		51.8	19.3		20.5	

Intersection Summary	
Area Type:	Other



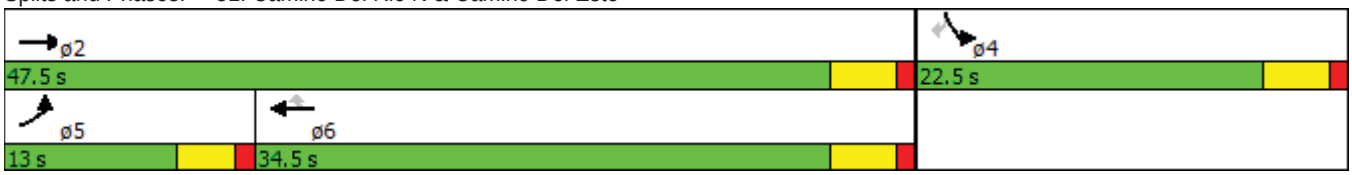
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	210	227	276	159	306	122
Confl. Peds. (#/hr)					2	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	226	244	303	175	336	134
Shared Lane Traffic (%)						
Lane Group Flow (vph)	226	244	303	175	336	134

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	210	227	276	159	306	122
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.5	34.5	34.5	22.5	22.5
Total Split (s)	13.0	47.5	34.5	34.5	22.5	22.5
Total Split (%)	18.6%	67.9%	49.3%	49.3%	32.1%	32.1%
Yellow Time (s)	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	9.0	43.0	30.0	30.0	16.5	16.5
Actuated g/C Ratio	0.13	0.63	0.44	0.44	0.24	0.24
v/c Ratio	0.97	0.21	0.20	0.22	0.79	0.28
Control Delay	87.9	6.4	12.6	3.1	39.3	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.9	6.4	12.6	3.1	39.3	6.1
LOS	F	A	B	A	D	A
Approach Delay		45.5	9.1		29.8	
Approach LOS		D	A		C	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 68.6	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 28.0	Intersection LOS: C
Intersection Capacity Utilization 47.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 51: Camino Del Rio N & Camino Del Este





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	210	227	276	159	306	122
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	226	244	303	65	336	24
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.93	0.93	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	239	1200	1591	712	392	350
Arrive On Green	0.13	0.64	0.45	0.45	0.22	0.22
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	226	244	303	65	336	24
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	8.4	3.6	3.4	1.6	12.1	0.8
Cycle Q Clear(g_c), s	8.4	3.6	3.4	1.6	12.1	0.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	239	1200	1591	712	392	350
V/C Ratio(X)	0.94	0.20	0.19	0.09	0.86	0.07
Avail Cap(c_a), veh/h	239	1200	1591	712	478	427
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	4.9	11.1	10.5	25.0	20.6
Incr Delay (d2), s/veh	42.6	0.4	0.3	0.3	13.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	2.0	1.7	0.7	7.3	0.8
LnGrp Delay(d),s/veh	71.3	5.2	11.3	10.8	38.2	20.7
LnGrp LOS	E	A	B	B	D	C
Approach Vol, veh/h		470	368		360	
Approach Delay, s/veh		37.0	11.2		37.0	
Approach LOS		D	B		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.5		19.3	13.0	34.5		
Change Period (Y+Rc), s		4.5		4.5	4.0	4.5		
Max Green Setting (Gmax), s		43.0		18.0	9.0	30.0		
Max Q Clear Time (g_c+I1), s		5.6		14.1	10.4	5.4		
Green Ext Time (p_c), s		3.4		0.6	0.0	3.3		

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		200	0		0	0		0
Storage Lanes	1		1	0		1	1		1	0		1
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor	0.99					0.98						
Frt			0.850			0.850						0.850
Flt Protected	0.950				0.997		0.950					
Satd. Flow (prot)	1770	0	1583	0	1857	1583	1770	5085	1863	0	3539	1583
Flt Permitted	0.950				0.997		0.950					
Satd. Flow (perm)	1760	0	1583	0	1857	1553	1770	5085	1863	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			341			270						416
Link Speed (mph)		35			30			45			45	
Link Distance (ft)		378			430			672			469	
Travel Time (s)		7.4			9.8			10.2			7.1	

Intersection Summary	
Area Type:	Other



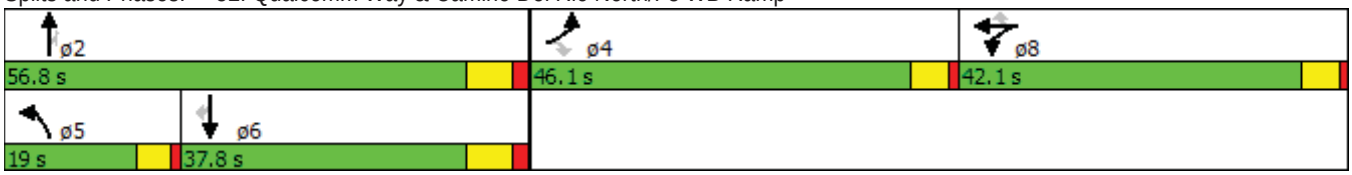
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	61	0	269	12	157	246	190	762	0	0	666	420
Confl. Peds. (#/hr)	6					6						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.79	0.79	0.79	0.91	0.91	0.91	0.94	0.94	0.94	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	77	0	341	13	173	270	202	811	0	0	732	462
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	0	341	0	186	270	202	811	0	0	732	462

Intersection Summary

Lane Group	EBL	EBR	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations								
Volume (vph)	61	269	157	246	190	762	666	420
Turn Type	Prot	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		8		5	2	6	
Permitted Phases		4		8				6
Detector Phase	4	4	8	8	5	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	15.0	15.0	14.0	12.0	13.0	13.0
Minimum Split (s)	46.1	46.1	42.1	42.1	18.7	25.0	37.0	37.0
Total Split (s)	46.1	46.1	42.1	42.1	19.0	56.8	37.8	37.8
Total Split (%)	31.8%	31.8%	29.0%	29.0%	13.1%	39.2%	26.1%	26.1%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.7	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.7	7.0	7.0	7.0
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Recall Mode	None	None	None	None	None	Min	Min	Min
Act Effct Green (s)	9.0	9.0	18.8	18.8	14.5	50.2	30.9	30.9
Actuated g/C Ratio	0.09	0.09	0.20	0.20	0.15	0.53	0.32	0.32
v/c Ratio	0.46	0.74	0.51	0.52	0.75	0.30	0.64	0.58
Control Delay	51.6	15.8	39.3	7.7	59.3	14.7	32.3	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.6	15.8	39.3	7.7	59.3	14.7	32.3	8.1
LOS	D	B	D	A	E	B	C	A
Approach Delay			20.6			23.6	22.9	
Approach LOS			C			C	C	

Intersection Summary	
Cycle Length: 145	
Actuated Cycle Length: 95.5	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 22.7	Intersection LOS: C
Intersection Capacity Utilization 67.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 52: Qualcomm Way & Camino Del Rio North/I-8 WB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	61	0	269	12	157	246	190	762	0	0	666	420
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	77	0	31	13	173	0	202	811	0	0	732	99
Adj No. of Lanes	1	0	1	0	1	1	1	3	1	0	2	1
Peak Hour Factor	0.79	0.79	0.79	0.91	0.91	0.91	0.94	0.94	0.94	0.91	0.91	0.91
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	29	387	355	343	3082	960	0	1228	549
Arrive On Green	0.00	0.00	0.00	0.22	0.22	0.00	0.19	0.61	0.00	0.00	0.35	0.35
Sat Flow, veh/h		0		130	1727	1583	1774	5085	1583	0	3632	1583
Grp Volume(v), veh/h		0.0		186	0	0	202	811	0	0	732	99
Grp Sat Flow(s),veh/h/ln				1856	0	1583	1774	1695	1583	0	1770	1583
Q Serve(g_s), s				6.2	0.0	0.0	7.4	5.3	0.0	0.0	12.1	3.1
Cycle Q Clear(g_c), s				6.2	0.0	0.0	7.4	5.3	0.0	0.0	12.1	3.1
Prop In Lane				0.07		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				416	0	355	343	3082	960	0	1228	549
V/C Ratio(X)				0.45	0.00	0.00	0.59	0.26	0.00	0.00	0.60	0.18
Avail Cap(c_a), veh/h				965	0	823	356	3559	1108	0	1532	685
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				23.8	0.0	0.0	26.1	6.6	0.0	0.0	19.1	16.2
Incr Delay (d2), s/veh				0.3	0.0	0.0	1.5	0.0	0.0	0.0	1.0	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.2	0.0	0.0	3.7	2.5	0.0	0.0	6.1	1.4
LnGrp Delay(d),s/veh				24.1	0.0	0.0	27.7	6.6	0.0	0.0	20.1	16.5
LnGrp LOS				C			C	A			C	B
Approach Vol, veh/h					186			1013			831	
Approach Delay, s/veh					24.1			10.8			19.7	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		50.1			18.4	31.7		21.0
Change Period (Y+Rc), s		7.0			* 4.7	7.0		5.1
Max Green Setting (Gmax), s		49.8			* 14	30.8		37.0
Max Q Clear Time (g_c+I1), s		7.3			9.4	14.1		8.2
Green Ext Time (p_c), s		17.6			0.0	10.6		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		220	0		0	0		80	330		0
Storage Lanes	2		1	0		0	0		1	2		0
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Ped Bike Factor									0.99			
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	3433	1863	0
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1564	3433	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			199						172			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		791			343			273			758	
Travel Time (s)		18.0			7.8			4.7			12.9	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	721	0	260	0	0	0	0	434	169	569	376	0
Confl. Peds. (#/hr)							3					3
Confl. Bikes (#/hr)									1			3
Peak Hour Factor	0.97	0.97	0.97	0.25	0.25	0.25	0.94	0.94	0.94	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	743	0	268	0	0	0	0	462	180	654	432	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	743	0	268	0	0	0	0	462	180	654	432	0

Intersection Summary

Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	721	260	434	169	569	376
Turn Type	Prot	Perm	NA	Perm	Split	NA
Protected Phases	2		4		8	8
Permitted Phases		2		4		
Detector Phase	2	2	4	4	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	2.0	2.0	18.0	18.0
Minimum Split (s)	11.1	11.1	5.0	5.0	44.1	44.1
Total Split (s)	22.0	22.0	78.0	78.0	40.0	40.0
Total Split (%)	15.7%	15.7%	55.7%	55.7%	28.6%	28.6%
Yellow Time (s)	4.1	4.1	3.0	3.0	4.1	4.1
All-Red Time (s)	2.0	2.0	0.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	3.0	3.0	6.1	6.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	None	Min	Min
Act Effct Green (s)	62.6	62.6	22.8	22.8	39.5	39.5
Actuated g/C Ratio	0.45	0.45	0.16	0.16	0.28	0.28
v/c Ratio	0.48	0.33	0.80	0.45	0.68	0.82
Control Delay	30.3	9.1	67.3	11.5	48.0	60.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	9.1	67.4	11.5	48.0	60.4
LOS	C	A	E	B	D	E
Approach Delay			51.7			52.9
Approach LOS			D			D

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 58 (41%), Referenced to phase 2:EBL and 6:, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 42.2 Intersection LOS: D
Intersection Capacity Utilization 60.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 58: Mission Center Road & I-8 EB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	721	0	260	0	0	0	0	434	169	569	376	0
Number	5	2	12				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	743	0	0				0	462	0	654	432	0
Adj No. of Lanes	2	0	1				0	2	1	2	1	0
Peak Hour Factor	0.97	0.97	0.97				0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	1715	0	789				0	534	239	833	451	0
Arrive On Green	0.50	0.00	0.00				0.00	0.05	0.00	0.24	0.24	0.00
Sat Flow, veh/h	3442	0	1583				0	3632	1583	3442	1863	0
Grp Volume(v), veh/h	743	0	0				0	462	0	654	432	0
Grp Sat Flow(s),veh/h/ln	1721	0	1583				0	1770	1583	1721	1863	0
Q Serve(g_s), s	19.3	0.0	0.0				0.0	18.1	0.0	24.9	32.0	0.0
Cycle Q Clear(g_c), s	19.3	0.0	0.0				0.0	18.1	0.0	24.9	32.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1715	0	789				0	534	239	833	451	0
V/C Ratio(X)	0.43	0.00	0.00				0.00	0.87	0.00	0.78	0.96	0.00
Avail Cap(c_a), veh/h	1715	0	789				0	1896	848	833	451	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.91	0.00	0.78	0.78	0.00
Uniform Delay (d), s/veh	22.5	0.0	0.0				0.0	65.1	0.0	49.6	52.3	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0				0.0	1.5	0.0	3.6	27.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.0	0.0				0.0	9.0	0.0	12.2	19.8	0.0
LnGrp Delay(d),s/veh	23.3	0.0	0.0				0.0	66.6	0.0	53.2	79.4	0.0
LnGrp LOS	C							E		D	E	
Approach Vol, veh/h		743						462			1086	
Approach Delay, s/veh		23.3						66.6			63.6	
Approach LOS		C						E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		75.9		24.1				40.0
Change Period (Y+Rc), s		6.1		3.0				6.1
Max Green Setting (Gmax), s		15.9		75.0				33.9
Max Q Clear Time (g_c+I1), s		21.3		20.1				34.0
Green Ext Time (p_c), s		0.0		1.0				0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.1
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	280		0	0		220	0		0	0		0
Storage Lanes	1		0	0		1	0		1	1		1
Taper Length (ft)	25			0			0			0		
Lane Util. Factor	0.91	0.91	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor								1.00				0.98
Frt		0.994				0.850			0.850			0.850
Flt Protected	0.950	0.964			0.991			0.995		0.950	0.963	
Satd. Flow (prot)	1610	3249	0	0	3507	1583	0	1853	1583	1681	1704	1583
Flt Permitted	0.950	0.964			0.991			0.995		0.950	0.963	
Satd. Flow (perm)	1610	3249	0	0	3507	1583	0	1853	1583	1681	1704	1557
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				288			119			359
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		473			544			207			273	
Travel Time (s)		9.2			10.6			3.5			4.7	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	332	50	10	12	54	268	3	27	6	304	38	280
Confl. Peds. (#/hr)							2					2
Confl. Bikes (#/hr)												2
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.82	0.82	0.82	0.78	0.78	0.78
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	346	52	10	13	58	288	4	33	7	390	49	359
Shared Lane Traffic (%)	50%									44%		
Lane Group Flow (vph)	173	235	0	0	71	288	0	37	7	218	221	359

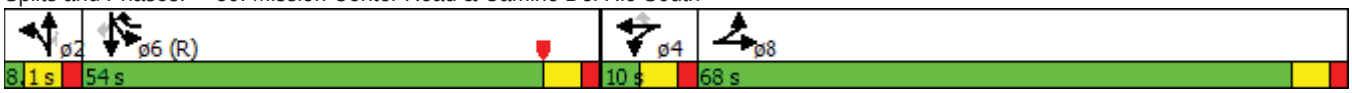
Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	332	50	54	268	27	6	304	38	280
Turn Type	Split	NA	NA	pm+ov	NA	Perm	Split	NA	Perm
Protected Phases	8	8	4	6	2		6	6	
Permitted Phases				4		2			6
Detector Phase	8	8	4	6	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	3.9	5.0	2.0	2.0	5.0	5.0	5.0
Minimum Split (s)	16.1	16.1	10.0	33.1	8.1	8.1	33.1	33.1	33.1
Total Split (s)	68.0	68.0	10.0	54.0	8.1	8.1	54.0	54.0	54.0
Total Split (%)	48.5%	48.5%	7.1%	38.5%	5.8%	5.8%	38.5%	38.5%	38.5%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Min	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	20.0	20.0	7.5	91.1	10.8	10.8	77.5	77.5	77.5
Actuated g/C Ratio	0.14	0.14	0.05	0.65	0.08	0.08	0.55	0.55	0.55
v/c Ratio	0.76	0.50	0.38	0.26	0.26	0.03	0.23	0.23	0.35
Control Delay	77.3	57.3	69.4	1.8	66.1	0.2	18.3	18.3	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.4	1.7
Total Delay	77.3	57.3	69.4	1.8	66.1	0.2	21.6	21.6	4.5
LOS	E	E	E	A	E	A	C	C	A
Approach Delay		65.8	15.2		55.6			13.9	
Approach LOS		E	B		E			B	

Intersection Summary

Cycle Length: 140.1
Actuated Cycle Length: 140.1
Offset: 58 (41%), Referenced to phase 6:SBTL, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 28.5 — Intersection LOS: C
Intersection Capacity Utilization 50.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 59: Mission Center Road & Camino Del Rio South



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	332	50	10	12	54	268	3	27	6	304	38	280
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	346	52	10	13	58	288	4	33	7	425	0	359
Adj No. of Lanes	2	1	0	0	2	1	0	1	1	2	0	1
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.82	0.82	0.82	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	411	176	34	9	91	726	86	712	681	892	0	387
Arrive On Green	0.12	0.12	0.12	0.03	0.03	0.03	0.43	0.43	0.43	0.25	0.00	0.25
Sat Flow, veh/h	3548	1519	292	338	3277	1583	200	1652	1581	3548	0	1541
Grp Volume(v), veh/h	346	0	62	71	0	288	37	0	7	425	0	359
Grp Sat Flow(s),veh/h/ln	1774	0	1811	1846	1770	1583	1853	0	1581	1774	0	1541
Q Serve(g_s), s	13.4	0.0	4.4	3.9	0.0	3.9	1.6	0.0	0.4	14.3	0.0	31.8
Cycle Q Clear(g_c), s	13.4	0.0	4.4	3.9	0.0	3.9	1.6	0.0	0.4	14.3	0.0	31.8
Prop In Lane	1.00		0.16	0.18		1.00	0.11		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	411	0	210	51	49	726	798	0	681	892	0	387
V/C Ratio(X)	0.84	0.00	0.30	1.38	0.00	0.40	0.05	0.00	0.01	0.48	0.00	0.93
Avail Cap(c_a), veh/h	1569	0	801	51	49	726	798	0	681	1214	0	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.73	0.00	0.73
Uniform Delay (d), s/veh	60.6	0.0	56.7	68.1	0.0	21.6	23.2	0.0	22.8	44.6	0.0	51.2
Incr Delay (d2), s/veh	1.8	0.0	0.3	256.2	0.0	0.1	0.0	0.0	0.0	1.3	0.0	24.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	2.2	5.6	0.0	11.1	0.8	0.0	0.2	7.2	0.0	16.2
LnGrp Delay(d),s/veh	62.4	0.0	56.9	324.3	0.0	21.7	23.2	0.0	22.8	45.9	0.0	75.8
LnGrp LOS	E		E	F		C	C		C	D		E
Approach Vol, veh/h		408			359			44			784	
Approach Delay, s/veh		61.6			81.6			23.1			59.6	
Approach LOS		E			F			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		66.4		10.0		41.3		22.3
Change Period (Y+Rc), s		6.1		6.1		6.1		6.1
Max Green Setting (Gmax), s		2.0		3.9		47.9		61.9
Max Q Clear Time (g_c+I1), s		3.6		5.9		33.8		15.4
Green Ext Time (p_c), s		0.0		0.0		1.3		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	64.1
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		2	0		1	0		0	0		0
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor											0.99	
Frt			0.850			0.865		0.961			0.946	
Flt Protected												
Satd. Flow (prot)	0	0	2787	0	0	1611	0	3401	0	0	3316	0
Flt Permitted												
Satd. Flow (perm)	0	0	2787	0	0	1611	0	3401	0	0	3316	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			232			67		123			266	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		550			167			411			198	
Travel Time (s)		12.5			3.8			6.2			3.0	

Intersection Summary	
Area Type:	Other



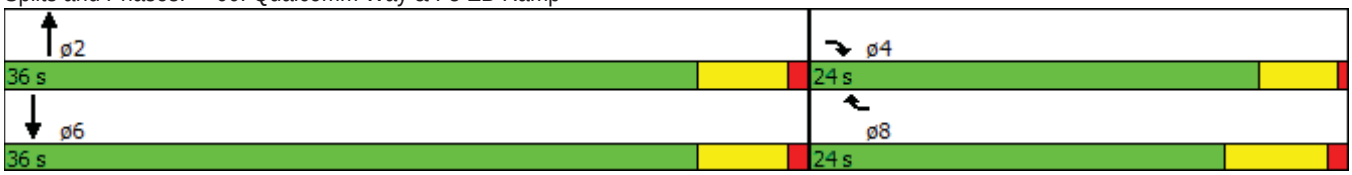
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	420	0	0	373	0	948	338	0	759	426
Confl. Peds. (#/hr)							4					4
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.93	0.92	0.93	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	452	0	0	405	0	1077	384	0	816	458
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	452	0	0	405	0	1461	0	0	1274	0

Intersection Summary

Lane Group	EBR	WBR	NBT	SBT
Lane Configurations				
Volume (vph)	420	373	948	759
Turn Type	Prot	Prot	NA	NA
Protected Phases	4	8	2	6
Permitted Phases			2	
Detector Phase	4	8	2	6
Switch Phase				
Minimum Initial (s)	4.0	5.0	15.0	15.0
Minimum Split (s)	8.0	21.5	21.1	26.1
Total Split (s)	24.0	24.0	36.0	36.0
Total Split (%)	40.0%	40.0%	60.0%	60.0%
Yellow Time (s)	3.5	4.5	4.1	4.1
All-Red Time (s)	0.5	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.5	5.1	5.1
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	Min	Min
Act Effct Green (s)	16.4	14.8	25.9	25.9
Actuated g/C Ratio	0.32	0.29	0.50	0.50
v/c Ratio	0.43	0.80	0.83	0.71
Control Delay	8.6	28.7	15.5	10.6
Queue Delay	0.0	0.0	0.1	0.0
Total Delay	8.6	28.7	15.6	10.6
LOS	A	C	B	B
Approach Delay			15.6	10.6
Approach LOS			B	B

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 51.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 68.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 60: Qualcomm Way & I-8 EB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	420	0	0	373	0	948	338	0	759	426
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	0	1863	0	0	1863	0	1863	1900	0	1863	1900
Adj Flow Rate, veh/h	0	0	301	0	0	0	0	1077	0	0	816	307
Adj No. of Lanes	0	0	2	0	0	1	0	2	0	0	2	0
Peak Hour Factor	0.93	0.92	0.93	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.93	0.93
Percent Heavy Veh, %	0	0	2	0	0	2	0	2	2	0	2	2
Cap, veh/h	0	0	0	0	0	0	0	2677	0	0	1892	710
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.76	0.76
Sat Flow, veh/h		0			0		0	3725	0	0	2594	939
Grp Volume(v), veh/h		0.0			0.0		0	1077	0	0	577	546
Grp Sat Flow(s),veh/h/ln							0	1770	0	0	1770	1671
Q Serve(g_s), s							0.0	2.2	0.0	0.0	2.5	2.5
Cycle Q Clear(g_c), s							0.0	2.2	0.0	0.0	2.5	2.5
Prop In Lane							0.00		0.00	0.00		0.56
Lane Grp Cap(c), veh/h							0	2677	0	0	1338	1264
V/C Ratio(X)							0.00	0.40	0.00	0.00	0.43	0.43
Avail Cap(c_a), veh/h							0	5225	0	0	2613	2467
HCM Platoon Ratio							1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)							0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh							0.0	0.9	0.0	0.0	0.9	0.9
Incr Delay (d2), s/veh							0.0	0.0	0.0	0.0	0.1	0.1
Initial Q Delay(d3),s/veh							0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln							0.0	1.1	0.0	0.0	1.2	1.1
LnGrp Delay(d),s/veh							0.0	0.9	0.0	0.0	1.0	1.0
LnGrp LOS								A			A	A
Approach Vol, veh/h								1077			1123	
Approach Delay, s/veh								0.9			1.0	
Approach LOS								A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		20.9				20.9		
Change Period (Y+Rc), s		5.1				5.1		
Max Green Setting (Gmax), s		30.9				30.9		
Max Q Clear Time (g_c+I1), s		4.2				4.5		
Green Ext Time (p_c), s		11.3				11.3		

Intersection Summary	
HCM 2010 Ctrl Delay	1.0
HCM 2010 LOS	A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	80		35	60		60	100		0	0		160
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00		0.98	0.99		0.98	1.00	1.00		1.00		0.97
Frt			0.850			0.850		0.982				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3460	0	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1763	1863	1550	1757	1863	1556	1763	3460	0	1762	3539	1535
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135			416		9				132
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		536			618			1151			411	
Travel Time (s)		10.4			12.0			17.4			6.2	

Intersection Summary	
Area Type:	Other



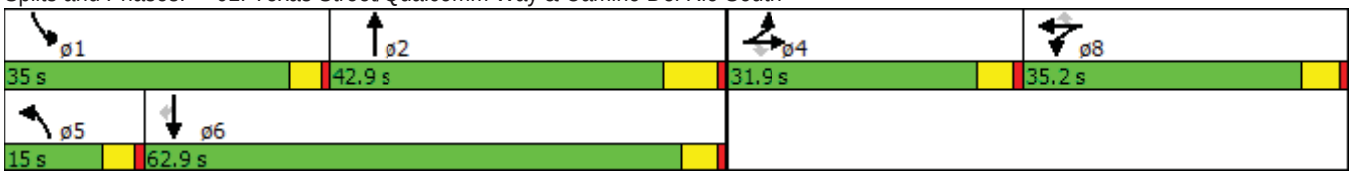
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	161	80	78	100	55	435	54	728	97	368	669	152
Confl. Peds. (#/hr)	3		5	5		3	4		5	5		4
Confl. Bikes (#/hr)			1			1			1			1
Peak Hour Factor	0.87	0.87	0.87	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	185	92	90	108	59	468	61	818	109	387	704	160
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	92	90	108	59	468	61	927	0	387	704	160

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	161	80	78	100	55	435	54	728	368	669	152
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	10.0	10.0
Minimum Split (s)	31.9	31.9	31.9	35.2	35.2	35.2	8.4	29.0	8.4	34.9	34.9
Total Split (s)	31.9	31.9	31.9	35.2	35.2	35.2	15.0	42.9	35.0	62.9	62.9
Total Split (%)	22.0%	22.0%	22.0%	24.3%	24.3%	24.3%	10.3%	29.6%	24.1%	43.4%	43.4%
Yellow Time (s)	3.9	3.9	3.9	4.2	4.2	4.2	3.4	6.0	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	5.2	5.2	5.2	4.4	7.0	4.4	4.9	4.9
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	17.9	17.9	17.9	14.5	14.5	14.5	8.2	36.3	31.0	63.4	63.4
Actuated g/C Ratio	0.15	0.15	0.15	0.12	0.12	0.12	0.07	0.30	0.26	0.52	0.52
v/c Ratio	0.71	0.34	0.26	0.51	0.27	0.85	0.51	0.89	0.86	0.38	0.19
Control Delay	65.7	51.0	3.6	58.9	51.6	23.2	73.3	53.0	63.8	21.3	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.7	0.0
Total Delay	65.7	51.0	3.6	58.9	51.6	23.2	73.3	53.0	72.8	22.0	6.4
LOS	E	D	A	E	D	C	E	D	E	C	A
Approach Delay		46.8			31.9			54.2		35.7	
Approach LOS		D			C			D		D	

Intersection Summary	
Cycle Length: 145	
Actuated Cycle Length: 121.4	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 41.9	Intersection LOS: D
Intersection Capacity Utilization 73.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 61: Texas Street/Qualcomm Way & Camino Del Rio South



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	161	80	78	100	55	435	54	728	97	368	669	152
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	185	92	0	108	59	22	61	818	103	387	704	76
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.93	0.93	0.93	0.89	0.89	0.89	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	255	216	169	177	146	79	1034	130	418	1838	801
Arrive On Green	0.14	0.14	0.00	0.10	0.10	0.10	0.04	0.33	0.33	0.24	0.52	0.52
Sat Flow, veh/h	1774	1863	1583	1774	1863	1536	1774	3152	397	1774	3539	1543
Grp Volume(v), veh/h	185	92	0	108	59	22	61	459	462	387	704	76
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1536	1774	1770	1779	1774	1770	1543
Q Serve(g_s), s	10.6	4.7	0.0	6.2	3.1	1.4	3.6	24.8	24.8	22.4	12.5	2.6
Cycle Q Clear(g_c), s	10.6	4.7	0.0	6.2	3.1	1.4	3.6	24.8	24.8	22.4	12.5	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	242	255	216	169	177	146	79	581	584	418	1838	801
V/C Ratio(X)	0.76	0.36	0.00	0.64	0.33	0.15	0.78	0.79	0.79	0.93	0.38	0.09
Avail Cap(c_a), veh/h	456	478	407	506	532	438	179	604	607	516	1953	851
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	41.2	0.0	45.8	44.4	43.7	49.7	32.1	32.1	39.3	15.2	12.8
Incr Delay (d2), s/veh	4.9	0.9	0.0	1.5	0.4	0.2	6.0	8.7	8.6	18.7	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	2.5	0.0	3.1	1.6	0.6	1.9	13.5	13.6	13.1	6.1	1.1
LnGrp Delay(d),s/veh	48.7	42.1	0.0	47.3	44.8	43.8	55.8	40.7	40.7	58.0	15.3	12.8
LnGrp LOS	D	D		D	D	D	E	D	D	E	B	B
Approach Vol, veh/h		277			189			982			1167	
Approach Delay, s/veh		46.5			46.1			41.6			29.3	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	29.2	41.5		19.3	9.1	61.6		15.2
Change Period (Y+Rc), s	4.4	7.0		4.9	4.4	* 7		5.2
Max Green Setting (Gmax), s	30.6	35.9		27.0	10.6	* 58		30.0
Max Q Clear Time (g_c+I1), s	24.4	26.8		12.6	5.6	14.5		8.2
Green Ext Time (p_c), s	0.3	7.7		0.8	0.0	26.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	37.0
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		400	120		0	0		0	0		180
Storage Lanes	0		1	2		0	0		0	1		1
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.99									
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3539	1583	3433	3539	0	0	0	0	1770	0	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3539	1562	3433	3539	0	0	0	0	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			83									545
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		1242			540			840			941	
Travel Time (s)		18.8			8.2			12.7			14.3	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	1037	4	268	488	0	0	0	0	276	0	1236
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)			3			4						
Peak Hour Factor	0.88	0.88	0.88	0.79	0.79	0.79	0.25	0.25	0.25	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1178	5	339	618	0	0	0	0	300	0	1343
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1178	5	339	618	0	0	0	0	300	0	1343

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Volume (vph)	1037	4	268	488	276	1236
Turn Type	NA	Perm	Prot	NA	Prot	Free
Protected Phases	2		1	6	4	
Permitted Phases		2				Free
Detector Phase	2	2	1	6	4	
Switch Phase						
Minimum Initial (s)	14.0	14.0	5.0	13.0	5.0	
Minimum Split (s)	26.5	26.5	9.7	18.5	10.1	
Total Split (s)	55.0	55.0	15.0	70.0	30.0	
Total Split (%)	55.0%	55.0%	15.0%	70.0%	30.0%	
Yellow Time (s)	4.5	4.5	3.7	4.5	4.1	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	4.7	5.5	5.1	
Lead/Lag	Lead	Lead	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	
Act Effct Green (s)	50.6	50.6	14.3	69.6	19.8	100.0
Actuated g/C Ratio	0.51	0.51	0.14	0.70	0.20	1.00
v/c Ratio	0.66	0.01	0.69	0.25	0.86	0.85
Control Delay	21.3	0.0	48.5	3.9	61.0	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	0.0	48.5	3.9	61.0	6.2
LOS	C	A	D	A	E	A
Approach Delay	21.2			19.7		
Approach LOS	C			B		

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 18.7 Intersection LOS: B
Intersection Capacity Utilization 78.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: I-5 SB Ramps & Seaworld Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1037	4	268	488	0	0	0	0	276	0	1236
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	0	1863
Adj Flow Rate, veh/h	0	1178	0	339	618	0				300	0	0
Adj No. of Lanes	0	2	1	2	2	0				1	0	1
Peak Hour Factor	0.88	0.88	0.88	0.79	0.79	0.79				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	1342	600	942	2505	0				331	0	295
Arrive On Green	0.00	0.38	0.00	0.55	1.00	0.00				0.19	0.00	0.00
Sat Flow, veh/h	0	3632	1583	3442	3632	0				1774	0	1583
Grp Volume(v), veh/h	0	1178	0	339	618	0				300	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	31.0	0.0	5.6	0.0	0.0				16.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	31.0	0.0	5.6	0.0	0.0				16.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1342	600	942	2505	0				331	0	295
V/C Ratio(X)	0.00	0.88	0.00	0.36	0.25	0.00				0.91	0.00	0.00
Avail Cap(c_a), veh/h	0	1752	784	942	2505	0				442	0	394
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.42	0.42	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	28.9	0.0	17.7	0.0	0.0				39.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.4	0.0	0.0	0.1	0.0				15.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.6	0.0	2.6	0.0	0.0				9.5	0.0	0.0
LnGrp Delay(d),s/veh	0.0	37.3	0.0	17.7	0.1	0.0				55.7	0.0	0.0
LnGrp LOS		D		B	A					E		
Approach Vol, veh/h		1178			957						300	
Approach Delay, s/veh		37.3			6.3						55.7	
Approach LOS		D			A						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	32.9	43.4		23.7		76.3		
Change Period (Y+Rc), s	5.5	* 5.5		5.1		5.5		
Max Green Setting (Gmax), s	10.3	* 50		24.9		64.5		
Max Q Clear Time (g_c+I1), s	7.6	33.0		18.6		2.0		
Green Ext Time (p_c), s	1.0	4.9		0.1		3.2		

Intersection Summary	
HCM 2010 Ctrl Delay	27.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	225		0	0		200	0		0	0		0
Storage Lanes	2		0	0		0	0		1	0		0
Taper Length (ft)	25			0			0			0		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.99							
Frt					0.933				0.850			
Flt Protected	0.950							0.956				
Satd. Flow (prot)	3433	3539	0	0	3281	0	0	1781	1583	0	0	0
Flt Permitted	0.950							0.956				
Satd. Flow (perm)	3433	3539	0	0	3281	0	0	1781	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					241				374			
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		540			1262			985			725	
Travel Time (s)		8.2			19.1			14.9			11.0	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	786	575	0	0	531	433	233	17	500	0	0	0
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)			3			4						
Peak Hour Factor	0.94	0.94	0.94	0.84	0.84	0.84	0.87	0.87	0.87	0.25	0.25	0.25
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	836	612	0	0	632	515	268	20	575	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	836	612	0	0	1147	0	0	288	575	0	0	0

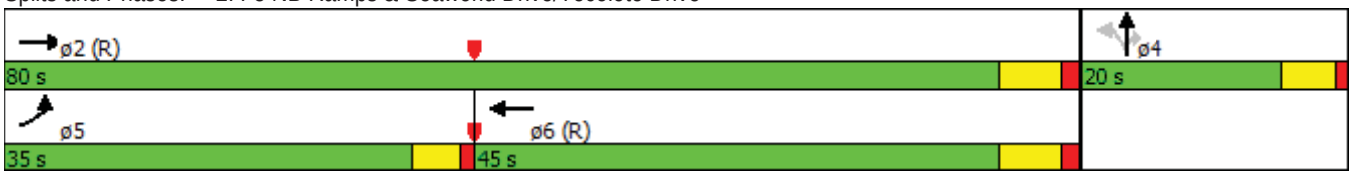
Intersection Summary

Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Configurations					
Volume (vph)	786	575	531	17	500
Turn Type	Prot	NA	NA	NA	Perm
Protected Phases	5	2	6	4	
Permitted Phases					4
Detector Phase	5	2	6	4	4
Switch Phase					
Minimum Initial (s)	5.0	10.0	14.0	5.0	5.0
Minimum Split (s)	34.7	24.0	29.0	10.1	10.1
Total Split (s)	35.0	80.0	45.0	20.0	20.0
Total Split (%)	35.0%	80.0%	45.0%	20.0%	20.0%
Yellow Time (s)	3.7	4.5	4.5	4.1	4.1
All-Red Time (s)	1.0	1.5	1.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	6.0	6.0	5.1	5.1
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	27.6	69.1	36.8	19.8	19.8
Actuated g/C Ratio	0.28	0.69	0.37	0.20	0.20
v/c Ratio	0.88	0.25	0.84	0.82	0.94
Control Delay	49.3	10.0	29.2	60.3	39.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	10.0	29.2	60.3	39.8
LOS	D	B	C	E	D
Approach Delay		32.7	29.2	46.6	
Approach LOS		C	C	D	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 70 (70%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 35.0 — Intersection LOS: D
Intersection Capacity Utilization 78.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 2: I-5 NB Ramps & Seaworld Drive/Tecolote Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	786	575	0	0	531	433	233	17	500	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	836	612	0	0	632	342	268	20	207			
Adj No. of Lanes	2	2	0	0	2	0	0	1	1			
Peak Hour Factor	0.94	0.94	0.94	0.84	0.84	0.84	0.87	0.87	0.87			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	927	2619	0	0	932	504	247	18	236			
Arrive On Green	0.09	0.24	0.00	0.00	0.42	0.42	0.15	0.15	0.15			
Sat Flow, veh/h	3442	3632	0	0	2292	1190	1656	124	1583			
Grp Volume(v), veh/h	836	612	0	0	509	465	288	0	207			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1770	1619	1780	0	1583			
Q Serve(g_s), s	24.1	13.9	0.0	0.0	23.2	23.2	14.9	0.0	12.8			
Cycle Q Clear(g_c), s	24.1	13.9	0.0	0.0	23.2	23.2	14.9	0.0	12.8			
Prop In Lane	1.00		0.00	0.00		0.73	0.93		1.00			
Lane Grp Cap(c), veh/h	927	2619	0	0	750	686	265	0	236			
V/C Ratio(X)	0.90	0.23	0.00	0.00	0.68	0.68	1.09	0.00	0.88			
Avail Cap(c_a), veh/h	1043	2619	0	0	750	686	265	0	236			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.65	0.65	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.2	15.1	0.0	0.0	23.3	23.3	42.6	0.0	41.7			
Incr Delay (d2), s/veh	6.5	0.1	0.0	0.0	4.9	5.3	80.1	0.0	28.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.3	6.8	0.0	0.0	12.3	11.4	13.2	0.0	12.4			
LnGrp Delay(d),s/veh	50.7	15.2	0.0	0.0	28.2	28.6	122.6	0.0	69.7			
LnGrp LOS	D	B			C	C	F		E			
Approach Vol, veh/h		1448			974			495				
Approach Delay, s/veh		35.7			28.4			100.5				
Approach LOS		D			C			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		80.0		20.0	31.6	48.4		
Change Period (Y+Rc), s		6.0		5.1	* 4.7	6.0		
Max Green Setting (Gmax), s		74.0		14.9	* 30	39.0		
Max Q Clear Time (g_c+I1), s		15.9		16.9	26.1	25.2		
Green Ext Time (p_c), s		7.7		0.0	0.9	5.6		

Intersection Summary	
HCM 2010 Ctrl Delay	44.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	250		0	0		0	0		600
Storage Lanes	0		1	1		0	0		0	0		1
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850									0.850
Flt Protected				0.950							0.953	
Satd. Flow (prot)	0	1863	1583	1770	1863	0	0	0	0	0	1775	1583
Flt Permitted				0.950							0.953	
Satd. Flow (perm)	0	1863	1583	1770	1863	0	0	0	0	0	1775	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			87									91
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		560			604			1740			1266	
Travel Time (s)		10.9			11.8			26.4			19.2	

Intersection Summary	
Area Type:	Other



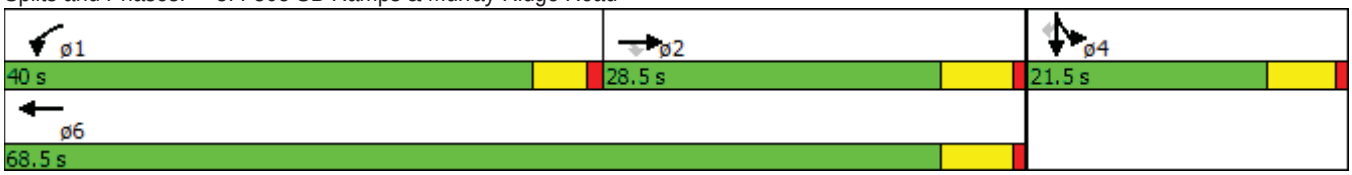
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	38	25	716	89	0	0	0	0	168	1	35
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.25	0.25	0.25	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	41	27	770	96	0	0	0	0	171	1	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	27	770	96	0	0	0	0	0	172	36

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations						
Volume (vph)	38	25	716	89	1	35
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	12.0	12.0	5.0	11.0	5.0	5.0
Minimum Split (s)	27.8	27.8	9.7	24.8	21.5	21.5
Total Split (s)	28.5	28.5	40.0	68.5	21.5	21.5
Total Split (%)	31.7%	31.7%	44.4%	76.1%	23.9%	23.9%
Yellow Time (s)	4.8	4.8	3.7	4.8	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.8	4.7	5.8	5.5	5.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	Min	None	None
Act Effct Green (s)	12.4	12.4	36.5	44.7	10.9	10.9
Actuated g/C Ratio	0.18	0.18	0.54	0.66	0.16	0.16
v/c Ratio	0.12	0.07	0.80	0.08	0.60	0.11
Control Delay	28.8	0.4	25.6	4.6	37.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.8	0.4	25.6	4.6	37.2	0.7
LOS	C	A	C	A	D	A
Approach Delay	17.5			23.3	30.9	
Approach LOS	B			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 67.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 72.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: I-805 SB Ramps & Murray Ridge Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	38	25	716	89	0	0	0	0	168	1	35
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	41	0	770	96	0				171	1	0
Adj No. of Lanes	0	1	1	1	1	0				0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	191	163	830	1229	0				223	1	201
Arrive On Green	0.00	0.10	0.00	0.47	0.66	0.00				0.13	0.13	0.00
Sat Flow, veh/h	0	1863	1583	1774	1863	0				1764	10	1583
Grp Volume(v), veh/h	0	41	0	770	96	0				172	0	0
Grp Sat Flow(s),veh/h/ln	0	1863	1583	1774	1863	0				1775	0	1583
Q Serve(g_s), s	0.0	1.1	0.0	21.6	1.0	0.0				5.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.1	0.0	21.6	1.0	0.0				5.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	191	163	830	1229	0				225	0	201
V/C Ratio(X)	0.00	0.21	0.00	0.93	0.08	0.00				0.77	0.00	0.00
Avail Cap(c_a), veh/h	0	800	680	1185	2210	0				537	0	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	21.8	0.0	13.2	3.2	0.0				22.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	7.9	0.0	0.0				2.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.0	12.3	0.5	0.0				2.6	0.0	0.0
LnGrp Delay(d),s/veh	0.0	22.0	0.0	21.2	3.2	0.0				24.4	0.0	0.0
LnGrp LOS		C		C	A					C		
Approach Vol, veh/h		41			866						172	
Approach Delay, s/veh		22.0			19.2						24.4	
Approach LOS		C			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	29.4	11.2		12.2		40.7		
Change Period (Y+Rc), s	* 4.7	5.8		5.5		5.8		
Max Green Setting (Gmax), s	* 35	22.7		16.0		62.7		
Max Q Clear Time (g_c+I1), s	23.6	3.1		7.0		3.0		
Green Ext Time (p_c), s	1.2	0.4		0.3		0.5		

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	0		260	0		0	0		0
Storage Lanes	1		0	0		1	0		1	0		0
Taper Length (ft)	25			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00					0.98						
Frt						0.850			0.850			
Flt Protected	0.950							0.954				
Satd. Flow (prot)	1770	1863	0	0	3539	1583	0	1777	1583	0	0	0
Flt Permitted	0.950							0.954				
Satd. Flow (perm)	1769	1863	0	0	3539	1549	0	1777	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						397			519			
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		604			1266			1836			1231	
Travel Time (s)		11.8			24.7			27.8			18.7	

Intersection Summary	
Area Type:	Other



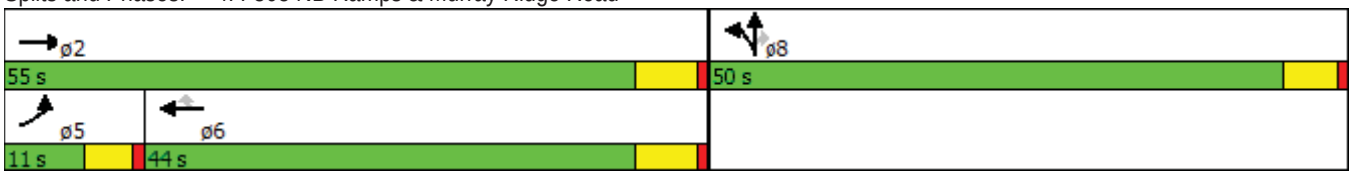
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	31	175	0	0	753	361	47	2	462	0	0	0
Confl. Peds. (#/hr)	1					1						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.89	0.89	0.89	0.25	0.25	0.25
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	33	186	0	0	827	397	53	2	519	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	186	0	0	827	397	0	55	519	0	0	0

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations						
Volume (vph)	31	175	753	361	2	462
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	11.0	17.0	17.0	5.0	5.0
Minimum Split (s)	9.7	27.8	41.8	41.8	49.1	49.1
Total Split (s)	11.0	55.0	44.0	44.0	50.0	50.0
Total Split (%)	10.5%	52.4%	41.9%	41.9%	47.6%	47.6%
Yellow Time (s)	3.7	4.8	4.8	4.8	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	5.8	5.8	5.8	5.1	5.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	6.1	25.0	21.7	21.7	8.0	8.0
Actuated g/C Ratio	0.14	0.55	0.48	0.48	0.18	0.18
v/c Ratio	0.14	0.18	0.49	0.42	0.18	0.73
Control Delay	25.8	5.4	10.4	2.9	20.2	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	5.4	10.4	2.9	20.2	9.7
LOS	C	A	B	A	C	A
Approach Delay		8.5	8.0		10.7	
Approach LOS		A	A		B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 45.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 8.8	Intersection LOS: A
Intersection Capacity Utilization 72.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: I-805 NB Ramps & Murray Ridge Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	31	175	0	0	753	361	47	2	462	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	33	186	0	0	827	117	53	2	188			
Adj No. of Lanes	1	1	0	0	2	1	0	1	1			
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.89	0.89	0.89			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	68	1064	0	0	1480	661	278	10	257			
Arrive On Green	0.04	0.57	0.00	0.00	0.42	0.42	0.16	0.16	0.16			
Sat Flow, veh/h	1774	1863	0	0	3632	1581	1712	65	1583			
Grp Volume(v), veh/h	33	186	0	0	827	117	55	0	188			
Grp Sat Flow(s),veh/h/ln	1774	1863	0	0	1770	1581	1777	0	1583			
Q Serve(g_s), s	0.7	1.9	0.0	0.0	7.3	1.9	1.1	0.0	4.6			
Cycle Q Clear(g_c), s	0.7	1.9	0.0	0.0	7.3	1.9	1.1	0.0	4.6			
Prop In Lane	1.00		0.00	0.00		1.00	0.96		1.00			
Lane Grp Cap(c), veh/h	68	1064	0	0	1480	661	288	0	257			
V/C Ratio(X)	0.49	0.17	0.00	0.00	0.56	0.18	0.19	0.00	0.73			
Avail Cap(c_a), veh/h	273	2240	0	0	3305	1477	1951	0	1738			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.3	4.2	0.0	0.0	9.0	7.5	14.8	0.0	16.3			
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	1.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	1.0	0.0	0.0	3.5	0.8	0.5	0.0	2.1			
LnGrp Delay(d),s/veh	21.3	4.2	0.0	0.0	9.2	7.5	14.9	0.0	17.8			
LnGrp LOS	C	A			A	A	B		B			
Approach Vol, veh/h		219			944			243				
Approach Delay, s/veh		6.8			9.0			17.2				
Approach LOS		A			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		29.2			6.3	22.9		11.7
Change Period (Y+Rc), s		5.8			* 4.7	5.8		5.1
Max Green Setting (Gmax), s		49.2			* 6.3	38.2		44.9
Max Q Clear Time (g_c+I1), s		3.9			2.7	9.3		6.6
Green Ext Time (p_c), s		5.2			0.0	5.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	170		0	290		200	240		0	200		200
Storage Lanes	1		1	2		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor			0.98	0.98		0.98	0.99		0.98	1.00		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	3433	1863	1583	3433	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1551	3362	1863	1549	3414	3539	1557	1766	3539	1552
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			445			157			153			153
Link Speed (mph)		30			25			40			40	
Link Distance (ft)		326			1405			675			1199	
Travel Time (s)		7.4			38.3			11.5			20.4	

Intersection Summary	
Area Type:	Other



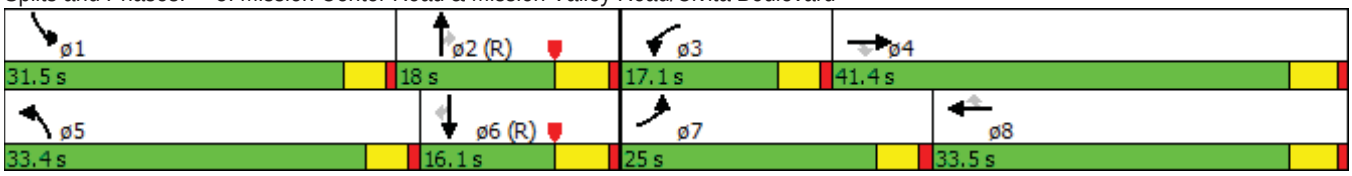
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	341	12	316	78	4	59	117	433	77	36	412	58
Confl. Peds. (#/hr)			5	5			5		4	4		5
Confl. Bikes (#/hr)			6			1						1
Peak Hour Factor	0.71	0.71	0.71	0.90	0.90	0.90	0.79	0.79	0.79	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	480	17	445	87	4	66	148	548	97	38	438	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	480	17	445	87	4	66	148	548	97	38	438	62

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	12	316	78	4	59	117	433	77	36	412	58
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	8.4	20.9	20.9	8.4	32.9	32.9	8.4	33.3	33.3	8.4	32.3	32.3
Total Split (s)	25.0	41.4	41.4	17.1	33.5	33.5	33.4	18.0	18.0	31.5	16.1	16.1
Total Split (%)	23.1%	38.3%	38.3%	15.8%	31.0%	31.0%	30.9%	16.7%	16.7%	29.2%	14.9%	14.9%
Yellow Time (s)	3.4	3.9	3.9	3.4	3.9	3.9	3.4	4.3	4.3	3.4	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.9	4.4	4.9	4.9	4.4	5.3	5.3	4.4	5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	20.6	24.1	24.1	8.1	12.1	12.1	9.1	55.8	55.8	6.8	49.8	49.8
Actuated g/C Ratio	0.19	0.22	0.22	0.08	0.11	0.11	0.08	0.52	0.52	0.06	0.46	0.46
v/c Ratio	1.42	0.04	0.64	0.34	0.02	0.21	0.51	0.30	0.11	0.34	0.27	0.08
Control Delay	241.6	29.9	7.5	50.5	37.0	1.5	69.6	11.7	0.5	56.0	21.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	241.6	29.9	7.5	50.5	37.0	1.5	69.6	11.7	0.5	56.0	21.3	0.2
LOS	F	C	A	D	D	A	E	B	A	E	C	A
Approach Delay		127.2			29.6			21.1			21.3	
Approach LOS		F			C			C			C	

Intersection Summary	
Cycle Length: 108	
Actuated Cycle Length: 108	
Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 62.8	Intersection LOS: E
Intersection Capacity Utilization 64.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Mission Center Road & Mission Valley Road/Civita Boulevard



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	341	12	316	78	4	59	117	433	77	36	412	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.94	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	480	17	0	87	4	66	148	548	34	38	438	62
Adj No. of Lanes	1	1	1	2	1	1	2	2	1	1	2	1
Peak Hour Factor	0.71	0.71	0.71	0.90	0.90	0.90	0.79	0.79	0.79	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	416	354	142	137	110	213	1884	840	48	1762	776
Arrive On Green	0.19	0.22	0.00	0.04	0.07	0.07	0.08	0.71	0.71	0.03	0.50	0.50
Sat Flow, veh/h	1774	1863	1583	3442	1863	1491	3442	3539	1579	1774	3539	1559
Grp Volume(v), veh/h	480	17	0	87	4	66	148	548	34	38	438	62
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1721	1863	1491	1721	1770	1579	1774	1770	1559
Q Serve(g_s), s	20.6	0.8	0.0	2.7	0.2	4.6	4.5	6.2	0.7	2.3	7.7	2.2
Cycle Q Clear(g_c), s	20.6	0.8	0.0	2.7	0.2	4.6	4.5	6.2	0.7	2.3	7.7	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	416	354	142	137	110	213	1884	840	48	1762	776
V/C Ratio(X)	1.42	0.04	0.00	0.61	0.03	0.60	0.70	0.29	0.04	0.79	0.25	0.08
Avail Cap(c_a), veh/h	338	630	535	405	493	395	924	1884	840	445	1762	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	32.9	0.0	50.9	46.4	48.5	48.6	8.3	7.5	52.2	15.5	14.2
Incr Delay (d2), s/veh	204.9	0.1	0.0	4.2	0.2	12.9	1.5	0.4	0.1	9.9	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.3	0.4	0.0	1.4	0.1	2.3	2.2	3.1	0.3	1.3	3.8	1.0
LnGrp Delay(d),s/veh	248.6	33.0	0.0	55.2	46.6	61.4	50.1	8.7	7.6	62.1	15.9	14.4
LnGrp LOS	F	C		E	D	E	D	A	A	E	B	B
Approach Vol, veh/h		497			157			730			538	
Approach Delay, s/veh		241.2			57.6			17.0			19.0	
Approach LOS		F			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	62.8	8.9	29.0	11.1	59.1	25.0	12.9
Change Period (Y+Rc), s	4.4	5.3	4.4	4.9	4.4	5.3	4.4	4.9
Max Green Setting (Gmax), s	27.1	12.7	12.7	36.5	29.0	10.8	20.6	28.6
Max Q Clear Time (g_c+I1), s	4.3	8.2	4.7	2.8	6.5	9.7	22.6	6.6
Green Ext Time (p_c), s	0.0	3.3	0.1	0.8	0.2	0.9	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	78.9
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		70	120		0	120		200	150		0
Storage Lanes	0		1	1		0	2		1	1		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.95	0.95
Ped Bike Factor			0.93	0.98			0.99		0.98	1.00	1.00	
Frt			0.850		0.918				0.850		0.984	
Flt Protected		0.962		0.950			0.950			0.950		
Satd. Flow (prot)	0	1792	1583	1770	1710	0	3433	5085	1583	1770	3472	0
Flt Permitted		0.962		0.950			0.950			0.950		
Satd. Flow (perm)	0	1792	1477	1731	1710	0	3407	5085	1548	1761	3472	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			410		18				156		12	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		331			1101			342			675	
Travel Time (s)		9.0			30.0			5.8			11.5	

Intersection Summary	
Area Type:	Other



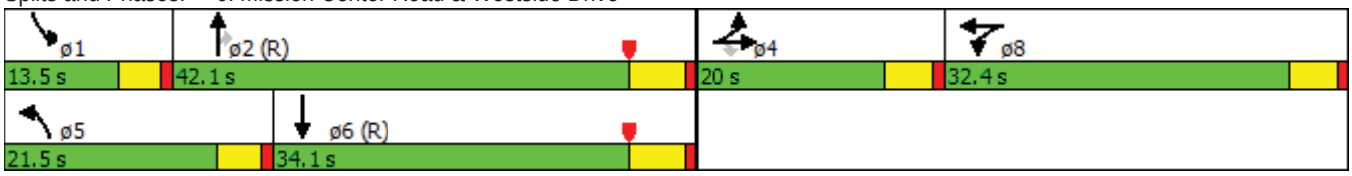
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	92	24	377	88	11	13	302	526	136	23	720	86
Confl. Peds. (#/hr)			25	25			9		5	5		9
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.92	0.92	0.92	0.74	0.74	0.74	0.87	0.87	0.87	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	100	26	410	119	15	18	347	605	156	25	791	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	126	410	119	33	0	347	605	156	25	886	0

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	24	377	88	11	302	526	136	23	720
Turn Type	NA	Perm	Split	NA	Prot	NA	Perm	Prot	NA
Protected Phases	4		8	8	5	2		1	6
Permitted Phases		4					2		
Detector Phase	4	4	8	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	7.0	7.0	4.0	7.0
Minimum Split (s)	8.9	8.9	35.9	35.9	8.4	20.5	20.5	8.4	24.5
Total Split (s)	20.0	20.0	32.4	32.4	21.5	42.1	42.1	13.5	34.1
Total Split (%)	18.5%	18.5%	30.0%	30.0%	19.9%	39.0%	39.0%	12.5%	31.6%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.4	4.5	4.5	3.4	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	4.9	4.4	5.5	5.5	4.4	5.5
Lead/Lag					Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	11.9	11.9	17.5	17.5	14.7	56.5	56.5	6.1	44.2
Actuated g/C Ratio	0.11	0.11	0.16	0.16	0.14	0.52	0.52	0.06	0.41
v/c Ratio	0.64	0.78	0.42	0.11	0.74	0.23	0.18	0.25	0.62
Control Delay	60.1	15.4	42.8	20.3	47.6	21.6	10.2	59.1	27.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	15.4	42.8	20.3	47.6	21.6	10.2	59.1	27.7
LOS	E	B	D	C	D	C	B	E	C
Approach Delay	25.9			37.9		28.2			28.6
Approach LOS	C			D		C			C

Intersection Summary	
Cycle Length: 108	
Actuated Cycle Length: 108	
Offset: 3 (3%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 28.4	Intersection LOS: C
Intersection Capacity Utilization 66.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: Mission Center Road & Westside Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	92	24	377	88	11	13	302	526	136	23	720	86
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.90	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	100	26	24	119	15	0	347	605	35	25	791	84
Adj No. of Lanes	0	1	1	1	1	0	2	3	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.74	0.74	0.74	0.87	0.87	0.87	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	33	126	245	257	0	406	2907	901	35	1527	162
Arrive On Green	0.09	0.09	0.09	0.14	0.14	0.00	0.24	1.00	1.00	0.04	0.95	0.95
Sat Flow, veh/h	1422	370	1426	1774	1863	0	3442	5085	1576	1774	3227	343
Grp Volume(v), veh/h	126	0	24	119	15	0	347	605	35	25	434	441
Grp Sat Flow(s),veh/h/ln	1792	0	1426	1774	1863	0	1721	1695	1576	1774	1770	1800
Q Serve(g_s), s	7.4	0.0	1.7	6.7	0.8	0.0	10.4	0.0	0.0	1.5	2.8	2.8
Cycle Q Clear(g_c), s	7.4	0.0	1.7	6.7	0.8	0.0	10.4	0.0	0.0	1.5	2.8	2.8
Prop In Lane	0.79		1.00	1.00		0.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	158	0	126	245	257	0	406	2907	901	35	837	852
V/C Ratio(X)	0.80	0.00	0.19	0.49	0.06	0.00	0.86	0.21	0.04	0.72	0.52	0.52
Avail Cap(c_a), veh/h	250	0	199	452	474	0	545	2907	901	149	837	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	0.93	0.93	0.93	0.89	0.89	0.89
Uniform Delay (d), s/veh	48.3	0.0	45.6	43.0	40.5	0.0	40.4	0.0	0.0	51.6	1.6	1.6
Incr Delay (d2), s/veh	3.6	0.0	0.3	2.0	0.1	0.0	7.3	0.2	0.1	9.0	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	0.7	3.4	0.4	0.0	5.3	0.0	0.0	0.8	1.4	1.5
LnGrp Delay(d),s/veh	51.9	0.0	45.9	45.0	40.6	0.0	47.7	0.2	0.1	60.6	3.6	3.6
LnGrp LOS	D		D	D	D		D	A	A	E	A	A
Approach Vol, veh/h		150			134			987			900	
Approach Delay, s/veh		50.9			44.5			16.9			5.2	
Approach LOS		D			D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.5	67.2		14.5	17.1	56.6		19.8
Change Period (Y+Rc), s	4.4	5.5		4.9	4.4	5.5		4.9
Max Green Setting (Gmax), s	9.1	36.6		15.1	17.1	28.6		27.5
Max Q Clear Time (g_c+I1), s	3.5	2.0		9.4	12.4	4.8		8.7
Green Ext Time (p_c), s	0.0	18.5		0.2	0.3	14.7		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

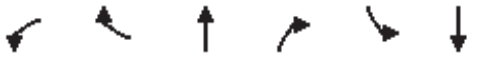
Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	230		0	280	
Storage Lanes	2	1		1	2	
Taper Length (ft)	0				25	
Lane Util. Factor	0.97	0.91	0.95	1.00	0.97	0.95
Ped Bike Factor	1.00					
Frt	0.996	0.850		0.850		
Flt Protected	0.954				0.950	
Satd. Flow (prot)	3434	1441	3539	1583	3433	3539
Flt Permitted	0.954				0.950	
Satd. Flow (perm)	3428	1441	3539	1583	3433	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	3	164		14		
Link Speed (mph)	45		45			45
Link Distance (ft)	1586		646			1193
Travel Time (s)	24.0		9.8			18.1

Intersection Summary	
Area Type:	Other



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	461	140	1118	698	392	1191
Confl. Peds. (#/hr)	1					
Confl. Bikes (#/hr)						
Peak Hour Factor	0.77	0.77	0.89	0.89	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	599	182	1256	784	417	1267
Shared Lane Traffic (%)		10%				
Lane Group Flow (vph)	617	164	1256	784	417	1267

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	461	140	1118	698	392	1191
Turn Type	Prot	Perm	NA	pm+ov	Prot	NA
Protected Phases	8		2	8	1	6
Permitted Phases		8		2		
Detector Phase	8	8	2	8	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	7.0	4.0	4.0	7.0
Minimum Split (s)	33.2	33.2	34.2	33.2	8.4	21.4
Total Split (s)	33.2	33.2	40.5	33.2	16.3	56.8
Total Split (%)	36.9%	36.9%	45.0%	36.9%	18.1%	63.1%
Yellow Time (s)	5.2	5.2	5.2	5.2	3.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	4.4	5.4
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	Min	None	None	Min
Act Effct Green (s)	20.0	20.0	32.2	58.4	11.9	49.3
Actuated g/C Ratio	0.25	0.25	0.40	0.72	0.15	0.61
v/c Ratio	0.73	0.34	0.89	0.68	0.83	0.59
Control Delay	33.5	6.3	33.3	9.6	51.0	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	6.3	33.3	9.6	51.0	11.7
LOS	C	A	C	A	D	B
Approach Delay	27.8		24.2			21.4
Approach LOS	C		C			C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 70.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Seaworld Drive & Friar Roads





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	461	140	1118	698	392	1191
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	599	33	1256	773	417	1267
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.77	0.77	0.89	0.89	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	713	318	1554	1014	497	2265
Arrive On Green	0.20	0.20	0.44	0.44	0.14	0.64
Sat Flow, veh/h	3548	1583	3632	1583	3442	3632
Grp Volume(v), veh/h	599	33	1256	773	417	1267
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1583	1721	1770
Q Serve(g_s), s	12.7	1.3	24.1	26.8	9.2	15.7
Cycle Q Clear(g_c), s	12.7	1.3	24.1	26.8	9.2	15.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	713	318	1554	1014	497	2265
V/C Ratio(X)	0.84	0.10	0.81	0.76	0.84	0.56
Avail Cap(c_a), veh/h	1228	548	1556	1014	525	2331
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	25.4	19.0	9.9	32.5	7.9
Incr Delay (d2), s/veh	1.0	0.1	3.4	3.7	10.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.6	12.4	17.6	5.1	7.7
LnGrp Delay(d),s/veh	31.0	25.5	22.5	13.6	42.7	8.4
LnGrp LOS	C	C	C	B	D	A
Approach Vol, veh/h	632		2029			1684
Approach Delay, s/veh	30.7		19.1			16.9
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	15.7	40.5				56.1		21.9
Change Period (Y+Rc), s	4.4	6.2				* 6.2		6.2
Max Green Setting (Gmax), s	11.9	34.3				* 51		27.0
Max Q Clear Time (g_c+I1), s	11.2	28.8				17.7		14.7
Green Ext Time (p_c), s	0.1	5.5				32.3		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	220		0	0		190	0		0	0		120
Storage Lanes	1		0	0		1	0		0	2		1
Taper Length (ft)	25			0			25			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	1.00					0.98					0.61	0.96
Frt						0.850					0.850	0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	3539	0	0	3539	1583	0	1863	0	3433	0	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1766	3539	0	0	3539	1554	0	1863	0	3433	0	1523
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						389					169	166
Link Speed (mph)		45			45			30			25	
Link Distance (ft)		3030			1815			196			747	
Travel Time (s)		45.9			27.5			4.5			20.4	

Intersection Summary	
Area Type:	Other



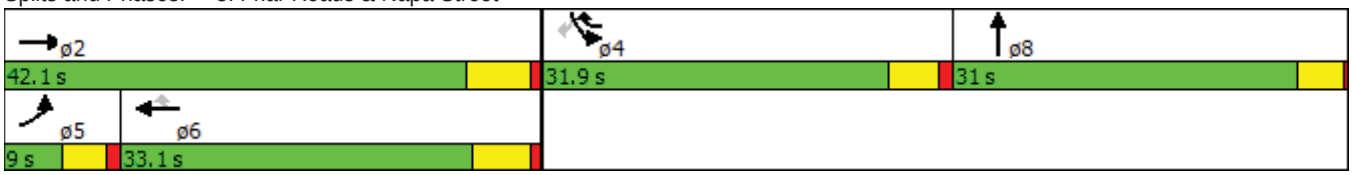
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	134	949	0	0	400	350	0	0	0	523	0	187
Confl. Peds. (#/hr)	3					3						23
Confl. Bikes (#/hr)						7						
Peak Hour Factor	0.88	0.88	0.92	0.92	0.90	0.90	0.92	0.92	0.92	0.91	0.92	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	152	1078	0	0	444	389	0	0	0	575	0	205
Shared Lane Traffic (%)												10%
Lane Group Flow (vph)	152	1078	0	0	444	389	0	0	0	575	21	184

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBT	SBR	ø8
Lane Configurations								
Volume (vph)	134	949	400	350	523	0	187	
Turn Type	Prot	NA	NA	pm+ov	Prot		Perm	
Protected Phases	5	2	6	4	4			8
Permitted Phases				6			4	
Detector Phase	5	2	6	4	4		4	
Switch Phase								
Minimum Initial (s)	4.0	7.0	7.0	4.0	4.0		4.0	4.0
Minimum Split (s)	8.4	30.0	32.6	31.9	31.9		31.9	31.0
Total Split (s)	9.0	42.1	33.1	31.9	31.9		31.9	31.0
Total Split (%)	8.6%	40.1%	31.5%	30.4%	30.4%		30.4%	30%
Yellow Time (s)	3.4	5.0	4.6	3.9	3.9		3.9	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.4	6.0	5.6	4.9	4.9		4.9	
Lead/Lag	Lead		Lag					
Lead-Lag Optimize?	Yes		Yes					
Recall Mode	None	Min	Min	None	None		None	None
Act Effct Green (s)	4.8	25.6	16.7	37.1	19.7	0.0	19.7	
Actuated g/C Ratio	0.08	0.45	0.29	0.65	0.35	0.00	0.35	
v/c Ratio	1.02	0.67	0.43	0.34	0.48	0.12	0.29	
Control Delay	116.2	15.3	17.8	1.0	16.4	0.0	5.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	116.2	15.3	17.8	1.0	16.4	0.0	5.0	
LOS	F	B	B	A	B	A	A	
Approach Delay		27.8	10.0			13.3		
Approach LOS		C	A			B		

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 56.7	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 49.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Friar Roads & Napa Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	134	949	0	0	400	350	0	0	0	523	0	187
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	0	1863	0	1863	0	1863
Adj Flow Rate, veh/h	152	1078	0	0	444	339	0	0	0	200	106	64514368
Adj No. of Lanes	1	2	0	0	2	1	0	1	0	7600803	21	18384720
Peak Hour Factor	0.88	0.88	0.92	0.92	0.90	0.90	0.92	0.92	0.92	0.91	0.92	0.91
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0	2	0	2
Cap, veh/h	175	2431	0	0	1747	894	0	4	107	70309888	0	0
Arrive On Green	0.10	0.69	0.00	0.00	0.49	0.49	0.00	0.00	0.00	0.08	0.00	0.00
Sat Flow, veh/h	1774	3632	0	0	3632	1557	0	-74510	1348	84151808	200	
Grp Volume(v), veh/h	152	1078	0	0	444	339	0	0	0	200	0.0	
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1557	0	1863	0	1774	A	
Q Serve(g_s), s	3.9	6.4	0.0	0.0	3.4	5.5	0.0	0.0	0.0	0.0		
Cycle Q Clear(g_c), s	3.9	6.4	0.0	0.0	3.4	5.5	0.0	0.0	0.0	0.0		
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		
Lane Grp Cap(c), veh/h	175	2431	0	0	1747	894	0	4	107	70309888		
V/C Ratio(X)	0.87	0.44	0.00	0.00	0.25	0.38	0.00	0.00	0.00	0.00		
Avail Cap(c_a), veh/h	175	2741	0	0	2088	1044	0	1079	781	10852352		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	20.7	3.3	0.0	0.0	6.8	5.4	0.0	0.0	0.0	0.0		
Incr Delay (d2), s/veh	33.0	0.2	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.5	3.1	0.0	0.0	1.6	2.8	0.0	0.0	0.0	0.0		
LnGrp Delay(d),s/veh	53.7	3.5	0.0	0.0	6.9	5.8	0.0	0.0	0.0	0.0		
LnGrp LOS	D	A			A	A				A		
Approach Vol, veh/h		1230			783			0				
Approach Delay, s/veh		9.7			6.5			0.0				
Approach LOS		A			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6	7	8
Phs Duration (G+Y+Rc), s		38.0			9.0	29.0	8.6	0.0
Change Period (Y+Rc), s		6.0			4.4	* 6	4.9	4.0
Max Green Setting (Gmax), s		36.1			4.6	* 28	27.0	27.0
Max Q Clear Time (g_c+I1), s		8.4			5.9	7.5	2.0	0.0
Green Ext Time (p_c), s		19.8			0.0	15.4	1.6	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.7
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	160		0	200		0	60		0	40		0
Storage Lanes	1		0	1		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		1.00	1.00				0.98	0.99		
Frt		0.995			0.990				0.850		0.874	
Flt Protected	0.950			0.950				0.954		0.950		
Satd. Flow (prot)	1770	3516	0	1770	3493	0	0	1777	1583	1770	1628	0
Flt Permitted	0.950			0.950				0.727		0.731		
Satd. Flow (perm)	1753	3516	0	1764	3493	0	0	1354	1553	1354	1628	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			9				143		64	
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1815			947			569			1557	
Travel Time (s)		27.5			14.3			15.5			42.5	

Intersection Summary	
Area Type:	Other



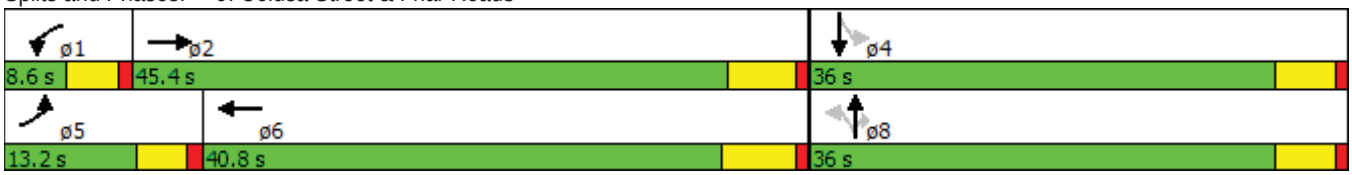
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	56	1375	43	34	632	45	28	1	14	139	9	49
Confl. Peds. (#/hr)	9		14	14		9			7	7		
Confl. Bikes (#/hr)			5			3			2			
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95	0.72	0.72	0.72	0.76	0.76	0.76
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	61	1495	47	36	665	47	39	1	19	183	12	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	1542	0	36	712	0	0	40	19	183	76	0

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	56	1375	34	632	28	1	14	139	9
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2	1	6		8			4
Permitted Phases					8		8	4	
Detector Phase	5	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	29.7	8.4	24.0	20.0	20.0	20.0	35.9	35.9
Total Split (s)	13.2	45.4	8.6	40.8	36.0	36.0	36.0	36.0	36.0
Total Split (%)	14.7%	50.4%	9.6%	45.3%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.4	4.7	3.4	5.0	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.7	4.4	6.0		4.9	4.9	4.9	4.9
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	6.7	40.6	4.3	38.3		15.4	15.4	15.4	15.4
Actuated g/C Ratio	0.09	0.57	0.06	0.53		0.22	0.22	0.22	0.22
v/c Ratio	0.37	0.77	0.34	0.38		0.14	0.04	0.63	0.19
Control Delay	40.1	18.7	46.2	13.3		23.2	0.2	35.2	9.2
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	40.1	18.7	46.2	13.3		23.2	0.2	35.2	9.2
LOS	D	B	D	B		C	A	D	A
Approach Delay		19.5		14.9		15.8			27.6
Approach LOS		B		B		B			C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 71.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 69.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Colusa Street & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	1375	43	34	632	45	28	1	14	139	9	49
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	61	1495	47	36	665	42	39	1	0	183	12	11
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95	0.72	0.72	0.72	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	1962	62	51	1842	116	339	7	295	378	166	152
Arrive On Green	0.04	0.56	0.56	0.03	0.55	0.55	0.19	0.19	0.00	0.19	0.19	0.19
Sat Flow, veh/h	1774	3498	110	1774	3373	213	1263	40	1583	1396	891	817
Grp Volume(v), veh/h	61	755	787	36	349	358	40	0	0	183	0	23
Grp Sat Flow(s),veh/h/ln	1774	1770	1839	1774	1770	1816	1302	0	1583	1396	0	1708
Q Serve(g_s), s	2.3	22.3	22.5	1.4	7.6	7.6	1.6	0.0	0.0	5.3	0.0	0.8
Cycle Q Clear(g_c), s	2.3	22.3	22.5	1.4	7.6	7.6	2.4	0.0	0.0	7.7	0.0	0.8
Prop In Lane	1.00		0.06	1.00		0.12	0.97		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	77	992	1031	51	967	992	347	0	295	378	0	318
V/C Ratio(X)	0.79	0.76	0.76	0.70	0.36	0.36	0.12	0.00	0.00	0.48	0.00	0.07
Avail Cap(c_a), veh/h	229	1029	1070	109	967	992	718	0	722	754	0	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.3	11.5	11.5	32.8	8.8	8.8	23.8	0.0	0.0	25.6	0.0	22.9
Incr Delay (d2), s/veh	6.5	5.0	4.9	6.3	1.0	1.0	0.1	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	12.1	12.6	0.8	4.0	4.1	0.6	0.0	0.0	3.2	0.0	0.4
LnGrp Delay(d),s/veh	38.8	16.5	16.4	39.1	9.8	9.8	23.9	0.0	0.0	25.9	0.0	23.0
LnGrp LOS	D	B	B	D	A	A	C			C		C
Approach Vol, veh/h		1603			743			40			206	
Approach Delay, s/veh		17.3			11.2			23.9			25.6	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	44.3		17.6	7.4	43.3		17.6
Change Period (Y+Rc), s	4.4	* 6		4.9	4.4	6.0		4.9
Max Green Setting (Gmax), s	4.2	* 40		31.1	8.8	34.8		31.1
Max Q Clear Time (g_c+I1), s	3.4	24.5		9.7	4.3	9.6		4.4
Green Ext Time (p_c), s	0.0	13.8		0.5	0.0	24.1		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	190			200	115	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	0.99			0.95		
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1749	3539	3539	1499	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				253		155
Link Speed (mph)		45	45		25	
Link Distance (ft)		1011	1038		405	
Travel Time (s)		15.3	15.7		11.0	

Intersection Summary	
Area Type:	Other



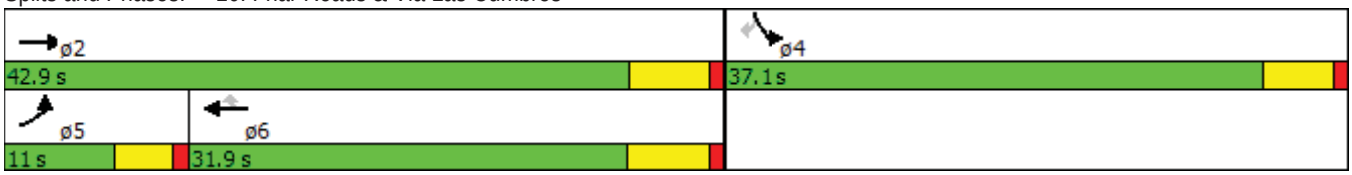
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	187	1282	652	240	360	129
Confl. Peds. (#/hr)	20			20		
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.93	0.93	0.95	0.95	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	201	1378	686	253	434	155
Shared Lane Traffic (%)						
Lane Group Flow (vph)	201	1378	686	253	434	155

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	187	1282	652	240	360	129
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	4.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	8.4	21.7	31.9	31.9	37.1	37.1
Total Split (s)	11.0	42.9	31.9	31.9	37.1	37.1
Total Split (%)	13.8%	53.6%	39.9%	39.9%	46.4%	46.4%
Yellow Time (s)	3.4	4.7	4.9	4.9	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.7	5.9	5.9	5.1	5.1
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	6.9	29.1	17.4	17.4	19.8	19.8
Actuated g/C Ratio	0.11	0.48	0.29	0.29	0.33	0.33
v/c Ratio	0.99	0.81	0.67	0.41	0.75	0.25
Control Delay	98.1	18.8	23.1	5.2	27.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.1	18.8	23.1	5.2	27.2	4.3
LOS	F	B	C	A	C	A
Approach Delay		28.9	18.3		21.1	
Approach LOS		C	B		C	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 60.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization 64.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: Friar Roads & Via Las Cumbres





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	187	1282	652	240	360	129
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	201	1378	686	74	434	41
Adj No. of Lanes	1	2	2	1	1	1
Peak Hour Factor	0.93	0.93	0.95	0.95	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	193	1910	1267	538	494	441
Arrive On Green	0.11	0.54	0.36	0.36	0.28	0.28
Sat Flow, veh/h	1774	3632	3632	1504	1774	1583
Grp Volume(v), veh/h	201	1378	686	74	434	41
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1504	1774	1583
Q Serve(g_s), s	6.6	17.8	9.3	2.0	14.1	1.2
Cycle Q Clear(g_c), s	6.6	17.8	9.3	2.0	14.1	1.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	193	1910	1267	538	494	441
V/C Ratio(X)	1.04	0.72	0.54	0.14	0.88	0.09
Avail Cap(c_a), veh/h	193	2176	1521	646	938	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	10.5	15.5	13.1	20.9	16.2
Incr Delay (d2), s/veh	75.3	0.9	0.2	0.1	2.0	0.0
Initial Q Delay(d3),s/veh	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	8.9	4.6	0.8	7.2	1.2
LnGrp Delay(d),s/veh	102.3	11.4	15.7	13.2	22.9	16.2
LnGrp LOS	F	B	B	B	C	B
Approach Vol, veh/h		1579	760		475	
Approach Delay, s/veh		23.0	15.5		22.3	
Approach LOS		C	B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		38.6		21.9	11.0	27.6		
Change Period (Y+Rc), s		* 5.9		5.1	4.4	5.9		
Max Green Setting (Gmax), s		* 37		32.0	6.6	26.0		
Max Q Clear Time (g_c+I1), s		19.8		16.1	8.6	11.3		
Green Ext Time (p_c), s		10.7		0.7	0.0	9.5		

Intersection Summary	
HCM 2010 Ctrl Delay	20.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	200		0	0		190	0		0
Storage Lanes	1		0	2		0	0		1	0		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.91	0.91	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		1.00	1.00			0.99	0.98		0.99	
Frt		0.974			0.997				0.850		0.977	
Flt Protected	0.950			0.950				0.953			0.972	
Satd. Flow (prot)	1770	4931	0	3433	3525	0	0	1775	1583	0	1761	0
Flt Permitted	0.950			0.950				0.722			0.850	
Satd. Flow (perm)	1743	4931	0	3429	3525	0	0	1325	1555	0	1537	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			2				59		2	
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1079			674			1337			329	
Travel Time (s)		16.3			10.2			36.5			9.0	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	7	1469	312	197	739	13	240	5	289	6	3	2
Confl. Peds. (#/hr)	9		6	6		9	13		5	5		13
Confl. Bikes (#/hr)			3			3						
Peak Hour Factor	0.90	0.90	0.90	0.97	0.97	0.97	0.91	0.91	0.91	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	8	1632	347	203	762	13	264	5	318	7	3	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	1979	0	203	775	0	0	269	318	0	12	0

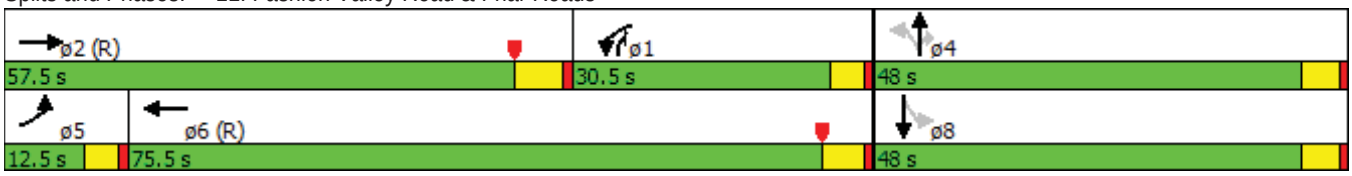
Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	7	1469	197	739	240	5	289	6	3
Turn Type	Prot	NA	Prot	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases	5	2	1	6		4	1		8
Permitted Phases					4		4	8	
Detector Phase	5	2	1	6	4	4	1	8	8
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	26.9	8.4	19.3	39.9	39.9	8.4	39.9	39.9
Total Split (s)	12.5	57.5	30.5	75.5	48.0	48.0	30.5	48.0	48.0
Total Split (%)	9.2%	42.3%	22.4%	55.5%	35.3%	35.3%	22.4%	35.3%	35.3%
Yellow Time (s)	3.4	4.9	3.4	4.3	3.9	3.9	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	4.4	5.9	4.4	5.3		4.9	4.4		4.9
Lead/Lag	Lead	Lead	Lag	Lag			Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	5.3	67.5	21.0	91.4		32.3	53.8		24.3
Actuated g/C Ratio	0.04	0.50	0.15	0.67		0.24	0.40		0.18
v/c Ratio	0.12	0.80	0.38	0.33		0.86	0.49		0.04
Control Delay	66.3	32.9	49.8	10.0		73.6	23.1		31.7
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	66.3	32.9	49.8	10.0		73.6	23.1		31.7
LOS	E	C	D	B		E	C		C
Approach Delay		33.0		18.3		46.2			31.7
Approach LOS		C		B		D			C

Intersection Summary

Cycle Length: 136
Actuated Cycle Length: 136
Offset: 40 (29%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 31.1 — Intersection LOS: C
Intersection Capacity Utilization 79.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 11: Fashion Valley Road & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	1469	312	197	739	13	240	5	289	6	3	2
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	8	1632	319	203	762	13	264	5	252	7	3	2
Adj No. of Lanes	1	3	0	2	2	0	0	1	1	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.97	0.97	0.97	0.91	0.91	0.91	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	14	1612	312	817	2207	38	343	5	425	60	24	8
Arrive On Green	0.01	0.38	0.38	0.47	1.00	1.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	4250	823	3442	3560	61	1095	21	1560	69	89	32
Grp Volume(v), veh/h	8	1299	652	203	379	396	269	0	252	12	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1683	1721	1770	1851	1116	0	1560	190	0	0
Q Serve(g_s), s	0.6	51.6	51.6	4.8	0.0	0.0	0.0	0.0	19.1	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.6	51.6	51.6	4.8	0.0	0.0	32.8	0.0	19.1	33.1	0.0	0.0
Prop In Lane	1.00		0.49	1.00		0.03	0.98		1.00	0.58		0.17
Lane Grp Cap(c), veh/h	14	1286	638	817	1097	1148	348	0	425	92	0	0
V/C Ratio(X)	0.59	1.01	1.02	0.25	0.35	0.35	0.77	0.00	0.59	0.13	0.00	0.00
Avail Cap(c_a), veh/h	106	1286	638	817	1097	1148	421	0	507	160	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.96	0.96	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	67.3	42.2	42.2	28.5	0.0	0.0	48.8	0.0	42.9	40.6	0.0	0.0
Incr Delay (d2), s/veh	14.1	27.5	41.1	0.1	0.8	0.8	6.0	0.0	0.7	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	29.0	31.2	2.3	0.3	0.3	10.4	0.0	8.3	0.3	0.0	0.0
LnGrp Delay(d),s/veh	81.3	69.7	83.3	28.6	0.8	0.8	54.8	0.0	43.6	41.0	0.0	0.0
LnGrp LOS	F	F	F	C	A	A	D		D	D		
Approach Vol, veh/h		1959			978			521			12	
Approach Delay, s/veh		74.3			6.6			49.4			41.0	
Approach LOS		E			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	37.6	57.5		40.9	5.4	89.6		40.9
Change Period (Y+Rc), s	5.3	* 5.9		4.9	4.4	5.3		4.9
Max Green Setting (Gmax), s	26.1	* 52		43.1	8.1	70.2		43.1
Max Q Clear Time (g_c+I1), s	6.8	53.6		34.8	2.6	2.0		35.1
Green Ext Time (p_c), s	5.7	0.0		1.3	0.0	7.0		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	51.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		0	300		0	0		0	0		0
Storage Lanes	1		0	2		0	1		1	0		0
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.91	0.91	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00								
Frt		0.995							0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	5056	0	3433	3539	0	1770	0	1583	0	0	0
Flt Permitted	0.950			0.950			0.950					
Satd. Flow (perm)	1770	5056	0	3432	3539	0	1770	0	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4							299			
Link Speed (mph)		45			45			25			30	
Link Distance (ft)		674			1326			591			186	
Travel Time (s)		10.2			20.1			16.1			4.2	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	5	1670	56	235	889	0	42	0	242	0	0	0
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)			12									
Peak Hour Factor	0.92	0.97	0.97	0.94	0.94	0.92	0.81	0.92	0.81	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	5	1722	58	250	946	0	52	0	299	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	1780	0	250	946	0	52	0	299	0	0	0

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	5	1670	235	889	42	242
Turn Type	Prot	NA	Prot	NA	Prot	Perm
Protected Phases	5	2	1	6	8	
Permitted Phases						8
Detector Phase	5	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	4.0
Minimum Split (s)	8.0	21.4	20.4	21.3	20.4	20.4
Total Split (s)	12.0	62.0	39.0	89.0	35.0	35.0
Total Split (%)	8.8%	45.6%	28.7%	65.4%	25.7%	25.7%
Yellow Time (s)	3.5	4.4	3.4	4.3	3.4	3.4
All-Red Time (s)	0.5	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.4	4.4	5.3	4.4	4.4
Lead/Lag	Lead	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		
Recall Mode	None	C-Min	None	C-Min	None	None
Act Effct Green (s)	6.0	98.1	14.3	114.8	9.3	9.3
Actuated g/C Ratio	0.04	0.72	0.11	0.84	0.07	0.07
v/c Ratio	0.06	0.49	0.69	0.32	0.43	0.77
Control Delay	52.4	5.9	64.4	3.3	70.0	20.3
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	52.4	6.0	64.4	3.3	70.0	20.3
LOS	D	A	E	A	E	C
Approach Delay		6.1		16.1		
Approach LOS		A		B		

Intersection Summary	
Cycle Length: 136	
Actuated Cycle Length: 136	
Offset: 63 (46%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 11.9	Intersection LOS: B
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 12: Via De La Moda & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	1670	56	235	889	0	42	0	242	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	0	1863	0	1863			
Adj Flow Rate, veh/h	5	1722	58	250	946	0	52	0	15			
Adj No. of Lanes	1	3	0	2	2	0	1	0	1			
Peak Hour Factor	0.92	0.97	0.97	0.94	0.94	0.92	0.81	0.92	0.81			
Percent Heavy Veh, %	2	2	2	2	2	0	2	0	2			
Cap, veh/h	9	3872	130	302	3018	0	72	0	64			
Arrive On Green	0.01	1.00	1.00	0.18	1.00	0.00	0.04	0.00	0.04			
Sat Flow, veh/h	1774	5048	170	3442	3632	0	1774	0	1583			
Grp Volume(v), veh/h	5	1156	624	250	946	0	52	0	15			
Grp Sat Flow(s),veh/h/ln	1774	1695	1827	1721	1770	0	1774	0	1583			
Q Serve(g_s), s	0.4	0.0	0.0	9.5	0.0	0.0	3.9	0.0	1.2			
Cycle Q Clear(g_c), s	0.4	0.0	0.0	9.5	0.0	0.0	3.9	0.0	1.2			
Prop In Lane	1.00		0.09	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	9	2601	1402	302	3018	0	72	0	64			
V/C Ratio(X)	0.56	0.44	0.45	0.83	0.31	0.00	0.72	0.00	0.23			
Avail Cap(c_a), veh/h	104	2601	1402	876	3018	0	399	0	356			
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.57	0.57	0.57	0.97	0.97	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	67.2	0.0	0.0	55.1	0.0	0.0	64.5	0.0	63.2			
Incr Delay (d2), s/veh	27.1	0.3	0.6	2.2	0.3	0.0	4.9	0.0	0.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.2	4.6	0.1	0.0	2.0	0.0	0.6			
LnGrp Delay(d),s/veh	94.3	0.3	0.6	57.2	0.3	0.0	69.4	0.0	63.9			
LnGrp LOS	F	A	A	E	A		E		E			
Approach Vol, veh/h		1785			1196			67				
Approach Delay, s/veh		0.7			12.2			68.2				
Approach LOS		A			B			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	16.3	109.7			4.7	121.4		9.9
Change Period (Y+Rc), s	4.4	5.4			4.0	* 5.4		4.4
Max Green Setting (Gmax), s	34.6	56.6			8.0	* 84		30.6
Max Q Clear Time (g_c+I1), s	11.5	2.0			2.4	2.0		5.9
Green Ext Time (p_c), s	0.4	41.1			0.0	54.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	6.7
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	410		0	0		0	0		0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.91	0.91	0.97	0.91	0.91	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00	1.00		0.99	0.99	0.99		0.98	
Frt		0.996			0.996			0.851	0.850		0.850	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5063	0	3433	5062	0	1770	1486	1504	1770	1547	0
Flt Permitted	0.950			0.950			0.752			0.310		
Satd. Flow (perm)	1770	5063	0	3433	5062	0	1386	1486	1484	577	1547	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			6			156	156		194	
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1326			818			332			302	
Travel Time (s)		20.1			12.4			9.1			8.2	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	22	1956	47	492	1049	27	37	1	275	18	0	3
Confl. Peds. (#/hr)			1	1			8					8
Confl. Bikes (#/hr)			10			2			1			
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.88	0.88	0.88	0.38	0.38	0.38
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	24	2126	51	512	1093	28	42	1	312	47	0	8
Shared Lane Traffic (%)									50%			
Lane Group Flow (vph)	24	2177	0	512	1121	0	42	157	156	47	8	0

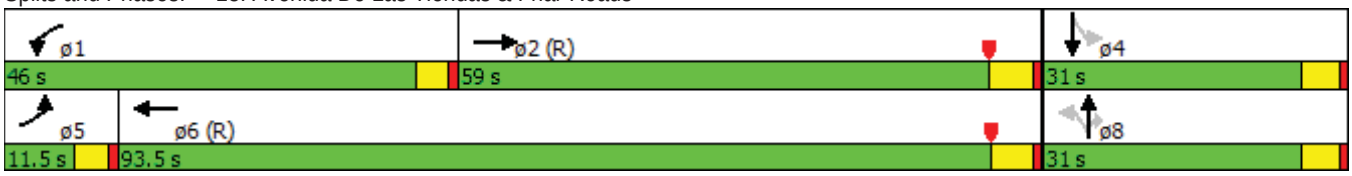
Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	22	1956	492	1049	37	1	275	18	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2	1	6		8			4
Permitted Phases					8		8	4	
Detector Phase	5	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	30.4	8.4	23.3	20.9	20.9	20.9	34.9	34.9
Total Split (s)	11.5	59.0	46.0	93.5	31.0	31.0	31.0	31.0	31.0
Total Split (%)	8.5%	43.4%	33.8%	68.8%	22.8%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.4	4.4	3.4	4.3	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.4	4.4	5.3	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	6.1	83.4	24.9	106.1	12.9	12.9	12.9	12.9	12.9
Actuated g/C Ratio	0.04	0.61	0.18	0.78	0.09	0.09	0.09	0.09	0.09
v/c Ratio	0.30	0.70	0.81	0.28	0.32	0.56	0.55	0.87	0.02
Control Delay	78.6	13.1	63.9	5.7	60.2	15.4	15.1	146.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.6	13.1	63.9	5.7	60.2	15.4	15.1	146.0	0.0
LOS	E	B	E	A	E	B	B	F	A
Approach Delay		13.8		23.9		20.5			124.8
Approach LOS		B		C		C			F

Intersection Summary

Cycle Length: 136
Actuated Cycle Length: 136
Offset: 71 (52%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 19.7 Intersection LOS: B
Intersection Capacity Utilization 76.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 13: Avenida De Las Tiendas & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	1956	47	492	1049	27	37	1	275	18	0	3
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.97		0.96	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	24	2126	51	512	1093	28	42	0	171	47	0	0
Adj No. of Lanes	1	3	0	2	3	0	1	0	2	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.88	0.88	0.88	0.38	0.38	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	3232	77	574	3987	102	180	0	280	162	172	0
Arrive On Green	0.01	0.42	0.42	0.17	0.78	0.78	0.09	0.00	0.09	0.09	0.00	0.00
Sat Flow, veh/h	1774	5107	122	3442	5096	130	1375	0	3040	1184	1863	0
Grp Volume(v), veh/h	24	1410	767	512	727	394	42	0	171	47	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1839	1721	1695	1836	1375	0	1520	1184	1863	0
Q Serve(g_s), s	1.8	45.2	45.3	19.8	8.1	8.1	3.9	0.0	7.4	5.1	0.0	0.0
Cycle Q Clear(g_c), s	1.8	45.2	45.3	19.8	8.1	8.1	3.9	0.0	7.4	5.1	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.07	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	31	2146	1164	574	2652	1437	180	0	280	162	172	0
V/C Ratio(X)	0.77	0.66	0.66	0.89	0.27	0.27	0.23	0.00	0.61	0.29	0.00	0.00
Avail Cap(c_a), veh/h	93	2146	1164	1053	2652	1437	317	0	584	280	357	0
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.62	0.62	0.62	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	66.9	27.4	27.4	55.4	4.1	4.1	57.8	0.0	59.4	58.4	0.0	0.0
Incr Delay (d2), s/veh	11.8	1.3	2.5	1.2	0.2	0.3	0.2	0.0	0.8	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	21.5	23.9	9.6	3.8	4.2	1.5	0.0	3.1	1.7	0.0	0.0
LnGrp Delay(d),s/veh	78.7	28.7	29.9	56.7	4.3	4.4	58.1	0.0	60.2	58.7	0.0	0.0
LnGrp LOS	E	C	C	E	A	A	E		E	E		
Approach Vol, veh/h		2201			1633			213			47	
Approach Delay, s/veh		29.7			20.7			59.8			58.7	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	27.1	91.5		17.4	6.8	111.8		17.4
Change Period (Y+Rc), s	4.4	5.4		4.9	4.4	* 5.4		4.9
Max Green Setting (Gmax), s	41.6	53.6		26.1	7.1	* 88		26.1
Max Q Clear Time (g_c+I1), s	21.8	47.3		7.1	3.8	10.1		9.4
Green Ext Time (p_c), s	0.9	6.1		0.5	0.0	64.8		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	0		0	0		300	0		260
Storage Lanes	1		1	0		1	0		1	1		1
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor			0.98			0.99		1.00	0.99	1.00	1.00	0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950							0.958		0.950	0.953	
Satd. Flow (prot)	1770	5085	1583	0	5085	1583	0	3391	1583	1681	1686	1583
Flt Permitted	0.950							0.958		0.950	0.953	
Satd. Flow (perm)	1770	5085	1551	0	5085	1561	0	3388	1564	1680	1685	1559
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133			631			171			136
Link Speed (mph)		45			45			40			40	
Link Distance (ft)		818			1167			458			1120	
Travel Time (s)		12.4			17.7			7.8			19.1	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	119	1738	706	0	1136	618	335	47	837	394	2	158
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)			1			5						2
Peak Hour Factor	0.94	0.94	0.94	0.98	0.98	0.98	0.87	0.87	0.87	0.74	0.74	0.74
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	127	1849	751	0	1159	631	385	54	962	532	3	214
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	127	1849	751	0	1159	631	0	439	962	266	269	214

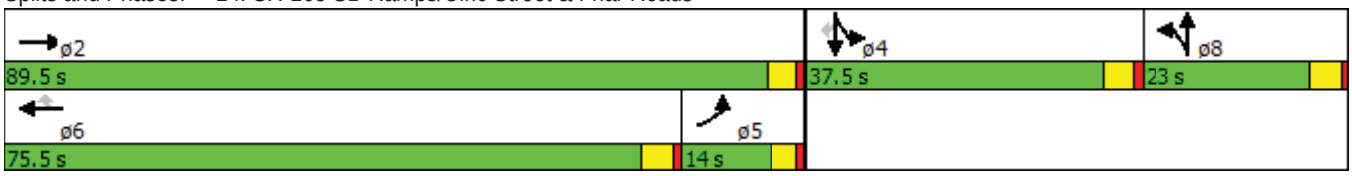
Intersection Summary

Lane Group	EBL	EBT	EBR	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	119	1738	706	1136	618	47	837	394	2	158
Turn Type	Prot	NA	Free	NA	Perm	NA	Free	Split	NA	Perm
Protected Phases	5	2		6		8		4	4	
Permitted Phases			Free		6		Free			4
Detector Phase	5	2		6	6	8		4	4	4
Switch Phase										
Minimum Initial (s)	2.0	10.0		10.0	10.0	4.0		4.0	4.0	4.0
Minimum Split (s)	8.0	22.5		20.0	20.0	20.0		37.5	37.5	37.5
Total Split (s)	14.0	89.5		75.5	75.5	23.0		37.5	37.5	37.5
Total Split (%)	9.3%	59.7%		50.3%	50.3%	15.3%		25.0%	25.0%	25.0%
Yellow Time (s)	3.0	3.5		3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5		4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag			Lead	Lead					
Lead-Lag Optimize?	Yes			Yes	Yes					
Recall Mode	None	Min		Min	Min	None		None	None	None
Act Effct Green (s)	18.9	56.7	112.4	33.6	33.6	19.1	112.4	22.7	22.7	22.7
Actuated g/C Ratio	0.17	0.50	1.00	0.30	0.30	0.17	1.00	0.20	0.20	0.20
v/c Ratio	0.43	0.72	0.48	0.76	0.69	1.28dl	0.62	0.79	0.79	0.51
Control Delay	49.7	23.6	1.1	40.0	7.1	56.8	1.8	61.2	61.7	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	23.6	1.1	40.0	7.1	56.8	1.8	61.2	61.7	20.7
LOS	D	C	A	D	A	E	A	E	E	C
Approach Delay		18.6		28.4		19.1			49.8	
Approach LOS		B		C		B			D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 112.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 74.3%	ICU Level of Service D
Analysis Period (min) 15	

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 14: SR-163 SB Ramps/Ulric Street & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	119	1738	706	0	1136	618	335	47	837	394	2	158
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	127	1849	0	0	1159	294	385	54	0	534	0	72
Adj No. of Lanes	1	3	1	0	3	1	0	2	1	2	0	1
Peak Hour Factor	0.94	0.94	0.94	0.98	0.98	0.98	0.87	0.87	0.87	0.74	0.74	0.74
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	245	2630	819	0	1710	524	314	313	280	628	0	276
Arrive On Green	0.14	0.52	0.00	0.00	0.34	0.34	0.18	0.18	0.00	0.18	0.00	0.18
Sat Flow, veh/h	1774	5085	1583	0	5253	1559	1774	1770	1583	3548	0	1558
Grp Volume(v), veh/h	127	1849	0	0	1159	294	385	54	0	534	0	72
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	0	1695	1559	1774	1770	1583	1774	0	1558
Q Serve(g_s), s	7.0	28.9	0.0	0.0	20.5	16.1	18.5	2.7	0.0	15.3	0.0	4.2
Cycle Q Clear(g_c), s	7.0	28.9	0.0	0.0	20.5	16.1	18.5	2.7	0.0	15.3	0.0	4.2
Prop In Lane	1.00		1.00	0.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	245	2630	819	0	1710	524	314	313	280	628	0	276
V/C Ratio(X)	0.52	0.70	0.00	0.00	0.68	0.56	1.23	0.17	0.00	0.85	0.00	0.26
Avail Cap(c_a), veh/h	245	4130	1286	0	3450	1058	314	313	280	1119	0	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.9	19.2	0.0	0.0	29.9	28.4	43.1	36.6	0.0	41.7	0.0	37.2
Incr Delay (d2), s/veh	0.9	0.4	0.0	0.0	0.5	1.0	127.4	0.1	0.0	1.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	13.4	0.0	0.0	9.6	7.1	20.1	1.3	0.0	7.6	0.0	1.8
LnGrp Delay(d),s/veh	42.8	19.5	0.0	0.0	30.4	29.4	170.5	36.7	0.0	43.0	0.0	37.3
LnGrp LOS	D	B			C	C	F	D		D		D
Approach Vol, veh/h		1976			1453			439			606	
Approach Delay, s/veh		21.0			30.2			154.0			42.3	
Approach LOS		C			C			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		58.6		23.0	18.9	39.7		23.0
Change Period (Y+Rc), s		4.5		4.5	4.5	* 4.5		4.5
Max Green Setting (Gmax), s		85.0		33.0	10.0	* 71		18.5
Max Q Clear Time (g_c+I1), s		30.9		17.3	9.0	22.5		20.5
Green Ext Time (p_c), s		23.3		1.0	0.9	12.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	260			0	0	0
Storage Lanes	1			1	0	0
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	0.91	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	1770	5085	3539	1583	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	5085	3539	1583	0	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				668		
Link Speed (mph)		45	45		45	
Link Distance (ft)		1167	746		946	
Travel Time (s)		17.7	11.3		14.3	

Intersection Summary	
Area Type:	Other



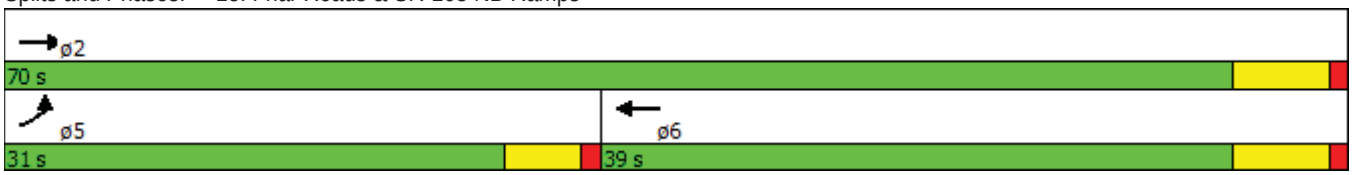
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	567	2356	1421	893	0	0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.97	0.97	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	597	2480	1465	921	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	597	2480	1465	921	0	0

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR
Lane Configurations				
Volume (vph)	567	2356	1421	893
Turn Type	Prot	NA	NA	Free
Protected Phases	5	2	6	
Permitted Phases				Free
Detector Phase	5	2	6	
Switch Phase				
Minimum Initial (s)	5.0	12.0	12.0	
Minimum Split (s)	10.0	22.0	22.0	
Total Split (s)	31.0	70.0	39.0	
Total Split (%)	44.3%	100.0%	55.7%	
Yellow Time (s)	4.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	
Total Lost Time (s)	5.0	6.0	6.0	
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	Min	Min	
Act Effct Green (s)	24.4	66.3	30.8	66.3
Actuated g/C Ratio	0.37	1.00	0.46	1.00
v/c Ratio	0.92	0.49	0.89	0.58
Control Delay	42.7	0.3	25.2	1.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	42.7	0.3	25.2	1.6
LOS	D	A	C	A
Approach Delay		8.6	16.1	
Approach LOS		A	B	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 66.3	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 79.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Friar Roads & SR-163 NB Ramps





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	567	2356	1421	893	0	0
Number	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	597	2480	1465	0		
Adj No. of Lanes	1	3	2	1		
Peak Hour Factor	0.95	0.95	0.97	0.97		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	636	4638	1699	760		
Arrive On Green	0.36	0.91	0.48	0.00		
Sat Flow, veh/h	1774	5253	3632	1583		
Grp Volume(v), veh/h	597	2480	1465	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1583		
Q Serve(g_s), s	22.2	5.7	25.0	0.0		
Cycle Q Clear(g_c), s	22.2	5.7	25.0	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	636	4638	1699	760		
V/C Ratio(X)	0.94	0.53	0.86	0.00		
Avail Cap(c_a), veh/h	677	4774	1713	766		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	21.1	0.5	15.7	0.0		
Incr Delay (d2), s/veh	19.8	0.1	4.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	14.3	2.3	13.1	0.0		
LnGrp Delay(d),s/veh	40.9	0.6	20.2	0.0		
LnGrp LOS	D	A	C			
Approach Vol, veh/h		3077	1465			
Approach Delay, s/veh		8.4	20.2			
Approach LOS		A	C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		68.2			29.4	38.7		
Change Period (Y+Rc), s		6.0			5.0	6.0		
Max Green Setting (Gmax), s		64.0			26.0	33.0		
Max Q Clear Time (g_c+I1), s		7.7			24.2	27.0		
Green Ext Time (p_c), s		42.0			0.3	5.7		

Intersection Summary	
HCM 2010 Ctrl Delay	12.2
HCM 2010 LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	130		0	200		200	140		0
Storage Lanes	2		1	1		1	2		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor	1.00		0.92	1.00		0.96	1.00	0.97		0.98		0.98
Frt			0.850			0.850		0.898				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	1770	5085	1583	3433	3073	0	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3423	5085	1451	1764	5085	1528	3420	3073	0	3349	1863	1554
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			422			142		137				260
Link Speed (mph)		45			50			25			25	
Link Distance (ft)		746			633			685			884	
Travel Time (s)		11.3			8.6			18.7			24.1	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	364	2047	676	97	1155	43	425	83	174	136	86	596
Confl. Peds. (#/hr)	6		23	23		6	2		40	40		2
Confl. Bikes (#/hr)			1						1			4
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.89	0.89	0.89	0.99	0.99	0.99
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	383	2155	712	103	1229	46	478	93	196	137	87	602
Shared Lane Traffic (%)												
Lane Group Flow (vph)	383	2155	712	103	1229	46	478	289	0	137	87	602

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	364	2047	676	97	1155	43	425	83	136	86	596
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	7	4	
Permitted Phases			2			6					4
Detector Phase	5	2	2	1	6	6	3	8	7	4	4
Switch Phase											
Minimum Initial (s)	6.0	10.0	10.0	4.0	10.0	10.0	6.0	7.0	6.0	7.0	7.0
Minimum Split (s)	10.4	32.5	32.5	8.4	35.5	35.5	10.4	53.9	10.4	20.0	20.0
Total Split (s)	28.9	70.9	70.9	13.8	55.8	55.8	25.3	54.1	11.2	40.0	40.0
Total Split (%)	19.3%	47.3%	47.3%	9.2%	37.2%	37.2%	16.9%	36.1%	7.5%	26.7%	26.7%
Yellow Time (s)	3.4	4.5	4.5	3.4	5.5	5.5	3.4	3.9	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.5	5.5	4.4	6.5	6.5	4.4	4.9	4.4	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	Min	Min
Act Effct Green (s)	20.7	65.4	65.4	9.4	53.1	53.1	20.9	49.2	6.8	35.1	35.1
Actuated g/C Ratio	0.14	0.44	0.44	0.06	0.35	0.35	0.14	0.33	0.05	0.23	0.23
v/c Ratio	0.81	0.97	0.82	0.94	0.68	0.07	1.00	0.26	0.88	0.20	1.07
Control Delay	76.5	54.9	23.1	138.2	44.1	0.2	104.7	19.6	116.7	47.7	88.7
Queue Delay	0.0	27.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.5	81.9	23.2	138.2	44.1	0.2	104.7	19.6	116.7	47.7	88.7
LOS	E	F	C	F	D	A	F	B	F	D	F
Approach Delay		68.4			49.6			72.6		89.0	
Approach LOS		E			D			E		F	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 67.5	Intersection LOS: E
Intersection Capacity Utilization 98.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: Frazee Road & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	364	2047	676	97	1155	43	425	83	174	136	86	596
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00	1.00		0.95	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	383	2155	454	103	1229	0	478	93	89	137	87	400
Adj No. of Lanes	2	3	1	1	3	1	2	2	0	2	1	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.89	0.89	0.89	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	432	2200	653	111	1879	585	477	582	487	155	433	344
Arrive On Green	0.13	0.43	0.43	0.06	0.37	0.00	0.14	0.33	0.33	0.05	0.23	0.23
Sat Flow, veh/h	3442	5085	1509	1774	5085	1583	3442	1784	1495	3442	1863	1479
Grp Volume(v), veh/h	383	2155	454	103	1229	0	478	92	90	137	87	400
Grp Sat Flow(s),veh/h/ln	1721	1695	1509	1774	1695	1583	1721	1770	1509	1721	1863	1479
Q Serve(g_s), s	16.5	63.0	36.8	8.7	30.3	0.0	20.9	5.6	6.4	6.0	5.7	35.1
Cycle Q Clear(g_c), s	16.5	63.0	36.8	8.7	30.3	0.0	20.9	5.6	6.4	6.0	5.7	35.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Lane Grp Cap(c), veh/h	432	2200	653	111	1879	585	477	577	492	155	433	344
V/C Ratio(X)	0.89	0.98	0.70	0.93	0.65	0.00	1.00	0.16	0.18	0.88	0.20	1.16
Avail Cap(c_a), veh/h	559	2205	654	111	1879	585	477	577	492	155	433	344
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.9	42.1	34.7	70.4	39.6	0.0	65.0	36.1	36.4	71.6	46.6	57.9
Incr Delay (d2), s/veh	11.3	14.7	3.5	63.4	1.0	0.0	41.8	0.0	0.1	39.7	0.1	100.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	32.3	16.0	6.2	14.4	0.0	12.6	2.7	2.7	3.7	2.9	23.9
LnGrp Delay(d),s/veh	76.2	56.8	38.2	133.9	40.5	0.0	106.8	36.2	36.5	111.3	46.7	158.3
LnGrp LOS	E	E	D	F	D		F	D	D	F	D	F
Approach Vol, veh/h		2992			1332			660			624	
Approach Delay, s/veh		56.5			47.8			87.4			132.4	
Approach LOS		E			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	71.8	25.3	40.0	23.3	62.2	11.2	54.1
Change Period (Y+Rc), s	4.4	* 6.5	4.4	4.9	4.4	6.5	4.4	4.9
Max Green Setting (Gmax), s	9.4	* 65	20.9	35.1	24.5	49.3	6.8	49.2
Max Q Clear Time (g_c+I1), s	10.7	65.0	22.9	37.1	18.5	32.3	8.0	8.4
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.4	16.7	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	66.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	370		370	0		0	0		0
Storage Lanes	0		0	1		1	2		0	0		1
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor						0.98	1.00					0.96
Frt						0.850						0.850
Flt Protected				0.950	0.955		0.950					
Satd. Flow (prot)	0	0	0	1681	1690	1583	3433	3539	0	0	3539	1583
Flt Permitted				0.950	0.955		0.950					
Satd. Flow (perm)	0	0	0	1681	1690	1556	3423	3539	0	0	3539	1528
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						246						271
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		844			939			398			342	
Travel Time (s)		19.2			21.3			6.8			5.8	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	170	6	263	243	654	0	0	935	236
Confl. Peds. (#/hr)	5					5	4		3	3		4
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	0.25	0.25	0.25	0.93	0.93	0.93	0.93	0.93	0.93	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	183	6	283	261	703	0	0	1075	271
Shared Lane Traffic (%)				48%								
Lane Group Flow (vph)	0	0	0	95	94	283	261	703	0	0	1075	271

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (vph)	170	6	263	243	654	935	236
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		8				6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	6.0	6.0	6.0	4.0	10.0	10.0	10.0
Minimum Split (s)	33.9	33.9	33.9	8.4	24.0	24.0	24.0
Total Split (s)	35.9	35.9	35.9	22.5	72.1	49.6	49.6
Total Split (%)	33.2%	33.2%	33.2%	20.8%	66.8%	45.9%	45.9%
Yellow Time (s)	3.9	3.9	3.9	3.4	4.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	4.4	5.0	6.0	6.0
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	14.4	14.4	14.4	13.5	83.7	64.8	64.8
Actuated g/C Ratio	0.13	0.13	0.13	0.12	0.78	0.60	0.60
v/c Ratio	0.42	0.42	0.67	0.61	0.26	0.51	0.26
Control Delay	46.3	46.1	16.0	45.2	8.1	10.7	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.4	0.4	0.3
Total Delay	46.3	46.1	16.0	45.2	8.5	11.1	2.3
LOS	D	D	B	D	A	B	A
Approach Delay		28.1			18.5	9.3	
Approach LOS		C			B	A	

Intersection Summary	
Cycle Length: 108	
Actuated Cycle Length: 108	
Offset: 10 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 61.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: Mission Center Road & Friar WB



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	170	6	263	243	654	0	0	935	236
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				187	0	95	261	703	0	0	1075	87
Adj No. of Lanes				2	0	1	2	2	0	0	2	1
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.87	0.87	0.87
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				351	0	154	330	2832	0	0	2349	1025
Arrive On Green				0.10	0.00	0.10	0.19	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h				3548	0	1559	3442	3632	0	0	3632	1545
Grp Volume(v), veh/h				187	0	95	261	703	0	0	1075	87
Grp Sat Flow(s),veh/h/ln				1774	0	1559	1721	1770	0	0	1770	1545
Q Serve(g_s), s				5.4	0.0	6.3	7.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s				5.4	0.0	6.3	7.8	0.0	0.0	0.0	0.0	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				351	0	154	330	2832	0	0	2349	1025
V/C Ratio(X)				0.53	0.00	0.62	0.79	0.25	0.00	0.00	0.46	0.08
Avail Cap(c_a), veh/h				1018	0	448	577	2832	0	0	2349	1025
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00
Upstream Filter(I)				1.00	0.00	1.00	0.79	0.79	0.00	0.00	0.71	0.71
Uniform Delay (d), s/veh				46.3	0.0	46.7	42.6	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh				1.3	0.0	3.9	3.4	0.2	0.0	0.0	0.5	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.7	0.0	2.9	3.9	0.1	0.0	0.0	0.2	0.0
LnGrp Delay(d),s/veh				47.5	0.0	50.6	46.1	0.2	0.0	0.0	0.5	0.1
LnGrp LOS				D		D	D	A			A	A
Approach Vol, veh/h					282			964			1162	
Approach Delay, s/veh					48.6			12.6			0.4	
Approach LOS					D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		92.4			14.7	77.7		15.6
Change Period (Y+Rc), s		* 6			4.4	6.0		4.9
Max Green Setting (Gmax), s		* 67			18.1	43.6		31.0
Max Q Clear Time (g_c+I1), s		2.0			9.8	2.0		8.3
Green Ext Time (p_c), s		40.6			0.5	30.1		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	10.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		100	0		0	0		0	120		0
Storage Lanes	1		1	0		0	0		1	2		0
Taper Length (ft)	25			0			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor									0.95	0.99		
Frt			0.850						0.850			
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1770	1863	1583	0	0	0	0	3539	1583	3433	3539	0
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1770	1863	1583	0	0	0	0	3539	1504	3404	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73						401			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		654			949			247			398	
Travel Time (s)		14.9			21.6			4.2			6.8	

Intersection Summary	
Area Type:	Other



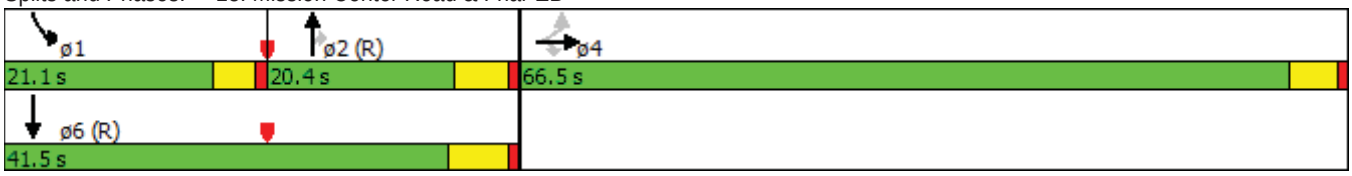
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	267	6	335	0	0	0	0	622	345	442	664	0
Confl. Peds. (#/hr)							1		8	8		1
Confl. Bikes (#/hr)									3			
Peak Hour Factor	0.88	0.88	0.88	0.25	0.25	0.25	0.86	0.86	0.86	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	303	7	381	0	0	0	0	723	401	539	810	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	303	7	381	0	0	0	0	723	401	539	810	0

Intersection Summary

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations							
Volume (vph)	267	6	335	622	345	442	664
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA
Protected Phases		4		2		1	6
Permitted Phases	4		4		2		
Detector Phase	4	4	4	2	2	1	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	4.0	10.0
Minimum Split (s)	20.9	20.9	20.9	24.3	24.3	15.1	25.8
Total Split (s)	66.5	66.5	66.5	20.4	20.4	21.1	41.5
Total Split (%)	61.6%	61.6%	61.6%	18.9%	18.9%	19.5%	38.4%
Yellow Time (s)	3.9	3.9	3.9	4.3	4.3	3.4	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	5.3	5.3	4.4	5.8
Lead/Lag				Lag	Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	
Recall Mode	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	30.6	30.6	30.6	39.0	39.0	23.8	66.7
Actuated g/C Ratio	0.28	0.28	0.28	0.36	0.36	0.22	0.62
v/c Ratio	0.60	0.01	0.76	0.57	0.50	0.71	0.37
Control Delay	37.2	22.0	37.3	41.6	16.8	49.3	7.1
Queue Delay	0.0	0.0	0.1	35.0	1.5	0.0	0.2
Total Delay	37.2	22.0	37.4	76.5	18.3	49.3	7.2
LOS	D	C	D	E	B	D	A
Approach Delay		37.1		55.8			24.0
Approach LOS		D		E			C

Intersection Summary	
Cycle Length: 108	
Actuated Cycle Length: 108	
Offset: 107 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 38.2	Intersection LOS: D
Intersection Capacity Utilization 61.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 18: Mission Center Road & Friar EB



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	267	6	335	0	0	0	0	622	345	442	664	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	303	7	347				0	723	0	539	810	0
Adj No. of Lanes	1	1	1				0	2	1	2	2	0
Peak Hour Factor	0.88	0.88	0.88				0.86	0.86	0.86	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	444	466	396				0	1611	721	532	2303	0
Arrive On Green	0.25	0.25	0.25				0.00	0.15	0.00	0.05	0.21	0.00
Sat Flow, veh/h	1774	1863	1583				0	3632	1583	3442	3632	0
Grp Volume(v), veh/h	303	7	347				0	723	0	539	810	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583				0	1770	1583	1721	1770	0
Q Serve(g_s), s	16.7	0.3	22.7				0.0	20.1	0.0	16.7	21.0	0.0
Cycle Q Clear(g_c), s	16.7	0.3	22.7				0.0	20.1	0.0	16.7	21.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	444	466	396				0	1611	721	532	2303	0
V/C Ratio(X)	0.68	0.02	0.88				0.00	0.45	0.00	1.01	0.35	0.00
Avail Cap(c_a), veh/h	1012	1062	903				0	1611	721	532	2303	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	0.33	0.33	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.92	0.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	36.6	30.5	38.9				0.0	33.5	0.0	51.2	23.1	0.0
Incr Delay (d2), s/veh	1.9	0.0	6.2				0.0	0.8	0.0	39.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	0.2	10.6				0.0	10.0	0.0	10.9	10.4	0.0
LnGrp Delay(d),s/veh	38.5	30.5	45.1				0.0	34.4	0.0	90.6	23.4	0.0
LnGrp LOS	D	C	D					C		F	C	
Approach Vol, veh/h		657						723			1349	
Approach Delay, s/veh		41.9						34.4			50.3	
Approach LOS		D						C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	21.1	55.0		31.9		76.1		
Change Period (Y+Rc), s	4.4	* 5.8		4.9		5.8		
Max Green Setting (Gmax), s	16.7	* 15		61.6		35.7		
Max Q Clear Time (g_c+I1), s	18.7	22.1		24.7		23.0		
Green Ext Time (p_c), s	0.0	0.0		2.3		8.9		

Intersection Summary	
HCM 2010 Ctrl Delay	44.0
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	320		0	0		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt											0.959	
Flt Protected				0.950	0.954		0.950					
Satd. Flow (prot)	0	0	0	1681	1688	0	1770	1863	0	0	1786	0
Flt Permitted				0.950	0.954		0.950					
Satd. Flow (perm)	0	0	0	1681	1688	0	1770	1863	0	0	1786	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											6	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		411			696			308			522	
Travel Time (s)		9.3			15.8			4.7			7.9	

Intersection Summary	
Area Type:	Other



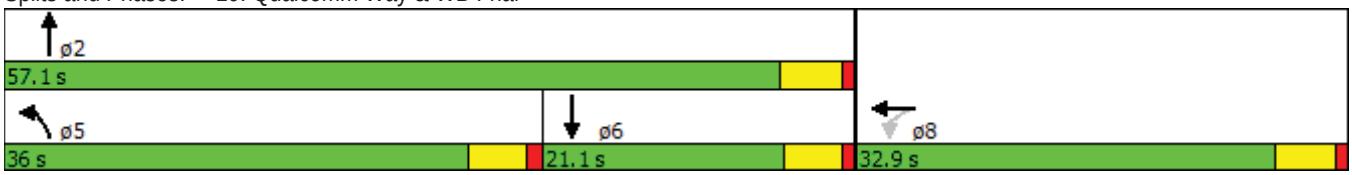
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	366	5	0	472	7	0	0	7	3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.25	0.25	0.25	0.95	0.95	0.95	0.91	0.91	0.91	0.50	0.50	0.50
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	385	5	0	519	8	0	0	14	6
Shared Lane Traffic (%)				49%								
Lane Group Flow (vph)	0	0	0	196	194	0	519	8	0	0	20	0

Intersection Summary

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	366	5	472	7	7
Turn Type	Perm	NA	Prot	NA	NA
Protected Phases		8	5	2	6
Permitted Phases	8				
Detector Phase	8	8	5	2	6
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	10.0	10.0
Minimum Split (s)	32.9	32.9	8.9	23.1	20.9
Total Split (s)	32.9	32.9	36.0	57.1	21.1
Total Split (%)	36.6%	36.6%	40.0%	63.4%	23.4%
Yellow Time (s)	3.9	3.9	3.9	4.1	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	5.1	4.9
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	Min	None	None
Act Effct Green (s)	11.4	11.4	21.2	15.6	11.3
Actuated g/C Ratio	0.25	0.25	0.47	0.34	0.25
v/c Ratio	0.46	0.46	0.63	0.01	0.04
Control Delay	21.3	21.2	14.9	10.3	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	21.2	14.9	10.3	19.4
LOS	C	C	B	B	B
Approach Delay		21.3		14.9	19.4
Approach LOS		C		B	B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 45.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 57.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 19: Qualcomm Way & WB Friar





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	366	5	0	472	7	0	0	7	3
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	0	1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h				389	0	0	519	8	0	0	14	0
Adj No. of Lanes				2	1	0	1	1	0	0	1	0
Peak Hour Factor				0.95	0.95	0.95	0.91	0.91	0.91	0.50	0.50	0.50
Percent Heavy Veh, %				2	2	0	2	2	0	0	2	2
Cap, veh/h				619	325	0	659	1015	0	0	68	0
Arrive On Green				0.17	0.00	0.00	0.37	0.55	0.00	0.00	0.04	0.00
Sat Flow, veh/h				3548	1863	0	1774	1863	0	0	1863	0
Grp Volume(v), veh/h				389	0	0	519	8	0	0	14	0
Grp Sat Flow(s),veh/h/ln				1774	1863	0	1774	1863	0	0	1863	0
Q Serve(g_s), s				3.6	0.0	0.0	9.3	0.1	0.0	0.0	0.3	0.0
Cycle Q Clear(g_c), s				3.6	0.0	0.0	9.3	0.1	0.0	0.0	0.3	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h				619	325	0	659	1015	0	0	68	0
V/C Ratio(X)				0.63	0.00	0.00	0.79	0.01	0.00	0.00	0.21	0.00
Avail Cap(c_a), veh/h				2787	1463	0	1548	2718	0	0	847	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				13.6	0.0	0.0	10.0	3.7	0.0	0.0	16.7	0.0
Incr Delay (d2), s/veh				0.4	0.0	0.0	2.5	0.0	0.0	0.0	1.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.8	0.0	0.0	4.9	0.0	0.0	0.0	0.2	0.0
LnGrp Delay(d),s/veh				14.0	0.0	0.0	12.5	3.7	0.0	0.0	18.2	0.0
LnGrp LOS				B			B	A			B	
Approach Vol, veh/h					389			527			14	
Approach Delay, s/veh					14.0			12.3			18.2	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		24.5			18.1	6.4		11.1
Change Period (Y+Rc), s		5.1			4.9	* 5.1		4.9
Max Green Setting (Gmax), s		52.0			31.1	* 16		28.0
Max Q Clear Time (g_c+I1), s		2.1			11.3	2.3		5.6
Green Ext Time (p_c), s		0.1			2.0	0.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		360	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850						0.850			
Flt Protected		0.957								0.950		
Satd. Flow (prot)	0	1783	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted		0.957								0.950		
Satd. Flow (perm)	0	1783	1583	0	0	0	0	3539	1583	1770	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			324						370			
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		366			590			785			308	
Travel Time (s)		8.3			13.4			11.9			4.7	

Intersection Summary	
Area Type:	Other



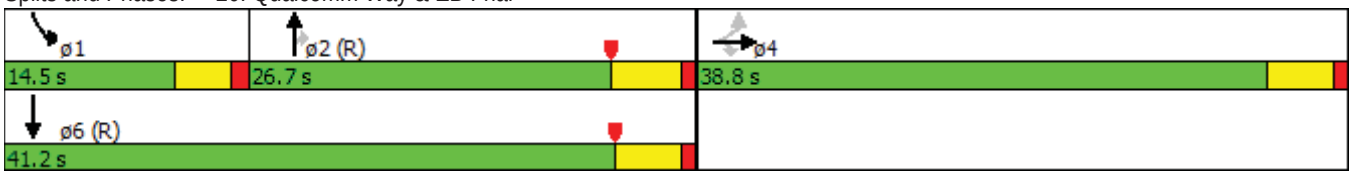
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	45	6	305	0	0	0	0	438	326	5	373	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.94	0.94	0.94	0.25	0.25	0.25	0.88	0.88	0.88	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	48	6	324	0	0	0	0	498	370	5	401	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	324	0	0	0	0	498	370	5	401	0

Intersection Summary

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	6	305	438	326	5	373
Turn Type	NA	Perm	NA	Perm	Prot	NA
Protected Phases	4		2		1	6
Permitted Phases		4		2		
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	10.0	10.0	4.0	10.0
Minimum Split (s)	38.9	38.9	15.1	15.1	8.4	20.9
Total Split (s)	38.8	38.8	26.7	26.7	14.5	41.2
Total Split (%)	48.5%	48.5%	33.4%	33.4%	18.1%	51.5%
Yellow Time (s)	3.9	3.9	4.1	4.1	3.4	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	5.1	5.1	4.4	4.9
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	8.1	8.1	59.9	59.9	4.8	62.1
Actuated g/C Ratio	0.10	0.10	0.75	0.75	0.06	0.78
v/c Ratio	0.30	0.72	0.19	0.29	0.05	0.15
Control Delay	35.7	13.6	4.3	1.5	36.2	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.7	13.6	4.3	1.5	36.2	2.8
LOS	D	B	A	A	D	A
Approach Delay	16.7		3.1			3.2
Approach LOS	B		A			A

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 4 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 6.2	Intersection LOS: A
Intersection Capacity Utilization 57.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 20: Qualcomm Way & EB Friar



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	45	6	305	0	0	0	0	438	326	5	373	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	48	6	127				0	498	63	5	401	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94				0.88	0.88	0.88	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	168	21	168				0	2509	1122	9	2722	0
Arrive On Green	0.11	0.11	0.11				0.00	0.71	0.71	0.01	0.77	0.00
Sat Flow, veh/h	1585	198	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	54	0	127				0	498	63	5	401	0
Grp Sat Flow(s),veh/h/ln	1783	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	2.2	0.0	6.2				0.0	3.8	1.0	0.2	2.4	0.0
Cycle Q Clear(g_c), s	2.2	0.0	6.2				0.0	3.8	1.0	0.2	2.4	0.0
Prop In Lane	0.89		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	189	0	168				0	2509	1122	9	2722	0
V/C Ratio(X)	0.29	0.00	0.76				0.00	0.20	0.06	0.54	0.15	0.00
Avail Cap(c_a), veh/h	756	0	671				0	2509	1122	224	2722	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.95	0.95	0.91	0.91	0.00
Uniform Delay (d), s/veh	33.0	0.0	34.8				0.0	3.9	3.5	39.7	2.4	0.0
Incr Delay (d2), s/veh	0.3	0.0	2.6				0.0	0.2	0.1	15.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	2.8				0.0	1.9	0.4	0.1	1.2	0.0
LnGrp Delay(d),s/veh	33.3	0.0	37.4				0.0	4.1	3.6	54.8	2.5	0.0
LnGrp LOS	C		D					A	A	D	A	
Approach Vol, veh/h		181						561			406	
Approach Delay, s/veh		36.2						4.1			3.2	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	4.8	61.8		13.4		66.6		
Change Period (Y+Rc), s	4.4	5.1		4.9		* 5.1		
Max Green Setting (Gmax), s	10.1	21.6		33.9		* 36		
Max Q Clear Time (g_c+I1), s	2.2	5.8		8.2		4.4		
Green Ext Time (p_c), s	0.0	4.8		0.4		5.9		

Intersection Summary	
HCM 2010 Ctrl Delay	8.8
HCM 2010 LOS	A

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	220		200	240		200	0		60	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00	1.00			1.00	0.98		0.99	
Frt			0.850		0.997				0.850		0.955	
Flt Protected	0.950			0.950				0.958			0.968	
Satd. Flow (prot)	1770	5085	1583	1770	5067	0	0	1785	1583	0	1710	0
Flt Permitted	0.950			0.950				0.680			0.772	
Satd. Flow (perm)	1766	5085	1535	1769	5067	0	0	1261	1548	0	1356	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			60		2				108		20	
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		1866			1172			844			533	
Travel Time (s)		25.4			16.0			23.0			14.5	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	18	1951	99	57	1177	21	40	5	95	117	3	59
Confl. Peds. (#/hr)	3		3	3		3	7		7	7		7
Confl. Bikes (#/hr)			1			1			2			1
Peak Hour Factor	0.88	0.88	0.88	0.97	0.97	0.97	0.88	0.88	0.88	0.65	0.65	0.65
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	20	2217	112	59	1213	22	45	6	108	180	5	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	2217	112	59	1235	0	0	51	108	0	276	0

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	18	1951	99	57	1177	40	5	95	117	3
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA
Protected Phases	5	2		1	6		8			4
Permitted Phases			2			8		8	4	
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	27.2	27.2	8.4	24.2	34.9	34.9	34.9	34.9	34.9
Total Split (s)	18.2	66.3	66.3	18.2	66.3	50.5	50.5	50.5	50.5	50.5
Total Split (%)	13.5%	49.1%	49.1%	13.5%	49.1%	37.4%	37.4%	37.4%	37.4%	37.4%
Yellow Time (s)	3.4	5.2	5.2	3.4	5.2	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	4.4	6.2	6.2	4.4	6.2		4.9	4.9		4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None
Act Effct Green (s)	6.1	80.7	80.7	8.9	85.2		31.8	31.8		31.8
Actuated g/C Ratio	0.05	0.60	0.60	0.07	0.63		0.24	0.24		0.24
v/c Ratio	0.25	0.73	0.12	0.51	0.39		0.17	0.24		0.83
Control Delay	69.1	23.7	8.4	75.2	14.4		39.4	7.4		64.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	69.1	23.7	8.4	75.2	14.4		39.4	7.4		64.5
LOS	E	C	A	E	B		D	A		E
Approach Delay		23.4			17.1		17.7			64.5
Approach LOS		C			B		B			E

Intersection Summary

Cycle Length: 135
Actuated Cycle Length: 135
Offset: 48.8 (36%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 24.0 — Intersection LOS: C
Intersection Capacity Utilization 75.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 21: River Run Drive & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	1951	99	57	1177	21	40	5	95	117	3	59
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	20	2217	72	59	1213	22	45	6	28	180	5	68
Adj No. of Lanes	1	3	1	1	3	0	0	1	1	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.97	0.97	0.97	0.88	0.88	0.88	0.65	0.65	0.65
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	3103	944	76	3276	59	328	41	360	250	6	77
Arrive On Green	0.02	0.61	0.61	0.04	0.64	0.64	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1774	5085	1547	1774	5141	93	1197	175	1547	880	24	332
Grp Volume(v), veh/h	20	2217	72	59	800	435	51	0	28	253	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1547	1774	1695	1844	1372	0	1547	1236	0	0
Q Serve(g_s), s	1.5	40.7	2.6	4.4	15.1	15.1	0.0	0.0	1.9	23.5	0.0	0.0
Cycle Q Clear(g_c), s	1.5	40.7	2.6	4.4	15.1	15.1	3.9	0.0	1.9	27.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.05	0.88		1.00	0.71		0.27
Lane Grp Cap(c), veh/h	28	3103	944	76	2160	1175	369	0	360	333	0	0
V/C Ratio(X)	0.72	0.71	0.08	0.78	0.37	0.37	0.14	0.00	0.08	0.76	0.00	0.00
Avail Cap(c_a), veh/h	181	3103	944	181	2160	1175	513	0	523	482	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	66.2	18.2	10.8	64.0	11.6	11.6	41.2	0.0	40.5	52.2	0.0	0.0
Incr Delay (d2), s/veh	12.3	1.4	0.2	5.8	0.4	0.8	0.1	0.0	0.1	4.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	19.3	1.1	2.3	7.1	7.9	1.5	0.0	0.8	9.6	0.0	0.0
LnGrp Delay(d),s/veh	78.4	19.6	10.9	69.8	12.1	12.5	41.4	0.0	40.6	57.1	0.0	0.0
LnGrp LOS	E	B	B	E	B	B	D		D	E		
Approach Vol, veh/h		2309			1294			79			253	
Approach Delay, s/veh		19.9			14.8			41.1			57.1	
Approach LOS		B			B			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.2	88.6		36.3	6.5	92.2		36.3
Change Period (Y+Rc), s	4.4	6.2		4.9	4.4	6.2		4.9
Max Green Setting (Gmax), s	13.8	60.1		45.6	13.8	60.1		45.6
Max Q Clear Time (g_c+I1), s	6.4	42.7		29.4	3.5	17.1		5.9
Green Ext Time (p_c), s	0.0	17.4		2.0	0.0	42.9		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	240		240	260		260	200		0	210		210
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	1.00	1.00	0.97	0.95	0.95
Ped Bike Factor			0.98	1.00		0.99	0.99		0.98	0.99	0.99	0.98
Frt			0.850			0.850			0.850		0.905	0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	3433	5085	1583	3433	1863	1583	3433	1582	1504
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	5085	1557	3431	5085	1563	3411	1863	1555	3412	1582	1476
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			352			86			343		28	96
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		1172			1541			740			798	
Travel Time (s)		16.0			21.0			20.2			21.8	

Intersection Summary	
Area Type:	Other



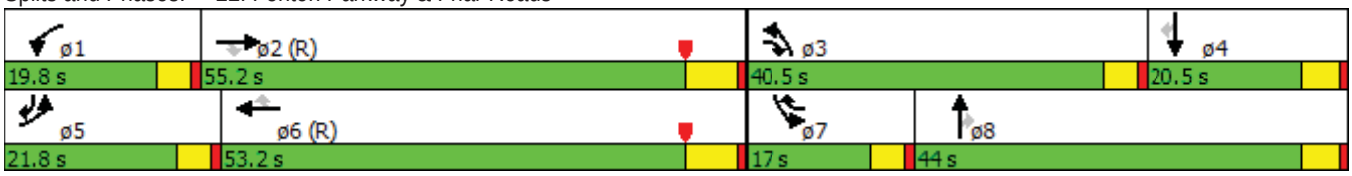
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	126	1944	348	230	923	59	232	31	322	24	14	63
Confl. Peds. (#/hr)			4	4			7		6	6		7
Confl. Bikes (#/hr)						2						
Peak Hour Factor	0.99	0.99	0.99	0.90	0.90	0.90	0.94	0.94	0.94	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	127	1964	352	256	1026	66	247	33	343	27	16	70
Shared Lane Traffic (%)												40%
Lane Group Flow (vph)	127	1964	352	256	1026	66	247	33	343	27	44	42

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	126	1944	348	230	923	59	232	31	322	24	14	63
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	8	7	4	5
Switch Phase												
Minimum Initial (s)	4.0	10.0	4.0	4.0	10.0	4.0	4.0	7.0	7.0	4.0	7.0	4.0
Minimum Split (s)	8.4	40.2	8.4	8.4	37.2	8.4	8.4	43.9	43.9	8.4	46.9	8.4
Total Split (s)	21.8	55.2	40.5	19.8	53.2	17.0	40.5	44.0	44.0	17.0	20.5	21.8
Total Split (%)	16.0%	40.6%	29.8%	14.6%	39.1%	12.5%	29.8%	32.4%	32.4%	12.5%	15.1%	16.0%
Yellow Time (s)	3.4	5.2	3.4	3.4	5.2	3.4	3.4	3.9	3.9	3.4	3.9	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	6.2	4.4	4.4	6.2	4.4	4.4	4.9	4.9	4.4	4.9	4.4
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	13.6	75.9	91.9	13.8	76.0	83.4	14.2	22.6	22.6	5.6	15.1	27.2
Actuated g/C Ratio	0.10	0.56	0.68	0.10	0.56	0.61	0.10	0.17	0.17	0.04	0.11	0.20
v/c Ratio	0.72	0.69	0.30	0.74	0.36	0.07	0.69	0.11	0.63	0.19	0.22	0.11
Control Delay	80.8	26.2	2.0	86.2	14.1	1.3	68.7	43.2	9.3	65.8	26.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.8	26.2	2.0	86.2	14.1	1.3	68.7	43.2	9.3	65.8	26.6	0.6
LOS	F	C	A	F	B	A	E	D	A	E	C	A
Approach Delay		25.5			27.2			34.7			26.3	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 136	
Actuated Cycle Length: 136	
Offset: 90 (66%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 27.3	Intersection LOS: C
Intersection Capacity Utilization 76.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 22: Fenton Parkway & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	126	1944	348	230	923	59	232	31	322	24	14	63
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	127	1964	0	256	1026	0	247	33	82	27	16	0
Adj No. of Lanes	1	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.99	0.99	0.99	0.90	0.90	0.90	0.94	0.94	0.94	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	3267	1157	303	3281	1051	305	195	162	67	65	190
Arrive On Green	0.09	0.64	0.00	0.18	1.00	0.00	0.09	0.10	0.10	0.02	0.03	0.00
Sat Flow, veh/h	1774	5085	1583	3442	5085	1583	3442	1863	1552	3548	1863	1583
Grp Volume(v), veh/h	127	1964	0	256	1026	0	247	33	82	27	16	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1695	1583	1721	1863	1552	1774	1863	1583
Q Serve(g_s), s	9.6	30.6	0.0	9.8	0.0	0.0	9.6	2.2	6.8	1.0	1.1	0.0
Cycle Q Clear(g_c), s	9.6	30.6	0.0	9.8	0.0	0.0	9.6	2.2	6.8	1.0	1.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	151	3267	1157	303	3281	1051	305	195	162	67	65	190
V/C Ratio(X)	0.84	0.60	0.00	0.85	0.31	0.00	0.81	0.17	0.51	0.40	0.25	0.00
Avail Cap(c_a), veh/h	227	3267	1157	390	3281	1051	914	536	446	329	214	316
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.00	0.93	0.93	0.00	0.96	0.96	0.96	1.00	1.00	0.00
Uniform Delay (d), s/veh	61.3	14.2	0.0	55.2	0.0	0.0	60.9	55.5	57.6	66.0	63.9	0.0
Incr Delay (d2), s/veh	7.0	0.5	0.0	9.9	0.2	0.0	1.9	1.0	6.0	1.5	8.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	14.3	0.0	5.0	0.1	0.0	4.6	1.2	3.2	0.5	0.7	0.0
LnGrp Delay(d),s/veh	68.4	14.7	0.0	65.0	0.2	0.0	62.8	56.5	63.5	67.4	72.7	0.0
LnGrp LOS	E	B		E	A		E	E	E	E	E	
Approach Vol, veh/h		2091			1282			362			43	
Approach Delay, s/veh		18.0			13.2			62.4			69.4	
Approach LOS		B			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	93.6	16.4	9.6	16.0	94.0	7.0	19.1
Change Period (Y+Rc), s	4.4	6.2	4.4	4.9	4.4	6.2	4.4	4.9
Max Green Setting (Gmax), s	15.4	49.0	36.1	15.6	17.4	47.0	12.6	39.1
Max Q Clear Time (g_c+I1), s	11.8	32.6	11.6	3.1	11.6	2.0	3.0	8.8
Green Ext Time (p_c), s	0.2	16.3	0.5	0.8	0.1	44.2	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		300	260		260	180		0	190		300
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor			0.99			0.99			0.98	0.99		0.99
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	3433	5085	1583	3433	1863	1583	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1562	3433	5085	1564	3433	1863	1552	3408	1863	1563
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182			137			103			96
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		1541			1521			578			725	
Travel Time (s)		21.0			20.7			15.8			19.8	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	112	2031	243	426	907	130	190	29	698	92	17	67
Confl. Peds. (#/hr)									7	7		
Confl. Bikes (#/hr)			3			1						1
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.94	0.94	0.94	0.83	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	126	2282	273	448	955	137	202	31	743	111	20	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	2282	273	448	955	137	202	31	743	111	20	81

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	2031	243	426	907	130	190	29	698	92	17	67
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	4.0	4.0	7.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	35.0	35.0	8.4	33.2	8.4	8.4	41.9	8.4	8.4	20.9	20.9
Total Split (s)	16.5	57.8	57.8	20.5	61.8	23.2	23.4	34.5	20.5	23.2	34.3	34.3
Total Split (%)	12.1%	42.5%	42.5%	15.1%	45.4%	17.1%	17.2%	25.4%	15.1%	17.1%	25.2%	25.2%
Yellow Time (s)	3.4	5.0	5.0	3.4	5.2	3.4	3.4	3.9	3.4	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	6.0	6.0	4.4	6.2	4.4	4.4	4.9	4.4	4.4	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	9.3	51.8	51.8	36.4	78.7	96.7	12.4	17.3	50.5	16.2	15.7	15.7
Actuated g/C Ratio	0.07	0.38	0.38	0.27	0.58	0.71	0.09	0.13	0.37	0.12	0.12	0.12
v/c Ratio	0.54	1.18	0.39	0.49	0.32	0.12	0.65	0.13	1.14	0.27	0.09	0.31
Control Delay	69.0	116.5	9.7	45.6	17.0	2.2	69.3	48.7	115.6	58.9	50.5	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.0	116.5	9.7	45.6	17.0	2.2	69.3	48.7	115.6	58.9	50.5	8.6
LOS	E	F	A	D	B	A	E	D	F	E	D	A
Approach Delay		103.4			24.0			103.9			38.9	
Approach LOS		F			C			F			D	

Intersection Summary	
Cycle Length: 136	
Actuated Cycle Length: 136	
Offset: 84 (62%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 78.4	Intersection LOS: E
Intersection Capacity Utilization 98.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 23: Northside Drive & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	112	2031	243	426	907	130	190	29	698	92	17	67
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	2282	144	448	955	0	202	31	631	111	20	0
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.94	0.94	0.94	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	2395	736	407	2739	927	255	405	529	161	354	301
Arrive On Green	0.07	0.63	0.63	0.12	0.54	0.00	0.07	0.22	0.22	0.05	0.19	0.00
Sat Flow, veh/h	3442	5085	1562	3442	5085	1583	3442	1863	1568	3442	1863	1583
Grp Volume(v), veh/h	126	2282	144	448	955	0	202	31	631	111	20	0
Grp Sat Flow(s),veh/h/ln	1721	1695	1562	1721	1695	1583	1721	1863	1568	1721	1863	1583
Q Serve(g_s), s	4.9	56.6	5.3	16.1	14.5	0.0	7.9	1.8	29.6	4.3	1.2	0.0
Cycle Q Clear(g_c), s	4.9	56.6	5.3	16.1	14.5	0.0	7.9	1.8	29.6	4.3	1.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	2395	736	407	2739	927	255	405	529	161	354	301
V/C Ratio(X)	0.72	0.95	0.20	1.10	0.35	0.00	0.79	0.08	1.19	0.69	0.06	0.00
Avail Cap(c_a), veh/h	306	2395	736	407	2739	927	481	405	529	476	403	342
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	1.00	1.00	0.00	0.81	0.81	0.81	1.00	1.00	0.00
Uniform Delay (d), s/veh	62.5	24.0	14.4	60.0	17.8	0.0	61.9	42.3	45.2	63.9	45.1	0.0
Incr Delay (d2), s/veh	1.4	7.6	0.4	74.3	0.4	0.0	1.7	0.2	101.7	2.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	27.9	2.4	11.8	6.9	0.0	3.8	1.0	34.8	2.1	0.6	0.0
LnGrp Delay(d),s/veh	63.9	31.6	14.8	134.2	18.2	0.0	63.6	42.5	146.9	65.8	45.4	0.0
LnGrp LOS	E	C	B	F	B		E	D	F	E	D	
Approach Vol, veh/h		2552			1403			864			131	
Approach Delay, s/veh		32.3			55.2			123.7			62.7	
Approach LOS		C			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.5	70.2	14.5	30.8	11.3	79.4	10.8	34.5
Change Period (Y+Rc), s	4.4	* 6.2	4.4	4.9	4.4	6.2	4.4	4.9
Max Green Setting (Gmax), s	16.1	* 52	19.0	29.4	12.1	55.6	18.8	29.6
Max Q Clear Time (g_c+I1), s	18.1	58.6	9.9	3.2	6.9	16.5	6.3	31.6
Green Ext Time (p_c), s	0.0	0.0	0.2	8.5	0.1	38.5	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	55.5
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	1		0	0		1
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor					1.00							
Frt						0.850						0.850
Flt Protected					0.950		0.950					
Satd. Flow (prot)	0	0	0	0	1770	1583	1770	3539	0	0	3539	1583
Flt Permitted					0.950		0.950					
Satd. Flow (perm)	0	0	0	0	1768	1583	1770	3539	0	0	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						288						422
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		872			777			546			762	
Travel Time (s)		19.8			17.7			12.4			17.3	

Intersection Summary	
Area Type:	Other



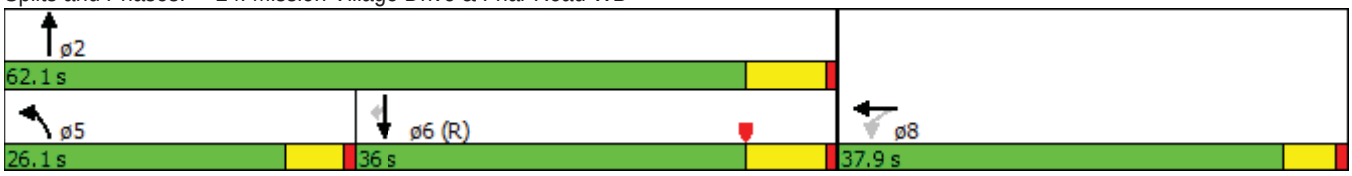
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	154	0	268	126	378	0	0	860	380
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)												
Peak Hour Factor	0.25	0.25	0.25	0.93	0.93	0.93	0.83	0.83	0.83	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	166	0	288	152	455	0	0	956	422
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	166	288	152	455	0	0	956	422

Intersection Summary

Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	268	126	378	860	380
Turn Type	NA	Free	Prot	NA	NA	Perm
Protected Phases	8		5	2	6	
Permitted Phases		Free				6
Detector Phase	8		5	2	6	6
Switch Phase						
Minimum Initial (s)	4.0		6.0	10.0	10.0	10.0
Minimum Split (s)	33.9		23.3	25.0	25.0	25.0
Total Split (s)	37.9		26.1	62.1	36.0	36.0
Total Split (%)	37.9%		26.1%	62.1%	36.0%	36.0%
Yellow Time (s)	3.9		4.3	6.0	6.0	6.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9		5.3	7.0	7.0	7.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	Min	C-Min	C-Min
Act Effct Green (s)	15.8	100.0	12.9	72.3	54.1	54.1
Actuated g/C Ratio	0.16	1.00	0.13	0.72	0.54	0.54
v/c Ratio	0.60	0.18	0.67	0.18	0.50	0.40
Control Delay	46.6	0.3	55.0	5.5	18.0	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	0.3	55.0	5.5	18.0	3.3
LOS	D	A	D	A	B	A
Approach Delay	17.2			17.9	13.5	
Approach LOS	B			B	B	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 39 (39%), Referenced to phase 3: and 6:SBT, Start of Yellow	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 68.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 24: Mission Village Drive & Friar Road WB





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	154	0	268	126	378	0	0	860	380
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				166	0	0	152	455	0	0	956	89
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.93	0.93	0.93	0.83	0.83	0.83	0.90	0.90	0.90
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				772	0	689	184	1578	0	0	1023	458
Arrive On Green				0.44	0.00	0.00	0.10	0.45	0.00	0.00	0.29	0.29
Sat Flow, veh/h				1774	0	1583	1774	3632	0	0	3632	1583
Grp Volume(v), veh/h				166	0	0	152	455	0	0	956	89
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1583
Q Serve(g_s), s				5.8	0.0	0.0	8.4	8.2	0.0	0.0	26.3	4.2
Cycle Q Clear(g_c), s				5.8	0.0	0.0	8.4	8.2	0.0	0.0	26.3	4.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				772	0	689	184	1578	0	0	1023	458
V/C Ratio(X)				0.22	0.00	0.00	0.83	0.29	0.00	0.00	0.93	0.19
Avail Cap(c_a), veh/h				772	0	689	369	1950	0	0	1026	459
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.98	0.98	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.6	0.0	0.0	43.9	17.6	0.0	0.0	34.6	26.8
Incr Delay (d2), s/veh				0.1	0.0	0.0	3.5	0.1	0.0	0.0	16.2	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.9	0.0	0.0	4.3	4.0	0.0	0.0	15.2	2.0
LnGrp Delay(d),s/veh				17.7	0.0	0.0	47.4	17.7	0.0	0.0	50.8	27.7
LnGrp LOS				B			D	B			D	C
Approach Vol, veh/h					166			607			1045	
Approach Delay, s/veh					17.7			25.2			48.8	
Approach LOS					B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		51.6			15.7	35.9		48.4
Change Period (Y+Rc), s		7.0			5.3	7.0		4.9
Max Green Setting (Gmax), s		55.1			20.8	29.0		33.0
Max Q Clear Time (g_c+I1), s		10.2			10.4	28.3		7.8
Green Ext Time (p_c), s		19.3			0.1	0.6		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		1	1		0
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor									0.97	1.00		
Frt			0.850						0.850			
Flt Protected		0.953								0.950		
Satd. Flow (prot)	0	1775	1583	0	0	0	0	3539	1583	1770	3539	0
Flt Permitted		0.953								0.950		
Satd. Flow (perm)	0	1775	1583	0	0	0	0	3539	1540	1762	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			295						163			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		731			746			159			546	
Travel Time (s)		16.6			17.0			3.6			12.4	

Intersection Summary	
Area Type:	Other



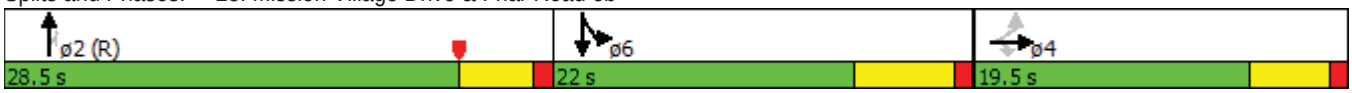
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	233	1	239	0	0	0	0	251	137	415	608	0
Confl. Peds. (#/hr)							4		4	4		4
Confl. Bikes (#/hr)						1			1			
Peak Hour Factor	0.81	0.81	0.81	0.25	0.25	0.25	0.84	0.84	0.84	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	288	1	295	0	0	0	0	299	163	456	668	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	289	295	0	0	0	0	299	163	456	668	0

Intersection Summary

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	1	239	251	137	415	608
Turn Type	NA	Perm	NA	Perm	Split	NA
Protected Phases	4		2		6	6
Permitted Phases		4		2		
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.2	21.2	27.9	27.9	23.2	23.2
Total Split (s)	19.5	19.5	28.5	28.5	22.0	22.0
Total Split (%)	27.9%	27.9%	40.7%	40.7%	31.4%	31.4%
Yellow Time (s)	4.2	4.2	3.9	3.9	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.2	5.2	4.9	4.9	6.2	6.2
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	Min	Min
Act Effct Green (s)	13.7	13.7	24.2	24.2	15.8	15.8
Actuated g/C Ratio	0.20	0.20	0.35	0.35	0.23	0.23
v/c Ratio	0.83	0.54	0.24	0.26	1.14	0.84
Control Delay	49.0	7.5	17.3	4.3	119.1	37.2
Queue Delay	0.0	0.0	2.8	1.4	0.0	0.0
Total Delay	49.0	7.5	20.1	5.7	119.1	37.2
LOS	D	A	C	A	F	D
Approach Delay	28.0		15.0			70.4
Approach LOS	C		B			E

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 14 (20%), Referenced to phase 2:NBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay: 47.2	Intersection LOS: D
Intersection Capacity Utilization 68.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 25: Mission Village Drive & Friar Road eb



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	233	1	239	0	0	0	0	251	137	415	608	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	288	1	5				0	299	32	456	668	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.81	0.81	0.81				0.84	0.84	0.84	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	334	1	299				0	1248	543	400	799	0
Arrive On Green	0.19	0.19	0.19				0.00	0.35	0.35	0.23	0.23	0.00
Sat Flow, veh/h	1768	6	1583				0	3632	1541	1774	3632	0
Grp Volume(v), veh/h	289	0	5				0	299	32	456	668	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1541	1774	1770	0
Q Serve(g_s), s	11.0	0.0	0.2				0.0	4.2	1.0	15.8	12.6	0.0
Cycle Q Clear(g_c), s	11.0	0.0	0.2				0.0	4.2	1.0	15.8	12.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	335	0	299				0	1248	543	400	799	0
V/C Ratio(X)	0.86	0.00	0.02				0.00	0.24	0.06	1.14	0.84	0.00
Avail Cap(c_a), veh/h	362	0	323				0	1248	543	400	799	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	27.5	0.0	23.1				0.0	16.0	15.0	27.1	25.9	0.0
Incr Delay (d2), s/veh	17.8	0.0	0.0				0.0	0.5	0.2	85.6	6.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	0.1				0.0	2.1	0.4	17.2	6.9	0.0
LnGrp Delay(d),s/veh	45.4	0.0	23.1				0.0	16.5	15.2	112.7	32.6	0.0
LnGrp LOS	D		C					B	B	F	C	
Approach Vol, veh/h		294						331			1124	
Approach Delay, s/veh		45.0						16.4			65.1	
Approach LOS		D						B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		29.6		18.4		22.0		
Change Period (Y+Rc), s		4.9		5.2		6.2		
Max Green Setting (Gmax), s		23.6		14.3		15.8		
Max Q Clear Time (g_c+I1), s		6.2		13.0		17.8		
Green Ext Time (p_c), s		1.8		0.2		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	52.5
HCM 2010 LOS	D



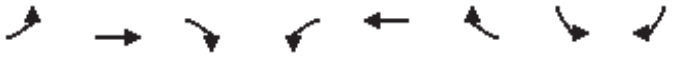
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	600		600
Storage Lanes	1		1	1		1	0		0	2		1
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	0.97	1.00	0.88
Ped Bike Factor												
Frt			0.850			0.850						0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	0	0	0	3433	0	2787
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	0	0	0	3433	0	2787
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			522			223						32
Link Speed (mph)		50			50			45			45	
Link Distance (ft)		760			1297			422			768	
Travel Time (s)		10.4			17.7			6.4			11.6	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	434	1829	662	227	1123	314	0	0	0	1017	0	368
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.25	0.25	0.25	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	472	1988	720	244	1208	338	0	0	0	1094	0	396
Shared Lane Traffic (%)												
Lane Group Flow (vph)	472	1988	720	244	1208	338	0	0	0	1094	0	396

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR
Lane Configurations								
Volume (vph)	434	1829	662	227	1123	314	1017	368
Turn Type	Prot	NA	Perm	Prot	NA	Free	Prot	pm+ov
Protected Phases	5	2		1	6		4	5
Permitted Phases			2			Free		4
Detector Phase	5	2	2	1	6		4	5
Switch Phase								
Minimum Initial (s)	5.0	14.0	14.0	5.0	13.0		5.0	5.0
Minimum Split (s)	9.7	21.0	21.0	9.2	20.0		10.1	9.7
Total Split (s)	42.0	68.0	68.0	24.0	50.0		44.0	42.0
Total Split (%)	30.9%	50.0%	50.0%	17.6%	36.8%		32.4%	30.9%
Yellow Time (s)	3.2	5.0	5.0	3.2	5.0		3.6	3.2
All-Red Time (s)	1.5	2.0	2.0	1.0	2.0		1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.7	7.0	7.0	4.2	7.0		5.1	4.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag			Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes			Yes
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None
Act Effct Green (s)	37.1	60.3	60.3	19.5	42.2	136.0	39.9	82.1
Actuated g/C Ratio	0.27	0.44	0.44	0.14	0.31	1.00	0.29	0.60
v/c Ratio	0.98	0.88	0.73	0.96	0.77	0.21	1.09	0.23
Control Delay	84.8	40.2	12.4	105.4	46.1	0.3	100.4	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.8	40.2	12.4	105.4	46.1	0.3	100.4	11.9
LOS	F	D	B	F	D	A	F	B
Approach Delay		40.5			45.6			
Approach LOS		D			D			

Intersection Summary	
Cycle Length: 136	
Actuated Cycle Length: 136	
Offset: 119 (88%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 50.3	Intersection LOS: D
Intersection Capacity Utilization 89.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 26: I-15 SB Ramps & Friar Roads



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	434	1829	662	227	1123	314	0	0	0	1017	0	368
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	0	1863
Adj Flow Rate, veh/h	472	1988	405	244	1208	0				1094	0	364
Adj No. of Lanes	1	3	1	1	3	1				2	0	2
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2				2	0	2
Cap, veh/h	487	2281	710	258	1608	501				984	0	1561
Arrive On Green	0.27	0.45	0.45	0.15	0.32	0.00				0.29	0.00	0.29
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583				3442	0	2787
Grp Volume(v), veh/h	472	1988	405	244	1208	0				1094	0	364
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583				1721	0	1393
Q Serve(g_s), s	35.8	48.1	25.8	18.5	29.0	0.0				38.9	0.0	9.0
Cycle Q Clear(g_c), s	35.8	48.1	25.8	18.5	29.0	0.0				38.9	0.0	9.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	487	2281	710	258	1608	501				984	0	1561
V/C Ratio(X)	0.97	0.87	0.57	0.94	0.75	0.00				1.11	0.00	0.23
Avail Cap(c_a), veh/h	487	2281	710	258	1608	501				984	0	1561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.66	0.66	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	48.8	34.0	27.8	57.6	41.7	0.0				48.5	0.0	15.1
Incr Delay (d2), s/veh	32.9	4.9	3.3	31.3	2.2	0.0				64.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.0	23.5	11.9	11.3	13.9	0.0				27.3	0.0	9.9
LnGrp Delay(d),s/veh	81.7	38.9	31.1	88.9	43.9	0.0				112.9	0.0	15.2
LnGrp LOS	F	D	C	F	D					F		B
Approach Vol, veh/h		2865			1452						1458	
Approach Delay, s/veh		44.8			51.5						88.5	
Approach LOS		D			D						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	24.0	68.0		44.0	42.0	50.0		
Change Period (Y+Rc), s	* 4.2	7.0		5.1	* 4.7	7.0		
Max Green Setting (Gmax), s	* 20	61.0		38.9	* 37	43.0		
Max Q Clear Time (g_c+I1), s	20.5	50.1		40.9	37.8	31.0		
Green Ext Time (p_c), s	0.0	9.3		0.0	0.0	10.2		

Intersection Summary	
HCM 2010 Ctrl Delay	57.5
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	520			0	0	0
Storage Lanes	1			1	0	0
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	0.91	0.86	0.86	1.00	1.00
Ped Bike Factor						
Frt			0.963	0.850		
Flt Protected	0.950					
Satd. Flow (prot)	1770	5085	4628	1362	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	5085	4628	1362	0	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			146	241		
Link Speed (mph)		50	50		30	
Link Distance (ft)		1297	893		840	
Travel Time (s)		17.7	12.2		19.1	

Intersection Summary	
Area Type:	Other



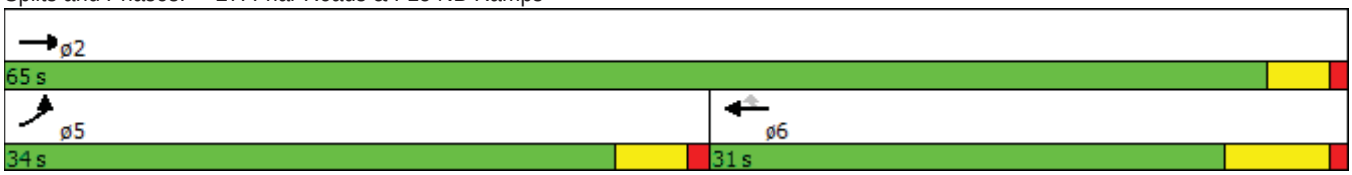
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	489	2369	978	701	0	0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.96	0.96	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	526	2547	1019	730	0	0
Shared Lane Traffic (%)				45%		
Lane Group Flow (vph)	526	2547	1348	401	0	0

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR
Lane Configurations				
Volume (vph)	489	2369	978	701
Turn Type	Prot	NA	NA	Perm
Protected Phases	5	2	6	
Permitted Phases				6
Detector Phase	5	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	2.0	14.0	14.0
Minimum Split (s)	9.5	6.0	20.0	20.0
Total Split (s)	34.0	65.0	31.0	31.0
Total Split (%)	52.3%	100.0%	47.7%	47.7%
Yellow Time (s)	3.5	3.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes
Recall Mode	None	Min	Min	Min
Act Effct Green (s)	19.7	51.4	20.7	20.7
Actuated g/C Ratio	0.38	1.00	0.40	0.40
v/c Ratio	0.78	0.50	0.69	0.58
Control Delay	23.1	0.4	14.2	9.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.1	0.4	14.2	9.6
LOS	C	A	B	A
Approach Delay		4.2	13.1	
Approach LOS		A	B	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 51.4	
Natural Cycle: 45	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 7.5	Intersection LOS: A
Intersection Capacity Utilization 64.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 27: Friar Roads & I-15 NB Ramps





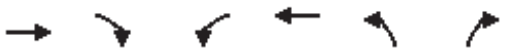
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	489	2369	978	701	0	0
Number	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863		
Adj Flow Rate, veh/h	526	2547	1019	0		
Adj No. of Lanes	1	3	3	1		
Peak Hour Factor	0.93	0.93	0.96	0.96		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	600	4408	2397	679		
Arrive On Green	0.34	0.87	0.43	0.00		
Sat Flow, veh/h	1774	5253	5588	1583		
Grp Volume(v), veh/h	526	2547	1019	0		
Grp Sat Flow(s),veh/h/ln	1774	1695	1863	1583		
Q Serve(g_s), s	12.6	6.0	5.7	0.0		
Cycle Q Clear(g_c), s	12.6	6.0	5.7	0.0		
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	600	4408	2397	679		
V/C Ratio(X)	0.88	0.58	0.43	0.00		
Avail Cap(c_a), veh/h	1162	6886	3101	879		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	14.0	0.8	9.0	0.0		
Incr Delay (d2), s/veh	1.7	0.0	0.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.4	2.6	2.9	0.0		
LnGrp Delay(d),s/veh	15.7	0.8	9.0	0.0		
LnGrp LOS	B	A	A			
Approach Vol, veh/h		3073	1019			
Approach Delay, s/veh		3.4	9.0			
Approach LOS		A	A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		45.0			19.7	25.3		
Change Period (Y+Rc), s		* 6			4.5	6.0		
Max Green Setting (Gmax), s		* 61			29.5	25.0		
Max Q Clear Time (g_c+I1), s		8.0			14.6	7.7		
Green Ext Time (p_c), s		20.1			0.7	11.6		

Intersection Summary	
HCM 2010 Ctrl Delay	4.8
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		400	160		160	0
Storage Lanes		1	1		2	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	1.00	1.00	0.86	0.97	0.91
Ped Bike Factor						
Frt		0.850			0.994	0.850
Flt Protected			0.950		0.954	
Satd. Flow (prot)	5085	1583	1770	6408	3427	1441
Flt Permitted			0.950		0.954	
Satd. Flow (perm)	5085	1583	1770	6408	3427	1441
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		489			3	150
Link Speed (mph)	50			50	45	
Link Distance (ft)	893			357	577	
Travel Time (s)	12.2			4.9	8.7	

Intersection Summary	
Area Type:	Other



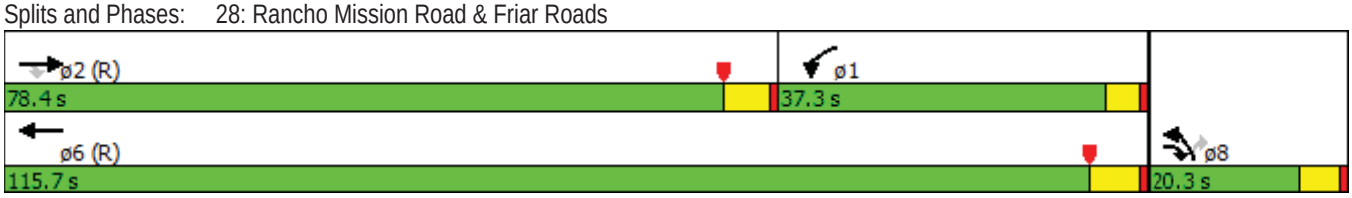
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	2561	469	80	1367	338	150
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.92	0.92	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	2668	489	87	1486	376	167
Shared Lane Traffic (%)						10%
Lane Group Flow (vph)	2668	489	87	1486	393	150

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	2561	469	80	1367	338	150
Turn Type	NA	pm+ov	Prot	NA	Prot	Perm
Protected Phases	2	8	1	6	8	
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	8
Switch Phase						
Minimum Initial (s)	10.0	4.0	4.0	10.0	4.0	4.0
Minimum Split (s)	34.8	37.1	8.4	22.0	37.1	37.1
Total Split (s)	78.4	20.3	37.3	115.7	20.3	20.3
Total Split (%)	57.6%	14.9%	27.4%	85.1%	14.9%	14.9%
Yellow Time (s)	4.8	4.1	3.4	5.0	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	5.1	4.4	6.0	5.1	5.1
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	C-Min	None	None	C-Min	None	None
Act Effct Green (s)	86.7	115.4	11.1	102.0	22.9	22.9
Actuated g/C Ratio	0.64	0.85	0.08	0.75	0.17	0.17
v/c Ratio	0.82	0.35	0.60	0.31	0.68	0.41
Control Delay	22.4	0.9	77.0	5.8	59.1	10.6
Queue Delay	0.9	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	0.9	77.0	5.8	59.1	10.6
LOS	C	A	E	A	E	B
Approach Delay	19.8			9.7	45.7	
Approach LOS	B			A	D	

Intersection Summary	
Cycle Length: 136	
Actuated Cycle Length: 136	
Offset: 20 (15%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 19.5	Intersection LOS: B
Intersection Capacity Utilization 77.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 28: Rancho Mission Road & Friar Roads



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2561	469	80	1367	338	150
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2668	36	87	1486	376	17
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.96	0.96	0.92	0.92	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2714	1022	408	5169	397	177
Arrive On Green	0.53	0.53	0.23	0.81	0.11	0.11
Sat Flow, veh/h	5253	1583	1774	6669	3548	1583
Grp Volume(v), veh/h	2668	36	87	1486	376	17
Grp Sat Flow(s),veh/h/ln	1695	1583	1774	1602	1774	1583
Q Serve(g_s), s	70.0	1.1	5.4	7.9	14.3	1.3
Cycle Q Clear(g_c), s	70.0	1.1	5.4	7.9	14.3	1.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2714	1022	408	5169	397	177
V/C Ratio(X)	0.98	0.04	0.21	0.29	0.95	0.10
Avail Cap(c_a), veh/h	2715	1022	429	5169	397	177
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	8.7	42.4	3.3	60.0	54.2
Incr Delay (d2), s/veh	12.5	0.1	0.1	0.1	31.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	35.7	0.7	2.7	3.5	8.8	0.6
LnGrp Delay(d),s/veh	43.6	8.8	42.5	3.5	91.8	54.3
LnGrp LOS	D	A	D	A	F	D
Approach Vol, veh/h	2704			1573	393	
Approach Delay, s/veh	43.1			5.6	90.2	
Approach LOS	D			A	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	37.3	78.4				115.7		20.3
Change Period (Y+Rc), s	6.0	* 5.8				6.0		5.1
Max Green Setting (Gmax), s	32.9	* 73				109.7		15.2
Max Q Clear Time (g_c+I1), s	7.4	72.0				9.9		16.3
Green Ext Time (p_c), s	18.0	0.6				37.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.4
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	200			190	200	0
Storage Lanes	2			0	2	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	0.91	0.86	0.86	0.97	1.00
Ped Bike Factor	1.00		1.00			
Frt			0.994			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	5085	6366	0	3433	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3432	5085	6366	0	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			8			16
Link Speed (mph)		50	50		25	
Link Distance (ft)		828	1698		1636	
Travel Time (s)		11.3	23.2		44.6	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	208	2451	1287	51	68	165
Confl. Peds. (#/hr)	1			1		
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.97	0.97	0.93	0.93	0.70	0.70
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	214	2527	1384	55	97	236
Shared Lane Traffic (%)						
Lane Group Flow (vph)	214	2527	1439	0	97	236

Intersection Summary

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Volume (vph)	208	2451	1287	68	165
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	5	2	6	4	5
Permitted Phases					4
Detector Phase	5	2	6	4	5
Switch Phase					
Minimum Initial (s)	4.0	10.0	10.0	4.0	4.0
Minimum Split (s)	8.4	16.5	31.8	41.4	8.4
Total Split (s)	20.0	79.4	59.4	40.6	20.0
Total Split (%)	16.7%	66.2%	49.5%	33.8%	16.7%
Yellow Time (s)	3.4	5.5	4.8	3.4	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	6.5	5.8	4.4	4.4
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	C-Min	C-Min	None	None
Act Effct Green (s)	13.2	101.3	84.4	7.8	25.4
Actuated g/C Ratio	0.11	0.84	0.70	0.06	0.21
v/c Ratio	0.57	0.59	0.32	0.43	0.68
Control Delay	55.8	3.7	7.5	59.7	49.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	55.8	3.7	7.5	59.7	49.8
LOS	E	A	A	E	D
Approach Delay		7.7	7.5	52.7	
Approach LOS		A	A	D	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 110 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 59.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 29: Friar Roads & Santo Road





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	208	2451	1287	51	68	165
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	214	2527	1384	50	97	215
Adj No. of Lanes	2	3	4	0	2	1
Peak Hour Factor	0.97	0.97	0.93	0.93	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	273	3895	4154	150	493	352
Arrive On Green	0.08	0.77	0.65	0.65	0.14	0.14
Sat Flow, veh/h	3442	5253	6652	231	3442	1583
Grp Volume(v), veh/h	214	2527	1040	394	97	215
Grp Sat Flow(s),veh/h/ln	1721	1695	1602	1816	1721	1583
Q Serve(g_s), s	7.3	27.8	11.6	11.6	3.0	14.7
Cycle Q Clear(g_c), s	7.3	27.8	11.6	11.6	3.0	14.7
Prop In Lane	1.00			0.13	1.00	1.00
Lane Grp Cap(c), veh/h	273	3895	3124	1180	493	352
V/C Ratio(X)	0.78	0.65	0.33	0.33	0.20	0.61
Avail Cap(c_a), veh/h	447	3895	3124	1180	1038	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.73	0.73	1.00	1.00
Uniform Delay (d), s/veh	54.2	6.5	9.4	9.4	45.3	42.0
Incr Delay (d2), s/veh	1.9	0.8	0.2	0.6	0.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	12.9	5.2	6.0	1.4	12.7
LnGrp Delay(d),s/veh	56.1	7.4	9.6	9.9	45.4	42.6
LnGrp LOS	E	A	A	A	D	D
Approach Vol, veh/h		2741	1434		312	
Approach Delay, s/veh		11.2	9.7		43.5	
Approach LOS		B	A		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		98.4		21.6	13.9	84.5		
Change Period (Y+Rc), s		6.5		4.4	4.4	* 6.5		
Max Green Setting (Gmax), s		72.9		36.2	15.6	* 54		
Max Q Clear Time (g_c+I1), s		29.8		16.7	9.3	13.6		
Green Ext Time (p_c), s		41.0		0.5	0.2	38.1		

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	220		315	190		0	150		200	130		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		0.97	1.00	1.00		1.00	0.99		1.00	0.99	
Frt			0.850		0.994			0.909			0.891	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	5050	0	1770	1675	0	1770	1638	0
Flt Permitted	0.950			0.950			0.564			0.504		
Satd. Flow (perm)	1769	5085	1529	1769	5050	0	1046	1675	0	936	1638	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			183		6			81			136	
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		1698			655			1012			895	
Travel Time (s)		23.2			8.9			27.6			24.4	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	214	2190	196	42	970	42	244	76	115	34	40	105
Confl. Peds. (#/hr)	1		6	6		1	7		5	5		7
Confl. Bikes (#/hr)			1						3			
Peak Hour Factor	0.96	0.96	0.96	0.90	0.90	0.90	0.84	0.84	0.84	0.77	0.77	0.77
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	223	2281	204	47	1078	47	290	90	137	44	52	136
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	2281	204	47	1125	0	290	227	0	44	188	0

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	214	2190	196	42	970	244	76	34	40
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2		1	6		8		4
Permitted Phases			2			8		4	
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	28.7	28.7	8.4	28.9	39.9	39.9	39.9	39.9
Total Split (s)	23.5	45.3	45.3	17.5	39.3	42.0	42.0	42.2	42.2
Total Split (%)	22.4%	43.1%	43.1%	16.7%	37.4%	40.0%	40.0%	40.2%	40.2%
Yellow Time (s)	3.4	4.7	4.7	3.4	4.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.7	5.7	4.4	5.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None	None	None
Act Effct Green (s)	16.4	53.1	53.1	7.3	41.9	31.4	31.4	31.4	31.4
Actuated g/C Ratio	0.16	0.51	0.51	0.07	0.40	0.30	0.30	0.30	0.30
v/c Ratio	0.81	0.89	0.24	0.39	0.56	0.93	0.41	0.16	0.32
Control Delay	64.5	31.2	4.7	55.0	27.3	70.8	19.4	26.0	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	31.2	4.7	55.0	27.3	70.8	19.4	26.0	9.5
LOS	E	C	A	E	C	E	B	C	A
Approach Delay		32.0			28.4		48.2		12.6
Approach LOS		C			C		D		B

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 100 (95%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 31.9	Intersection LOS: C
Intersection Capacity Utilization 89.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 30: Riverdale Street & Friar Roads



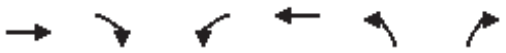
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	214	2190	196	42	970	42	244	76	115	34	40	105
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	0.99		0.98	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	223	2281	84	47	1078	41	290	90	77	44	52	19
Adj No. of Lanes	1	3	1	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.90	0.90	0.90	0.84	0.84	0.84	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	254	2736	830	60	2156	82	402	260	223	317	368	135
Arrive On Green	0.14	0.54	0.54	0.03	0.43	0.43	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1774	5085	1542	1774	5027	191	1316	918	786	1207	1300	475
Grp Volume(v), veh/h	223	2281	84	47	727	392	290	0	167	44	0	71
Grp Sat Flow(s),veh/h/ln	1774	1695	1542	1774	1695	1827	1316	0	1704	1207	0	1775
Q Serve(g_s), s	12.9	39.5	2.8	2.8	16.4	16.4	22.2	0.0	8.2	3.2	0.0	3.1
Cycle Q Clear(g_c), s	12.9	39.5	2.8	2.8	16.4	16.4	25.3	0.0	8.2	11.3	0.0	3.1
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.46	1.00		0.27
Lane Grp Cap(c), veh/h	254	2736	830	60	1454	784	402	0	483	317	0	503
V/C Ratio(X)	0.88	0.83	0.10	0.78	0.50	0.50	0.72	0.00	0.35	0.14	0.00	0.14
Avail Cap(c_a), veh/h	323	2736	830	221	1454	784	494	0	602	403	0	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	0.34	0.34	0.34	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.1	20.3	11.9	50.3	21.8	21.8	37.5	0.0	29.9	34.4	0.0	28.1
Incr Delay (d2), s/veh	13.8	2.5	0.2	2.8	0.4	0.8	2.7	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	19.0	1.2	1.4	7.8	8.5	8.4	0.0	3.9	1.1	0.0	1.5
LnGrp Delay(d),s/veh	57.9	22.8	12.0	53.2	22.2	22.6	40.3	0.0	30.1	34.5	0.0	28.1
LnGrp LOS	E	C	B	D	C	C	D		C	C		C
Approach Vol, veh/h		2588			1166			457			115	
Approach Delay, s/veh		25.5			23.6			36.5			30.6	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	62.4		34.6	19.4	50.9		34.6
Change Period (Y+Rc), s	4.4	* 5.9		4.9	4.4	5.9		4.9
Max Green Setting (Gmax), s	13.1	* 40		37.3	19.1	33.4		37.1
Max Q Clear Time (g_c+I1), s	4.8	41.5		13.3	14.9	18.4		27.3
Green Ext Time (p_c), s	0.0	0.0		1.5	0.1	14.4		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		90	190		140	0
Storage Lanes		1	1		1	2
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	1.00	0.97	1.00	1.00	0.88
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	5085	1583	3433	0	1770	2787
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	5085	1583	3433	0	1770	2787
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		36				5
Link Speed (mph)	50			50	45	
Link Distance (ft)	655			989	1463	
Travel Time (s)	8.9			13.5	22.2	

Intersection Summary	
Area Type:	Other



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	2073	196	198	0	314	473
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	2182	206	211	0	334	503
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2182	206	211	0	334	503

Intersection Summary

Lane Group	EBT	EBR	WBL	NBL	NBR
Lane Configurations					
Volume (vph)	2073	196	198	314	473
Turn Type	NA	Free	Prot	Prot	pm+ov
Protected Phases	2		1	3	1
Permitted Phases		Free			3
Detector Phase	2		1	3	1
Switch Phase					
Minimum Initial (s)	10.0		4.0	4.0	4.0
Minimum Split (s)	30.8		8.4	8.4	8.4
Total Split (s)	67.4		19.6	33.0	19.6
Total Split (%)	56.2%		16.3%	27.5%	16.3%
Yellow Time (s)	4.8		3.4	3.4	3.4
All-Red Time (s)	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.8		4.4	4.4	4.4
Lead/Lag	Lead		Lag		Lag
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	C-Min		None	None	None
Act Effct Green (s)	62.9	120.0	16.9	25.6	46.9
Actuated g/C Ratio	0.52	1.00	0.14	0.21	0.39
v/c Ratio	0.82	0.13	0.44	0.89	0.46
Control Delay	27.6	0.2	50.5	70.8	28.1
Queue Delay	0.8	0.0	0.0	0.0	0.0
Total Delay	28.4	0.2	50.5	70.8	28.1
LOS	C	A	D	E	C
Approach Delay	26.0			45.1	
Approach LOS	C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 27 (23%), Referenced to phase 2:EBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 32.1	Intersection LOS: C
Intersection Capacity Utilization 74.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 31: Mission Gorge Road & Friar Roads



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2073	196	198	0	314	473
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	2182	0	211	0	334	476
Adj No. of Lanes	3	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	0	2	2
Cap, veh/h	2507	781	612	0	368	1074
Arrive On Green	0.49	0.00	0.18	0.00	0.21	0.21
Sat Flow, veh/h	5253	1583	3442	211	1774	2787
Grp Volume(v), veh/h	2182	0	211	43.3	334	476
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	D	1774	1393
Q Serve(g_s), s	45.7	0.0	6.4		22.1	0.0
Cycle Q Clear(g_c), s	45.7	0.0	6.4		22.1	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2507	781	612		368	1074
V/C Ratio(X)	0.87	0.00	0.35		0.91	0.44
Avail Cap(c_a), veh/h	2610	813	612		423	1159
HCM Platoon Ratio	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	0.37	0.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	43.2		46.4	27.3
Incr Delay (d2), s/veh	1.7	0.0	0.1		19.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	21.6	0.0	3.1		12.8	5.8
LnGrp Delay(d),s/veh	28.7	0.0	43.3		66.3	27.5
LnGrp LOS	C		D		E	C
Approach Vol, veh/h	2182				810	
Approach Delay, s/veh	28.7				43.5	
Approach LOS	C				D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2						8
Phs Duration (G+Y+Rc), s	25.7	65.0						29.3
Change Period (Y+Rc), s	4.4	5.8						4.4
Max Green Setting (Gmax), s	15.2	61.6						28.6
Max Q Clear Time (g_c+I1), s	8.4	47.7						24.1
Green Ext Time (p_c), s	0.2	11.5						0.9

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		200	0		200	120		0	120		0
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	0			0			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor		0.99	0.98		1.00	0.98	0.99		0.96	0.99		0.96
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.956			0.956		0.950			0.950		
Satd. Flow (prot)	0	1781	1583	0	1781	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.617			0.535		0.950			0.950		
Satd. Flow (perm)	0	1138	1555	0	993	1544	1757	3539	1524	1759	3539	1519
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			168			122			75			90
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		385			388			1038			247	
Travel Time (s)		8.8			8.8			17.7			4.2	

Intersection Summary	
Area Type:	Other



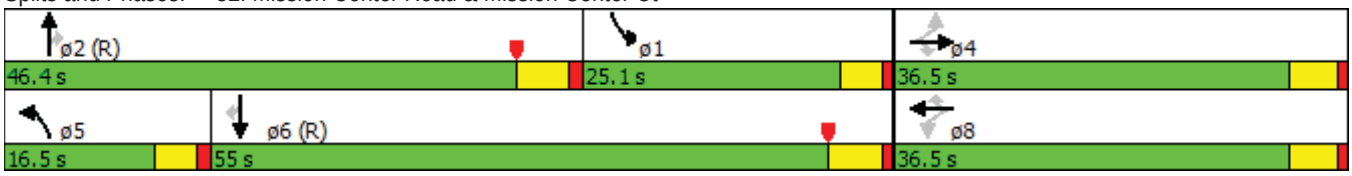
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	96	8	119	83	7	95	72	735	70	137	700	80
Confl. Peds. (#/hr)	11		4	4		11	9		6	6		9
Confl. Bikes (#/hr)			2			1						
Peak Hour Factor	0.71	0.71	0.71	0.78	0.78	0.78	0.93	0.93	0.93	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	135	11	168	106	9	122	77	790	75	154	787	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	168	0	115	122	77	790	75	154	787	90

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	8	119	83	7	95	72	735	70	137	700	80
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	33.9	33.9	33.9	33.9	33.9	33.9	8.4	23.3	23.3	8.4	28.3	28.3
Total Split (s)	36.5	36.5	36.5	36.5	36.5	36.5	16.5	46.4	46.4	25.1	55.0	55.0
Total Split (%)	33.8%	33.8%	33.8%	33.8%	33.8%	33.8%	15.3%	43.0%	43.0%	23.2%	50.9%	50.9%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.9	3.4	4.3	4.3	3.4	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.9	4.9		4.9	4.9	4.4	5.3	5.3	4.4	5.3	5.3
Lead/Lag							Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)		18.2	18.2		18.2	18.2	9.1	59.5	59.5	15.7	68.0	68.0
Actuated g/C Ratio		0.17	0.17		0.17	0.17	0.08	0.55	0.55	0.15	0.63	0.63
v/c Ratio		0.76	0.42		0.69	0.34	0.52	0.41	0.09	0.60	0.35	0.09
Control Delay		65.8	8.4		61.3	8.6	58.8	16.5	4.3	48.4	10.4	2.9
Queue Delay		0.0	0.0		0.0	0.1	0.0	0.7	0.0	1.0	0.4	0.0
Total Delay		65.8	8.4		61.3	8.6	58.8	17.2	4.3	49.4	10.8	2.9
LOS		E	A		E	A	E	B	A	D	B	A
Approach Delay		35.1			34.2			19.6			15.9	
Approach LOS		D			C			B			B	

Intersection Summary	
Cycle Length: 108	
Actuated Cycle Length: 108	
Offset: 102 (94%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 21.4	Intersection LOS: C
Intersection Capacity Utilization 55.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 32: Mission Center Road & Mission Center Ct



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	96	8	119	83	7	95	72	735	70	137	700	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	135	11	0	106	9	13	77	790	27	154	787	34
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.71	0.71	0.71	0.78	0.78	0.78	0.93	0.93	0.93	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	14	309	360	28	300	99	946	416	698	2173	965
Arrive On Green	0.20	0.20	0.00	0.20	0.20	0.20	0.06	0.27	0.27	0.79	1.00	1.00
Sat Flow, veh/h	908	74	1583	1517	144	1536	1774	3539	1557	1774	3539	1572
Grp Volume(v), veh/h	146	0	0	115	0	13	77	790	27	154	787	34
Grp Sat Flow(s),veh/h/ln	982	0	1583	1661	0	1536	1774	1770	1557	1774	1770	1572
Q Serve(g_s), s	10.9	0.0	0.0	0.0	0.0	0.7	4.6	22.7	1.4	2.4	0.0	0.0
Cycle Q Clear(g_c), s	17.1	0.0	0.0	6.2	0.0	0.7	4.6	22.7	1.4	2.4	0.0	0.0
Prop In Lane	0.92		1.00	0.92		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	256	0	309	389	0	300	99	946	416	698	2173	965
V/C Ratio(X)	0.57	0.00	0.00	0.30	0.00	0.04	0.78	0.83	0.06	0.22	0.36	0.04
Avail Cap(c_a), veh/h	391	0	463	526	0	450	199	1347	592	698	2173	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.83	0.83	0.83	0.86	0.86	0.86
Uniform Delay (d), s/veh	44.8	0.0	0.0	37.5	0.0	35.3	50.4	37.3	29.5	7.2	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.2	0.0	0.0	4.2	7.3	0.2	0.1	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.0	3.0	0.0	0.3	2.4	12.0	0.6	1.1	0.1	0.0
LnGrp Delay(d),s/veh	45.6	0.0	0.0	37.6	0.0	35.3	54.5	44.6	29.7	7.3	0.4	0.1
LnGrp LOS	D			D		D	D	D	C	A	A	A
Approach Vol, veh/h		146			128			894			975	
Approach Delay, s/veh		45.6			37.4			45.0			1.5	
Approach LOS		D			D			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	47.8	34.2		26.0	10.4	71.6		26.0
Change Period (Y+Rc), s	5.3	* 5.3		4.9	4.4	5.3		4.9
Max Green Setting (Gmax), s	20.7	* 41		31.6	12.1	49.7		31.6
Max Q Clear Time (g_c+I1), s	4.4	24.7		19.1	6.6	2.0		8.2
Green Ext Time (p_c), s	6.5	4.1		0.8	0.0	9.2		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	140		120	120		160	335		200	180		200
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	1.00	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor	0.99		0.98	0.99		0.97	1.00		0.98	1.00		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1583	3433	3539	1583	3433	5085	1583	3433	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3395	1863	1545	3398	3539	1539	3421	5085	1546	3426	5085	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			135			228			347			155
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		1364			1297			1368			785	
Travel Time (s)		23.3			22.1			20.7			11.9	

Intersection Summary	
Area Type:	Other



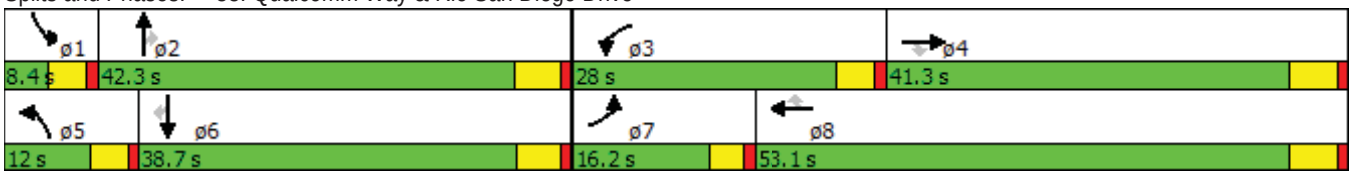
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	170	104	218	643	189	196	204	381	316	22	499	141
Confl. Peds. (#/hr)	15		12	12		15	4		2	2		4
Confl. Bikes (#/hr)			1			2						4
Peak Hour Factor	0.88	0.88	0.88	0.86	0.86	0.86	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	193	118	248	748	220	228	224	419	347	24	548	155
Shared Lane Traffic (%)												
Lane Group Flow (vph)	193	118	248	748	220	228	224	419	347	24	548	155

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	104	218	643	189	196	204	381	316	22	499	141
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	8.4	41.3	41.3	8.4	41.3	41.3	8.4	36.1	36.1	8.4	38.0	38.0
Total Split (s)	16.2	41.3	41.3	28.0	53.1	53.1	12.0	42.3	42.3	8.4	38.7	38.7
Total Split (%)	13.5%	34.4%	34.4%	23.3%	44.3%	44.3%	10.0%	35.3%	35.3%	7.0%	32.3%	32.3%
Yellow Time (s)	3.0	4.3	4.3	3.4	4.3	4.3	3.4	4.1	4.1	3.4	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.3	5.3	4.4	5.3	5.3	4.4	5.1	5.1	4.4	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	9.0	14.3	14.3	24.5	30.2	30.2	7.9	26.8	26.8	4.2	17.3	17.3
Actuated g/C Ratio	0.11	0.17	0.17	0.29	0.36	0.36	0.09	0.32	0.32	0.05	0.21	0.21
v/c Ratio	0.52	0.37	0.66	0.75	0.17	0.33	0.70	0.26	0.48	0.14	0.52	0.35
Control Delay	43.5	33.9	23.8	35.1	19.5	4.3	52.2	23.6	5.7	47.1	31.8	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	33.9	23.8	35.1	19.5	4.3	52.2	23.6	5.7	47.1	31.8	7.6
LOS	D	C	C	D	B	A	D	C	A	D	C	A
Approach Delay		32.7			26.4			23.8			27.2	
Approach LOS		C			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 83.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 65.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 33: Qualcomm Way & Rio San Diego Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	170	104	218	643	189	196	204	381	316	22	499	141
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	193	118	140	748	220	71	224	419	83	24	548	34
Adj No. of Lanes	2	1	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.88	0.88	0.88	0.86	0.86	0.86	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	348	285	839	1259	549	301	1602	496	71	1261	385
Arrive On Green	0.08	0.19	0.19	0.24	0.36	0.36	0.09	0.32	0.32	0.02	0.25	0.25
Sat Flow, veh/h	3442	1863	1525	3442	3539	1543	3442	5085	1573	3442	5085	1551
Grp Volume(v), veh/h	193	118	140	748	220	71	224	419	83	24	548	34
Grp Sat Flow(s),veh/h/ln	1721	1863	1525	1721	1770	1543	1721	1695	1573	1721	1695	1551
Q Serve(g_s), s	4.5	4.5	6.8	17.3	3.5	2.6	5.2	5.1	3.1	0.6	7.5	1.4
Cycle Q Clear(g_c), s	4.5	4.5	6.8	17.3	3.5	2.6	5.2	5.1	3.1	0.6	7.5	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	348	285	839	1259	549	301	1602	496	71	1261	385
V/C Ratio(X)	0.70	0.34	0.49	0.89	0.17	0.13	0.74	0.26	0.17	0.34	0.43	0.09
Avail Cap(c_a), veh/h	511	816	668	988	2058	897	318	2301	712	167	2085	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	29.0	29.9	30.0	18.2	17.9	36.6	21.0	20.4	39.7	26.1	23.8
Incr Delay (d2), s/veh	1.2	0.6	1.3	8.3	0.1	0.1	7.4	0.1	0.2	1.0	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	2.4	2.9	9.2	1.7	1.1	2.8	2.4	1.4	0.3	3.5	0.6
LnGrp Delay(d),s/veh	38.1	29.6	31.2	38.3	18.3	18.0	44.0	21.1	20.6	40.8	26.5	23.9
LnGrp LOS	D	C	C	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		451			1039			726			606	
Approach Delay, s/veh		33.7			32.7			28.1			26.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	31.0	24.5	20.7	11.6	25.5	10.6	34.6
Change Period (Y+Rc), s	4.4	5.1	4.4	5.3	4.4	* 5.1	4.0	5.3
Max Green Setting (Gmax), s	4.0	37.2	23.6	36.0	7.6	* 34	12.2	47.8
Max Q Clear Time (g_c+I1), s	2.6	7.1	19.3	8.8	7.2	9.5	6.5	5.5
Green Ext Time (p_c), s	0.0	11.4	0.8	2.7	0.0	10.3	0.2	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	30.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		200	110		200	0		200	0		200
Storage Lanes	1		1	1		1	0		1	0		1
Taper Length (ft)	25			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950				0.978			0.955	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	0	1822	1583	0	1779	1583
Flt Permitted	0.950			0.950				0.978			0.955	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	0	1822	1583	0	1779	1583
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1618			1168			369			844	
Travel Time (s)		27.6			19.9			10.1			23.0	

Intersection Summary	
Area Type:	Other
Description: EB & WB through were divided by 1/2 and reduce by 1 lane	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	127	190	1	16	183	42	4	5	1	53	3	47
Confl. Peds. (#/hr)	10		7	7		10	1					1
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.83	0.83	0.83	0.74	0.74	0.74
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	134	200	1	17	195	45	5	6	1	72	4	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	200	1	17	195	45	0	11	1	0	76	64

Intersection Summary
Description: EB & WB through were divided by 1/2 and reduce by 1 lane

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	127	190	1	0	16	183	42	0	4	5	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.94	0.94	0.94	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	134	200	1	0	17	195	45	0	5	6	1
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	3
HCM Control Delay	10.7	10.5	9.5
HCM LOS	B	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	44%	0%	100%	0%	0%	100%	0%	0%	95%	0%
Vol Thru, %	56%	0%	0%	100%	0%	0%	100%	0%	5%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	1	127	190	1	16	183	42	56	47
LT Vol	4	0	127	0	0	16	0	0	53	0
Through Vol	5	0	0	190	0	0	183	0	3	0
RT Vol	0	1	0	0	1	0	0	42	0	47
Lane Flow Rate	11	1	134	200	1	17	195	45	76	64
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.02	0.002	0.225	0.308	0.001	0.029	0.309	0.062	0.141	0.097
Departure Headway (Hd)	6.774	5.85	6.154	5.651	4.947	6.325	5.822	5.118	6.698	5.525
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	531	615	587	640	728	569	621	704	539	652
Service Time	4.482	3.557	3.854	3.351	2.647	4.025	3.522	2.818	4.398	3.225
HCM Lane V/C Ratio	0.021	0.002	0.228	0.313	0.001	0.03	0.314	0.064	0.141	0.098
HCM Control Delay	9.6	8.6	10.6	10.8	7.7	9.2	11.1	8.2	10.5	8.8
HCM Lane LOS	A	A	B	B	A	A	B	A	B	A
HCM 95th-tile Q	0.1	0	0.9	1.3	0	0.1	1.3	0.2	0.5	0.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	53	3	47
Peak Hour Factor	0.92	0.74	0.74	0.74
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	72	4	64
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	9.7
HCM LOS	A

Lane



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		0	0		0	160		200	300		200
Storage Lanes	1		1	0		0	1		1	2		1
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	0.99	1.00	0.98		0.99		0.96		0.97	1.00		0.94
Frt			0.850		0.951				0.850			0.850
Flt Protected	0.950	0.998			0.997		0.950			0.950		
Satd. Flow (prot)	1681	1766	1583	0	3325	0	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950	0.998			0.997		0.950			0.950		
Satd. Flow (perm)	1669	1766	1553	0	3324	0	1703	3539	1544	3419	3539	1484
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			162		64				105			105
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1168			1523			533			740	
Travel Time (s)		19.9			26.0			14.5			20.2	

Intersection Summary	
Area Type:	Other



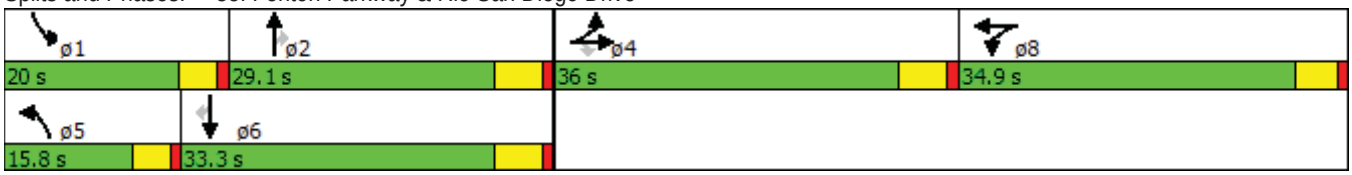
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	122	362	147	30	359	186	106	176	10	392	111	87
Confl. Peds. (#/hr)	14		6	6		14	19		2	2		19
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.90	0.90	0.90	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	134	398	162	32	386	200	118	196	11	400	113	89
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	121	411	162	0	618	0	118	196	11	400	113	89

Intersection Summary

Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	122	362	147	359	106	176	10	392	111	87
Turn Type	Split	NA	Perm	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	5	2		1	6	
Permitted Phases			4				2			6
Detector Phase	4	4	4	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	7.0	7.0	4.0	7.0	7.0
Minimum Split (s)	35.2	35.2	35.2	34.9	8.4	28.3	28.3	8.4	31.4	31.4
Total Split (s)	36.0	36.0	36.0	34.9	15.8	29.1	29.1	20.0	33.3	33.3
Total Split (%)	30.0%	30.0%	30.0%	29.1%	13.2%	24.3%	24.3%	16.7%	27.8%	27.8%
Yellow Time (s)	4.2	4.2	4.2	3.9	3.4	4.3	4.3	3.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.2	5.2	5.2	4.9	4.4	5.3	5.3	4.4	5.4	5.4
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	27.6	27.6	27.6	22.5	10.1	15.9	15.9	15.0	20.7	20.7
Actuated g/C Ratio	0.27	0.27	0.27	0.22	0.10	0.16	0.16	0.15	0.20	0.20
v/c Ratio	0.26	0.85	0.30	0.78	0.67	0.35	0.03	0.79	0.16	0.23
Control Delay	33.0	54.6	6.9	41.5	66.4	41.8	0.2	55.9	36.4	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	54.6	6.9	41.5	66.4	41.8	0.2	55.9	36.4	6.8
LOS	C	D	A	D	E	D	A	E	D	A
Approach Delay		39.7		41.5		49.3			45.0	
Approach LOS		D		D		D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 43.0	Intersection LOS: D
Intersection Capacity Utilization 76.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 35: Fenton Parkway & Rio San Diego Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	122	362	147	30	359	186	106	176	10	392	111	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	134	398	30	32	386	146	118	196	0	400	113	2
Adj No. of Lanes	1	1	1	0	2	0	1	2	1	2	2	1
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.90	0.90	0.90	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	457	480	402	43	527	210	148	548	245	481	747	319
Arrive On Green	0.26	0.26	0.26	0.22	0.22	0.22	0.08	0.15	0.00	0.14	0.21	0.21
Sat Flow, veh/h	1774	1863	1558	193	2382	951	1774	3539	1583	3442	3539	1512
Grp Volume(v), veh/h	134	398	30	307	0	257	118	196	0	400	113	2
Grp Sat Flow(s),veh/h/ln	1774	1863	1558	1853	0	1673	1774	1770	1583	1721	1770	1512
Q Serve(g_s), s	5.3	17.7	1.3	13.6	0.0	12.4	5.7	4.4	0.0	9.9	2.3	0.1
Cycle Q Clear(g_c), s	5.3	17.7	1.3	13.6	0.0	12.4	5.7	4.4	0.0	9.9	2.3	0.1
Prop In Lane	1.00		1.00	0.10		0.57	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	457	480	402	410	0	370	148	548	245	481	747	319
V/C Ratio(X)	0.29	0.83	0.07	0.75	0.00	0.69	0.80	0.36	0.00	0.83	0.15	0.01
Avail Cap(c_a), veh/h	622	653	546	633	0	571	230	958	429	611	1123	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	30.8	24.7	32.0	0.0	31.5	39.5	33.2	0.0	36.8	28.3	27.4
Incr Delay (d2), s/veh	0.2	5.5	0.0	1.0	0.0	0.9	4.7	1.8	0.0	6.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	9.8	0.6	7.0	0.0	5.8	3.0	2.3	0.0	5.1	1.2	0.0
LnGrp Delay(d),s/veh	26.4	36.2	24.7	33.0	0.0	32.4	44.2	35.0	0.0	43.0	28.7	27.4
LnGrp LOS	C	D	C	C		C	D	D		D	C	C
Approach Vol, veh/h		562			564			314			515	
Approach Delay, s/veh		33.3			32.7			38.5			39.8	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.7	19.0		27.9	11.7	23.9		24.3
Change Period (Y+Rc), s	4.4	* 5.4		5.2	4.4	5.4		4.9
Max Green Setting (Gmax), s	15.6	* 24		30.8	11.4	27.9		30.0
Max Q Clear Time (g_c+I1), s	11.9	6.4		19.7	7.7	4.3		15.6
Green Ext Time (p_c), s	0.3	4.8		1.5	0.0	5.7		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	35.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	0		200	70		200	100		0
Storage Lanes	1		0	0		1	1		1	1		1
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00				0.98			0.97	0.99		
Frt		0.999				0.850			0.850			0.850
Flt Protected	0.950	0.953			0.986		0.950			0.950		
Satd. Flow (prot)	1681	1685	0	0	1837	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.950	0.953			0.986		0.950			0.950		
Satd. Flow (perm)	1675	1678	0	0	1837	1558	1770	3539	1531	1751	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						255			162			251
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1523			649			624			578	
Travel Time (s)		26.0			11.1			17.0			15.8	

Intersection Summary	
Area Type:	Other



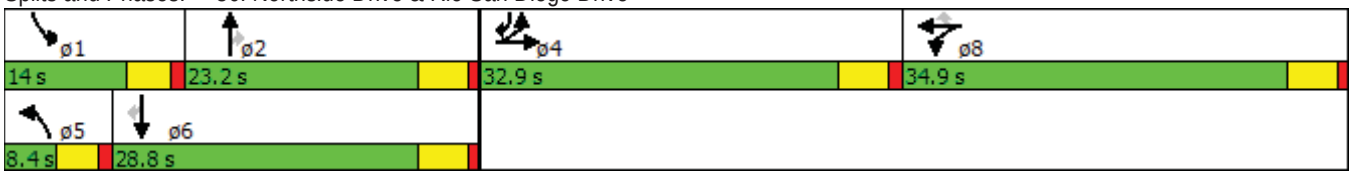
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	460	2	2	16	40	231	5	151	3	82	123	226
Confl. Peds. (#/hr)	4					4			4	4		
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.78	0.78	0.78	0.88	0.88	0.88	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	523	2	2	21	51	296	6	172	3	91	137	251
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	261	266	0	0	72	296	6	172	3	91	137	251

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	460	2	40	231	5	151	3	82	123	226
Turn Type	Split	NA	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	4	4	8		5	2		1	6	4
Permitted Phases				8			2			6
Detector Phase	4	4	8	8	5	2	2	1	6	4
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	7.0	7.0	4.0	7.0	4.0
Minimum Split (s)	32.9	32.9	34.9	34.9	8.4	22.9	22.9	8.4	26.9	32.9
Total Split (s)	32.9	32.9	34.9	34.9	8.4	23.2	23.2	14.0	28.8	32.9
Total Split (%)	31.3%	31.3%	33.2%	33.2%	8.0%	22.1%	22.1%	13.3%	27.4%	31.3%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.4	3.9	3.9	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	4.9	4.4	4.9	4.9	4.4	4.9	4.9
Lead/Lag					Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	Min	Min	None	Min	None
Act Effct Green (s)	15.3	15.3	10.0	10.0	4.5	10.0	10.0	7.9	18.7	39.5
Actuated g/C Ratio	0.25	0.25	0.16	0.16	0.07	0.16	0.16	0.13	0.30	0.64
v/c Ratio	0.62	0.63	0.24	0.64	0.05	0.30	0.01	0.40	0.24	0.23
Control Delay	30.5	30.8	26.9	12.8	39.2	29.8	0.0	37.2	22.7	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.5	30.8	26.9	12.8	39.2	29.8	0.0	37.2	22.7	1.9
LOS	C	C	C	B	D	C	A	D	C	A
Approach Delay		30.7	15.6			29.7			14.6	
Approach LOS		C	B			C			B	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 61.6	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 22.0	Intersection LOS: C
Intersection Capacity Utilization 47.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 36: Northside Drive & Rio San Diego Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	460	2	2	16	40	231	5	151	3	82	123	226
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	526	0	0	21	51	65	6	172	0	91	137	45
Adj No. of Lanes	2	1	0	0	1	1	1	2	1	1	1	1
Peak Hour Factor	0.88	0.88	0.88	0.78	0.78	0.78	0.88	0.88	0.88	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	770	404	0	49	118	142	11	608	272	115	429	706
Arrive On Green	0.22	0.00	0.00	0.09	0.09	0.09	0.01	0.17	0.00	0.06	0.23	0.23
Sat Flow, veh/h	3548	1863	0	535	1300	1563	1774	3539	1583	1774	1863	1575
Grp Volume(v), veh/h	526	0	0	72	0	65	6	172	0	91	137	45
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1836	0	1563	1774	1770	1583	1774	1863	1575
Q Serve(g_s), s	5.7	0.0	0.0	1.6	0.0	1.7	0.1	1.8	0.0	2.1	2.6	0.7
Cycle Q Clear(g_c), s	5.7	0.0	0.0	1.6	0.0	1.7	0.1	1.8	0.0	2.1	2.6	0.7
Prop In Lane	1.00		0.00	0.29		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	770	404	0	167	0	142	11	608	272	115	429	706
V/C Ratio(X)	0.68	0.00	0.00	0.43	0.00	0.46	0.53	0.28	0.00	0.79	0.32	0.06
Avail Cap(c_a), veh/h	2368	1243	0	1313	0	1118	169	1544	691	406	1061	1241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	0.0	18.0	0.0	18.1	20.8	15.1	0.0	19.3	13.4	6.6
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.7	0.0	0.8	13.2	0.1	0.0	4.5	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0	0.8	0.0	0.7	0.1	0.9	0.0	1.2	1.4	0.4
LnGrp Delay(d),s/veh	15.5	0.0	0.0	18.7	0.0	18.9	34.0	15.2	0.0	23.9	14.5	6.7
LnGrp LOS	B			B		B	C	B		C	B	A
Approach Vol, veh/h		526			137			178			273	
Approach Delay, s/veh		15.5			18.8			15.8			16.3	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.1	12.1		14.0	4.7	14.6		8.7
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	9.6	18.3		28.0	4.0	23.9		30.0
Max Q Clear Time (g_c+I1), s	4.1	3.8		7.7	2.1	4.6		3.7
Green Ext Time (p_c), s	0.0	2.3		0.9	0.0	2.6		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	80		0	200		0	70		0	120		120
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99		0.99		0.97	0.99		0.98	0.99		0.97
Frt		0.928				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3238	0	1770	3539	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1751	3238	0	1759	3539	1531	1750	1863	1550	1760	1863	1542
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		297				140			135			135
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2011			1623			1851			555	
Travel Time (s)		39.2			31.6			28.0			8.4	

Intersection Summary	
Area Type:	Other



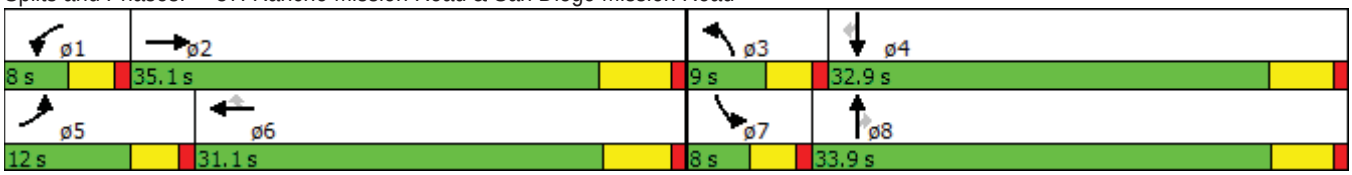
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	138	353	322	102	104	132	86	233	106	108	165	50
Confl. Peds. (#/hr)	7		20	20		7	15		9	9		15
Confl. Bikes (#/hr)			1			1			2			
Peak Hour Factor	0.85	0.85	0.85	0.94	0.94	0.94	0.86	0.86	0.86	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	162	415	379	109	111	140	100	271	123	123	188	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	162	794	0	109	111	140	100	271	123	123	188	57

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	138	353	102	104	132	86	233	106	108	165	50
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	4.0	7.0	4.0	7.0	7.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	34.5	8.0	29.3	29.3	8.0	33.9	33.9	8.0	32.1	32.1
Total Split (s)	12.0	35.1	8.0	31.1	31.1	9.0	33.9	33.9	8.0	32.9	32.9
Total Split (%)	14.1%	41.3%	9.4%	36.6%	36.6%	10.6%	39.9%	39.9%	9.4%	38.7%	38.7%
Yellow Time (s)	3.0	4.5	3.0	4.3	4.3	3.0	3.9	3.9	3.0	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.5	4.0	5.3	5.3	4.0	4.9	4.9	4.0	5.1	5.1
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	8.4	16.9	4.2	12.9	12.9	5.2	14.1	14.1	4.2	12.8	12.8
Actuated g/C Ratio	0.14	0.29	0.07	0.22	0.22	0.09	0.24	0.24	0.07	0.22	0.22
v/c Ratio	0.64	0.69	0.87	0.14	0.31	0.63	0.60	0.26	0.98	0.46	0.13
Control Delay	42.8	15.2	87.7	19.6	6.5	51.8	26.2	5.0	112.5	24.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	15.2	87.7	19.6	6.5	51.8	26.2	5.0	112.5	24.0	0.6
LOS	D	B	F	B	A	D	C	A	F	C	A
Approach Delay		19.9		35.1			26.1			50.0	
Approach LOS		B		D			C			D	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 58.6	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 28.9	Intersection LOS: C
Intersection Capacity Utilization 64.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 37: Rancho Mission Road & San Diego Mission Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	138	353	322	102	104	132	86	233	106	108	165	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.94	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	162	415	150	109	111	34	100	271	18	123	188	0
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.94	0.94	0.94	0.86	0.86	0.86	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	792	283	123	946	399	128	420	345	123	416	353
Arrive On Green	0.11	0.31	0.31	0.07	0.27	0.27	0.07	0.23	0.23	0.07	0.22	0.00
Sat Flow, veh/h	1774	2534	904	1774	3539	1491	1774	1863	1530	1774	1863	1583
Grp Volume(v), veh/h	162	288	277	109	111	34	100	271	18	123	188	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1669	1774	1770	1491	1774	1863	1530	1774	1863	1583
Q Serve(g_s), s	5.1	7.7	7.9	3.5	1.4	1.0	3.2	7.6	0.5	4.0	5.0	0.0
Cycle Q Clear(g_c), s	5.1	7.7	7.9	3.5	1.4	1.0	3.2	7.6	0.5	4.0	5.0	0.0
Prop In Lane	1.00		0.54	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	204	553	521	123	946	399	128	420	345	123	416	353
V/C Ratio(X)	0.80	0.52	0.53	0.88	0.12	0.09	0.78	0.64	0.05	1.00	0.45	0.00
Avail Cap(c_a), veh/h	246	910	858	123	1586	668	154	938	771	123	899	764
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.8	16.3	16.3	26.6	16.0	15.8	26.3	20.2	17.5	26.8	19.3	0.0
Incr Delay (d2), s/veh	11.3	1.2	1.3	46.5	0.1	0.1	15.6	0.6	0.0	80.5	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	3.9	3.8	3.3	0.7	0.4	2.1	4.0	0.2	4.7	2.6	0.0
LnGrp Delay(d),s/veh	36.2	17.4	17.6	73.1	16.1	16.0	41.9	20.8	17.5	107.3	19.6	0.0
LnGrp LOS	D	B	B	E	B	B	D	C	B	F	B	
Approach Vol, veh/h		727			254			389			311	
Approach Delay, s/veh		21.7			40.5			26.1			54.3	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	23.5	8.1	17.9	10.6	20.9	8.0	18.1
Change Period (Y+Rc), s	4.0	5.5	4.0	5.1	4.0	* 5.5	4.0	* 5.1
Max Green Setting (Gmax), s	4.0	29.6	5.0	27.8	8.0	* 26	4.0	* 29
Max Q Clear Time (g_c+I1), s	5.5	9.9	5.2	7.0	7.1	3.4	6.0	9.6
Green Ext Time (p_c), s	0.0	6.2	0.0	1.4	0.0	6.5	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	230		0	0		0	200		0	240		0
Storage Lanes	1		1	0		1	2		1	1		0
Taper Length (ft)	25			0			25			25		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor			0.97		0.99		0.99		0.96	0.99	1.00	
Frt			0.850			0.850			0.850		0.993	
Flt Protected	0.950	0.958			0.958		0.950			0.950		
Satd. Flow (prot)	1681	1695	1583	0	1785	1583	3433	3539	1583	1770	5042	0
Flt Permitted	0.950	0.958			0.958		0.950			0.950		
Satd. Flow (perm)	1681	1695	1541	0	1764	1583	3412	3539	1522	1759	5042	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			281			112			98		7	
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		471			685			996			1038	
Travel Time (s)		12.8			18.7			17.0			17.7	

Intersection Summary	
Area Type:	Other



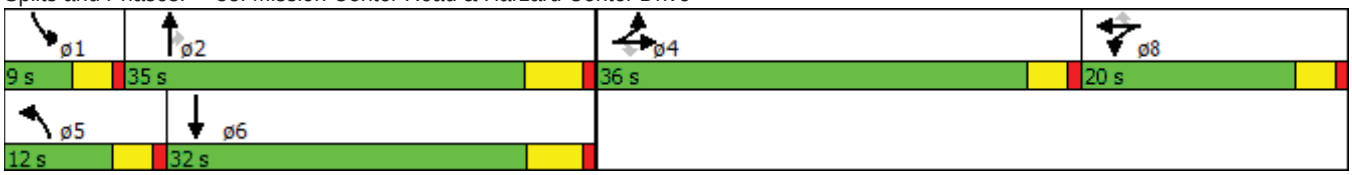
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	90	6	519	68	10	7	301	680	20	41	955	44
Confl. Peds. (#/hr)			15	15			16		7	7		16
Confl. Bikes (#/hr)			1						2			3
Peak Hour Factor	0.85	0.85	0.85	0.69	0.69	0.69	0.94	0.94	0.94	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	106	7	611	99	14	10	320	723	21	48	1110	51
Shared Lane Traffic (%)	47%											
Lane Group Flow (vph)	56	57	611	0	113	10	320	723	21	48	1161	0

Intersection Summary

Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	90	6	519	10	7	301	680	20	41	955
Turn Type	Split	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		8		5	2		1	6
Permitted Phases			4		8			2		
Detector Phase	4	4	4	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	10.0	10.0	4.0	10.0
Minimum Split (s)	36.0	36.0	36.0	20.0	20.0	8.0	26.3	26.3	8.0	31.2
Total Split (s)	36.0	36.0	36.0	20.0	20.0	12.0	35.0	35.0	9.0	32.0
Total Split (%)	36.0%	36.0%	36.0%	20.0%	20.0%	12.0%	35.0%	35.0%	9.0%	32.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.3	4.3	3.0	4.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.3	5.3	4.0	5.2
Lead/Lag						Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	27.6	27.6	27.6	10.1	10.1	8.3	30.8	30.8	5.1	25.0
Actuated g/C Ratio	0.32	0.32	0.32	0.12	0.12	0.10	0.36	0.36	0.06	0.29
v/c Ratio	0.10	0.10	0.89	0.54	0.04	0.96	0.57	0.03	0.46	0.79
Control Delay	23.1	23.1	33.1	48.8	0.3	85.0	28.0	0.1	59.5	34.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.1	23.1	33.1	48.8	0.3	85.0	28.0	0.1	59.5	34.2
LOS	C	C	C	D	A	F	C	A	E	C
Approach Delay		31.5		44.9			44.6			35.2
Approach LOS		C		D			D			D

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 86.1	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 38.0	Intersection LOS: D
Intersection Capacity Utilization 69.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 38: Mission Center Road & Harzard Center Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	6	519	68	10	7	301	680	20	41	955	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	111	0	387	99	14	0	320	723	0	48	1110	45
Adj No. of Lanes	2	0	1	0	1	1	2	2	1	1	3	0
Peak Hour Factor	0.85	0.85	0.85	0.69	0.69	0.69	0.94	0.94	0.94	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1065	0	462	129	18	130	335	1319	590	60	1548	63
Arrive On Green	0.30	0.00	0.30	0.08	0.08	0.00	0.10	0.37	0.00	0.03	0.31	0.31
Sat Flow, veh/h	3548	0	1540	1563	221	1583	3442	3539	1583	1774	5007	203
Grp Volume(v), veh/h	111	0	387	113	0	0	320	723	0	48	751	404
Grp Sat Flow(s),veh/h/ln	1774	0	1540	1785	0	1583	1721	1770	1583	1774	1695	1820
Q Serve(g_s), s	1.9	0.0	19.3	5.1	0.0	0.0	7.6	13.2	0.0	2.2	16.1	16.2
Cycle Q Clear(g_c), s	1.9	0.0	19.3	5.1	0.0	0.0	7.6	13.2	0.0	2.2	16.1	16.2
Prop In Lane	1.00		1.00	0.88		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	1065	0	462	147	0	130	335	1319	590	60	1048	563
V/C Ratio(X)	0.10	0.00	0.84	0.77	0.00	0.00	0.95	0.55	0.00	0.79	0.72	0.72
Avail Cap(c_a), veh/h	1383	0	600	348	0	309	335	1319	590	108	1107	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	26.8	36.9	0.0	0.0	36.9	20.3	0.0	39.4	25.2	25.2
Incr Delay (d2), s/veh	0.1	0.0	8.7	3.2	0.0	0.0	36.7	0.8	0.0	8.4	2.6	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	9.2	2.6	0.0	0.0	5.3	6.6	0.0	1.2	7.9	8.8
LnGrp Delay(d),s/veh	20.8	0.0	35.6	40.1	0.0	0.0	73.6	21.1	0.0	47.8	27.8	30.0
LnGrp LOS	C		D	D			E	C		D	C	C
Approach Vol, veh/h		498			113			1043			1203	
Approach Delay, s/veh		32.3			40.1			37.2			29.3	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.8	35.9		28.6	12.0	30.7		10.8
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	* 5.3		4.0
Max Green Setting (Gmax), s	5.0	29.7		32.0	8.0	* 27		16.0
Max Q Clear Time (g_c+I1), s	4.2	15.2		21.3	9.6	18.2		7.1
Green Ext Time (p_c), s	0.0	12.4		2.0	0.0	7.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	130			220	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.96
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1767	1863	1863	1532	1770	1528
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				366		66
Link Speed (mph)		30	30		30	
Link Distance (ft)		834	642		429	
Travel Time (s)		19.0	14.6		9.8	

Intersection Summary	
Area Type:	Other



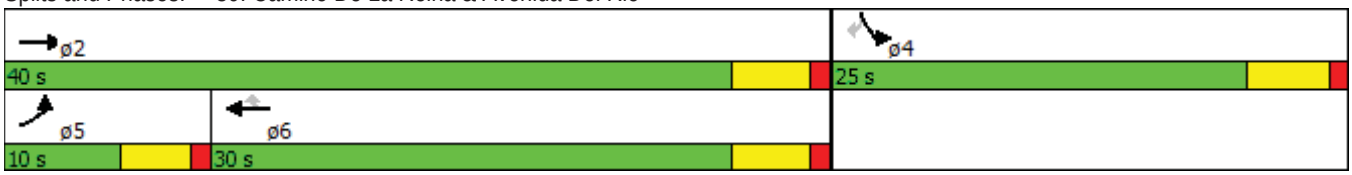
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	72	426	284	326	362	63
Confl. Peds. (#/hr)	2			2		7
Confl. Bikes (#/hr)				10		1
Peak Hour Factor	0.91	0.91	0.89	0.89	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	79	468	319	366	381	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	79	468	319	366	381	66

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	72	426	284	326	362	63
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	4.0	7.0	7.0	7.0	4.0	4.0
Minimum Split (s)	8.4	20.9	28.9	28.9	22.9	22.9
Total Split (s)	10.0	40.0	30.0	30.0	25.0	25.0
Total Split (%)	15.4%	61.5%	46.2%	46.2%	38.5%	38.5%
Yellow Time (s)	3.4	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	5.9	19.9	15.0	15.0	14.4	14.4
Actuated g/C Ratio	0.13	0.44	0.33	0.33	0.32	0.32
v/c Ratio	0.34	0.57	0.52	0.49	0.68	0.12
Control Delay	29.0	12.4	17.5	4.4	22.6	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	12.4	17.5	4.4	22.6	5.4
LOS	C	B	B	A	C	A
Approach Delay		14.8	10.5		20.0	
Approach LOS		B	B		C	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 45.3	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 51.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 39: Camino De La Reina & Avenida Del Rio





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	72	426	284	326	362	63
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	79	468	319	113	381	19
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.89	0.89	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	107	878	546	447	469	418
Arrive On Green	0.06	0.47	0.29	0.29	0.26	0.26
Sat Flow, veh/h	1774	1863	1863	1526	1774	1583
Grp Volume(v), veh/h	79	468	319	113	381	19
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1526	1774	1583
Q Serve(g_s), s	1.6	6.6	5.4	2.1	7.5	0.3
Cycle Q Clear(g_c), s	1.6	6.6	5.4	2.1	7.5	0.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	107	878	546	447	469	418
V/C Ratio(X)	0.74	0.53	0.58	0.25	0.81	0.05
Avail Cap(c_a), veh/h	268	1763	1260	1033	961	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	6.9	11.2	10.0	12.8	10.2
Incr Delay (d2), s/veh	3.8	0.2	0.4	0.1	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.3	2.8	0.9	3.8	0.3
LnGrp Delay(d),s/veh	20.9	7.1	11.6	10.1	14.1	10.2
LnGrp LOS	C	A	B	B	B	B
Approach Vol, veh/h		547	432		400	
Approach Delay, s/veh		9.1	11.2		13.9	
Approach LOS		A	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		22.4		14.7	6.6	15.8		
Change Period (Y+Rc), s		4.9		4.9	4.4	4.9		
Max Green Setting (Gmax), s		35.1		20.1	5.6	25.1		
Max Q Clear Time (g_c+I1), s		8.6		9.5	3.6	7.4		
Green Ext Time (p_c), s		3.6		0.5	0.0	3.3		

Intersection Summary	
HCM 2010 Ctrl Delay	11.2
HCM 2010 LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	290		0	140		0	160		0	320		0
Storage Lanes	2		0	2		0	2		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	0.95	0.97	0.91	0.91	0.97	0.91	1.00
Ped Bike Factor	1.00	0.99		1.00	0.99		1.00	0.99		0.99		0.97
Frt		0.950			0.927			0.964				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3338	0	3433	3252	0	3433	4860	0	3433	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3428	3338	0	3421	3252	0	3420	4860	0	3400	5085	1529
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		85			250			75				271
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		2210			1926			473			996	
Travel Time (s)		50.2			43.8			8.1			17.0	

Intersection Summary	
Area Type:	Other



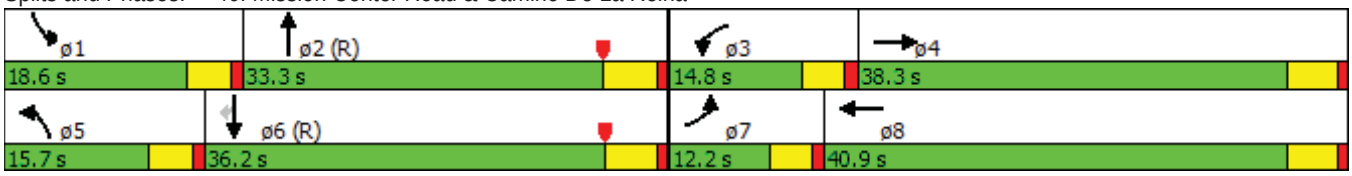
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	223	446	219	289	284	271	194	454	145	427	839	255
Confl. Peds. (#/hr)	4		10	10		4	7		21	21		7
Confl. Bikes (#/hr)			1			4			1			1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	235	469	231	307	302	288	206	483	154	454	893	271
Shared Lane Traffic (%)												
Lane Group Flow (vph)	235	700	0	307	590	0	206	637	0	454	893	271

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	223	446	289	284	194	454	427	839	255
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	7	4	3	8	5	2	1	6	
Permitted Phases									6
Detector Phase	7	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	4.0	7.0	4.0	7.0	4.0	10.0	4.0	10.0	10.0
Minimum Split (s)	8.4	37.9	8.4	40.9	8.4	33.2	8.4	33.0	33.0
Total Split (s)	12.2	38.3	14.8	40.9	15.7	33.3	18.6	36.2	36.2
Total Split (%)	11.6%	36.5%	14.1%	39.0%	15.0%	31.7%	17.7%	34.5%	34.5%
Yellow Time (s)	3.4	3.9	3.4	3.9	3.4	4.2	3.4	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.4	4.9	4.4	5.2	4.4	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	9.9	25.5	12.0	27.6	10.2	30.5	18.1	38.5	38.5
Actuated g/C Ratio	0.09	0.24	0.11	0.26	0.10	0.29	0.17	0.37	0.37
v/c Ratio	0.72	0.80	0.78	0.57	0.62	0.44	0.77	0.48	0.37
Control Delay	60.7	39.6	60.5	20.2	53.7	28.3	51.7	27.7	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.7	39.6	60.5	20.2	53.7	28.3	51.7	27.7	5.0
LOS	E	D	E	C	D	C	D	C	A
Approach Delay		44.9		34.0		34.5		30.6	
Approach LOS		D		C		C		C	

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 35.2	Intersection LOS: D
Intersection Capacity Utilization 81.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 40: Mission Center Road & Camino De La Reina



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	223	446	219	289	284	271	194	454	145	427	839	255
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	235	469	168	307	302	112	206	483	95	454	893	69
Adj No. of Lanes	2	2	0	2	2	0	2	3	0	2	3	1
Peak Hour Factor	0.95	0.95	0.95	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	665	236	341	723	262	270	1383	265	465	1938	574
Arrive On Green	0.07	0.26	0.26	0.10	0.29	0.29	0.08	0.32	0.32	0.14	0.38	0.38
Sat Flow, veh/h	3442	2543	903	3442	2528	915	3442	4262	815	3442	5085	1507
Grp Volume(v), veh/h	235	325	312	307	209	205	206	381	197	454	893	69
Grp Sat Flow(s),veh/h/ln	1721	1770	1677	1721	1770	1673	1721	1695	1687	1721	1695	1507
Q Serve(g_s), s	7.1	17.5	17.7	9.3	10.1	10.5	6.2	9.0	9.4	13.8	13.8	3.1
Cycle Q Clear(g_c), s	7.1	17.5	17.7	9.3	10.1	10.5	6.2	9.0	9.4	13.8	13.8	3.1
Prop In Lane	1.00		0.54	1.00		0.55	1.00		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	256	462	438	341	506	479	270	1100	547	465	1938	574
V/C Ratio(X)	0.92	0.70	0.71	0.90	0.41	0.43	0.76	0.35	0.36	0.98	0.46	0.12
Avail Cap(c_a), veh/h	256	563	533	341	607	574	370	1100	547	465	1938	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	0.46	0.46	0.46
Uniform Delay (d), s/veh	48.3	35.1	35.2	46.8	30.3	30.5	47.4	27.0	27.1	45.2	24.4	21.1
Incr Delay (d2), s/veh	34.8	3.1	3.5	25.1	1.1	1.2	3.4	0.8	1.6	22.2	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	8.9	8.7	5.6	5.0	5.0	3.0	4.3	4.6	8.0	6.5	1.3
LnGrp Delay(d),s/veh	83.1	38.2	38.7	71.8	31.4	31.7	50.8	27.8	28.8	67.4	24.8	21.3
LnGrp LOS	F	D	D	E	C	C	D	C	C	E	C	C
Approach Vol, veh/h		872			721			784			1416	
Approach Delay, s/veh		50.5			48.7			34.1			38.3	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	39.3	14.8	32.3	12.6	45.2	12.2	34.9
Change Period (Y+Rc), s	4.4	5.2	4.4	4.9	4.4	* 5.2	4.4	4.9
Max Green Setting (Gmax), s	14.2	28.1	10.4	33.4	11.3	* 31	7.8	36.0
Max Q Clear Time (g_c+I1), s	15.8	11.4	11.3	19.7	8.2	15.8	9.1	12.5
Green Ext Time (p_c), s	0.0	12.5	0.0	6.8	0.1	11.6	0.0	9.2

Intersection Summary	
HCM 2010 Ctrl Delay	42.2
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	260		0	160		0	160		0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	0.99		0.97	0.99		0.97	0.99		0.98	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.584			0.666		
Satd. Flow (perm)	1756	3539	1535	1759	3539	1530	1081	3539	1551	1232	3539	1549
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			228			81			83			224
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1307			1328			752			1348	
Travel Time (s)		29.7			30.2			20.5			36.8	

Intersection Summary	
Area Type:	Other



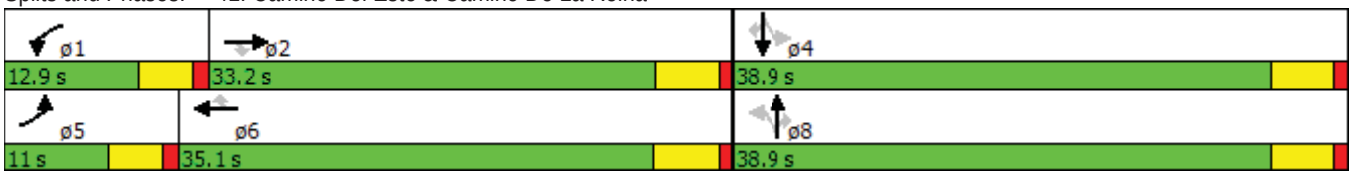
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	136	587	198	107	358	29	106	109	50	76	237	195
Confl. Peds. (#/hr)	9		17	17		9	13		11	11		13
Confl. Bikes (#/hr)			5			1						
Peak Hour Factor	0.87	0.87	0.87	0.94	0.94	0.94	0.80	0.80	0.80	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	156	675	228	114	381	31	132	136	62	87	272	224
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	675	228	114	381	31	132	136	62	87	272	224

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	136	587	198	107	358	29	106	109	50	76	237	195
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	33.0	33.0	8.4	35.1	35.1	36.9	36.9	36.9	38.9	38.9	38.9
Total Split (s)	11.0	33.2	33.2	12.9	35.1	35.1	38.9	38.9	38.9	38.9	38.9	38.9
Total Split (%)	12.9%	39.1%	39.1%	15.2%	41.3%	41.3%	45.8%	45.8%	45.8%	45.8%	45.8%	45.8%
Yellow Time (s)	3.4	4.0	4.0	3.4	4.1	4.1	3.9	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.0	5.0	4.4	5.1	5.1	4.9	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effct Green (s)	7.2	19.4	19.4	7.8	17.1	17.1	13.5	13.5	13.5	13.5	13.5	13.5
Actuated g/C Ratio	0.13	0.36	0.36	0.15	0.32	0.32	0.25	0.25	0.25	0.25	0.25	0.25
v/c Ratio	0.66	0.52	0.32	0.44	0.34	0.06	0.48	0.15	0.14	0.28	0.30	0.40
Control Delay	44.3	17.8	4.5	32.7	15.5	0.2	23.7	15.9	3.6	18.7	16.9	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	17.8	4.5	32.7	15.5	0.2	23.7	15.9	3.6	18.7	16.9	5.1
LOS	D	B	A	C	B	A	C	B	A	B	B	A
Approach Delay		18.9			18.3			16.7			12.6	
Approach LOS		B			B			B			B	

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 53.4	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 41: Camino Del Este & Camino De La Reina



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	136	587	198	107	358	29	106	109	50	76	237	195
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.99		1.00	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	156	675	56	114	381	0	132	136	0	87	272	69
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.94	0.94	0.94	0.80	0.80	0.80	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	1214	527	146	1114	498	396	1120	501	486	1120	495
Arrive On Green	0.11	0.34	0.34	0.08	0.31	0.00	0.32	0.32	0.00	0.32	0.32	0.32
Sat Flow, veh/h	1774	3539	1536	1774	3539	1583	1028	3539	1583	1236	3539	1564
Grp Volume(v), veh/h	156	675	56	114	381	0	132	136	0	87	272	69
Grp Sat Flow(s),veh/h/ln	1774	1770	1536	1774	1770	1583	1028	1770	1583	1236	1770	1564
Q Serve(g_s), s	4.8	8.6	1.4	3.5	4.6	0.0	6.1	1.5	0.0	3.0	3.2	1.8
Cycle Q Clear(g_c), s	4.8	8.6	1.4	3.5	4.6	0.0	9.3	1.5	0.0	4.5	3.2	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	196	1214	527	146	1114	498	396	1120	501	486	1120	495
V/C Ratio(X)	0.79	0.56	0.11	0.78	0.34	0.00	0.33	0.12	0.00	0.18	0.24	0.14
Avail Cap(c_a), veh/h	210	1789	777	270	1904	852	697	2157	965	849	2157	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	14.9	12.5	25.1	14.7	0.0	17.5	13.6	0.0	15.2	14.1	13.6
Incr Delay (d2), s/veh	15.9	0.4	0.1	3.4	0.2	0.0	0.3	0.0	0.0	0.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	4.3	0.6	1.8	2.3	0.0	1.8	0.7	0.0	1.0	1.6	0.8
LnGrp Delay(d),s/veh	40.1	15.3	12.6	28.5	14.9	0.0	17.9	13.6	0.0	15.3	14.2	13.7
LnGrp LOS	D	B	B	C	B		B	B		B	B	B
Approach Vol, veh/h		887			495			268			428	
Approach Delay, s/veh		19.5			18.0			15.7			14.3	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	24.2		22.5	10.6	22.7		22.5
Change Period (Y+Rc), s	4.4	* 5.1		4.9	4.4	5.1		4.9
Max Green Setting (Gmax), s	8.5	* 28		34.0	6.6	30.0		34.0
Max Q Clear Time (g_c+I1), s	5.5	10.6		6.5	6.8	6.6		11.3
Green Ext Time (p_c), s	0.0	7.2		3.2	0.0	8.2		3.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	250		0	250		200	0		200	250		200
Storage Lanes	1		0	2		1	2		1	2		1
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Ped Bike Factor	0.99					0.98			0.99	1.00		
Frt		0.930				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3291	0	3433	3539	1583	3433	5085	1583	3433	5085	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1758	3291	0	3433	3539	1550	3433	5085	1561	3430	5085	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		192				115			236			175
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		1328			1080			469			1368	
Travel Time (s)		30.2			24.5			7.1			20.7	

Intersection Summary	
Area Type:	Other



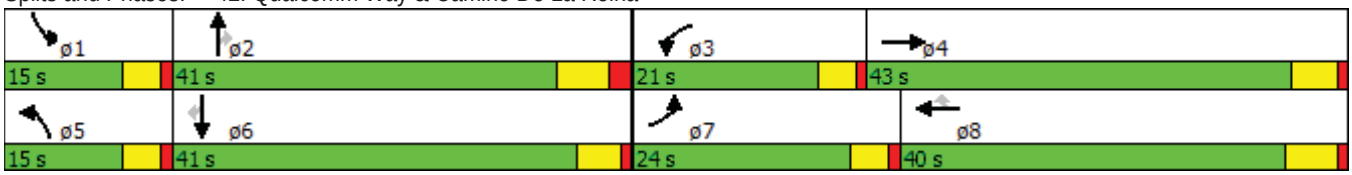
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	138	377	330	280	175	97	174	570	210	182	966	163
Confl. Peds. (#/hr)	8					8			1	1		
Confl. Bikes (#/hr)						1			1			
Peak Hour Factor	0.76	0.76	0.76	0.84	0.84	0.84	0.89	0.89	0.89	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	182	496	434	333	208	115	196	640	236	196	1039	175
Shared Lane Traffic (%)												
Lane Group Flow (vph)	182	930	0	333	208	115	196	640	236	196	1039	175

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	138	377	280	175	97	174	570	210	182	966	163
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	7.0	4.0	7.0	7.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	8.4	23.1	8.4	39.7	39.7	8.4	37.7	37.7	8.4	36.9	36.9
Total Split (s)	24.0	43.0	21.0	40.0	40.0	15.0	41.0	41.0	15.0	41.0	41.0
Total Split (%)	20.0%	35.8%	17.5%	33.3%	33.3%	12.5%	34.2%	34.2%	12.5%	34.2%	34.2%
Yellow Time (s)	3.4	4.1	3.4	4.7	4.7	3.4	4.7	4.7	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.1	4.4	5.7	5.7	4.4	6.7	6.7	4.4	4.9	4.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	14.4	28.5	13.7	27.2	27.2	9.5	26.1	26.1	9.5	28.0	28.0
Actuated g/C Ratio	0.15	0.29	0.14	0.27	0.27	0.10	0.26	0.26	0.10	0.28	0.28
v/c Ratio	0.71	0.86	0.70	0.21	0.23	0.60	0.48	0.40	0.60	0.72	0.31
Control Delay	58.3	35.8	51.6	29.8	7.2	54.5	33.0	6.5	54.5	36.3	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	35.8	51.6	29.8	7.2	54.5	33.0	6.5	54.5	36.3	6.2
LOS	E	D	D	C	A	D	C	A	D	D	A
Approach Delay		39.5		36.9			31.1			35.1	
Approach LOS		D		D			C			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.1	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 35.5	Intersection LOS: D
Intersection Capacity Utilization 68.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 42: Qualcomm Way & Camino De La Reina



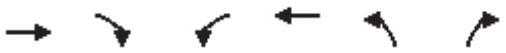
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	138	377	330	280	175	97	174	570	210	182	966	163
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	182	496	322	333	208	8	196	640	62	196	1039	46
Adj No. of Lanes	1	2	0	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.76	0.76	0.76	0.84	0.84	0.84	0.89	0.89	0.89	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	594	385	402	1010	442	260	1600	491	260	1600	498
Arrive On Green	0.12	0.29	0.29	0.12	0.29	0.29	0.08	0.31	0.31	0.08	0.31	0.31
Sat Flow, veh/h	1774	2055	1330	3442	3539	1550	3442	5085	1562	3442	5085	1582
Grp Volume(v), veh/h	182	427	391	333	208	8	196	640	62	196	1039	46
Grp Sat Flow(s),veh/h/ln	1774	1770	1615	1721	1770	1550	1721	1695	1562	1721	1695	1582
Q Serve(g_s), s	10.5	23.5	23.6	9.8	4.6	0.4	5.8	10.3	2.9	5.8	18.3	2.1
Cycle Q Clear(g_c), s	10.5	23.5	23.6	9.8	4.6	0.4	5.8	10.3	2.9	5.8	18.3	2.1
Prop In Lane	1.00		0.82	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	214	512	467	402	1010	442	260	1600	491	260	1600	498
V/C Ratio(X)	0.85	0.83	0.84	0.83	0.21	0.02	0.75	0.40	0.13	0.75	0.65	0.09
Avail Cap(c_a), veh/h	334	645	588	549	1167	511	351	1676	515	351	1764	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	34.7	34.7	44.9	28.2	26.7	47.1	28.0	25.4	47.1	30.7	25.2
Incr Delay (d2), s/veh	7.1	7.0	7.8	5.6	0.0	0.0	3.8	0.1	0.1	3.8	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	12.5	11.6	5.0	2.3	0.2	2.9	4.8	1.3	2.9	8.8	1.0
LnGrp Delay(d),s/veh	51.9	41.7	42.5	50.5	28.3	26.7	51.0	28.1	25.5	51.0	32.0	25.4
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1000			549			898			1281	
Approach Delay, s/veh		43.9			41.7			32.9			34.7	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	39.4	16.6	35.8	12.3	39.4	16.9	35.4
Change Period (Y+Rc), s	4.4	6.7	4.4	* 5.7	4.4	* 6.7	4.4	5.7
Max Green Setting (Gmax), s	10.6	34.3	16.6	* 38	10.6	* 36	19.6	34.3
Max Q Clear Time (g_c+I1), s	7.8	12.3	11.8	25.6	7.8	20.3	12.5	6.6
Green Ext Time (p_c), s	0.1	16.3	0.3	4.5	0.1	12.4	0.1	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	70		80	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98	1.00		1.00	
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1863	1545	1768	1863	1768	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		150				121
Link Speed (mph)	35			35	25	
Link Distance (ft)	1295			433	1067	
Travel Time (s)	25.2			8.4	29.1	

Intersection Summary	
Area Type:	Other



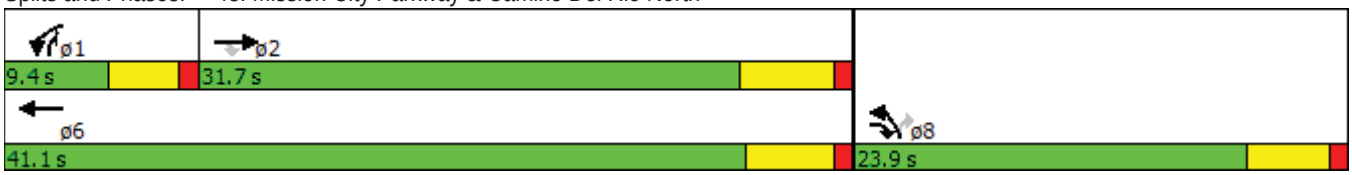
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	497	509	102	237	94	103
Confl. Peds. (#/hr)		2	2		1	
Confl. Bikes (#/hr)		2				
Peak Hour Factor	0.83	0.83	0.88	0.88	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	599	613	116	269	111	121
Shared Lane Traffic (%)						
Lane Group Flow (vph)	599	613	116	269	111	121

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	497	509	102	237	94	103
Turn Type	NA	pm+ov	Prot	NA	Prot	pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases		2				8
Detector Phase	2	8	1	6	8	1
Switch Phase						
Minimum Initial (s)	7.0	4.0	4.0	7.0	4.0	4.0
Minimum Split (s)	31.6	23.9	8.4	21.3	23.9	8.4
Total Split (s)	31.7	23.9	9.4	41.1	23.9	9.4
Total Split (%)	48.8%	36.8%	14.5%	63.2%	36.8%	14.5%
Yellow Time (s)	4.6	3.9	3.4	4.3	3.9	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	4.9	4.4	5.3	4.9	4.4
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	Min	None	None	Min	None	None
Act Effct Green (s)	20.4	30.2	5.2	30.5	9.0	19.2
Actuated g/C Ratio	0.41	0.60	0.10	0.61	0.18	0.38
v/c Ratio	0.79	0.61	0.64	0.24	0.35	0.18
Control Delay	22.9	5.4	45.3	5.9	21.9	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	5.4	45.3	5.9	21.9	3.5
LOS	C	A	D	A	C	A
Approach Delay	14.1			17.7	12.3	
Approach LOS	B			B	B	

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 50	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 14.6	Intersection LOS: B
Intersection Capacity Utilization 49.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 43: Mission City Parkway & Camino Del Rio North



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	497	509	102	237	94	103
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	599	486	116	269	111	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.83	0.83	0.88	0.88	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	874	853	147	1230	144	259
Arrive On Green	0.47	0.47	0.08	0.66	0.08	0.00
Sat Flow, veh/h	1863	1546	1774	1863	1774	1583
Grp Volume(v), veh/h	599	486	116	269	111	0
Grp Sat Flow(s),veh/h/ln	1863	1546	1774	1863	1774	1583
Q Serve(g_s), s	10.2	8.4	2.6	2.3	2.5	0.0
Cycle Q Clear(g_c), s	10.2	8.4	2.6	2.3	2.5	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	874	853	147	1230	144	259
V/C Ratio(X)	0.69	0.57	0.79	0.22	0.77	0.00
Avail Cap(c_a), veh/h	1198	1122	219	1643	830	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.4	6.0	18.3	2.7	18.3	0.0
Incr Delay (d2), s/veh	1.0	0.7	5.9	0.1	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	4.3	1.5	1.2	1.3	0.0
LnGrp Delay(d),s/veh	9.5	6.6	24.2	2.8	21.6	0.0
LnGrp LOS	A	A	C	A	C	
Approach Vol, veh/h	1085			385	111	
Approach Delay, s/veh	8.2			9.3	21.6	
Approach LOS	A			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	7.8	24.6				32.4		8.2
Change Period (Y+Rc), s	4.4	5.6				* 5.6		4.9
Max Green Setting (Gmax), s	5.0	26.1				* 36		19.0
Max Q Clear Time (g_c+I1), s	4.6	12.2				4.3		4.5
Green Ext Time (p_c), s	0.0	6.7				9.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	9.4
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	95			80	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor				0.99		0.98
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	3539	3539	1562	1770	1548
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				235		142
Link Speed (mph)		35	35		45	
Link Distance (ft)		1490	1635		1851	
Travel Time (s)		29.0	31.9		28.0	

Intersection Summary	
Area Type:	Other



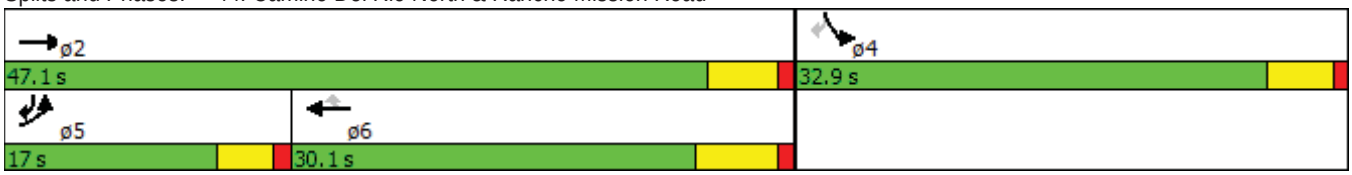
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	213	439	135	200	402	128
Confl. Peds. (#/hr)						1
Confl. Bikes (#/hr)				2		1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	251	516	159	235	447	142
Shared Lane Traffic (%)						
Lane Group Flow (vph)	251	516	159	235	447	142

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	213	439	135	200	402	128
Turn Type	Prot	NA	NA	Perm	Prot	pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	5
Switch Phase						
Minimum Initial (s)	4.0	10.0	10.0	10.0	4.0	4.0
Minimum Split (s)	8.4	21.3	30.0	30.0	32.9	8.4
Total Split (s)	17.0	47.1	30.1	30.1	32.9	17.0
Total Split (%)	21.3%	58.9%	37.6%	37.6%	41.1%	21.3%
Yellow Time (s)	3.4	4.3	5.0	5.0	3.9	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.3	6.0	6.0	4.9	4.4
Lead/Lag	Lead		Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes	Yes		Yes
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	12.4	30.1	12.4	12.4	18.6	31.5
Actuated g/C Ratio	0.21	0.51	0.21	0.21	0.31	0.53
v/c Ratio	0.68	0.29	0.21	0.46	0.80	0.16
Control Delay	36.3	9.5	21.1	6.7	31.3	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.3	9.5	21.1	6.7	31.3	1.9
LOS	D	A	C	A	C	A
Approach Delay		18.3	12.5		24.2	
Approach LOS		B	B		C	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 59.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 19.0	Intersection LOS: B
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 44: Camino Del Rio North & Rancho Mission Road





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	213	439	135	200	402	128
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	251	516	159	41	447	0
Adj No. of Lanes	1	2	2	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	310	1700	757	331	517	738
Arrive On Green	0.17	0.48	0.21	0.21	0.29	0.00
Sat Flow, veh/h	1774	3632	3632	1546	1774	1583
Grp Volume(v), veh/h	251	516	159	41	447	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1546	1774	1583
Q Serve(g_s), s	6.5	4.2	1.8	1.0	11.4	0.0
Cycle Q Clear(g_c), s	6.5	4.2	1.8	1.0	11.4	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	310	1700	757	331	517	738
V/C Ratio(X)	0.81	0.30	0.21	0.12	0.86	0.00
Avail Cap(c_a), veh/h	468	3095	1784	779	1039	1204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.0	7.6	15.5	15.2	16.0	0.0
Incr Delay (d2), s/veh	3.5	0.2	0.2	0.3	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	2.0	0.9	0.5	5.7	0.0
LnGrp Delay(d),s/veh	22.5	7.7	15.7	15.4	17.8	0.0
LnGrp LOS	C	A	B	B	B	
Approach Vol, veh/h		767	200		447	
Approach Delay, s/veh		12.6	15.6		17.8	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		29.0		18.8	12.7	16.2		
Change Period (Y+Rc), s		* 6		4.9	4.4	6.0		
Max Green Setting (Gmax), s		* 42		28.0	12.6	24.1		
Max Q Clear Time (g_c+I1), s		6.2		13.4	8.5	3.8		
Green Ext Time (p_c), s		7.8		0.6	0.1	6.5		

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	130		0	520		140	220		200	90		150
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	0.91	0.86	0.91	1.00	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor					1.00	0.98	1.00		0.99			0.98
Frt			0.850		0.989	0.850			0.850			0.850
Flt Protected	0.950	0.996		0.950	0.968		0.950			0.950		
Satd. Flow (prot)	1681	1763	1583	1610	3064	1441	1770	3539	1583	3433	3539	1583
Flt Permitted	0.950	0.996		0.950	0.968		0.950			0.950		
Satd. Flow (perm)	1681	1763	1583	1610	3064	1417	1768	3539	1563	3433	3539	1551
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			103		5	190			172			103
Link Speed (mph)		35			45			45			45	
Link Distance (ft)		1214			1000			780			968	
Travel Time (s)		23.6			15.2			11.8			14.7	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	92	105	574	624	123	244	261	951	165	34	1314	64
Confl. Peds. (#/hr)							7					7
Confl. Bikes (#/hr)						3			2			3
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.96	0.96	0.96	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	98	112	611	657	129	257	272	991	172	36	1398	68
Shared Lane Traffic (%)	10%			50%		14%						
Lane Group Flow (vph)	88	122	611	328	494	221	272	991	172	36	1398	68

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	105	574	624	123	244	261	951	165	34	1314	64
Turn Type	Split	NA	pm+ov	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	4	4	5	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.9	6.9	13.0	14.0	14.0	14.0	13.0	15.0	15.0	2.9	15.0	15.0
Minimum Split (s)	12.0	12.0	19.1	19.1	19.1	19.1	19.1	48.1	48.1	8.0	44.1	44.1
Total Split (s)	19.0	19.0	20.0	25.0	25.0	25.0	20.0	76.0	76.0	10.0	64.0	64.0
Total Split (%)	14.6%	14.6%	15.4%	19.2%	19.2%	19.2%	15.4%	58.5%	58.5%	7.7%	49.2%	49.2%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Lead/Lag			Lead				Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?			Yes				Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	12.1	12.1	27.0	21.7	21.7	21.7	14.9	74.9	74.9	4.8	60.9	60.9
Actuated g/C Ratio	0.09	0.09	0.21	0.17	0.17	0.17	0.11	0.58	0.58	0.04	0.47	0.47
v/c Ratio	0.56	0.74	1.49	1.22	1.21dl	0.56	1.35	0.49	0.18	0.28	0.84	0.09
Control Delay	70.2	83.5	259.3	174.0	83.9	16.4	228.2	17.8	2.4	66.7	36.3	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.2	83.5	259.3	174.0	83.9	16.4	228.2	17.8	2.4	66.7	36.3	1.4
LOS	E	F	F	F	F	B	F	B	A	E	D	A
Approach Delay		212.9			97.9			55.9			35.4	
Approach LOS		F			F			E			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 30 (23%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.49	
Intersection Signal Delay: 85.5	Intersection LOS: F
Intersection Capacity Utilization 101.9%	ICU Level of Service G
Analysis Period (min) 15	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 45: Mission Gorge Road & Camino Del Rio North/I-8 WB Off Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	92	105	574	624	123	244	261	951	165	34	1314	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	98	112	366	657	192	84	272	991	94	36	1398	4
Adj No. of Lanes	1	1	1	2	1	1	1	2	1	2	2	1
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.96	0.96	0.96	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	199	351	543	285	238	203	1930	849	130	1658	729
Arrive On Green	0.11	0.11	0.11	0.15	0.15	0.15	0.11	0.55	0.55	0.04	0.47	0.47
Sat Flow, veh/h	1774	1863	1583	3548	1863	1557	1774	3539	1557	3442	3539	1555
Grp Volume(v), veh/h	98	112	366	657	192	84	272	991	94	36	1398	4
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1557	1774	1770	1557	1721	1770	1555
Q Serve(g_s), s	6.8	7.4	13.9	19.9	12.7	6.3	14.9	23.0	3.8	1.3	45.1	0.2
Cycle Q Clear(g_c), s	6.8	7.4	13.9	19.9	12.7	6.3	14.9	23.0	3.8	1.3	45.1	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	190	199	351	543	285	238	203	1930	849	130	1658	729
V/C Ratio(X)	0.52	0.56	1.04	1.21	0.67	0.35	1.34	0.51	0.11	0.28	0.84	0.01
Avail Cap(c_a), veh/h	190	199	351	543	285	238	203	1930	849	130	1658	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	55.2	50.6	55.1	52.0	49.3	57.5	18.7	14.3	60.8	30.4	18.4
Incr Delay (d2), s/veh	1.1	2.2	59.8	110.6	5.0	0.3	176.1	0.8	0.2	0.4	5.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	4.0	18.4	18.1	6.9	2.7	17.2	11.4	1.7	0.6	23.2	0.1
LnGrp Delay(d),s/veh	56.0	57.4	110.4	165.7	57.0	49.6	233.6	19.4	14.5	61.3	35.8	18.4
LnGrp LOS	E	E	F	F	E	D	F	B	B	E	D	B
Approach Vol, veh/h		576			933			1357			1438	
Approach Delay, s/veh		90.8			132.9			62.0			36.4	
Approach LOS		F			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	76.0		19.0	20.0	66.0		25.0
Change Period (Y+Rc), s	5.1	5.1		5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	4.9	70.9		13.9	14.9	58.9		19.9
Max Q Clear Time (g_c+I1), s	3.3	25.0		15.9	16.9	47.1		21.9
Green Ext Time (p_c), s	0.8	4.8		0.0	0.0	5.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	72.7
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		140	90		0
Storage Lanes	0		0	0		1	0		1	1		1
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												0.99
Frt						0.850			0.850			0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	0	0	0	1863	1583	0	3539	1583	1770	0	1583
Flt Permitted										0.950		
Satd. Flow (perm)	0	0	0	0	1863	1583	0	3539	1583	1770	0	1563
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)						326			143			227
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		599			191			329			288	
Travel Time (s)		11.7			4.3			7.5			6.5	

Intersection Summary	
Area Type:	Other



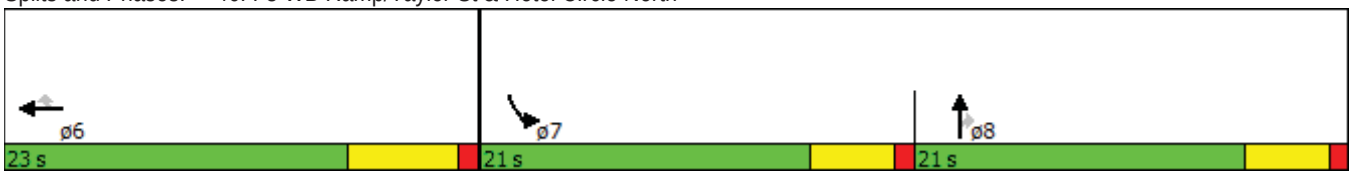
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	0	0	131	251	0	405	106	218	0	97
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												3
Peak Hour Factor	0.25	0.25	0.25	0.77	0.77	0.77	0.91	0.91	0.91	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	170	326	0	445	116	245	0	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	170	326	0	445	116	245	0	109

Intersection Summary

Lane Group	WBT	WBR	NBT	NBR	SBL	SBR
Lane Configurations						
Volume (vph)	131	251	405	106	218	97
Turn Type	NA	Perm	NA	Perm	Prot	Free
Protected Phases	6		8		7	
Permitted Phases		6		8		Free
Detector Phase	6	6	8	8	7	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	21.0	21.0	21.0	
Total Split (s)	23.0	23.0	21.0	21.0	21.0	
Total Split (%)	35.4%	35.4%	32.3%	32.3%	32.3%	
Yellow Time (s)	5.5	5.5	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	5.0	5.0	5.0	
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	Min	Min	None	None	None	
Act Effct Green (s)	11.2	11.2	9.9	9.9	10.2	48.6
Actuated g/C Ratio	0.23	0.23	0.20	0.20	0.21	1.00
v/c Ratio	0.40	0.53	0.62	0.27	0.66	0.07
Control Delay	20.6	6.3	22.6	4.7	28.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	6.3	22.6	4.7	28.3	0.1
LOS	C	A	C	A	C	A
Approach Delay	11.2		18.9			
Approach LOS	B		B			

Intersection Summary	
Cycle Length: 65	
Actuated Cycle Length: 48.6	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 16.4	Intersection LOS: B
Intersection Capacity Utilization 43.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 46: I-8 WB Ramp/Taylor St & Hotel Circle North





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	131	251	0	405	106	218	0	97
Number				1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				0	1863	1863	0	1863	1863	1863	0	1863
Adj Flow Rate, veh/h				0	170	8	0	445	0	245	0	0
Adj No. of Lanes				0	1	1	0	2	1	1	0	1
Peak Hour Factor				0.77	0.77	0.77	0.91	0.91	0.91	0.89	0.89	0.89
Percent Heavy Veh, %				0	2	2	0	2	2	2	0	2
Cap, veh/h				0	0	0	0	877	392	348	0	0
Arrive On Green				0.00	0.00	0.00	0.00	0.25	0.00	0.20	0.00	0.00
Sat Flow, veh/h					0		0	3632	1583	1774	245	
Grp Volume(v), veh/h					0.0		0	445	0	245	7.7	
Grp Sat Flow(s),veh/h/ln							0	1770	1583	1774	A	
Q Serve(g_s), s							0.0	1.9	0.0	2.3		
Cycle Q Clear(g_c), s							0.0	1.9	0.0	2.3		
Prop In Lane							0.00		1.00	1.00		
Lane Grp Cap(c), veh/h							0	877	392	348		
V/C Ratio(X)							0.00	0.51	0.00	0.70		
Avail Cap(c_a), veh/h							0	3148	1408	1578		
HCM Platoon Ratio							1.00	1.00	1.00	1.00		
Upstream Filter(I)							0.00	1.00	0.00	1.00		
Uniform Delay (d), s/veh							0.0	5.8	0.0	6.7		
Incr Delay (d2), s/veh							0.0	0.2	0.0	1.0		
Initial Q Delay(d3),s/veh							0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln							0.0	0.9	0.0	1.2		
LnGrp Delay(d),s/veh							0.0	6.0	0.0	7.7		
LnGrp LOS								A		A		
Approach Vol, veh/h								445				
Approach Delay, s/veh								6.0				
Approach LOS								A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs							7	8
Phs Duration (G+Y+Rc), s							8.5	9.5
Change Period (Y+Rc), s							5.0	5.0
Max Green Setting (Gmax), s							16.0	16.0
Max Q Clear Time (g_c+I1), s							4.3	3.9
Green Ext Time (p_c), s							0.1	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	6.6
HCM 2010 LOS	A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	90		0	0		230	0		0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.993			0.989				0.850		0.977	
Flt Protected				0.950				0.954			0.968	
Satd. Flow (prot)	0	1850	0	1770	1842	0	0	1777	1583	0	1762	0
Flt Permitted				0.950				0.954			0.968	
Satd. Flow (perm)	0	1850	0	1770	1842	0	0	1777	1583	0	1762	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1334			890			500			305	
Travel Time (s)		26.0			17.3			11.4			6.9	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	1	310	17	330	116	9	139	4	506	4	1	1
Confl. Peds. (#/hr)	7		3	3		7						
Confl. Bikes (#/hr)			3			2						
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.93	0.93	0.93	0.50	0.50	0.50
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	1	356	20	363	127	10	149	4	544	8	2	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	377	0	363	137	0	0	153	544	0	12	0

Intersection Summary

Intersection	
Intersection Delay, s/veh	41
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	1	310	17	0	330	116	9	0	139	4	506
Peak Hour Factor	0.87	0.87	0.87	0.87	0.92	0.91	0.91	0.91	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	356	20	0	363	127	10	0	149	4	544
Number of Lanes	0	0	1	0	0	1	1	0	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	33	30.5	53.4
HCM LOS	D	D	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	97%	0%	0%	100%	0%	67%
Vol Thru, %	3%	0%	95%	0%	93%	17%
Vol Right, %	0%	100%	5%	0%	7%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	143	506	328	330	125	6
LT Vol	139	0	1	330	0	4
Through Vol	4	0	310	0	116	1
RT Vol	0	506	17	0	9	1
Lane Flow Rate	154	544	377	363	137	12
Geometry Grp	7	7	6	7	7	6
Degree of Util (X)	0.339	1	0.787	0.811	0.286	0.032
Departure Headway (Hd)	7.937	6.72	7.515	8.054	7.504	9.457
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	455	544	486	453	482	383
Service Time	5.642	4.424	5.502	5.739	5.189	7.394
HCM Lane V/C Ratio	0.338	1	0.776	0.801	0.284	0.031
HCM Control Delay	14.7	64.4	33	37.1	13.2	12.7
HCM Lane LOS	B	F	D	E	B	B
HCM 95th-tile Q	1.5	14.2	7.1	7.5	1.2	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	4	1	1
Peak Hour Factor	0.92	0.50	0.50	0.50
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	8	2	2
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	12.7
HCM LOS	B

Lane



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			150	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	0				0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00			0.97		0.98
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1765	1863	1863	1540	1770	1549
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				156		262
Link Speed (mph)		35	35		25	
Link Distance (ft)		890	756		1554	
Travel Time (s)		17.3	14.7		42.4	

Intersection Summary	
Area Type:	Other



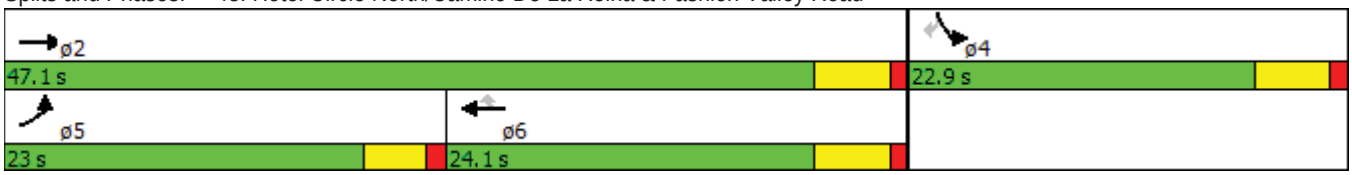
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	361	495	267	137	200	199
Confl. Peds. (#/hr)	2			2		
Confl. Bikes (#/hr)				3		1
Peak Hour Factor	0.85	0.85	0.88	0.88	0.76	0.76
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	425	582	303	156	263	262
Shared Lane Traffic (%)						
Lane Group Flow (vph)	425	582	303	156	263	262

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	361	495	267	137	200	199
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.4	20.9	23.9	23.9	22.9	22.9
Total Split (s)	23.0	47.1	24.1	24.1	22.9	22.9
Total Split (%)	32.9%	67.3%	34.4%	34.4%	32.7%	32.7%
Yellow Time (s)	3.4	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.9	4.9	4.9	4.9
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	17.5	37.2	15.2	15.2	13.0	13.0
Actuated g/C Ratio	0.29	0.62	0.25	0.25	0.22	0.22
v/c Ratio	0.83	0.51	0.64	0.31	0.69	0.49
Control Delay	38.8	8.8	28.2	5.9	32.9	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	8.8	28.2	5.9	32.9	6.7
LOS	D	A	C	A	C	A
Approach Delay		21.5	20.6		19.8	
Approach LOS		C	C		B	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 60.3	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 57.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 48: Hotel Circle North/Camino De La Reina & Fashion Valley Road





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	361	495	267	137	200	199
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	425	582	303	25	263	5
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.85	0.85	0.88	0.88	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	486	1166	495	409	324	289
Arrive On Green	0.27	0.63	0.27	0.27	0.18	0.18
Sat Flow, veh/h	1774	1863	1863	1539	1774	1583
Grp Volume(v), veh/h	425	582	303	25	263	5
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1539	1774	1583
Q Serve(g_s), s	11.7	8.7	7.3	0.6	7.3	0.1
Cycle Q Clear(g_c), s	11.7	8.7	7.3	0.6	7.3	0.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	486	1166	495	409	324	289
V/C Ratio(X)	0.87	0.50	0.61	0.06	0.81	0.02
Avail Cap(c_a), veh/h	645	1536	699	577	624	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	5.2	16.5	14.0	20.1	17.2
Incr Delay (d2), s/veh	8.4	0.3	1.7	0.1	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	4.5	3.9	0.3	3.7	0.1
LnGrp Delay(d),s/veh	26.1	5.5	18.2	14.1	22.0	17.2
LnGrp LOS	C	A	B	B	C	B
Approach Vol, veh/h		1007	328		268	
Approach Delay, s/veh		14.2	17.9		21.9	
Approach LOS		B	B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		36.9		14.3	18.4	18.5		
Change Period (Y+Rc), s		4.9		4.9	4.4	4.9		
Max Green Setting (Gmax), s		42.2		18.0	18.6	19.2		
Max Q Clear Time (g_c+I1), s		10.7		9.3	13.7	9.3		
Green Ext Time (p_c), s		6.9		0.3	0.4	4.2		

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	70		70	160		0	190		190	150		0
Storage Lanes	1		1	2		1	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor	0.99		0.99	0.99		0.98			0.99			0.99
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	1863	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1757	3539	1563	3412	1863	1547	3433	3539	1563	3433	3539	1562
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			252			434			609			81
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		730			461			758			473	
Travel Time (s)		19.9			12.6			12.9			8.1	

Intersection Summary	
Area Type:	Other



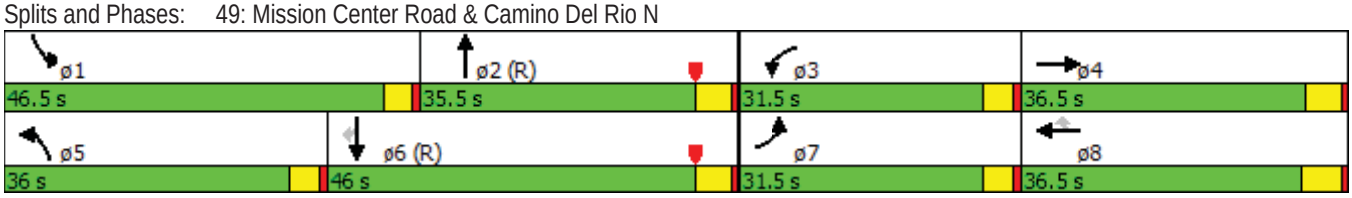
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	19	171	247	251	262	408	166	318	536	351	858	56
Confl. Peds. (#/hr)	7		3	3		7						
Confl. Bikes (#/hr)						1			3			2
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.88	0.88	0.88	0.99	0.99	0.99
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	23	206	298	267	279	434	189	361	609	355	867	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	206	298	267	279	434	189	361	609	355	867	57

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	171	247	251	262	408	166	318	536	351	858	56
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	7.0		4.0	7.0	7.0	4.0	10.0		4.0	10.0	10.0
Minimum Split (s)	8.4	20.9		8.4	36.3	36.3	8.4	20.9		8.4	27.9	27.9
Total Split (s)	31.5	36.5		31.5	36.5	36.5	36.0	35.5		46.5	46.0	46.0
Total Split (%)	21.0%	24.3%		21.0%	24.3%	24.3%	24.0%	23.7%		31.0%	30.7%	30.7%
Yellow Time (s)	3.4	3.9		3.4	4.3	4.3	3.4	3.9		3.4	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9		4.4	5.3	5.3	4.4	4.9		4.4	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	C-Min
Act Effct Green (s)	6.5	17.7	150.0	16.0	30.6	30.6	12.7	76.7	150.0	20.9	85.0	85.0
Actuated g/C Ratio	0.04	0.12	1.00	0.11	0.20	0.20	0.08	0.51	1.00	0.14	0.57	0.57
v/c Ratio	0.30	0.49	0.19	0.73	0.74	0.66	0.65	0.20	0.39	0.74	0.43	0.06
Control Delay	78.7	64.9	0.3	79.0	51.6	10.4	91.5	10.9	1.9	71.4	21.3	1.9
Queue Delay	0.0	0.0	0.0	0.0	1.0	0.3	0.0	0.0	0.0	0.0	1.2	0.0
Total Delay	78.7	64.9	0.3	79.0	52.6	10.8	91.5	10.9	1.9	71.4	22.5	1.9
LOS	E	E	A	E	D	B	F	B	A	E	C	A
Approach Delay		28.9			41.3			19.3			35.2	
Approach LOS		C			D			B			D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 6 (4%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 31.2	Intersection LOS: C
Intersection Capacity Utilization 63.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 49: Mission Center Road & Camino Del Rio N



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	171	247	251	262	408	166	318	536	351	858	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	23	206	0	267	279	67	189	361	0	355	867	0
Adj No. of Lanes	1	2	1	2	1	1	2	2	1	2	2	1
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.88	0.88	0.88	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	29	354	158	321	329	273	237	1974	883	421	2163	968
Arrive On Green	0.02	0.10	0.00	0.03	0.06	0.06	0.11	0.93	0.00	0.12	0.61	0.00
Sat Flow, veh/h	1774	3539	1583	3442	1863	1544	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	23	206	0	267	279	67	189	361	0	355	867	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1863	1544	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	1.9	8.3	0.0	11.6	22.3	6.2	8.0	1.3	0.0	15.1	18.9	0.0
Cycle Q Clear(g_c), s	1.9	8.3	0.0	11.6	22.3	6.2	8.0	1.3	0.0	15.1	18.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	29	354	158	321	329	273	237	1974	883	421	2163	968
V/C Ratio(X)	0.79	0.58	0.00	0.83	0.85	0.25	0.80	0.18	0.00	0.84	0.40	0.00
Avail Cap(c_a), veh/h	321	746	334	622	387	321	725	1974	883	966	2163	968
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.86	0.86	0.86	0.80	0.80	0.00	0.81	0.81	0.00
Uniform Delay (d), s/veh	73.5	64.5	0.0	71.5	68.6	61.1	65.4	2.3	0.0	64.4	15.0	0.0
Incr Delay (d2), s/veh	15.8	1.5	0.0	1.9	10.9	0.1	1.9	0.2	0.0	3.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.2	0.0	5.6	12.5	2.7	3.9	0.6	0.0	7.4	9.4	0.0
LnGrp Delay(d),s/veh	89.3	66.0	0.0	73.4	79.5	61.2	67.3	2.5	0.0	68.2	15.5	0.0
LnGrp LOS	F	E		E	E	E	E	A		E	B	
Approach Vol, veh/h		229			613			550			1222	
Approach Delay, s/veh		68.4			74.8			24.7			30.8	
Approach LOS		E			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.7	88.6	18.4	20.3	14.7	96.6	6.9	31.8
Change Period (Y+Rc), s	4.4	4.9	4.4	* 5.3	4.4	4.9	4.4	5.3
Max Green Setting (Gmax), s	42.1	30.6	27.1	* 32	31.6	41.1	27.1	31.2
Max Q Clear Time (g_c+I1), s	17.1	3.3	13.6	10.3	10.0	20.9	3.9	24.3
Green Ext Time (p_c), s	1.2	11.7	0.4	2.6	0.3	10.0	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	43.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	110		0	560		560	0		0
Storage Lanes	0		1	1		0	1		1	0		0
Taper Length (ft)	0			25			25			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850						0.850			
Flt Protected				0.950			0.950	0.966				
Satd. Flow (prot)	0	3539	1583	1770	3539	0	1681	1709	1583	0	0	0
Flt Permitted				0.950			0.950	0.966				
Satd. Flow (perm)	0	3539	1583	1770	3539	0	1681	1709	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			804						353			
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		461			859			441			281	
Travel Time (s)		12.6			23.4			10.0			6.4	

Intersection Summary	
Area Type:	Other



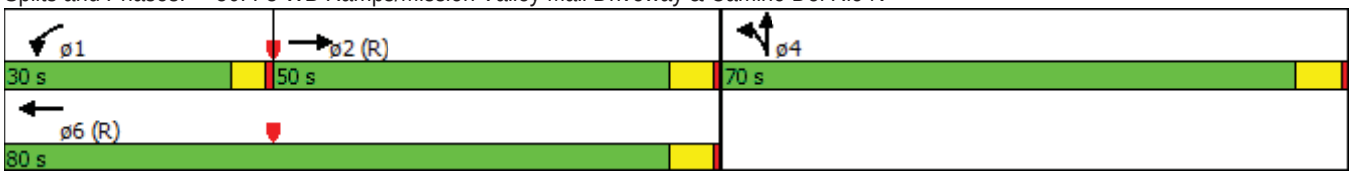
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	224	756	276	297	0	628	112	325	0	0	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92	0.25	0.25	0.25
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	238	804	303	326	0	683	122	353	0	0	0
Shared Lane Traffic (%)							41%					
Lane Group Flow (vph)	0	238	804	303	326	0	403	402	353	0	0	0

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR
Lane Configurations							
Volume (vph)	224	756	276	297	628	112	325
Turn Type	NA	Free	Prot	NA	Split	NA	Free
Protected Phases	2		1	6	4	4	
Permitted Phases		Free					Free
Detector Phase	2		1	6	4	4	
Switch Phase							
Minimum Initial (s)	12.0		5.0	10.0	8.0	8.0	
Minimum Split (s)	22.0		9.7	22.0	57.0	57.0	
Total Split (s)	50.0		30.0	80.0	70.0	70.0	
Total Split (%)	33.3%		20.0%	53.3%	46.7%	46.7%	
Yellow Time (s)	5.0		3.7	5.0	5.0	5.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0		4.7	6.0	6.0	6.0	
Lead/Lag	Lag		Lead				
Lead-Lag Optimize?	Yes		Yes				
Recall Mode	C-Max		None	C-Max	Min	Min	
Act Effct Green (s)	54.1	150.0	32.8	91.6	46.4	46.4	150.0
Actuated g/C Ratio	0.36	1.00	0.22	0.61	0.31	0.31	1.00
v/c Ratio	0.19	0.51	0.78	0.15	0.78	0.76	0.22
Control Delay	31.0	4.0	70.2	14.0	56.8	55.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay	31.0	4.0	70.2	14.0	56.8	55.7	0.3
LOS	C	A	E	B	E	E	A
Approach Delay	10.2			41.1		39.2	
Approach LOS	B			D		D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 85 (57%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 28.9	Intersection LOS: C
Intersection Capacity Utilization 59.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 50: I-8 WB Ramps/Mission Valley Mall Driveway & Camino Del Rio N





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	224	756	276	297	0	628	112	325	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	0	238	0	303	326	0	770	0	0			
Adj No. of Lanes	0	2	1	1	2	0	2	0	1			
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92			
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2			
Cap, veh/h	0	1648	737	299	2356	0	902	0	403			
Arrive On Green	0.00	0.47	0.00	0.17	0.67	0.00	0.25	0.00	0.00			
Sat Flow, veh/h	0	3632	1583	1774	3632	0	3548	0	1583			
Grp Volume(v), veh/h	0	238	0	303	326	0	770	0	0			
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0	1774	0	1583			
Q Serve(g_s), s	0.0	5.8	0.0	25.3	5.1	0.0	31.0	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	5.8	0.0	25.3	5.1	0.0	31.0	0.0	0.0			
Prop In Lane	0.00		1.00	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	1648	737	299	2356	0	902	0	403			
V/C Ratio(X)	0.00	0.14	0.00	1.01	0.14	0.00	0.85	0.00	0.00			
Avail Cap(c_a), veh/h	0	1648	737	299	2356	0	1514	0	676			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.85	0.00	1.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	23.0	0.0	62.4	9.2	0.0	53.3	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.2	0.0	55.3	0.1	0.0	3.5	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	2.8	0.0	17.0	2.5	0.0	15.6	0.0	0.0			
LnGrp Delay(d),s/veh	0.0	23.1	0.0	117.7	9.4	0.0	56.8	0.0	0.0			
LnGrp LOS		C		F	A		E					
Approach Vol, veh/h		238			629			770				
Approach Delay, s/veh		23.1			61.5			56.8				
Approach LOS		C			E			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	30.0	75.9		44.1		105.9		
Change Period (Y+Rc), s	* 4.7	6.0		6.0		6.0		
Max Green Setting (Gmax), s	* 25	44.0		64.0		74.0		
Max Q Clear Time (g_c+I1), s	27.3	7.8		33.0		7.1		
Green Ext Time (p_c), s	0.0	4.4		5.1		4.5		

Intersection Summary	
HCM 2010 Ctrl Delay	53.7
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	200			90	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor					0.99	
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	3539	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	3539	1583	1758	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				122		159
Link Speed (mph)		25	25		25	
Link Distance (ft)		1900	707		752	
Travel Time (s)		51.8	19.3		20.5	

Intersection Summary	
Area Type:	Other



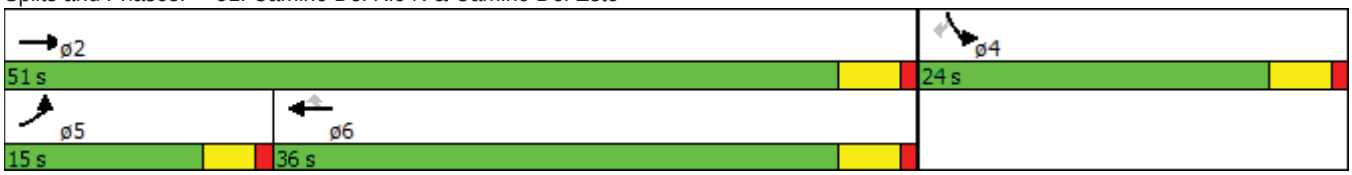
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	220	304	220	100	349	132
Confl. Peds. (#/hr)					3	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.91	0.91	0.82	0.82	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	242	334	268	122	420	159
Shared Lane Traffic (%)						
Lane Group Flow (vph)	242	334	268	122	420	159

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	220	304	220	100	349	132
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.5	34.5	34.5	22.5	22.5
Total Split (s)	15.0	51.0	36.0	36.0	24.0	24.0
Total Split (%)	20.0%	68.0%	48.0%	48.0%	32.0%	32.0%
Yellow Time (s)	3.0	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Max	Max	Max	None	None
Act Effct Green (s)	11.0	46.5	31.5	31.5	19.3	19.3
Actuated g/C Ratio	0.15	0.62	0.42	0.42	0.26	0.26
v/c Ratio	0.93	0.29	0.18	0.17	0.92	0.30
Control Delay	75.9	7.4	14.0	3.5	55.6	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.9	7.4	14.0	3.5	55.6	5.8
LOS	E	A	B	A	E	A
Approach Delay		36.2	10.7		41.9	
Approach LOS		D	B		D	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 74.8	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 31.9	Intersection LOS: C
Intersection Capacity Utilization 48.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 51: Camino Del Rio N & Camino Del Este





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	220	304	220	100	349	132
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	242	334	268	37	420	14
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.91	0.91	0.82	0.82	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	261	1158	1491	667	457	408
Arrive On Green	0.15	0.62	0.42	0.42	0.26	0.26
Sat Flow, veh/h	1774	1863	3632	1583	1774	1583
Grp Volume(v), veh/h	242	334	268	37	420	14
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1583	1774	1583
Q Serve(g_s), s	10.1	6.2	3.5	1.0	17.2	0.5
Cycle Q Clear(g_c), s	10.1	6.2	3.5	1.0	17.2	0.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	261	1158	1491	667	457	408
V/C Ratio(X)	0.93	0.29	0.18	0.06	0.92	0.03
Avail Cap(c_a), veh/h	261	1158	1491	667	463	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	6.5	13.6	12.8	27.0	20.8
Incr Delay (d2), s/veh	36.2	0.6	0.3	0.2	23.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	3.4	1.8	0.5	11.4	0.5
LnGrp Delay(d),s/veh	67.7	7.1	13.8	13.0	50.4	20.8
LnGrp LOS	E	A	B	B	D	C
Approach Vol, veh/h		576	305		434	
Approach Delay, s/veh		32.6	13.7		49.5	
Approach LOS		C	B		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		51.0		23.8	15.0	36.0		
Change Period (Y+Rc), s		4.5		4.5	4.0	4.5		
Max Green Setting (Gmax), s		46.5		19.5	11.0	31.5		
Max Q Clear Time (g_c+I1), s		8.2		19.2	12.1	5.5		
Green Ext Time (p_c), s		3.7		0.1	0.0	3.6		

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		200	0		0	0		0
Storage Lanes	1		1	0		1	1		1	0		1
Taper Length (ft)	0			0			0			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00					0.98	1.00					0.98
Frt			0.850			0.850						0.850
Flt Protected	0.950				0.993		0.950					
Satd. Flow (prot)	1770	0	1583	0	1850	1583	1770	5085	1863	0	3539	1583
Flt Permitted	0.950				0.993		0.950					
Satd. Flow (perm)	1765	0	1583	0	1850	1559	1769	5085	1863	0	3539	1548
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			408			276						376
Link Speed (mph)		35			30			45			45	
Link Distance (ft)		378			430			672			469	
Travel Time (s)		7.4			9.8			10.2			7.1	

Intersection Summary	
Area Type:	Other



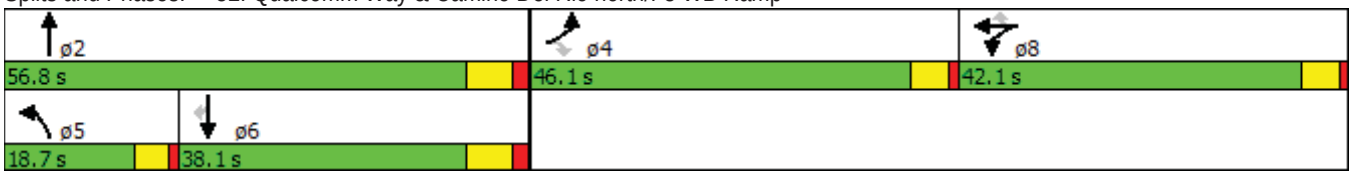
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	92	0	351	19	118	248	153	602	0	0	1004	571
Confl. Peds. (#/hr)	3					3	1					1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.90	0.90	0.90	0.84	0.84	0.84	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	107	0	408	21	131	276	182	717	0	0	1024	583
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	0	408	0	152	276	182	717	0	0	1024	583

Intersection Summary

Lane Group	EBL	EBR	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations								
Volume (vph)	92	351	118	248	153	602	1004	571
Turn Type	Prot	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		8		5	2	6	
Permitted Phases		4		8				6
Detector Phase	4	4	8	8	5	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	15.0	15.0	14.0	12.0	13.0	13.0
Minimum Split (s)	46.1	46.1	42.1	42.1	18.7	25.0	37.0	37.0
Total Split (s)	46.1	46.1	42.1	42.1	18.7	56.8	38.1	38.1
Total Split (%)	31.8%	31.8%	29.0%	29.0%	12.9%	39.2%	26.3%	26.3%
Yellow Time (s)	4.1	4.1	4.1	4.1	3.7	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.1	5.1	5.1	4.7	7.0	7.0	7.0
Lead/Lag					Lead		Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes
Recall Mode	None	None	None	None	None	Min	Min	Min
Act Effct Green (s)	10.6	10.6	18.7	18.7	14.2	50.5	31.5	31.5
Actuated g/C Ratio	0.11	0.11	0.19	0.19	0.15	0.52	0.32	0.32
v/c Ratio	0.56	0.76	0.43	0.53	0.71	0.27	0.89	0.77
Control Delay	53.7	14.7	38.3	7.9	57.4	15.0	43.5	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Total Delay	53.7	14.7	38.3	7.9	57.4	15.0	44.0	19.3
LOS	D	B	D	A	E	B	D	B
Approach Delay			18.7			23.6	35.0	
Approach LOS			B			C	D	

Intersection Summary	
Cycle Length: 145	
Actuated Cycle Length: 97.2	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 28.2	Intersection LOS: C
Intersection Capacity Utilization 78.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 52: Qualcomm Way & Camino Del Rio north/I-8 WB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	92	0	351	19	118	248	153	602	0	0	1004	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	107	0	65	21	131	48	182	717	0	0	1024	282
Adj No. of Lanes	1	0	1	0	1	1	1	3	1	0	2	1
Peak Hour Factor	0.86	0.86	0.86	0.90	0.90	0.90	0.84	0.84	0.84	0.98	0.98	0.98
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	52	327	323	322	3227	1005	0	1383	618
Arrive On Green	0.00	0.00	0.00	0.21	0.21	0.21	0.18	0.63	0.00	0.00	0.39	0.39
Sat Flow, veh/h		0		256	1594	1576	1774	5085	1583	0	3632	1581
Grp Volume(v), veh/h		0.0		152	0	48	182	717	0	0	1024	282
Grp Sat Flow(s),veh/h/ln				1850	0	1576	1774	1695	1583	0	1770	1581
Q Serve(g_s), s				5.4	0.0	1.9	7.1	4.5	0.0	0.0	18.7	10.0
Cycle Q Clear(g_c), s				5.4	0.0	1.9	7.1	4.5	0.0	0.0	18.7	10.0
Prop In Lane				0.14		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				379	0	323	322	3227	1005	0	1383	618
V/C Ratio(X)				0.40	0.00	0.15	0.57	0.22	0.00	0.00	0.74	0.46
Avail Cap(c_a), veh/h				907	0	773	329	3357	1045	0	1459	652
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				26.0	0.0	24.6	28.2	5.9	0.0	0.0	19.7	17.0
Incr Delay (d2), s/veh				0.3	0.0	0.1	1.3	0.0	0.0	0.0	2.5	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.8	0.0	0.8	3.6	2.1	0.0	0.0	9.6	4.5
LnGrp Delay(d),s/veh				26.2	0.0	24.7	29.4	5.9	0.0	0.0	22.2	18.2
LnGrp LOS				C		C	C	A			C	B
Approach Vol, veh/h					200			899			1306	
Approach Delay, s/veh					25.8			10.6			21.3	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		54.9			18.4	36.5		20.6
Change Period (Y+Rc), s		7.0			* 4.7	7.0		5.1
Max Green Setting (Gmax), s		49.8			* 14	31.1		37.0
Max Q Clear Time (g_c+I1), s		6.5			9.1	20.7		7.4
Green Ext Time (p_c), s		26.3			0.0	8.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		0	90		140	0		0	140		0
Storage Lanes	2		0	1		0	0		0	1		1
Taper Length (ft)	25			25			0			25		
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor	1.00	1.00		0.99	1.00			0.95		0.97	0.97	0.98
Frt		0.994			0.962			0.865				0.850
Flt Protected	0.950			0.950						0.950	0.958	
Satd. Flow (prot)	3433	3512	0	1770	3390	0	0	1523	0	1681	1695	1583
Flt Permitted	0.950			0.950						0.950	0.958	
Satd. Flow (perm)	3428	3512	0	1755	3390	0	0	1523	0	1630	1650	1559
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			34			248				382
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		1245			572			282			437	
Travel Time (s)		24.3			11.1			4.8			7.4	

Intersection Summary	
Area Type:	Other



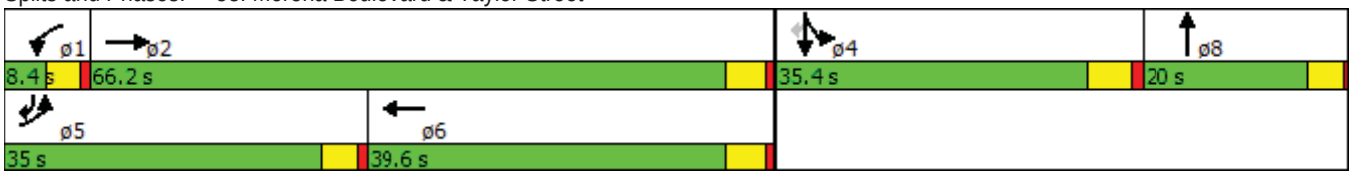
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	502	603	25	7	370	123	0	0	28	199	13	355
Confl. Peds. (#/hr)	2		5	5		2	1		8	8		1
Confl. Bikes (#/hr)						2			1			5
Peak Hour Factor	0.85	0.85	0.85	0.78	0.78	0.78	0.58	0.58	0.58	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	591	709	29	9	474	158	0	0	48	214	14	382
Shared Lane Traffic (%)										47%		
Lane Group Flow (vph)	591	738	0	9	632	0	0	48	0	113	115	382

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Configurations								
Volume (vph)	502	603	7	370	0	199	13	355
Turn Type	Prot	NA	Prot	NA	NA	Split	NA	pm+ov
Protected Phases	5	2	1	6	8	4	4	5
Permitted Phases								4
Detector Phase	5	2	1	6	8	4	4	5
Switch Phase								
Minimum Initial (s)	2.0	7.0	4.0	7.0	4.0	7.0	7.0	2.0
Minimum Split (s)	11.0	22.9	8.4	26.9	20.0	35.3	35.3	11.0
Total Split (s)	35.0	66.2	8.4	39.6	20.0	35.4	35.4	35.0
Total Split (%)	26.9%	50.9%	6.5%	30.5%	15.4%	27.2%	27.2%	26.9%
Yellow Time (s)	3.4	3.9	3.4	3.9	3.5	4.3	4.3	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	0.5	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	4.9	4.4	4.9	4.0	5.3	5.3	4.4
Lead/Lag	Lead	Lag	Lead	Lag				Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effct Green (s)	19.7	45.1	4.4	21.7	6.1	14.8	14.8	35.5
Actuated g/C Ratio	0.26	0.58	0.06	0.28	0.08	0.19	0.19	0.46
v/c Ratio	0.67	0.36	0.09	0.65	0.14	0.35	0.35	0.41
Control Delay	32.3	10.8	48.7	28.8	0.8	34.3	34.4	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	10.8	48.7	28.8	0.8	34.3	34.4	2.3
LOS	C	B	D	C	A	C	C	A
Approach Delay		20.4		29.1	0.8		14.3	
Approach LOS		C		C	A		B	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 77.1	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 20.7	Intersection LOS: C
Intersection Capacity Utilization 53.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 53: Morena Boulevard & Taylor Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	502	603	25	7	370	123	0	0	28	199	13	355
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	0	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	591	709	29	9	474	158	0	0	0	224	0	382
Adj No. of Lanes	2	2	0	1	2	0	0	1	0	2	0	1
Peak Hour Factor	0.85	0.85	0.85	0.78	0.78	0.78	0.58	0.58	0.58	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	2
Cap, veh/h	713	1816	74	16	848	281	0	3	0	922	0	735
Arrive On Green	0.21	0.52	0.52	0.01	0.33	0.33	0.00	0.00	0.00	0.26	0.00	0.26
Sat Flow, veh/h	3442	3465	142	1774	2602	861	0	-74510	0	3494	0	1544
Grp Volume(v), veh/h	591	362	376	9	321	311	0	0	0	224	0	382
Grp Sat Flow(s),veh/h/ln	1721	1770	1837	1774	1770	1692	0	1863	0	1747	0	1544
Q Serve(g_s), s	11.8	8.8	8.8	0.4	10.8	10.9	0.0	0.0	0.0	3.6	0.0	12.5
Cycle Q Clear(g_c), s	11.8	8.8	8.8	0.4	10.8	10.9	0.0	0.0	0.0	3.6	0.0	12.5
Prop In Lane	1.00		0.08	1.00		0.51	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	713	928	963	16	577	552	0	3	0	922	0	735
V/C Ratio(X)	0.83	0.39	0.39	0.55	0.56	0.56	0.00	0.00	0.00	0.24	0.00	0.52
Avail Cap(c_a), veh/h	1463	1506	1564	99	853	816	0	414	0	1461	0	973
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.3	10.2	10.2	35.5	20.0	20.0	0.0	0.0	0.0	20.8	0.0	13.4
Incr Delay (d2), s/veh	1.0	0.3	0.3	10.5	1.1	1.2	0.0	0.0	0.0	0.2	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	4.3	4.5	0.2	5.4	5.3	0.0	0.0	0.0	1.8	0.0	0.2
LnGrp Delay(d),s/veh	28.3	10.5	10.5	46.0	21.1	21.2	0.0	0.0	0.0	21.1	0.0	14.3
LnGrp LOS	C	B	B	D	C	C				C		B
Approach Vol, veh/h		1329			641			0			606	
Approach Delay, s/veh		18.4			21.5			0.0			16.8	
Approach LOS		B			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.1	42.6		24.3	19.3	28.4		0.0
Change Period (Y+Rc), s	4.4	4.9		5.3	4.4	4.9		4.0
Max Green Setting (Gmax), s	4.0	61.3		30.1	30.6	34.7		16.0
Max Q Clear Time (g_c+I1), s	2.4	10.8		14.5	13.8	12.9		0.0
Green Ext Time (p_c), s	0.0	14.4		3.5	1.1	10.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	170			140	0	280
Storage Lanes	1			0	2	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.97	1.00
Ped Bike Factor					1.00	0.99
Frt			0.958			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	3391	0	3433	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	3391	0	3424	1560
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			47			108
Link Speed (mph)		35	35		30	
Link Distance (ft)		532	730		439	
Travel Time (s)		10.4	14.2		10.0	

Intersection Summary	
Area Type:	Other



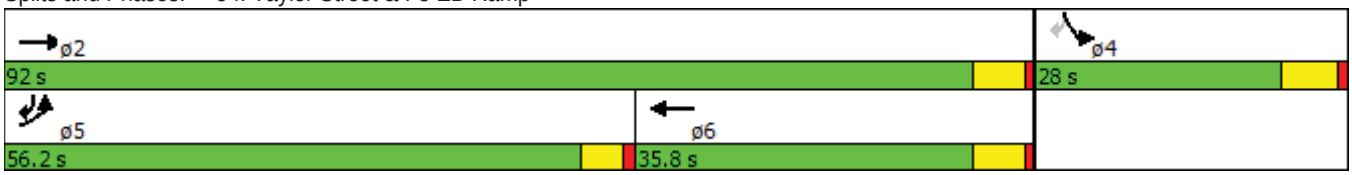
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	594	342	394	156	311	81
Confl. Peds. (#/hr)					1	
Confl. Bikes (#/hr)						7
Peak Hour Factor	0.90	0.90	0.95	0.95	0.75	0.75
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	660	380	415	164	415	108
Shared Lane Traffic (%)						
Lane Group Flow (vph)	660	380	579	0	415	108

Intersection Summary

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Volume (vph)	594	342	394	311	81
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	5	2	6	4	5
Permitted Phases					4
Detector Phase	5	2	6	4	5
Switch Phase					
Minimum Initial (s)	5.0	10.0	15.0	5.0	5.0
Minimum Split (s)	9.7	21.5	35.5	28.0	9.7
Total Split (s)	56.2	92.0	35.8	28.0	56.2
Total Split (%)	46.8%	76.7%	29.8%	23.3%	46.8%
Yellow Time (s)	3.7	4.5	4.5	5.0	3.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	5.5	5.5	6.0	4.7
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	Max	Max	None	None
Act Effct Green (s)	45.5	86.6	36.4	17.1	63.9
Actuated g/C Ratio	0.39	0.75	0.32	0.15	0.55
v/c Ratio	0.94	0.27	0.53	0.81	0.12
Control Delay	56.6	5.4	33.5	60.8	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	5.4	33.5	60.8	1.7
LOS	E	A	C	E	A
Approach Delay		37.9	33.5	48.6	
Approach LOS		D	C	D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.2	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 39.3	Intersection LOS: D
Intersection Capacity Utilization 71.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 54: Taylor Street & I-8 EB Ramp





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	594	342	394	156	311	81
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	660	380	415	0	415	0
Adj No. of Lanes	1	1	2	0	2	1
Peak Hour Factor	0.90	0.90	0.95	0.95	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	682	1418	1187	0	474	827
Arrive On Green	0.38	0.76	0.34	0.00	0.14	0.00
Sat Flow, veh/h	1774	1863	3725	0	3442	1583
Grp Volume(v), veh/h	660	380	415	0	415	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	0	1721	1583
Q Serve(g_s), s	41.4	7.0	10.0	0.0	13.4	0.0
Cycle Q Clear(g_c), s	41.4	7.0	10.0	0.0	13.4	0.0
Prop In Lane	1.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	682	1418	1187	0	474	827
V/C Ratio(X)	0.97	0.27	0.35	0.00	0.88	0.00
Avail Cap(c_a), veh/h	804	1418	1187	0	666	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	34.3	4.1	28.4	0.0	48.0	0.0
Incr Delay (d2), s/veh	21.4	0.5	0.8	0.0	7.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.2	3.7	5.0	0.0	6.9	0.0
LnGrp Delay(d),s/veh	55.7	4.5	29.3	0.0	55.3	0.0
LnGrp LOS	E	A	C		E	
Approach Vol, veh/h		1040	415		415	
Approach Delay, s/veh		37.0	29.3		55.3	
Approach LOS		D	C		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		92.0		21.7	48.4	43.6		
Change Period (Y+Rc), s		5.5		6.0	* 4.7	5.5		
Max Green Setting (Gmax), s		86.5		22.0	* 52	30.3		
Max Q Clear Time (g_c+I1), s		9.0		15.4	43.4	12.0		
Green Ext Time (p_c), s		3.5		0.2	0.2	3.1		

Intersection Summary	
HCM 2010 Ctrl Delay	39.4
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	360			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.925			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1723	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1723	0	1770	1583
Link Speed (mph)		35	35		35	
Link Distance (ft)		730	3613		599	
Travel Time (s)		14.2	70.4		11.7	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	262	472	63	80	152	486
Confl. Peds. (#/hr)						1
Confl. Bikes (#/hr)				5		
Peak Hour Factor	0.89	0.89	0.83	0.83	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	294	530	76	96	163	523
Shared Lane Traffic (%)						
Lane Group Flow (vph)	294	530	172	0	163	523

Intersection Summary

Intersection	
Intersection Delay, s/veh	43.1
Intersection LOS	E

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Vol, veh/h	0	262	472	0	63	80	0	152	486
Peak Hour Factor	0.89	0.89	0.89	0.92	0.83	0.83	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	294	530	0	76	96	0	163	523
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	50.1	13.6	42.2
HCM LOS	F	B	E

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	44%	0%	0%
Vol Right, %	0%	0%	56%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	262	472	143	152	486
LT Vol	262	0	0	152	0
Through Vol	0	472	63	0	0
RT Vol	0	0	80	0	486
Lane Flow Rate	294	530	172	163	523
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.611	1	0.339	0.351	0.945
Departure Headway (Hd)	7.477	6.967	7.091	7.733	6.512
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	480	520	515	471	564
Service Time	5.259	4.749	5.025	5.386	4.189
HCM Lane V/C Ratio	0.613	1.019	0.334	0.346	0.927
HCM Control Delay	21.4	66.1	13.6	14.5	50.8
HCM Lane LOS	C	F	B	B	F
HCM 95th-tile Q	4	13.8	1.5	1.6	12.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	180			90	0	60
Storage Lanes	1			1	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1863	1583	1770	1583
Link Speed (mph)		30	35		30	
Link Distance (ft)		806	1103		432	
Travel Time (s)		18.3	21.5		9.8	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	467	320	165	661	127	27
Confl. Peds. (#/hr)					1	
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.61	0.61	0.94	0.94	0.70	0.70
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	766	525	176	703	181	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	766	525	176	703	181	39

Intersection Summary

Intersection	
Intersection Delay, s/veh	53.2
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Vol, veh/h	0	467	320	0	165	661	0	127	27
Peak Hour Factor	0.61	0.61	0.61	0.92	0.94	0.94	0.92	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	766	525	0	176	703	0	181	39
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	59.8	52.5	16.8
HCM LOS	F	F	C

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	467	320	165	661	127	27
LT Vol	467	0	0	0	127	0
Through Vol	0	320	165	0	0	0
RT Vol	0	0	0	661	0	27
Lane Flow Rate	766	525	176	703	181	39
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	1	0.943	0.341	1	0.438	0.08
Departure Headway (Hd)	6.981	6.472	6.991	6.291	8.687	7.489
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	521	556	516	584	417	481
Service Time	4.751	4.251	4.704	4.004	6.398	5.2
HCM Lane V/C Ratio	1.47	0.944	0.341	1.204	0.434	0.081
HCM Control Delay	66.1	50.7	13.3	62.3	18	10.9
HCM Lane LOS	F	F	B	F	C	B
HCM 95th-tile Q	13.8	12.1	1.5	14.6	2.2	0.3



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	110		300	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99				0.97	0.97
Frt	0.966					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1790	0	1770	1863	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1790	0	1770	1863	1713	1542
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	29					263
Link Speed (mph)	35			35	40	
Link Distance (ft)	1103			674	947	
Travel Time (s)	21.5			13.1	16.1	

Intersection Summary	
Area Type:	Other



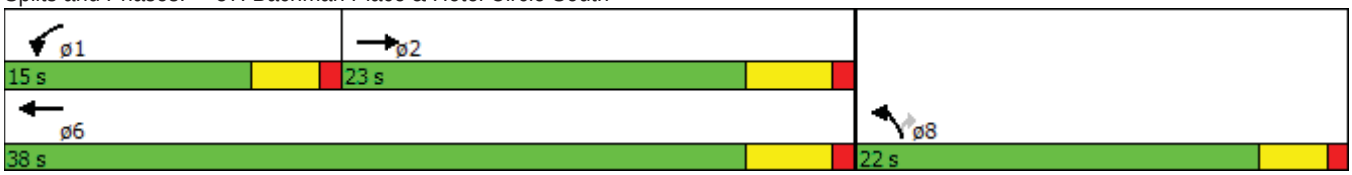
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	265	89	203	553	393	245
Confl. Peds. (#/hr)					18	
Confl. Bikes (#/hr)		1				5
Peak Hour Factor	0.78	0.78	0.86	0.86	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	340	114	236	643	423	263
Shared Lane Traffic (%)						
Lane Group Flow (vph)	454	0	236	643	423	263

Intersection Summary

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Volume (vph)	265	203	553	393	245
Turn Type	NA	Prot	NA	Prot	Perm
Protected Phases	2	1	6	8	
Permitted Phases					8
Detector Phase	2	1	6	8	8
Switch Phase					
Minimum Initial (s)	10.0	4.0	10.0	4.0	4.0
Minimum Split (s)	23.0	8.0	21.0	22.0	22.0
Total Split (s)	23.0	15.0	38.0	22.0	22.0
Total Split (%)	38.3%	25.0%	63.3%	36.7%	36.7%
Yellow Time (s)	4.0	3.0	4.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	5.0	4.0	4.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	Min	None	Min	None	None
Act Effct Green (s)	16.7	10.2	31.0	16.2	16.2
Actuated g/C Ratio	0.30	0.18	0.55	0.29	0.29
v/c Ratio	0.82	0.73	0.63	0.83	0.42
Control Delay	33.0	39.0	12.4	36.1	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	39.0	12.4	36.1	4.9
LOS	C	D	B	D	A
Approach Delay	33.0		19.5	24.1	
Approach LOS	C		B	C	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 56.3	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization 63.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 57: Bachman Place & Hotel Circle South



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	265	89	203	553	393	245
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	340	88	236	643	423	64
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.78	0.78	0.86	0.86	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	445	115	290	1031	487	435
Arrive On Green	0.31	0.31	0.16	0.55	0.27	0.27
Sat Flow, veh/h	1421	368	1774	1863	1774	1583
Grp Volume(v), veh/h	0	428	236	643	423	64
Grp Sat Flow(s),veh/h/ln	0	1788	1774	1863	1774	1583
Q Serve(g_s), s	0.0	11.3	6.7	12.3	11.9	1.6
Cycle Q Clear(g_c), s	0.0	11.3	6.7	12.3	11.9	1.6
Prop In Lane		0.21	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	560	290	1031	487	435
V/C Ratio(X)	0.00	0.76	0.81	0.62	0.87	0.15
Avail Cap(c_a), veh/h	0	616	374	1177	611	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	16.2	21.1	8.0	18.1	14.3
Incr Delay (d2), s/veh	0.0	5.5	9.1	1.0	9.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.3	4.0	6.5	7.1	0.7
LnGrp Delay(d),s/veh	0.0	21.7	30.2	9.0	28.0	14.4
LnGrp LOS		C	C	A	C	B
Approach Vol, veh/h	428			879	487	
Approach Delay, s/veh	21.7			14.7	26.2	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	12.5	21.4				33.9		18.3
Change Period (Y+Rc), s	4.0	5.0				5.0		4.0
Max Green Setting (Gmax), s	11.0	18.0				33.0		18.0
Max Q Clear Time (g_c+I1), s	8.7	13.3				14.3		13.9
Green Ext Time (p_c), s	0.1	3.1				8.5		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		220	0		0	0		80	330		0
Storage Lanes	2		1	0		0	0		1	1		0
Taper Length (ft)	0			0			0			25		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.91	0.91	1.00
Ped Bike Factor												
Frt			0.850						0.850			
Flt Protected	0.950									0.950	0.975	
Satd. Flow (prot)	3433	0	1583	0	0	0	0	3539	1583	1610	3305	0
Flt Permitted	0.950									0.950	0.975	
Satd. Flow (perm)	3433	0	1583	0	0	0	0	3539	1583	1610	3305	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			386						128			
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		791			665			273			758	
Travel Time (s)		18.0			15.1			4.7			12.9	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	572	0	340	0	0	0	0	473	315	785	388	0
Confl. Peds. (#/hr)							16					16
Confl. Bikes (#/hr)												2
Peak Hour Factor	0.88	0.88	0.88	0.25	0.25	0.25	0.87	0.87	0.87	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	650	0	386	0	0	0	0	544	362	809	400	0
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	650	0	386	0	0	0	0	544	362	404	805	0

Intersection Summary

Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	572	340	473	315	785	388
Turn Type	Prot	Perm	NA	Free	Split	NA
Protected Phases	2		4		8	8
Permitted Phases		2		Free		
Detector Phase	2	2	4		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	2.0		18.0	18.0
Minimum Split (s)	11.1	11.1	5.0		44.1	44.1
Total Split (s)	58.0	58.0	42.0		50.0	50.0
Total Split (%)	38.7%	38.7%	28.0%		33.3%	33.3%
Yellow Time (s)	4.1	4.1	3.0		4.1	4.1
All-Red Time (s)	2.0	2.0	0.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.1	6.1	3.0		6.1	6.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max		Max	Max
Act Effct Green (s)	51.9	51.9	39.0	150.0	43.9	43.9
Actuated g/C Ratio	0.35	0.35	0.26	1.00	0.29	0.29
v/c Ratio	0.55	0.48	0.59	0.23	0.86	0.83
Control Delay	41.7	5.2	31.9	0.4	70.6	61.0
Queue Delay	0.0	0.0	3.0	0.0	0.0	0.0
Total Delay	41.7	5.2	34.9	0.4	70.6	61.0
LOS	D	A	C	A	E	E
Approach Delay			21.1			64.2
Approach LOS			C			E

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 57 (38%), Referenced to phase 2:EBL and 6:, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 40.0	Intersection LOS: D
Intersection Capacity Utilization 72.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 58: Mission Center Road & I-8 EB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	572	0	340	0	0	0	0	473	315	785	388	0
Number	5	2	12				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	650	0	0				0	544	0	809	400	0
Adj No. of Lanes	2	0	1				0	2	1	2	1	0
Peak Hour Factor	0.88	0.88	0.88				0.87	0.87	0.87	0.97	0.97	0.97
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	1191	0	548				0	920	412	1038	545	0
Arrive On Green	0.35	0.00	0.00				0.00	0.09	0.00	0.10	0.10	0.00
Sat Flow, veh/h	3442	0	1583				0	3632	1583	3548	1863	0
Grp Volume(v), veh/h	650	0	0				0	544	0	809	400	0
Grp Sat Flow(s),veh/h/ln	1721	0	1583				0	1770	1583	1774	1863	0
Q Serve(g_s), s	22.8	0.0	0.0				0.0	22.2	0.0	33.4	31.3	0.0
Cycle Q Clear(g_c), s	22.8	0.0	0.0				0.0	22.2	0.0	33.4	31.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1191	0	548				0	920	412	1038	545	0
V/C Ratio(X)	0.55	0.00	0.00				0.00	0.59	0.00	0.78	0.73	0.00
Avail Cap(c_a), veh/h	1191	0	548				0	920	412	1038	545	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.5	0.0	0.0				0.0	60.9	0.0	63.0	62.1	0.0
Incr Delay (d2), s/veh	1.8	0.0	0.0				0.0	2.8	0.0	5.8	8.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	0.0	0.0				0.0	11.3	0.0	17.3	17.5	0.0
LnGrp Delay(d),s/veh	41.3	0.0	0.0				0.0	63.7	0.0	68.8	70.6	0.0
LnGrp LOS	D							E		E	E	
Approach Vol, veh/h		650						544			1209	
Approach Delay, s/veh		41.3						63.7			69.4	
Approach LOS		D						E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		58.0		42.0				50.0
Change Period (Y+Rc), s		6.1		3.0				6.1
Max Green Setting (Gmax), s		51.9		39.0				43.9
Max Q Clear Time (g_c+I1), s		24.8		24.2				35.4
Green Ext Time (p_c), s		1.3		1.1				2.3

Intersection Summary	
HCM 2010 Ctrl Delay	60.5
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	280		0	0		220	0		0	0		0
Storage Lanes	1		0	0		1	0		1	1		1
Taper Length (ft)	25			0			0			0		
Lane Util. Factor	0.91	0.91	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor								1.00	0.97			0.97
Frt		0.998				0.850			0.850			0.850
Flt Protected	0.950	0.961			0.997			0.995		0.950	0.958	
Satd. Flow (prot)	1610	3251	0	0	3529	1583	0	1853	1583	1681	1695	1583
Flt Permitted	0.950	0.961			0.997			0.995		0.950	0.958	
Satd. Flow (perm)	1610	3251	0	0	3529	1583	0	1851	1540	1681	1695	1537
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				67			111			313
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		473			544			207			273	
Travel Time (s)		9.2			10.6			3.5			4.7	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	494	79	6	4	67	284	3	26	11	402	25	285
Confl. Peds. (#/hr)							10					10
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.43	0.43	0.43	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	568	91	7	4	74	312	7	60	26	442	27	313
Shared Lane Traffic (%)	75%									47%		
Lane Group Flow (vph)	142	524	0	0	78	312	0	67	26	234	235	313

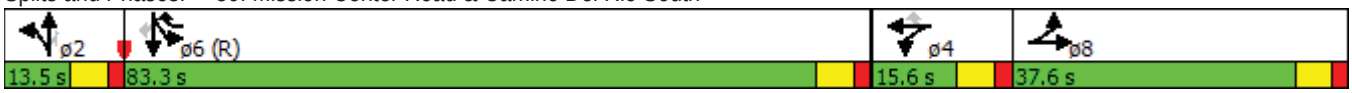
Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	494	79	67	284	26	11	402	25	285
Turn Type	Split	NA	NA	pm+ov	NA	Perm	Split	NA	Perm
Protected Phases	8	8	4	6	2		6	6	
Permitted Phases				4		2			6
Detector Phase	8	8	4	6	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	9.5	5.0	2.0	2.0	5.0	5.0	5.0
Minimum Split (s)	16.1	16.1	15.6	33.1	8.1	8.1	33.1	33.1	33.1
Total Split (s)	37.6	37.6	15.6	83.3	13.5	13.5	83.3	83.3	83.3
Total Split (%)	25.1%	25.1%	10.4%	55.5%	9.0%	9.0%	55.5%	55.5%	55.5%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	31.5	31.5	9.5	92.8	7.4	7.4	77.2	77.2	77.2
Actuated g/C Ratio	0.21	0.21	0.06	0.62	0.05	0.05	0.51	0.51	0.51
v/c Ratio	0.42	1.21dl	0.35	0.31	0.74	0.14	0.27	0.27	0.33
Control Delay	55.8	64.2	71.9	11.2	110.8	1.6	10.2	10.2	0.8
Queue Delay	0.5	1.1	0.0	0.0	0.0	0.0	2.2	2.1	1.2
Total Delay	56.3	65.2	71.9	11.2	110.8	1.6	12.3	12.3	2.0
LOS	E	E	E	B	F	A	B	B	A
Approach Delay		63.3	23.4		80.3			8.2	
Approach LOS		E	C		F			A	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 15 (10%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 33.7	Intersection LOS: C
Intersection Capacity Utilization 54.8%	ICU Level of Service A
Analysis Period (min) 15	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 59: Mission Center Road & Camino Del Rio South



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	494	79	6	4	67	284	3	26	11	402	25	285
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.92	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	568	91	7	4	74	312	7	60	26	461	0	313
Adj No. of Lanes	2	1	0	0	2	1	0	1	1	2	0	1
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.43	0.43	0.43	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	745	359	28	6	224	178	10	82	72	1826	0	790
Arrive On Green	0.21	0.21	0.21	0.06	0.06	0.06	0.05	0.05	0.05	0.51	0.00	0.51
Sat Flow, veh/h	3548	1708	131	95	3532	1583	194	1659	1464	3548	0	1534
Grp Volume(v), veh/h	568	0	98	78	0	312	67	0	26	461	0	313
Grp Sat Flow(s),veh/h/ln	1774	0	1840	1858	1770	1583	1853	0	1464	1774	0	1534
Q Serve(g_s), s	22.6	0.0	6.7	6.2	0.0	9.5	5.3	0.0	2.6	10.9	0.0	18.7
Cycle Q Clear(g_c), s	22.6	0.0	6.7	6.2	0.0	9.5	5.3	0.0	2.6	10.9	0.0	18.7
Prop In Lane	1.00		0.07	0.05		1.00	0.10		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	745	0	386	118	112	178	91	0	72	1826	0	790
V/C Ratio(X)	0.76	0.00	0.25	0.66	0.00	1.75	0.73	0.00	0.36	0.25	0.00	0.40
Avail Cap(c_a), veh/h	745	0	386	118	112	178	91	0	72	1826	0	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.7	0.0	49.4	68.7	0.0	63.3	70.3	0.0	69.0	20.3	0.0	22.2
Incr Delay (d2), s/veh	7.3	0.0	1.6	25.7	0.0	359.2	40.4	0.0	13.4	0.3	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	0.0	3.6	4.0	0.0	25.2	3.8	0.0	1.3	5.4	0.0	8.2
LnGrp Delay(d),s/veh	63.0	0.0	51.0	94.4	0.0	422.4	110.8	0.0	82.4	20.6	0.0	23.7
LnGrp LOS	E		D	F	A	F	F		F	C		C
Approach Vol, veh/h		666			390			93			774	
Approach Delay, s/veh		61.2			356.8			102.8			21.9	
Approach LOS		E			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		13.5		15.6		83.3		37.6
Change Period (Y+Rc), s		6.1		6.1		6.1		6.1
Max Green Setting (Gmax), s		7.4		9.5		77.2		31.5
Max Q Clear Time (g_c+I1), s		7.3		11.5		20.7		24.6
Green Ext Time (p_c), s		0.0		0.0		1.4		2.9

Intersection Summary	
HCM 2010 Ctrl Delay	107.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		2	0		1	0		0	0		0
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor											0.99	
Frt			0.850			0.865		0.957			0.962	
Flt Protected												
Satd. Flow (prot)	0	0	2787	0	0	1611	0	3387	0	0	3372	0
Flt Permitted												
Satd. Flow (perm)	0	0	2787	0	0	1611	0	3387	0	0	3372	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			108			159		156			126	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		550			181			411			198	
Travel Time (s)		12.5			4.1			6.2			3.0	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	0	375	0	0	197	0	943	374	0	1369	471
Confl. Peds. (#/hr)							7					7
Confl. Bikes (#/hr)												5
Peak Hour Factor	0.82	0.92	0.82	0.92	0.92	0.76	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	457	0	0	259	0	1025	407	0	1488	512
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	457	0	0	259	0	1432	0	0	2000	0

Intersection Summary

Lane Group	EBR	WBR	NBT	SBT
Lane Configurations				
Volume (vph)	375	197	943	1369
Turn Type	Prot	Prot	NA	NA
Protected Phases	4	8	2	6
Permitted Phases				
Detector Phase	4	8	2	6
Switch Phase				
Minimum Initial (s)	4.0	4.0	15.0	15.0
Minimum Split (s)	8.0	20.0	21.1	26.1
Total Split (s)	22.0	22.0	68.0	68.0
Total Split (%)	24.4%	24.4%	75.6%	75.6%
Yellow Time (s)	3.5	3.5	4.1	4.1
All-Red Time (s)	0.5	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	5.1	5.1
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	None	Min	Min
Act Effct Green (s)	14.3	14.3	48.7	48.7
Actuated g/C Ratio	0.20	0.20	0.67	0.67
v/c Ratio	0.72	0.58	0.62	0.87
Control Delay	29.7	18.5	7.1	13.9
Queue Delay	0.0	0.0	0.2	0.0
Total Delay	29.7	18.5	7.3	13.9
LOS	C	B	A	B
Approach Delay			7.3	13.9
Approach LOS			A	B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 72.6	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 13.7	Intersection LOS: B
Intersection Capacity Utilization 73.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 60: Qualcomm Way & I-8 EB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	375	0	0	197	0	943	374	0	1369	471
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	0	1863	0	0	1863	0	1863	1900	0	1863	1900
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	1025	0	0	1488	452
Adj No. of Lanes	0	0	2	0	0	1	0	2	0	0	2	0
Peak Hour Factor	0.82	0.92	0.82	0.92	0.92	0.76	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	2	0	0	2	0	2	2	0	2	2
Cap, veh/h	0	0	0	0	0	0	0	3092	0	0	2357	676
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.00	0.87	0.87
Sat Flow, veh/h		0			0		0	3725	0	0	2791	774
Grp Volume(v), veh/h		0.0			0.0		0	1025	0	0	946	994
Grp Sat Flow(s),veh/h/ln							0	1770	0	0	1770	1702
Q Serve(g_s), s							0.0	2.1	0.0	0.0	5.9	7.2
Cycle Q Clear(g_c), s							0.0	2.1	0.0	0.0	5.9	7.2
Prop In Lane							0.00		0.00	0.00		0.45
Lane Grp Cap(c), veh/h							0	3092	0	0	1546	1487
V/C Ratio(X)							0.00	0.33	0.00	0.00	0.61	0.67
Avail Cap(c_a), veh/h							0	5517	0	0	2758	2653
HCM Platoon Ratio							1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)							0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh							0.0	0.5	0.0	0.0	0.7	0.8
Incr Delay (d2), s/veh							0.0	0.0	0.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh							0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln							0.0	0.9	0.0	0.0	2.4	2.8
LnGrp Delay(d),s/veh							0.0	0.5	0.0	0.0	0.8	1.0
LnGrp LOS								A			A	A
Approach Vol, veh/h								1025			1940	
Approach Delay, s/veh								0.5			0.9	
Approach LOS								A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		40.4				40.4		
Change Period (Y+Rc), s		5.1				5.1		
Max Green Setting (Gmax), s		62.9				62.9		
Max Q Clear Time (g_c+I1), s		4.1				9.2		
Green Ext Time (p_c), s		27.1				26.1		

Intersection Summary	
HCM 2010 Ctrl Delay	0.8
HCM 2010 LOS	A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	80		35	60		60	100		0	0		160
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	25			25			25			0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	0.99		0.98	1.00		0.98	1.00	0.99		1.00		0.96
Frt			0.850			0.850		0.977				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3438	0	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1751	1863	1557	1763	1863	1547	1766	3438	0	1762	3539	1526
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140			307		14				90
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		536			618			1151			411	
Travel Time (s)		10.4			12.0			17.4			6.2	

Intersection Summary	
Area Type:	Other



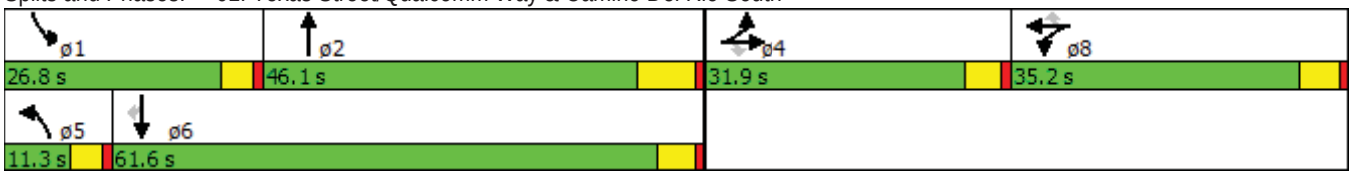
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	204	168	247	189	53	528	72	728	130	219	1166	147
Confl. Peds. (#/hr)	8		3	3		8	7		5	5		7
Confl. Bikes (#/hr)									2			
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.87	0.87	0.87	0.78	0.78	0.78
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	246	202	298	201	56	562	83	837	149	281	1495	188
Shared Lane Traffic (%)												
Lane Group Flow (vph)	246	202	298	201	56	562	83	986	0	281	1495	188

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	204	168	247	189	53	528	72	728	219	1166	147
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	4	4	4	8	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	10.0	10.0
Minimum Split (s)	31.9	31.9	31.9	35.2	35.2	35.2	8.4	29.0	8.4	34.9	34.9
Total Split (s)	31.9	31.9	31.9	35.2	35.2	35.2	11.3	46.1	26.8	61.6	61.6
Total Split (%)	22.8%	22.8%	22.8%	25.1%	25.1%	25.1%	8.1%	32.9%	19.1%	44.0%	44.0%
Yellow Time (s)	3.9	3.9	3.9	4.2	4.2	4.2	3.4	6.0	3.4	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	5.2	5.2	5.2	4.4	7.0	4.4	4.9	4.9
Lead/Lag							Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min
Act Effct Green (s)	23.4	23.4	23.4	29.5	29.5	29.5	6.9	39.2	22.4	56.8	56.8
Actuated g/C Ratio	0.17	0.17	0.17	0.22	0.22	0.22	0.05	0.29	0.16	0.42	0.42
v/c Ratio	0.81	0.63	0.78	0.52	0.14	0.98	0.93	0.99	0.96	1.01	0.27
Control Delay	74.7	61.6	42.6	53.4	45.3	56.4	141.2	73.0	100.8	65.9	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.1	0.0
Total Delay	74.7	61.6	42.6	53.4	45.3	56.4	141.2	73.0	100.8	100.1	15.0
LOS	E	E	D	D	D	E	F	E	F	F	B
Approach Delay		58.3			54.9			78.3		92.0	
Approach LOS		E			D			E		F	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 136	
Natural Cycle: 145	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 76.8	Intersection LOS: E
Intersection Capacity Utilization 83.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 61: Texas Street/Qualcomm Way & Camino Del Rio South



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	204	168	247	189	53	528	72	728	130	219	1166	147
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	246	202	165	201	56	301	83	837	138	281	1495	124
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.87	0.87	0.87	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	293	308	258	369	387	325	90	918	151	293	1478	656
Arrive On Green	0.17	0.17	0.17	0.21	0.21	0.21	0.05	0.30	0.30	0.16	0.42	0.42
Sat Flow, veh/h	1774	1863	1560	1774	1863	1565	1774	3025	499	1774	3539	1570
Grp Volume(v), veh/h	246	202	165	201	56	301	83	490	485	281	1495	124
Grp Sat Flow(s),veh/h/ln	1774	1863	1560	1774	1863	1565	1774	1770	1754	1774	1770	1570
Q Serve(g_s), s	18.2	13.8	13.4	13.7	3.3	25.6	6.3	36.2	36.2	21.3	56.7	6.8
Cycle Q Clear(g_c), s	18.2	13.8	13.4	13.7	3.3	25.6	6.3	36.2	36.2	21.3	56.7	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	293	308	258	369	387	325	90	537	532	293	1478	656
V/C Ratio(X)	0.84	0.66	0.64	0.54	0.14	0.92	0.92	0.91	0.91	0.96	1.01	0.19
Avail Cap(c_a), veh/h	353	370	310	392	411	346	90	537	532	293	1478	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	53.1	52.9	48.0	43.9	52.7	64.2	45.6	45.6	56.3	39.6	25.0
Incr Delay (d2), s/veh	14.0	3.1	3.2	0.6	0.1	28.2	68.1	21.1	21.2	41.5	26.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	7.4	6.0	6.8	1.7	13.6	4.8	20.8	20.7	13.8	32.9	3.0
LnGrp Delay(d),s/veh	68.9	56.2	56.1	48.6	44.0	81.0	132.3	66.6	66.8	97.8	65.9	25.2
LnGrp LOS	E	E	E	D	D	F	F	E	E	F	F	C
Approach Vol, veh/h		613			558			1058			1900	
Approach Delay, s/veh		61.3			65.6			71.8			67.9	
Approach LOS		E			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.8	48.2		27.4	11.3	63.7		33.4
Change Period (Y+Rc), s	4.4	7.0		4.9	4.4	* 7		5.2
Max Green Setting (Gmax), s	22.4	39.1		27.0	6.9	* 57		30.0
Max Q Clear Time (g_c+I1), s	23.3	38.2		20.2	8.3	58.7		27.6
Green Ext Time (p_c), s	0.0	0.9		1.5	0.0	0.0		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	67.6
HCM 2010 LOS	E

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	160			230	75	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99			0.97	0.99	0.98
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1759	1863	1863	1535	1756	1550
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				112		95
Link Speed (mph)		35	45		25	
Link Distance (ft)		1857	2146		1067	
Travel Time (s)		36.2	32.5		29.1	

Intersection Summary	
Area Type:	Other



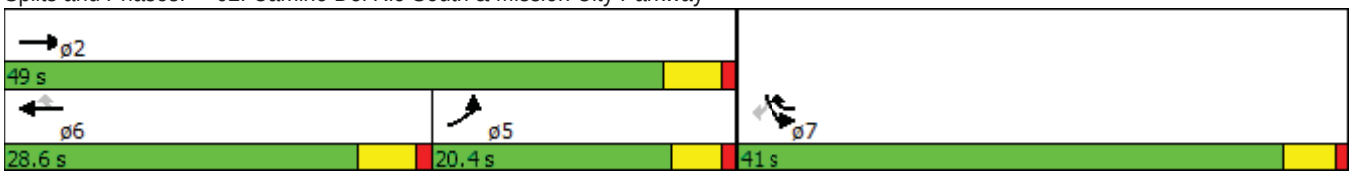
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Volume (vph)	101	486	197	104	559	81
Confl. Peds. (#/hr)	4			4	5	
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.78	0.78	0.93	0.93	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	129	623	212	112	658	95
Shared Lane Traffic (%)						
Lane Group Flow (vph)	129	623	212	112	658	95

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	101	486	197	104	559	81
Turn Type	Prot	NA	NA	pm+ov	Prot	Perm
Protected Phases	5	2	6	7	7	
Permitted Phases				6		7
Detector Phase	5	2	6	7	7	7
Switch Phase						
Minimum Initial (s)	4.0	10.0	10.0	4.0	4.0	4.0
Minimum Split (s)	20.4	21.0	28.0	22.4	22.4	22.4
Total Split (s)	20.4	49.0	28.6	41.0	41.0	41.0
Total Split (%)	22.7%	54.4%	31.8%	45.6%	45.6%	45.6%
Yellow Time (s)	3.4	4.0	4.0	3.4	3.4	3.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.4	5.0	5.0	4.4	4.4	4.4
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	11.1	29.9	17.2	48.5	30.7	30.7
Actuated g/C Ratio	0.16	0.42	0.24	0.69	0.44	0.44
v/c Ratio	0.46	0.79	0.47	0.10	0.86	0.13
Control Delay	35.8	26.3	30.7	1.1	32.6	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	26.3	30.7	1.1	32.6	4.2
LOS	D	C	C	A	C	A
Approach Delay		27.9	20.4		29.0	
Approach LOS		C	C		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 70.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 27.1	Intersection LOS: C
Intersection Capacity Utilization 64.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 62: Camino Del Rio South & Mission City Parkway





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	101	486	197	104	559	81
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	129	623	212	0	658	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.78	0.78	0.93	0.93	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	254	788	352	942	720	643
Arrive On Green	0.14	0.42	0.19	0.00	0.41	0.00
Sat Flow, veh/h	1774	1863	1863	1583	1774	1583
Grp Volume(v), veh/h	129	623	212	0	658	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1583	1774	1583
Q Serve(g_s), s	3.7	15.9	5.7	0.0	19.3	0.0
Cycle Q Clear(g_c), s	3.7	15.9	5.7	0.0	19.3	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	254	788	352	942	720	643
V/C Ratio(X)	0.51	0.79	0.60	0.00	0.91	0.00
Avail Cap(c_a), veh/h	516	1490	799	1323	1181	1054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	21.8	13.8	20.4	0.0	15.4	0.0
Incr Delay (d2), s/veh	0.6	2.1	1.9	0.0	4.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	8.6	3.1	0.0	10.2	0.0
LnGrp Delay(d),s/veh	22.4	15.9	22.3	0.0	19.8	0.0
LnGrp LOS	C	B	C		B	
Approach Vol, veh/h		752	212		658	
Approach Delay, s/veh		17.0	22.3		19.8	
Approach LOS		B	C		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		28.3		26.7	12.9	15.4		
Change Period (Y+Rc), s		5.0		4.4	5.0	* 5		
Max Green Setting (Gmax), s		44.0		36.6	16.0	* 24		
Max Q Clear Time (g_c+I1), s		17.9		21.3	5.7	7.7		
Green Ext Time (p_c), s		5.1		1.1	3.4	1.0		

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	80		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	1		1
Taper Length (ft)	0			25			0			0		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00				0.96		0.99		0.96
Frt		0.998						0.916				0.850
Flt Protected				0.950				0.982		0.950		
Satd. Flow (prot)	0	3531	0	1770	1863	0	0	1641	0	1770	0	1583
Flt Permitted				0.950				0.982		0.950		
Satd. Flow (perm)	0	3531	0	1769	1863	0	0	1609	0	1759	0	1526
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						137				136
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		1152			264			335			589	
Travel Time (s)		17.5			4.0			5.1			8.9	

Intersection Summary	
Area Type:	Other



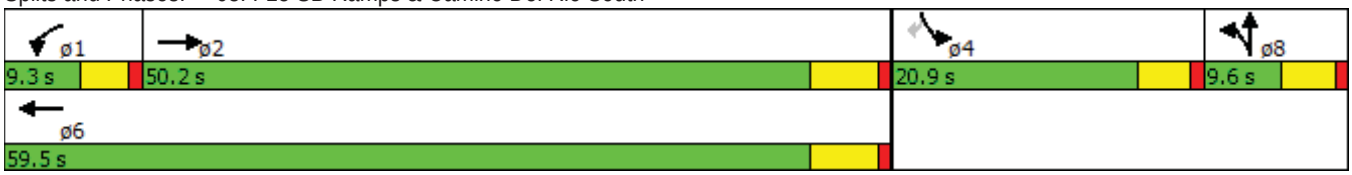
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	1517	17	27	144	0	20	0	34	180	0	85
Confl. Peds. (#/hr)	8		2	2		8	6		4	4		6
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.88	0.88	0.88	0.85	0.85	0.85	0.75	0.75	0.75	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1724	19	32	169	0	27	0	45	194	0	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1743	0	32	169	0	0	72	0	194	0	91

Intersection Summary

Lane Group	EBT	WBL	WBT	NBT	SBL	SBR
Lane Configurations						
Volume (vph)	1517	27	144	0	180	85
Turn Type	NA	Prot	NA	NA	Prot	Perm
Protected Phases	2	1	6	8	4	
Permitted Phases						4
Detector Phase	2	1	6	8	4	4
Switch Phase						
Minimum Initial (s)	20.0	5.0	11.0	5.0	5.0	5.0
Minimum Split (s)	27.5	9.2	21.5	9.5	20.6	20.6
Total Split (s)	50.2	9.3	59.5	9.6	20.9	20.9
Total Split (%)	55.8%	10.3%	66.1%	10.7%	23.2%	23.2%
Yellow Time (s)	4.5	3.2	4.5	3.5	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.2	5.5	4.5	4.6	4.6
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	Min	None	Min	None	None	None
Act Effct Green (s)	43.4	5.3	48.3	5.3	11.8	11.8
Actuated g/C Ratio	0.56	0.07	0.62	0.07	0.15	0.15
v/c Ratio	0.88	0.27	0.15	0.30	0.73	0.26
Control Delay	24.9	45.7	7.6	3.7	50.0	4.1
Queue Delay	0.0	0.0	0.4	0.0	0.0	0.0
Total Delay	24.9	45.7	7.9	3.7	50.0	4.1
LOS	C	D	A	A	D	A
Approach Delay	24.9		14.0	3.7		
Approach LOS	C		B	A		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 77.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 24.6	Intersection LOS: C
Intersection Capacity Utilization 67.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 63: I-15 SB Ramps & Camino Del Rio South



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1517	17	27	144	0	20	0	34	180	0	85
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0	1900	1863	1900	1863	0	1863
Adj Flow Rate, veh/h	0	1724	19	32	169	0	27	0	0	194	0	0
Adj No. of Lanes	0	2	0	1	1	0	0	1	0	1	0	1
Peak Hour Factor	0.88	0.88	0.88	0.85	0.85	0.85	0.75	0.75	0.75	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	0	2
Cap, veh/h	0	2208	24	65	1390	0	56	0	0	0	0	0
Arrive On Green	0.00	0.62	0.62	0.04	0.75	0.00	0.03	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	0	3678	39	1774	1863	0	1774	0	0		0	
Grp Volume(v), veh/h	0	850	893	32	169	0	27	0	0		0.0	
Grp Sat Flow(s),veh/h/ln	0	1770	1855	1774	1863	0	1774	0	0			
Q Serve(g_s), s	0.0	16.0	16.1	0.8	1.1	0.0	0.7	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	16.0	16.1	0.8	1.1	0.0	0.7	0.0	0.0			
Prop In Lane	0.00		0.02	1.00		0.00	1.00		0.00			
Lane Grp Cap(c), veh/h	0	1090	1143	65	1390	0	56	0	0			
V/C Ratio(X)	0.00	0.78	0.78	0.49	0.12	0.00	0.48	0.00	0.00			
Avail Cap(c_a), veh/h	0	1758	1842	201	2235	0	201	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	6.4	6.4	21.3	1.6	0.0	21.4	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.5	0.5	2.1	0.0	0.0	2.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	7.7	8.1	0.4	0.6	0.0	0.4	0.0	0.0			
LnGrp Delay(d),s/veh	0.0	6.9	6.9	23.4	1.6	0.0	23.7	0.0	0.0			
LnGrp LOS		A	A	C	A		C					
Approach Vol, veh/h		1743			201			27				
Approach Delay, s/veh		6.9			5.1			23.7				
Approach LOS		A			A			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	5.8	33.2				39.1		5.9
Change Period (Y+Rc), s	* 4.2	5.5				5.5		4.5
Max Green Setting (Gmax), s	* 5.1	44.7				54.0		5.1
Max Q Clear Time (g_c+I1), s	2.8	18.1				3.1		2.7
Green Ext Time (p_c), s	0.0	9.7				11.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	6.9
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	350		0	0
Storage Lanes		0	1		0	0
Taper Length (ft)			25		0	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.955					
Flt Protected			0.950			
Satd. Flow (prot)	3380	0	1770	3539	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	3380	0	1770	3539	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	325					
Link Speed (mph)	45			45	45	
Link Distance (ft)	264			1252	814	
Travel Time (s)	4.0			19.0	12.3	

Intersection Summary	
Area Type:	Other



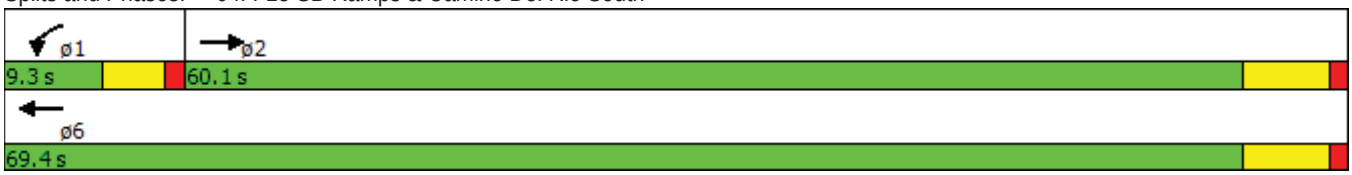
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	1222	526	30	162	0	0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.88	0.88	0.91	0.91	0.25	0.25
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1389	598	33	178	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1987	0	33	178	0	0

Intersection Summary

Lane Group	EBT	WBL	WBT
Lane Configurations			
Volume (vph)	1222	30	162
Turn Type	NA	Prot	NA
Protected Phases	2	1	6
Permitted Phases			
Detector Phase	2	1	6
Switch Phase			
Minimum Initial (s)	20.0	5.0	11.0
Minimum Split (s)	27.5	9.2	21.5
Total Split (s)	60.1	9.3	69.4
Total Split (%)	86.6%	13.4%	100.0%
Yellow Time (s)	4.5	3.2	4.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	5.5	4.2	5.5
Lead/Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes	
Recall Mode	Min	None	Min
Act Effct Green (s)	49.2	5.4	53.6
Actuated g/C Ratio	0.92	0.10	1.00
v/c Ratio	0.64	0.19	0.05
Control Delay	2.7	31.4	0.0
Queue Delay	0.1	0.0	0.0
Total Delay	2.8	31.4	0.0
LOS	A	C	A
Approach Delay	2.8		4.9
Approach LOS	A		A

Intersection Summary	
Cycle Length: 69.4	
Actuated Cycle Length: 53.6	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 3.0	Intersection LOS: A
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 64: I-15 SB Ramps & Camino Del Rio South



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1222	526	30	162	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863		
Adj Flow Rate, veh/h	1389	0	33	178		
Adj No. of Lanes	2	0	1	2		
Peak Hour Factor	0.88	0.88	0.91	0.91		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2288	0	71	2910		
Arrive On Green	0.65	0.00	0.04	0.82		
Sat Flow, veh/h	3725	0	1774	3632		
Grp Volume(v), veh/h	1389	0	33	178		
Grp Sat Flow(s),veh/h/ln	1770	0	1774	1770		
Q Serve(g_s), s	7.1	0.0	0.6	0.3		
Cycle Q Clear(g_c), s	7.1	0.0	0.6	0.3		
Prop In Lane		0.00	1.00			
Lane Grp Cap(c), veh/h	2288	0	71	2910		
V/C Ratio(X)	0.61	0.00	0.47	0.06		
Avail Cap(c_a), veh/h	6247	0	292	7311		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	3.2	0.0	14.5	0.5		
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.3	0.1		
LnGrp Delay(d),s/veh	3.3	0.0	16.3	0.5		
LnGrp LOS	A		B	A		
Approach Vol, veh/h	1389			211		
Approach Delay, s/veh	3.3			3.0		
Approach LOS	A			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	5.4	25.5				30.9		
Change Period (Y+Rc), s	* 4.2	5.5				5.5		
Max Green Setting (Gmax), s	* 5.1	54.6				63.9		
Max Q Clear Time (g_c+I1), s	2.6	9.1				2.3		
Green Ext Time (p_c), s	0.0	8.9				9.0		

Intersection Summary	
HCM 2010 Ctrl Delay	3.2
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	115		0	0		180	190		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	25			0			25			0		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850		0.852				
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1770	3539	0	0	1863	1583	1770	1587	0	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1770	3539	0	0	1863	1583	1770	1587	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						113		111				
Link Speed (mph)		45			40			45			45	
Link Distance (ft)		1252			1666			833			375	
Travel Time (s)		19.0			28.4			12.6			5.7	

Intersection Summary	
Area Type:	Other



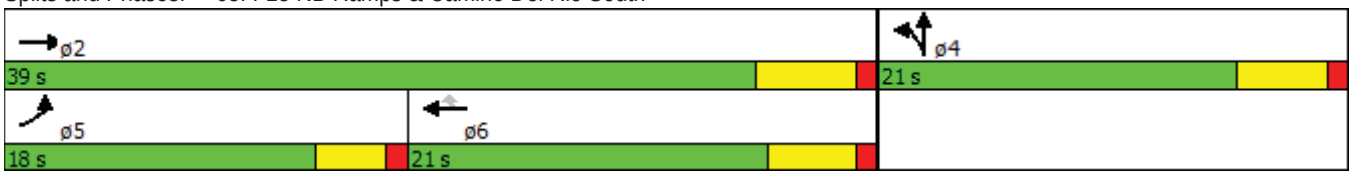
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	359	868	0	0	90	37	110	2	110	0	0	0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)			4									
Peak Hour Factor	0.90	0.90	0.90	0.79	0.79	0.79	0.84	0.84	0.84	0.25	0.25	0.25
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	399	964	0	0	114	47	131	2	131	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	399	964	0	0	114	47	131	133	0	0	0	0

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT
Lane Configurations						
Volume (vph)	359	868	90	37	110	2
Turn Type	Prot	NA	NA	Perm	Split	NA
Protected Phases	5	2	6		4	4
Permitted Phases				6		
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	14.0	14.0	5.0	5.0
Minimum Split (s)	9.2	27.5	21.0	21.0	21.0	21.0
Total Split (s)	18.0	39.0	21.0	21.0	21.0	21.0
Total Split (%)	30.0%	65.0%	35.0%	35.0%	35.0%	35.0%
Yellow Time (s)	3.2	4.5	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.2	5.5	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	Min	Min	Min	None	None
Act Effct Green (s)	13.9	33.4	14.3	14.3	8.0	8.0
Actuated g/C Ratio	0.29	0.70	0.30	0.30	0.17	0.17
v/c Ratio	0.78	0.39	0.21	0.09	0.44	0.37
Control Delay	31.9	5.3	16.0	0.6	23.9	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	5.3	16.0	0.6	23.9	9.6
LOS	C	A	B	A	C	A
Approach Delay		13.1	11.5			16.7
Approach LOS		B	B			B

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 48	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 13.5	Intersection LOS: B
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 65: I-15 NB Ramps & Camino Del Rio South



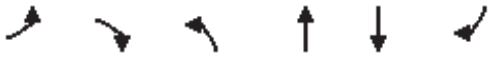
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	359	868	0	0	90	37	110	2	110	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1900			
Adj Flow Rate, veh/h	399	964	0	0	114	0	131	2	36			
Adj No. of Lanes	1	2	0	0	1	1	1	1	0			
Peak Hour Factor	0.90	0.90	0.90	0.79	0.79	0.79	0.84	0.84	0.84			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	459	2343	0	0	578	491	187	9	159			
Arrive On Green	0.26	0.66	0.00	0.00	0.31	0.00	0.11	0.11	0.11			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1774	84	1512			
Grp Volume(v), veh/h	399	964	0	0	114	0	131	0	38			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1863	1583	1774	0	1596			
Q Serve(g_s), s	9.7	5.7	0.0	0.0	2.0	0.0	3.2	0.0	1.0			
Cycle Q Clear(g_c), s	9.7	5.7	0.0	0.0	2.0	0.0	3.2	0.0	1.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.95			
Lane Grp Cap(c), veh/h	459	2343	0	0	578	491	187	0	168			
V/C Ratio(X)	0.87	0.41	0.00	0.00	0.20	0.00	0.70	0.00	0.23			
Avail Cap(c_a), veh/h	542	2626	0	0	660	561	629	0	566			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	16.0	3.5	0.0	0.0	11.4	0.0	19.5	0.0	18.5			
Incr Delay (d2), s/veh	11.2	0.0	0.0	0.0	0.1	0.0	1.8	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.1	2.7	0.0	0.0	1.1	0.0	1.7	0.0	0.4			
LnGrp Delay(d),s/veh	27.2	3.6	0.0	0.0	11.5	0.0	21.3	0.0	18.8			
LnGrp LOS	C	A			B		C		B			
Approach Vol, veh/h		1363			114			169				
Approach Delay, s/veh		10.5			11.5			20.7				
Approach LOS		B			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		35.4		9.8	15.9	19.5		
Change Period (Y+Rc), s		5.5		5.0	* 4.2	* 5.5		
Max Green Setting (Gmax), s		33.5		16.0	* 14	* 16		
Max Q Clear Time (g_c+I1), s		7.7		5.2	11.7	4.0		
Green Ext Time (p_c), s		4.7		0.2	0.1	3.7		

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

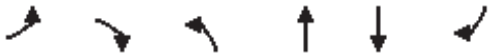
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	180			0
Storage Lanes	2	3	1			0
Taper Length (ft)	0		25			
Lane Util. Factor	0.97	0.76	1.00	0.95	0.91	0.91
Ped Bike Factor			1.00		0.99	
Frt		0.850			0.952	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	3610	1770	3539	4791	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	3610	1768	3539	4791	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		1199			112	
Link Speed (mph)	45			50	45	
Link Distance (ft)	797			948	780	
Travel Time (s)	12.1			12.9	11.8	

Intersection Summary	
Area Type:	Other



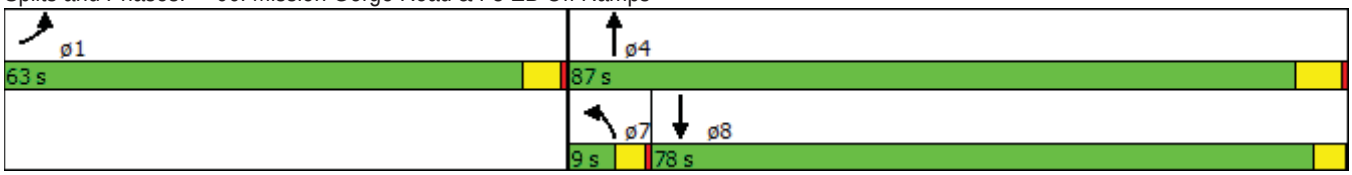
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Volume (vph)	840	2017	14	558	1254	593
Confl. Peds. (#/hr)			2			2
Confl. Bikes (#/hr)						4
Peak Hour Factor	0.97	0.97	0.93	0.93	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	866	2079	15	600	1280	605
Shared Lane Traffic (%)						
Lane Group Flow (vph)	866	2079	15	600	1885	0

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	840	2017	14	558	1254
Turn Type	Prot	Free	Prot	NA	NA
Protected Phases	1		7	4	8
Permitted Phases		Free			
Detector Phase	1		7	4	8
Switch Phase					
Minimum Initial (s)	5.0		4.0	12.0	4.0
Minimum Split (s)	21.1		8.0	22.0	20.0
Total Split (s)	63.0		9.0	87.0	78.0
Total Split (%)	42.0%		6.0%	58.0%	52.0%
Yellow Time (s)	4.1		3.5	5.0	3.5
All-Red Time (s)	1.0		0.5	1.0	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.1		4.0	6.0	4.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None		None	None	Min
Act Effct Green (s)	32.7	97.5	5.4	52.7	52.2
Actuated g/C Ratio	0.34	1.00	0.06	0.54	0.54
v/c Ratio	0.75	0.58	0.15	0.31	0.72
Control Delay	35.5	0.7	60.9	12.9	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	0.7	60.9	12.9	18.9
LOS	D	A	E	B	B
Approach Delay	10.9			14.1	18.9
Approach LOS	B			B	B

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 97.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 14.0	Intersection LOS: B
Intersection Capacity Utilization 69.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 66: Mission Gorge Road & I-8 EB Off Ramps



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	840	2017	14	558	1254	593
Number	1	16	7	4	8	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	866	842	15	600	1280	549
Adj No. of Lanes	2	3	1	2	3	0
Peak Hour Factor	0.97	0.97	0.93	0.93	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1024	1074	24	2094	1869	793
Arrive On Green	0.30	0.30	0.01	0.59	0.54	0.54
Sat Flow, veh/h	3442	3610	1774	3632	3642	1475
Grp Volume(v), veh/h	866	842	15	600	1249	580
Grp Sat Flow(s),veh/h/ln	1721	1203	1774	1770	1695	1559
Q Serve(g_s), s	23.6	21.4	0.8	8.3	27.0	27.4
Cycle Q Clear(g_c), s	23.6	21.4	0.8	8.3	27.0	27.4
Prop In Lane	1.00	1.00	1.00			0.95
Lane Grp Cap(c), veh/h	1024	1074	24	2094	1824	839
V/C Ratio(X)	0.85	0.78	0.62	0.29	0.68	0.69
Avail Cap(c_a), veh/h	1992	2089	89	2866	2508	1153
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.0	32.2	49.1	10.0	16.9	17.0
Incr Delay (d2), s/veh	0.8	0.5	23.1	0.0	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	0.0	0.6	4.1	12.6	12.0
LnGrp Delay(d),s/veh	33.8	32.7	72.2	10.1	17.4	18.1
LnGrp LOS	C	C	E	B	B	B
Approach Vol, veh/h	1708			615	1829	
Approach Delay, s/veh	33.2			11.6	17.6	
Approach LOS	C			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				65.2		34.9	5.4	59.8
Change Period (Y+Rc), s				6.0		5.1	4.0	* 6
Max Green Setting (Gmax), s				81.0		57.9	5.0	* 74
Max Q Clear Time (g_c+I1), s				10.3		25.6	2.8	29.4
Green Ext Time (p_c), s				29.7		4.1	0.0	24.4

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	110		110	85		0	190		0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (ft)	0			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.97		0.97	0.99		0.96	1.00		0.96	0.99	1.00	
Frt			0.850			0.850			0.850		0.988	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	3487	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1725	1863	1538	1752	1863	1513	1767	1863	1513	1752	3487	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			136			273			136		10	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		1000			781			1255			1135	
Travel Time (s)		19.5			15.2			19.0			17.2	

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	171	70	39	28	55	229	65	514	44	162	1441	125
Confl. Peds. (#/hr)	14		6	6		14	4		7	7		4
Confl. Bikes (#/hr)			4			4			3			4
Peak Hour Factor	0.91	0.91	0.91	0.84	0.84	0.84	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	188	77	43	33	65	273	71	565	48	178	1584	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	188	77	43	33	65	273	71	565	48	178	1721	0

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Volume (vph)	171	70	39	28	55	229	65	514	44	162	1441
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	4	4		8	8		5	2		1	6
Permitted Phases			4			8			2		
Detector Phase	4	4	4	8	8	8	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	10.0	4.0	10.0
Minimum Split (s)	24.9	24.9	24.9	23.9	23.9	23.9	8.4	24.9	24.9	8.4	23.9
Total Split (s)	25.2	25.2	25.2	24.0	24.0	24.0	10.6	54.6	54.6	21.2	65.2
Total Split (%)	20.2%	20.2%	20.2%	19.2%	19.2%	19.2%	8.5%	43.7%	43.7%	17.0%	52.2%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.9	3.9	3.4	3.9	3.9	3.4	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	4.9	4.9	4.9	4.9	4.9	4.4	4.9	4.9	4.4	4.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min
Act Effct Green (s)	15.4	15.4	15.4	8.9	8.9	8.9	6.2	52.4	52.4	14.4	60.6
Actuated g/C Ratio	0.14	0.14	0.14	0.08	0.08	0.08	0.06	0.48	0.48	0.13	0.55
v/c Ratio	0.76	0.30	0.13	0.23	0.44	0.73	0.72	0.64	0.06	0.77	0.90
Control Delay	65.9	46.0	0.8	52.1	58.1	18.2	89.5	28.2	0.1	69.3	30.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.9	46.0	0.8	52.1	58.1	18.2	89.5	28.2	0.1	69.3	30.7
LOS	E	D	A	D	E	B	F	C	A	E	C
Approach Delay		51.9			28.2			32.6			34.3
Approach LOS		D			C			C			C

Intersection Summary	
Cycle Length: 125	
Actuated Cycle Length: 110.3	
Natural Cycle: 125	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 34.9	Intersection LOS: C
Intersection Capacity Utilization 75.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 67: Texas Street & Madison Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	171	70	39	28	55	229	65	514	44	162	1441	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	188	77	0	33	65	0	71	565	0	178	1584	132
Adj No. of Lanes	1	1	1	1	1	1	1	1	1	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.84	0.84	0.84	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	255	217	134	140	119	91	910	773	209	1832	151
Arrive On Green	0.14	0.14	0.00	0.08	0.08	0.00	0.05	0.49	0.00	0.12	0.55	0.55
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	1863	1583	1774	3302	273
Grp Volume(v), veh/h	188	77	0	33	65	0	71	565	0	178	842	874
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1863	1583	1774	1770	1805
Q Serve(g_s), s	10.7	3.9	0.0	1.8	3.5	0.0	4.2	23.4	0.0	10.3	42.4	43.9
Cycle Q Clear(g_c), s	10.7	3.9	0.0	1.8	3.5	0.0	4.2	23.4	0.0	10.3	42.4	43.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	243	255	217	134	140	119	91	910	773	209	982	1001
V/C Ratio(X)	0.78	0.30	0.00	0.25	0.46	0.00	0.78	0.62	0.00	0.85	0.86	0.87
Avail Cap(c_a), veh/h	343	360	306	323	339	288	105	910	773	284	1017	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	40.8	0.0	45.7	46.5	0.0	49.2	19.7	0.0	45.4	19.8	20.2
Incr Delay (d2), s/veh	4.1	0.2	0.0	0.4	0.9	0.0	23.3	1.5	0.0	13.1	7.5	8.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	2.0	0.0	0.9	1.8	0.0	2.6	12.3	0.0	5.8	22.6	24.0
LnGrp Delay(d),s/veh	47.9	41.0	0.0	46.1	47.4	0.0	72.5	21.2	0.0	58.5	27.3	28.6
LnGrp LOS	D	D		D	D		E	C		E	C	C
Approach Vol, veh/h		265			98			636			1894	
Approach Delay, s/veh		45.9			46.9			27.0			30.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.7	56.2		19.3	9.8	63.1		12.8
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	16.8	49.7		20.3	6.2	60.3		19.1
Max Q Clear Time (g_c+I1), s	12.3	25.4		12.7	6.2	45.9		5.5
Green Ext Time (p_c), s	0.1	20.3		0.3	0.0	12.3		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	31.9
HCM 2010 LOS	C

Appendix E
HCS Analysis Worksheets
Adopted Community Plan (No Project)

AM Peak Hour

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Sunset Cliffs to Sports Arena*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*2851*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*63648*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*2851*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1508*	pc/h/ln
S	*68.9*	mph
D = v_p / S	*21.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Sports Arena Boulevard to I-5*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4381*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*99578*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*4381*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.28*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1545*	pc/h/ln
S	*68.6*	mph
D = v_p / S	*22.5*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-5 Interchange to Morena Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6177*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*135453*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6177*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2200*	pc/h/ln
S	*58.4*	mph
D = v_p / S	*37.7*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Morena Boulevard to Taylor St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7685*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*168535*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7685*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2053*	pc/h/ln
S	*61.6*	mph
D = v_p / S	*33.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Taylor Street to Hotel Circle*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7913*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*173535*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7913*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.76*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2114*	pc/h/ln
S	*60.3*	mph
D = v_p / S	*35.1*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7993*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*175295*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7993*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1708*	pc/h/ln
S	*63.7*	mph
D = v_p / S	*26.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*SR-163 to Mission Center Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7124*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*156237*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7124*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.88*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.8*	mph
FFS	*67.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1903*	pc/h/ln
S	*64.3*	mph
D = v_p / S	*29.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Mission Cntr Rd to Q Way/TX St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8882*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*194782*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8882*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.20*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.6*	mph
FFS	*66.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2372*	pc/h/ln
S	*51.6*	mph
D = v_p / S	*46.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Qualcomm Way/TX St to I-805*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6355*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*139366*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6355*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.94*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.0*	mph
FFS	*67.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1697*	pc/h/ln
S	*63.7*	mph
D = v_p / S	*26.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9514*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*208641*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9514*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2033*	pc/h/ln
S	*62.0*	mph
D = v_p / S	*32.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-15 to Fairmount Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8187*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*173460*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*8187*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.26*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2198*	pc/h/ln
S	*58.4*	mph
D = v_p / S	*37.6*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10843*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*250996*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*10843*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2317*	pc/h/ln
S	*55.5*	mph
D = v_p / S	*41.7*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*I-8 to Old Town Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11291*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*261367*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*11291*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3031*	pc/h/ln
S	*31.1*	mph
D = v_p / S	*97.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Genesee Avenue to Friars Road*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*12078*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*235438*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.09*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*12078*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2594*	pc/h/ln
S	*47.5*	mph
D = v_p / S	*54.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Friars Road to I-8 Interchange*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8198*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*200928*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8198*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.71*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2934*	pc/h/ln
S	*35.1*	mph
D = v_p / S	*83.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*I-8 Interchange to 6th Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8215*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*201360*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8215*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.81*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2926*	pc/h/ln
S	*35.4*	mph
D = v_p / S	*82.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6907*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*169288*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6907*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.72*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.5*	mph
FFS	*67.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2460*	pc/h/ln
S	*51.6*	mph
D = v_p / S	*47.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Mesa Col Dr to Murray Ridge Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*15777*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*281735*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*15777*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3438*	pc/h/ln
S	*11.9*	mph
D = v_p / S	*288.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*12298*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*273289*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*12298*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.07*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.9*	mph
FFS	*69.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2680*	pc/h/ln
S	*44.6*	mph
D = v_p / S	*60.1*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*12021*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*267140*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*12021*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.10*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.0*	mph
FFS	*69.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3274*	pc/h/ln
S	*20.1*	mph
D = v_p / S	*162.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Adams Avenue to El Cajon Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10746*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*238805*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*10746*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.29*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.5*	mph
FFS	*68.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2927*	pc/h/ln
S	*35.4*	mph
D = v_p / S	*82.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*13100*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*272913*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*13100*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.79*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3534*	pc/h/ln
S	*6.8*	mph
D = v_p / S	*519.1*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10819*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*265163*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*10819*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2300*	pc/h/ln
S	*56.0*	mph
D = v_p / S	*41.1*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9343*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228997*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9343*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2483*	pc/h/ln
S	*50.9*	mph
D = v_p / S	*48.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8907*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*218320*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8907*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2367*	pc/h/ln
S	*54.2*	mph
D = v_p / S	*43.7*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Sunset Cliffs to Sports Arena*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3121*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*79606*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*3121*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.49*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.5*	mph
FFS	*70.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1651*	pc/h/ln
S	*67.6*	mph
D = v_p / S	*24.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Sports Arena Boulevard to I-5*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4641*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*120533*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*4641*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.96*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.7*	mph
FFS	*69.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1637*	pc/h/ln
S	*67.8*	mph
D = v_p / S	*24.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-5 Interchange to Morena Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7155*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*179335*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7155*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*1.64*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.9*	mph
FFS	*70.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1911*	pc/h/ln
S	*64.1*	mph
D = v_p / S	*29.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Morena Boulevard to Taylor St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8903*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*223134*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8903*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.51*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1902*	pc/h/ln
S	*64.3*	mph
D = v_p / S	*29.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Taylor Street to Hotel Circle*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9167*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*229754*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9167*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.76*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2449*	pc/h/ln
S	*51.9*	mph
D = v_p / S	*47.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9260*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*232084*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9260*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.93*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.9*	mph
FFS	*67.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1979*	pc/h/ln
S	*60.2*	mph
D = v_p / S	*32.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*SR-163 to Mission Center Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8253*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*206851*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8253*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.03*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2204*	pc/h/ln
S	*55.8*	mph
D = v_p / S	*39.5*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Mission Cntr Rd to Q Way/TX St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10290*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*257883*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10290*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.06*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2749*	pc/h/ln
S	*39.2*	mph
D = v_p / S	*70.1*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Qualcomm Way/TX St to I-805*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7362*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*184515*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7362*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1966*	pc/h/ln
S	*60.5*	mph
D = v_p / S	*32.5*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11022*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*276232*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*11022*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2355*	pc/h/ln
S	*54.5*	mph
D = v_p / S	*43.2*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-15 to Fairmount Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10412*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*252105*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*10412*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.41*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.7*	mph
FFS	*68.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2236*	pc/h/ln
S	*57.5*	mph
D = v_p / S	*38.9*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8082*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*213811*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*8082*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.37*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.6*	mph
FFS	*68.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1727*	pc/h/ln
S	*66.8*	mph
D = v_p / S	*25.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*I-8 to Old Town Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8416*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*222646*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*8416*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1807*	pc/h/ln
S	*65.7*	mph
D = v_p / S	*27.5*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Genesee Avenue to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8089*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*177394*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8089*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2171*	pc/h/ln
S	*59.1*	mph
D = v_p / S	*36.8*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8498*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*208294*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8498*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.56*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.1*	mph
FFS	*68.3*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1825*	pc/h/ln
S	*65.5*	mph
D = v_p / S	*27.9*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to 6th Avenue*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8517*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*208742*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8517*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.48*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.9*	mph
FFS	*68.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2275*	pc/h/ln
S	*56.6*	mph
D = v_p / S	*40.2*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*6th Avenue to Washington St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7160*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*175494*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7160*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*2.36*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.6*	mph
FFS	*68.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3825*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Mesa Col Dr to Murray Ridge Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6781*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*121089*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*6781*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1478*	pc/h/ln
S	*69.1*	mph
D = v_p / S	*21.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5583*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*93050*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*5583*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.21*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.3*	mph
FFS	*69.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1217*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*17.4*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5457*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*90957*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*5457*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*6*	
Total Ramp Density, TRD	*2.25*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*991*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*14.2*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*Adams Avenue to El Cajon Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4879*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*81309*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*4879*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.44*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1063*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*15.2*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8560*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*178332*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*8560*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1847*	pc/h/ln
S	*65.1*	mph
D = v_p / S	*28.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11474*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*281227*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*11474*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.14*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.4*	mph
FFS	*67.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2440*	pc/h/ln
S	*49.7*	mph
D = v_p / S	*49.1*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9909*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*242870*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9909*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2107*	pc/h/ln
S	*60.5*	mph
D = v_p / S	*34.9*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9447*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*231546*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9447*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2009*	pc/h/ln
S	*62.4*	mph
D = v_p / S	*32.2*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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PM Peak Hour

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Sunset Cliffs to Sports Arena*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3566*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*79606*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*3566*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1886*	pc/h/ln
S	*64.5*	mph
D = v_p / S	*29.2*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Sports Arena Boulevard to I-5*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5303*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*120533*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*5303*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.28*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1870*	pc/h/ln
S	*64.8*	mph
D = v_p / S	*28.9*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-5 Interchange to Morena Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8178*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*179335*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8178*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2913*	pc/h/ln
S	*36.0*	mph
D = v_p / S	*81.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Morena Boulevard to Taylor St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10175*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*223134*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10175*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2718*	pc/h/ln
S	*43.3*	mph
D = v_p / S	*62.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Taylor Street to Hotel Circle*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10477*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*229754*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10477*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.67*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.3*	mph
FFS	*68.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2798*	pc/h/ln
S	*40.4*	mph
D = v_p / S	*69.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10583*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*232084*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10583*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2261*	pc/h/ln
S	*54.5*	mph
D = v_p / S	*41.5*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*SR-163 to Mission Center Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9432*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*206851*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9432*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.88*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.8*	mph
FFS	*67.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2519*	pc/h/ln
S	*49.8*	mph
D = v_p / S	*50.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Mission Cntr Rd to Q Way/TX St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11759*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*257883*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*11759*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.20*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.6*	mph
FFS	*66.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3141*	pc/h/ln
S	*22.0*	mph
D = v_p / S	*142.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Qualcomm Way/Texas St to I-805*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8414*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*184515*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8414*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.94*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.0*	mph
FFS	*67.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2247*	pc/h/ln
S	*54.8*	mph
D = v_p / S	*41.0*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*12596*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*276232*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*12596*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2692*	pc/h/ln
S	*44.2*	mph
D = v_p / S	*60.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-15 to Fairmount Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11899*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*252105*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*11899*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.26*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3194*	pc/h/ln
S	*23.9*	mph
D = v_p / S	*133.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9237*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*213811*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*9237*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1974*	pc/h/ln
S	*63.1*	mph
D = v_p / S	*31.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*I-8 to Old Town Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9618*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*222646*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*9618*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2582*	pc/h/ln
S	*47.8*	mph
D = v_p / S	*54.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Genesee Avenue to Friars Road*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9100*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*177394*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.09*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9100*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1954*	pc/h/ln
S	*63.4*	mph
D = v_p / S	*30.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Friars Road to I-8 Interchange*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8498*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*208294*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8498*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.71*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3041*	pc/h/ln
S	*30.7*	mph
D = v_p / S	*99.1*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to 6th Avenue*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8517*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*208742*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8517*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.60*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3033*	pc/h/ln
S	*31.0*	mph
D = v_p / S	*97.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7160*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*175494*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7160*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.40*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.7*	mph
FFS	*68.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2550*	pc/h/ln
S	*48.9*	mph
D = v_p / S	*52.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Mesa Col Dr/Murray Ridge Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6781*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*121089*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*6781*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1478*	pc/h/ln
S	*69.1*	mph
D = v_p / S	*21.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4187*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*93050*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*4187*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.07*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.9*	mph
FFS	*69.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*912*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*13.0*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to Adams Ave*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4093*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*90957*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*4093*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.10*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.0*	mph
FFS	*69.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1115*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*15.9*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Adams Avenue to El Cajon Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3659*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*81309*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*3659*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.29*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.5*	mph
FFS	*68.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*997*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*14.2*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8560*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*178332*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*8560*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.79*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2309*	pc/h/ln
S	*55.7*	mph
D = v_p / S	*41.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11135*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*272913*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*11135*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2368*	pc/h/ln
S	*54.2*	mph
D = v_p / S	*43.7*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9909*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*242870*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9909*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2634*	pc/h/ln
S	*46.1*	mph
D = v_p / S	*57.1*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9447*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*231546*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9447*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2511*	pc/h/ln
S	*50.1*	mph
D = v_p / S	*50.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Sunset Cliffs to Sports Arena*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*2495*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*63648*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*2495*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.49*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.5*	mph
FFS	*70.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1320*	pc/h/ln
S	*69.8*	mph
D = v_p / S	*18.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Sports Arena Boulevard to I-5*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3834*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*99578*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*3834*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.96*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.7*	mph
FFS	*69.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1352*	pc/h/ln
S	*69.7*	mph
D = v_p / S	*19.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-5 Interchange to Morena Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5405*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*135453*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*5405*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*1.64*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.9*	mph
FFS	*70.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1444*	pc/h/ln
S	*69.3*	mph
D = v_p / S	*20.8*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Morena Boulevard to Taylor St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6725*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*168535*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6725*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.51*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1437*	pc/h/ln
S	*69.3*	mph
D = v_p / S	*20.7*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Taylor Street to Hotel Circle*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6924*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*173535*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6924*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.67*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.3*	mph
FFS	*68.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1849*	pc/h/ln
S	*65.1*	mph
D = v_p / S	*28.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6994*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*175295*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6994*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.93*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.9*	mph
FFS	*67.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1495*	pc/h/ln
S	*64.9*	mph
D = v_p / S	*23.0*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*SR-163 to Mission Center Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6234*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*156237*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6234*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.03*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1665*	pc/h/ln
S	*64.0*	mph
D = v_p / S	*26.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Mission Cntr Rd to Q Way/TX St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7772*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*194782*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7772*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.06*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2076*	pc/h/ln
S	*58.5*	mph
D = v_p / S	*35.5*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Qualcomm Way/Texas St to I-805*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5561*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*139366*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*5561*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1485*	pc/h/ln
S	*64.9*	mph
D = v_p / S	*22.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8325*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*208641*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8325*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1779*	pc/h/ln
S	*66.1*	mph
D = v_p / S	*26.9*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-15 to Fairmount Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7164*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*173460*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*7164*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.41*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.7*	mph
FFS	*68.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1538*	pc/h/ln
S	*68.7*	mph
D = v_p / S	*22.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9488*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*250996*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*9488*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.37*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.6*	mph
FFS	*68.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2027*	pc/h/ln
S	*62.1*	mph
D = v_p / S	*32.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*I-8 to Old Town Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9880*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*261367*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*9880*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2122*	pc/h/ln
S	*60.1*	mph
D = v_p / S	*35.3*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Genesee Avenue to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10736*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*235438*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10736*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2882*	pc/h/ln
S	*37.2*	mph
D = v_p / S	*77.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*Friars Road to I-8 Interchange*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8198*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*200928*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8198*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.56*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.1*	mph
FFS	*68.3*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1760*	pc/h/ln
S	*66.4*	mph
D = v_p / S	*26.5*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to 6th Avenue*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8215*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*201360*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8215*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.29*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.5*	mph
FFS	*68.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2194*	pc/h/ln
S	*58.5*	mph
D = v_p / S	*37.5*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*6th Avenue to Washington St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6907*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*169288*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6907*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*2.06*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.9*	mph
FFS	*69.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3690*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Mesa Col Dr/Murray Ridge Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*15777*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*281735*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*15777*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3438*	pc/h/ln
S	*11.9*	mph
D = v_p / S	*288.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*16397*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*273289*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*16397*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.21*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.3*	mph
FFS	*69.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3573*	pc/h/ln
S	*4.7*	mph
D = v_p / S	*763.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*16028*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*267140*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*16028*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*6*	
Total Ramp Density, TRD	*2.25*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2910*	pc/h/ln
S	*36.1*	mph
D = v_p / S	*80.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*14328*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*238805*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*14328*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.44*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3122*	pc/h/ln
S	*27.1*	mph
D = v_p / S	*115.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*13499*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*281227*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*13499*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2913*	pc/h/ln
S	*36.0*	mph
D = v_p / S	*81.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10819*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*265163*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*10819*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.14*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.4*	mph
FFS	*67.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2300*	pc/h/ln
S	*53.5*	mph
D = v_p / S	*43.0*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9343*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228997*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9343*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1987*	pc/h/ln
S	*62.8*	mph
D = v_p / S	*31.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Adopted*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8907*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*218320*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8907*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1894*	pc/h/ln
S	*64.4*	mph
D = v_p / S	*29.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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Appendix F
Modeling Documentation & Model Outputs

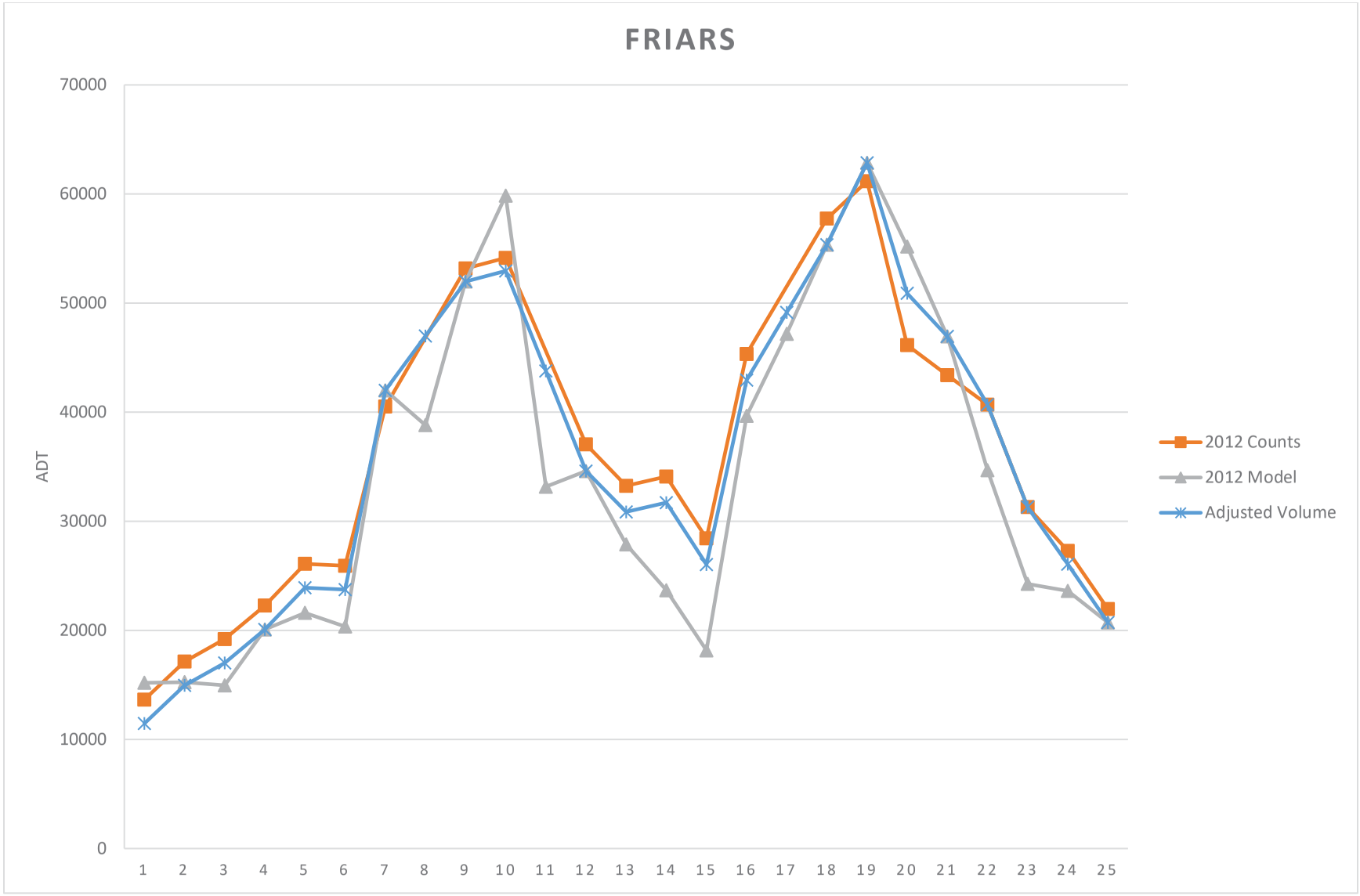
Roadway Adjustment

Model Adjustment was conducted using the following steps for corridors adjustment. Corridor adjustment calculations are provided below.

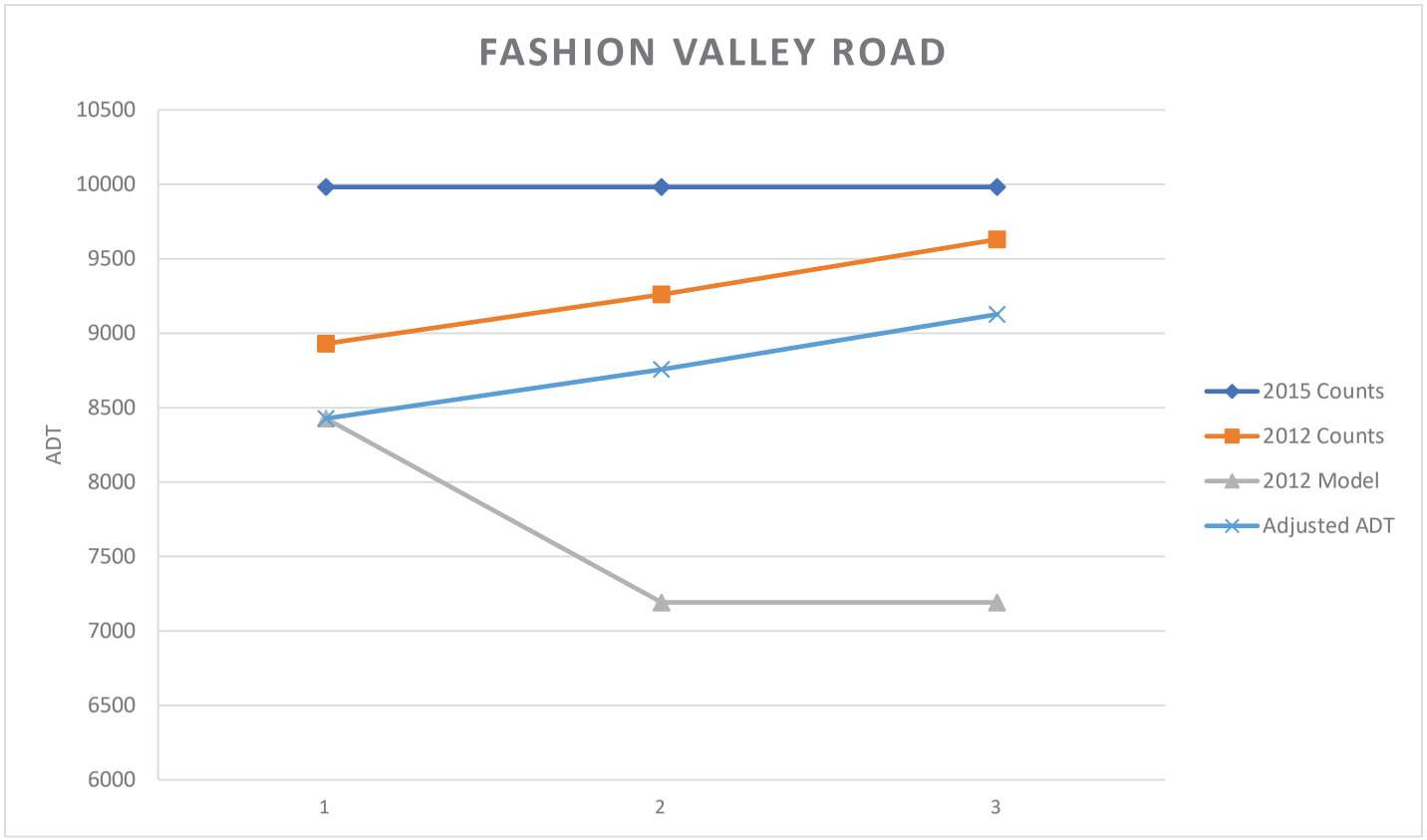
Model Ajdustment Steps:

1. Identify key segment where the Base Year 2012 counts are within +/- 10% of the model projected volume. These locations are consider to be key locations and no adjustment is needed.
2. Calculate the change in Base Year 2012 volume between the key location and adjacent location.
3. Add or subtract the change calculate in Step 2 to the key location in Step 1 to arrive at the adjusted model volume.
4. Subtract adjusted model volume from unadjusted model volume to arrive at the adjustment factor. This factor is refer to as “adj” in the tables below
5. Repeat the process above for all segments
6. Review trendline to ensure that adjusted model volume follow the same trend as the Base Year 2012 counts
7. Consider additional adjustment as needed, depending on results in Step 6
8. Extract adjustment ADT (calculated from Step 4) and apply them to all future scenarios
9. Repeat Step 1 to 8 for all corridor that needs adjustment

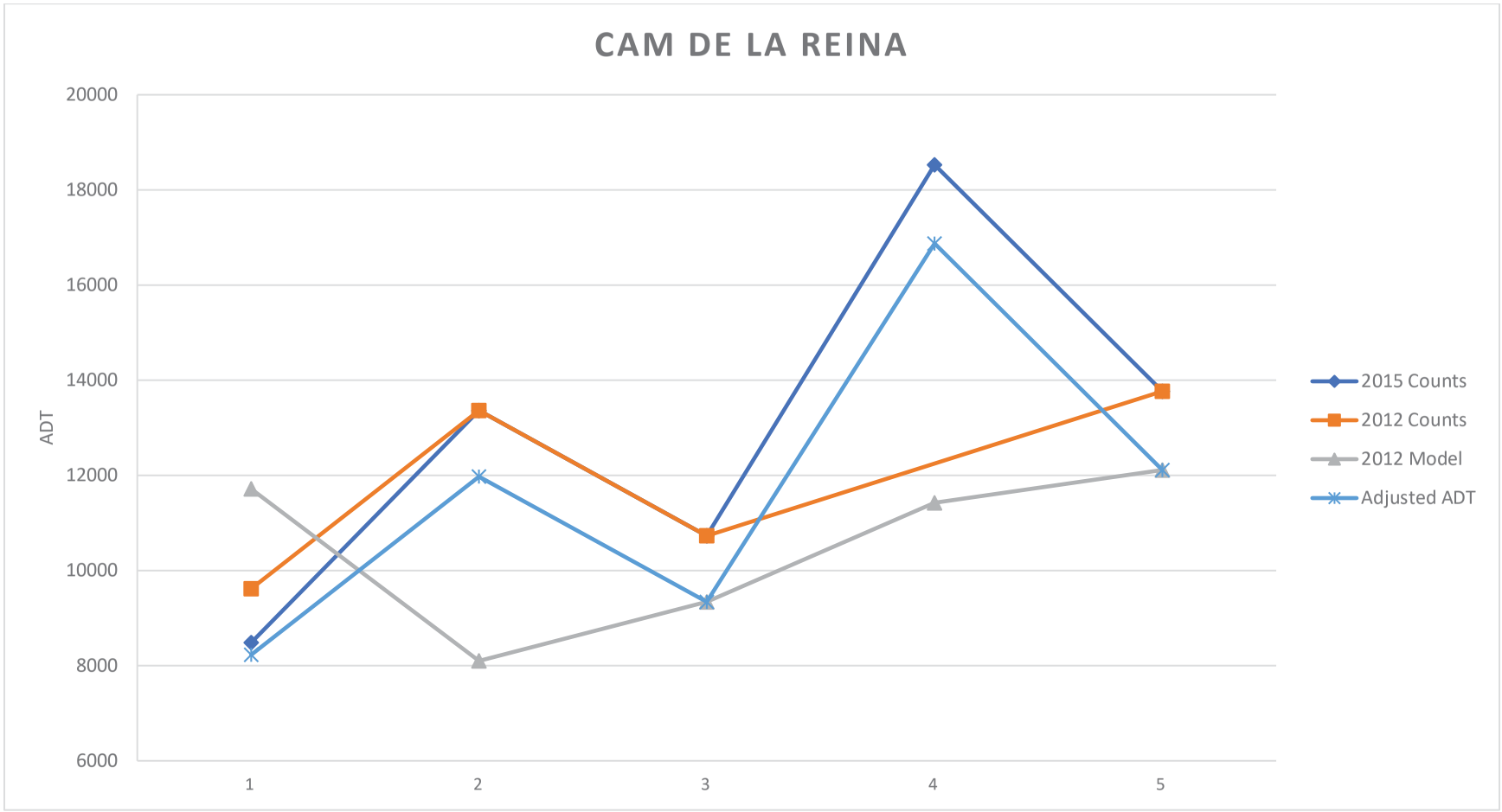
ID	Roadway	From	TO	Average ADT	2012 Count	2012 Model	Adjusted Volume	Adj	Delta %
1	Friars Road	Sea World Drive	Napa Street	13651	13650	15195	11464	-3731	-0.16015
2	Friars Road	Napa Street	Colusa Street	19165	17140	15254	14954	-300	-0.12754
3	Friars Road	Colusa Street	Via Las Cumbres	19198	19198	14959	17012	2053	-0.11387
4	Friars Road	Via Las Cumbres	Fashion Valley Road	22272	22272	20086	20086	0	-0.09815
5	Friars Road	Fashion Valley Road	Via De La Moda	26095	26095	21606	23909	2303	-0.08377
6	Friars Road	Via De La Moda	Fashion Valley Driveway	25917	25920	20355	23734	3379	-0.08434
7	Friars Road	Fashion Valley Driveway	Avenida De Las Tiendas	26827	40513	42003	42003	0	0.036778
8	Friars Road	Avenida De Las Tiendas	Ulric Street/SR-163 SB Ramps	40513	#N/A	38815	46989	8174	#N/A
9	Friars Road	Ulric Street/SR-163 SB Ramps	SR-163 NB Ramps	53166	53170	51975	51975	0	-0.02248
10	Friars Road	SR-163 NB Ramps	Frazee Road	54145	54145	59849	52950	-6899	-0.02207
11	Friars Road	Frazee Road	Mission Center Road	42781	#N/A	33168	43777	10609	#N/A
12	Friars Road	Mission Center Road	Qualcomm Way	37053	37053	34604	34604	0	-0.06609
13	Friars Road	Qualcomm Way	River Run Drive	33247	33250	27883	30856	2973	-0.072
14	Friars Road	River Run Drive	Fenton Parkway	22075	34100	23682	31706	8024	-0.07021
15	Friars Road	Fenton Parkway	Northside Drive	28434	28430	18166	26036	7870	-0.08421
16	Friars Road	Northside Drive	Mission Village Drive	45327	45330	39663	42936	3273	-0.05281
17	Friars Road	San Diego Mission Road	I-15 SB Ramps	57744	#N/A	47182	49143	1961	#N/A
18	Friars Road	I-15 SB Ramps	I-15 NB Ramps	46567	57744	55350	55350	0	-0.04146
19	Friars Road	I-15 NB Ramps	Rancho Mission Road	51608	61175	62864	62864	0	0.027609
20	Friars Road	Rancho Mission Road	Santo Road	39432	46148	55180	50898	-4282	0.10293
21	Friars Road	Santo Road	Riverdale Street	43383	43383	46947	46947	0	0.082152
22	Friars Road	Riverdale Street	Mission Gorge Road	31295	40690	34684	40690	6006	0
23	Mission Gorge Road	Friars Road	Zion Avenue	40690	31300	24260	31300	7040	0
24	Mission Gorge Road	Zion Avenue	Allied		27289	23617	26061	2444	-0.045
25	Mission Gorge Road	Old Cliffs RD	Katlyn Court		21951	20723	20723	0	-0.05594


FRIARS
70000
60000
50000
40000
30000
20000
10000
0
ADT
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
2012 Counts
2012 Model
Adjusted Volume

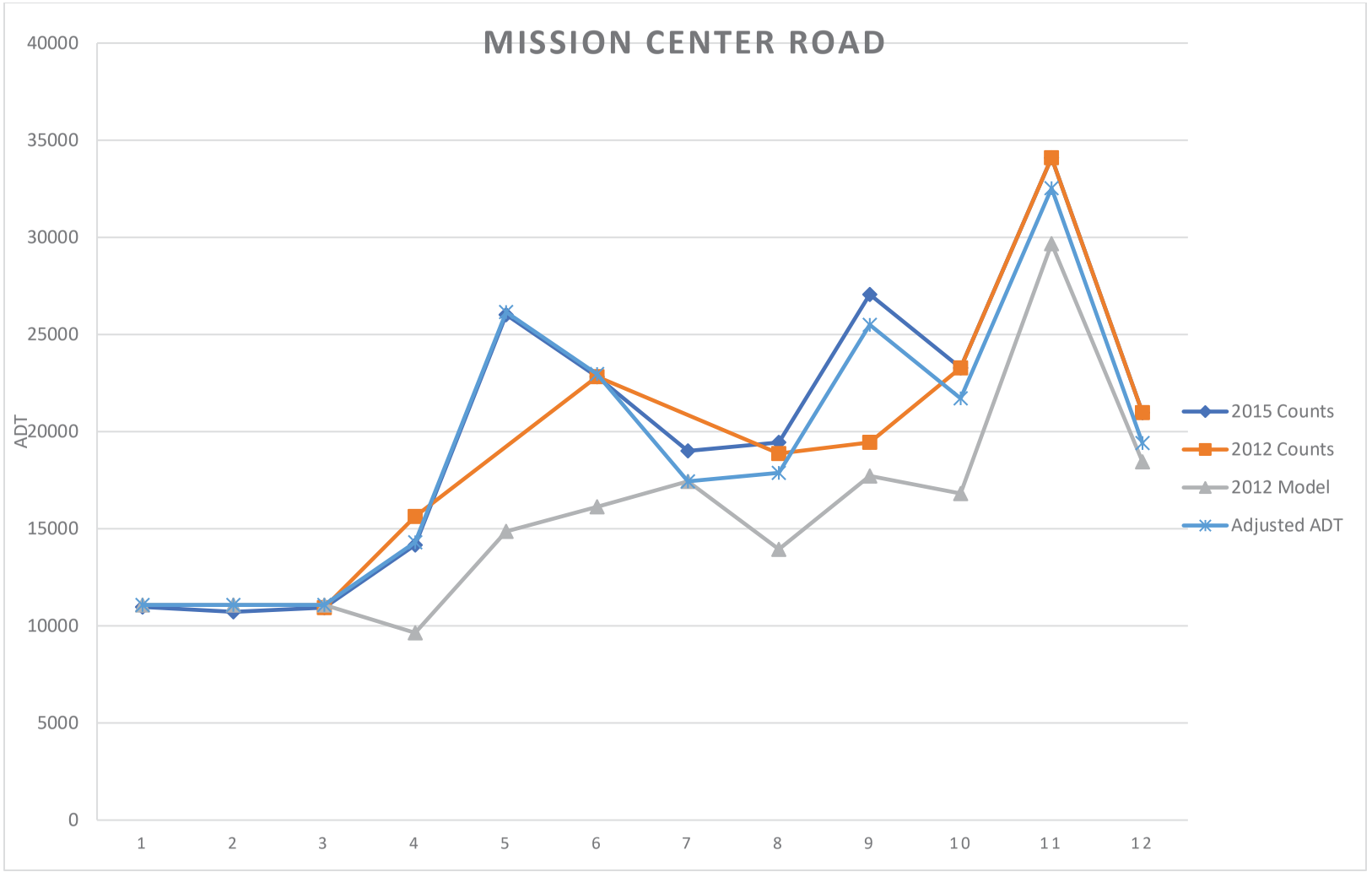
ID	Roadway	From	TO	Average ADT	2012 Count	2012 Model	Adjusted ADT	Adj	Delta %
1	Fashion Valley Road	Friars Road	Riverwalk Drive	9982	8930	8427	8427	0	-0.05633
2	Fashion Valley Road	Riverwalk Drive	Levi-Cushman Street "B"	9982	9260	7192	8757	1565	-0.05432
3	Fashion Valley Road	Levi-Cushman Street "B"	Hotel Circle North	9982	9630	7192	9127	1935	-0.05223



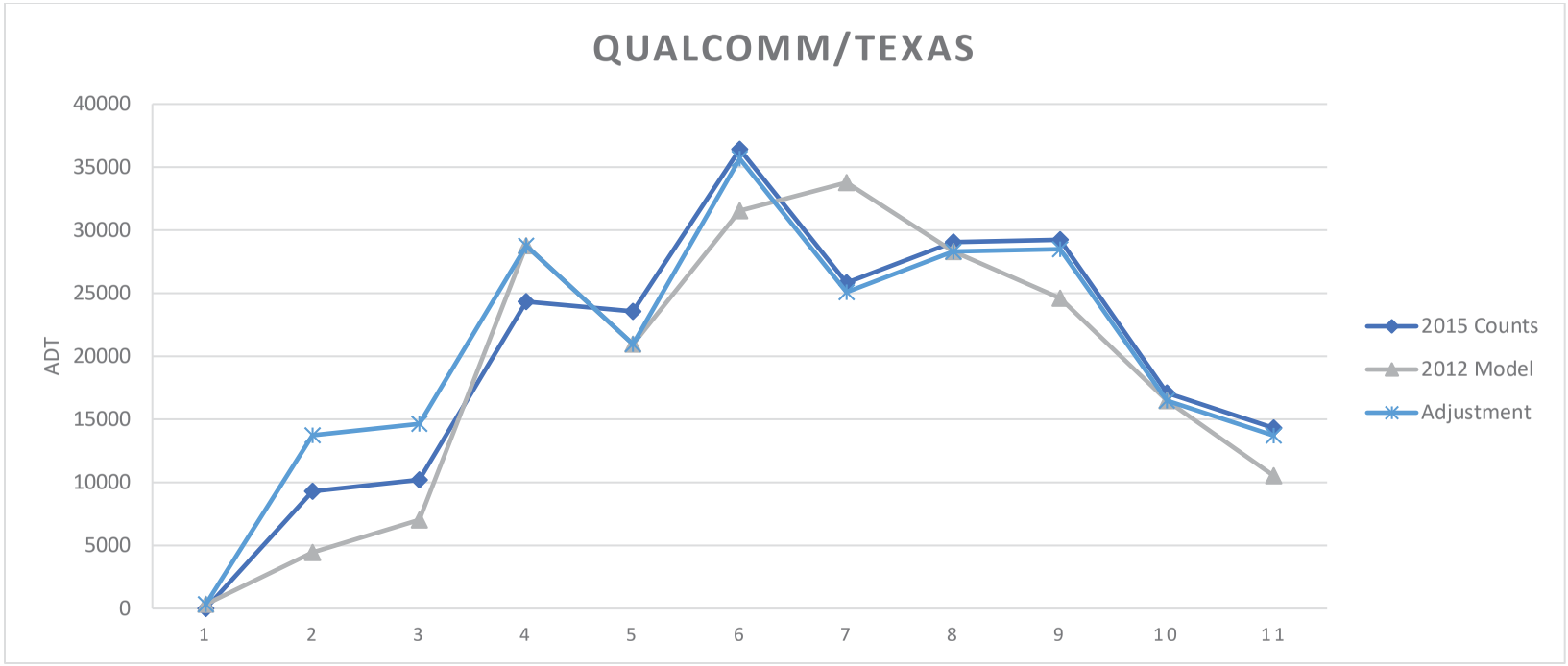
ID	Roadway	From	TO	Average ADT	2012 Count	2012 Model	Adjusted ADT	Adj	Delta %
1	Camino De La Reina	Hotel Circle North	Avenida Del Rio	8484	9617	11715		-3487	-0.03017
2	Camino De La Reina	Avenida Del Rio	Camino De La Siesta	13363	13363	8100	11974	3874	-0.10394
3	Camino De La Reina	Camino De La Siesta	Mission Center Road	10730	10730	9341	9341	0	-0.12945
4	Camino De La Reina	Mission Center Road	Camino Del Este	18528	#N/A	11423	16874	5451	-0.08927
5	Camino De La Reina	Camino Del Este	Qualcomm Way	13767	13767	12113	12113	0	-0.12014



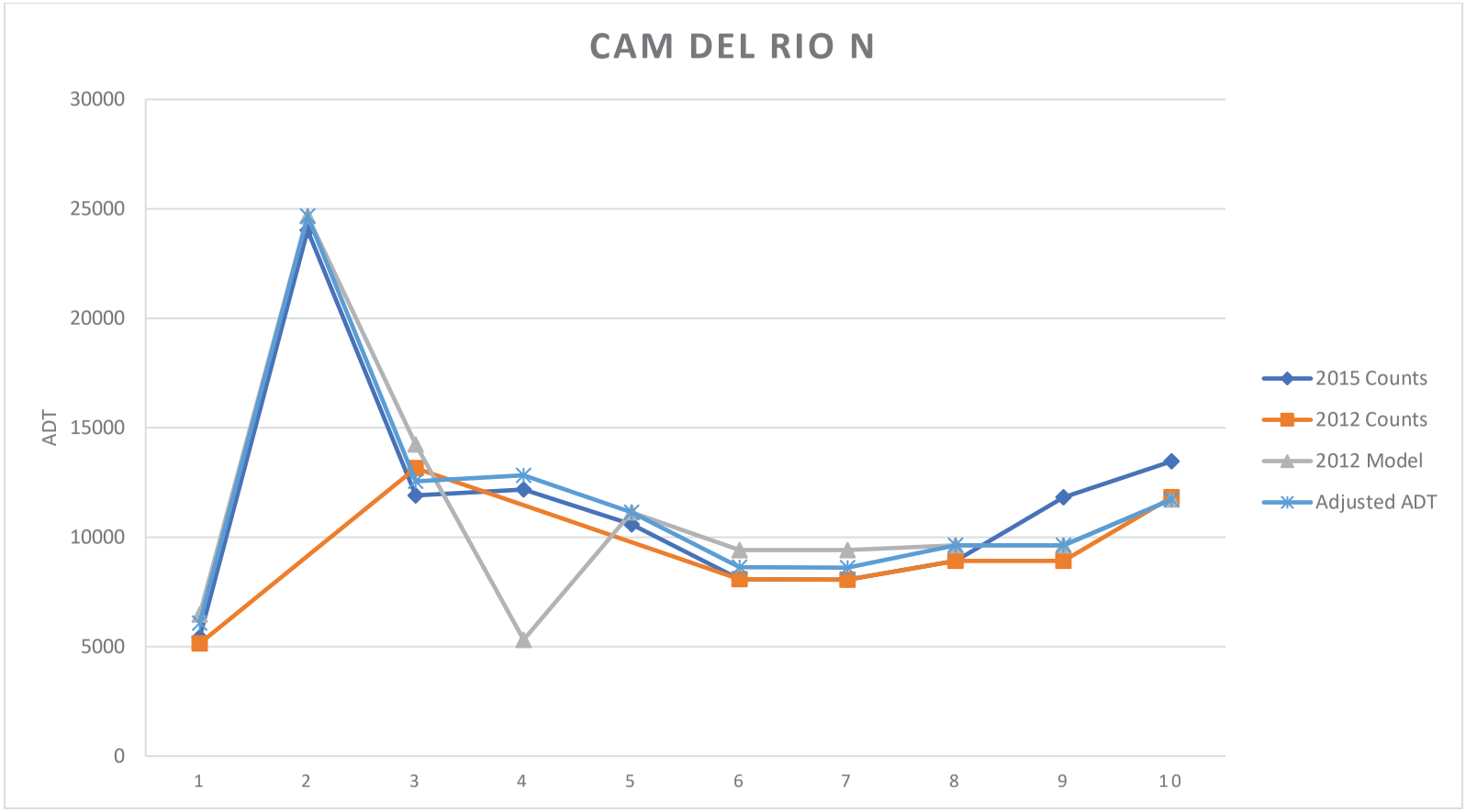
ID	Roadway	From	TO	Average ADT	2012 Count	2012 Model	Adjusted ADT	Adj	Delta %
1	Mission Center Road	Murray Ridge Road	1200 Feet West of Murray Ridge Road	10972	#N/A	11076	11076	0	#N/A
2	Mission Center Road	1200 Feet West of Murray Ridge Road	950 Feet North of Mission Valley Road	10721	#N/A	11076	11076	0	#N/A
3	Mission Center Road	950 Feet North of Mission Valley Road	Mission Valley Road	10939	10939	11076	11076	0	0.012524
4	Mission Center Road	Mission Valley Road	Westside Drive	14165	15630	9642	14302	4660	-0.08496
5	Mission Center Road	Westside Drive	Friars Road WB Ramps	26018	#N/A	14862	26155	11293	#N/A
6	Mission Center Road	Friars Road WB Ramps	Friars Road EB Ramps	22826	22826	16128	22963	6835	0.006002
7	Mission Center Road	Friars Road EB Ramps	Mission Center Court	19005	#N/A	17438	17438	0	#N/A
8	Mission Center Road	Mission Center Court	Hazard Center Drive	19445	18870	13940	17878	3938	-0.05257
9	Mission Center Road	Hazard Center Drive	Camino De La Reina	27063	19445	17716	25496	7780	0.311185
10	Mission Center Road	Camino De La Reina	Camino Del Rio North	23280	23280	16814	21713	4899	-0.06731
11	Auto Circle	Camino Del Rio North	I-8 EB Ramps	34097	34097	29675	32530	2855	-0.04596
12	Auto Circle	I-8 EB Ramps	Camino Del Rio South	20976	20976	18448	19409	961	-0.0747


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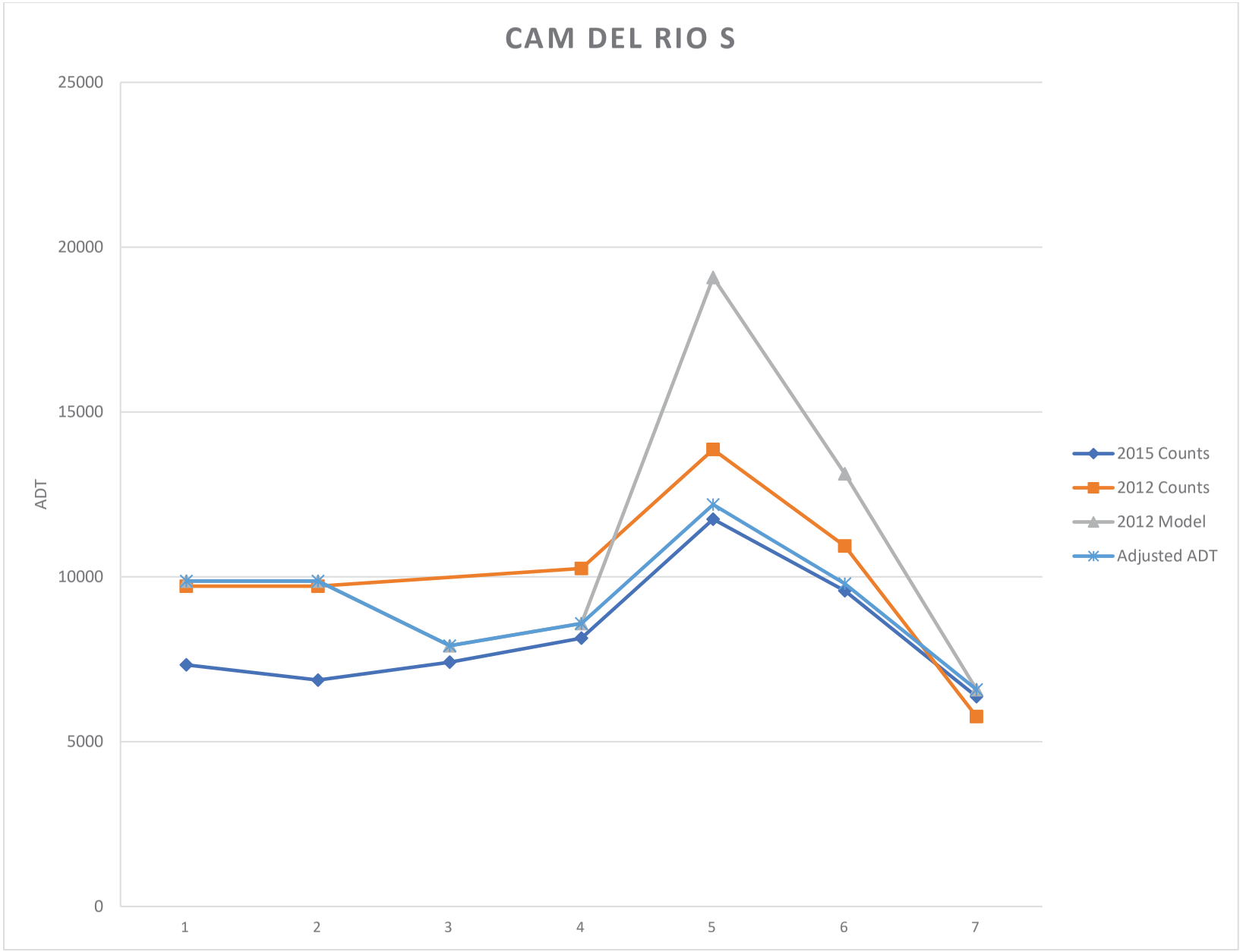
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1	Qualcomm Way	Civita Boulevard	Friars Road WB Ramps	0	#N/A	334	334	0	#DIV/0!
2	Qualcomm Way	Friars Road WB Ramps	Friars Road EB Ramps	9299	#N/A	4446	13736	9290	0.4771481
3	Qualcomm Way	Friars Road EB Ramps	Rio San Diego Drive	10201	10201	7025	14638	7613	0.4349574
4	Qualcomm Way	Rio San Diego Drive	Camino Del Rio North	24329	25829	28766	28766	0	0.1823749
5	Qualcomm Way	Camino Del Rio North	I-8 WB Ramps	23559	23559	20959	20959	0	-0.1103612
6	Qualcomm Way	I-8 WB Ramps	I-8 EB Ramps	36413	36413	31540	35666	4126	-0.0205147
7	Qualcomm Way	I-8 EB Ramps	Camino Del Rio South	25827	#N/A	33771	25080	-8691	-0.0289232
8	Texas Street	Camino Del Rio South	1400 Feet North of Madison Ave	29054	29239	28307	28307	0	-0.0257107
9	Texas Street	1400 Feet North of Madison Ave	Madison Avenue	29239	#N/A	24605	28492	3887	-0.0255481
10	Texas Street	Madison Avenue	Meade Ave	17087	#N/A	16481	16481	0	-0.0354656
11	Texas Street	Meade Ave	El Cajon Boulevard	14313	#N/A	10527	13707	3180	-0.0423391


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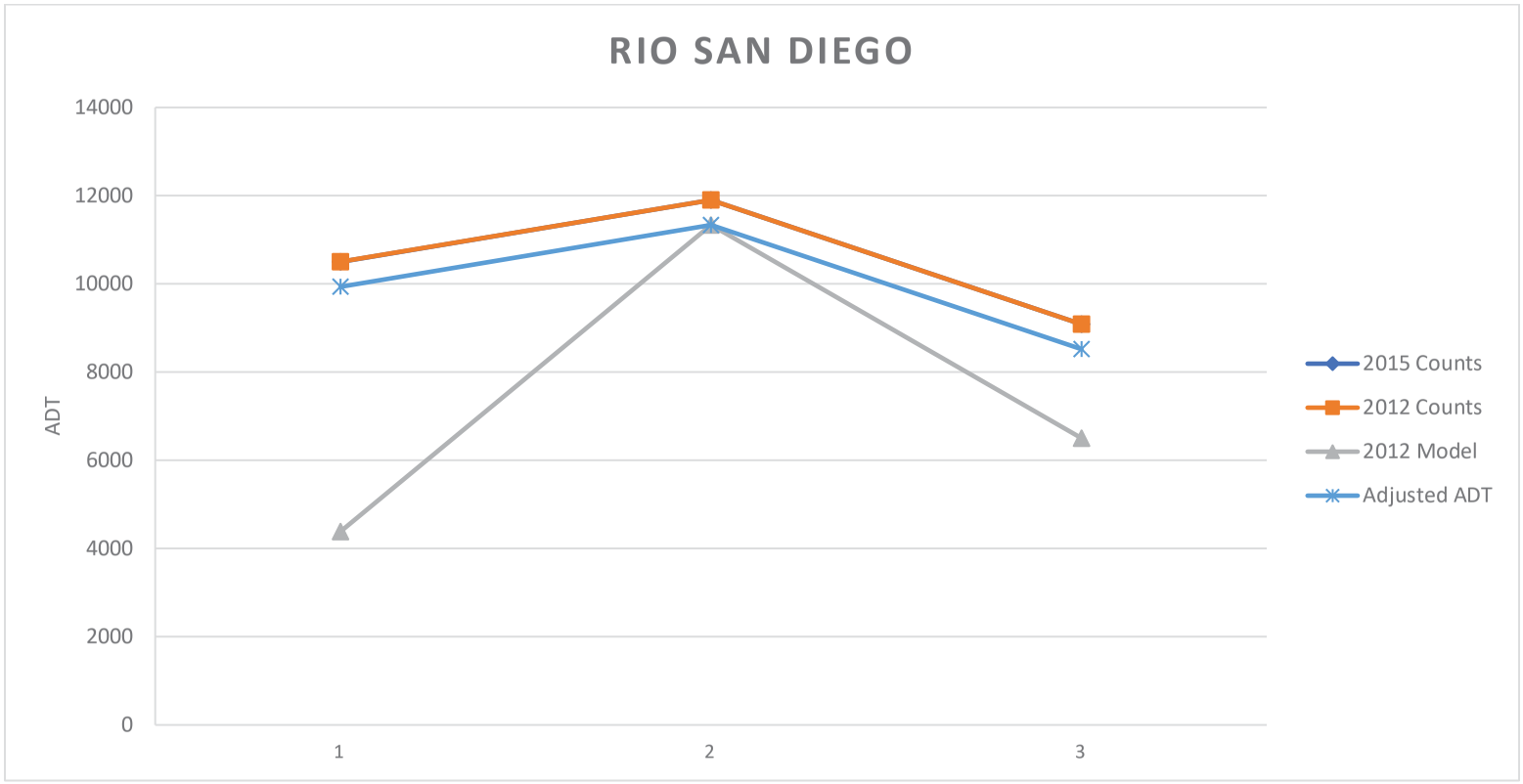
ID	Roadway	From	TO	Average ADT	2012 Count	2012 Model	Adjusted ADT	Adj	Delta %
1	Camino Del Rio North	Camino De La Siesta	Mission Center Road	5430	5145	6468	6078	-390	0.119337
2	Camino Del Rio North	Mission Center Road	I-8 WB Ramps	24026	#N/A	24674	24674	0	0.0269708
3	Camino Del Rio North	I-8 WB Ramps	Camino Del Este	11908	13155	14241	12556	-1685	0.0544172
4	Camino Del Rio North	Camino Del Este	Qualcomm Way	12181	#N/A	5314	12829	7515	0.0531976
5	Camino Del Rio North	Qualcomm Way	Mission City Parkway	10588	#N/A	11139	11139	0	0.05204
6	Camino Del Rio North	Mission City Parkway	800 Feet East of Mission City Parkway	8081	8081	9412	8632	-780	0.0681846
7	Camino Del Rio North	800 Feet East of Mission City Parkway	1800 Feet West of Ward Road	8059	8059	9412	8610	-802	0.0683708
8	Camino Del Rio North	1800 Feet West of Ward Road	Ward Road	8920	8920	9633	9633	0	0.0799327
9	Camino Del Rio North	Ward Road	1000 Feet West of Fairmount Avenue	11825	8920	9633	9633	0	-0.18537
10	Camino Del Rio North	1000 Feet West of Fairmount Avenue	Fairmount Avenue	13469	11825	11725	11725	0	-0.1294825


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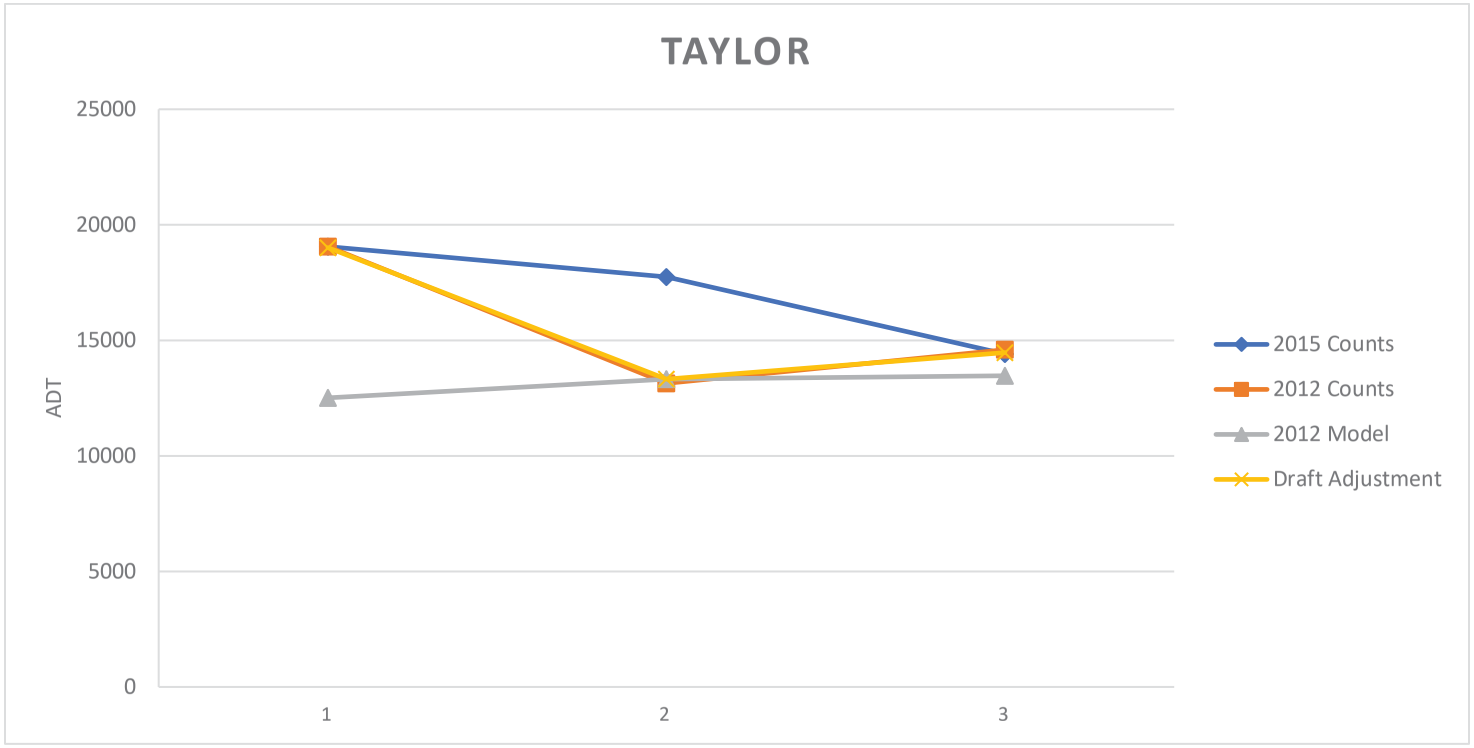
ID	Roadway	From	TO	Average ADT	2012 Count	2012 Model	Adjusted ADT	Adj
1	Camino Del Rio South	Western Terminus	1800 Feet west of Mission Center Road	7331	9715	9871	**9871**	0
2	Camino Del Rio South	1800 Feet west of Mission Center Road	Mission Center Road	6867	9715	9871	**9871**	0
3	Camino Del Rio South	Mission Center Road	Texas Street	7412	#N/A	7910	**7910**	0
4	Camino Del Rio South	Texas Street	Mission City Parkway	8141	10254	8584	**8584**	0
5	Camino Del Rio South	Mission City Parkway	I-15 SB Offramp	11749	13862	19082	12192	-6890
6	Camino Del Rio South	I-15 SB Offramp	I-15 SB Onramp	9577	10934	13125	9791	-3334
7	Camino Del Rio South	I-15 SB Onramp	Fairmount Avenue	6367	5760	6581	**6581**	0


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ID	Roadway	From	TO	Average ADT	2012 Count	2012 Model	Adjusted ADT	Adj
1	Rio San Diego Drive	Gill Village Way	Qualcomm Way	10499	10500	4384	9935	5551
2	Rio San Diego Drive	Qualcomm Way	River Run Drive	11900	11900	11335	11335	0
3	Rio San Diego Drive	River Run Drive	Fenton Parkway	9085	9085	6500	8520	2020



ID	Roadway	From	TO	Average ADT	2012 Count	2012 Model	Delta ADT	Delta %	Draft Adjustment	Adj
1	Taylor Street	Pacific Highway	Morena Boulevard	19057	19060	12512	-6548	-0.3435467	19012	6500
2	Taylor Street	Morena Boulevard	I-8 EB Ramps	17745	13140	13322	182	0.0138508	13322	0
3	Taylor Street	I-8 EB Ramps	Hotel Circle South	14410	14595	13468	-1127	-0.0772182	14468	1000



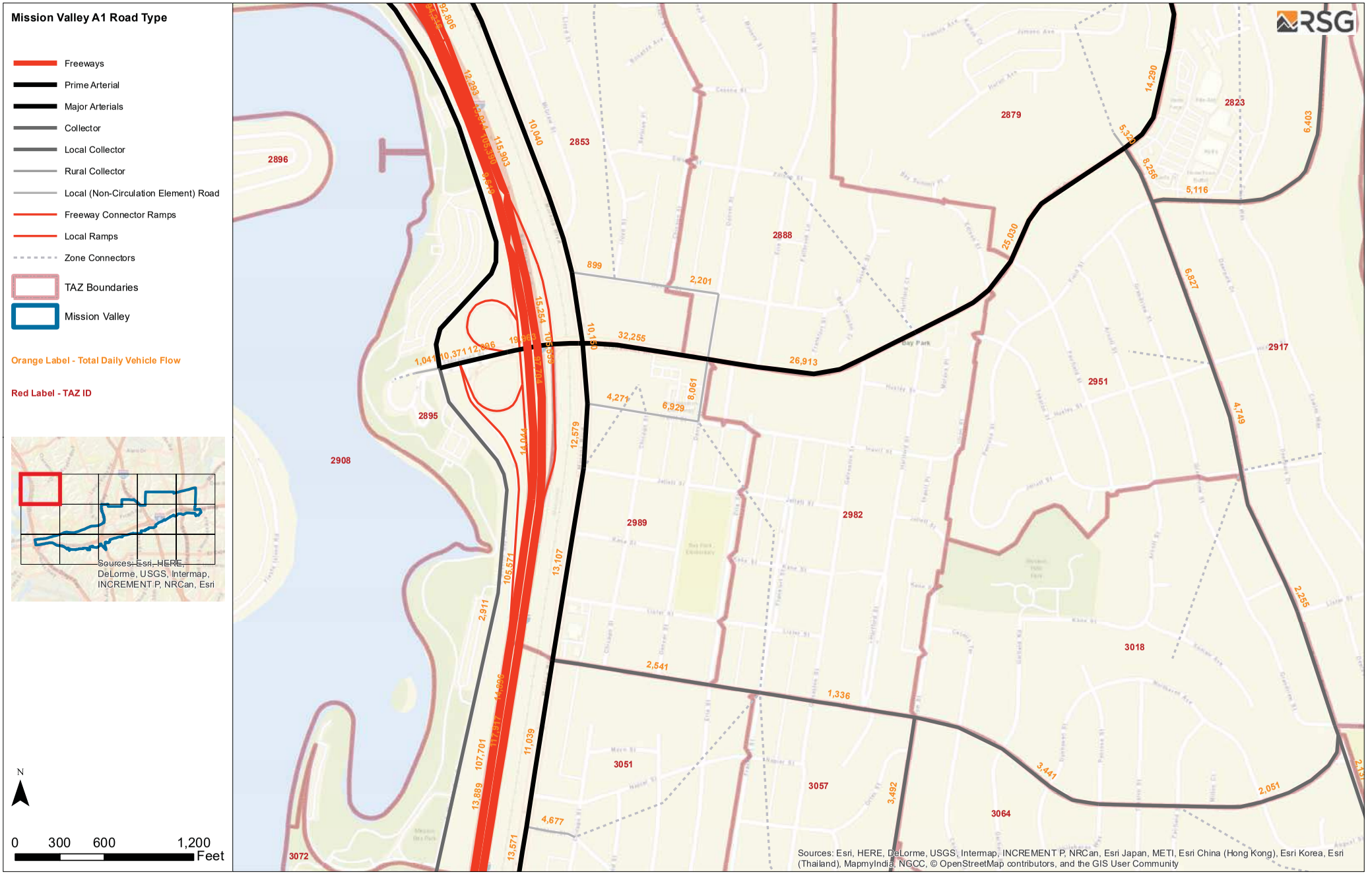
ID			Segment		2015			Base Year Model (Alt H)				CPU			
ID	Selected?	Roadway	From	To	ADT, Day 1	ADT, Day 2	Average ADT	Count ID Match	2012 Counts	2012 Model	1st Manual Adjustment	2nd Manual Adjustment	Comments	Proposed ADT (Model)	Final (Proposed)
1	Yes	Phyllis Place	Abbotshill Road	I-805 SB Ramps	2293	2251	2272	#N/A	#N/A	2095	0	0	No Adjustment	32515	32500
2	Yes	Sea World Drive	Mission Bay Parkway	Friars Road	34253	34139	34196	11539	34200	35739	0	0	No Adjustment	41124	41100
3	Yes	Sea World Drive	Friars Road	I-5 SB Ramps	29485	29495	29490	11623	29490	26735	2700	0	No Adjustment	31899	34600
4	Yes	Tecolote Road	I-5 SB Ramps	I-5 NB Ramps	32271	28675	30473	22655	30470	21313	9200	0	No Adjustment	25551	34800
5	Yes	Tecolote Road	I-5 NB Ramps	Morena Boulevard	22727	22091	22409	11335	22410	17340	5100	0	No Adjustment	26733	31800
6	Yes	Mission Valley Road	Metropolitan Drive	Mission Center Road	7577	7298	7438	16078	7438	6840	0	0	- no adjustment require. Negative growth in Propos	16420	16400
7	Yes	Civita Boulevard	Mission Center Road	Via Alta	2523	2435	2479	#N/A	#N/A	0	#N/A	0	No Adjustment - volume close to SMCPA	5052	5100
New	Yes	Civita Boulevard	Via Alta	Qualcomm Way	2523	2435	2479	#N/A	#N/A	#N/A	#N/A	0	No Adjustment - volume close to SMCPA	4195	4200
New	Yes	Civita Boulevard	Qualcomm Way	Franklin Ridge Road	0	0	0	#N/A	#N/A	#N/A	#N/A	0	No Adjustment - volume close to SMCPA	11054	11100
8	Yes	Westside Drive	Mission Center Road	Via Alta	4044	4090	4067	#N/A	#N/A	0	#N/A	0	No Adjustment - volume close to SMCPA	5096	5100
9	Yes	Friars Road	Sea World Drive	Napa Street	13528	13773	13651	8860	13650	15195	-3731	0	No Adjustment	18348	14600
10	Yes	Friars Road	Napa Street	Colusa Street	19011	19319	19165	8859	17140	15254	-300	0	No Adjustment	18954	18700
11	Yes	Friars Road	Colusa Street	Via Las Cumbres	19013	19383	19198	2357	19198	14959	2053	0	No Adjustment due to parallel facility	22037	24100
12	Yes	Friars Road	Via Las Cumbres	Fashion Valley Road	21377	23166	22272	17054	22272	20086	0	0	No Adjustment due to parallel facility	24813	24800
13	Yes	Friars Road	Fashion Valley Road	Via De La Moda	25640	26549	26095	16392	26095	21606	2303	0	No Adjustment due to parallel facility	25029	27300
14	Yes	Friars Road	Via De La Moda	Fashion Valley Driveway	25187	26646	25917	16393	25920	20355	3379	0	No Adjustment due to parallel facility	23689	27100
15	Yes	Friars Road	Fashion Valley Driveway	Avenida De Las Tiendas	25796	27857	26827	16394	40513	42003	0	0	No Adjustment due to parallel facility	41662	41700
16	Yes	Friars Road	Avenida De Las Tiendas	Ulric Street/SR-163 SB Ramps	39490	41535	40513	#N/A	#N/A	38815	8174	0	No Adjustment due to parallel facility	50262	58400
17	Yes	Friars Road	Ulric Street/SR-163 SB Ramps	SR-163 NB Ramps	53210	53122	53166	16401	53170	51975	0		No Adjustment due to parallel facility	55941	55900
18	Yes	Friars Road	SR-163 NB Ramps	Frazee Road	54251	54038	54145	16072	54145	59849	-6899	0	No Adjustment due to parallel facility	52547	45600
19	Yes	Friars Road	Frazee Road	Mission Center Road	42111	43450	42781	#N/A	#N/A	33168	10609	0	No adjustment	31081	41700
20	Yes	Friars Road	Mission Center Road	Qualcomm Way	36807	37298	37053	18038	37053	34604	0	0	No Adjustment	35719	35700
21	Yes	Friars Road	Qualcomm Way	River Run Drive	33167	33327	33247	16087	33250	27883	2973	0	No Adjustment	35892	38900
22	Yes	Friars Road	River Run Drive	Fenton Parkway	21969	22180	22075	16092	34100	23682	8024	0	No Adjustment	32152	40200
23	Yes	Friars Road	Fenton Parkway	Northside Drive	28394	28473	28434	1814	28430	18166	7870	0	No adjustment	26364	34200
24	Yes	Friars Road	Northside Drive	Mission Village Drive	46057	44597	45327	14749	45330	39663	3273	0	No Adjustment	48439	51700
25	Yes	Friars Road	San Diego Mission Road	I-15 SB Ramps	57770	57717	57744	#N/A	#N/A	47182	1961	0	No Adjustment	83272	85200
26	Yes	Friars Road	I-15 SB Ramps	I-15 NB Ramps	46670	46464	46567	8726	57744	55350	0	0	No Adjustment	73936	73900
27	Yes	Friars Road	I-15 NB Ramps	Rancho Mission Road	52142	51073	51608	11556	61175	62864	0	0	No Adjustment	70293	70300
28	Yes	Friars Road	Rancho Mission Road	Santo Road	40015	38849	39432	9307	46148	55180	-4282	0	No Adjustment	63000	58700
29	Yes	Friars Road	Santo Road	Riverdale Street	43074	43692	43383	9308	43383	46947	0	0	No Adjustment	62042	62000
30	Yes	Friars Road	Riverdale Street	Mission Gorge Road	31776	30813	31295	369	40690	34684	6006	0	No Adjustment	36762	42800
31	Yes	Mission Gorge Road	Friars Road	Zion Avenue	40998	40382	40690	14750	31300	24260	7040		No Adjustment	26076	33100
New	Yes	Hazard Center Drive	Avenida Del Rio	Hazard Center W. Driveway							2100			10271	12400
32	Yes	Hazard Center Drive	Hazard Center W. Driveway	Mission Center Road	8604	8817	8711	#N/A	#N/A	4439	4300	0	No Adjustment	11505	15800
33	Yes	Rio San Diego Drive	Gill Village Way	Qualcomm Way	10617	10381	10499	14746	10500	4384	5551	0	No Adjustment	9845	15400
34	Yes	Rio San Diego Drive	Qualcomm Way	River Run Drive	11386	11177	11282	#N/A	#N/A	11335	0	0	No Adjustment	14651	14700
35	Yes	Rio San Diego Drive	River Run Drive	Fenton Parkway	9074	9095	9085	16091	9085	6500	2020	0	No Adjustment	11891	13900
36	Yes	San Diego Mission Road	Friars Road EB Ramps	Rancho Mission Road	7707	7469	7588	#N/A	#N/A	7638	0	0	No Adjustment	12383	12400
37	Yes	San Diego Mission Road	Rancho Mission Road	950 Feet West of Fairmount Avenue	8048	7986	8017	15424	6688	6094	0	0	No Adjustment	13660	13700
38	Yes	San Diego Mission Road	950 Feet West of Fairmount Avenue	Fairmount Avenue	8048	7986	8017	15424	6688	6094	0	0	No Adjustment	13660	13700
39	Yes	Taylor Street	Pacific Highway	Morena Boulevard	18648	19466	19057	9733	19060	10510	6500	0	No Adjustment	12296	18800
40	Yes	Taylor Street	Morena Boulevard	I-8 EB Ramps	17394	18096	17745	16026	13140	13322	0	0	No Adjustment	4222	4200
41	Yes	Taylor Street	I-8 EB Ramps	Hotel Circle South	13695	15124	14410	#N/A	#N/A	13468	1000	0	No Adjustment	4222	5200
42	Yes	Hotel Circle North	Hotel Circle South	Fashion Valley Road	14261	16426	15344	14770	12463	7188	0	0	No Adjustment - new parallel facility (VLC)	8556	8600
43	Yes	Hotel Circle North	Fashion Valley Road	I-8 WB Off-Ramp	6089	6920	6505	16016	15506	11253	0	0	No Adjustment - new parallel facility (VLC)	12840	12800
44	Yes	Hotel Circle North	I-8 WB Off-Ramp	Via Las Cumbres	14978	16034	15506	16017	6510	6740	0	0	No Adjustment	24101	24100
45	Yes	Hotel Circle North	Via Las Cumbres	I-8 WB On-Ramp	12345	12580	12463	#N/A	#N/A	3288	0	0	No Adjustment	15735	15700

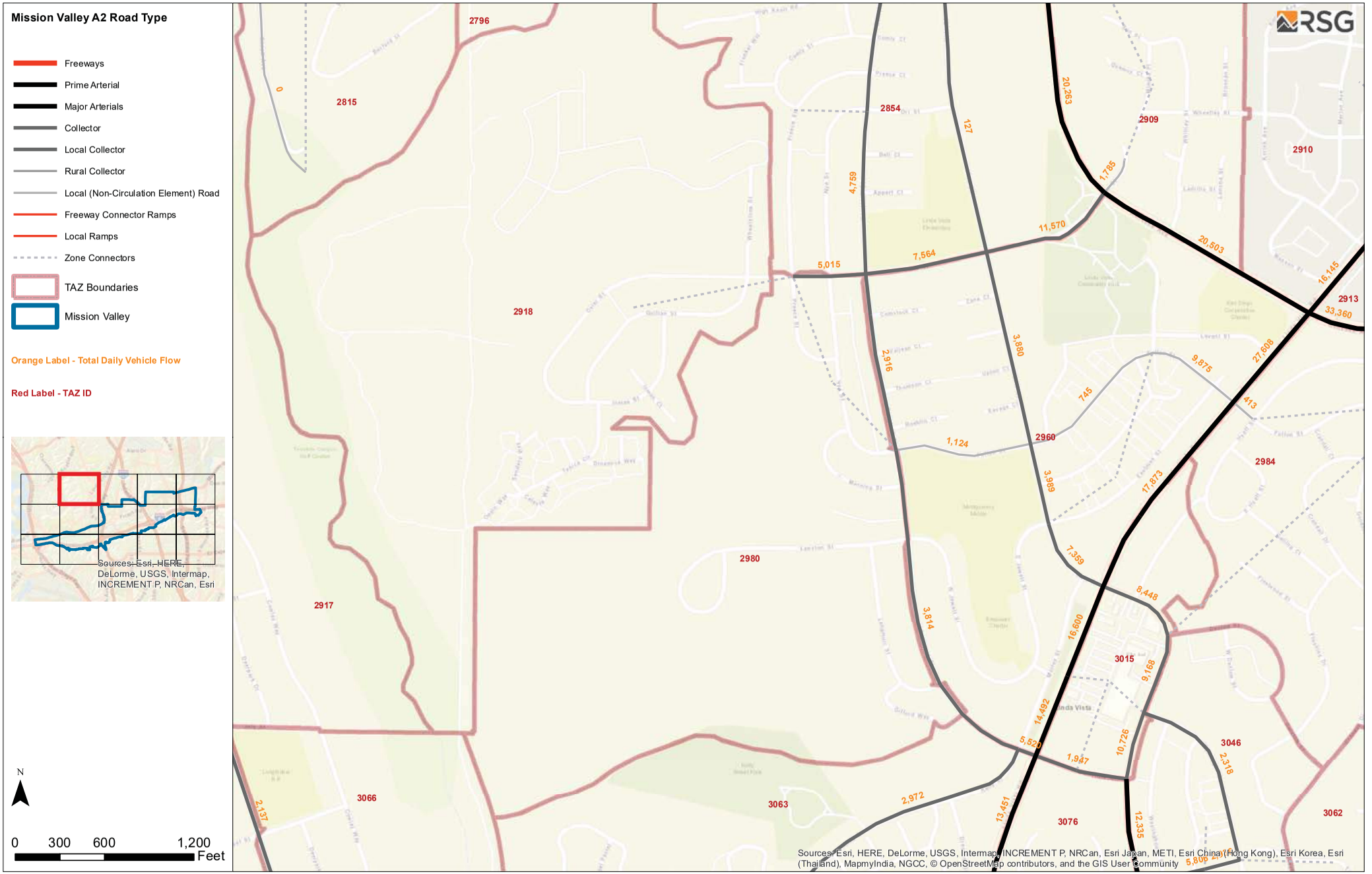
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ID	Selected?	Roadway	From	To	ADT, Day 1	ADT, Day 2	Average ADT	Count ID Match	2012 Counts	2012 Model	1st Manual Adjustment	2nd Manual Adjustment	Comments	Proposed ADT (Model)	Final (Proposed)
New	Yes	Hotel Circle North	I-8 WB On-Ramp	Hotel Circle South							0			3426	3400
46	Yes	Camino De La Reina	Hotel Circle North	Avenida Del Rio	8304	8663	8484	17610	9617	11715	-3487	0	No Adjustment	12539	9100
47	Yes	Camino De La Reina	Avenida Del Rio	Camino De La Siesta	12989	13736	13363	6703	13363	8100	3874	0	No Adjustment	13016	16900
48	Yes	Camino De La Reina	Camino De La Siesta	Mission Center Road	10553	10906	10730	9319	10730	9341	0	0	No Adjustment	10504	10500
49	Yes	Camino De La Reina	Mission Center Road	Camino Del Este	18208	18847	18528	#N/A	#N/A	11423	5451	0	No Adjustment	14474	19900
50	Yes	Camino De La Reina	Camino Del Este	Qualcomm Way	13522	14012	13767	9199	13767	12113	0	0	No Adjustment	13197	13200
51	Yes	Camino Del Rio North	Camino De La Siesta	Mission Center Road	5288	5571	5430	6981	5145	6468	-390	0	No Adjustment	13215	12800
52	Yes	Camino Del Rio North	Mission Center Road	I-8 WB Ramps	24977	23074	24026	#N/A	#N/A	24674	0	0	No Adjustment	29546	29500
53	Yes	Camino Del Rio North	I-8 WB Ramps	Camino Del Este	11539	12276	11908	#N/A	#N/A	14241	-1685	0	No Adjustment	13006	11300
54	Yes	Camino Del Rio North	Camino Del Este	Qualcomm Way	12104	12258	12181	#N/A	#N/A	5314	7515	0	No Adjustment	13867	21400
55	Yes	Camino Del Rio North	Qualcomm Way	Mission City Parkway	10769	10407	10588	#N/A	#N/A	11139	0	0	No Adjustment	15552	15600
56	Yes	Camino Del Rio North	Mission City Parkway	800 Feet East of Mission City Parkway	8295	7867	8081	388	8081	9412	-780	0	No Adjustment	9689	8900
57	Yes	Camino Del Rio North	800 Feet East of Mission City Parkway	1800 Feet West of Ward Road	8297	7821	8059	12649	8059	9412	-802	0	No Adjustment	9689	8900
58	Yes	Camino Del Rio North	1800 Feet West of Ward Road	Ward Road	9176	8663	8920	10997	8920	9633	0	0	No Adjustment	9763	9800
59	Yes	Camino Del Rio North	Ward Road	1000 Feet West of Fairmount Avenue	11918	11732	11825	10997	8920	9633	0	0	No Adjustment - negative growth	9763	9800
60	Yes	Camino Del Rio North	1000 Feet West of Fairmount Avenue	Fairmount Avenue	13395	13543	13469	14510	11825	11725	0	0	No Adjustment - negative growth	20336	20300
61	Yes	Hotel Circle South	Taylor Street	I-8 EB Off-Ramp	12001	12017	12009	#N/A	#N/A	6879	0	0	No Adjustment - additional parallel facility (VLC)	3210	3200
62	Yes	Hotel Circle South	I-8 EB Off-Ramp	Via Las Cumbres	12107	12569	12338	#N/A	#N/A	6921	0	0	No Adjustment - additional parallel facility (VLC)	16369	16400
63	Yes	Hotel Circle South	Via Las Cumbres	I-8 EB On-Ramp	16911	17483	17197	#N/A	#N/A	6921	0		No Adjustment	30174	30200
New	Yes	Hotel Circle South	I-8 EB On-Ramp	Bachman Place										13632	13600
64	Yes	Hotel Circle South	Bachman Place	Hotel Circle North	15813	15339	15576	#N/A	#N/A	12817	0	0	No Adjustment	14337	14300
65	Yes	Camino Del Rio South	Western Terminus	1800 Feet west of Mission Center Road	7012	7650	7331	16065	7331	9871	-2500	0	No Adjustment	10042	7500
66	Yes	Camino Del Rio South	1800 Feet west of Mission Center Road	Mission Center Road	6686	7047	6867	#N/A	#N/A	9871	-2500	0	No Adjustment	10042	7500
67	Yes	Camino Del Rio South	Mission Center Road	Texas Street	7602	7221	7412	#N/A	#N/A	7910	0	0	No Adjustment	8688	8700
68	Yes	Camino Del Rio South	Texas Street	Mission City Parkway	8383	7899	8141	25094	10254	8584	0	0	No Adjustment	11177	11200
69	Yes	Camino Del Rio South	Mission City Parkway	I-15 SB Offramp	11908	11589	11749	#N/A	#N/A	19082	-8000	0	No Adjustment	22120	14100
70	Yes	Camino Del Rio South	I-15 SB Offramp	I-15 SB Onramp	9376	9777	9577	11011	10934	13125	2200	0	No Adjustment	14783	17000
71	Yes	Camino Del Rio South	I-15 SB Onramp	Fairmount Avenue	6188	6546	6367	#N/A	#N/A	6581	0	0	No Adjustment	7636	7600
72	Yes	West Morena Boulevard	Tecolote Road	Morena Boulevard	15932	16424	16178	#N/A	#N/A	10074	6000	0	No Adjustment	10638	16600
73	Yes	Morena Boulevard	West Morena Boulevard	Linda Vista Road	17674	17800	17737	6885	17740	11929	5800	0	No Adjustment	10154	16000
74	Yes	Morena Boulevard	Linda Vista Road	I-8 WB Offramp	41556	42308	41932	8855	36350	35449	0	0	No Adjustment	28420	28400
75	Yes	Morena Boulevard	I-8 WB Offramp	Taylor Street	11206	11924	11565	#N/A	#N/A	5748	5800	0	No Adjustment	9630	15400
76	Yes	Napa Street	Morena Boulevard	Friars Road	13632	13228	13430	#N/A	#N/A	9681	3700	0	No Adjustment	11818	15500
77	Yes	Colusa Street	Linda Vista Road	Friars Road	2699	2731	2715	#N/A	#N/A	3459	-700	0	No Adjustment	3295	2600
New	Yes	Colusa Street	Friars Road	Riverwalk Drive			0	#N/A	#N/A	3124	0	0	No Adjustment	444	400
78	Yes	Via Las Cumbres	Linda Vista Road	Friars Road	10658	11187	10923	18800	10923	13138	0	0	No Adjustment	12540	12500
New	Yes	Via Las Cumbres	Friars Road	Riverwalk Drive			0	#N/A	#N/A	#N/A	0	0	No Adjustment	14284	14300
New	Yes	Via Las Cumbres	Riverwalk Drive	Levi-Cushman Street "B"			0	#N/A	#N/A	#N/A	0	0	No Adjustment	19495	19500
New	Yes	Via Las Cumbres	Levi-Cushman Street "B"	Hotel Circle North			0	#N/A	#N/A	#N/A	0	0	No Adjustment	23476	23500
New	Yes	Via Las Cumbres	Hotel Circle North	Hotel Circle South			0	#N/A	#N/A	#N/A	0	0	No Adjustment	30242	30200
79	Yes	Fashion Valley Road	Friars Road	Riverwalk Drive	9760	10204	9982	24729	8930	8427	0	0	No Adjustment	7800	7800

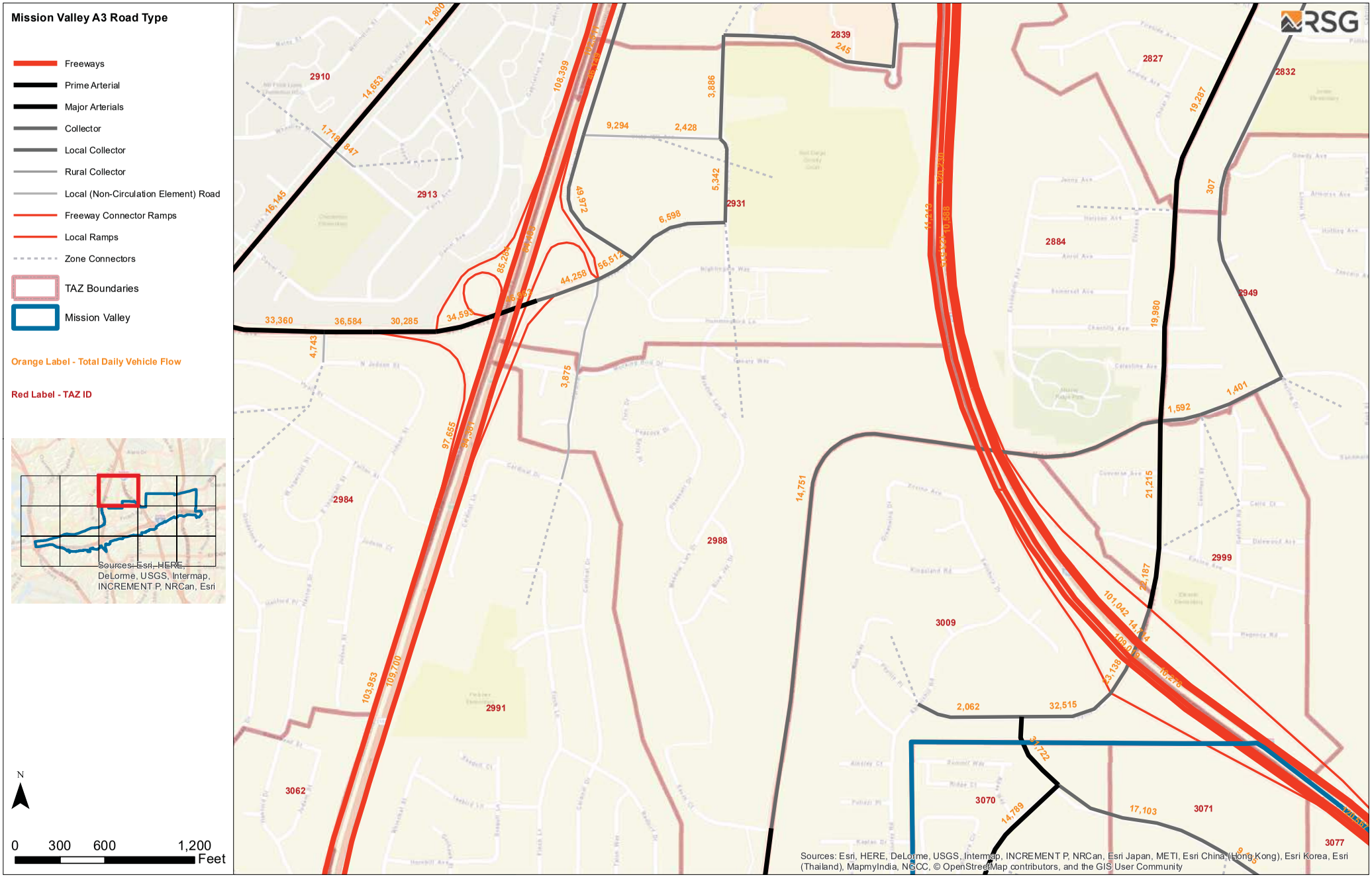
ID			Segment		2015			Base Year Model (Alt H)				CPU			
ID	Selected?	Roadway	From	To	ADT, Day 1	ADT, Day 2	Average ADT	Count ID Match	2012 Counts	2012 Model	1st Manual Adjustment	2nd Manual Adjustment	Comments	Proposed ADT (Model)	Final (Proposed)
New	Yes	Fashion Valley Road	Riverwalk Drive	Levi-Cushman Street "B"			9982	#N/A	#N/A	7192	1565	0	No Adjustment	16323	17900
New	Yes	Fashion Valley Road	Levi-Cushman Street "B"	Hotel Circle North			9982	#N/A	#N/A	#N/A	1935	0	No Adjustment	20164	22100
80	Yes	Bachman Place	Hotel Circle South	MV Southern Boundary	9047	9223	9135	#N/A	#N/A	7659	1500	0	No Adjustment	19197	20700
81	Yes	Avenida Del Rio	Fashion Valley Parking Lot	Camino De La Reina	8496	8992	8744	11656	8744	7623	1100	0	No Adjustment	16922	18000
82	Yes	Ulric Street	Fashion Hills Boulevard	600 Feet South of Fashion Hills Boulevard	20818	19940	20379	#N/A	#N/A	19870	0	0	No Adjustment	25840	25800
83	Yes	Ulric Street	600 Feet South of Fashion Hills Boulevard	Friars Road	20437	20414	20426	#N/A	#N/A	20843	0	0	No Adjustment	27157	27200
84	Yes	Camino De La Siesta	Camino De La Reina	Camino Del Rio North	5078	5212	5145	#N/A	#N/A	1798	3000	0	No Adjustment	6452	9500
85	Yes	Metropolitan Drive	Mission Valley Road	Murray Canyon Road	3876	3810	3843	#N/A	#N/A	5079	-1200	0	No Adjustment - negative growth	11351	10200
86	Yes	Murray Canyon Road	Metropolitan Drive	Frazee Road	7310	7483	7397	#N/A	#N/A	7012	0	5000	Adjust to account for parallel facility and TAZ loading	335	5300
87	Yes	Frazee Road	Metropolitan Drive	Murray Canyon Road				#N/A	#N/A	#N/A		-5000	Adjust to account for parallel facility and TAZ loading	11111	6100
87	Yes	Frazee Road	Murray Canyon Road	Friars Road	14904	14440	14672	#N/A	#N/A	5385	9200	0	No Adjustment	11111	20300
88	Yes	Frazee Road	Friars Road	Hazard Center Drive	17369	16721	17045	16071	17150	11918	5100	0	No Adjustment	14122	19200
89	Yes	Mission Center Road	Murray Ridge Road	1200 Feet West of Murray Ridge Road	10979	10965	10972	#N/A	#N/A	11076	0	0	Adjustment- negative growth and new freeway conne	14751	14800
90	Yes	Mission Center Road	1200 Feet West of Murray Ridge Road	950 Feet North of Mission Valley Road	10725	10716	10721	#N/A	#N/A	11076	0	0	Adjustment- negative growth and new freeway conne	14751	14800
91	Yes	Mission Center Road	950 Feet North of Mission Valley Road	Mission Valley Road	10920	10958	10939	31283	10939	11076	0	0	Adjustment- negative growth and new freeway conne	14751	14800
92	Yes	Mission Center Road	Mission Valley Road	Westside Drive	14157	14172	14165	16081	15630	9642	4660	0	Adjustment- negative growth and new freeway conne	15564	20200
93	Yes	Mission Center Road	Westside Drive	Friars Road WB Ramps	25927	26109	26018	#N/A	#N/A	14862	11293	0	Adjustment- negative growth and new freeway conne	21676	33000
94	Yes	Mission Center Road	Friars Road WB Ramps	Friars Road EB Ramps	22383	23269	22826	1820	22826	16128	6835	0	Adjustment- negative growth and new freeway conne	18623	25500
95	Yes	Mission Center Road	Friars Road EB Ramps	Mission Center Court	19074	19866	19470	#N/A	#N/A	17438	0	0	Adjustment- negative growth and new freeway conne	22234	22200
96	Yes	Mission Center Road	Mission Center Court	Hazard Center Drive	19313	19577	19445	14725	18870	13940	3938	0	Adjustment- negative growth and new freeway conne	22088	26000
97	Yes	Mission Center Road	Hazard Center Drive	Camino De La Reina	27105	27020	27063	1818	19445	17716	7780	0	Adjustment- negative growth and new freeway conne	24318	32100
98	Yes	Mission Center Road	Camino De La Reina	Camino Del Rio North	23104	23456	23280	6902	23280	16814	4899	0	Adjustment- negative growth and new freeway conne	26529	31400
99	Yes	Auto Circle	Camino Del Rio North	I-8 EB Ramps	34141	34052	34097	16067	34097	29675	2855	0	Adjustment- negative growth and new freeway conne	37984	40800
100	Yes	Auto Circle	I-8 EB Ramps	Camino Del Rio South	21026	20925	20976	16066	20976	18448	961	0	Adjustment- negative growth and new freeway conne	16993	18000
New	Yes	Via Alta	Franlin Ridge Road	Civita Boulevard	1332	1350	1341	0	0	0	1300	0	No Adjustment	9640	10900
101	Yes	Via Alta	Civita Boulevard	Westside Drive	1332	1350	1341	#N/A	#N/A	0	1300	0	No Adjustment	5096	6400
102	Yes	Murray Ridge Road	Mission Center Road	I-805 NB Ramps	20301	19693	19997	#N/A	#N/A	17359	2600	0	No Adjustment	21215	23800
103	Yes	Murray Ridge Road	I-805 NB Ramps	I-805 SB Ramps	11826	11572	11699	#N/A	#N/A	10784	900	0	No Adjustment	23138	24000
104	Yes	Russell Park Way	Civita Boulevard	Friars Road	985	1057	1021	#N/A	#N/A	#N/A	0	0	No Adjustment	7459	7500
105	Yes	Camino Del Este	Rio San Diego Drive	Camino De La Reina	8380	8517	8449	18048	8449	7343	1100	0	No Adjustment	13075	14200
106	Yes	Camino Del Este	Camino De La Reina	Camino Del Rio North	9672	10086	9879	#N/A	#N/A	6543	3300	0	No Adjustment	14820	18100
New	Yes	Franklin Ridge Road	Phyllys Place	Via Alta			0	#N/A	#N/A	#N/A	0	0	No Adjustment	31722	31700
107	Yes	Franklin Ridge Road	Via Alta	Civita Boulevard			0	#N/A	#N/A	#N/A	0		No Adjustment	17103	17100
108	Yes	Qualcomm Way	Civita Boulevard	Friars Road WB Ramps			0	#N/A	#N/A	334	0	0	No Adjustment	19793	19800
109	Yes	Qualcomm Way	Friars Road WB Ramps	Friars Road EB Ramps	9226	9372	9299	#N/A	#N/A	4446	9290	0	No Adjustment	20941	30200
110	Yes	Qualcomm Way	Friars Road EB Ramps	Rio San Diego Drive	10014	10388	10201	9190	10201	7025	7613	0	No Adjustment	18733	26300
111	Yes	Qualcomm Way	Rio San Diego Drive	Camino Del Rio North	24223	24434	24329	#N/A	#N/A	28766	0	0	No Adjustment	42774	42800
112	Yes	Qualcomm Way	Camino Del Rio North	I-8 WB Ramps	23586	23532	23559	7964	36413	31540	0	0	No Adjustment	49338	49300
113	Yes	Qualcomm Way	I-8 WB Ramps	I-8 EB Ramps	36091	36735	36413	7964	36413	31540	4126	0	No Adjustment	49338	53500
114	Yes	Qualcomm Way	I-8 EB Ramps	Camino Del Rio South	25865	25789	25827	#N/A	#N/A	33771	-8691	0	No Adjustment	40766	32100
115	Yes	Texas Street	Camino Del Rio South	1400 Feet North of Madison Ave	29130	28977	29054	9887	29239	28307	0	0	No Adjustment	33113	33100
116	Yes	Texas Street	1400 Feet North of Madison Ave	Madison Avenue	29443	29034	29239	#N/A	#N/A	24605	3887	0	No Adjustment	29260	33100
117	Yes	Texas Street	Madison Avenue	Meade Ave	17053	17121	17087	#N/A	#N/A	16481	0	0	No Adjustment	20292	20300
118	Yes	Texas Street	Meade Ave	El Cajon Boulevard	14365	14260	14313	#N/A	#N/A	10527	3180	0	No Adjustment	12387	15600
119	Yes	River Run Drive	Friars Road	Rio San Diego Drive	4166	3893	4030	#N/A	#N/A	5542		0	No Adjustment	4120	4100

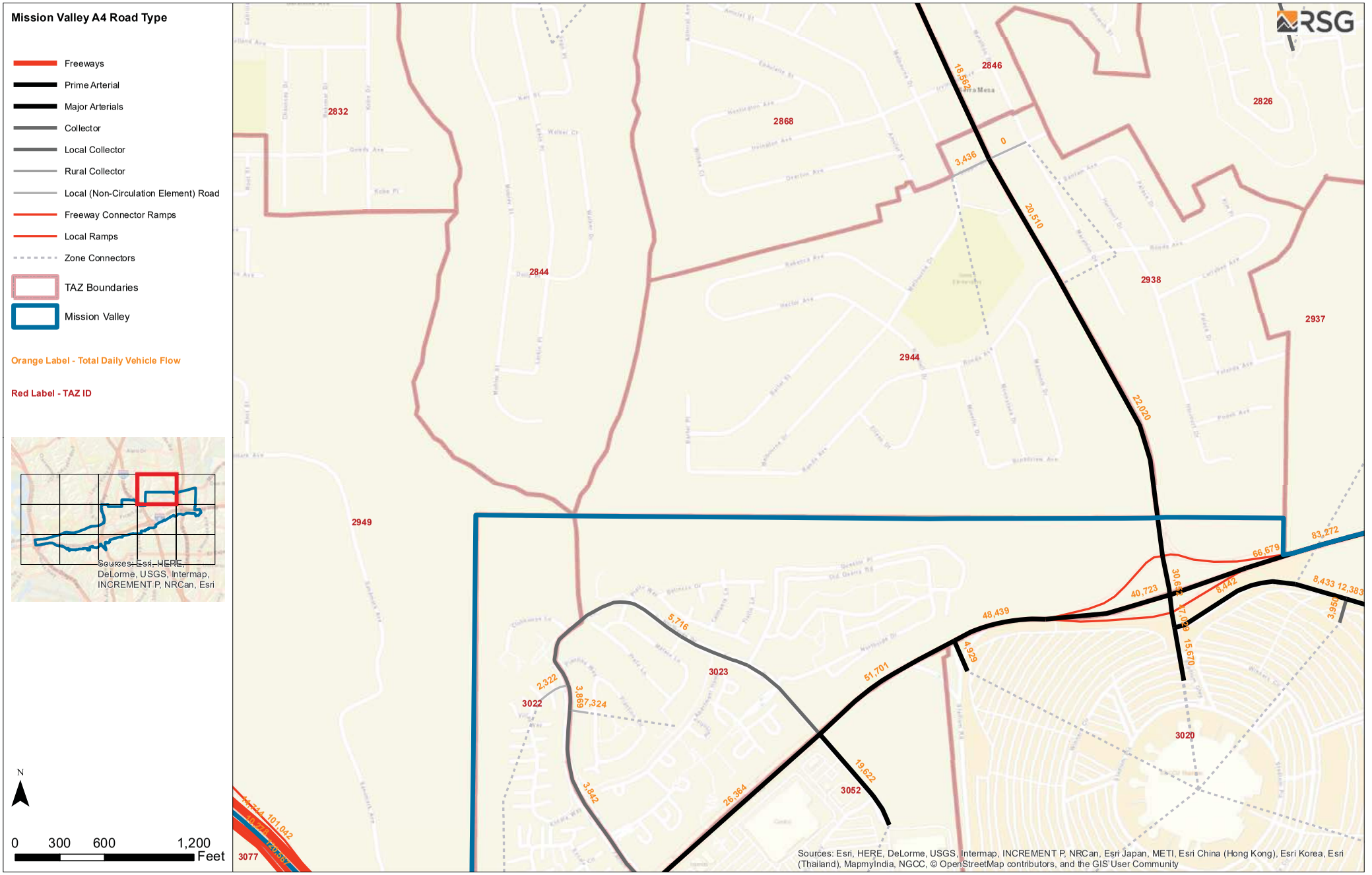
ID			Segment		2015			Base Year Model (Alt H)				CPU			
ID	Selected?	Roadway	From	To	ADT, Day 1	ADT, Day 2	Average ADT	Count ID Match	2012 Counts	2012 Model	1st Manual Adjustment	2nd Manual Adjustment	Comments	Proposed ADT (Model)	Final (Proposed)
120	Yes	Fenton Parkway	Portofino Driveway	Friars Road	4094	4135	4115	1815	4115	5276	1100	0	No Adjustment - negative growth	3842	4900
121	Yes	Fenton Parkway	Friars Road	Rio San Diego Drive	12703	12521	12612	5055	12612	9096	3500	0	No Adjustment	12346	15800
122	Yes	Fenton Parkway	Rio San Diego Drive	Del Rio Apartments Driveway	5548	5247	5398	#N/A	#N/A	0	0	0	No Adjustment	9259	9300
New	Yes	Fenton Parkway	Del Rio Apartment Driveway	New Street I				#N/A	#N/A	#N/A	0			9259	9300
New	Yes	Fenton Parkway	New Street I	Camino Del Rio North				#N/A	#N/A	#N/A	0	0	No Adjustment	13871	13900
123	Yes	Mission City Parkway	Camino Del Rio North	Camino Del Rio South	6580	6277	6429	3904	6428	10314	-3900	0	No Adjustment	14915	11000
124	Yes	Northside Drive	Portofino Driveway	Friars Road	6556	6628	6592	5056	6592	7221	-700	0	No Adjustment	5716	5000
125	Yes	Northside Drive	Friars Road	Fenton Marketplace Driveway	20223	20399	20311	16090	19398	14318	5000		No Adjustment	19622	24600
126	Yes	Northside Drive	Fenton Marketplace Driveway	Lowe's Frontage Road	15729	16058	15894	16090	19398	14318			no adjustment - readjusted based on existing pattern	19622	19600
127	Yes	Mission Village Drive	Ronda Avenue	Friars Road WB Ramps	16813	17628	17221	15759	17221	21196	-4000	0	No Adjustment	22020	18000
128	Yes	Mission Village Drive	Friars Road WB Ramps	Friars Road EB Ramps	14355	12970	13663	15760	13663	14323	0	0	No Adjustment	30652	30700
129	Yes	Rancho Mission Road	Friars Road	San Diego Mission Road	13271	12366	12819	4492	12819	10997	1800	0	No Adjustment	14310	16100
130	Yes	Rancho Mission Road	San Diego Mission Road	Camino Del Rio North	9511	9644	9578	14771	9578	7979	1600	0	No Adjustment	17617	19200
131	Yes	Santo Road	Northern Terminus	Friars Road	6205	6523	6364	9305	6360	12605	-6200	0	No Adjustment	21873	15700
132	Yes	Riverdale Street	Zion Road	Friars Road	2792	2743	2768	36131	2770	4216	-1400	0	No Adjustment	3585	2200
133	Yes	Riverdale Street	Friars Road	Vandever Avenue	8824	8984	8904	15419	8900	7338	1600	0	No Adjustment	24844	26400
134	Yes	Mission Gorge Road	Friars Road	Camino Del Rio North	14742	14684	14713	#N/A	#N/A	14054	0	0	No Adjustment	22607	22600
135	Yes	Fairmount Avenue	Camino Del Rio North/I-8 WB Offramp	I-8 EB Offramp	40053	40370	40212	#N/A	#N/A	47333	-6000	0	No Adjustment	59339	53300
136	Yes	Fairmount Avenue	I-8 EB Offramp	Camino Del Rio South	81276	84480	82878	1574	82880	80189	2700	0	No Adjustment	90608	93300
New	Yes	Riverwalk Drive	Colusa Street	Via Las Cumbres			0	#N/A	#N/A	#N/A	0	0	No Adjustment	2828	2800
New	Yes	Riverwalk Drive	Via Las Cumbres	Fashion Valley Road			0	#N/A	#N/A	#N/A	0	0	No Adjustment	2980	3000
New	Yes	Riverwalk Drive	Fashion Valley Road	Avenida Del Rio			0	16013	6950	7623	-700	0	No Adjustment	14648	13900
New	Yes	Riverwalk Drive	Avenida Del Rio	Hazard Center W. Driveway			0	#N/A	#N/A	#N/A	#N/A	0	No Adjustment	10271	10300
New	Yes	Levi-Cushman Street "B"	Via Las Cumbres	Fashion Valley Road			0	#N/A	#N/A	#N/A	#N/A	0	No Adjustment	13147	13100
New	Yes	Goshen St	Linda Vista Road	Riley Street							0		No Adjustment	4280	4300
New	Yes	Goshen St	Riley Street	Friars Road							0		No Adjustment	3295	3300
New	Yes	Goshen St	Friars Road	Southern End							0		No Adjustment	2261	2300
New	Yes	"New Street I"	Fenton Parkway	Eastern Terminus							0		No Adjustment	11854	11900
New	Yes	Frazee Extension	Mission Valley Road	Murray Canyon Road								-5000	Assumed 1/2 goes to Metropolitan Drive	11111	6100
New	Yes	Gill Village Way	Friars Road	Rio San Diego Drive									No Adjustment	5684	5700
New	Yes	Rio Bonito Way	Friars Road	Rio San Diego Drive									No Adjustment	4006	4000

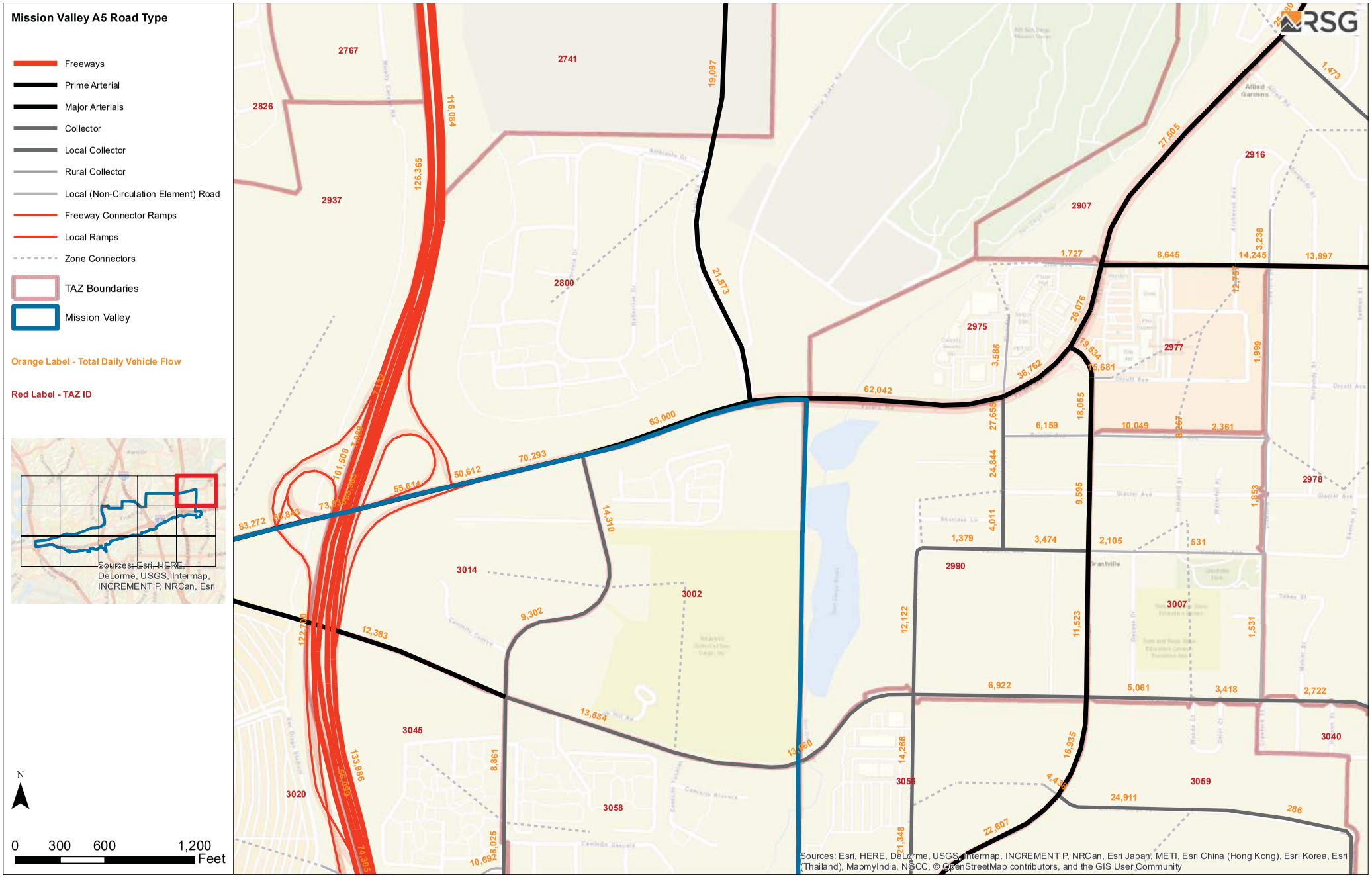
Preferred Alternative Model Outputs

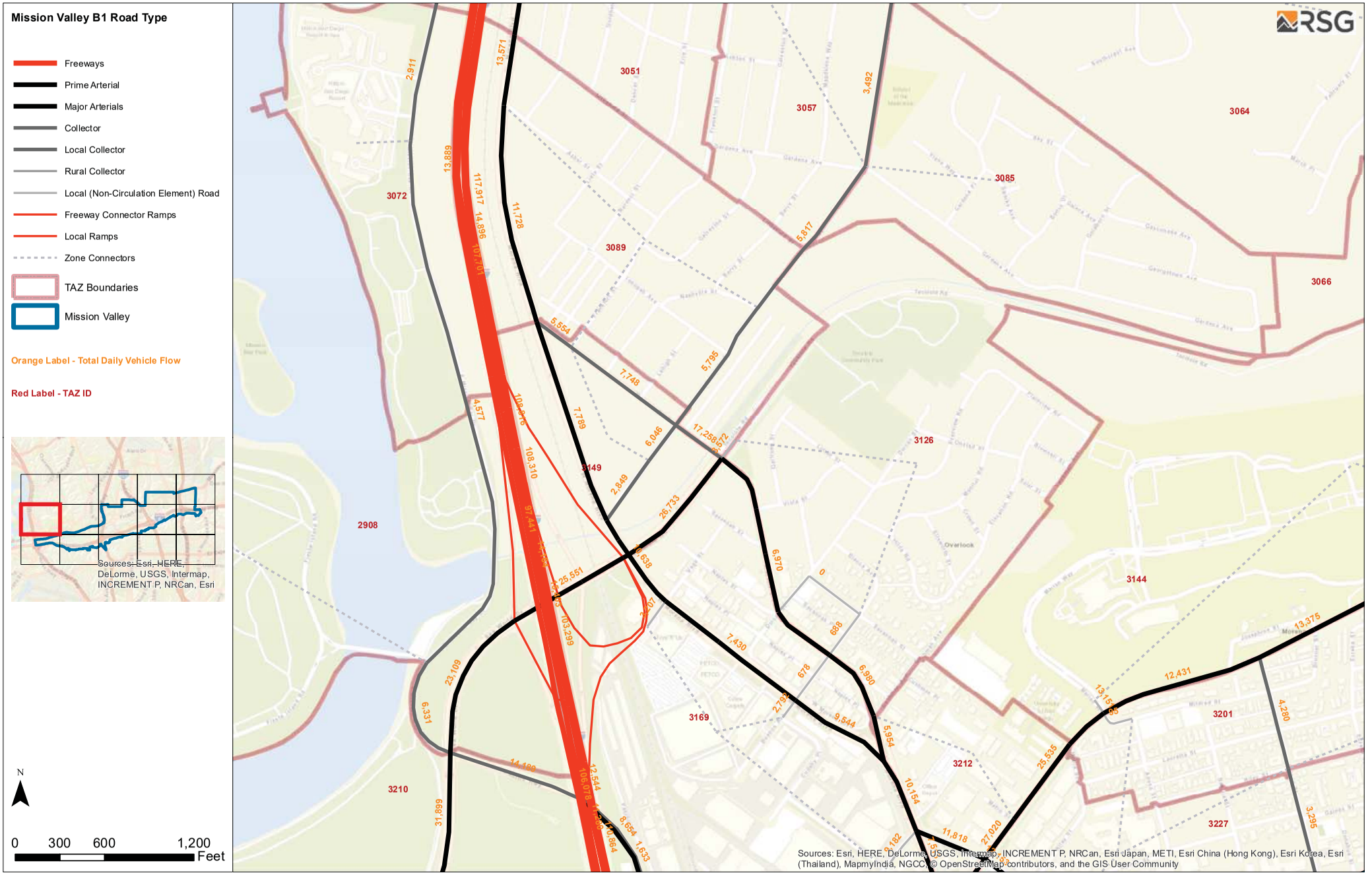

Mission Valley A1 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
2896
2853
2879
2823
2888
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2951
2917
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2982
3018
3051
3057
3064
3072
899
2,201
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4,271
6,929
8,061
10,040
14,290
5,329
8,256
5,116
6,403
25,030
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4,749
12,579
13,107
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2,911
107,701
11,039
13,889
13,571
4,677
2,541
1,336
3,441
2,051
3,492
2,255
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

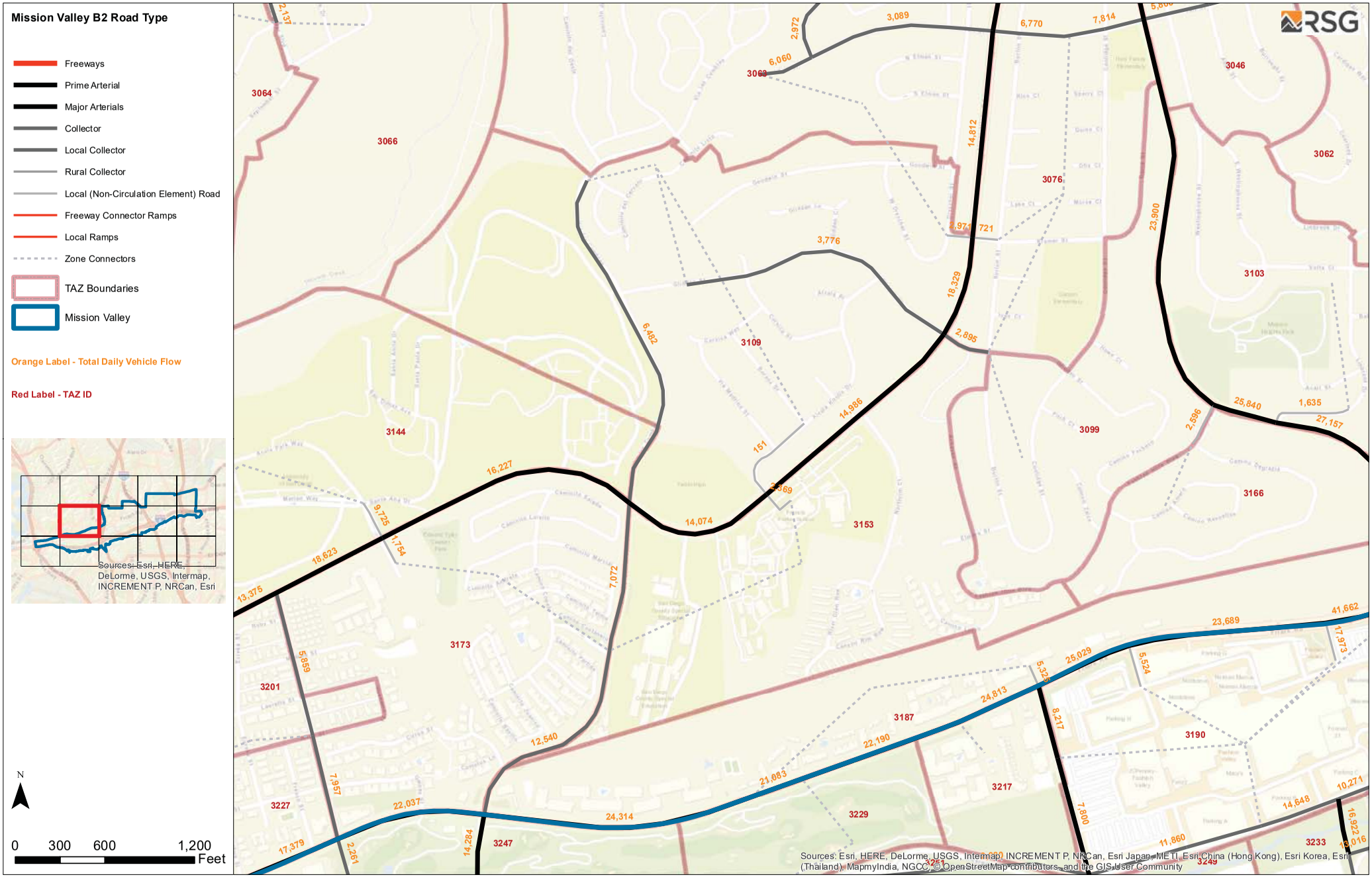

Mission Valley A2 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
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2909
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2913
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10,726
2,318
2,137
2,972
13,451
12,335
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

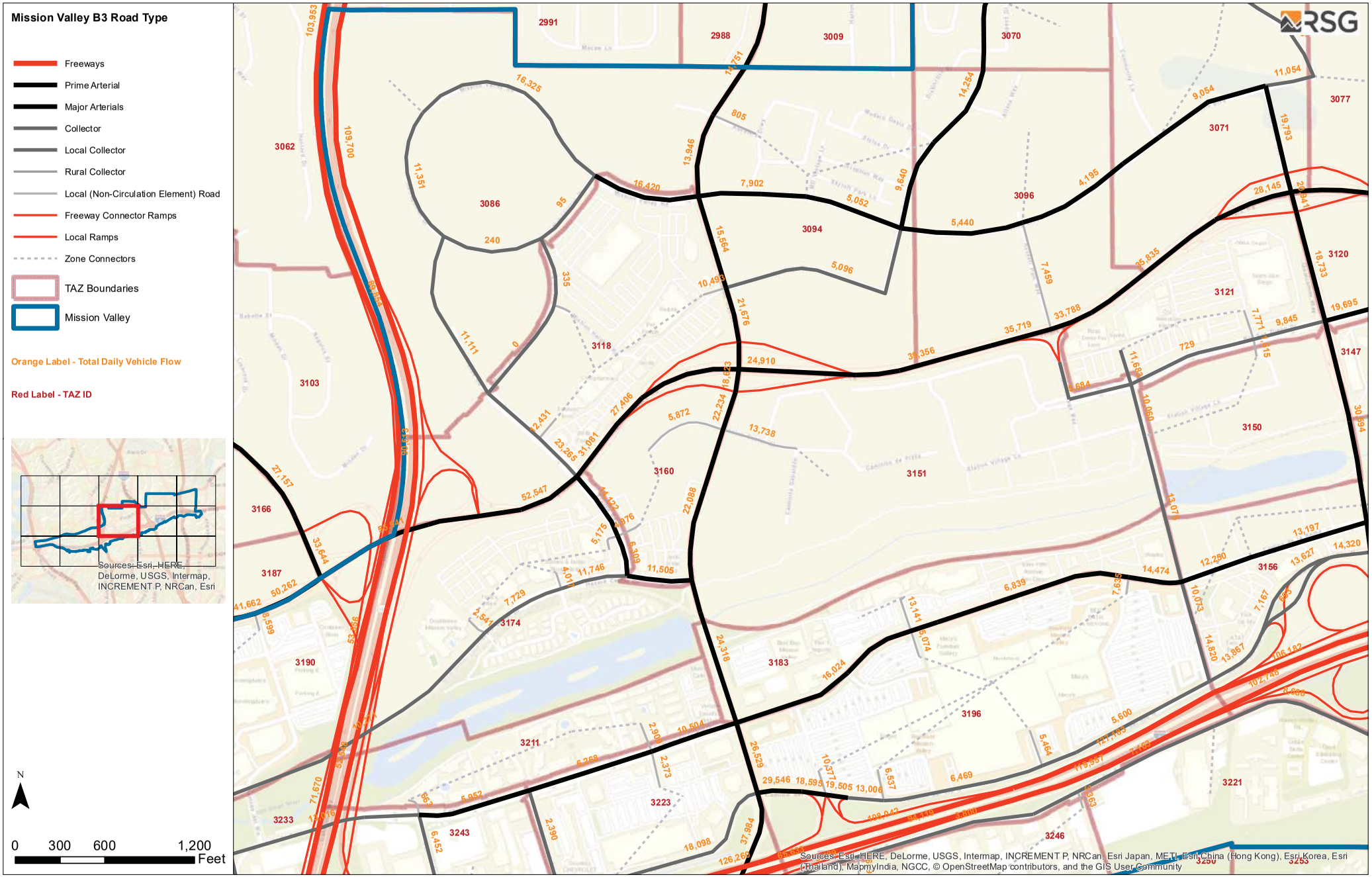

Mission Valley A3 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
2910
2913
2984
2988
2991
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2839
245
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3009
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1,719
947
16,145
108,399
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3,875
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10,278
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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

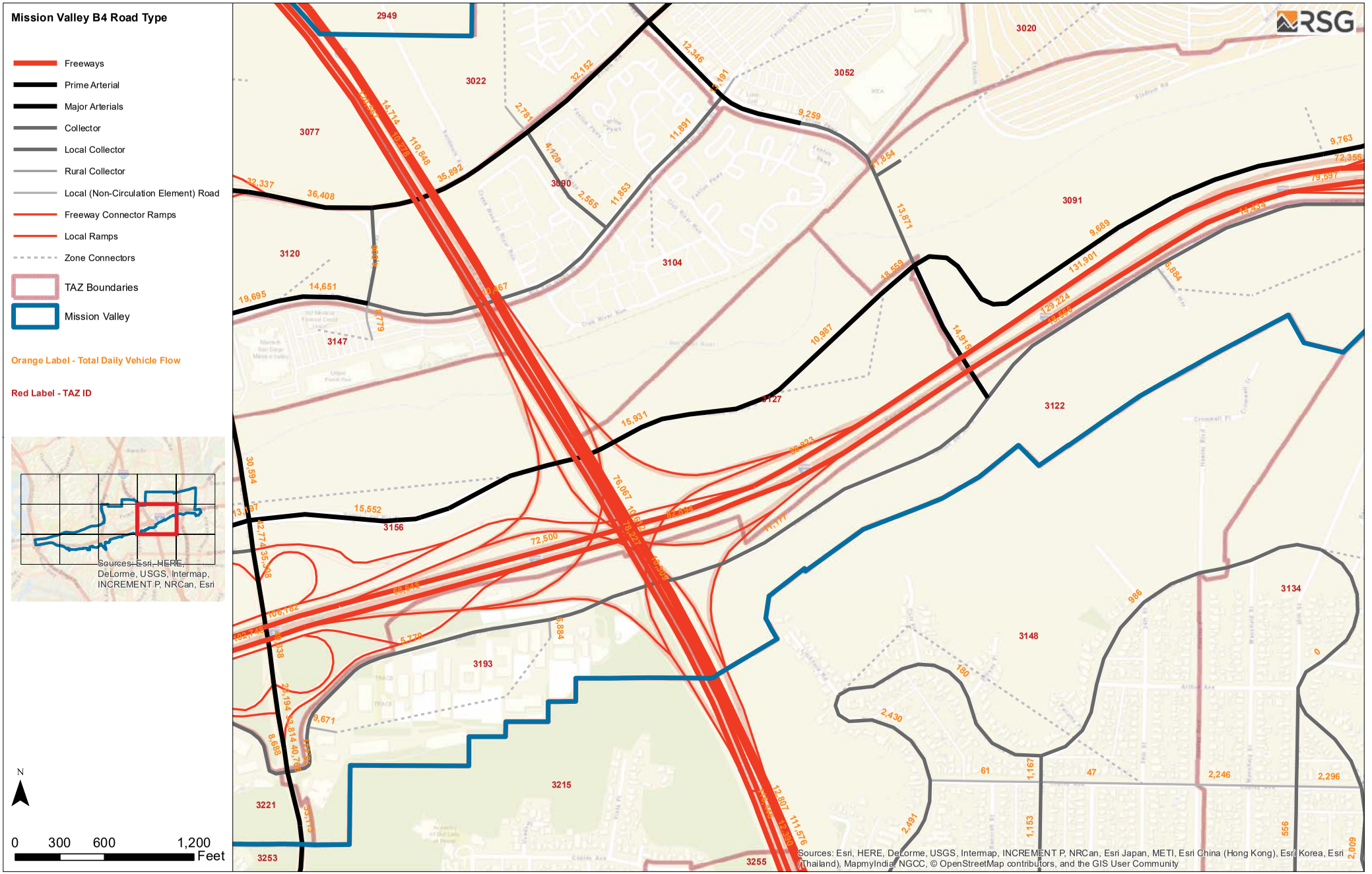

Mission Valley A4 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
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2846
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15,670
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5,716
2,322
3,869
7,324
3,842
19,622
26,364
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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

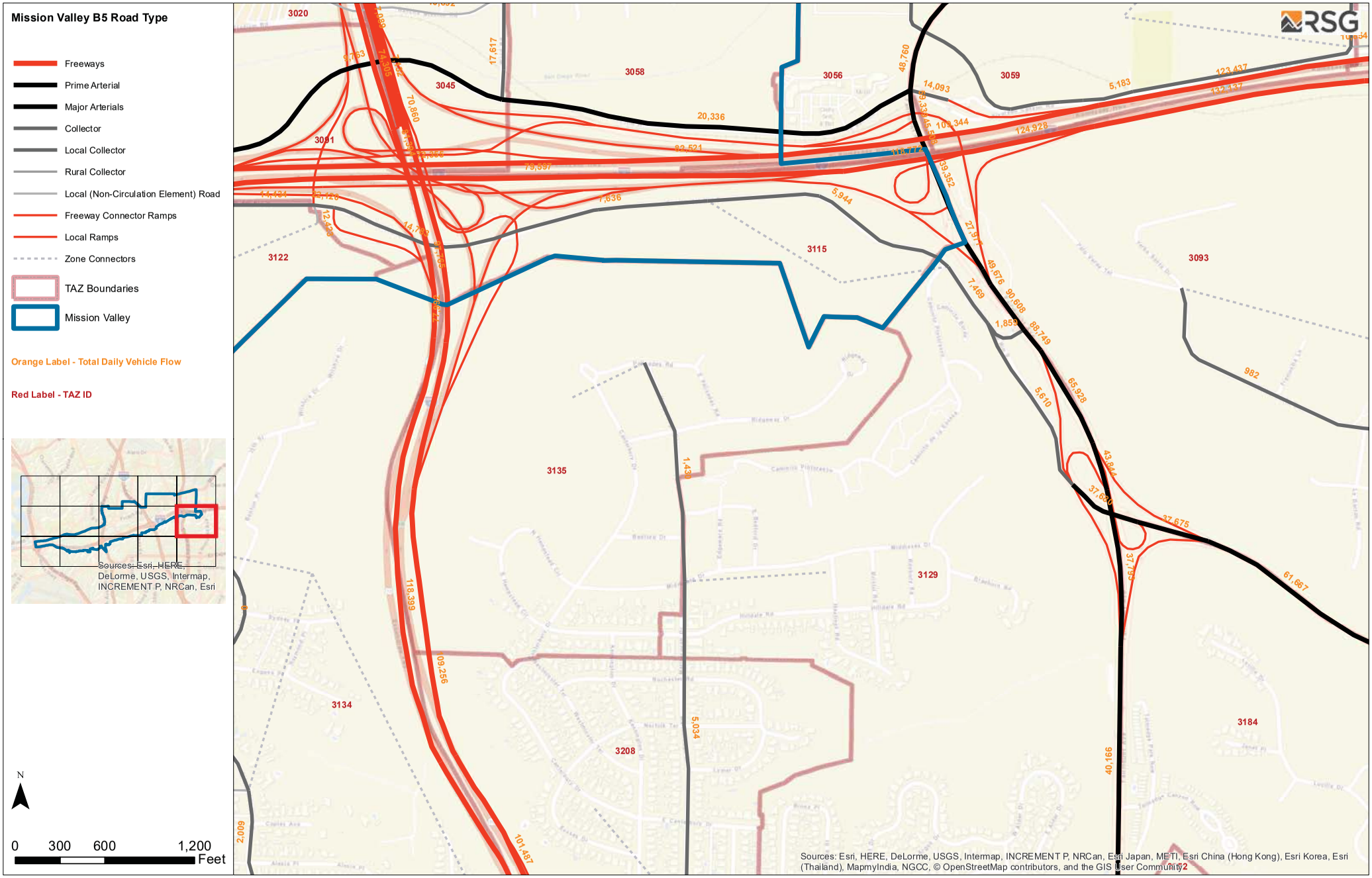

Mission Valley A5 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
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2741
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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley B1 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
3051
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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

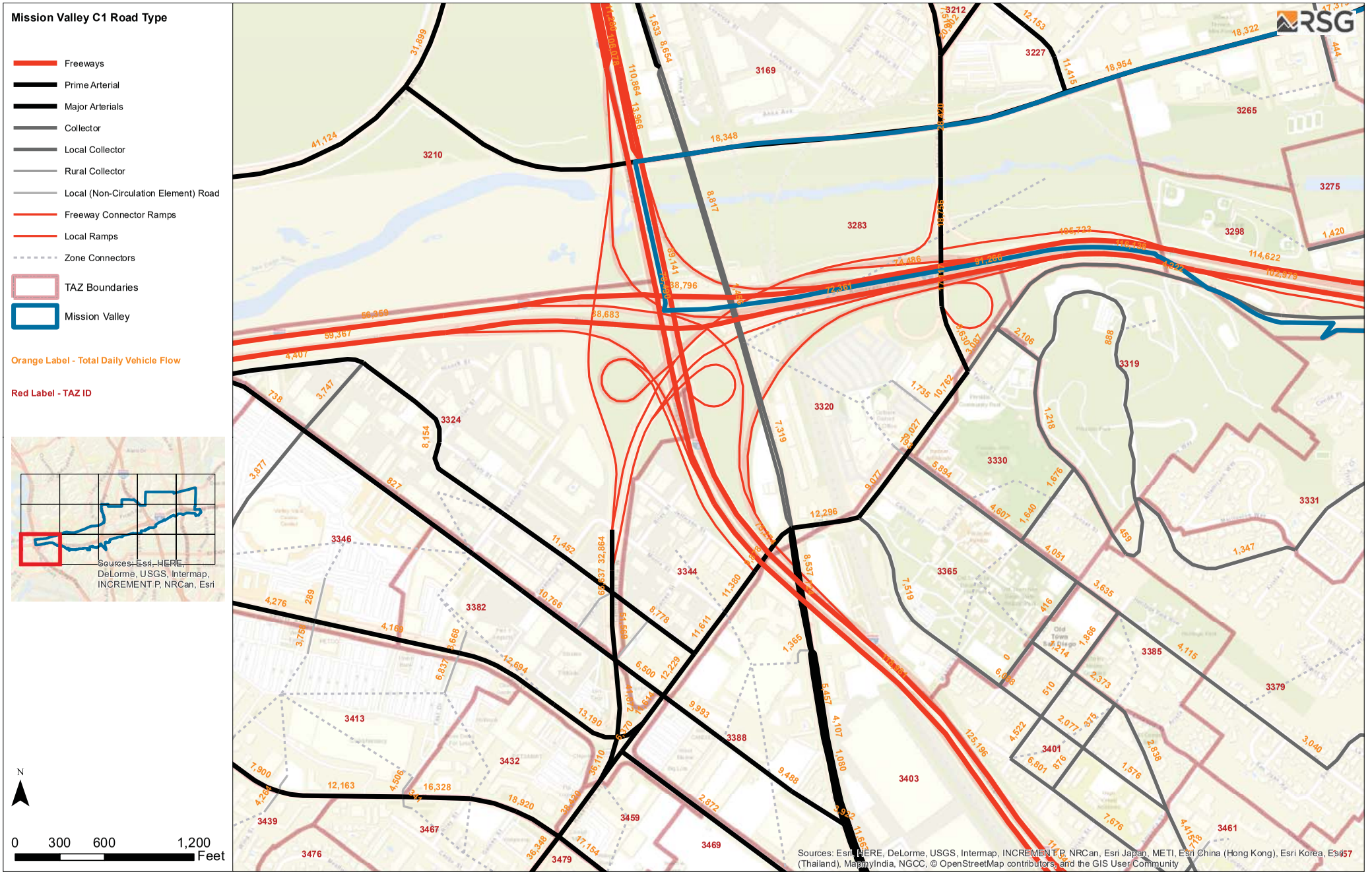

Mission Valley B2 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
3064
3066
3063
3046
3062
3076
3103
3109
3144
3099
3166
3153
3173
3201
3187
3190
3217
3227
3229
3247
3233
3249
3251
2,137
2,972
3,089
6,770
7,814
6,060
14,812
23,900
3,776
18,329
6,482
2,895
14,986
151
16,227
14,074
9,725
1,754
18,623
13,375
7,072
5,859
7,957
22,037
24,314
12,540
21,083
22,190
24,813
5,323
25,029
5,524
8,217
7,800
23,689
41,662
17,973
14,648
10,271
16,922
11,860
25,840
1,635
27,157
2,596
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley B3 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley B4 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
2949
3020
3022
3052
3077
3091
3120
3104
3147
3122
3127
3156
3148
3134
3193
3215
3221
3253
3255
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

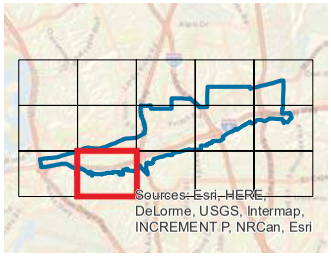

Mission Valley C1 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley C2 Road Type

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

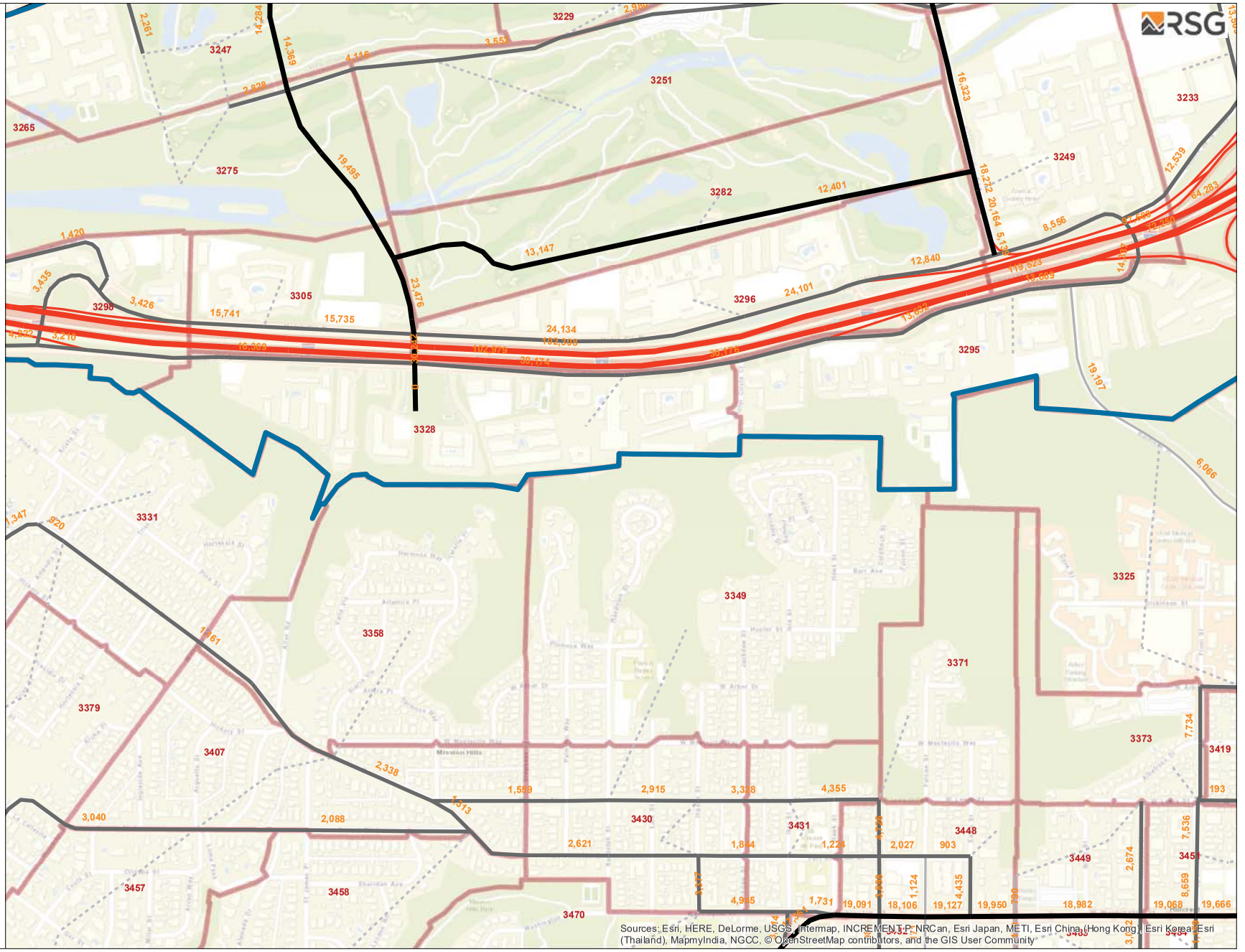
Orange Label - Total Daily Vehicle Flow

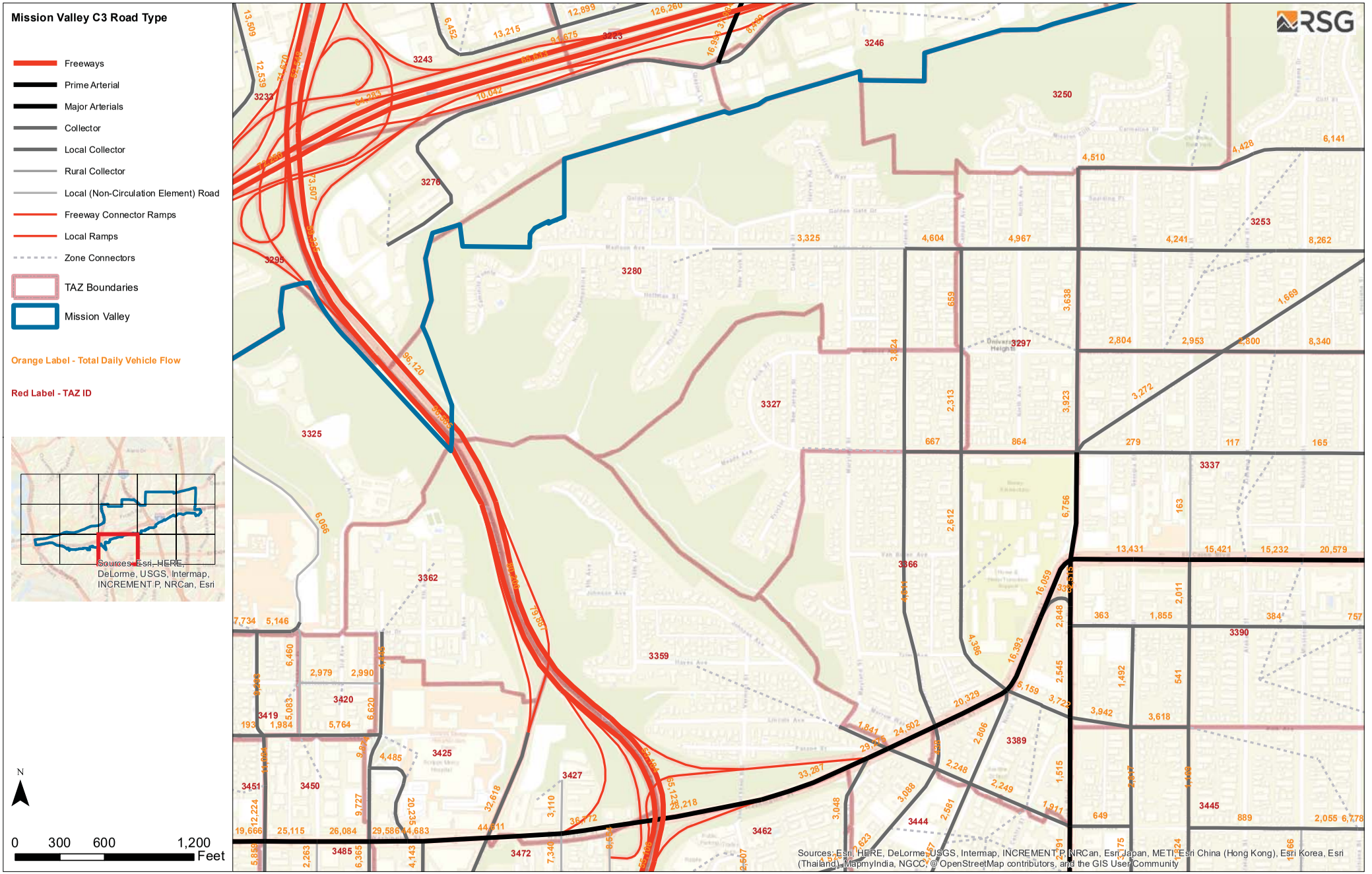
Red Label - TAZ ID

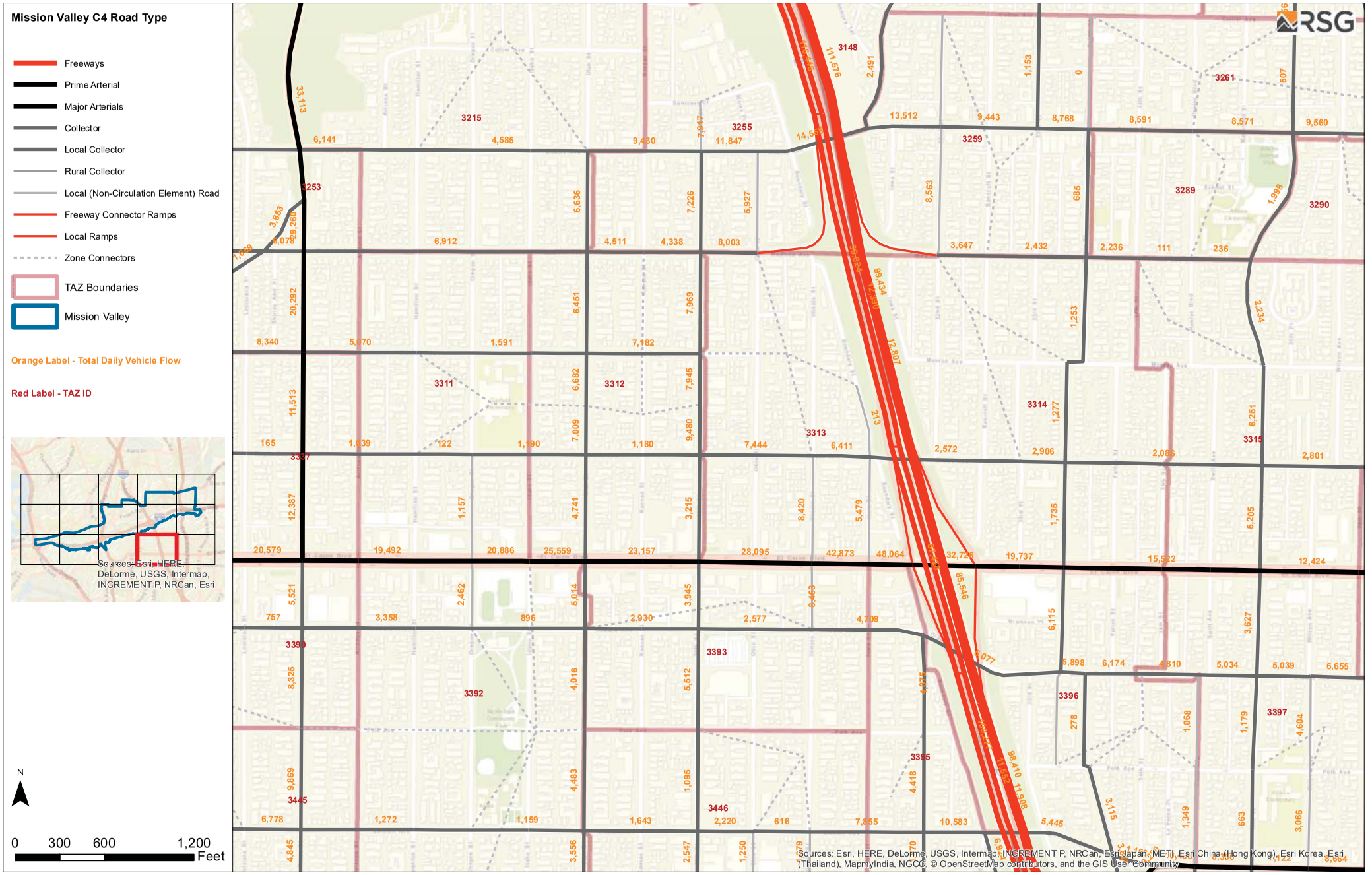


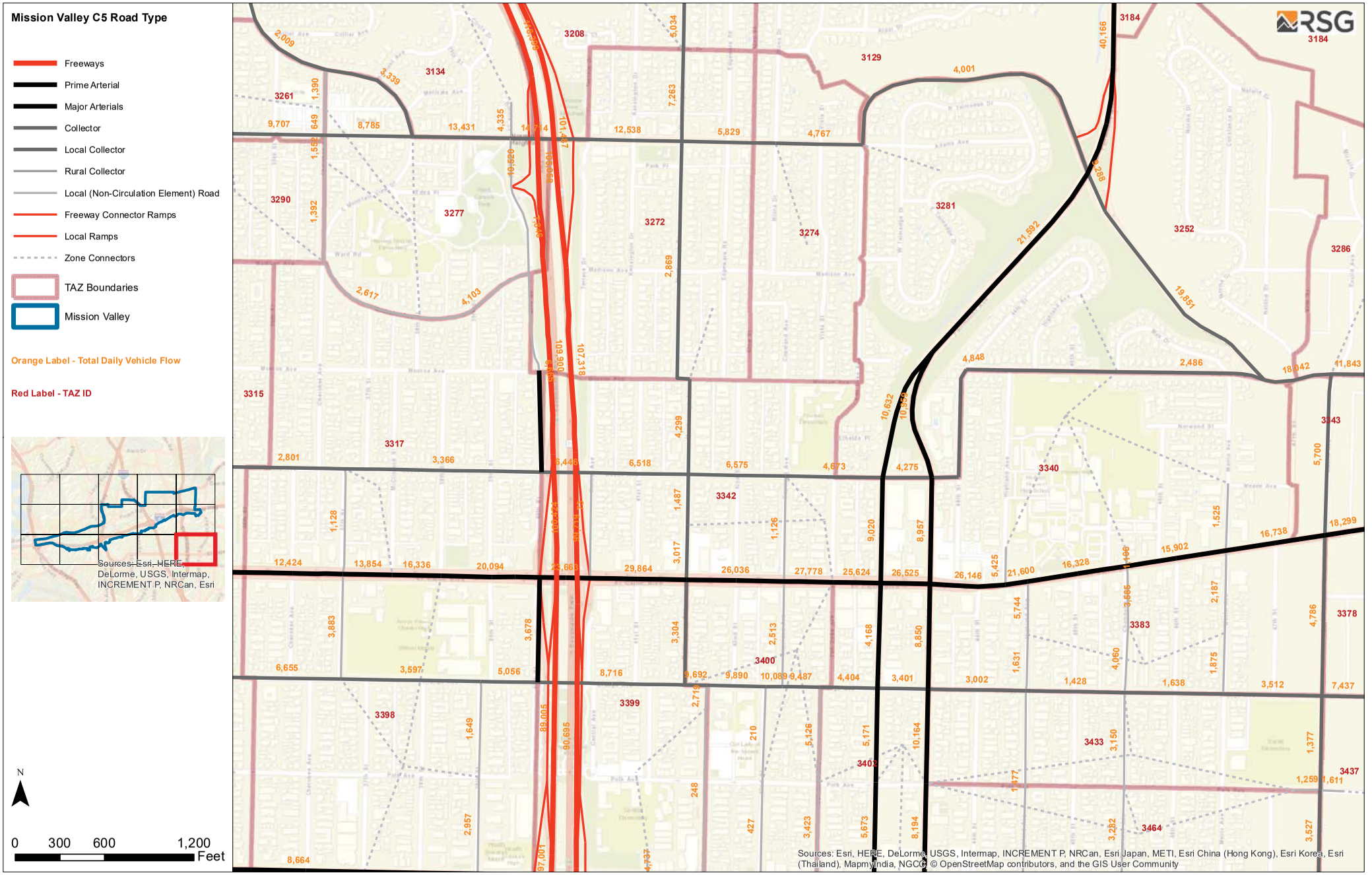
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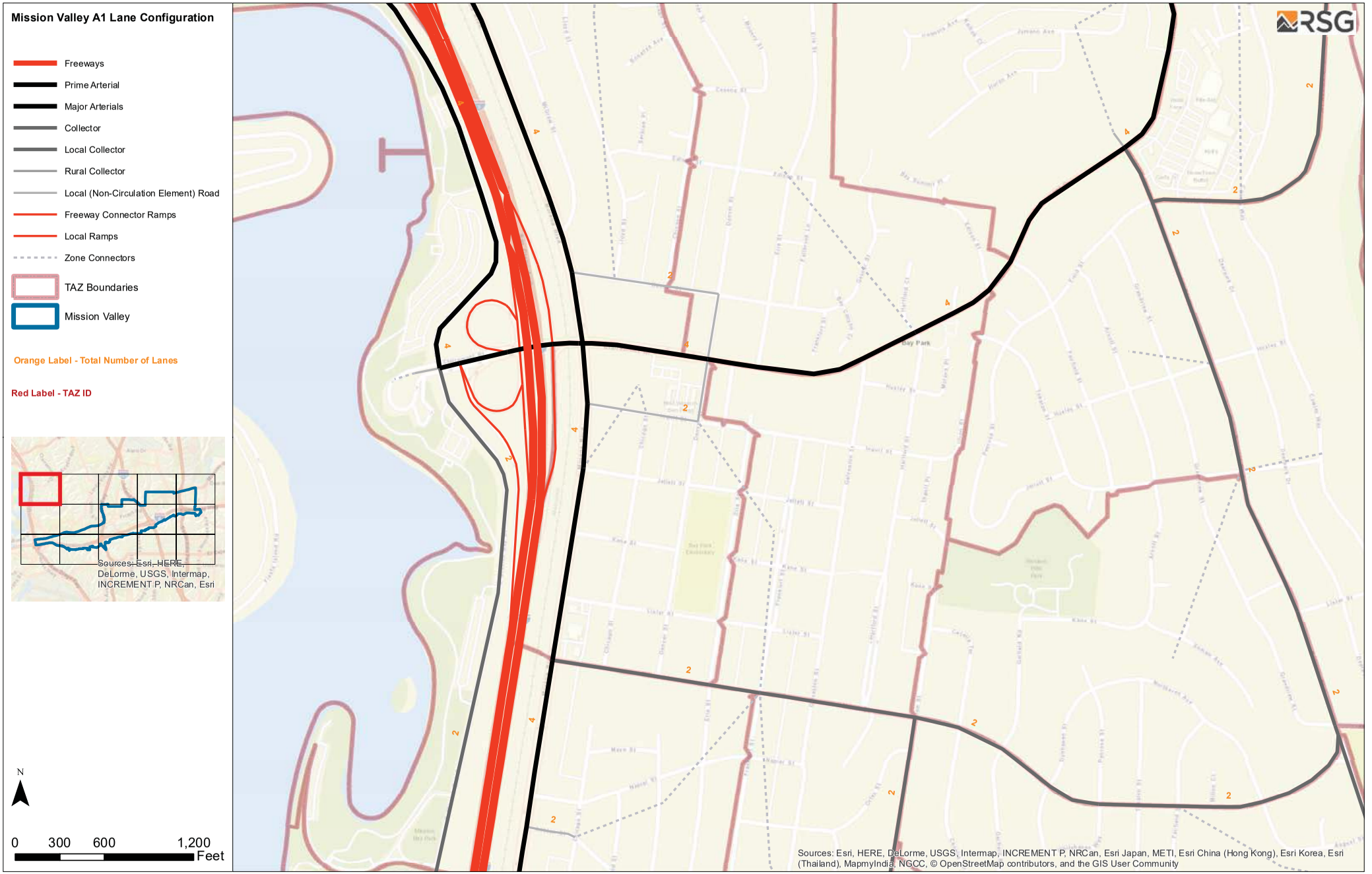
0 300 600 1,200 Feet




Mission Valley C3 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley C4 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley C5 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), Mapmyindia, NGCC, © OpenStreetMap contributors, and the GIS User Community

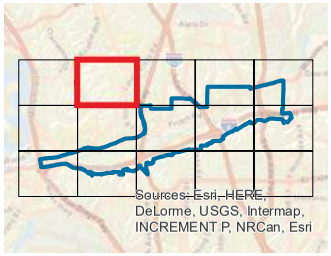

Mission Valley A1 Lane Configuration
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley A2 Lane Configuration

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Total Number of Lanes

Red Label - TAZ ID



N

0 300 600 1,200 Feet

RSG

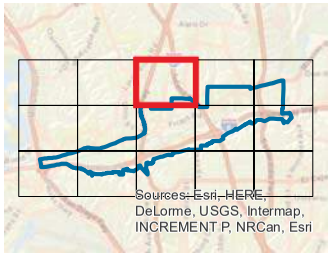
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley A3 Lane Configuration

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Total Number of Lanes

Red Label - TAZ ID



N

0 300 600 1,200 Feet

RSG

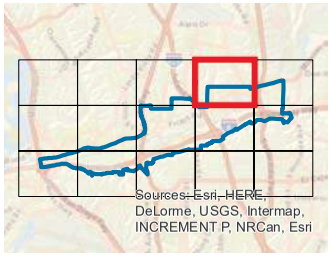
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley A4 Lane Configuration

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Total Number of Lanes

Red Label - TAZ ID

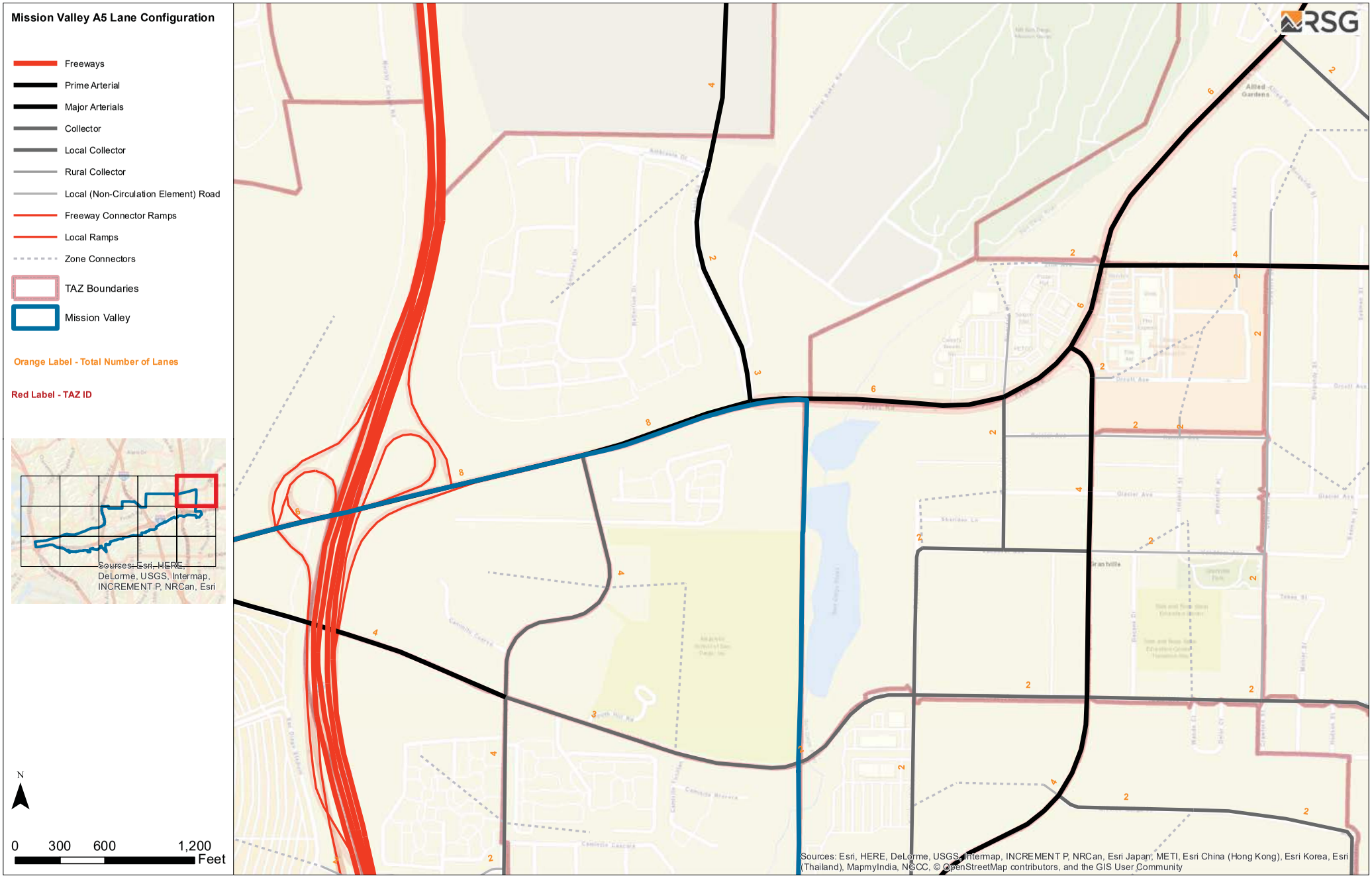


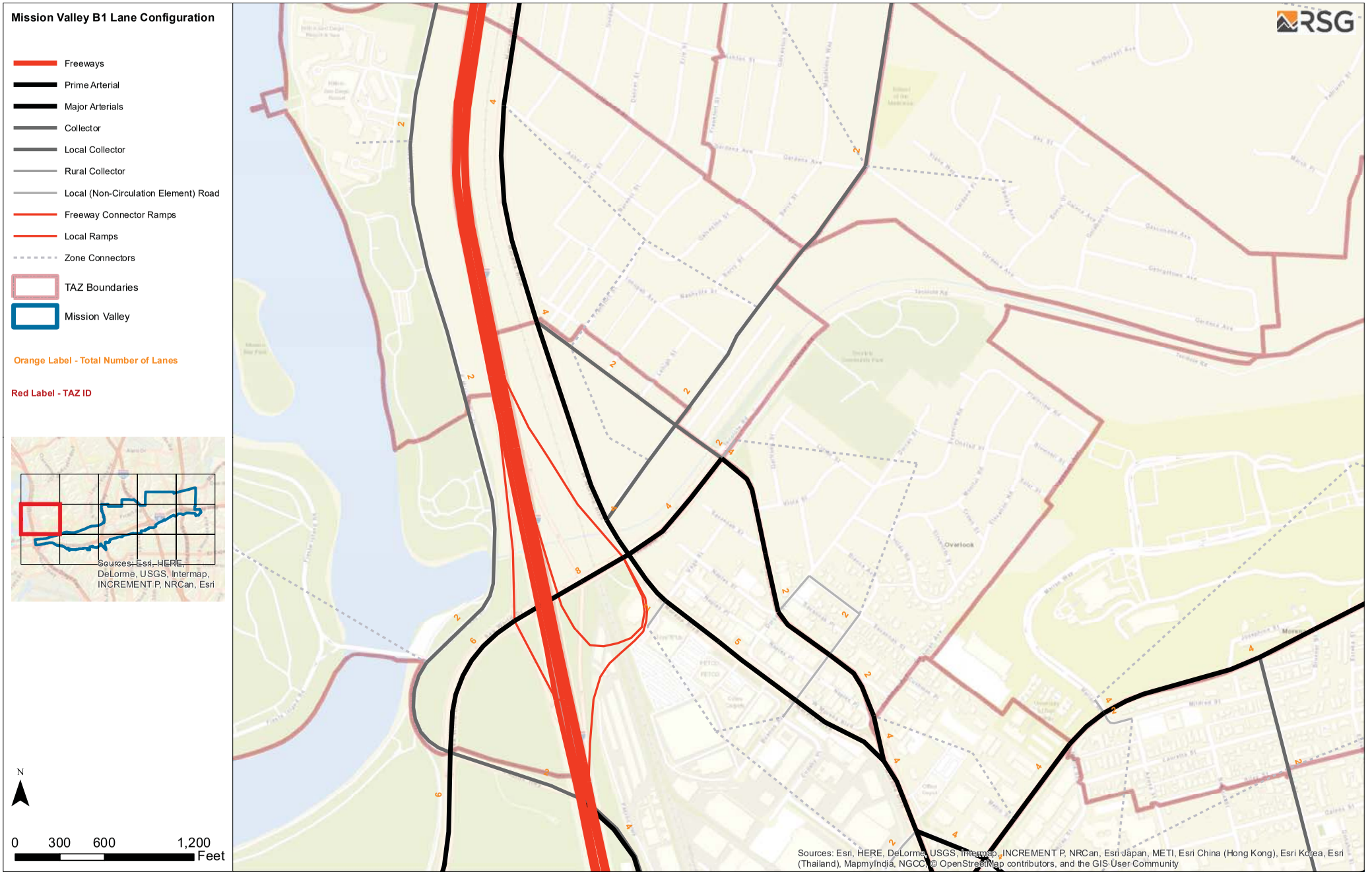
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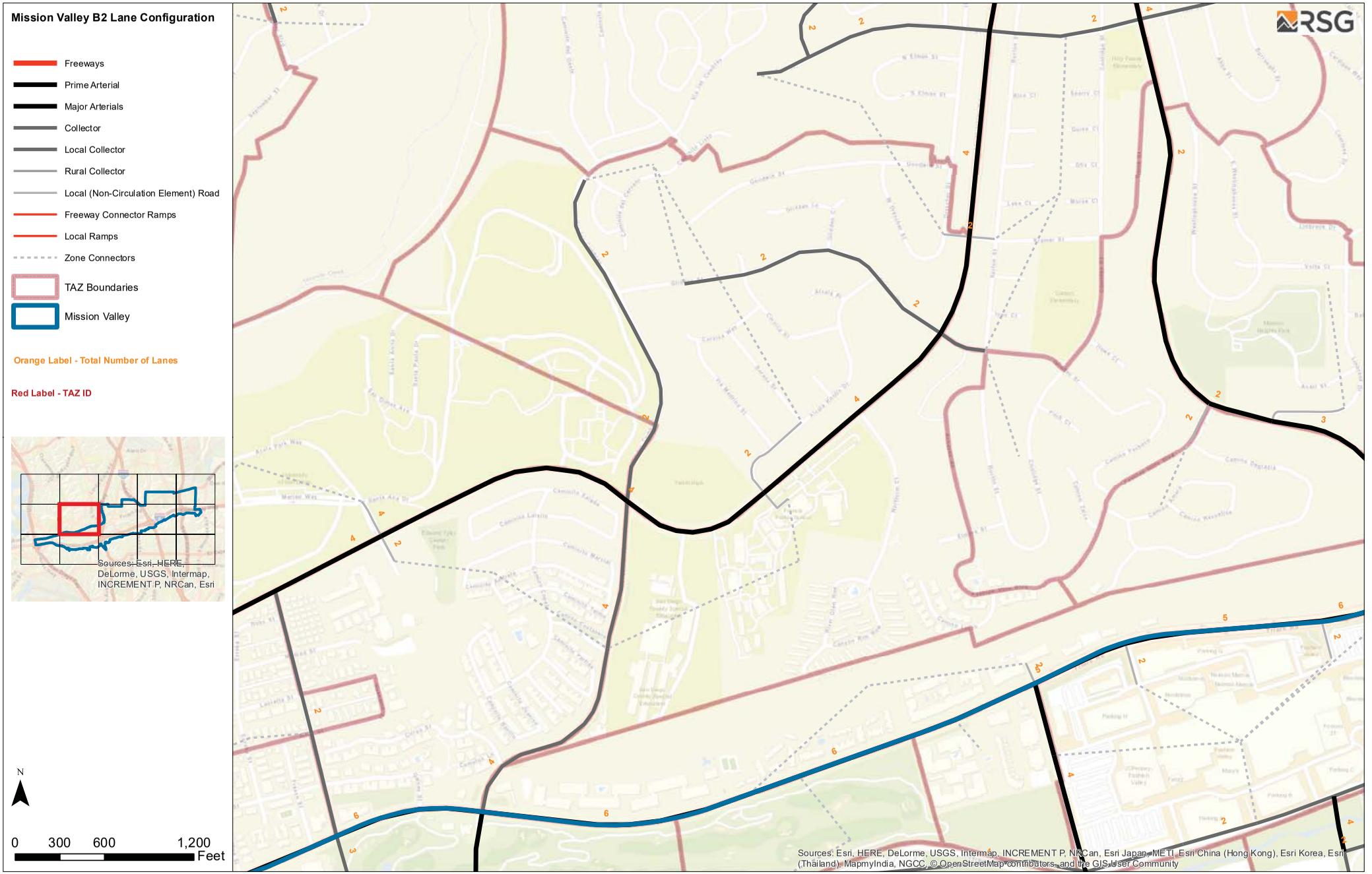
0 300 600 1,200 Feet

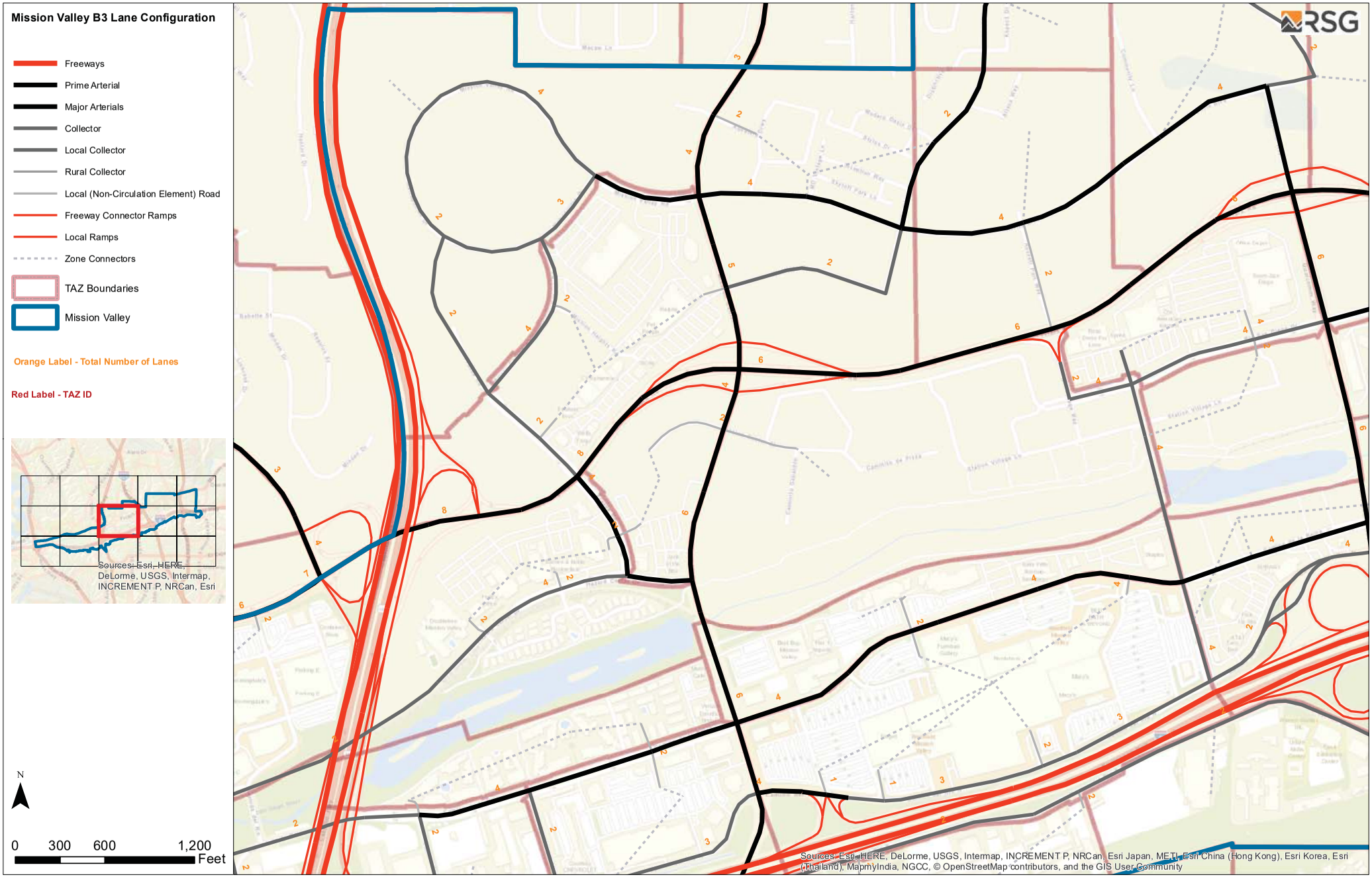
RSG

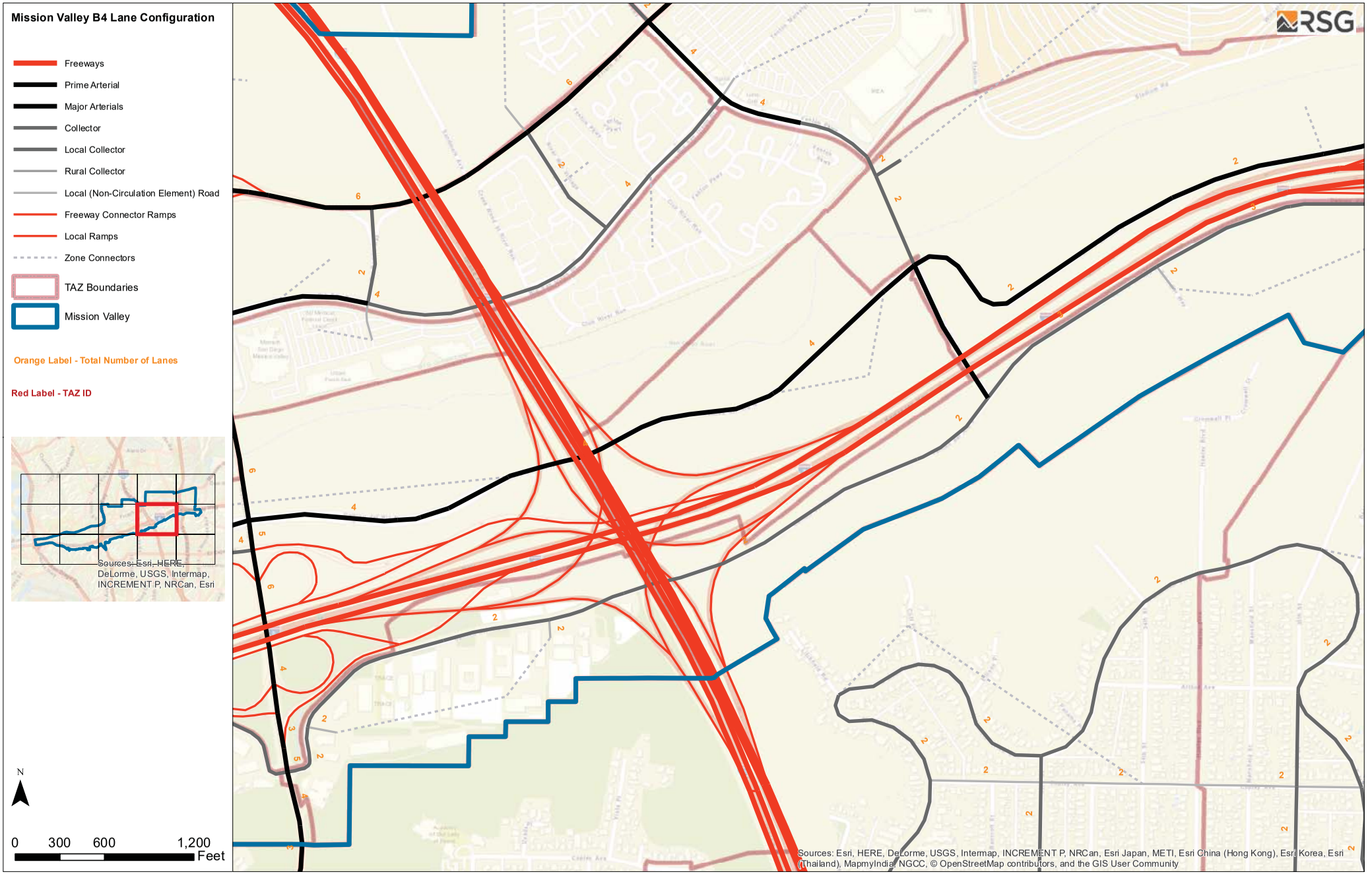
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

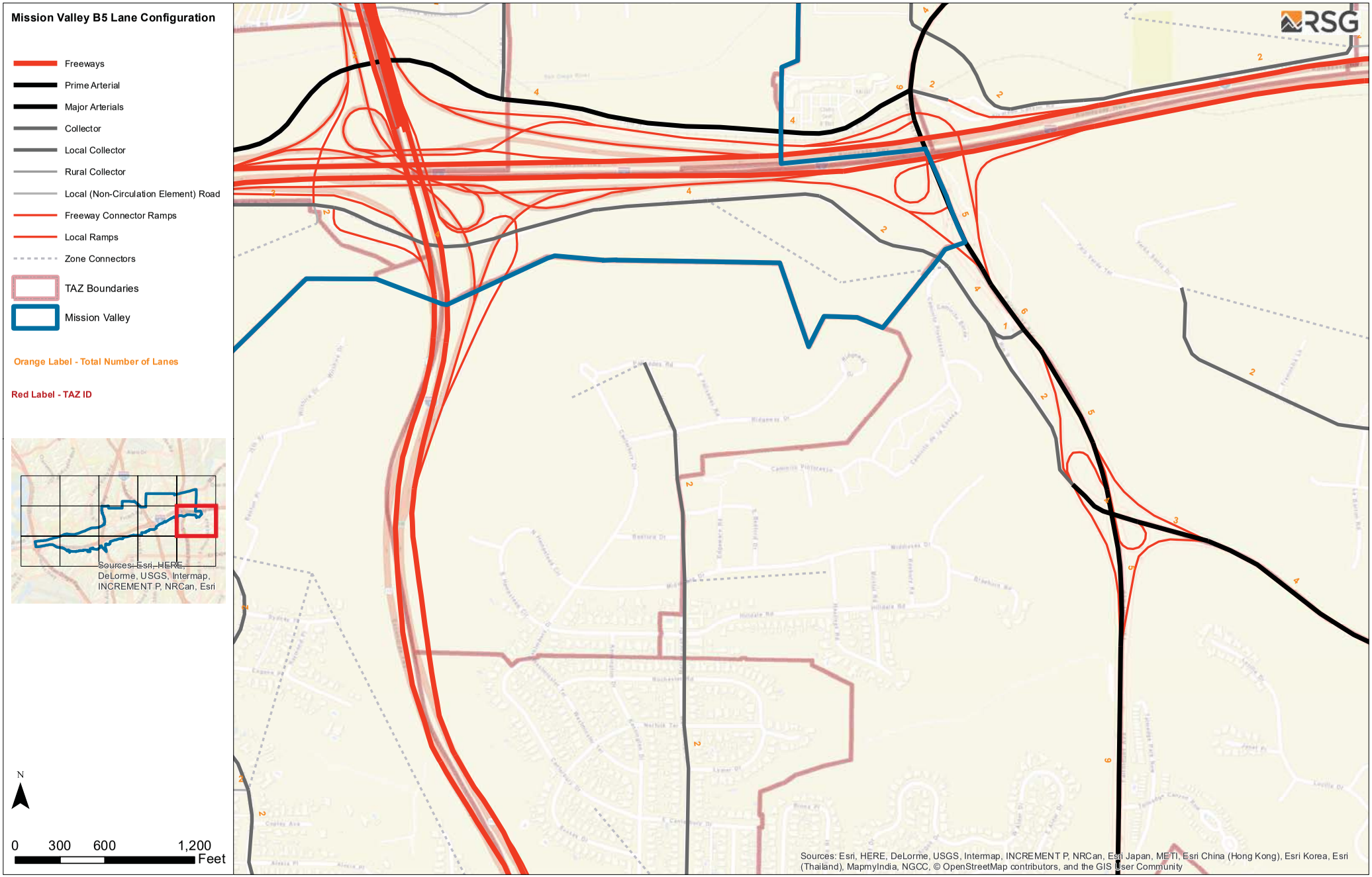

Mission Valley A5 Lane Configuration
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

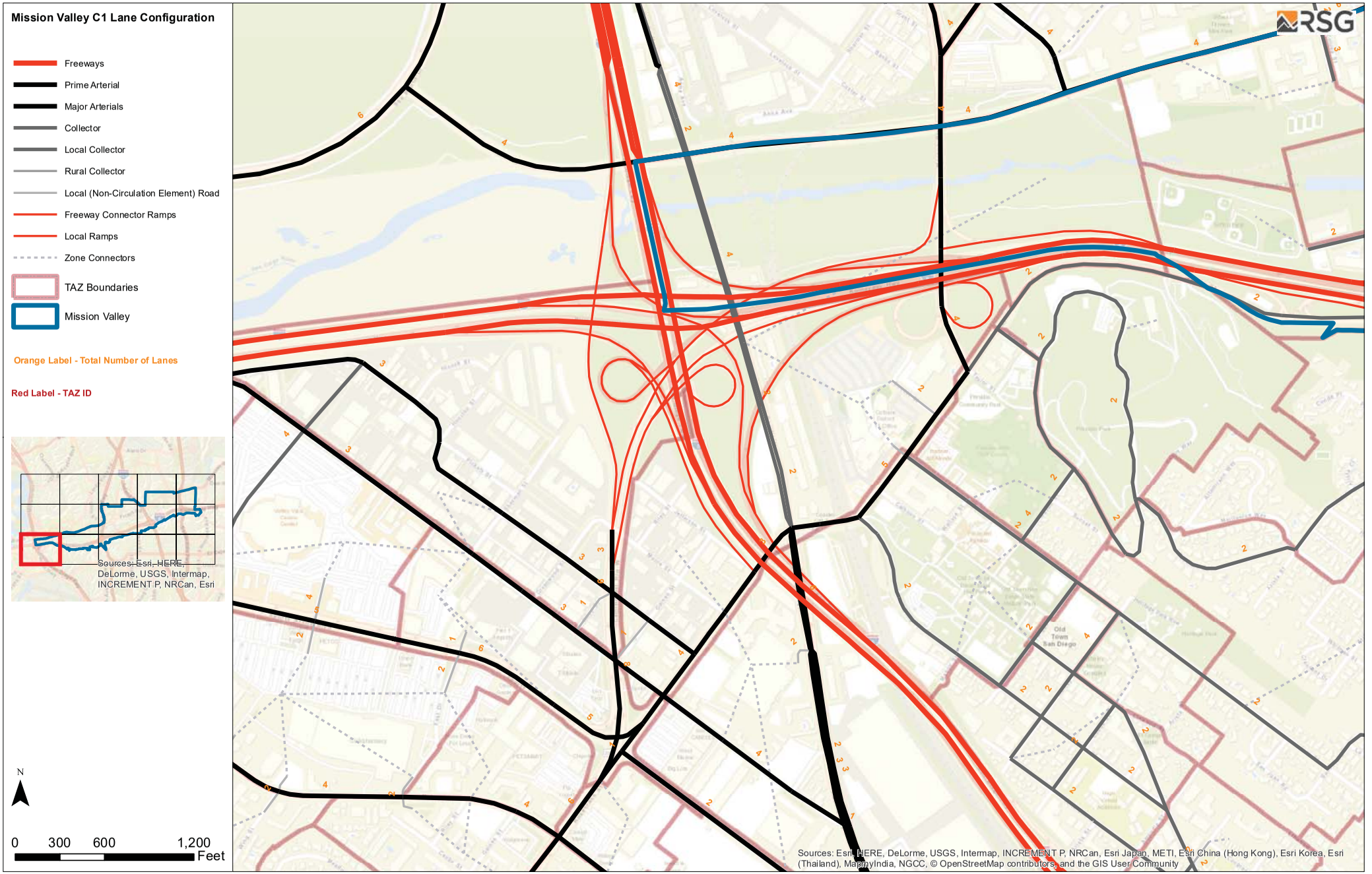

Mission Valley B1 Lane Configuration
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

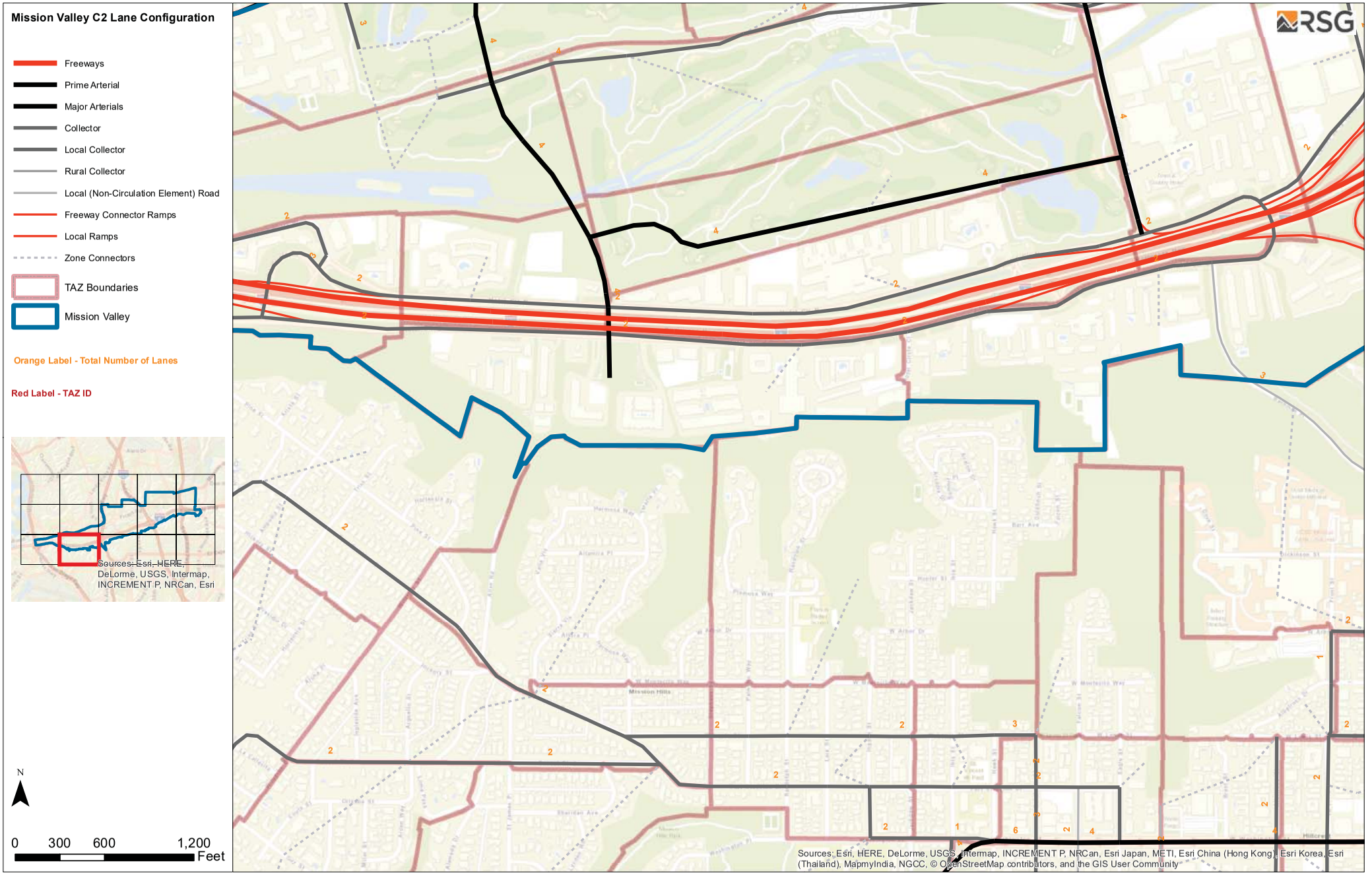

Mission Valley B2 Lane Configuration
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

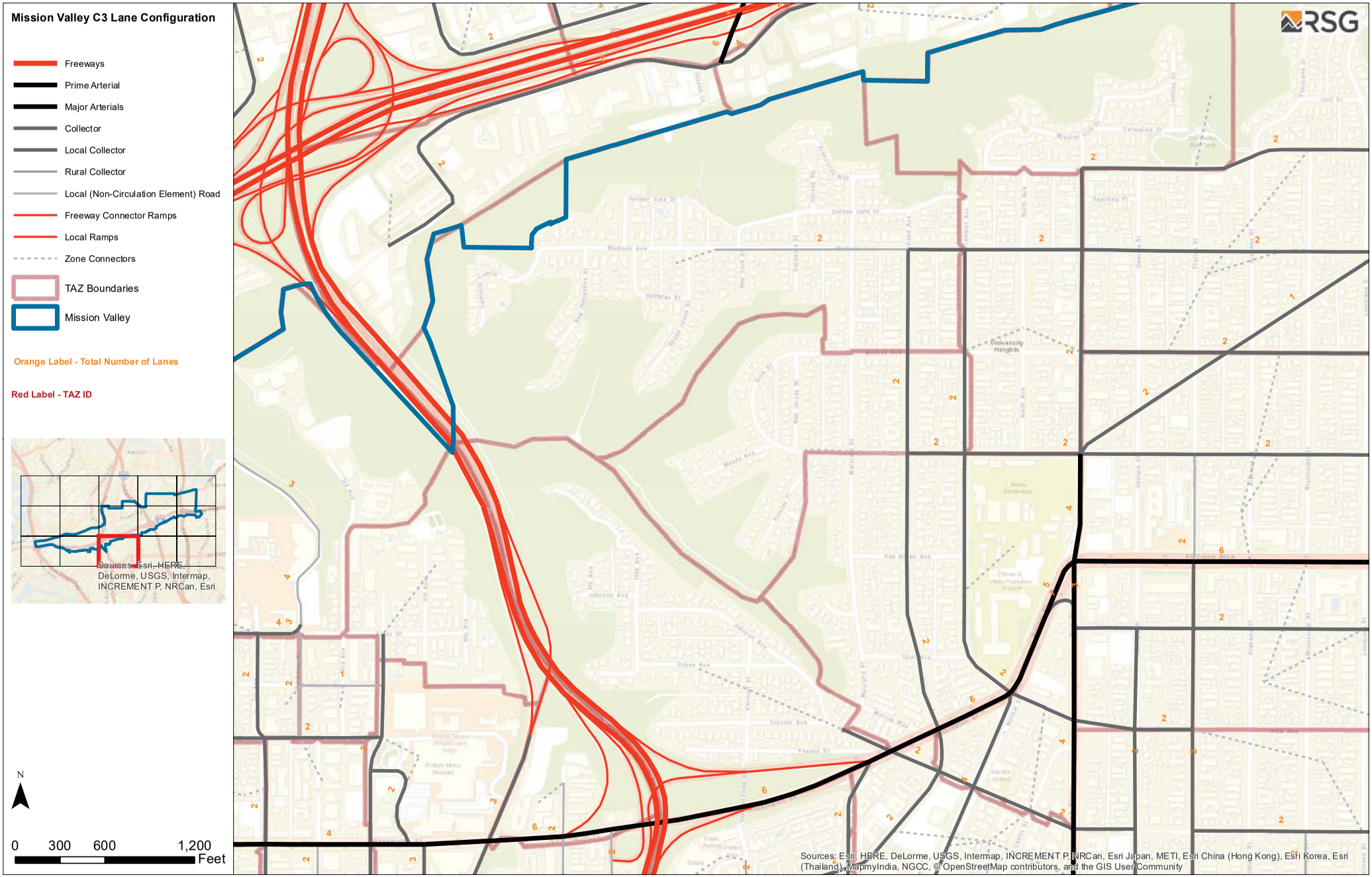

Mission Valley B3 Lane Configuration
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley B4 Lane Configuration
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley B5 Lane Configuration
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley C1 Lane Configuration
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley C2 Lane Configuration
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

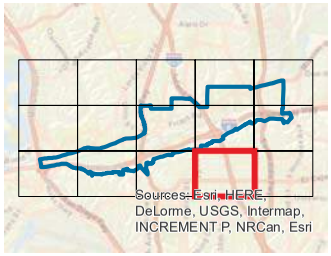

Mission Valley C3 Lane Configuration
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley C4 Lane Configuration

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Total Number of Lanes

Red Label - TAZ ID

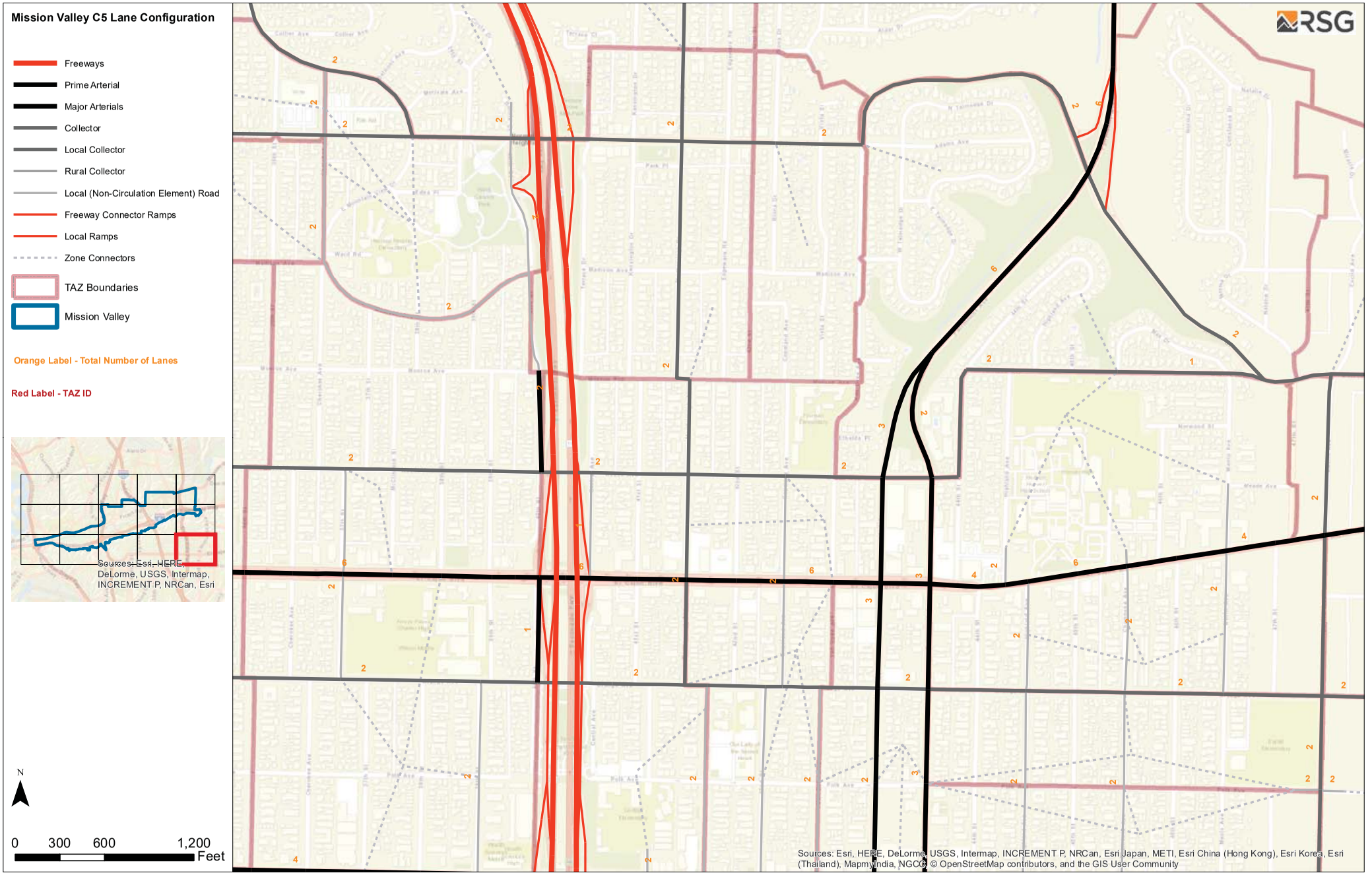


N

0 300 600 1,200 Feet

RSG

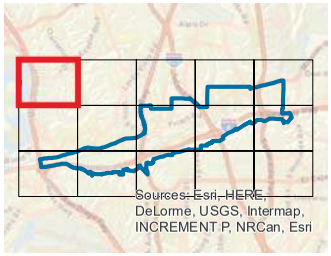
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Mission Valley C5 Lane Configuration
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley A1 Median Type

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

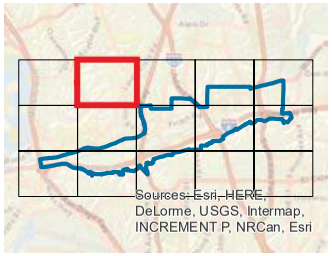
0 300 600 1,200 Feet

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley A2 Median Type

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

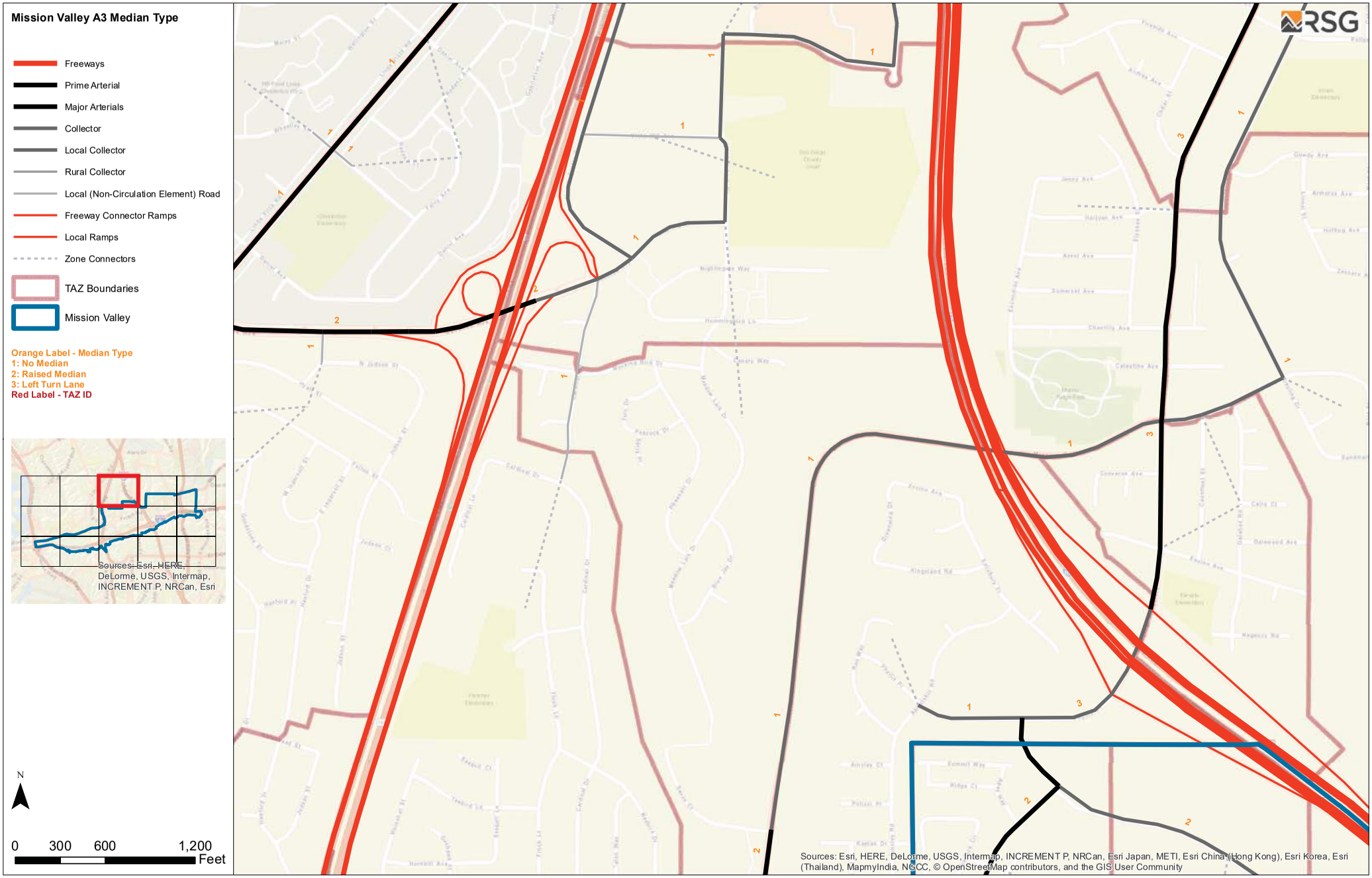
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

0 300 600 1,200 Feet

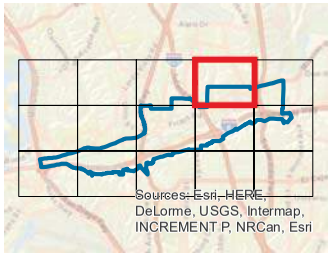
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley A3 Median Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley A4 Median Type

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

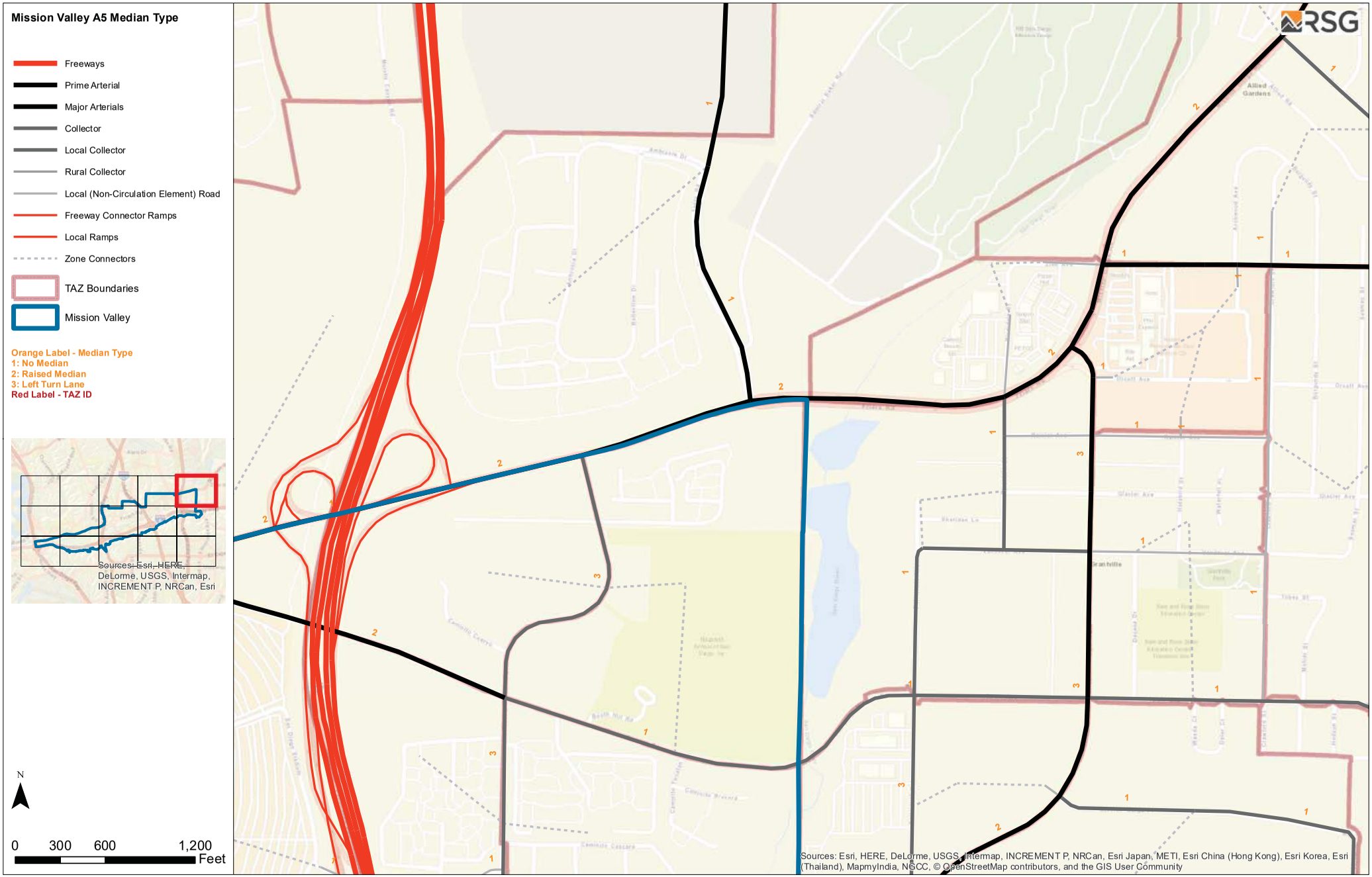
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID

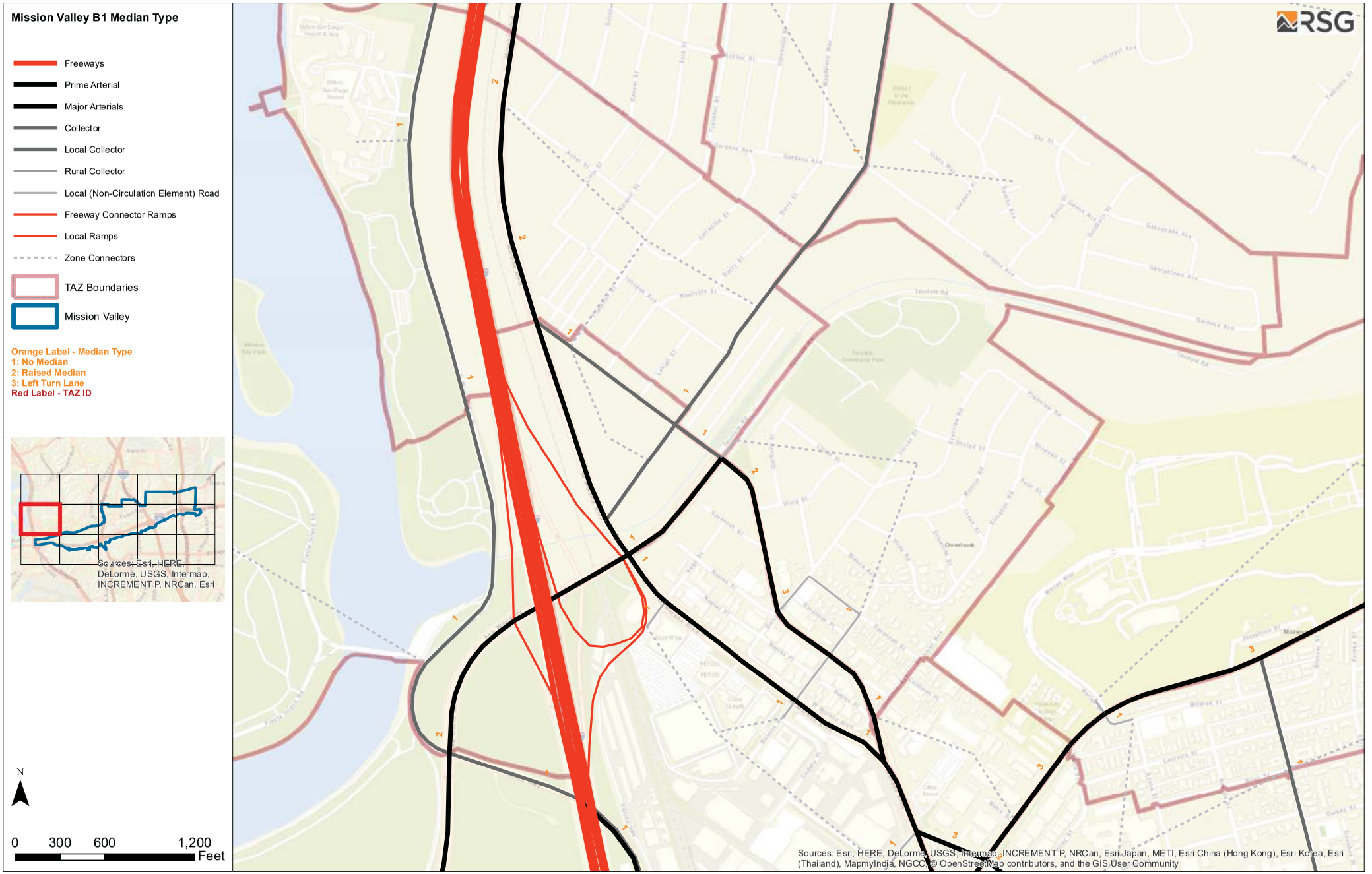


N

0 300 600 1,200 Feet

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

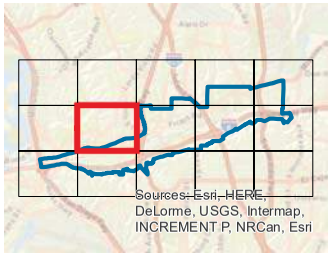

Mission Valley A5 Median Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley B1 Median Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley B2 Median Type

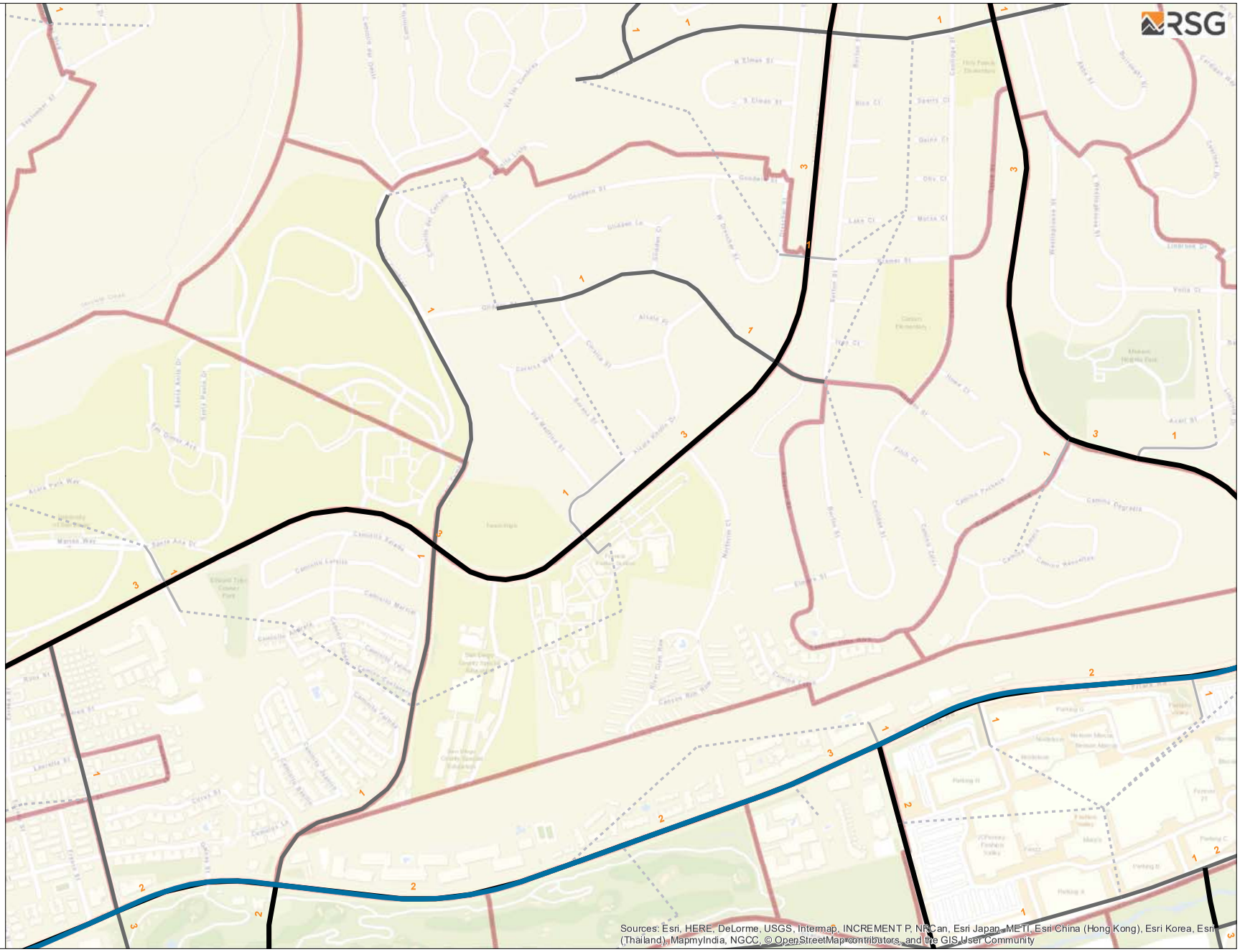
- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

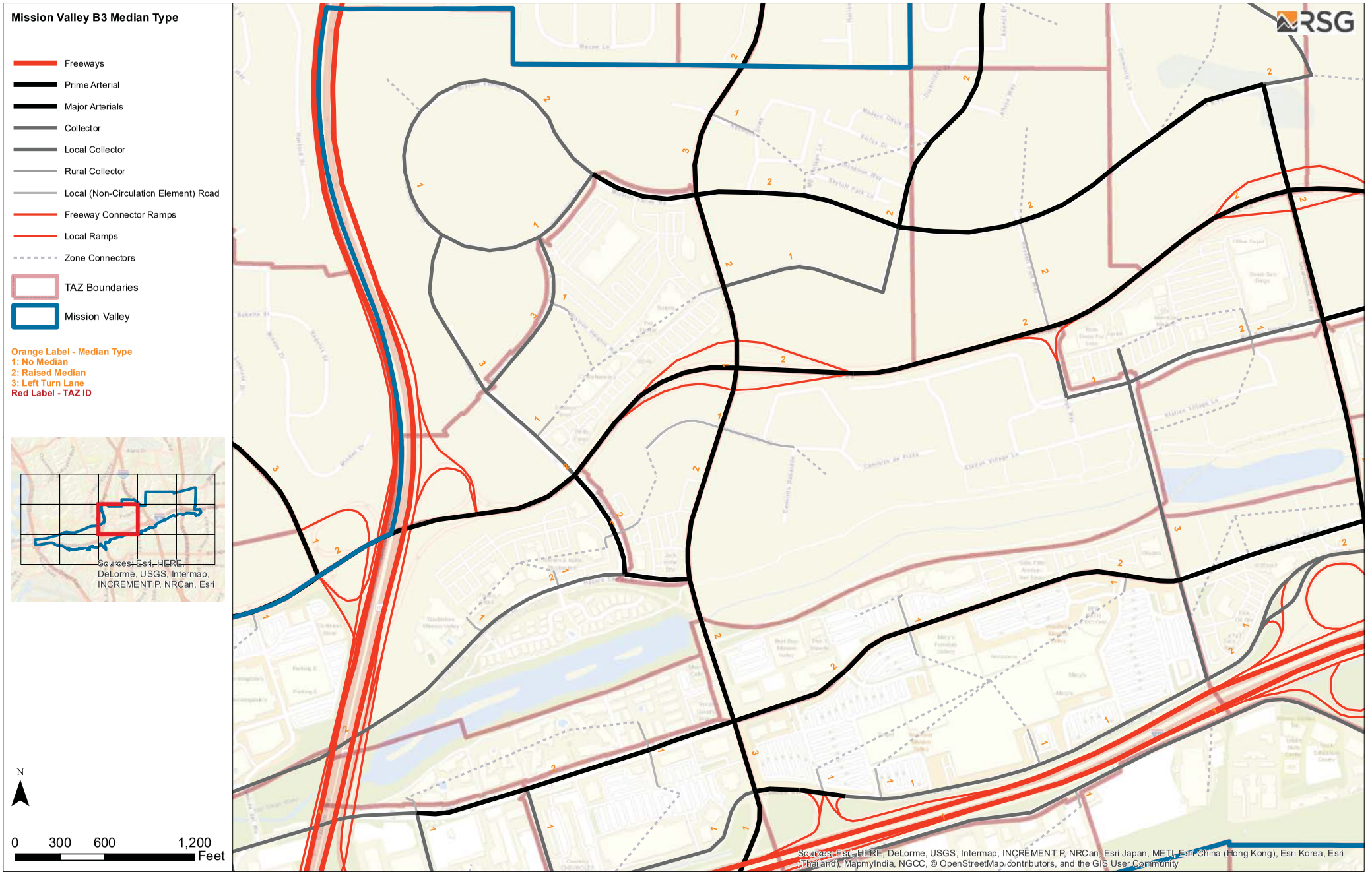
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID

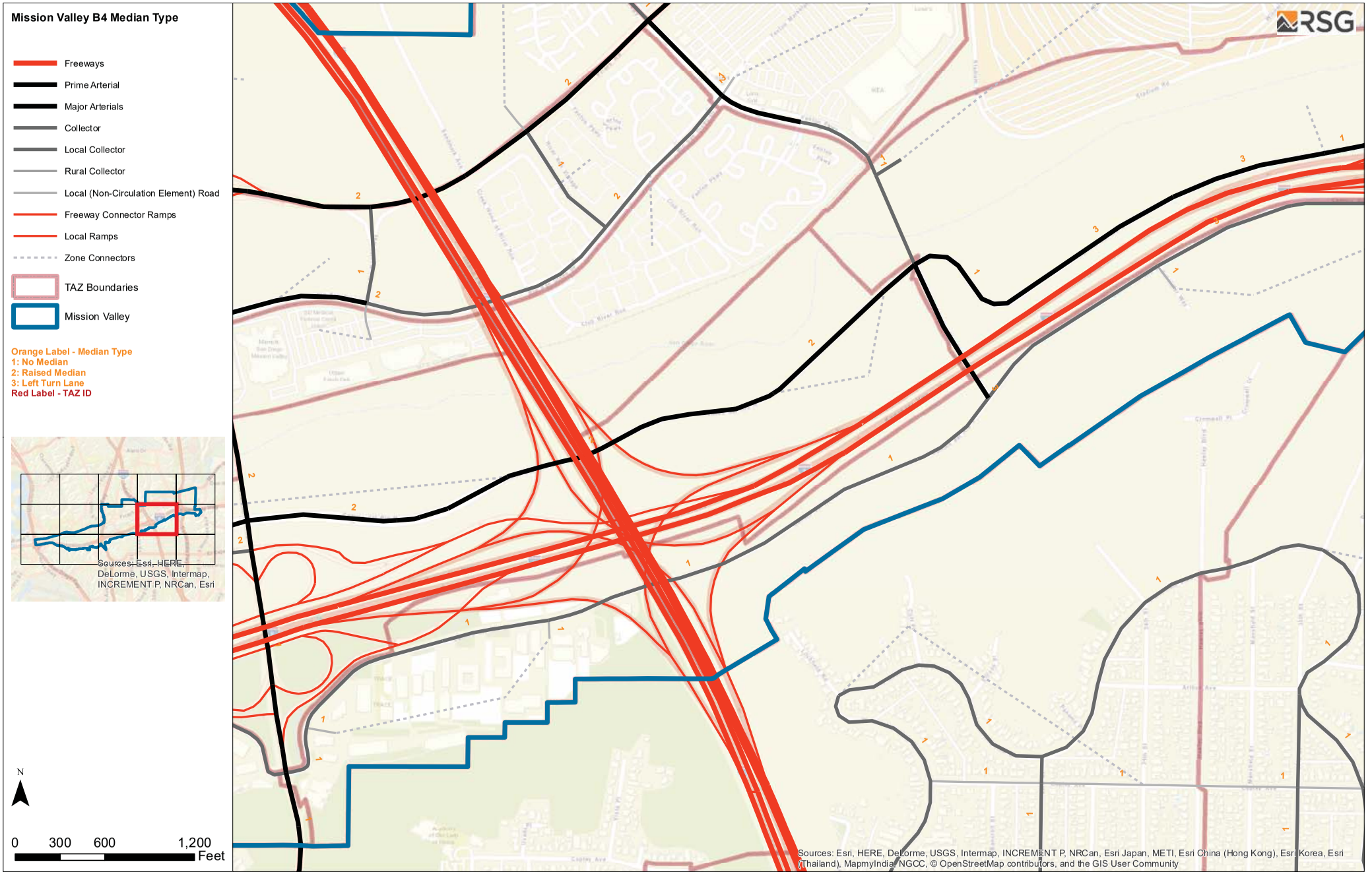


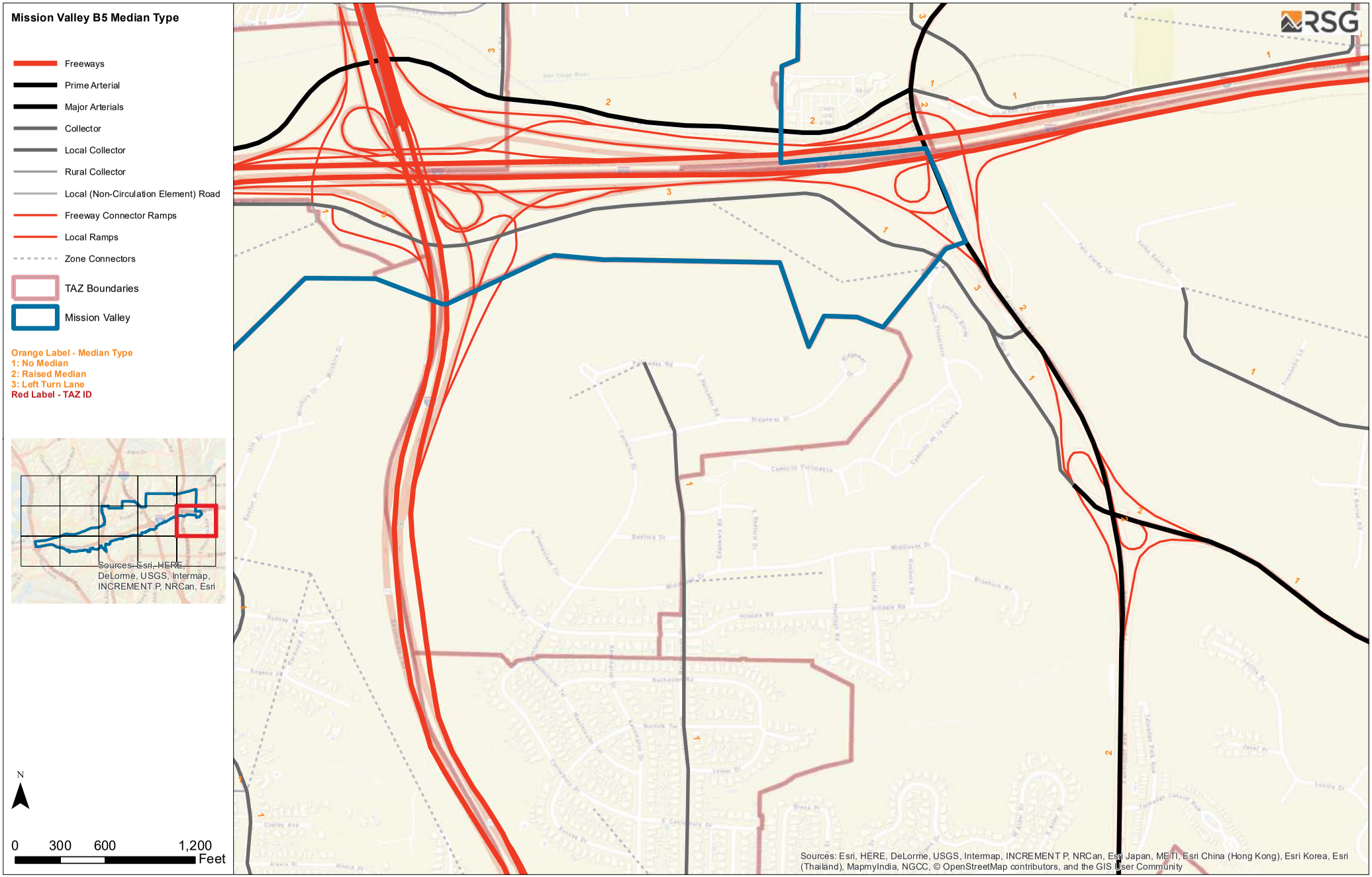
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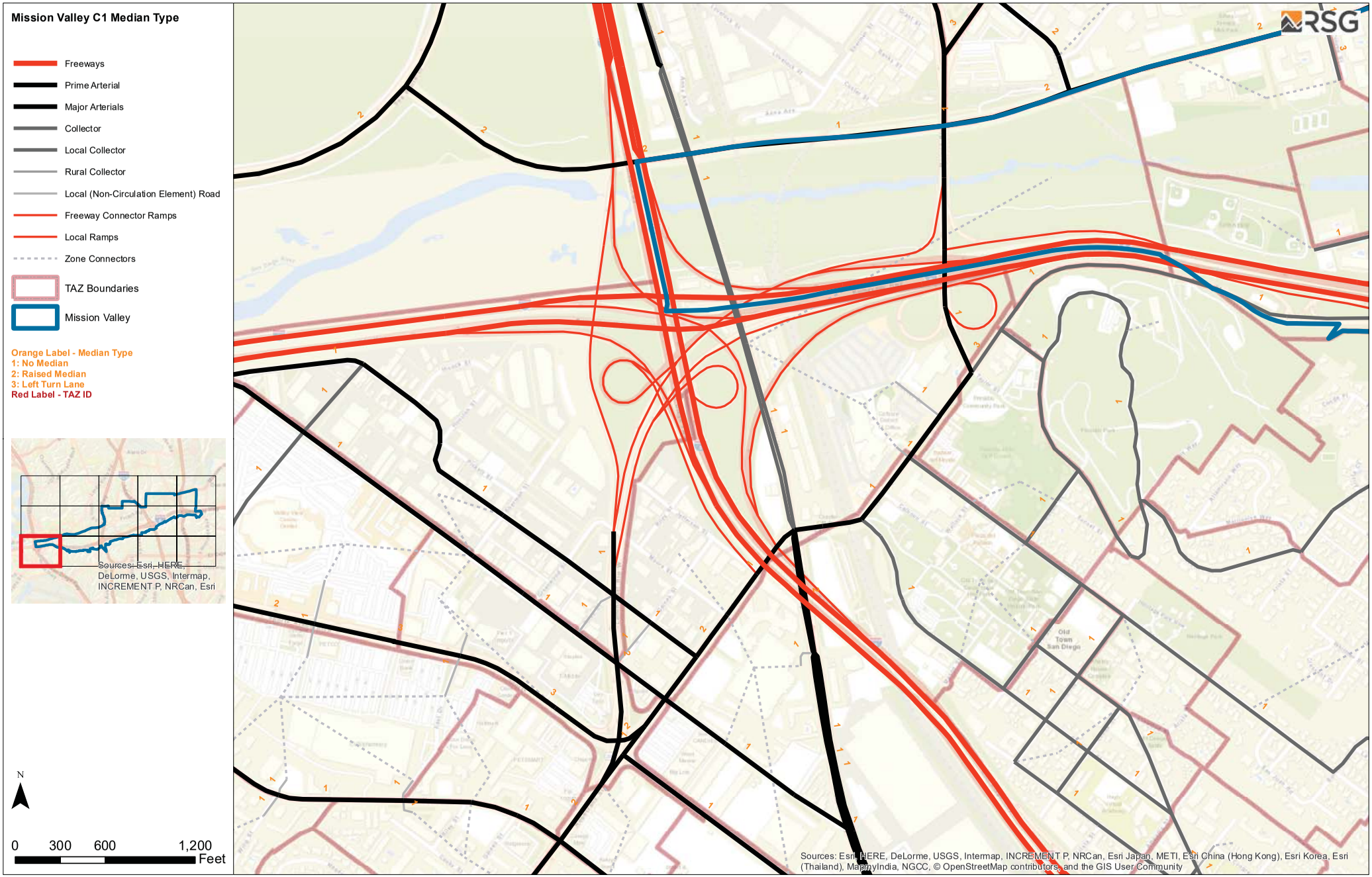
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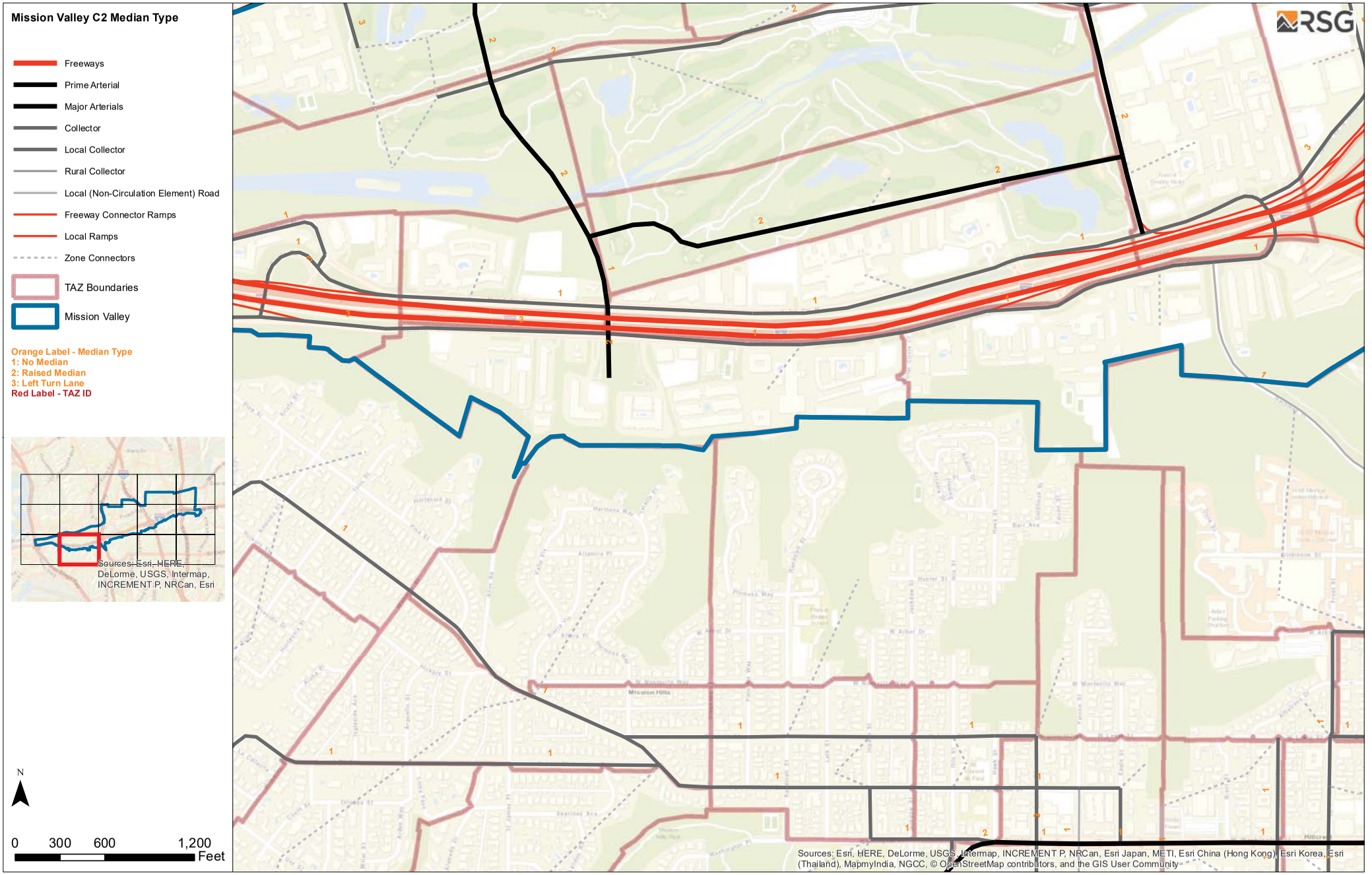


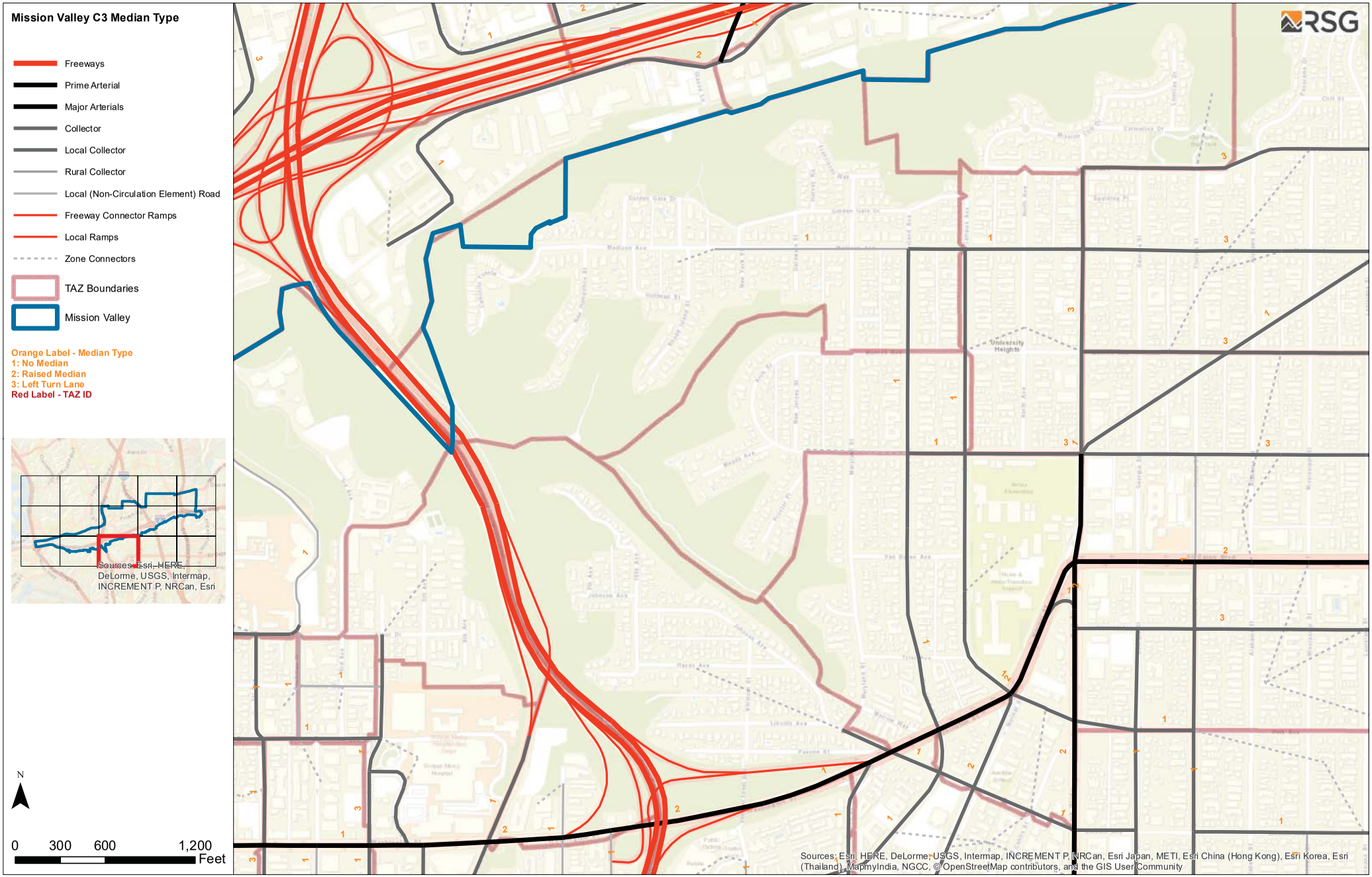

Mission Valley B3 Median Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley B4 Median Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley B5 Median Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley C1 Median Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

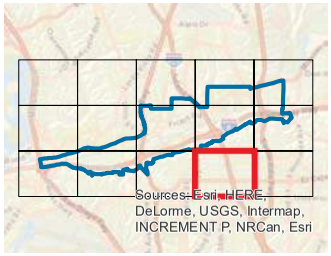

Mission Valley C2 Median Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley C3 Median Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley C4 Median Type

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

0 300 600 1,200 Feet

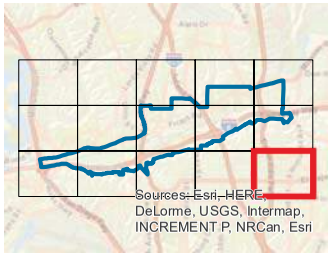
RSG

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley C5 Median Type

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID

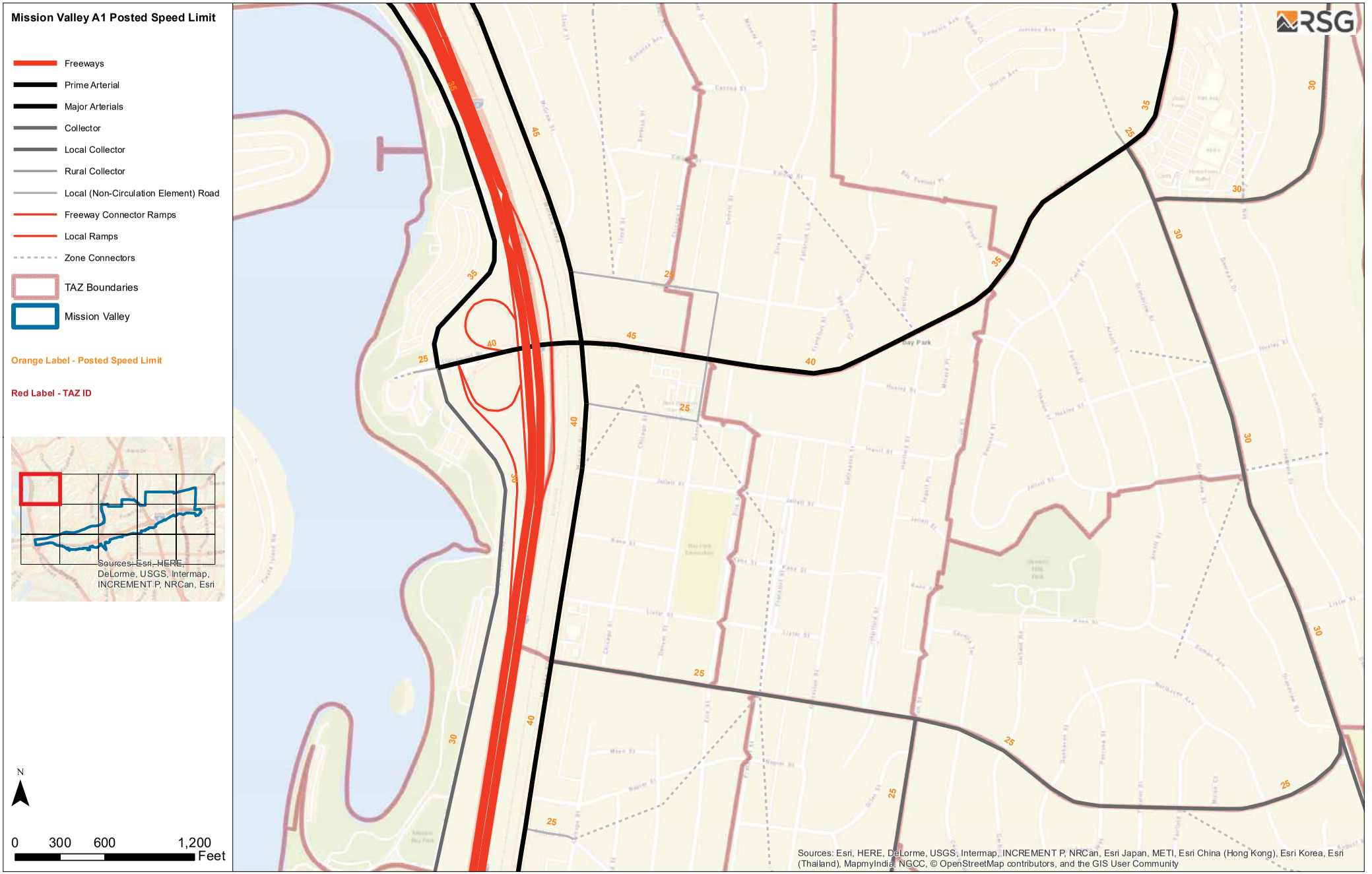


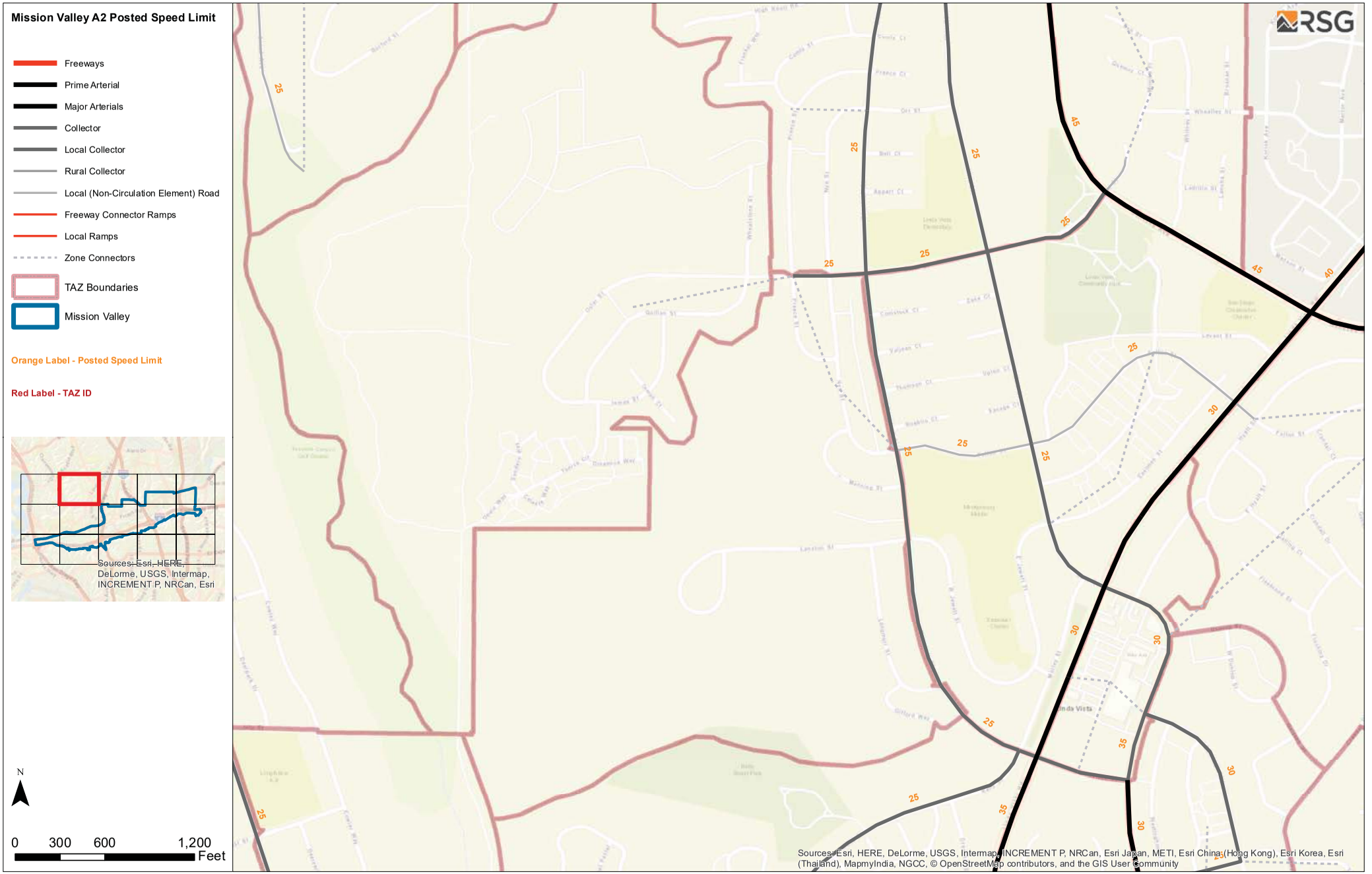
N

0 300 600 1,200 Feet

RSG

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), Mapmyindia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley A1 Posted Speed Limit
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Posted Speed Limit
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

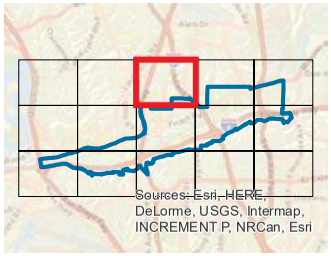

Mission Valley A2 Posted Speed Limit
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Posted Speed Limit
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley A3 Posted Speed Limit

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Posted Speed Limit

Red Label - TAZ ID



N

0 300 600 1,200 Feet

RSG

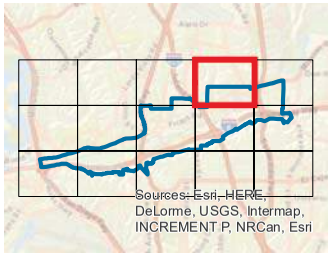
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley A4 Posted Speed Limit

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Posted Speed Limit

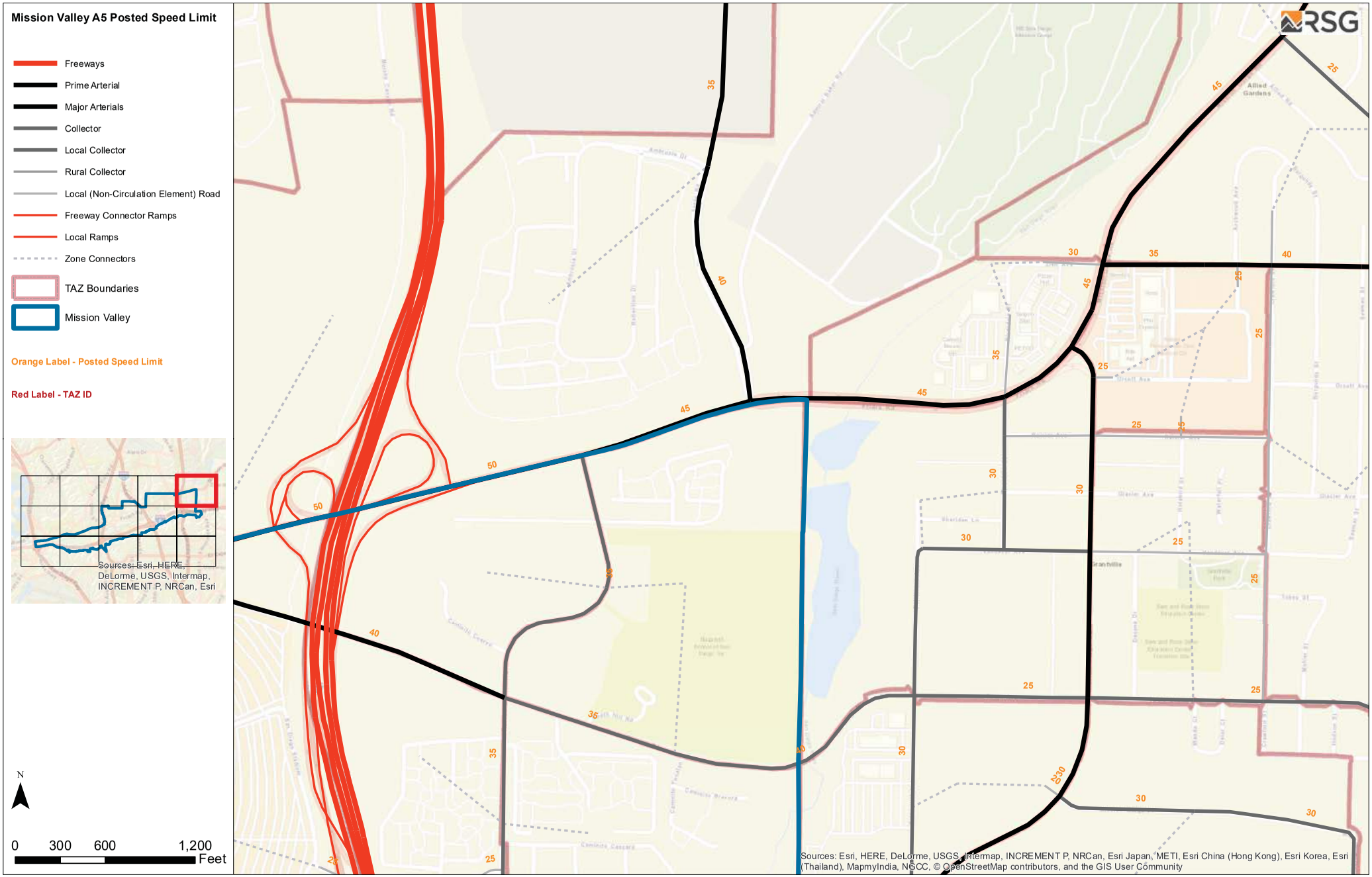
Red Label - TAZ ID

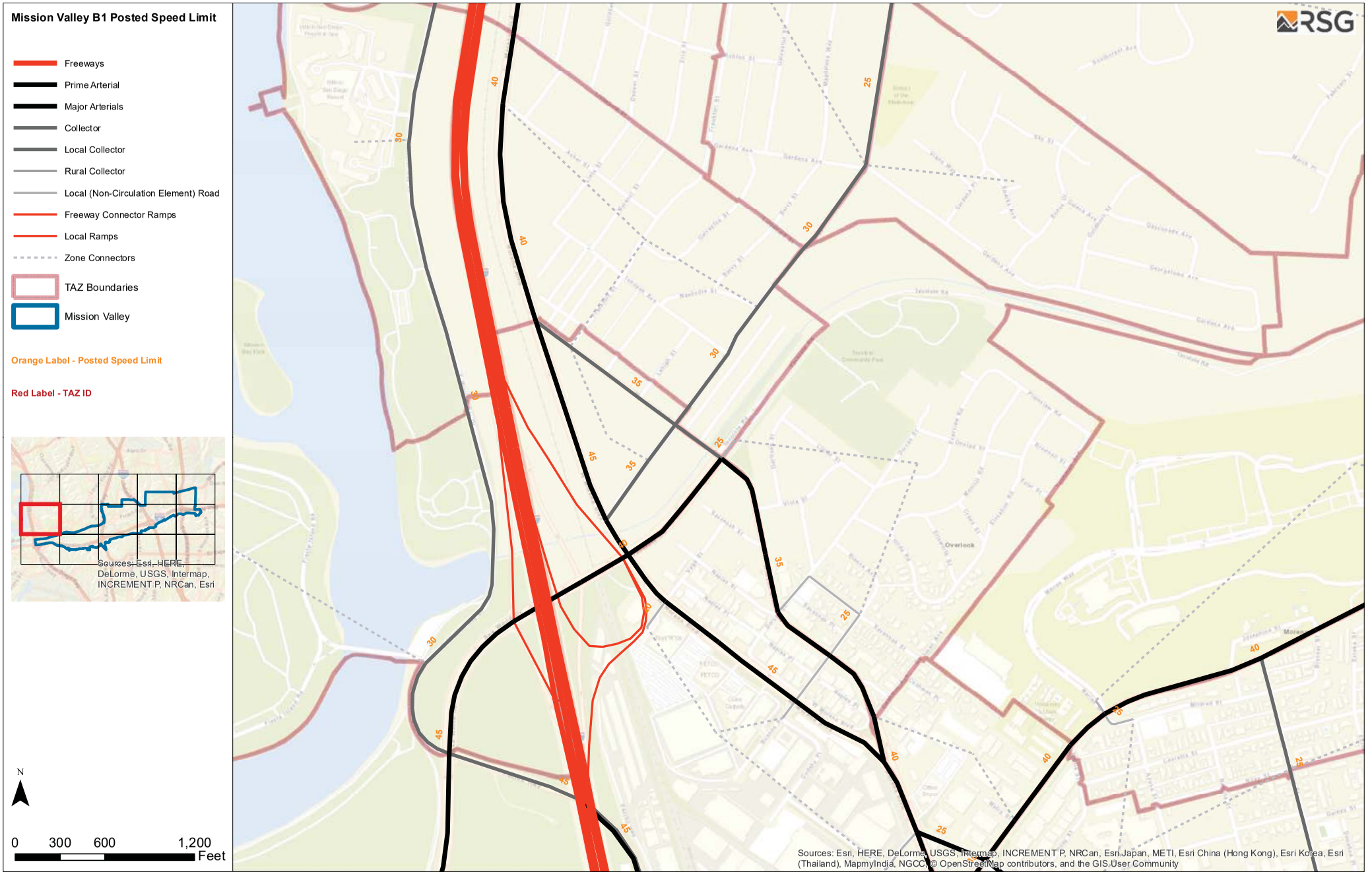


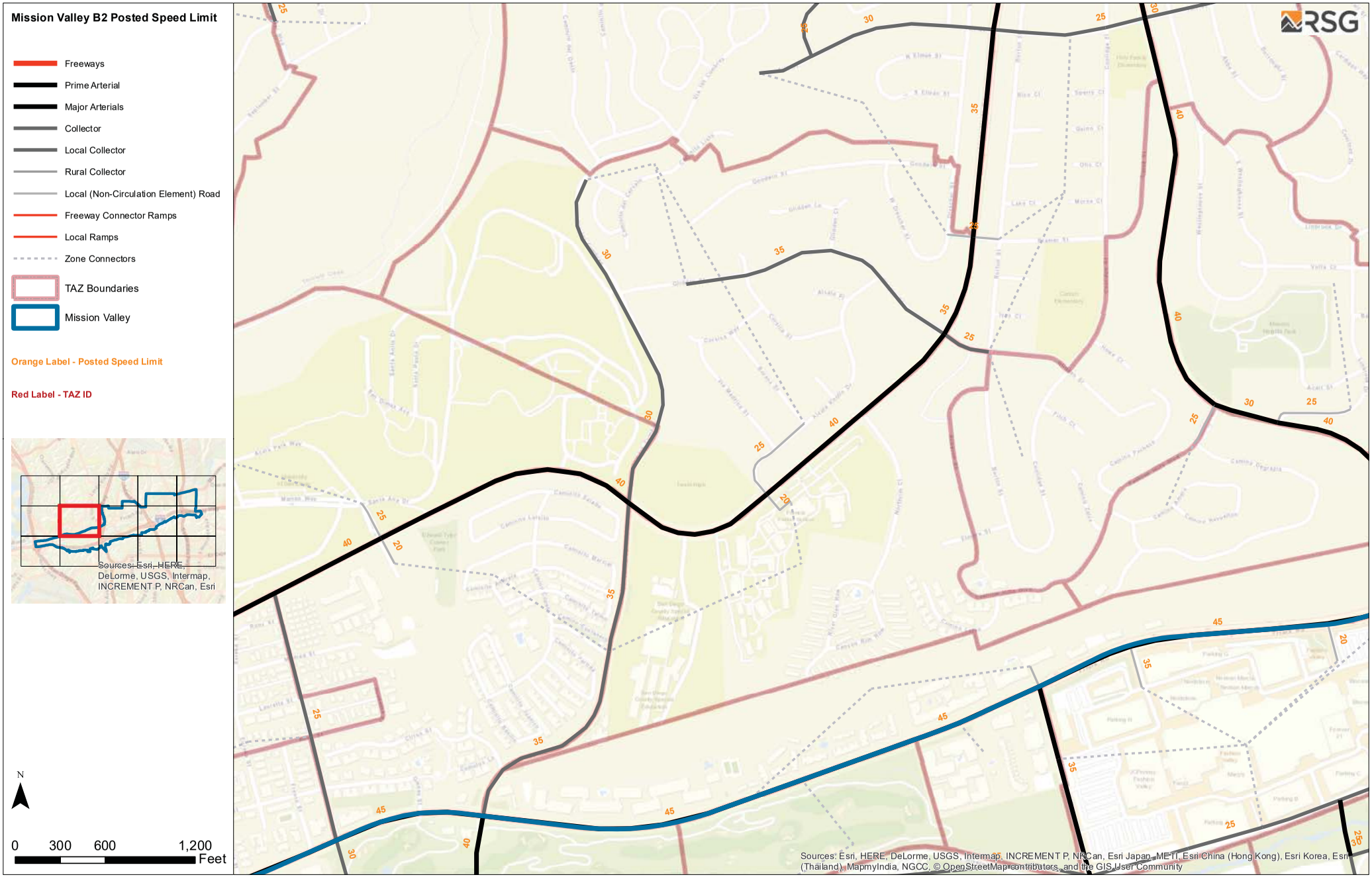
N

0 300 600 1,200 Feet

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley A5 Posted Speed Limit
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Posted Speed Limit
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley B1 Posted Speed Limit
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Posted Speed Limit
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

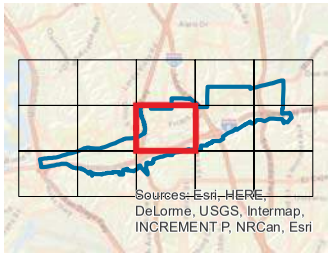

Mission Valley B2 Posted Speed Limit
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Posted Speed Limit
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley B3 Posted Speed Limit

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Posted Speed Limit

Red Label - TAZ ID

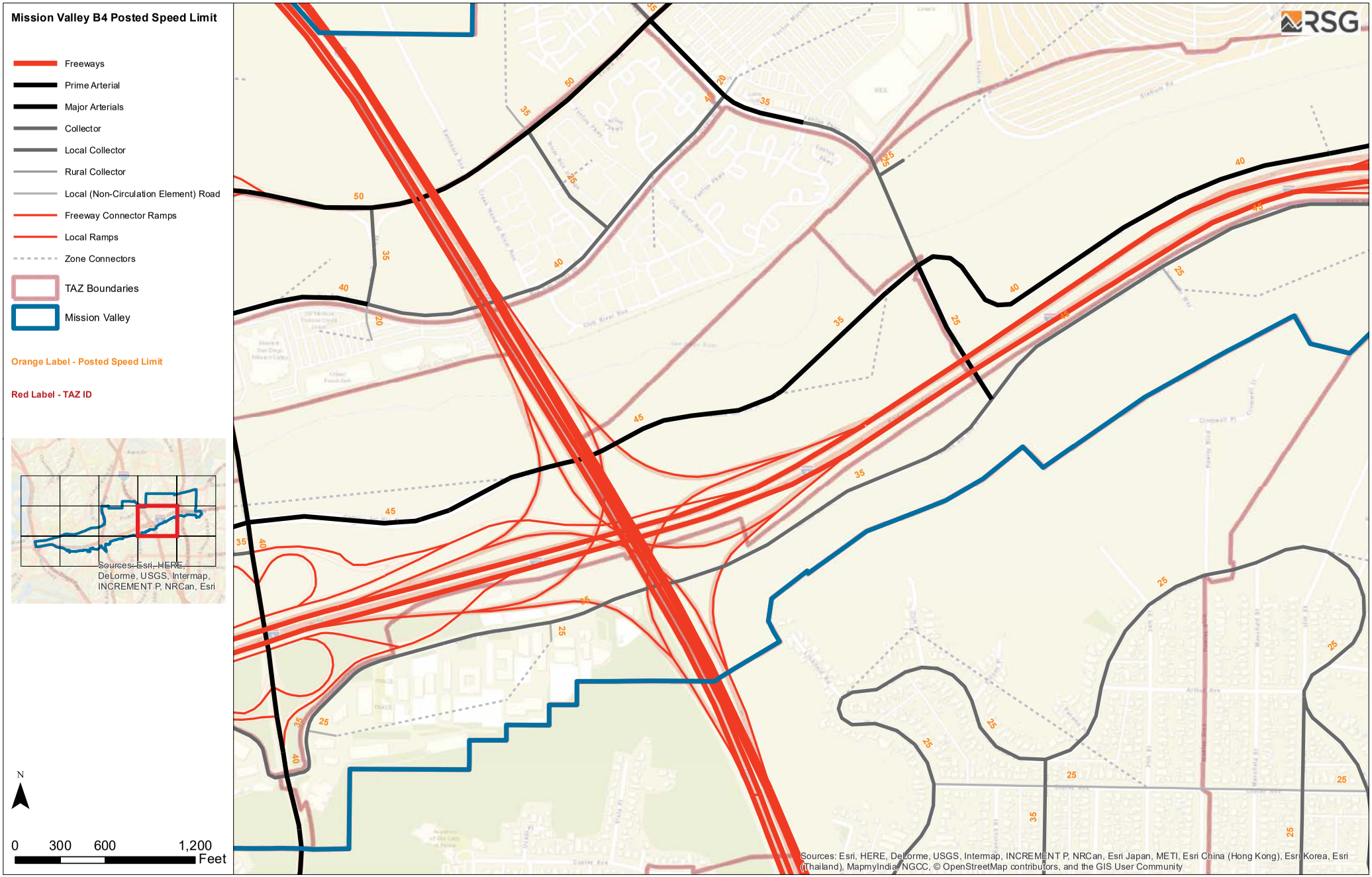


N

0 300 600 1,200 Feet

RSG

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

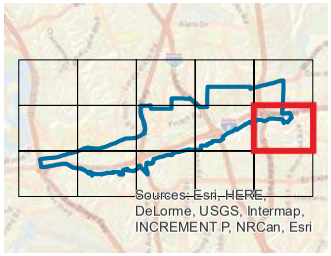

Mission Valley B4 Posted Speed Limit
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Posted Speed Limit
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley B5 Posted Speed Limit

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

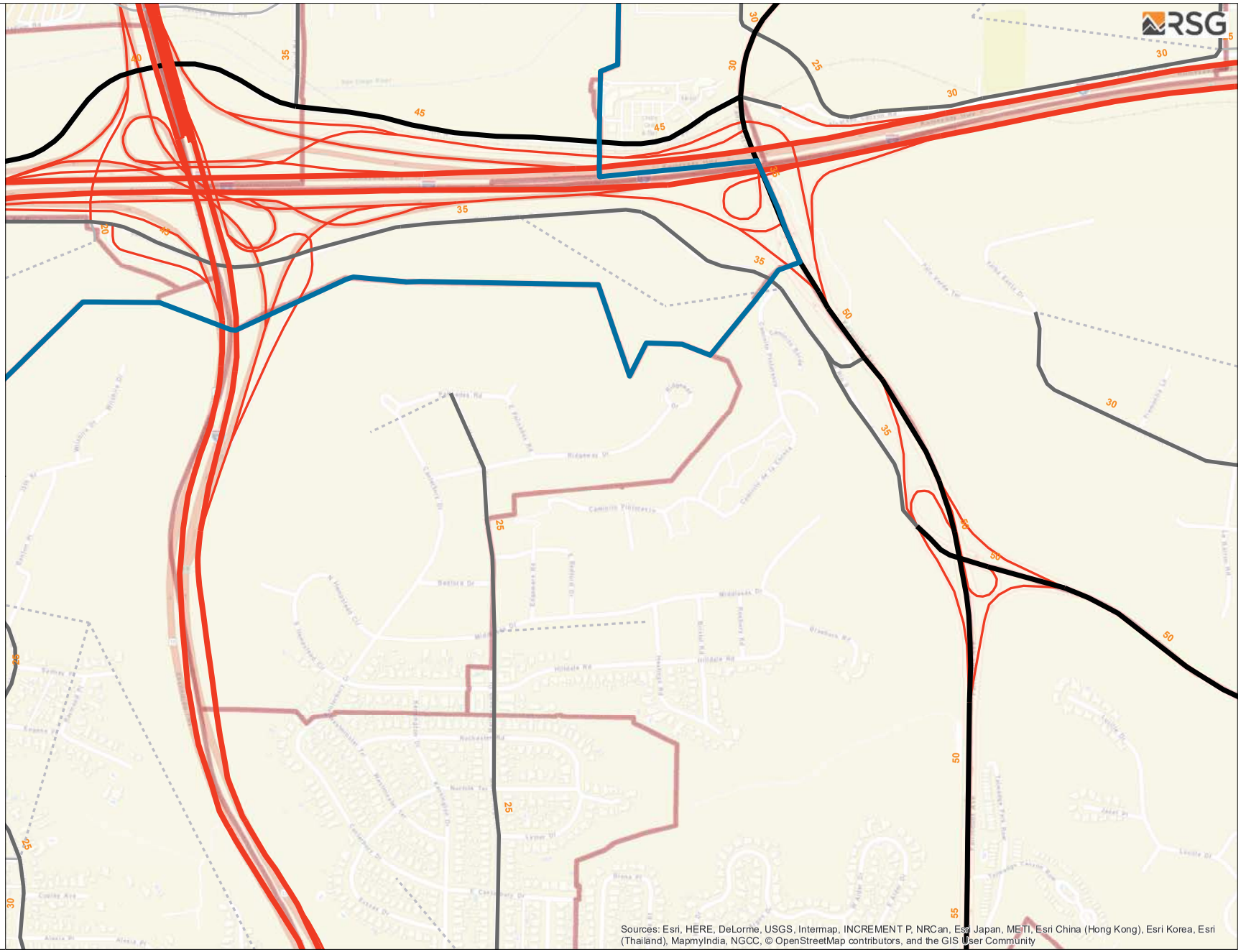
Orange Label - Posted Speed Limit

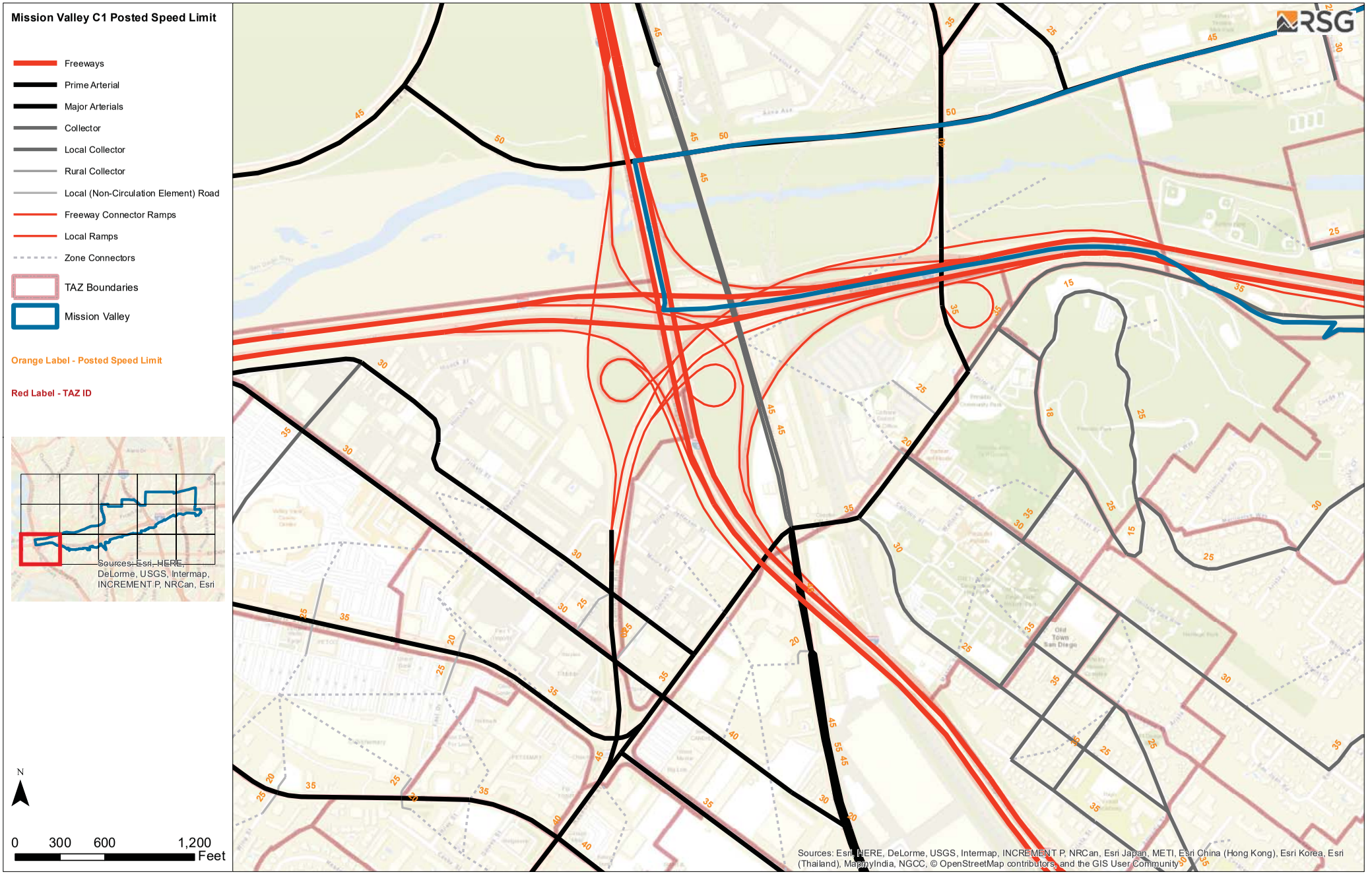
Red Label - TAZ ID



N

0 300 600 1,200 Feet



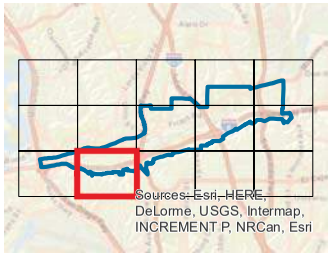

Mission Valley C1 Posted Speed Limit
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Posted Speed Limit
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley C2 Posted Speed Limit

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Posted Speed Limit

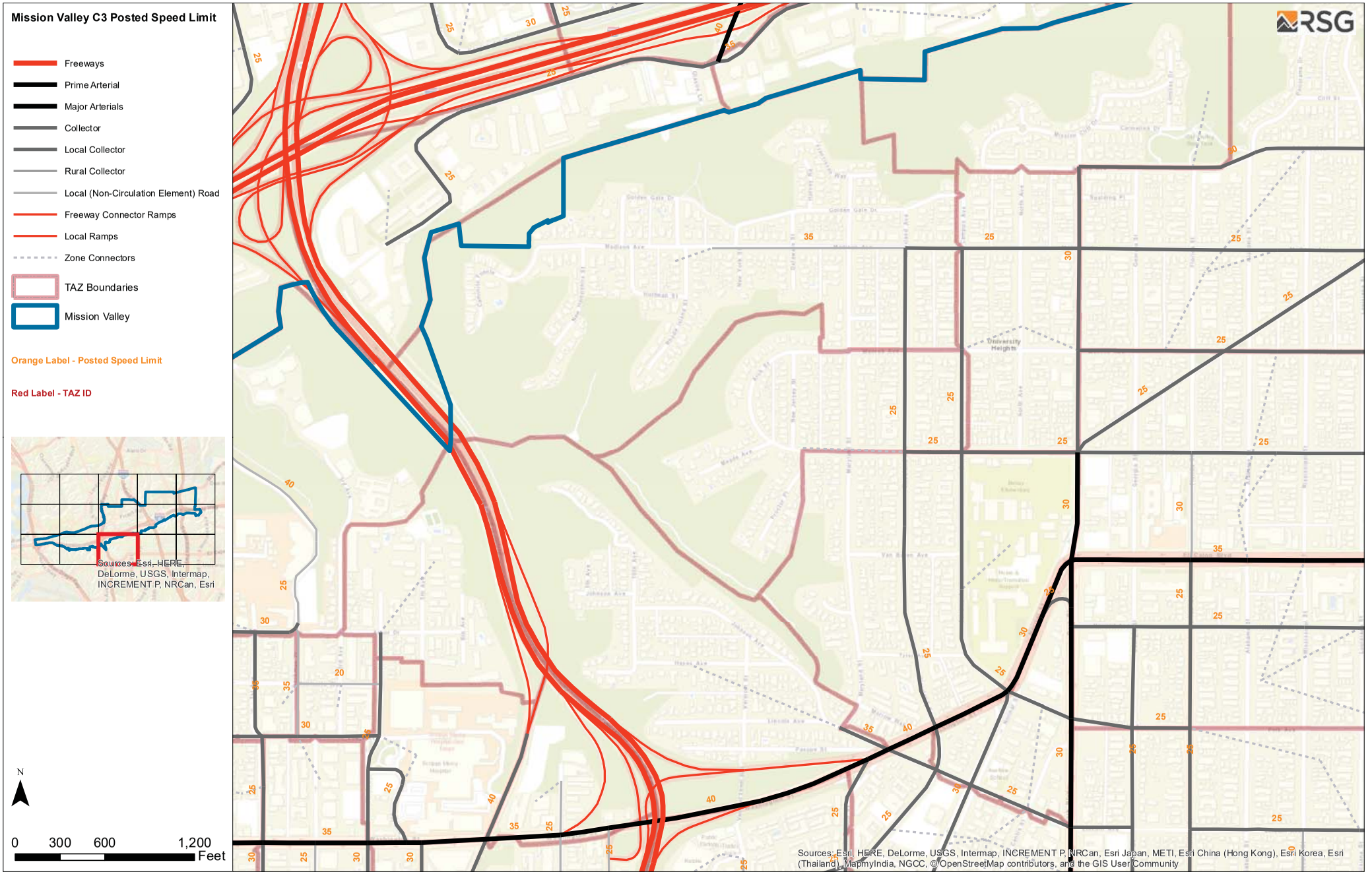
Red Label - TAZ ID

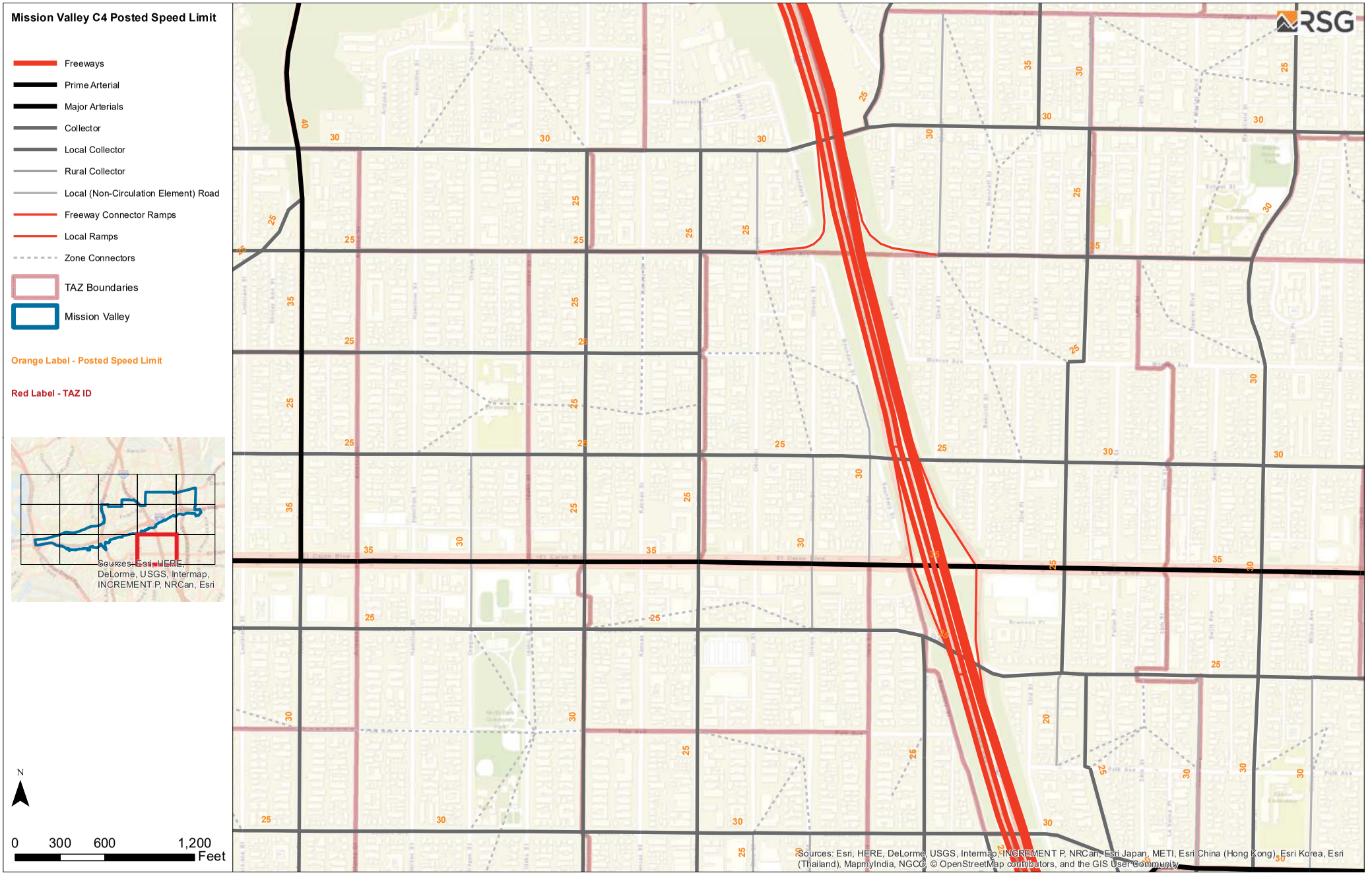


N

0 300 600 1,200 Feet

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley C3 Posted Speed Limit
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Posted Speed Limit
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

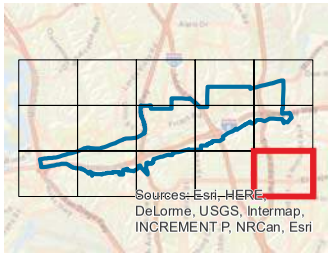

Mission Valley C4 Posted Speed Limit
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Posted Speed Limit
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley C5 Posted Speed Limit

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Posted Speed Limit

Red Label - TAZ ID



N

0 300 600 1,200 Feet

RSG

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

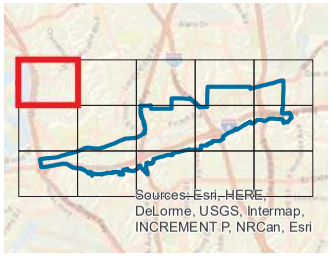
2 Lane Via Las Cumbres Alternative Model Outputs

Mission Valley Alt6 A1 Road Type

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

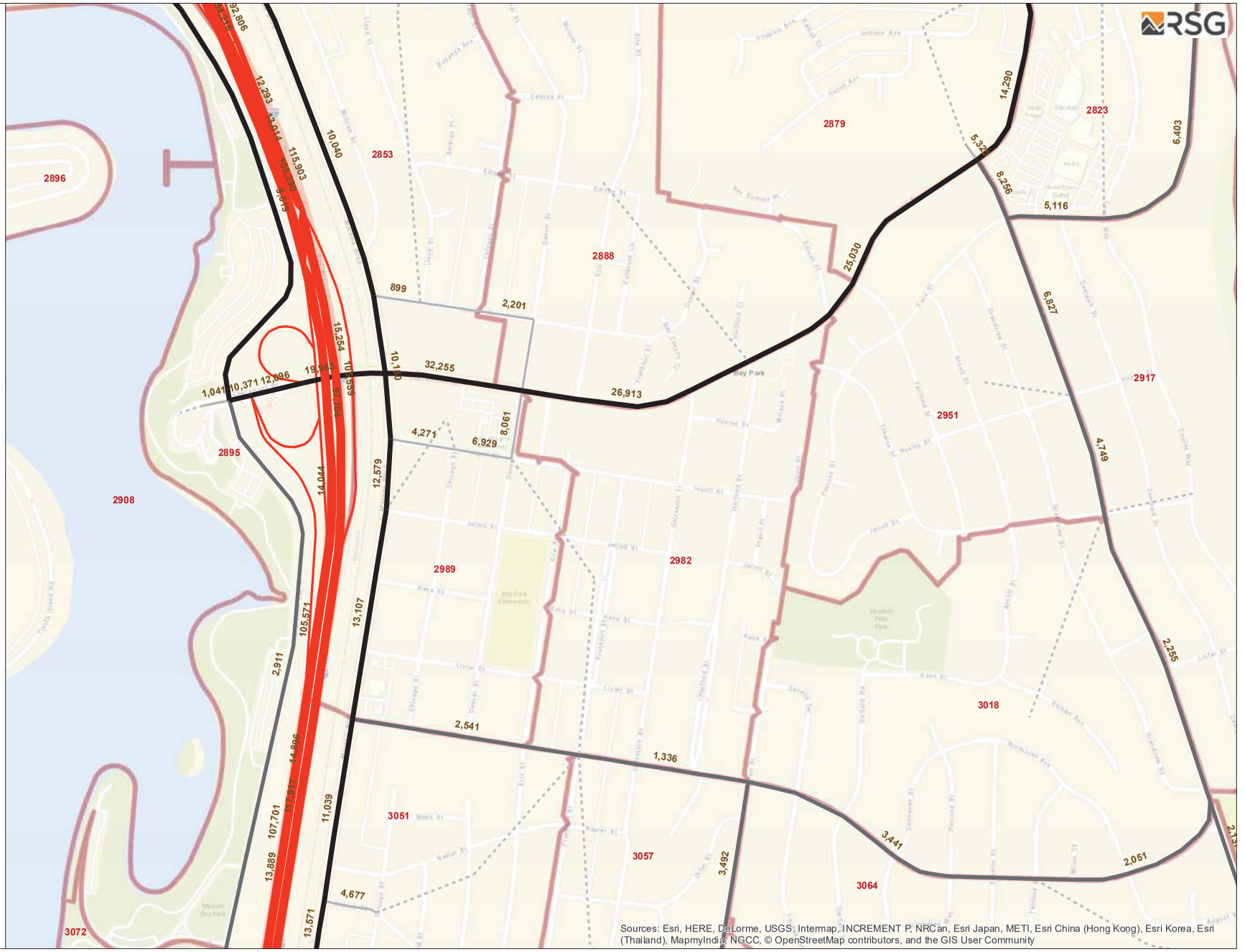
Orange Label - Total Daily Vehicle Flow

Red Label - TAZ ID



N

0 300 600 1,200 Feet

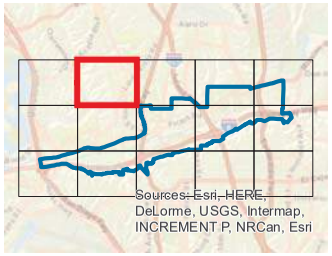


Mission Valley Alt6 A2 Road Type

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

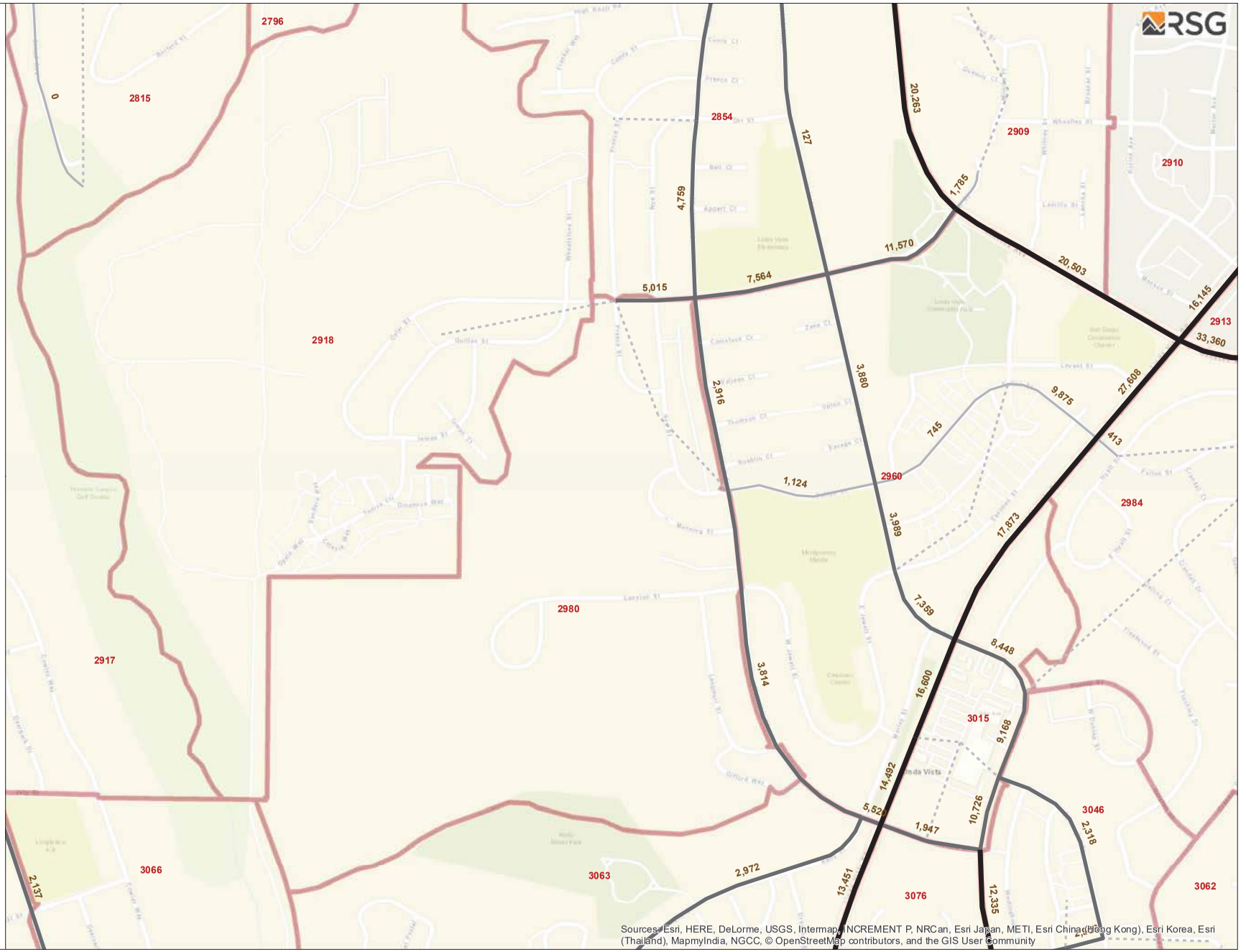
Orange Label - Total Daily Vehicle Flow

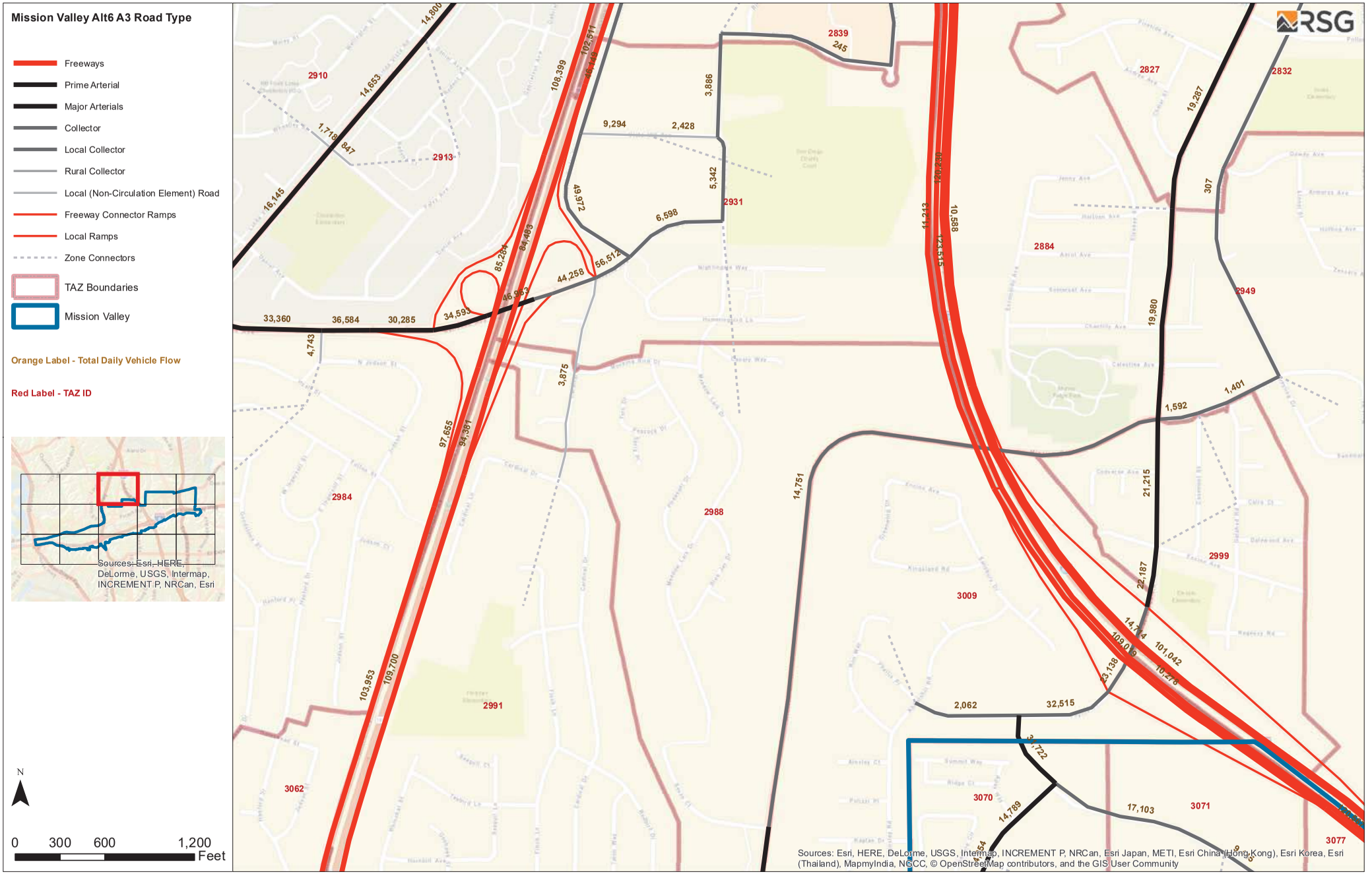
Red Label - TAZ ID

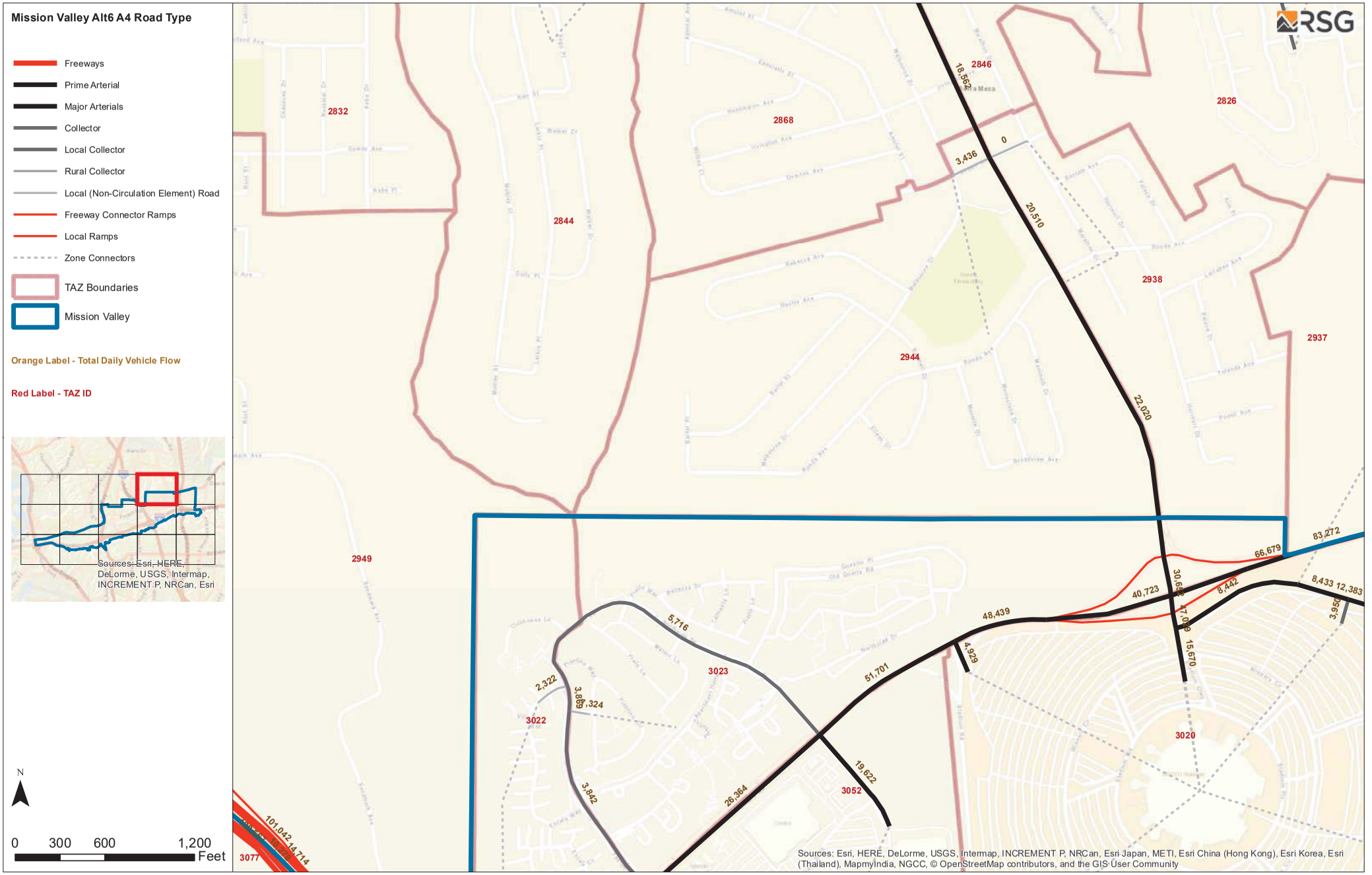


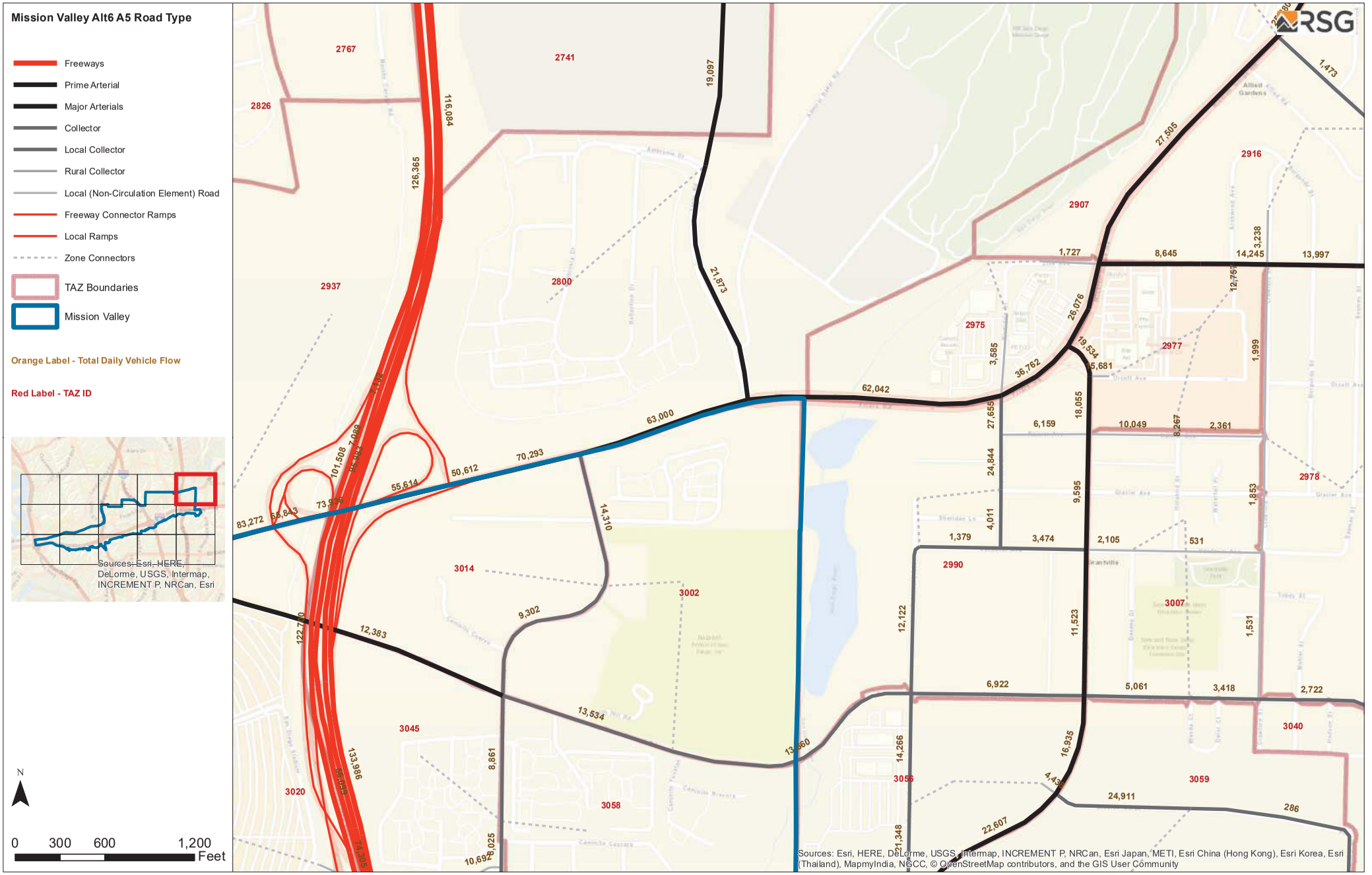
N

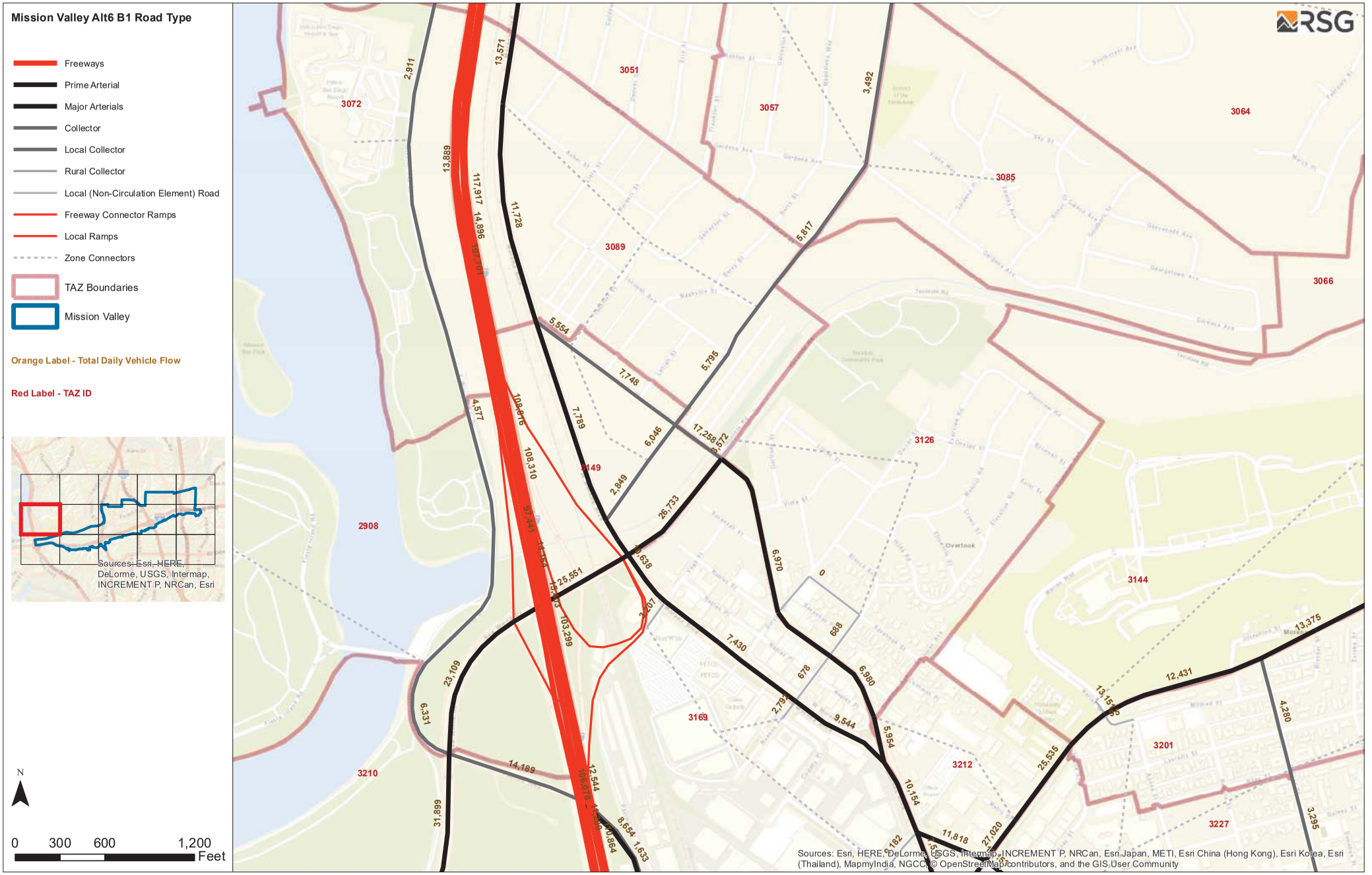
0 300 600 1,200 Feet

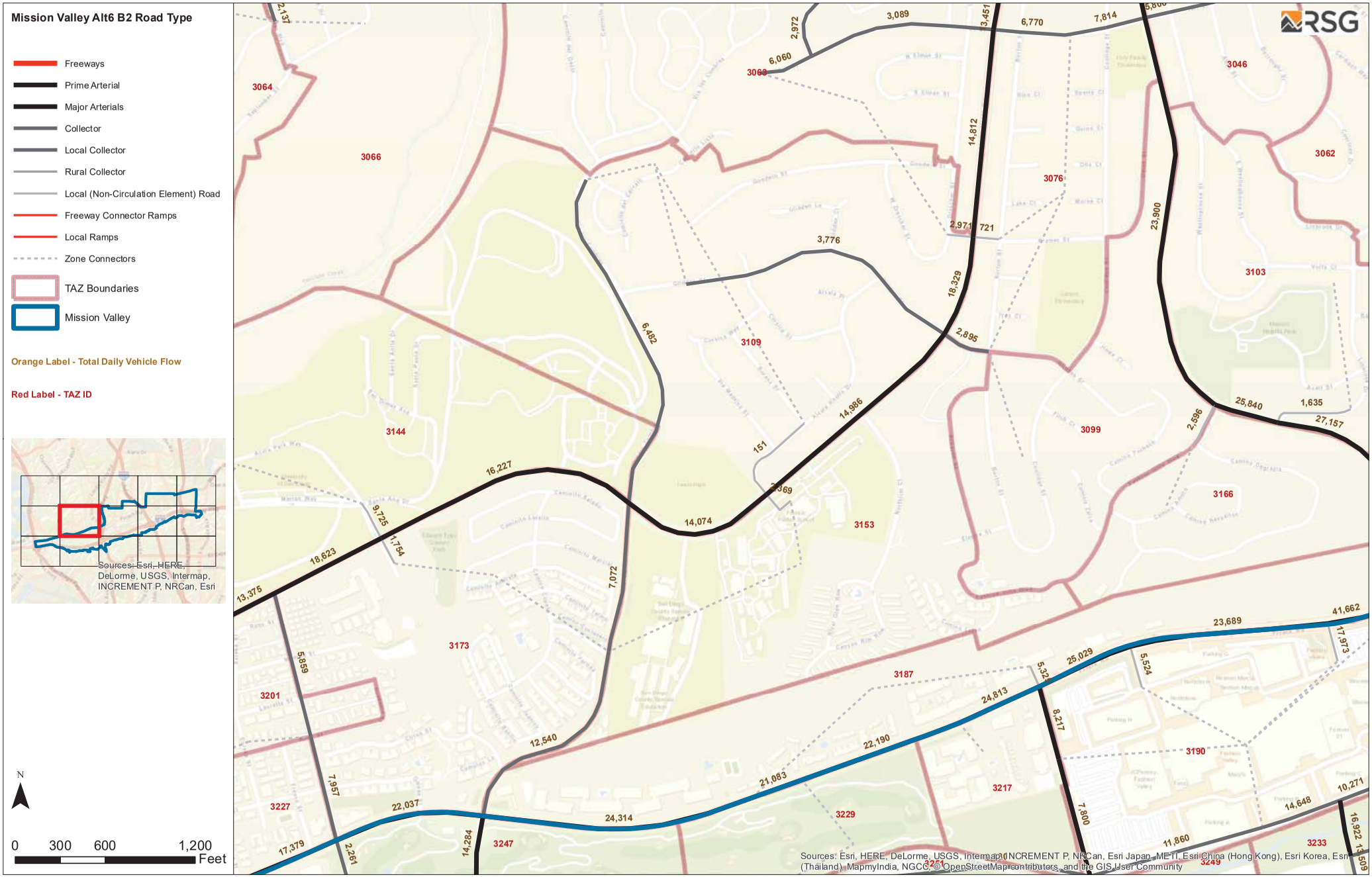


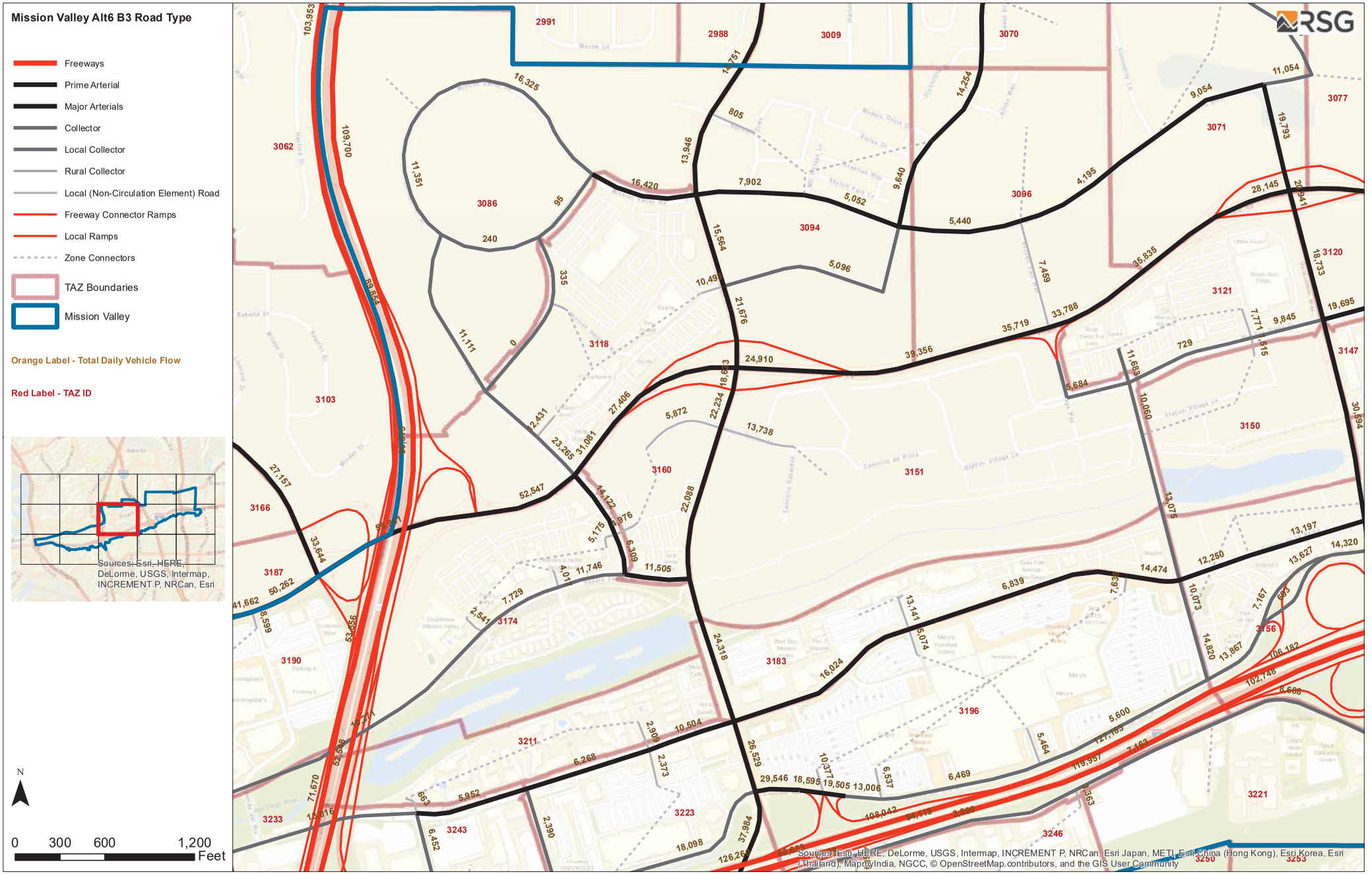

Mission Valley Alt6 A3 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200 Feet
RSG
2910
2913
2839
245
2827
2832
2931
2884
2949
2984
2988
2999
3009
2991
3062
3070
3071
3077
14,800
14,653
1,719
847
16,145
108,399
102,511
3,886
9,294
2,428
5,342
49,972
6,598
85,254
84,493
44,258
56,512
46,933
34,593
33,360
36,584
30,285
4,743
3,875
97,655
94,381
103,953
109,700
14,751
11,213
10,588
19,287
307
19,980
1,592
1,401
21,215
22,187
14,714
101,042
10,278
33,138
2,062
32,515
14,789
17,103
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NCCC, © OpenStreetMap contributors, and the GIS User Community

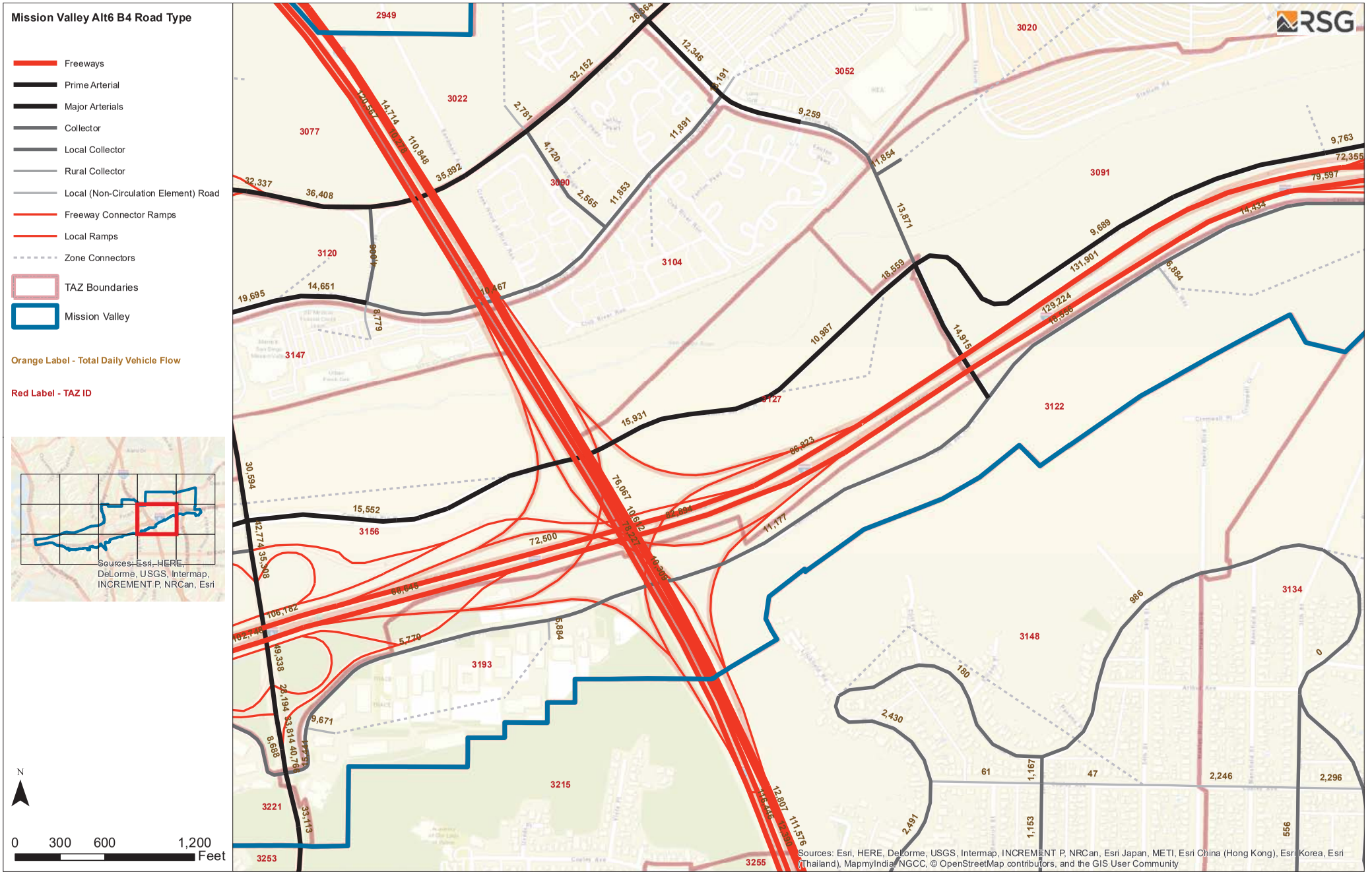

Mission Valley Alt6 A4 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
2832
2868
2846
2826
2844
2938
2937
2944
2949
3023
3022
3020
3052
3077
18,562
0
3,436
20,510
22,020
83,272
66,679
40,723
30,682
8,442
8,433
12,383
3,959
48,439
4,929
15,670
51,701
5,716
2,322
3,869
1,324
3,842
26,364
19,622
101,042
14,714
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

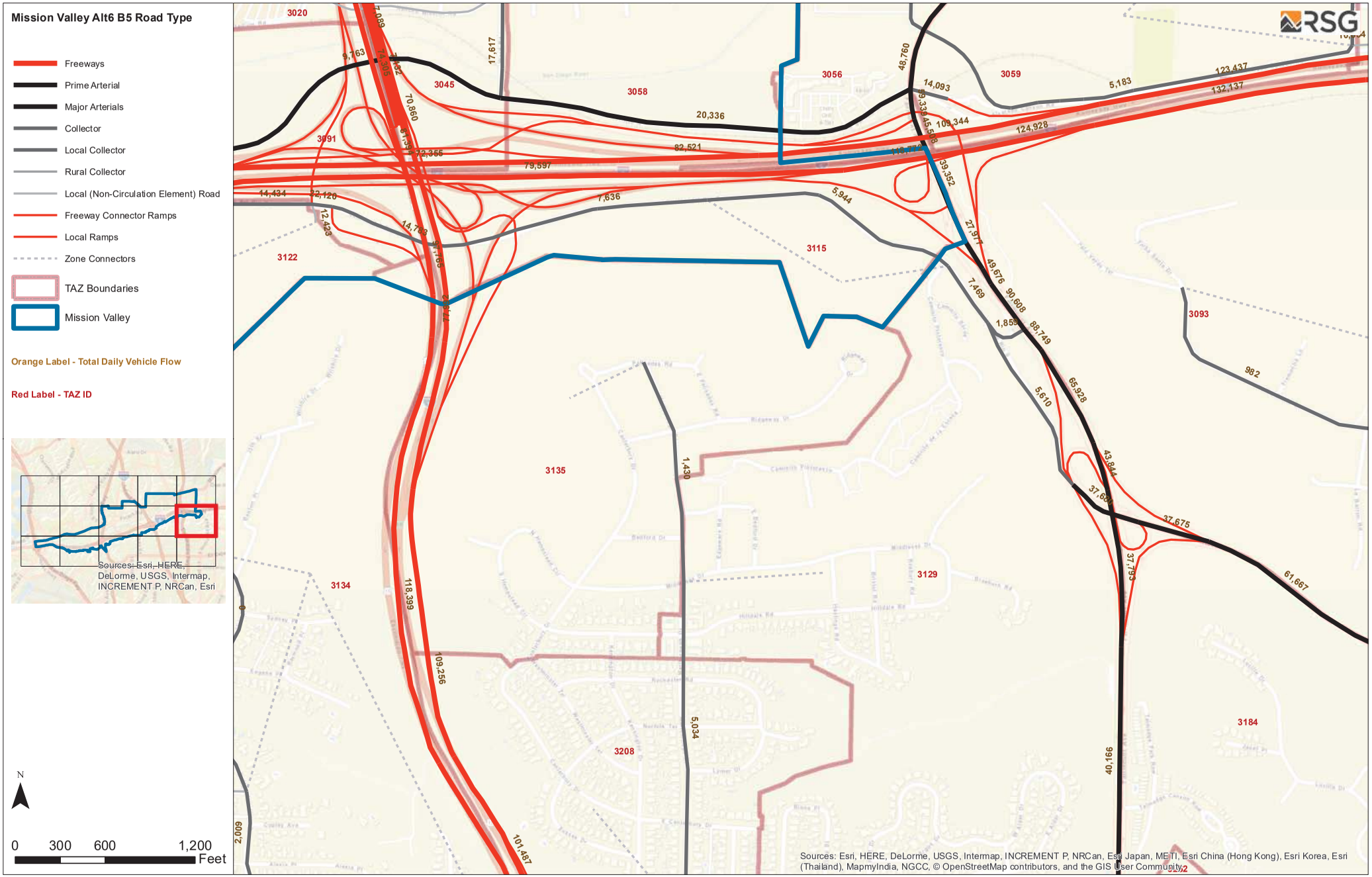

Mission Valley Alt6 A5 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
2767
2741
2826
2937
2800
2907
2916
2975
2977
2978
3014
3002
3045
3020
3058
3056
3059
3040
2990
3007
116,084
126,365
19,097
21,873
27,505
1,473
1,727
8,645
14,245
13,997
3,238
12,757
26,076
19,534
5,681
1,999
62,042
63,000
70,293
50,612
55,614
83,272
55,843
73,935
101,508
95,982
2,069
27,655
36,762
3,585
6,159
18,055
10,049
8,267
2,361
24,844
4,011
9,595
1,853
1,379
3,474
2,105
531
14,310
9,302
12,383
122,780
12,122
11,523
1,531
6,922
5,061
3,418
2,722
13,534
13,360
14,266
16,935
4,435
24,911
286
22,607
21,348
8,861
133,986
74,305
10,692
8,025
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

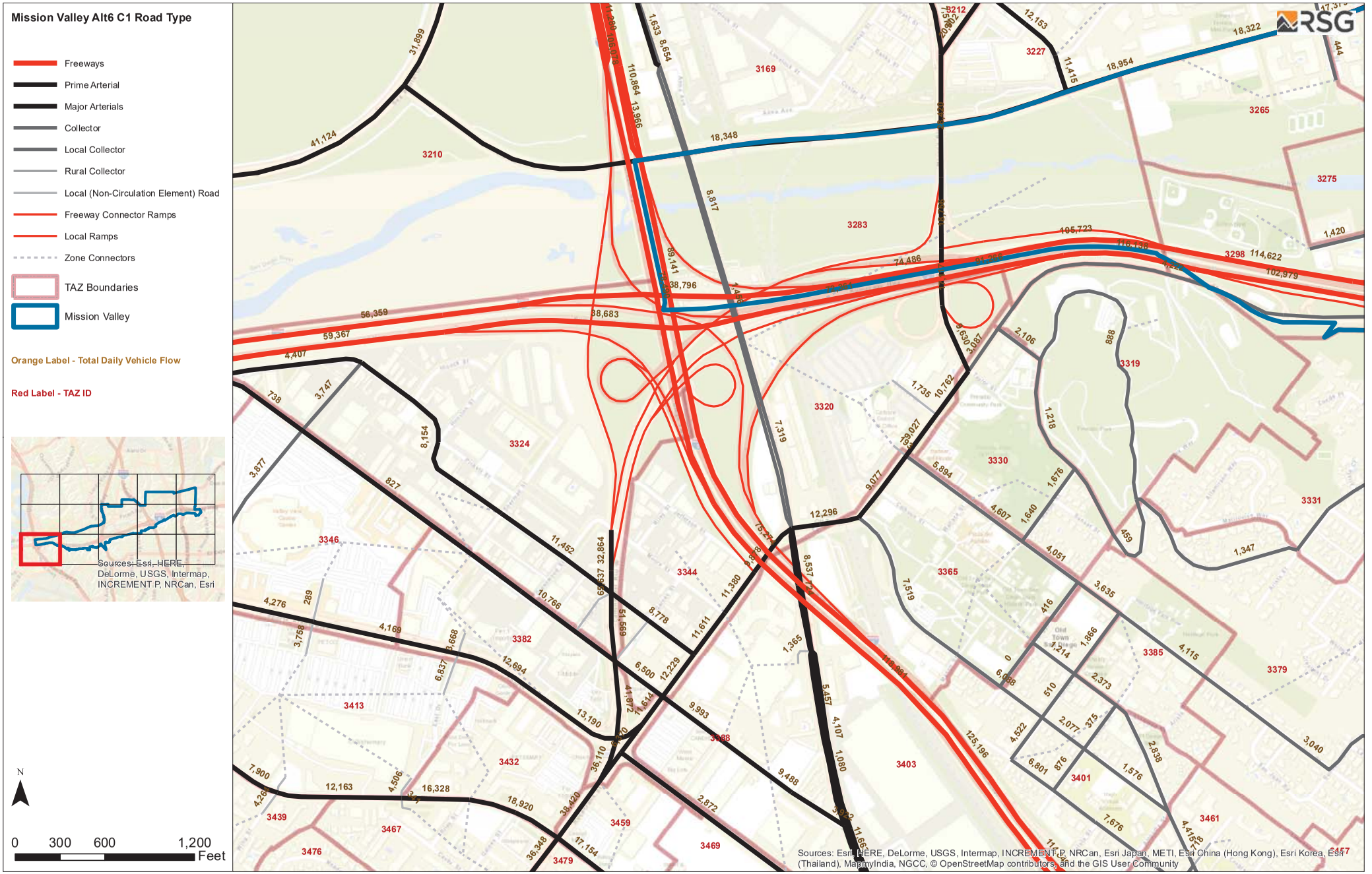

Mission Valley Alt6 B1 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200 Feet
RSG
3072
3051
3057
3064
3085
3089
3066
3126
3149
2908
3144
3169
3201
3212
3210
3227
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

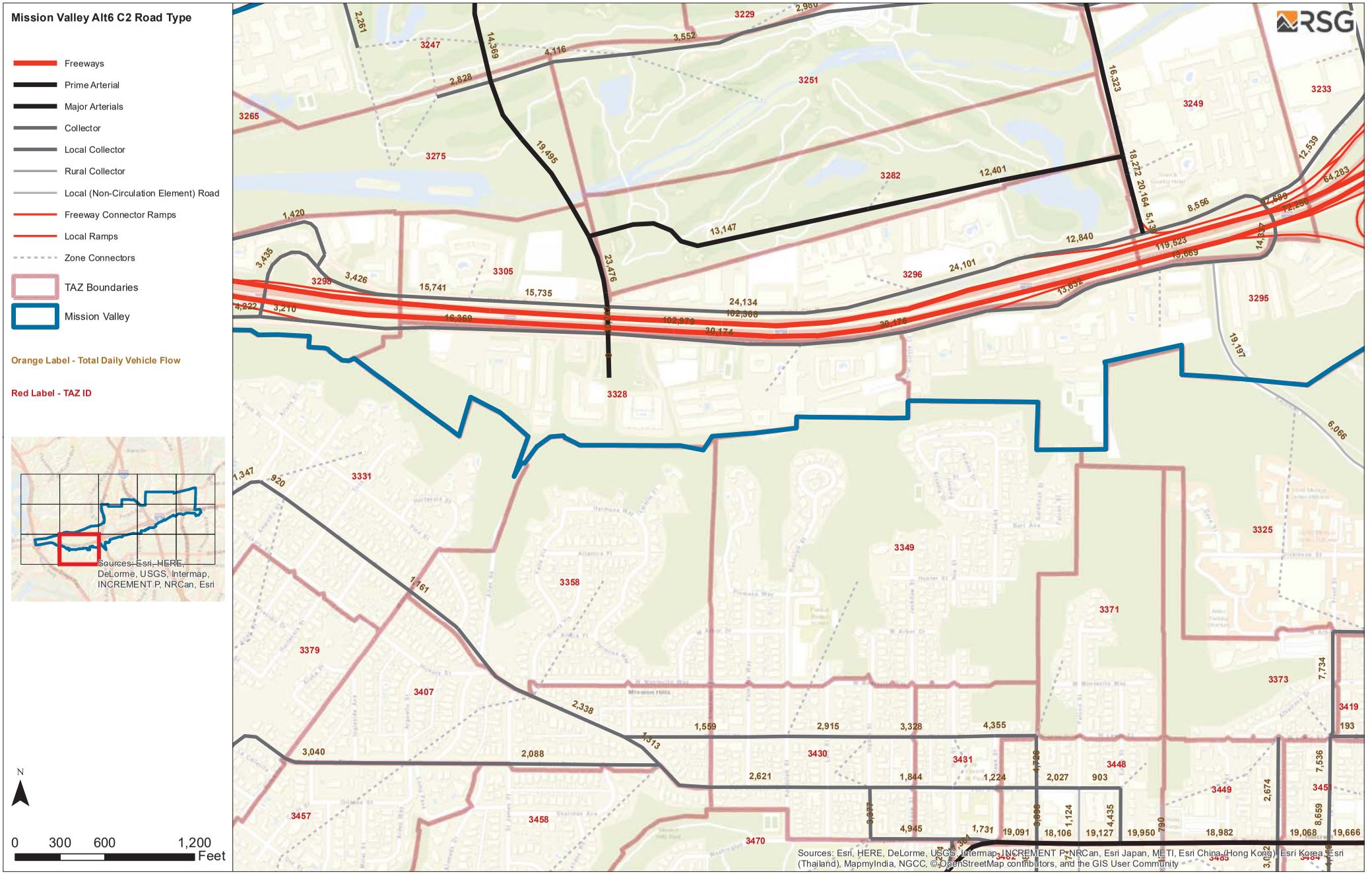

Mission Valley Alt6 B2 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
3064
3066
3068
3046
3062
3076
3103
3109
3144
3099
3166
3153
3173
3187
3201
3190
3217
3227
3229
3247
3233
3249
2,137
2,972
3,089
6,060
6,770
7,814
14,812
3,776
721
23,900
18,329
6,482
2,895
14,986
151
2,596
25,840
1,635
27,157
16,227
9,725
1,754
14,074
18,623
13,375
7,072
5,859
7,957
2,261
14,284
12,540
22,037
24,314
21,083
22,190
24,813
25,029
5,324
8,217
7,800
5,524
23,689
17,973
41,662
14,648
10,271
11,860
16,922
13,509
17,379
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

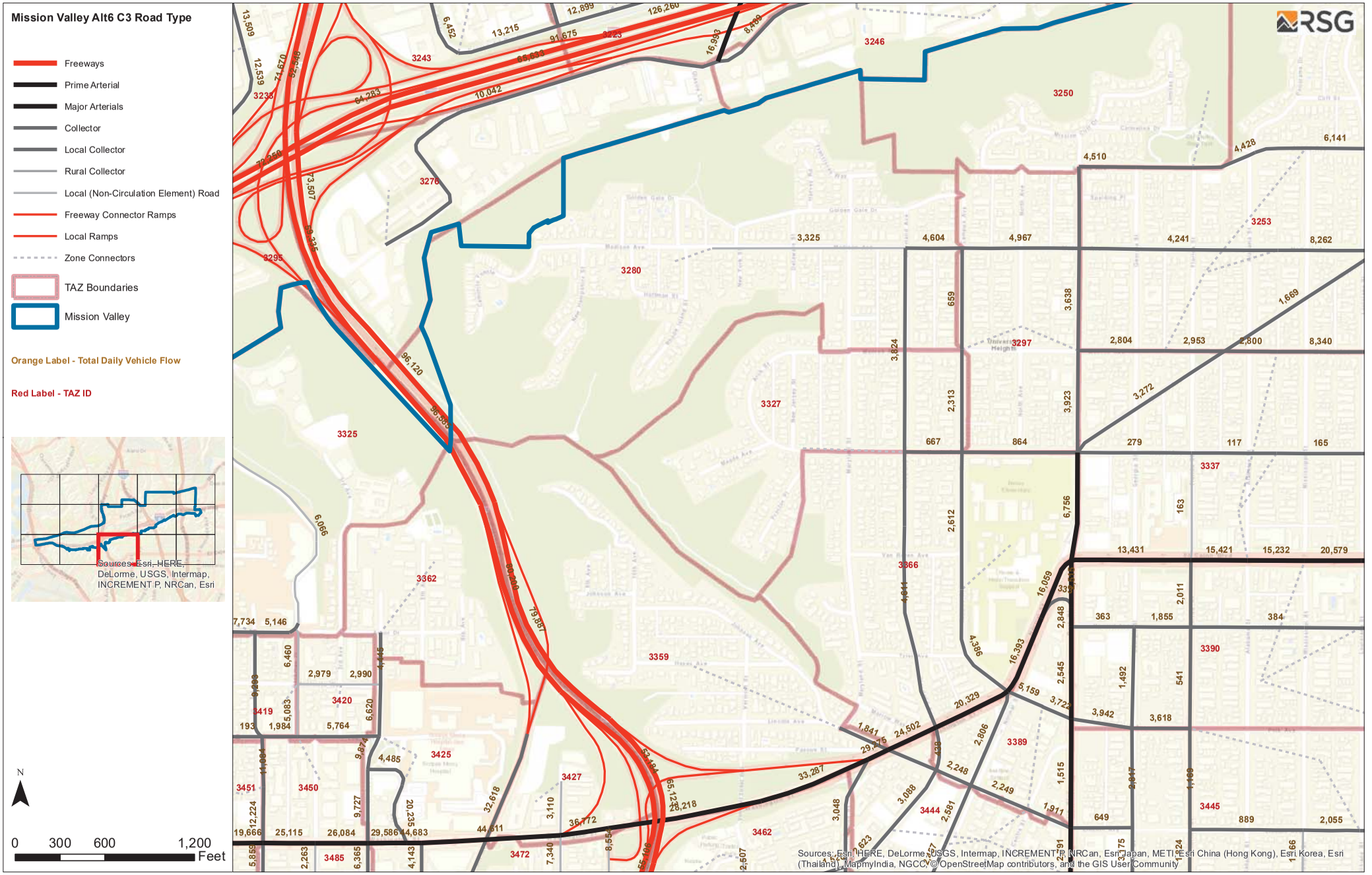

Mission Valley Alt6 B3 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

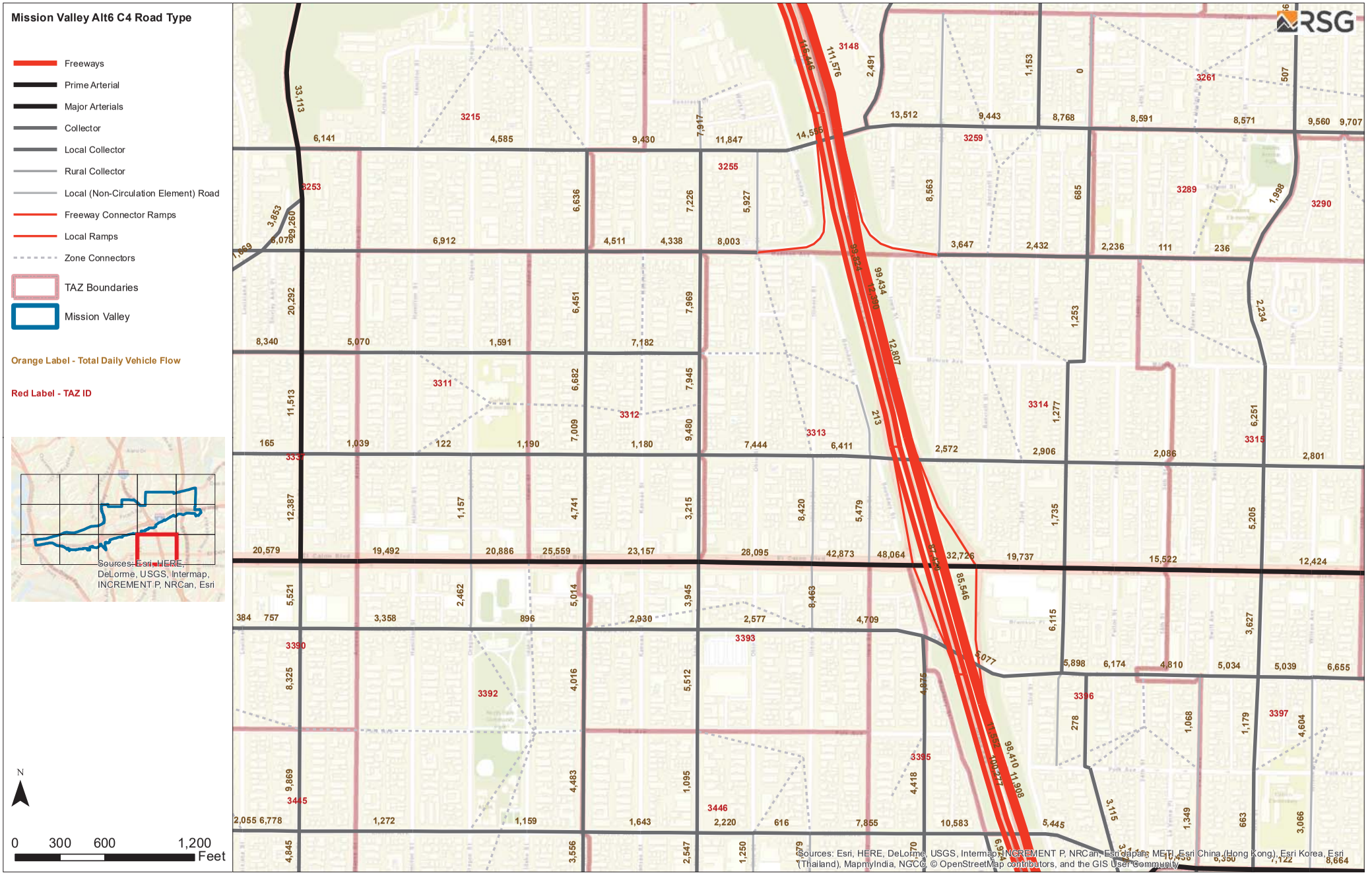

Mission Valley Alt6 B4 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
2949
3020
3052
3022
3077
3091
3120
3104
3147
3122
3156
3127
3148
3134
3193
3215
3221
3253
3255
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

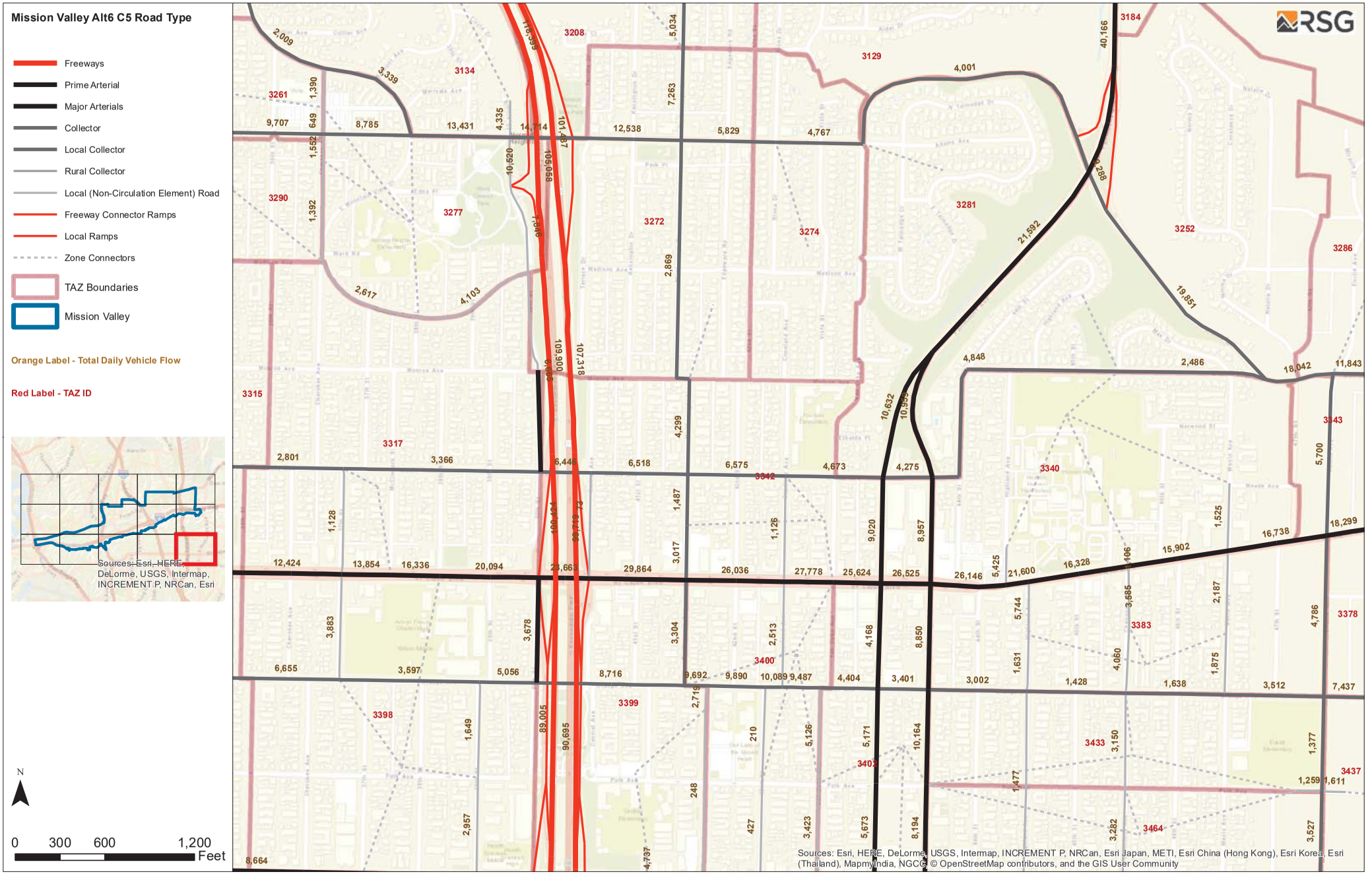

Mission Valley Alt6 B5 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
3020
3045
3058
3056
3059
3091
3122
3115
3093
982
3135
3134
3129
3184
3208
17,617
48,760
14,093
20,336
82,521
79,597
109,344
124,928
123,437
132,137
5,183
39,352
5,944
7,636
14,434
12,423
27,971
49,676
90,608
88,749
65,928
5,610
43,844
37,675
37,793
61,667
40,166
118,399
109,256
101,487
1,430
5,034
7,469
1,855
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

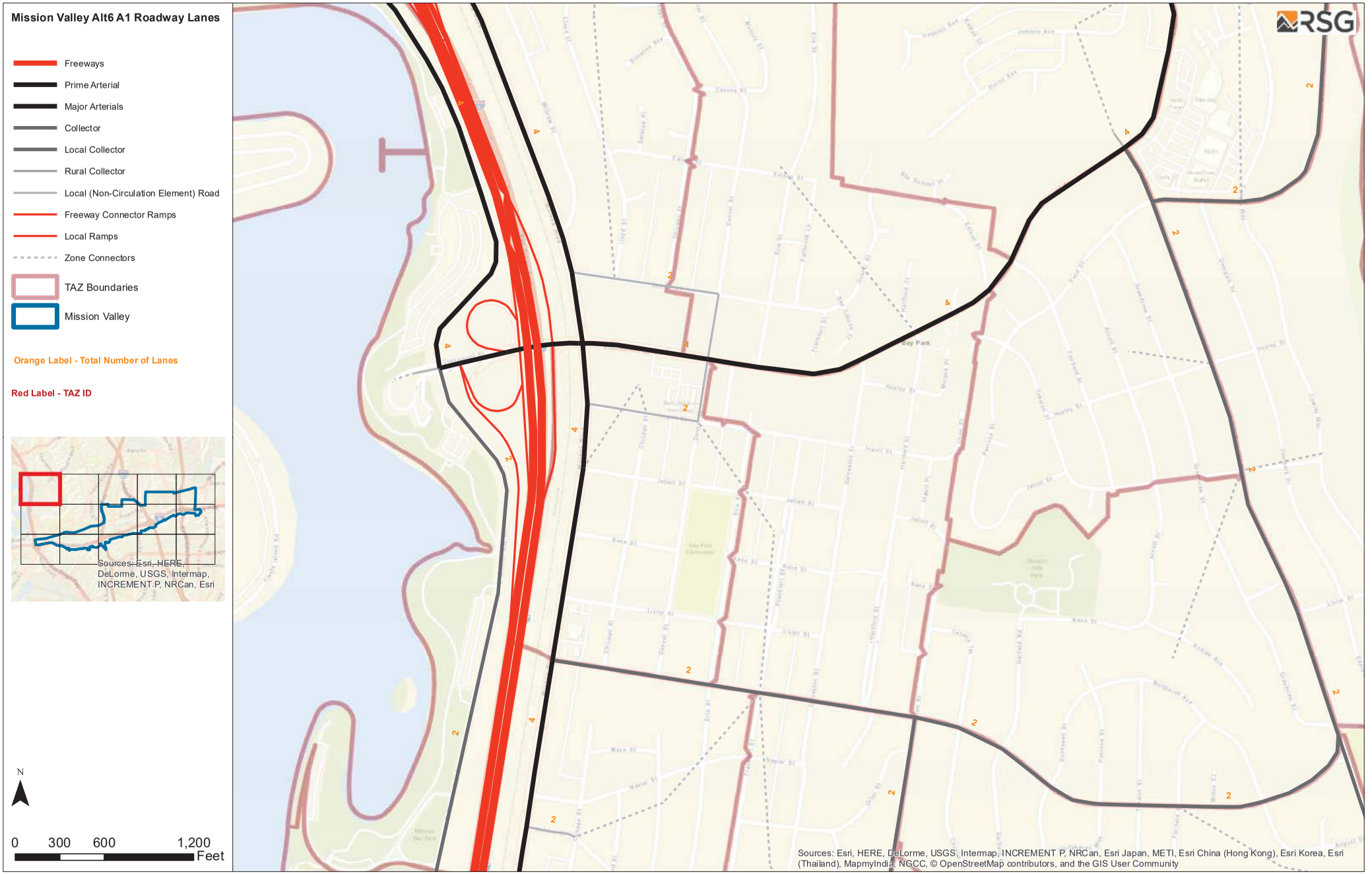

Mission Valley Alt6 C1 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

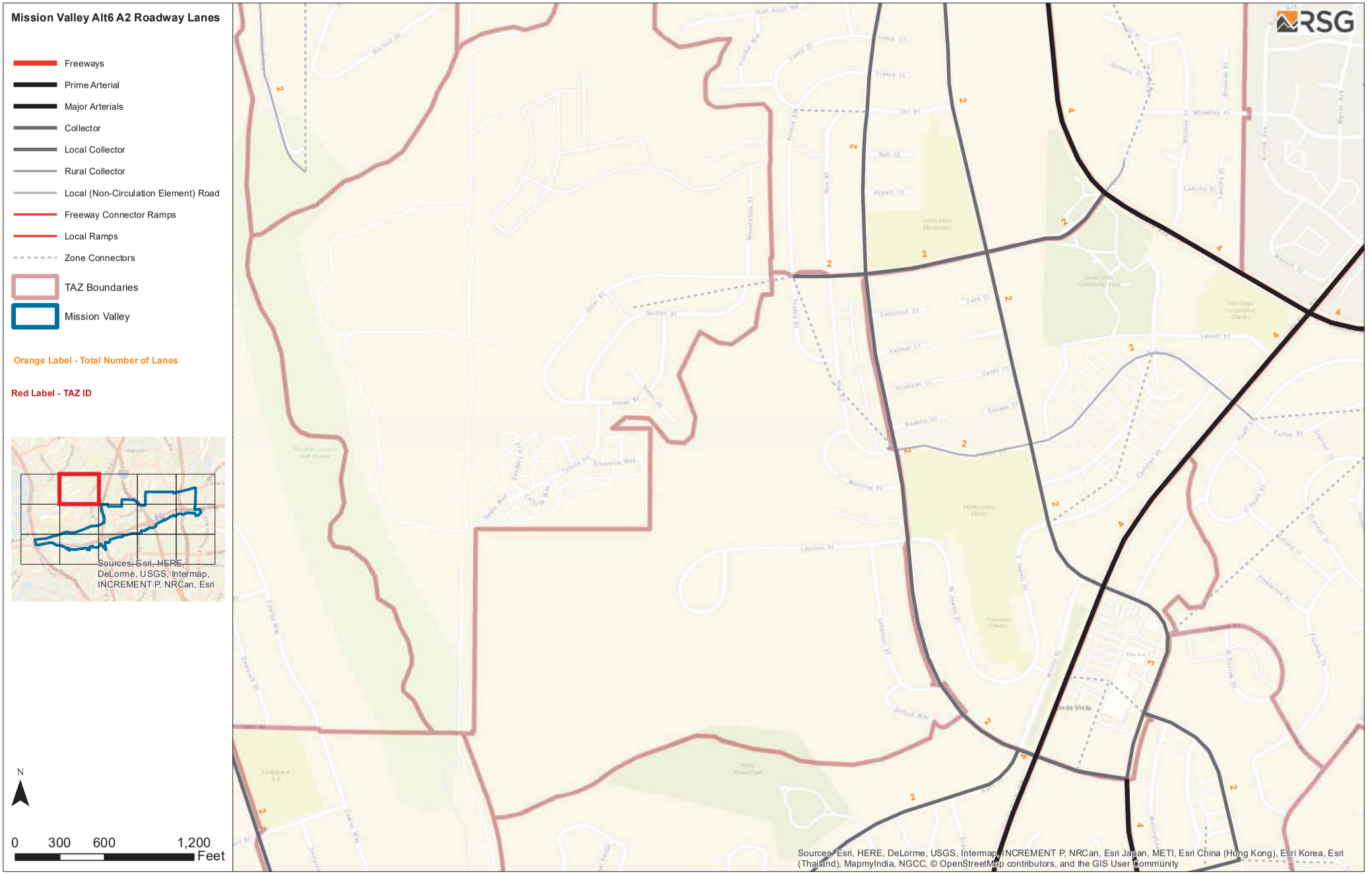

Mission Valley Alt6 C2 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

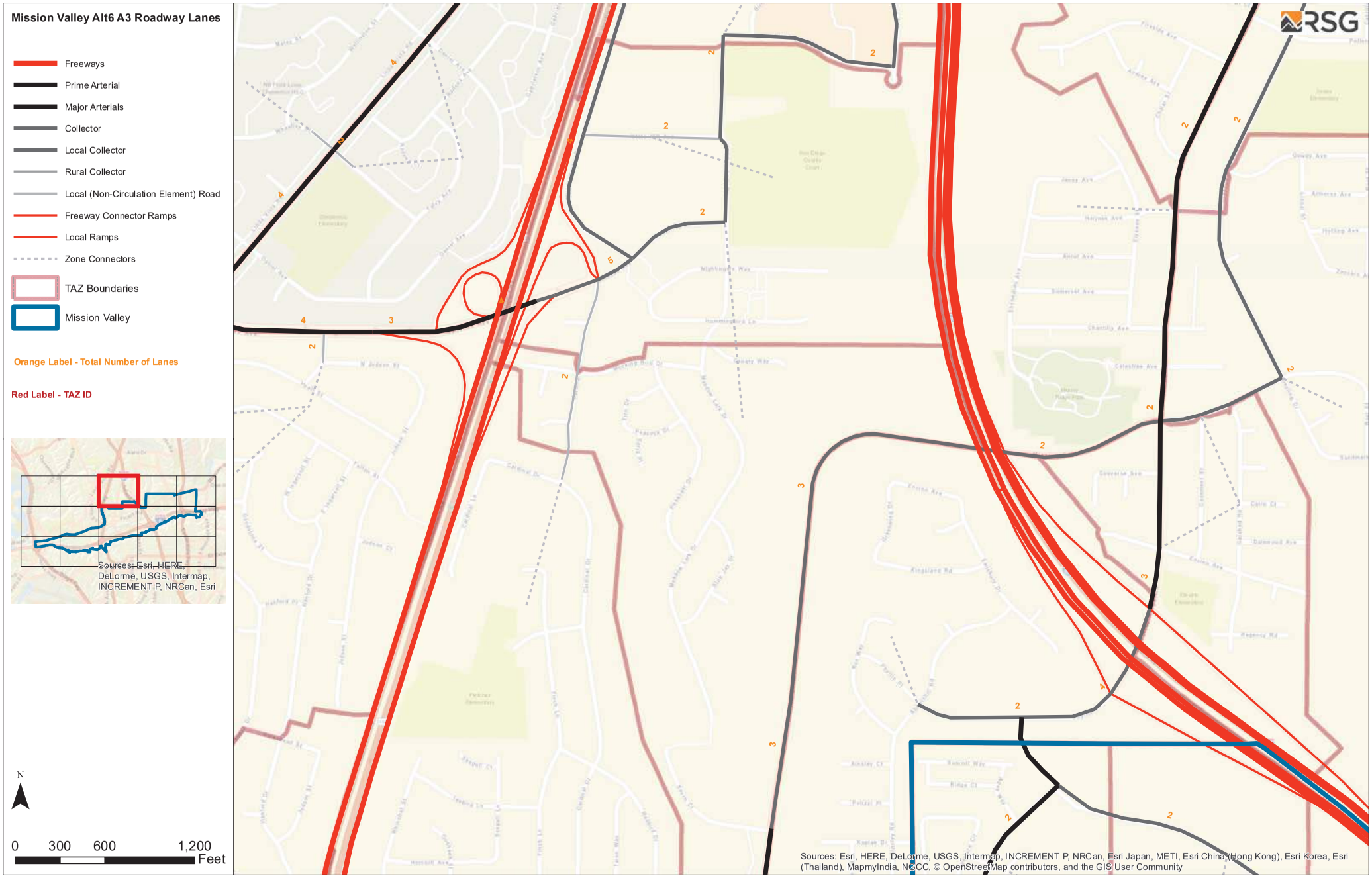

Mission Valley Alt6 C3 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

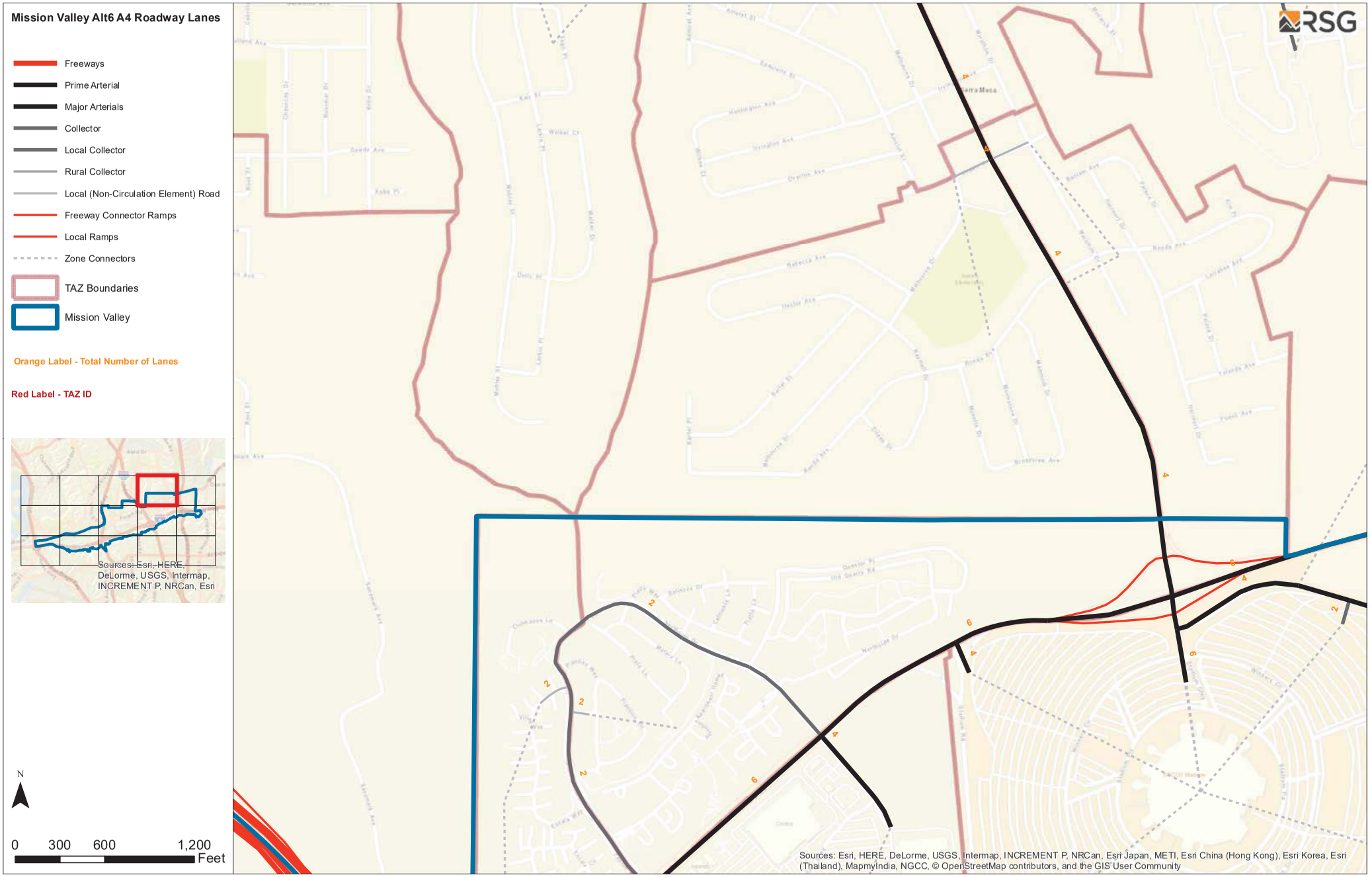

Mission Valley Alt6 C4 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

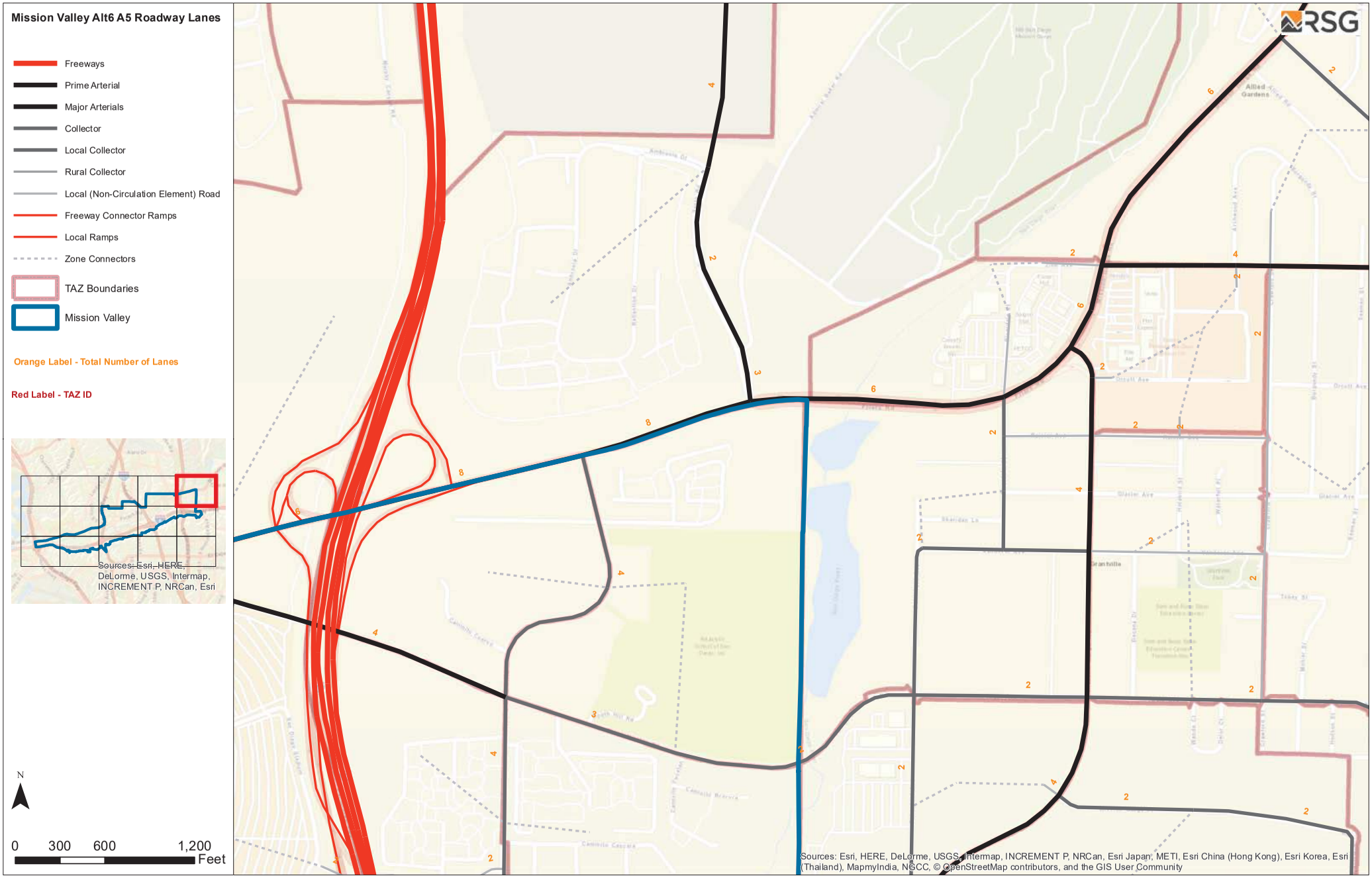

Mission Valley Alt6 C5 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), Mapmyindia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 A1 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 A2 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 A3 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 A4 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

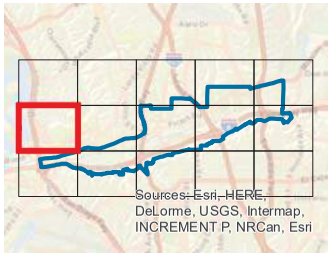

Mission Valley Alt6 A5 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt6 B1 Roadway Lanes

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Total Number of Lanes

Red Label - TAZ ID



N

0 300 600 1,200 Feet

RSG

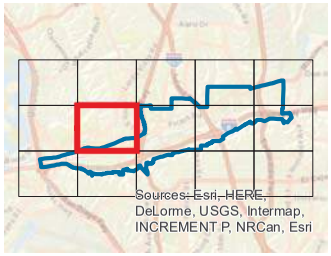
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt6 B2 Roadway Lanes

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Total Number of Lanes

Red Label - TAZ ID

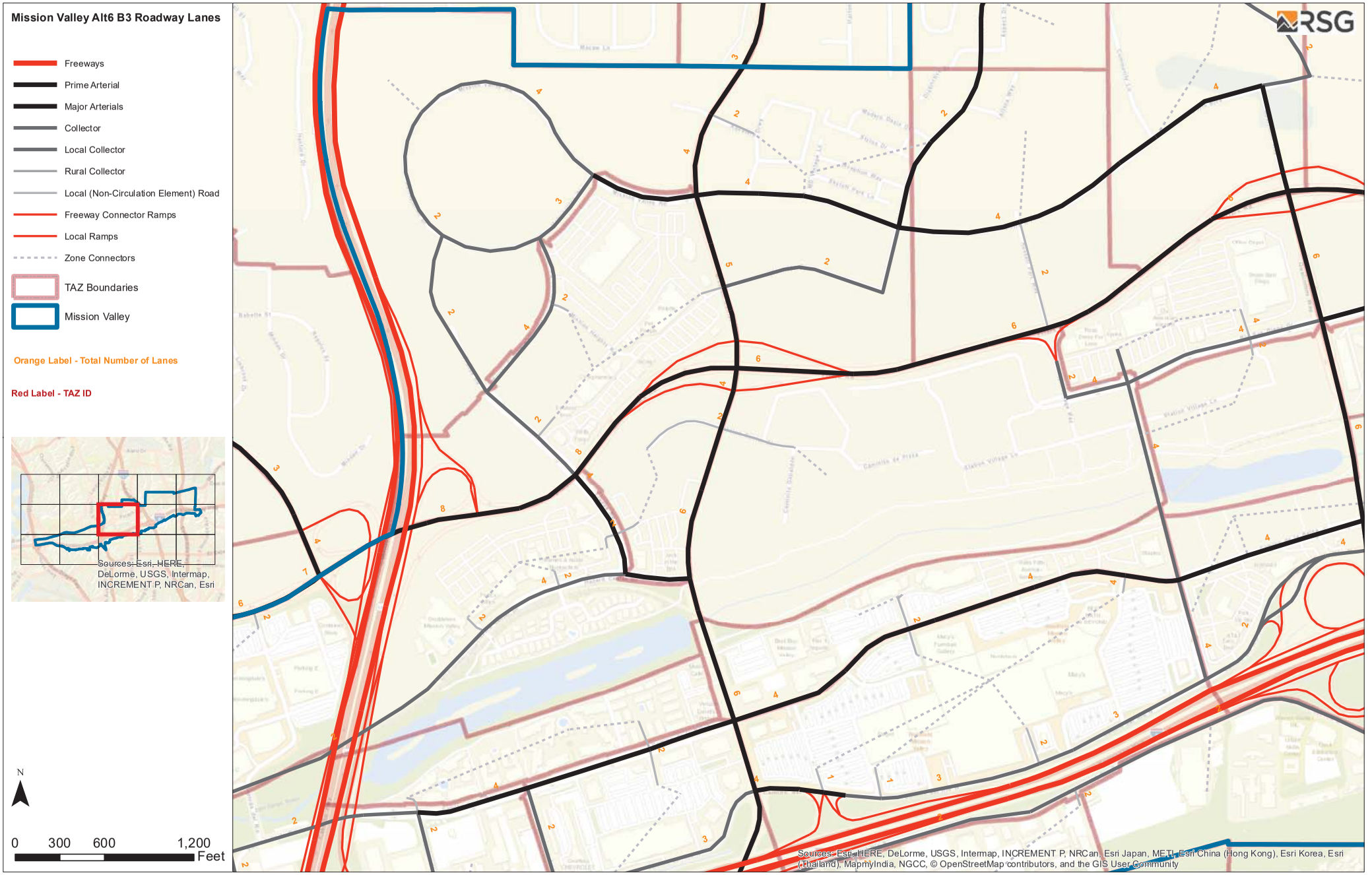


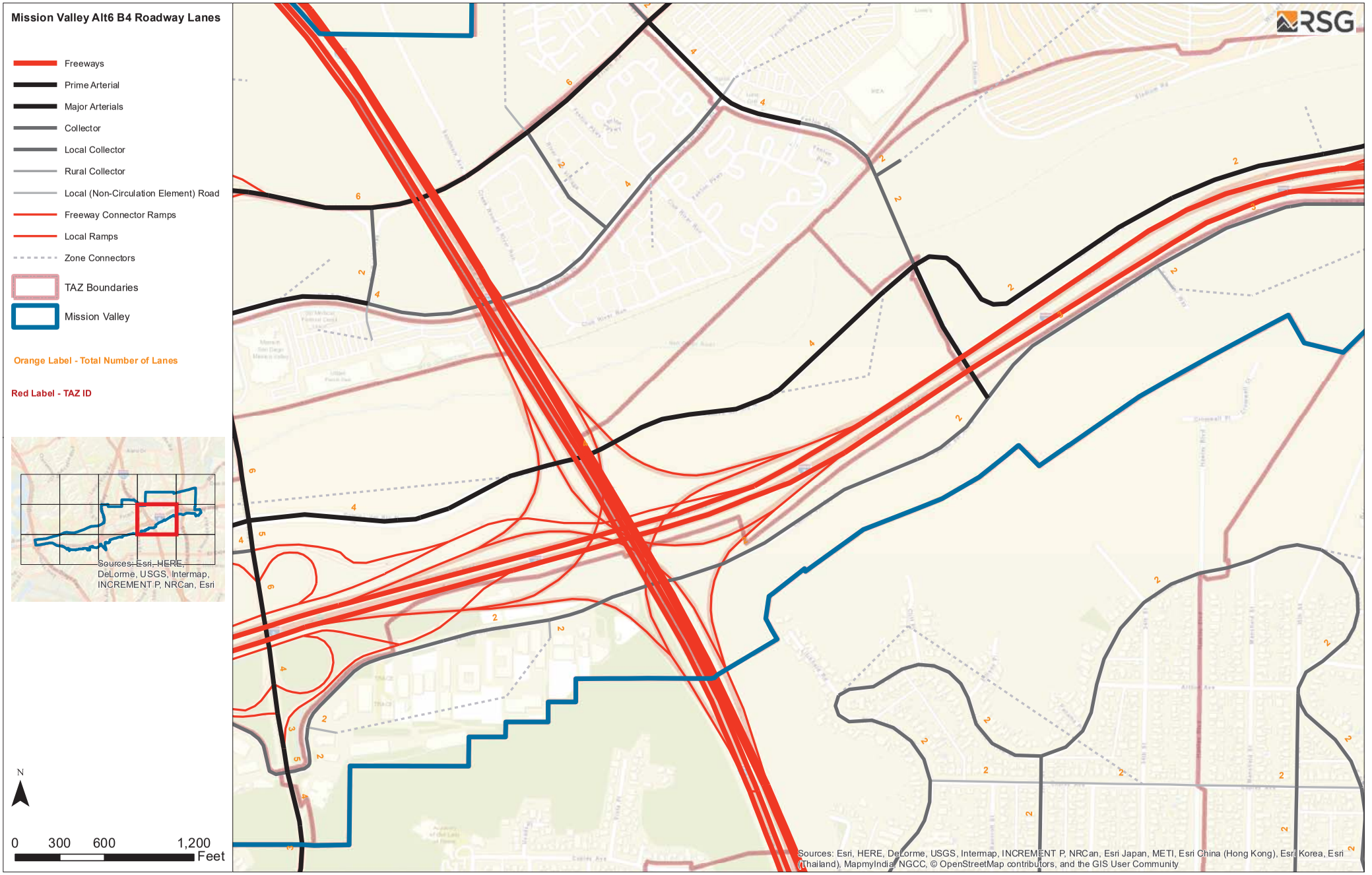
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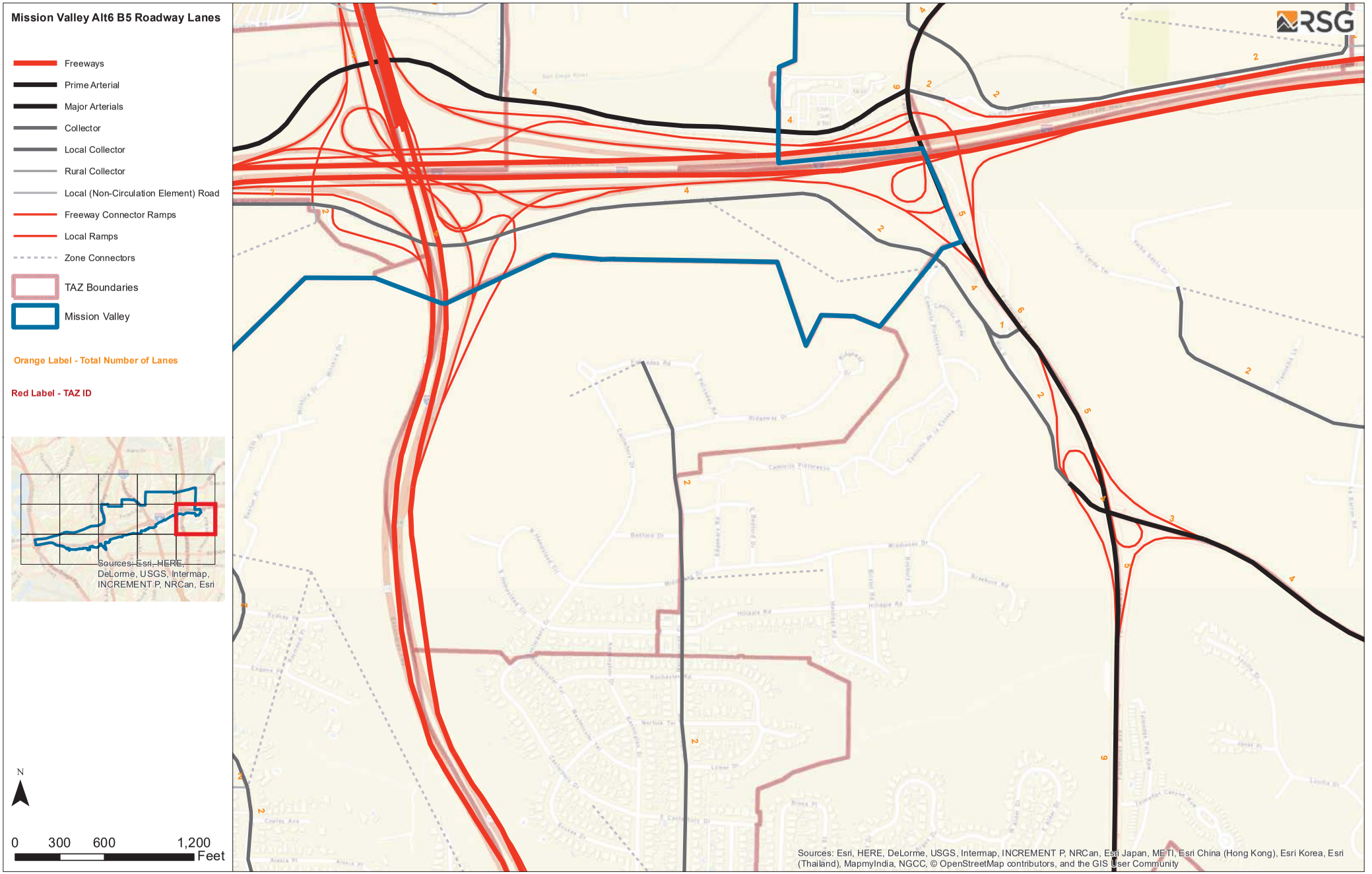
0 300 600 1,200 Feet

RSG

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 B3 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 B4 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

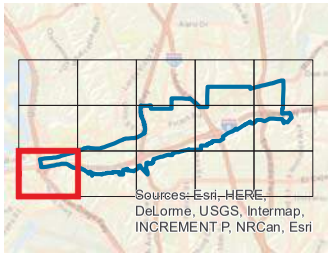

Mission Valley Alt6 B5 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt6 C1 Roadway Lanes

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Total Number of Lanes

Red Label - TAZ ID

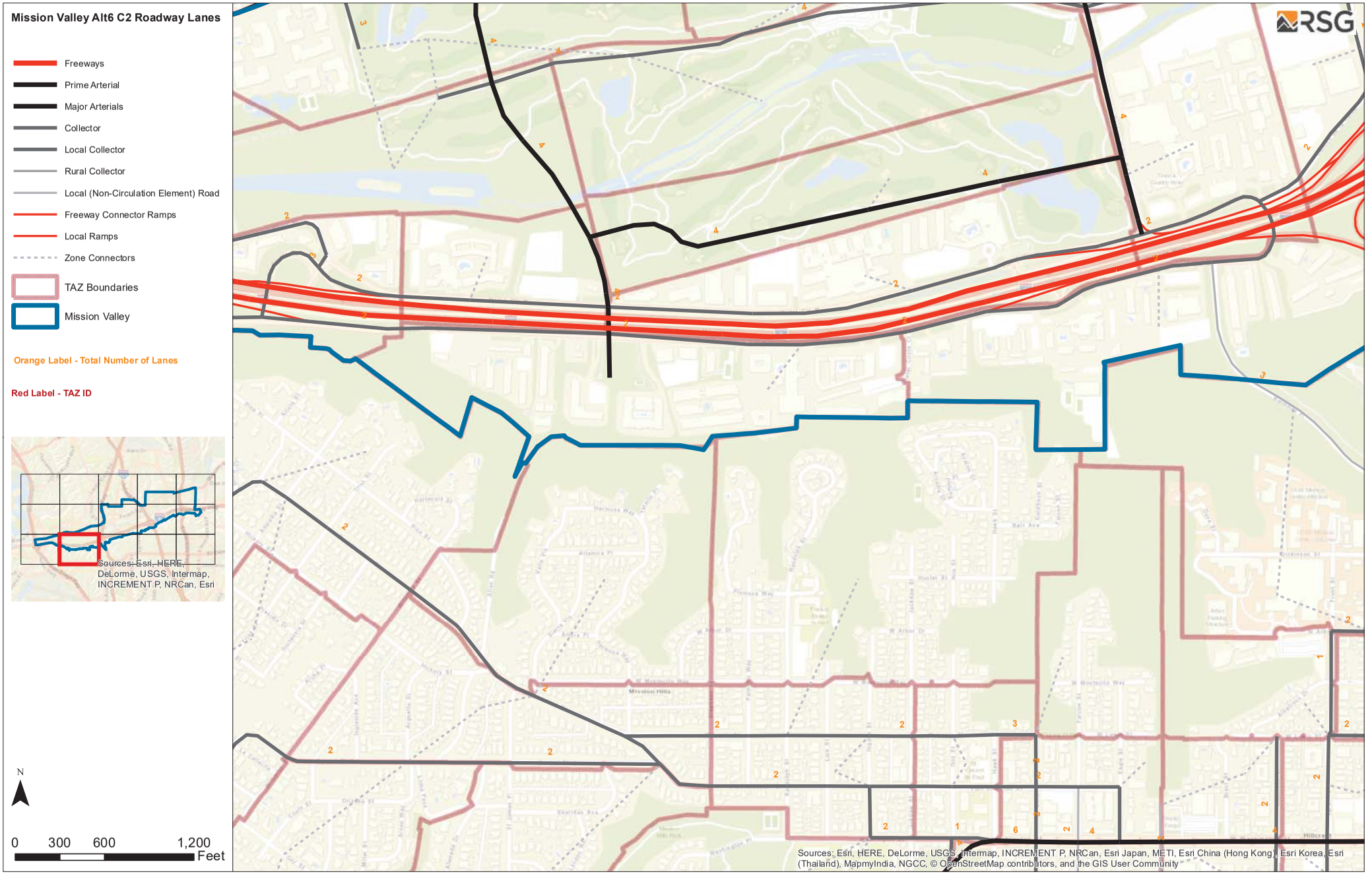


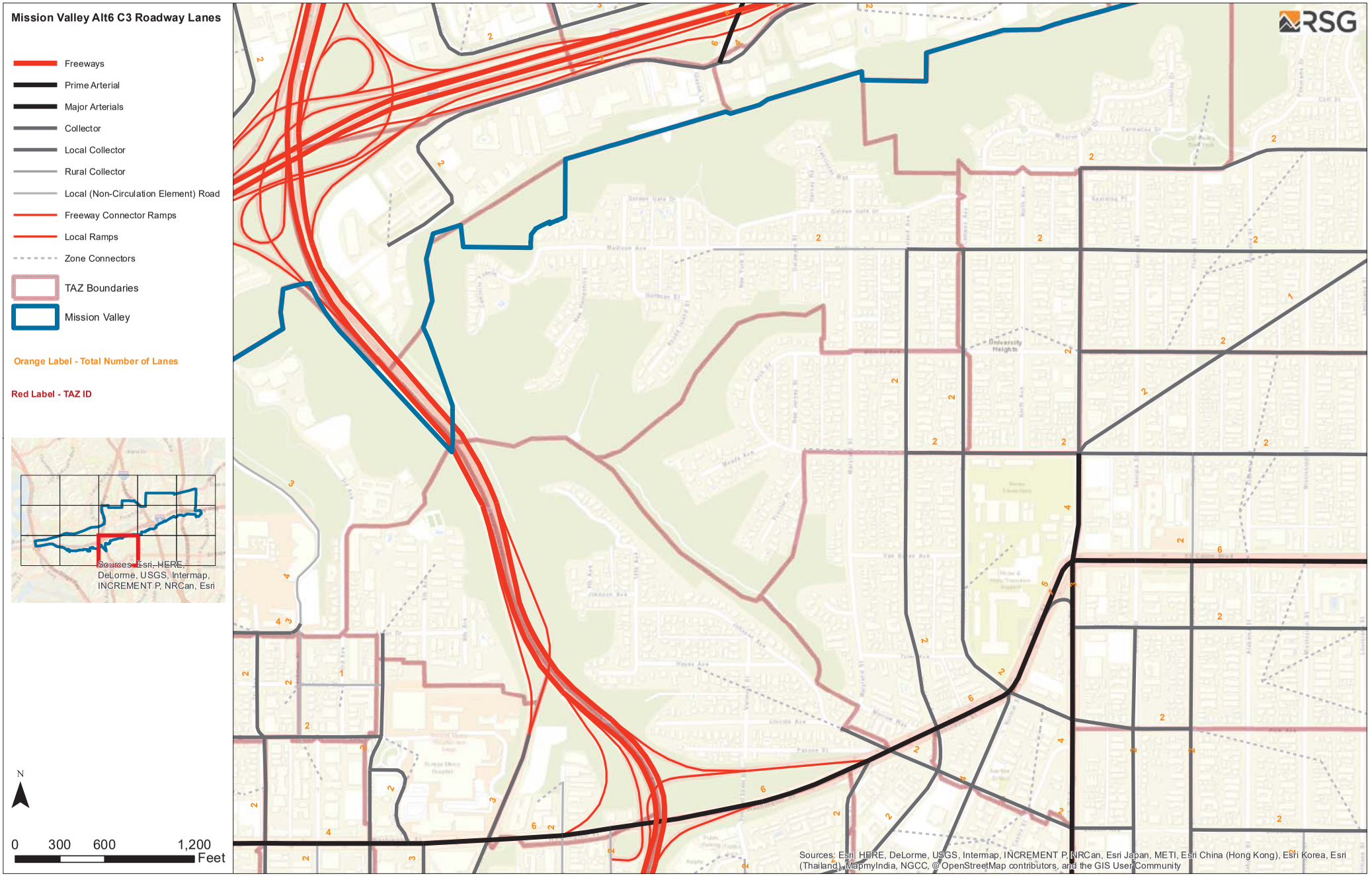
N

0 300 600 1,200 Feet

RSG

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 C2 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

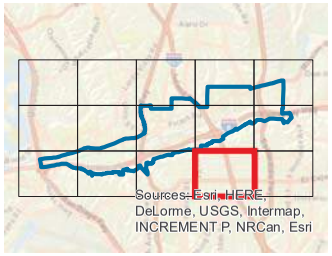

Mission Valley Alt6 C3 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt6 C4 Roadway Lanes

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Total Number of Lanes

Red Label - TAZ ID

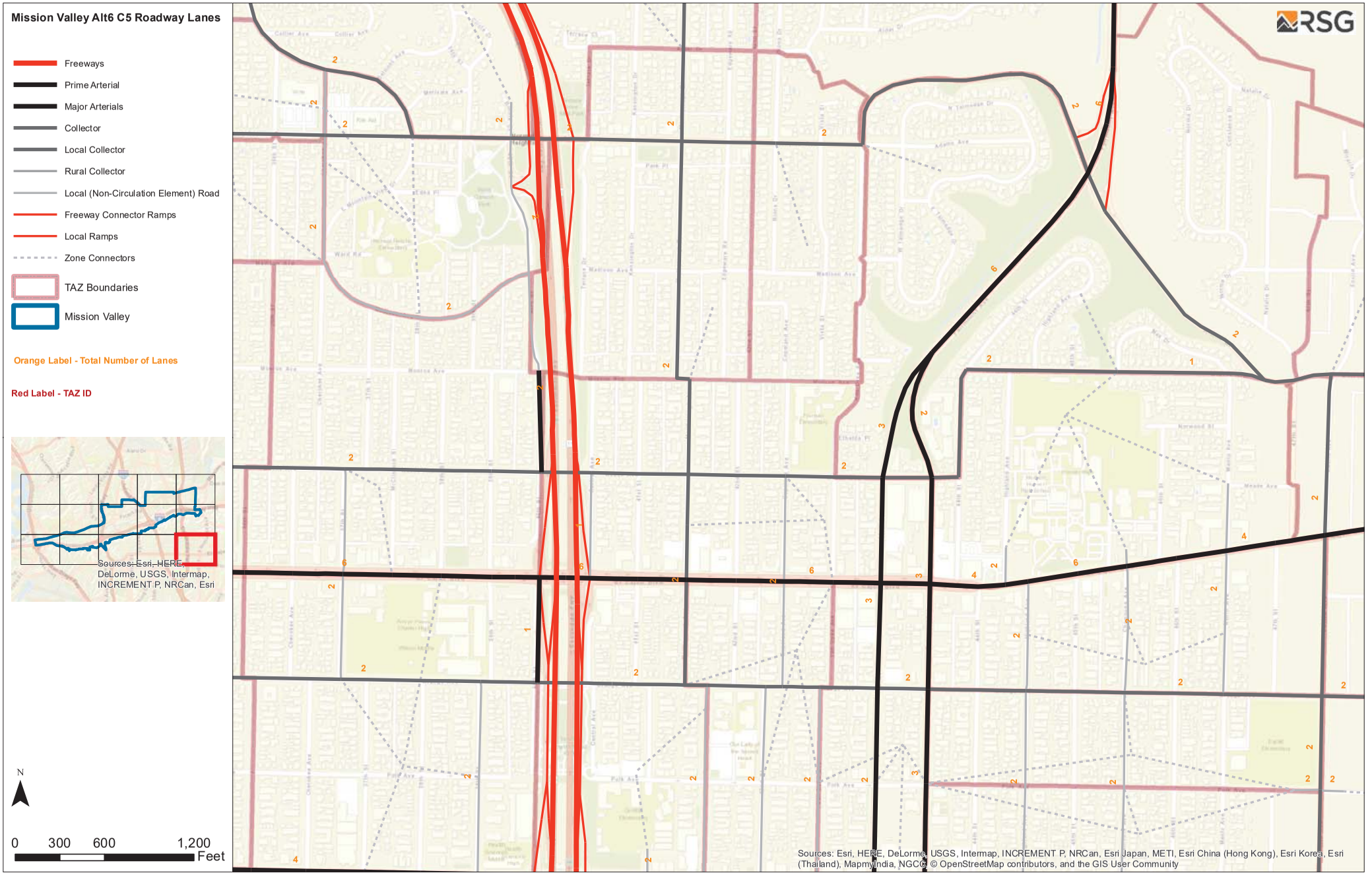


N

0 300 600 1,200 Feet

RSG

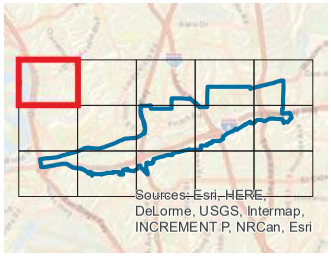
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 C5 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt6 A1 Medians

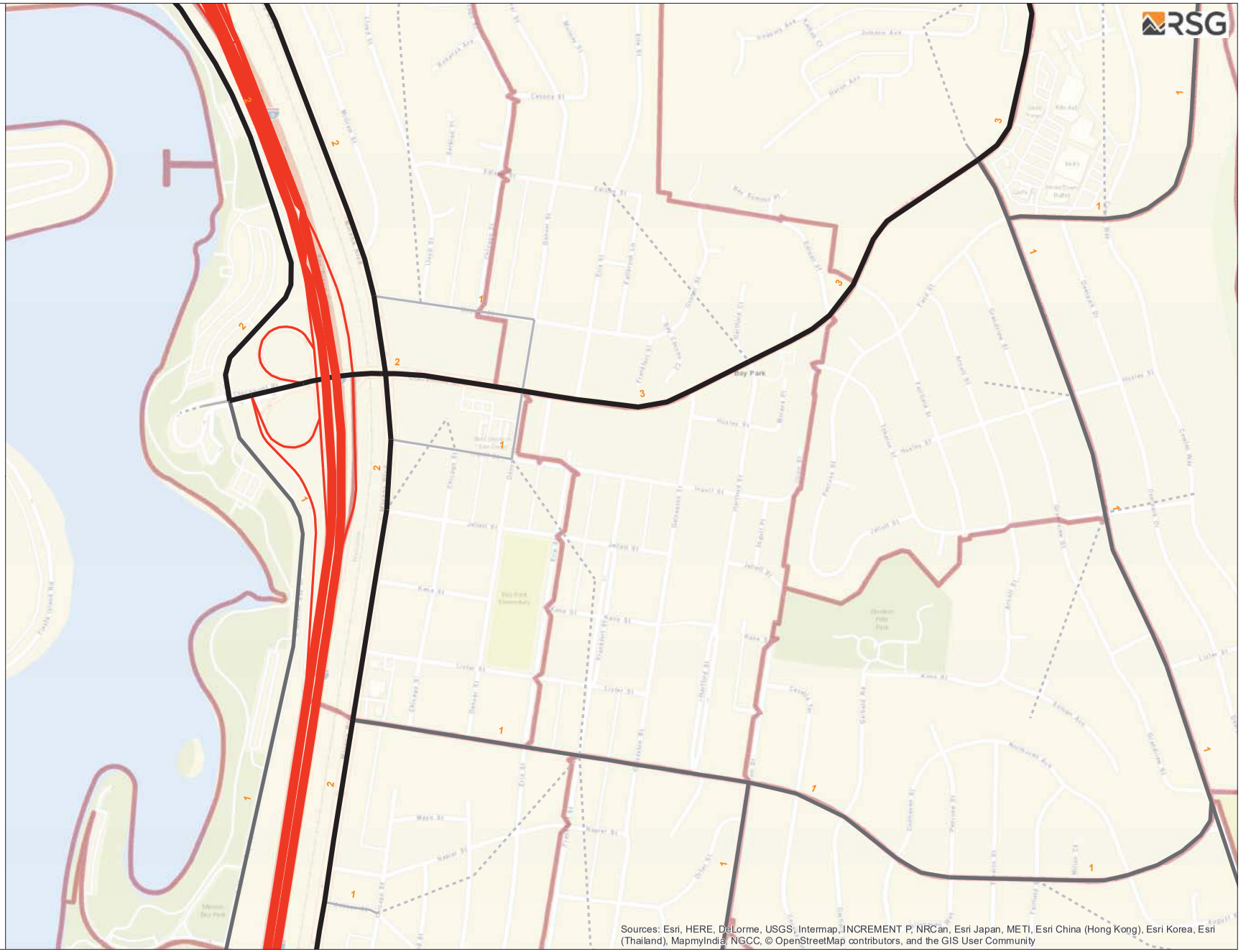
- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

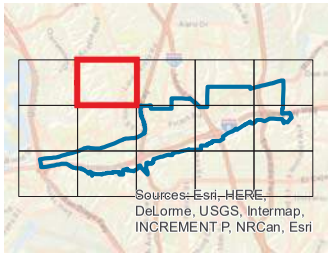
0 300 600 1,200 Feet



Mission Valley Alt6 A2 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

0 300 600 1,200 Feet

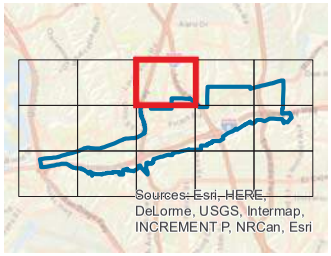
RSG

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt6 A3 Medians

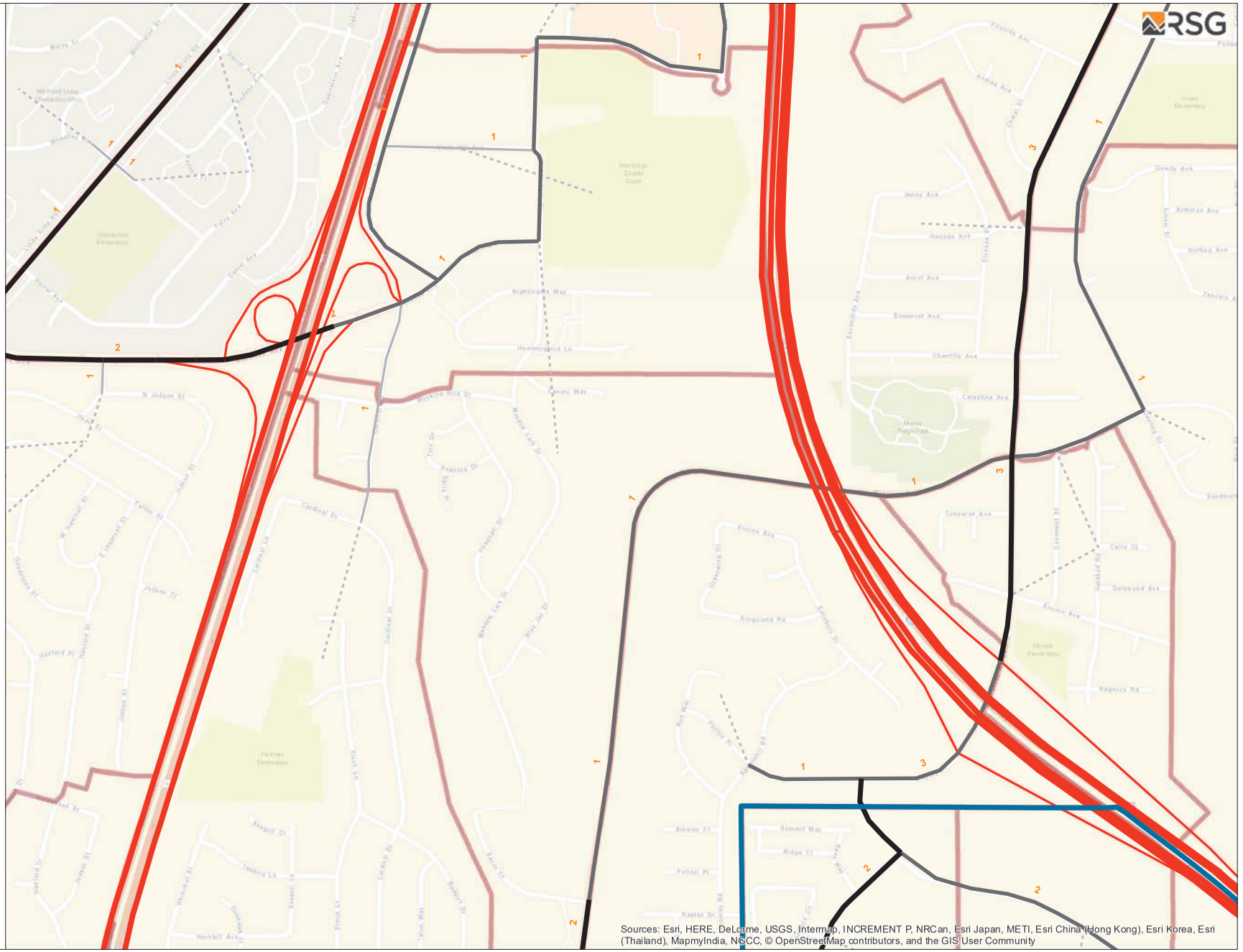
- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

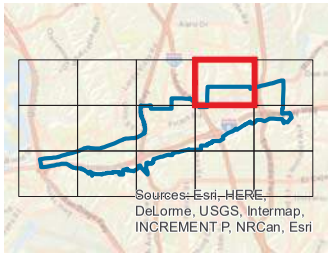
0 300 600 1,200 Feet



Mission Valley Alt6 A4 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

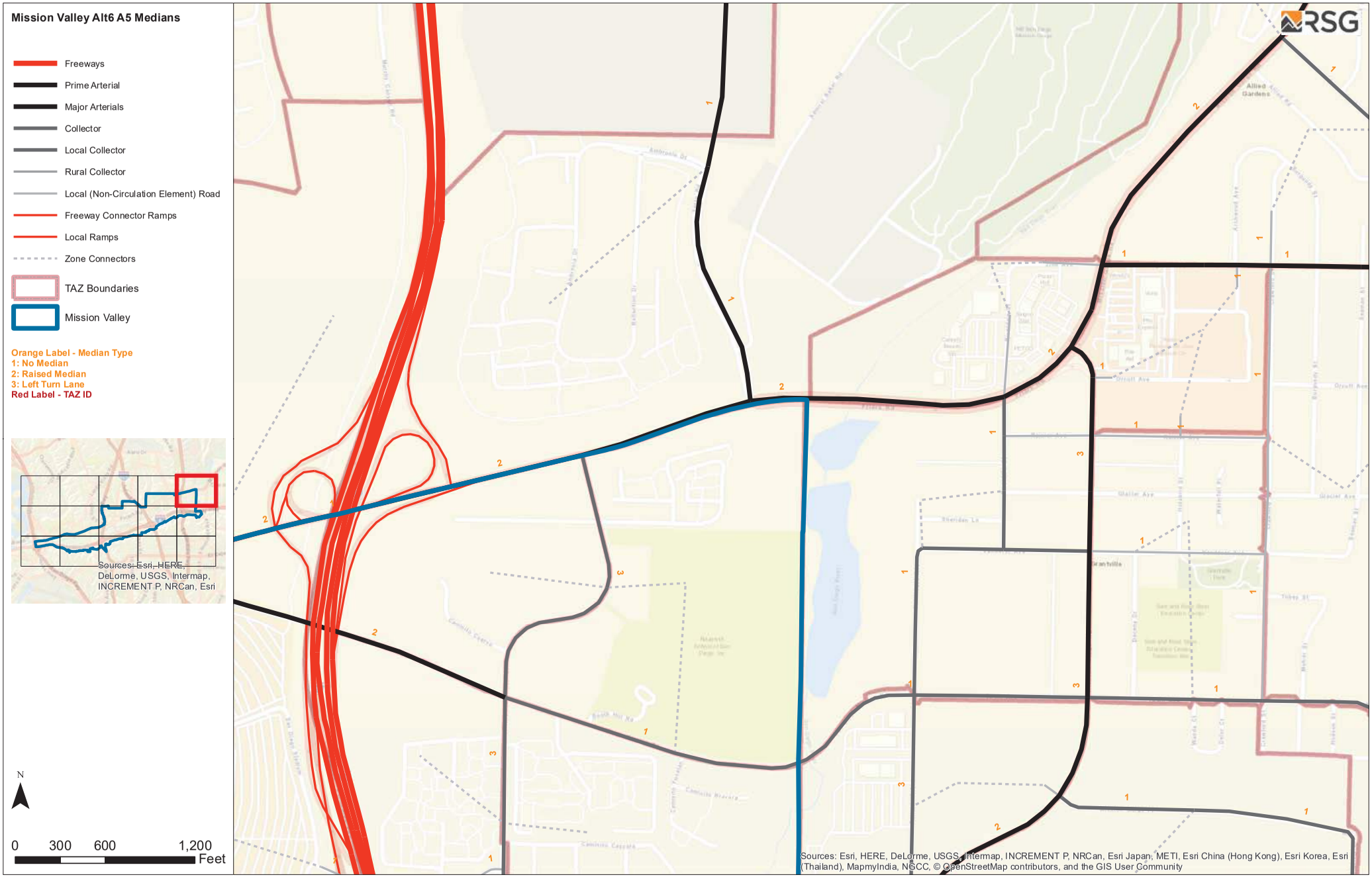
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

0 300 600 1,200 Feet

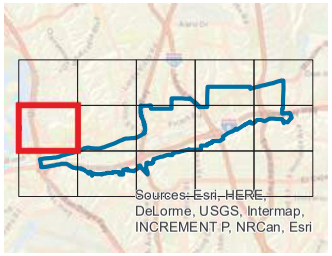
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 A5 Medians
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt6 B1 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

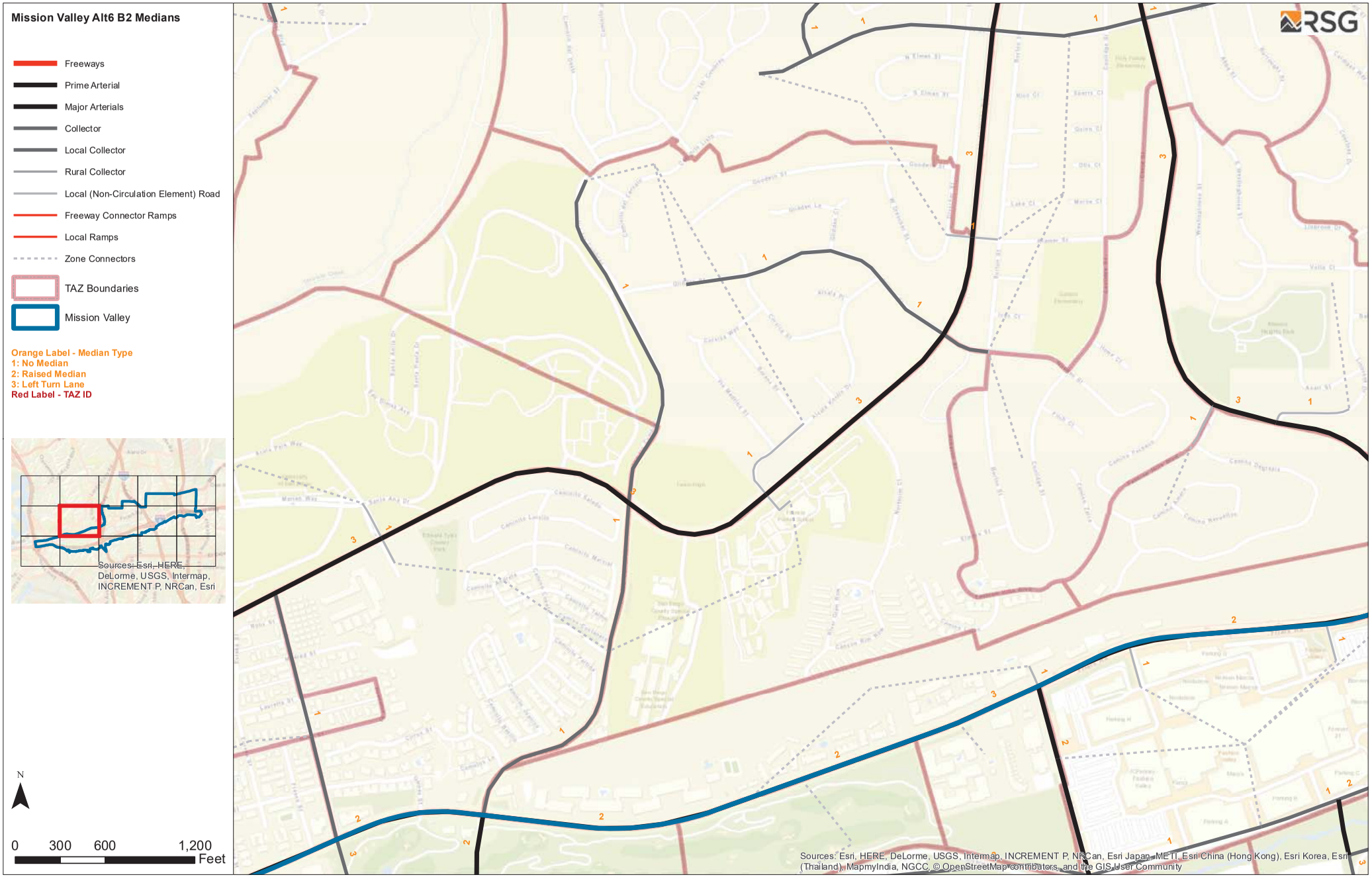
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID

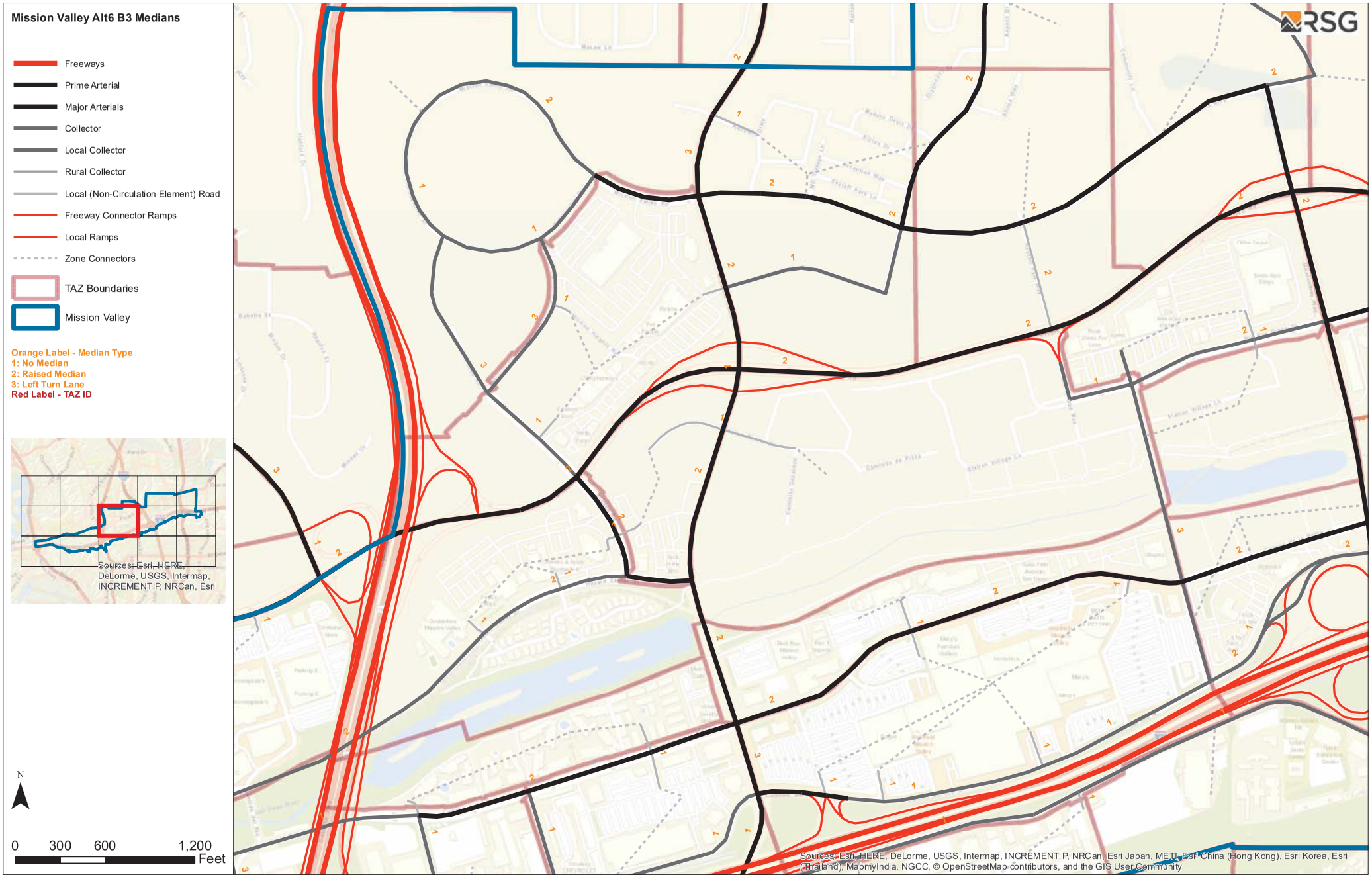


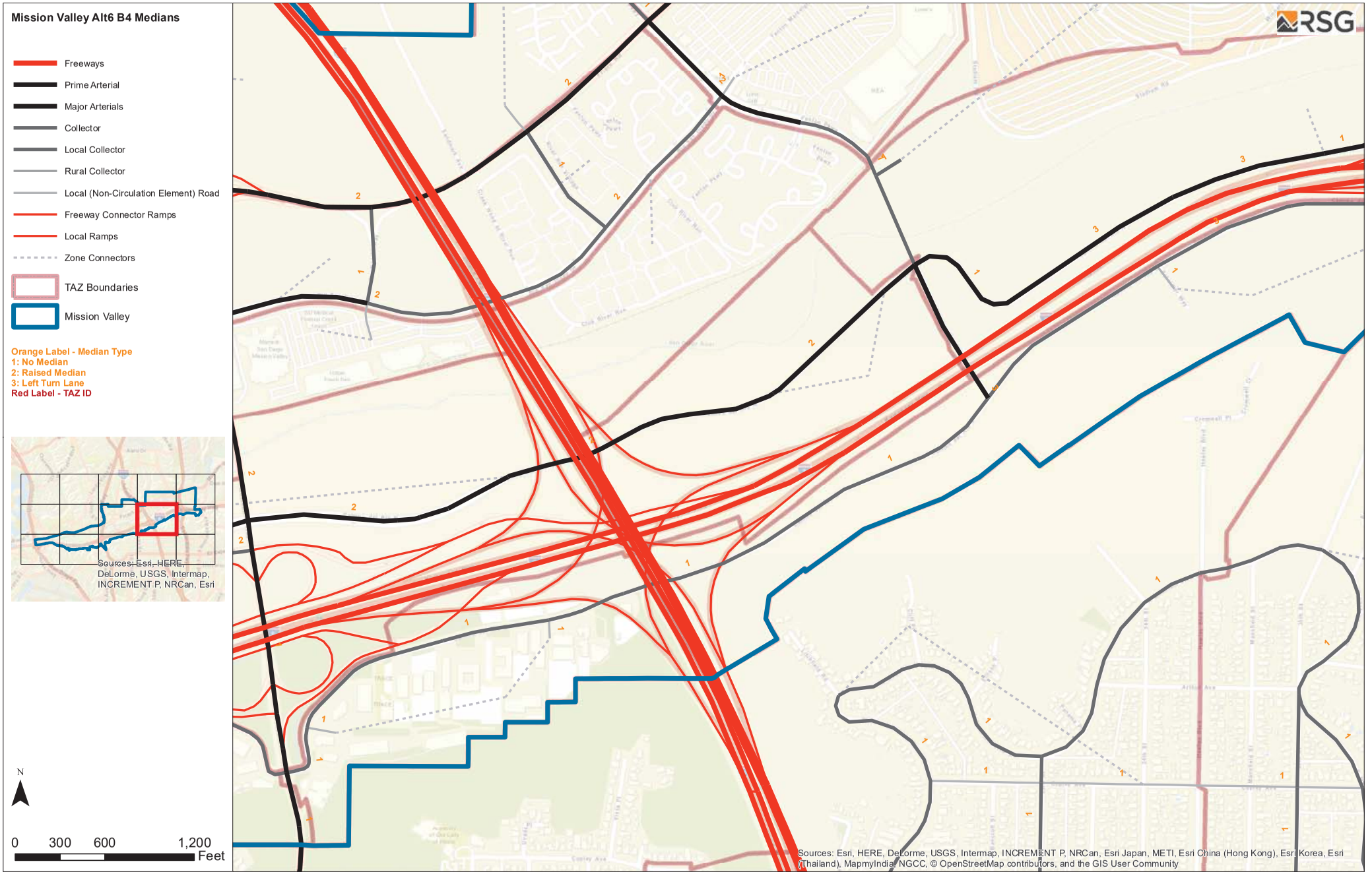
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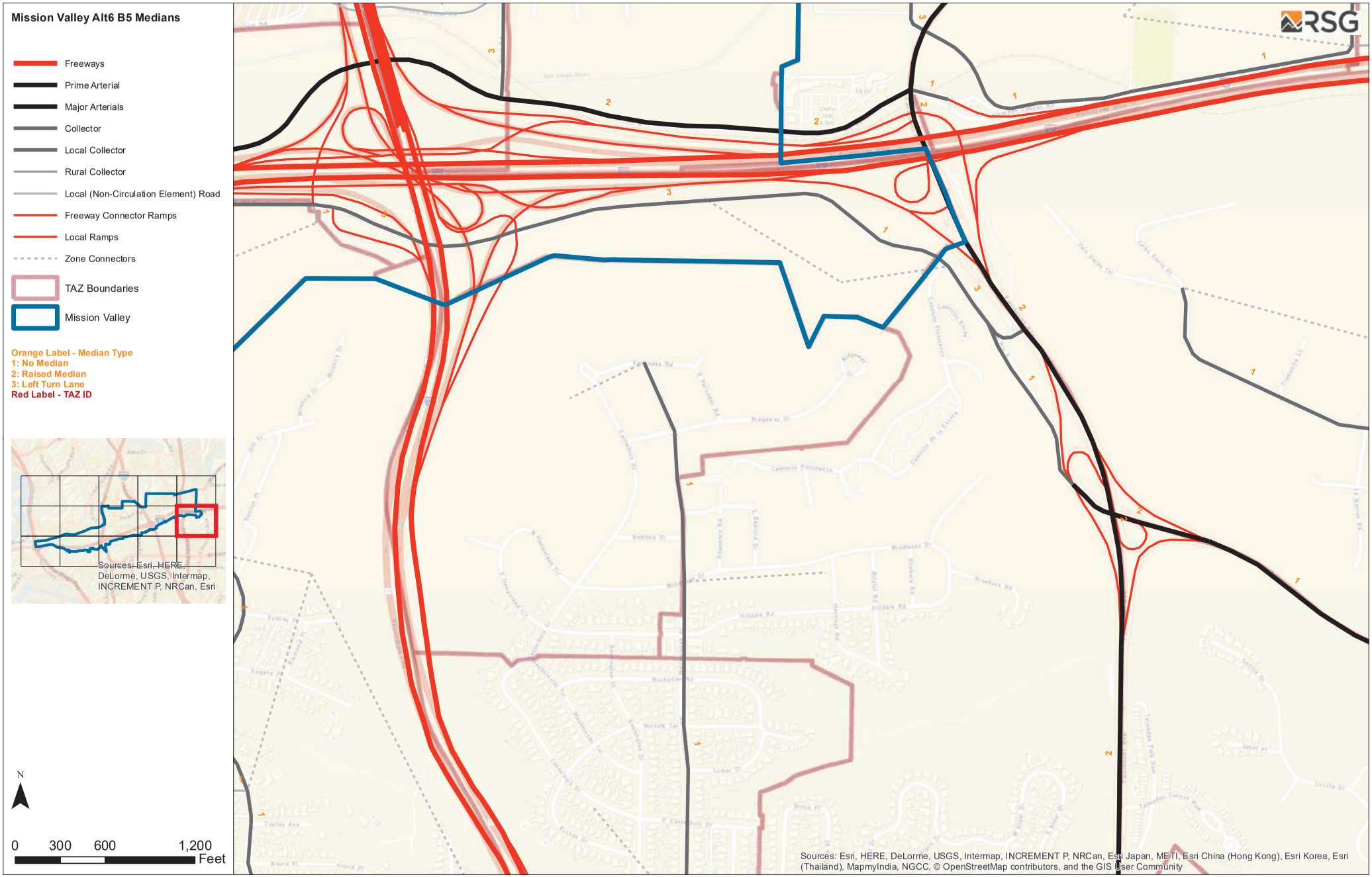
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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 B2 Medians
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 B3 Medians
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

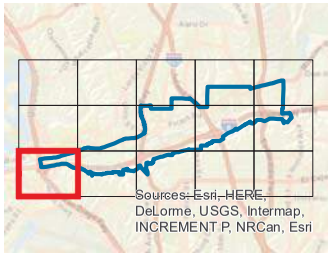

Mission Valley Alt6 B4 Medians
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 B5 Medians
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt6 C1 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

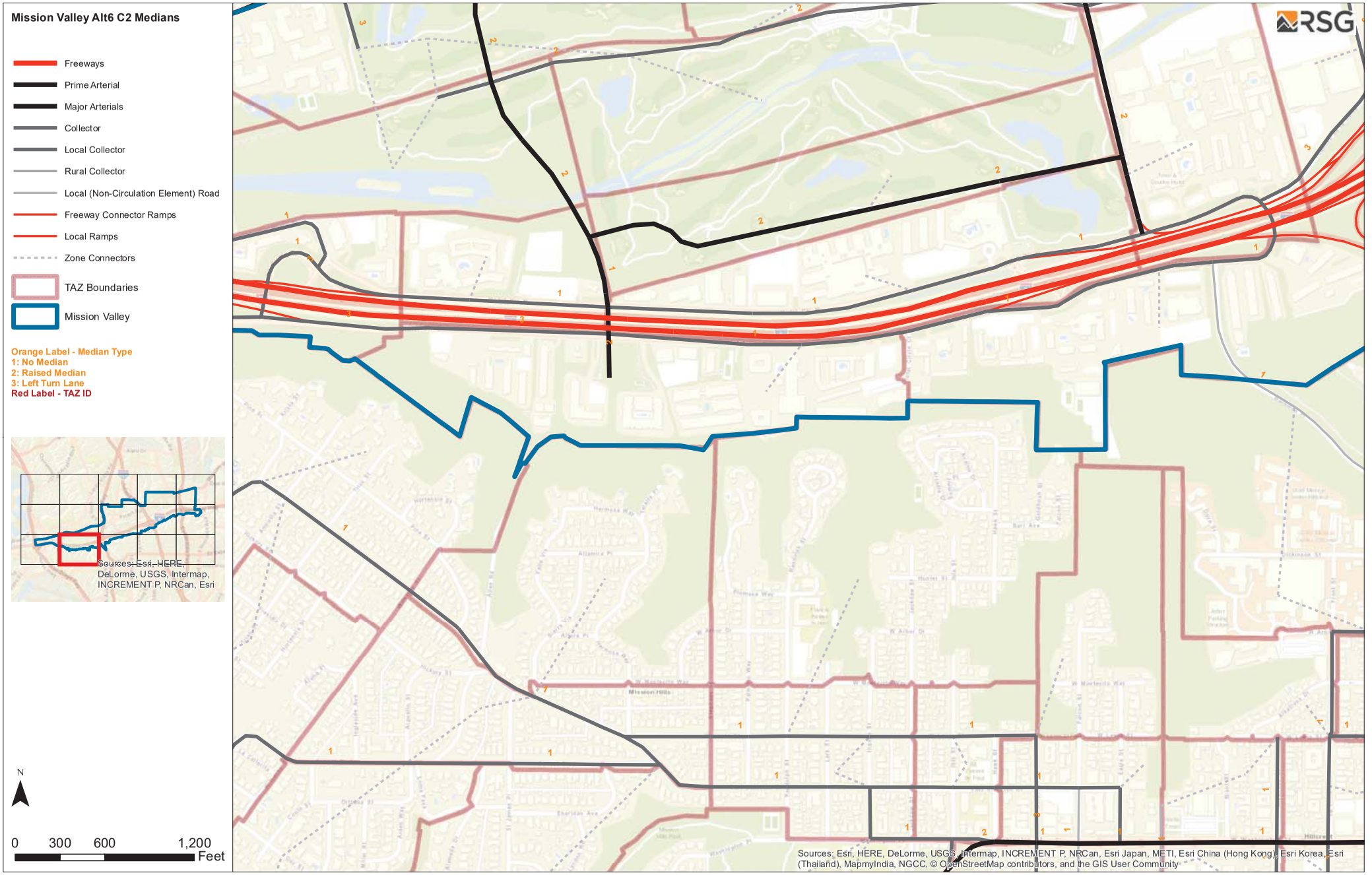
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID

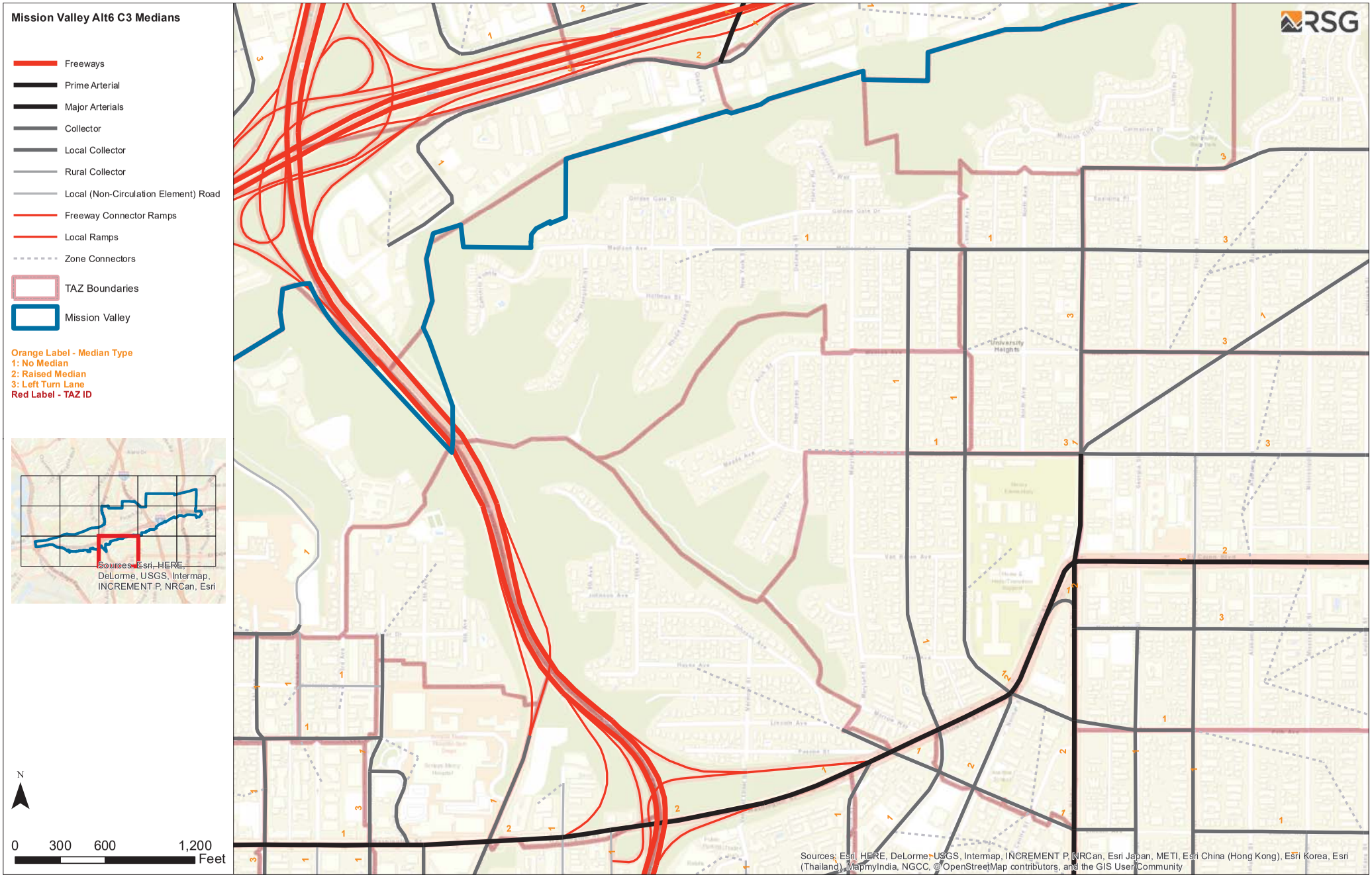


N

0 300 600 1,200 Feet

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

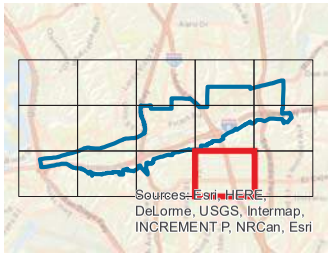

Mission Valley Alt6 C2 Medians
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 C3 Medians
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt6 C4 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

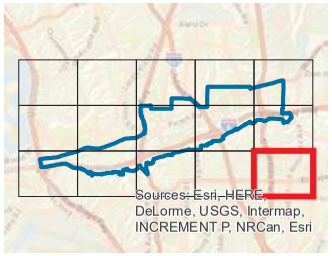
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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt6 C5 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID

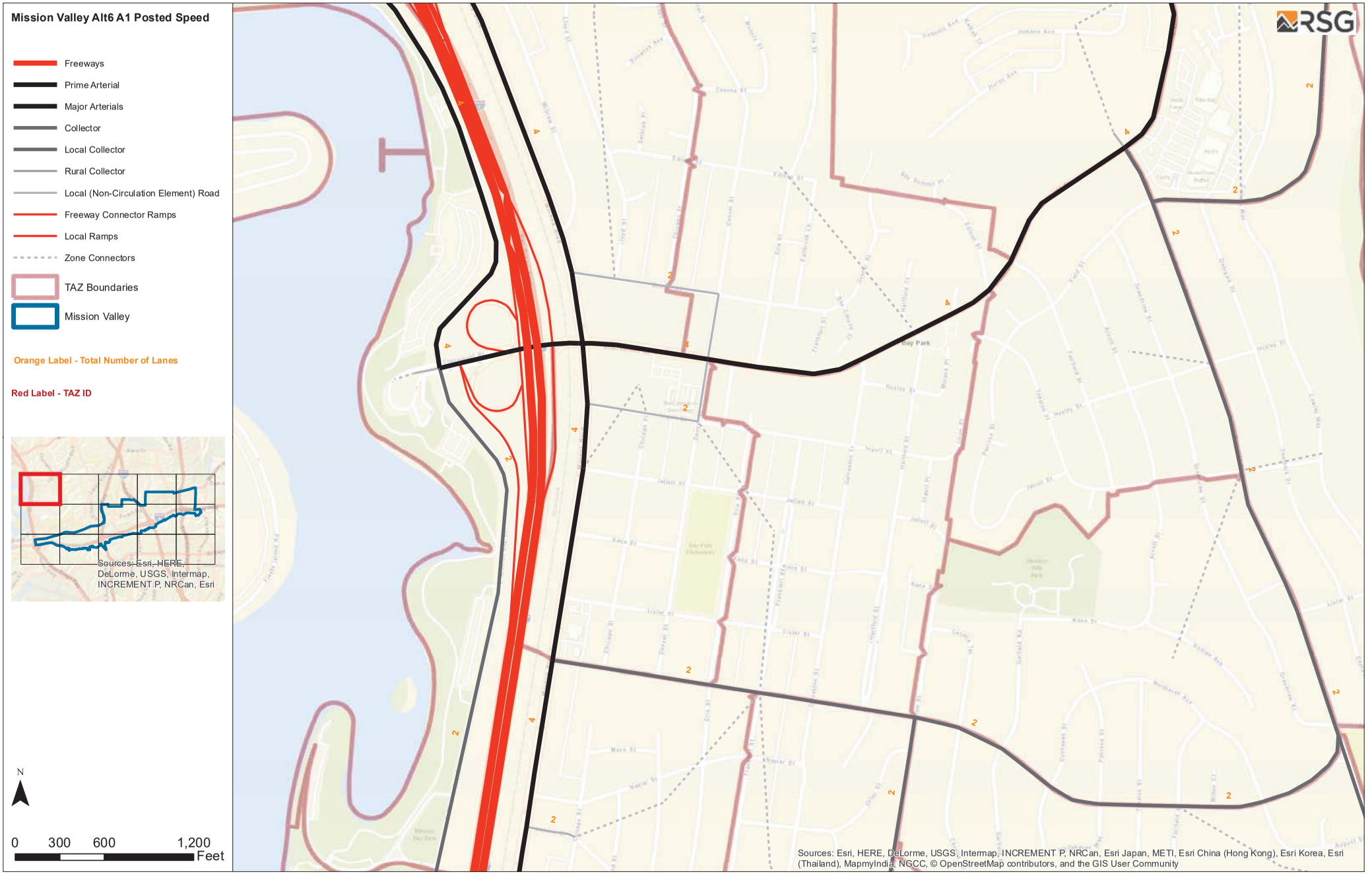


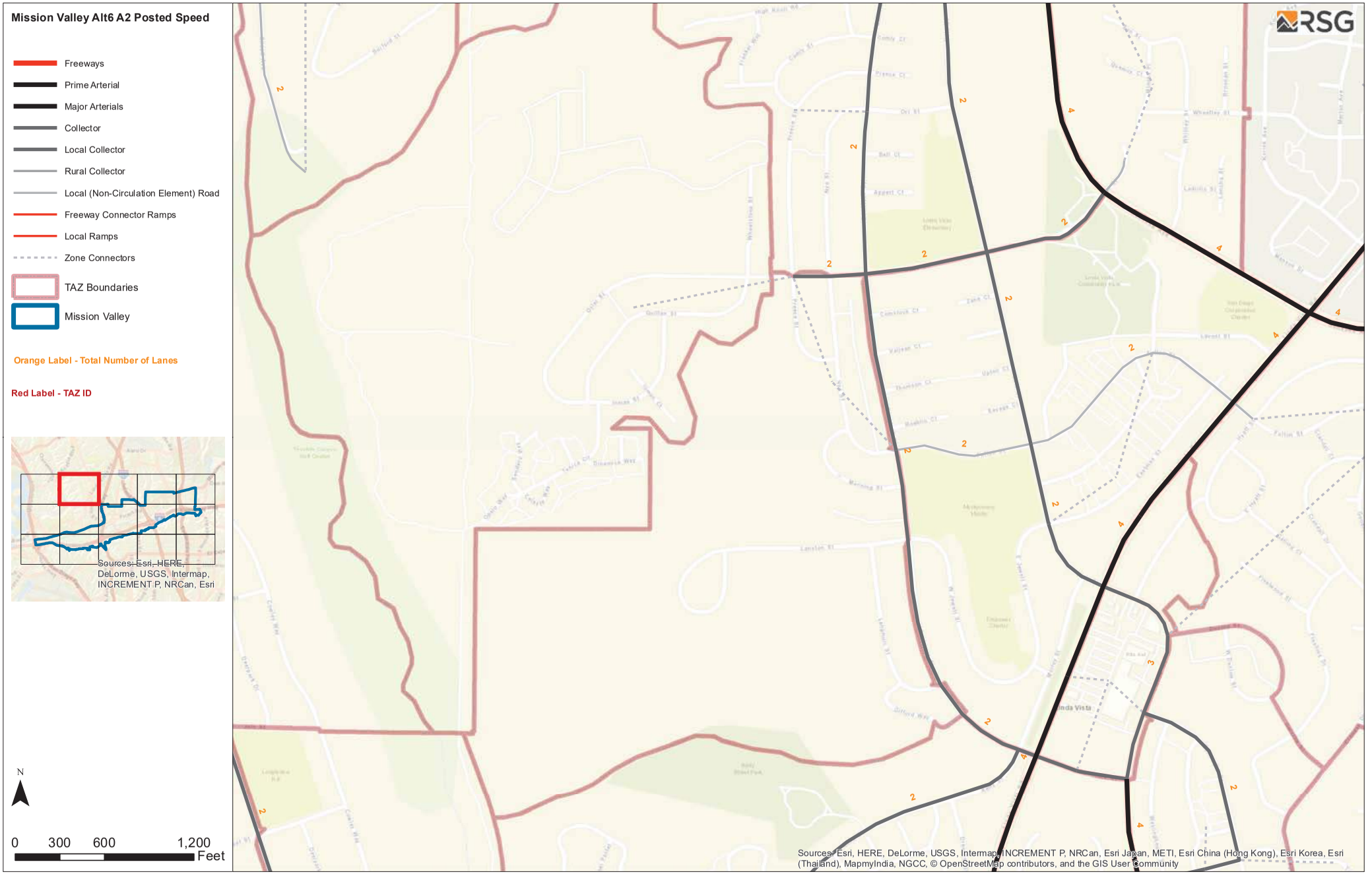
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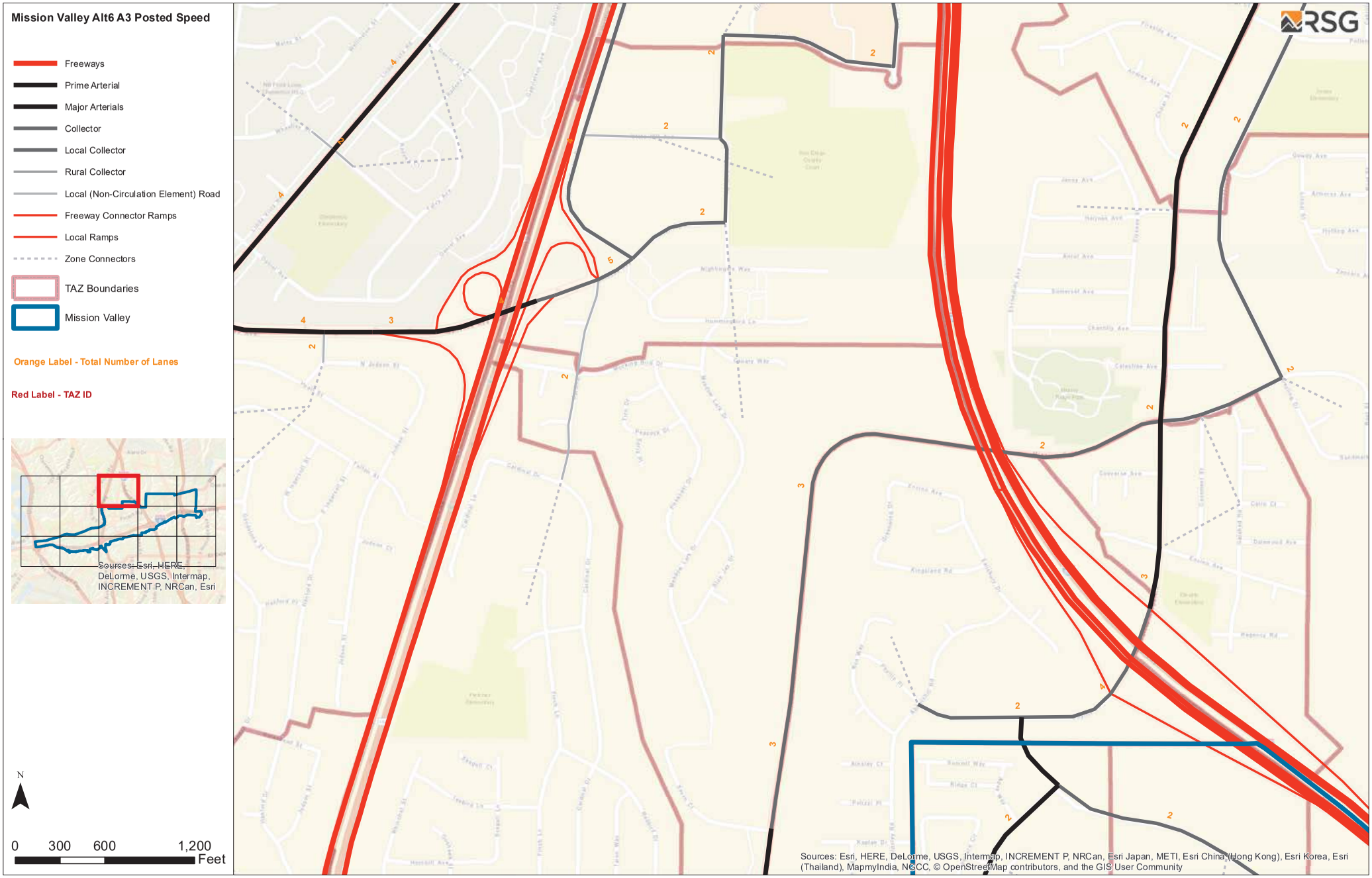
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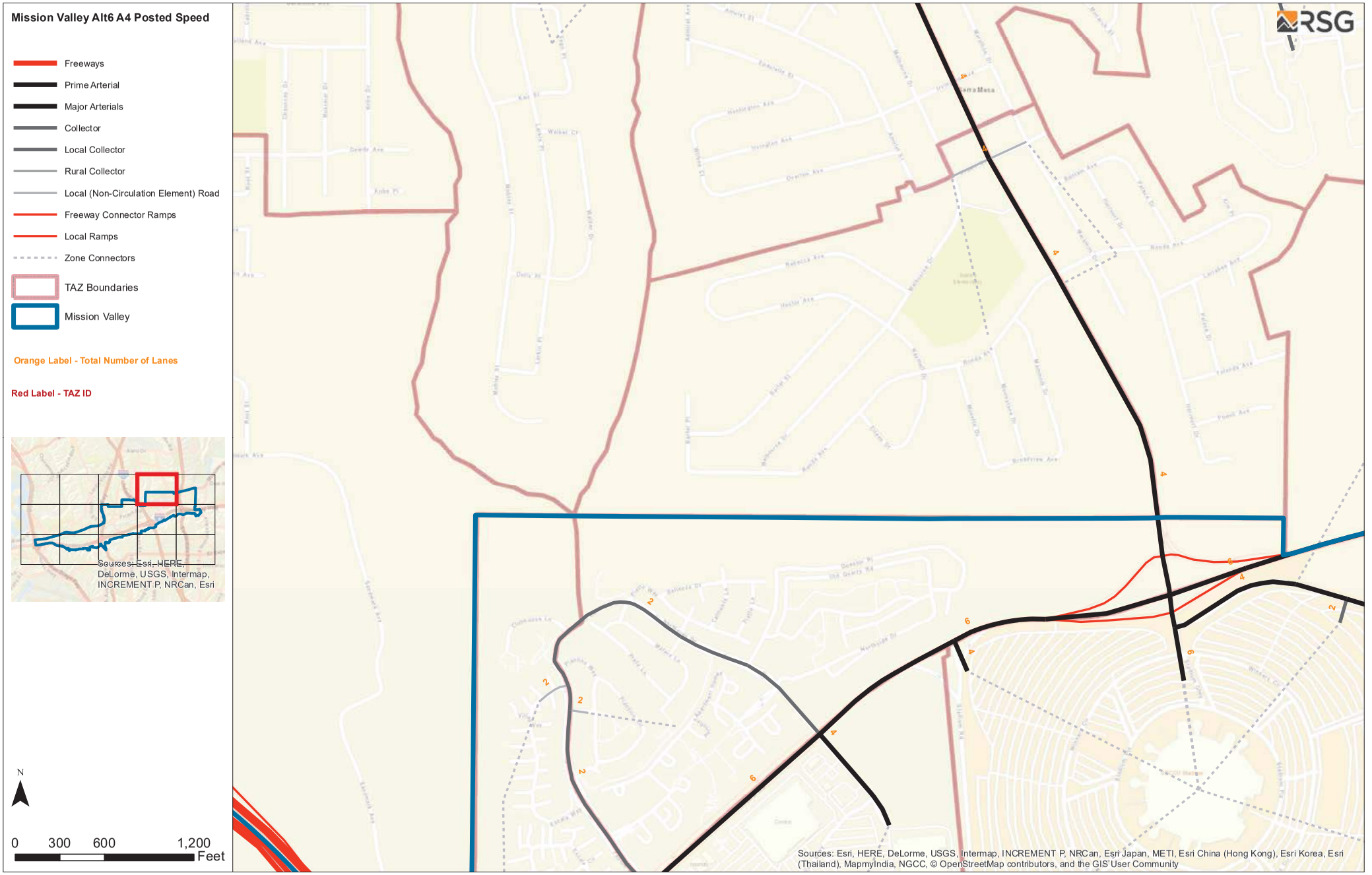
RSG

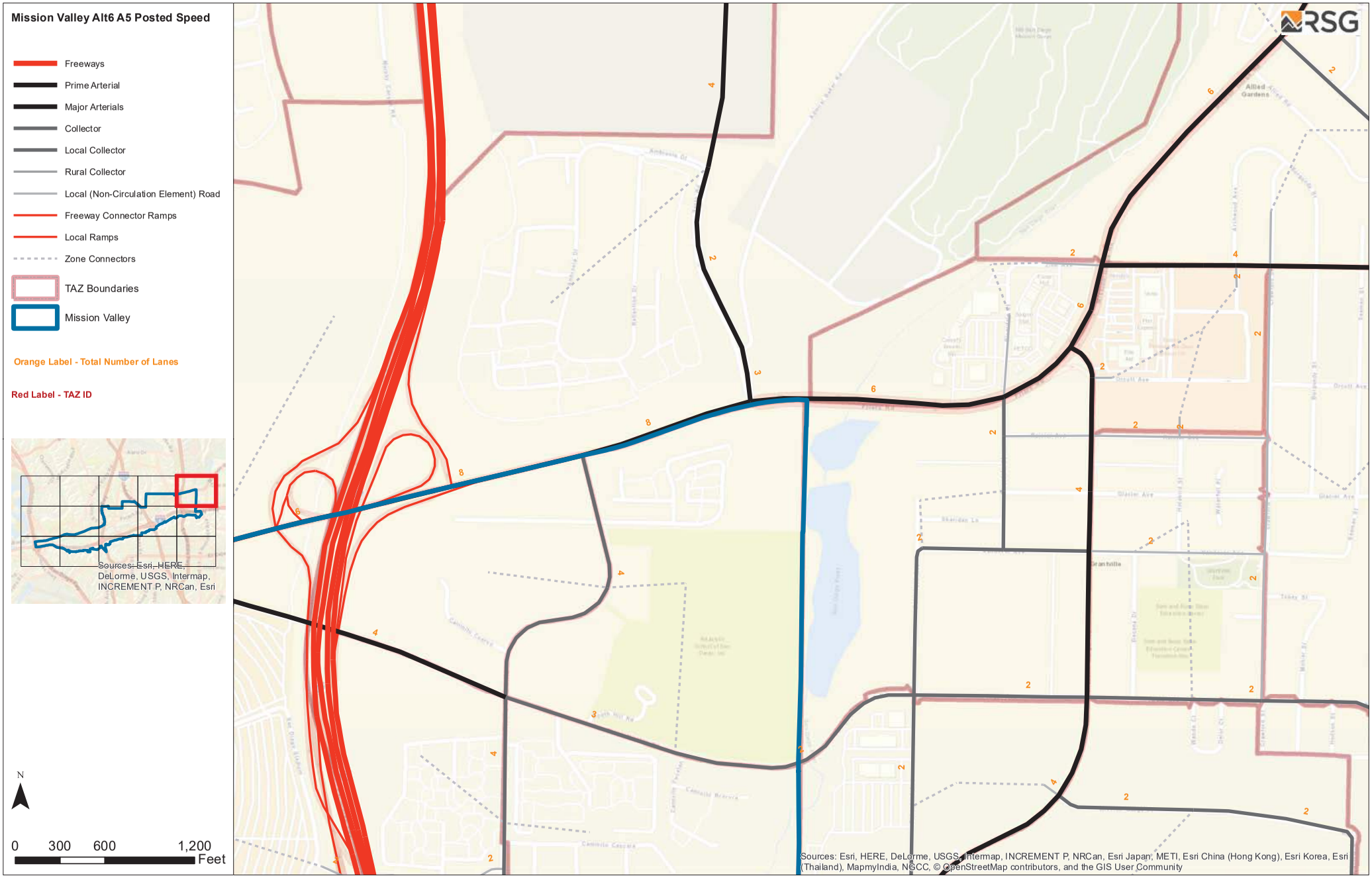
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

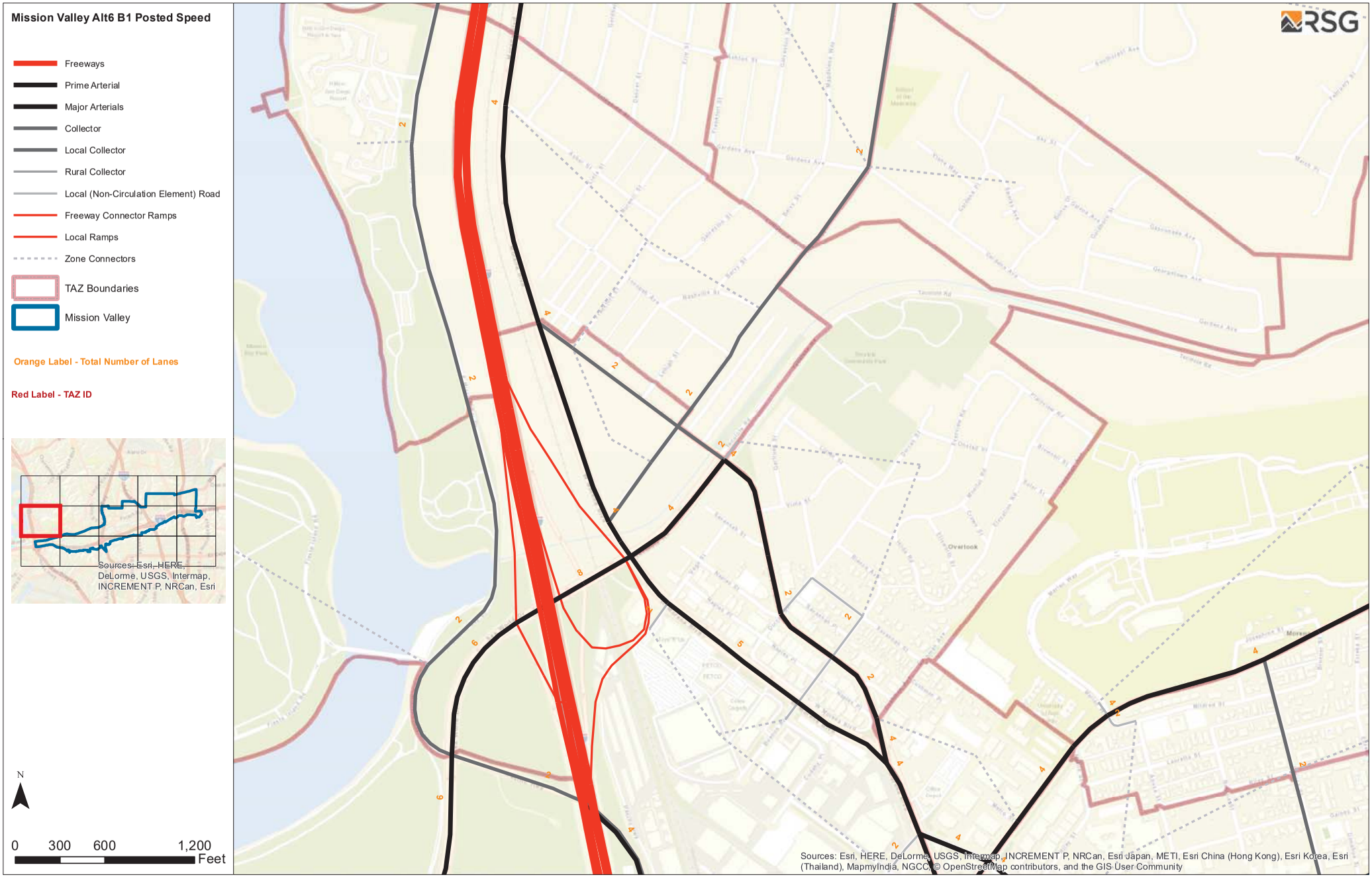

Mission Valley Alt6 A1 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

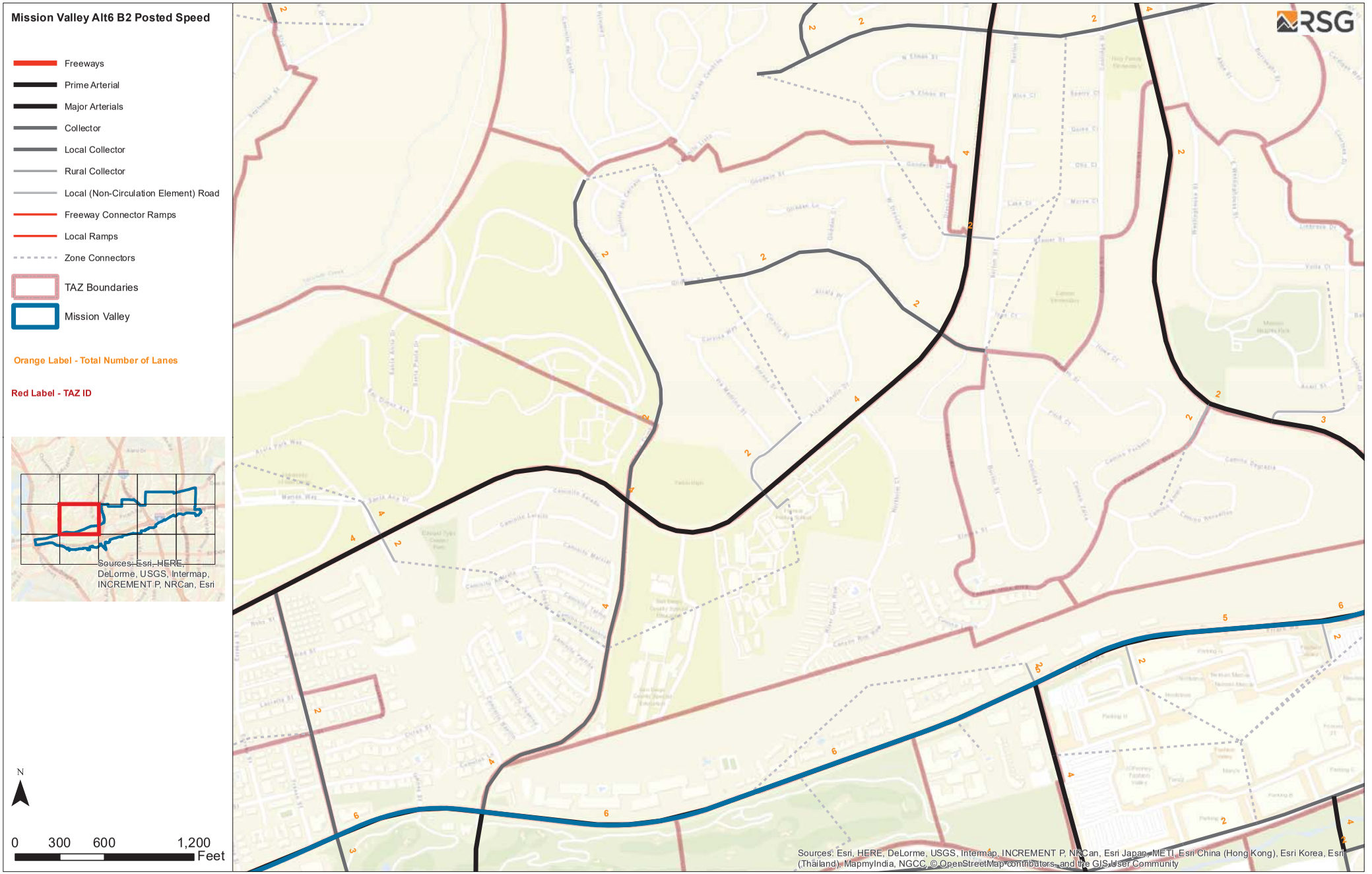

Mission Valley Alt6 A2 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

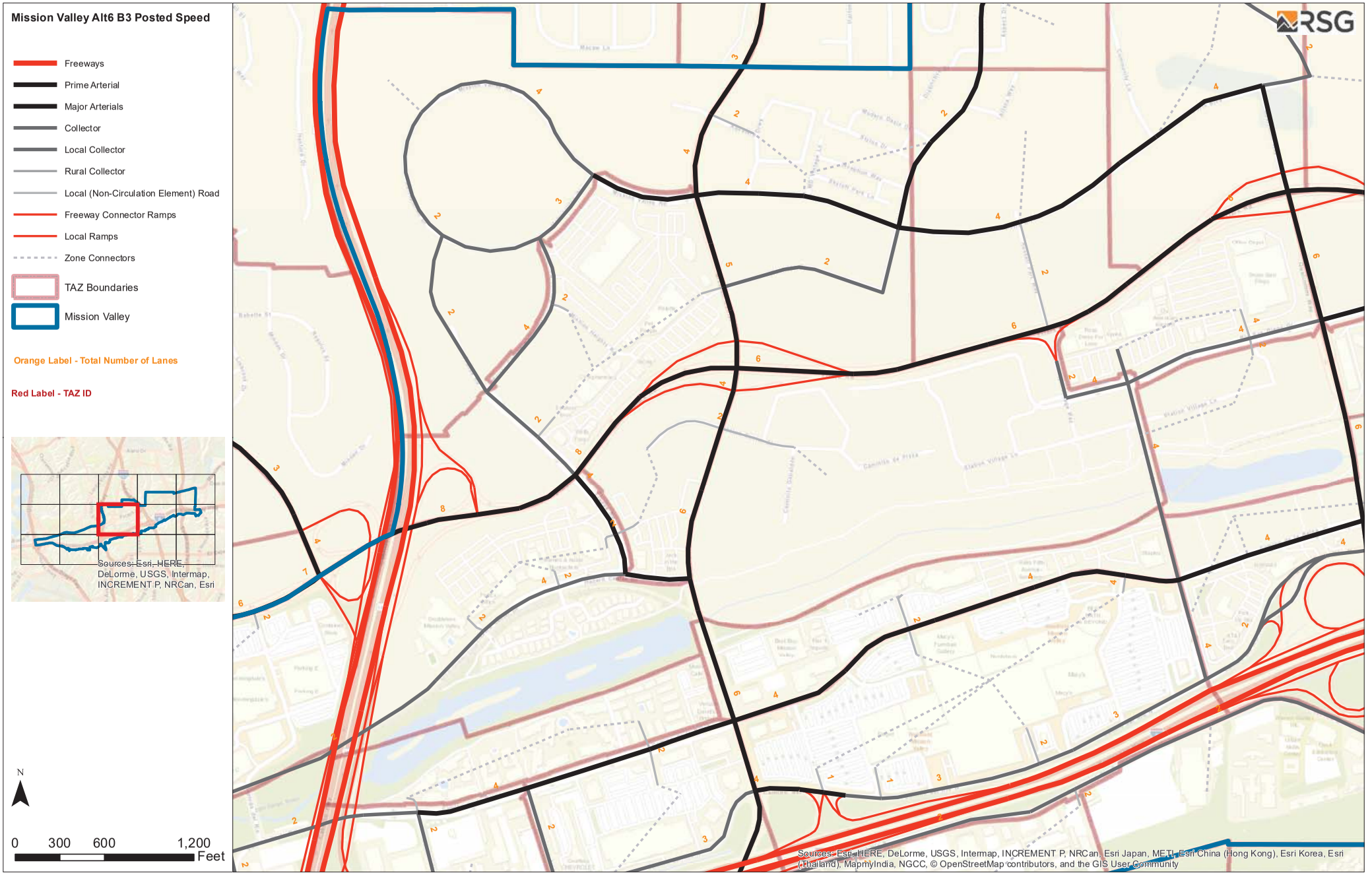

Mission Valley Alt6 A3 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

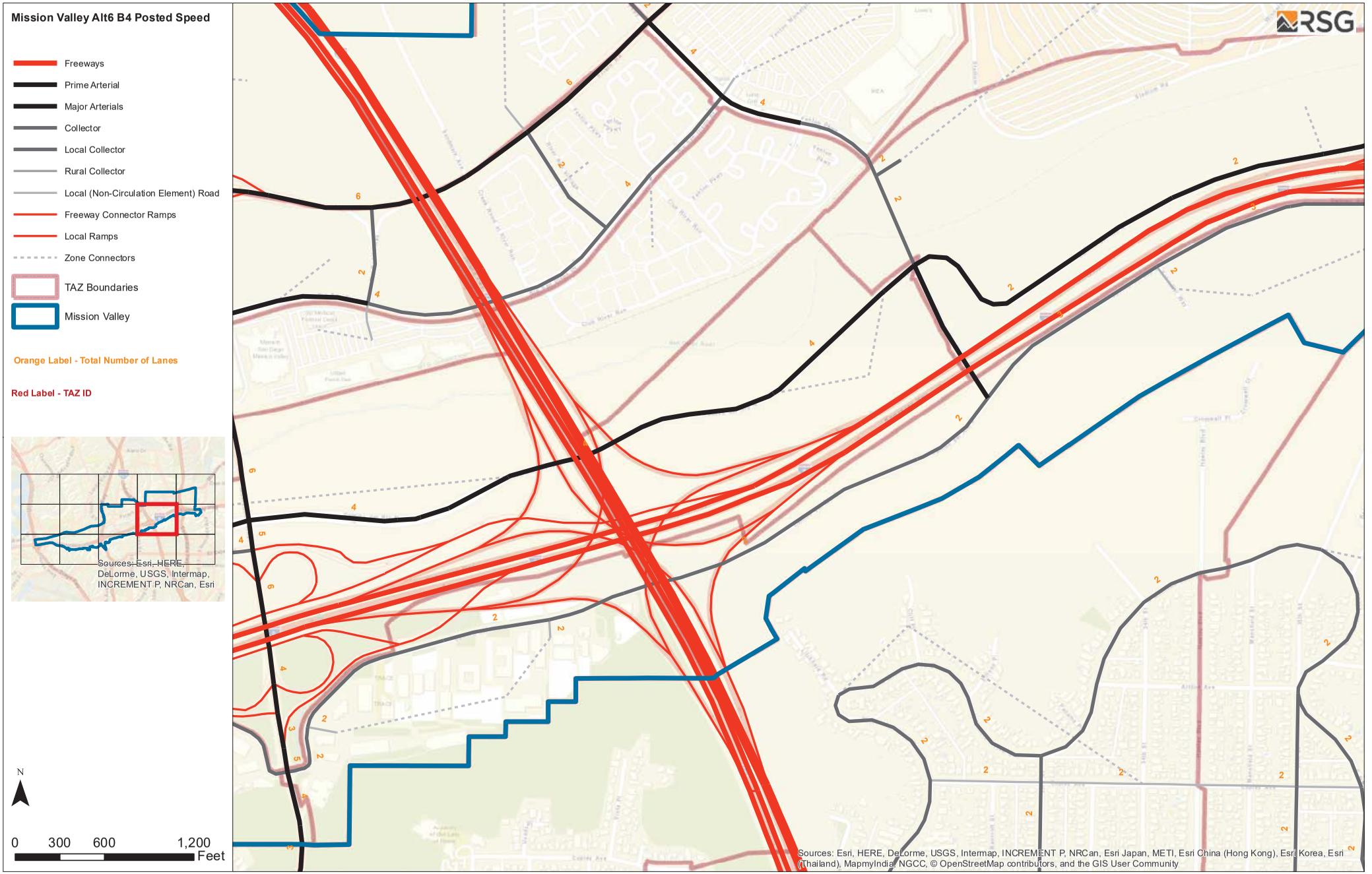

Mission Valley Alt6 A4 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

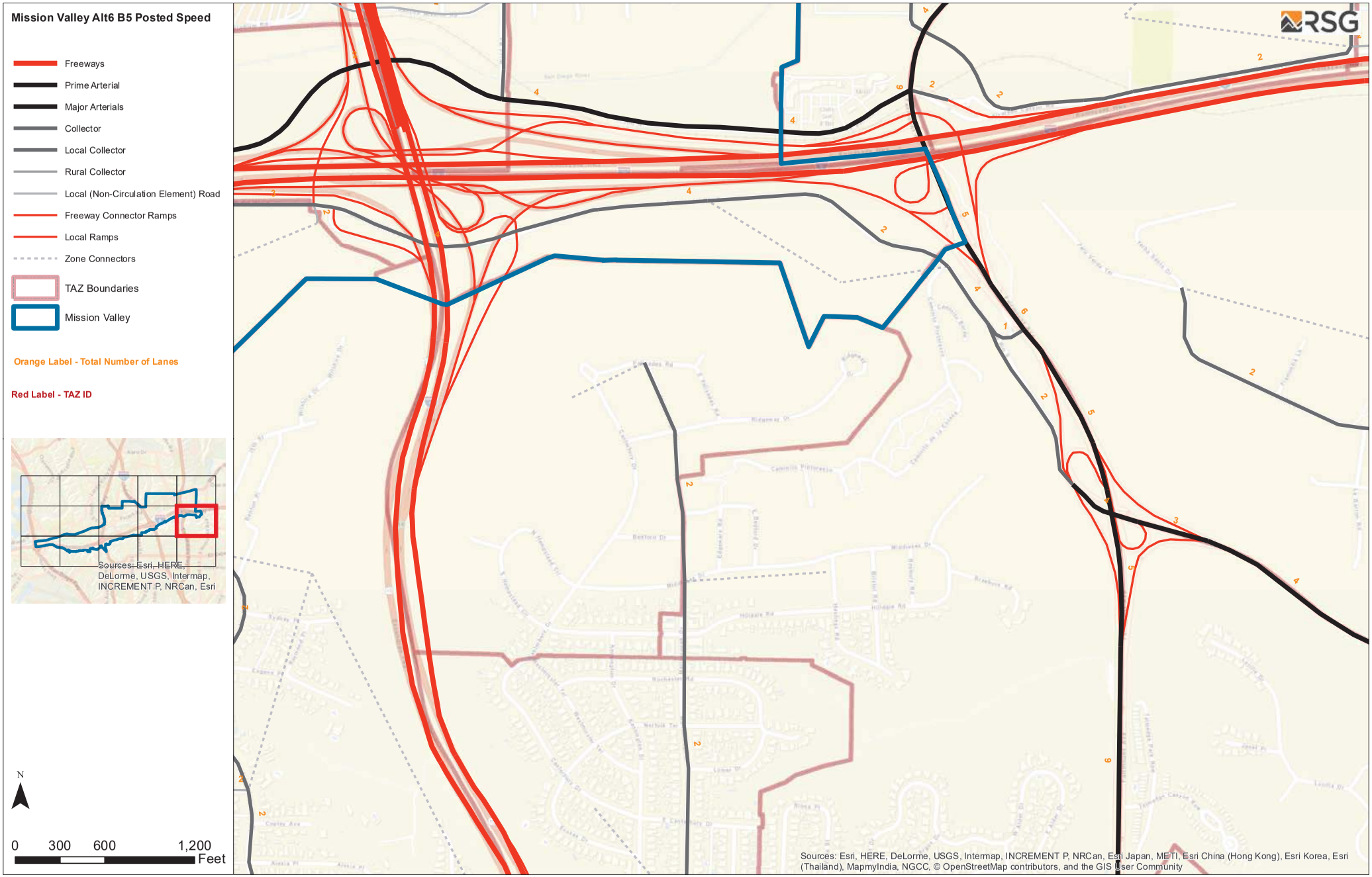

Mission Valley Alt6 A5 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

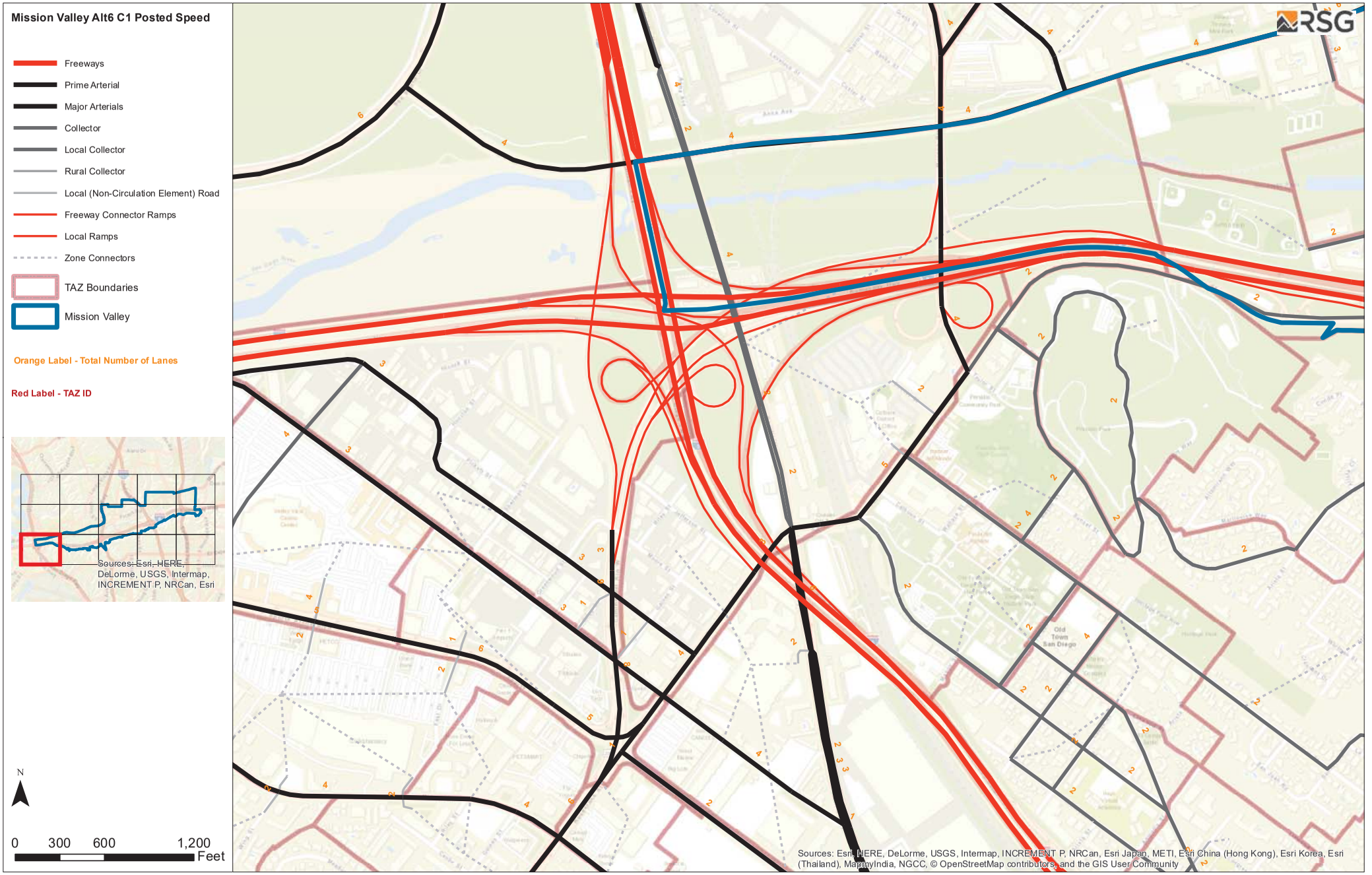

Mission Valley Alt6 B1 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

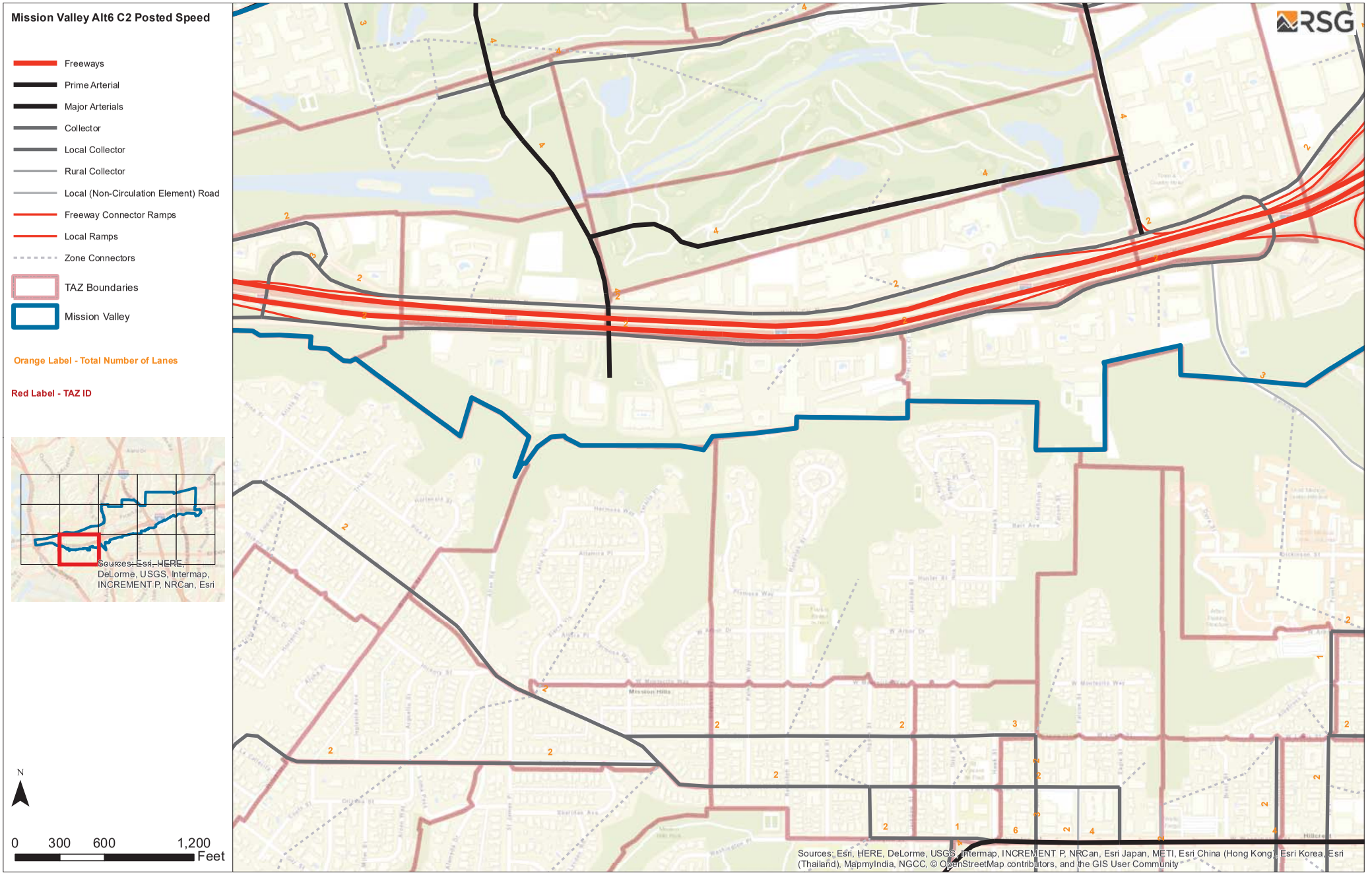

Mission Valley Alt6 B2 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

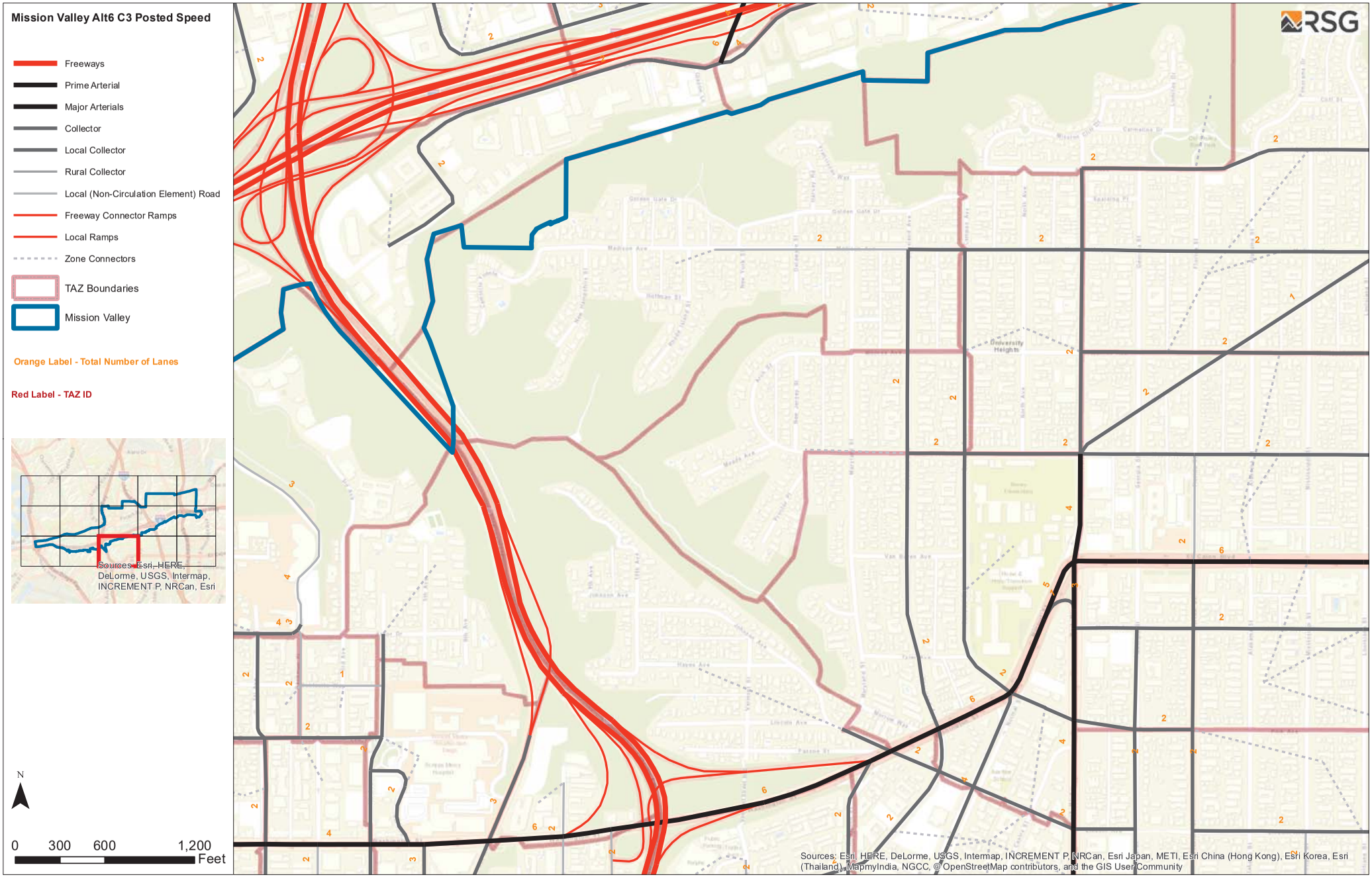

Mission Valley Alt6 B3 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

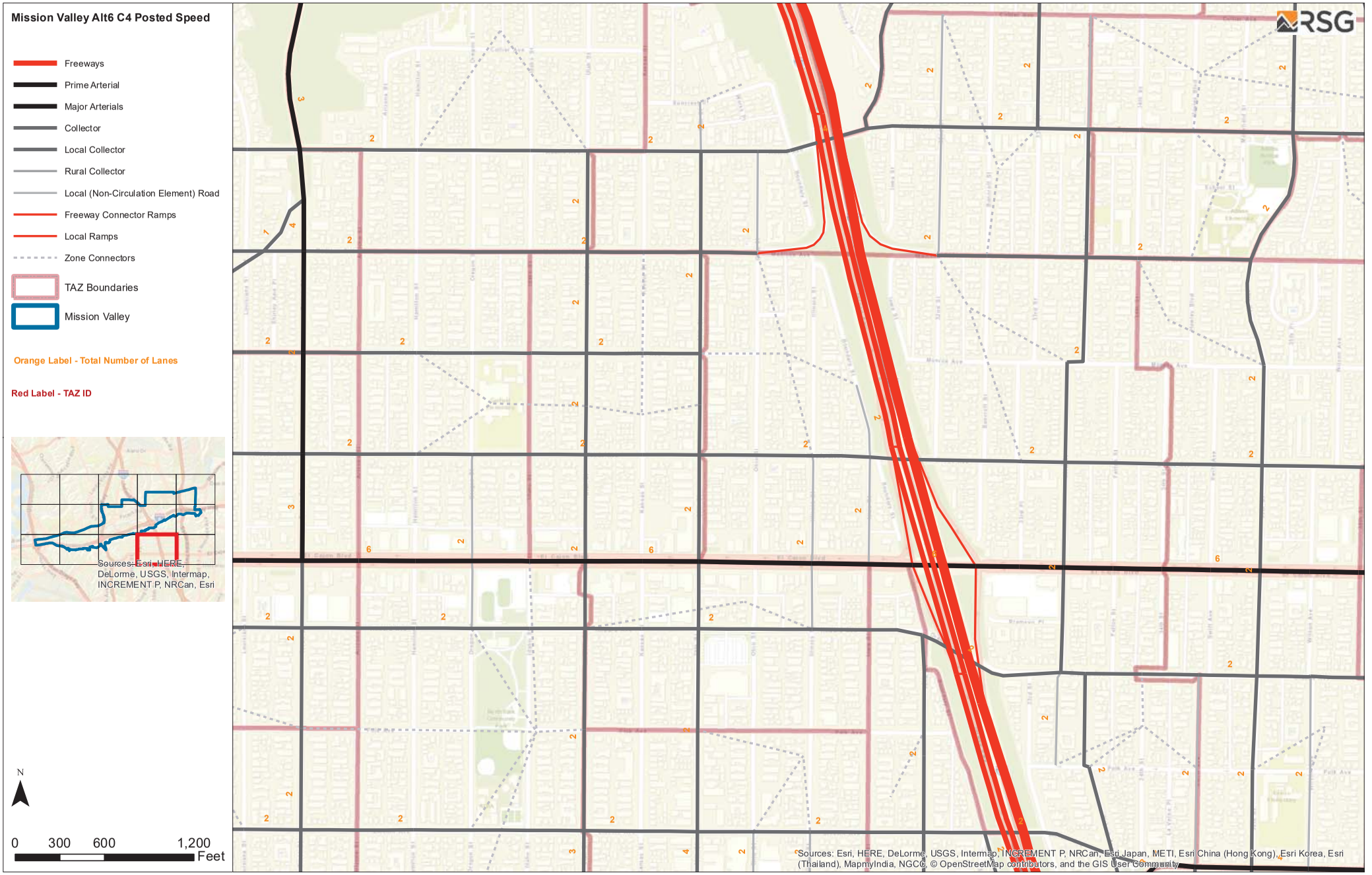

Mission Valley Alt6 B4 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 B5 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 C1 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 C2 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt6 C3 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

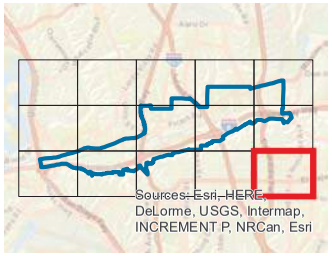

Mission Valley Alt6 C4 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt6 C5 Posted Speed

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Total Number of Lanes

Red Label - TAZ ID



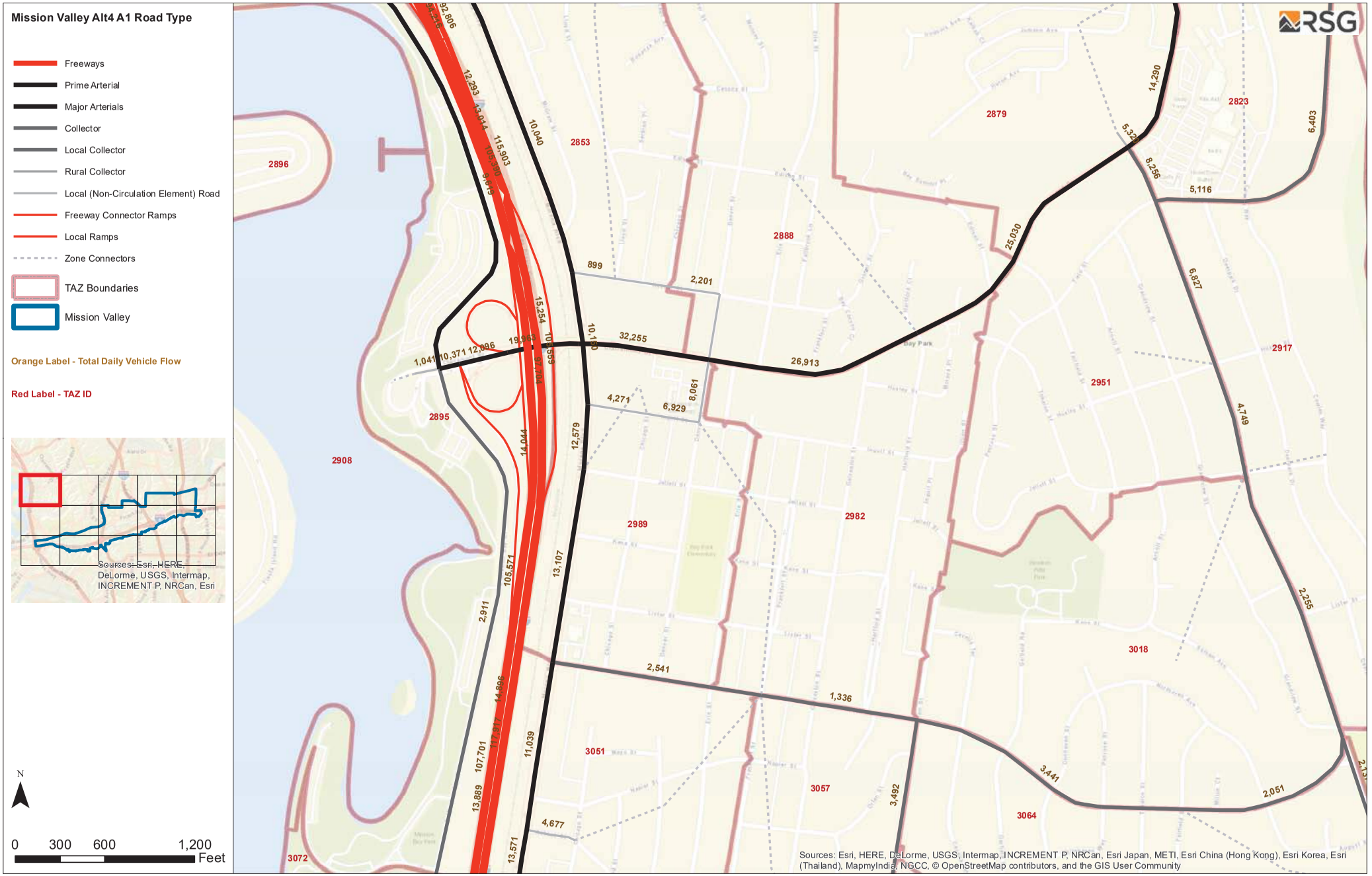
N

0 300 600 1,200 Feet

RSG

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), Mapmyindia, NGCC, © OpenStreetMap contributors, and the GIS User Community

No Via Las Cumbres Connection Alternative Model Outputs

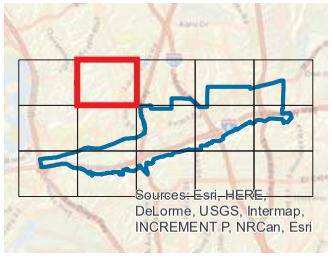

Mission Valley Alt4 A1 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
2896
2853
2879
2823
2888
2895
2908
2989
2982
2951
2917
3018
3051
3057
3064
3072
899
2,201
32,255
26,913
25,030
14,290
6,403
5,116
8,256
6,827
4,749
2,255
2,541
1,336
3,441
2,051
3,492
4,677
4,271
6,929
8,061
12,579
13,107
11,039
13,571
105,571
107,701
117,917
14,896
2,911
13,889
10,040
115,903
15,254
97,701
14,044
1,041
10,371
12,896
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt4 A2 Road Type

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

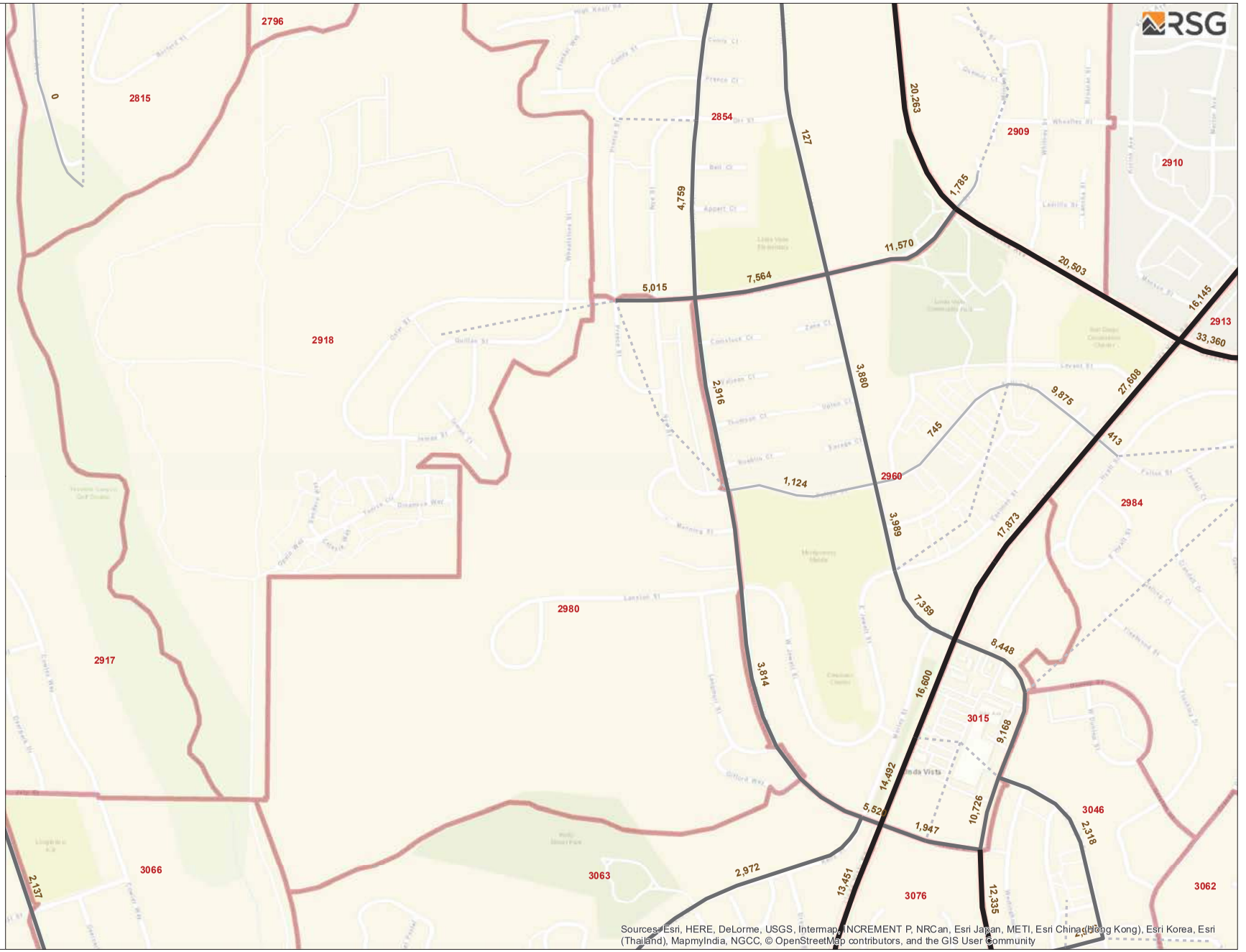
Orange Label - Total Daily Vehicle Flow

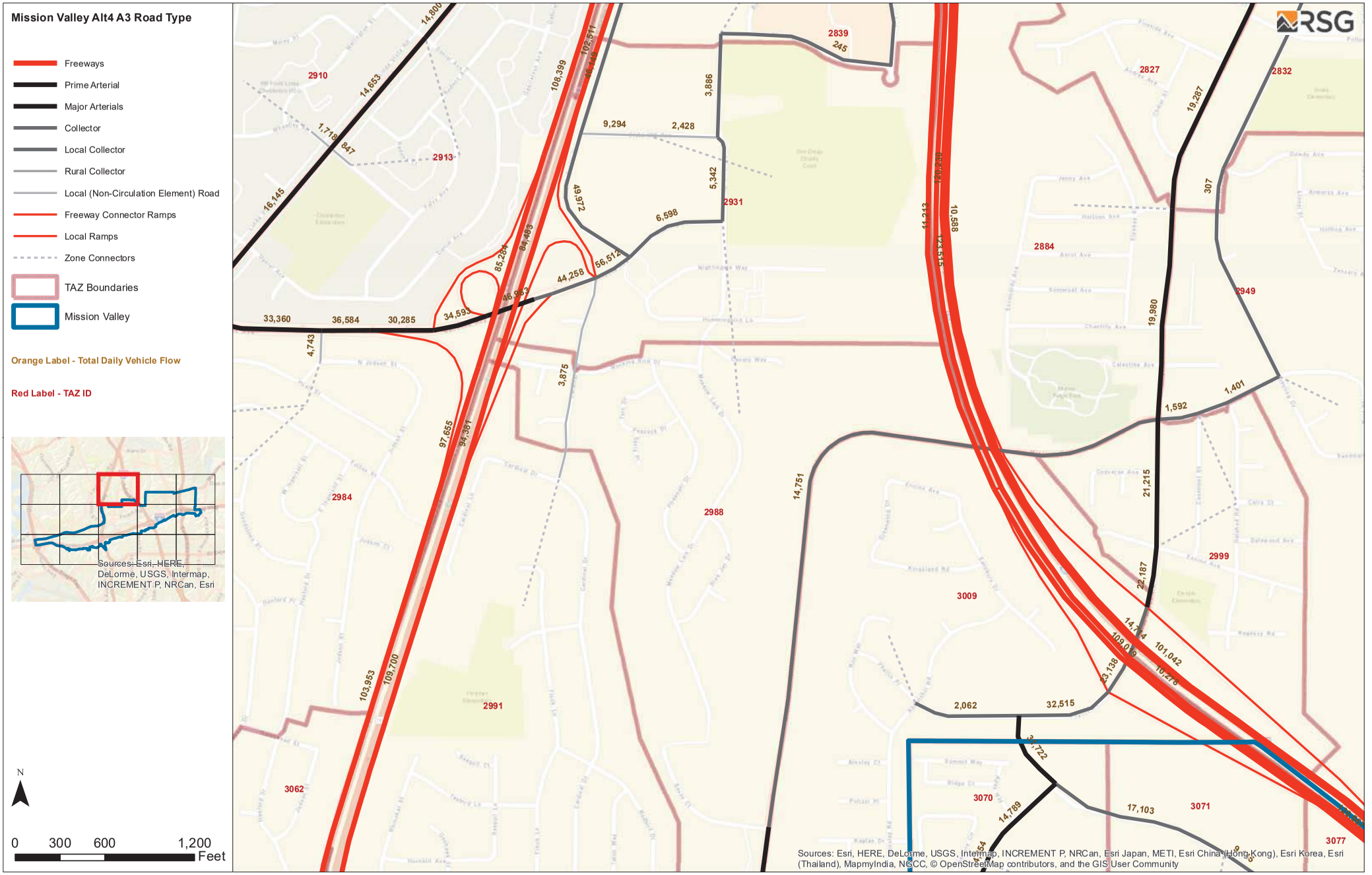
Red Label - TAZ ID



N

0 300 600 1,200 Feet



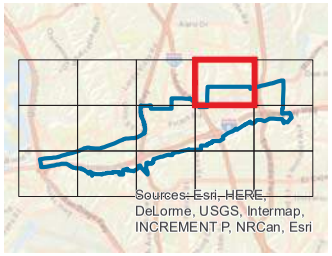

Mission Valley Alt4 A3 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
2910
2913
2839
245
2827
2832
2931
2884
2949
2984
2988
2999
3009
2991
3062
3070
3071
3077
14,800
14,653
1,719
847
16,145
108,399
102,511
15,119
3,886
9,294
2,428
5,342
49,972
6,598
84,493
85,254
56,512
44,258
46,933
34,593
33,360
36,584
30,285
4,743
3,875
97,655
94,381
103,953
109,700
14,751
11,213
123,515
10,588
19,287
307
19,980
1,592
1,401
21,215
22,187
14,714
109,016
101,042
10,278
23,138
2,062
32,515
3,722
14,789
17,103
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NCCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt4 A4 Road Type

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Total Daily Vehicle Flow

Red Label - TAZ ID



N

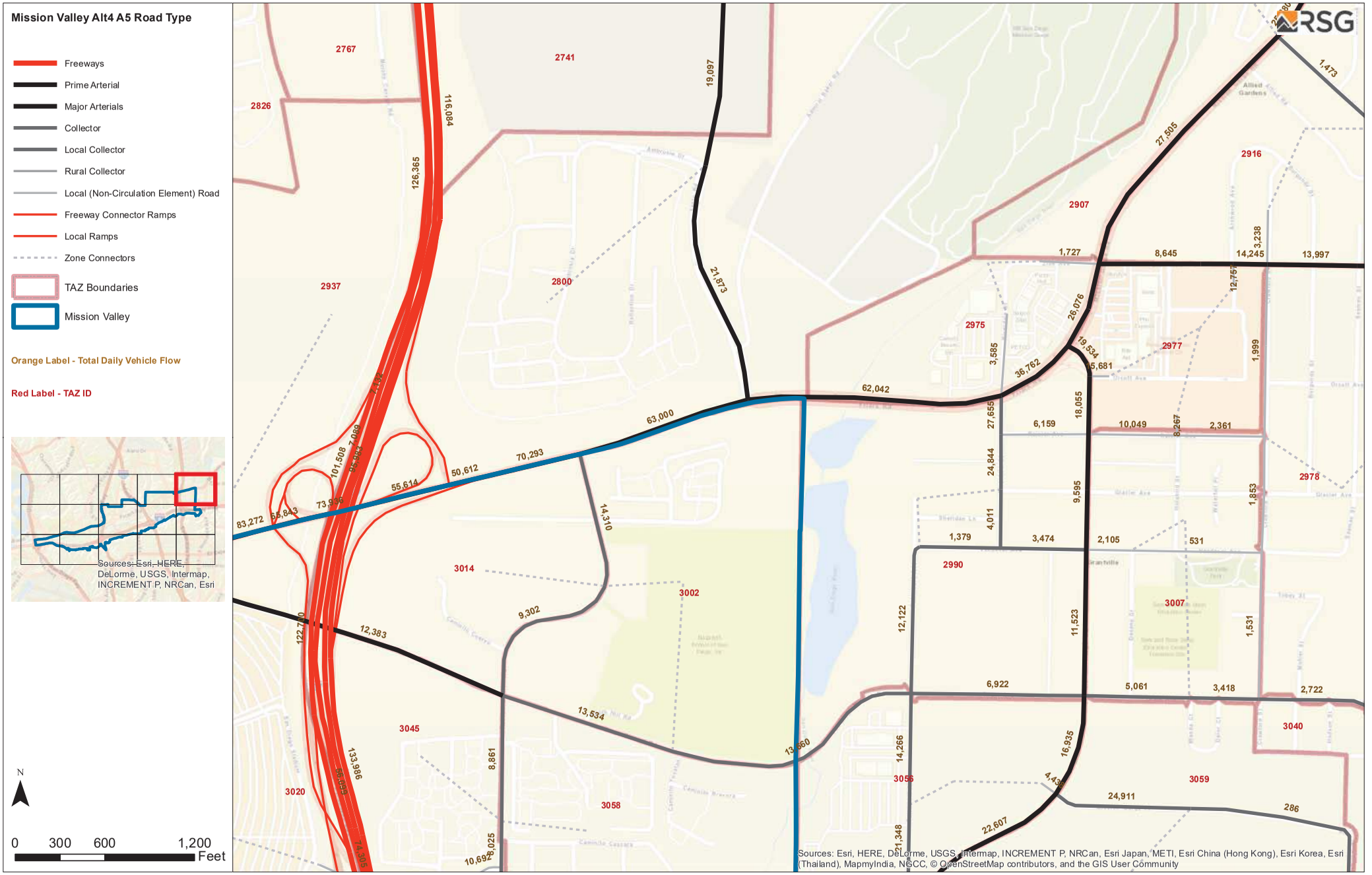
0 300 600 1,200 Feet

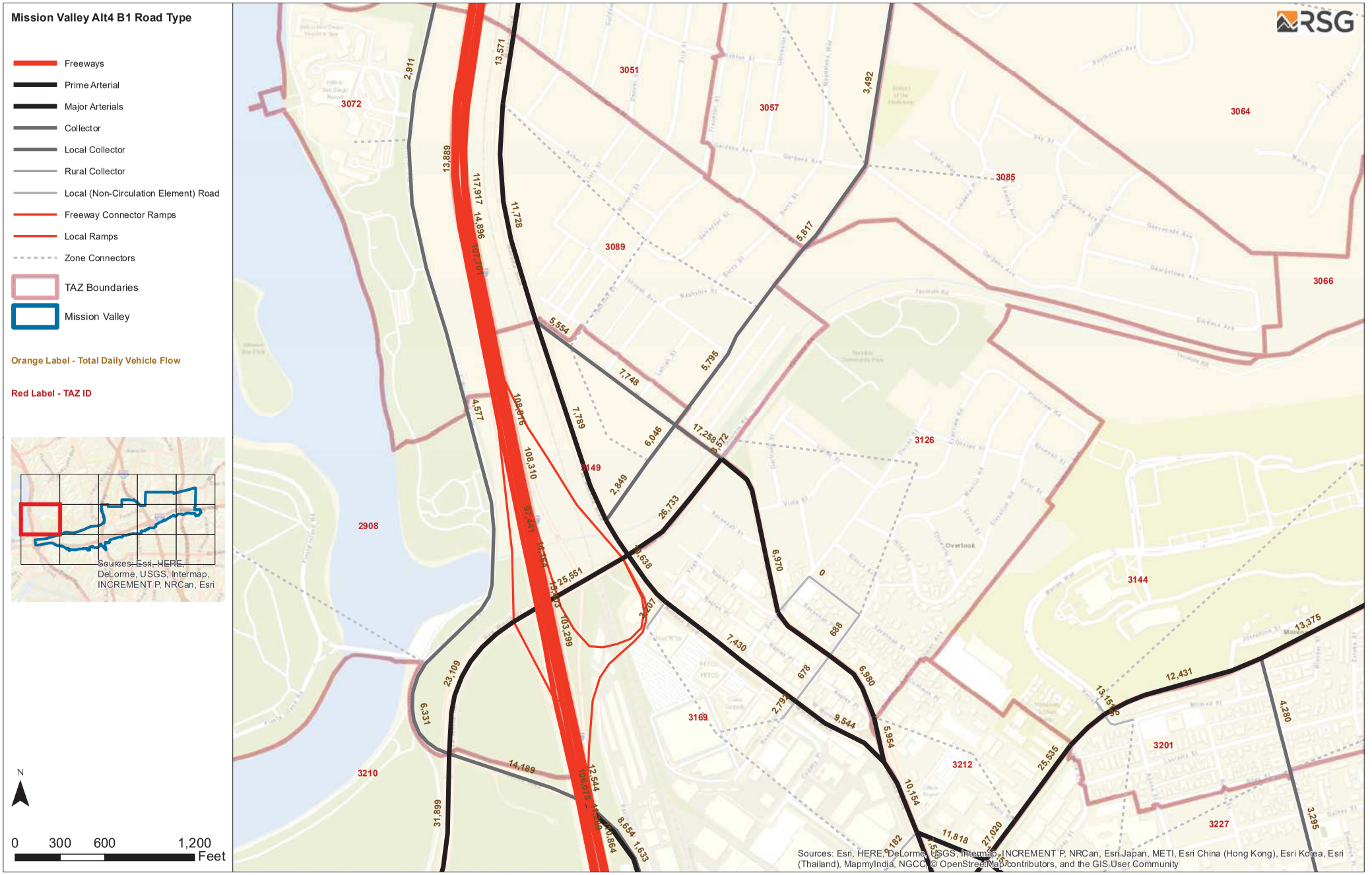
RSG

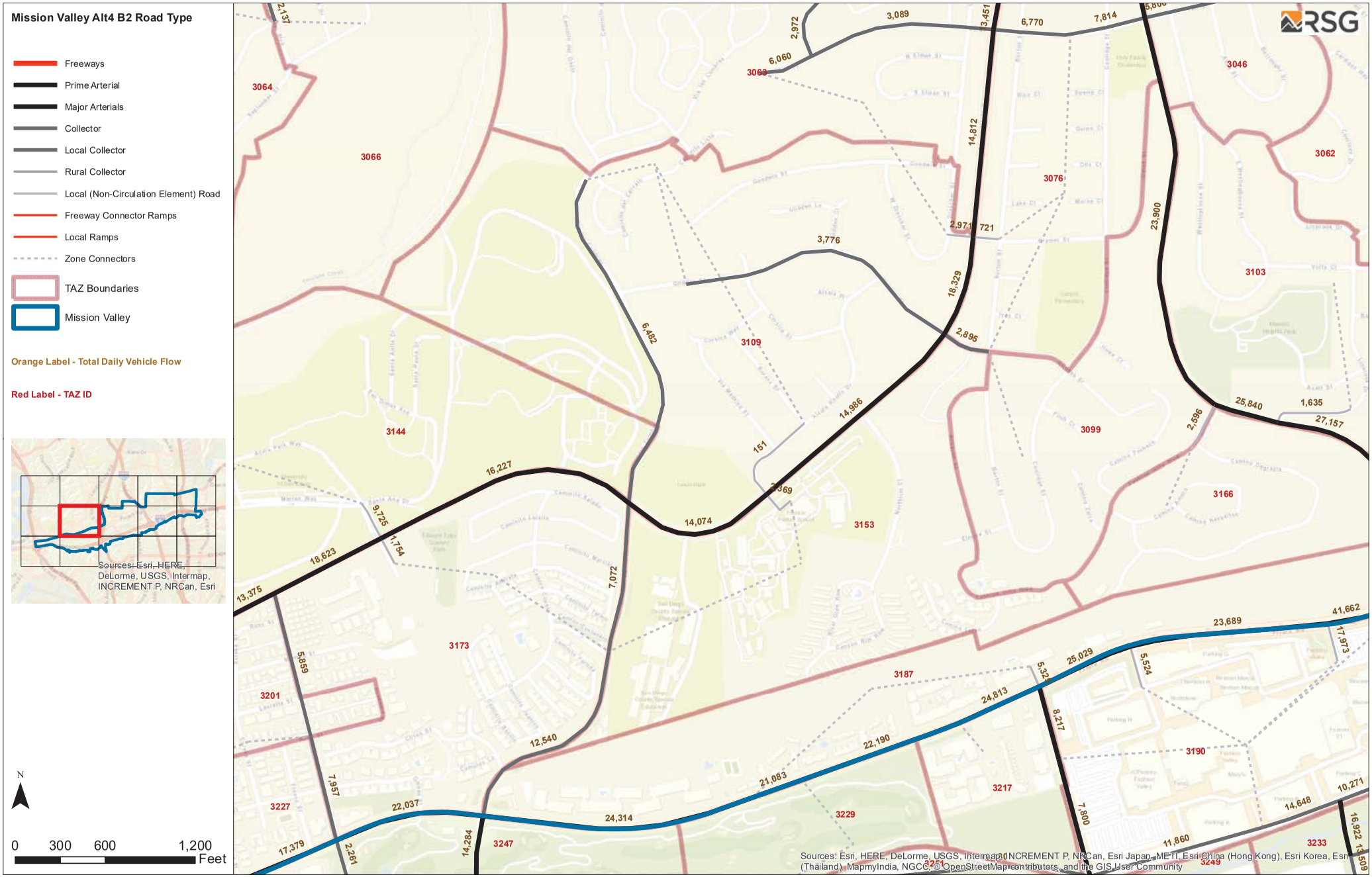
2832 2868 2846 2826 2844 2938 2937 2944 2949 3023 3022 3020 3052 3077

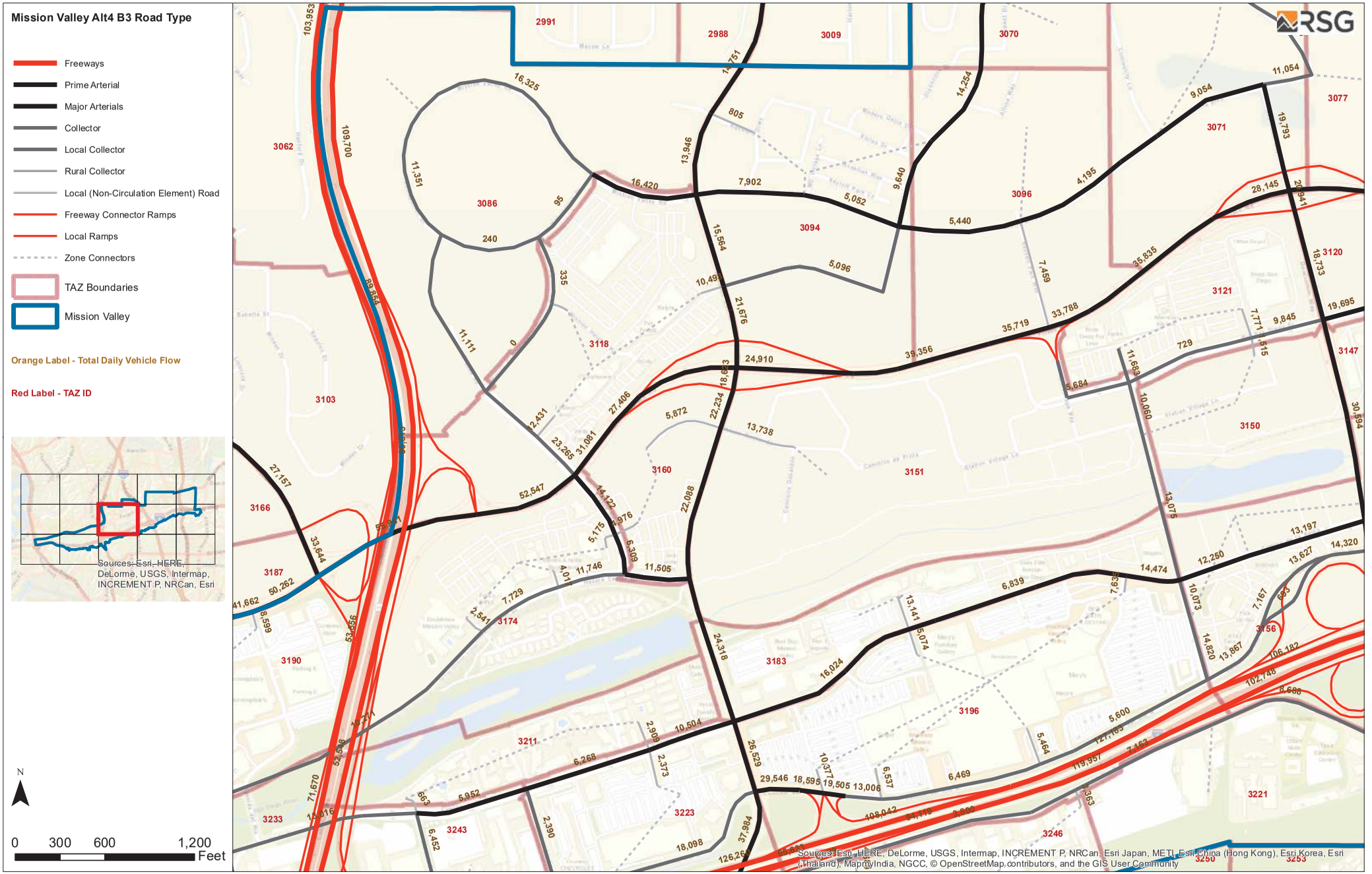
18,562 0 3,436 20,510 22,020 83,272 66,679 40,723 30,681 8,442 8,433 12,383 3,959 48,439 17,009 15,670 4,929 51,701 5,716 2,322 3,869 1,324 3,842 26,364 19,622 101,042 14,714

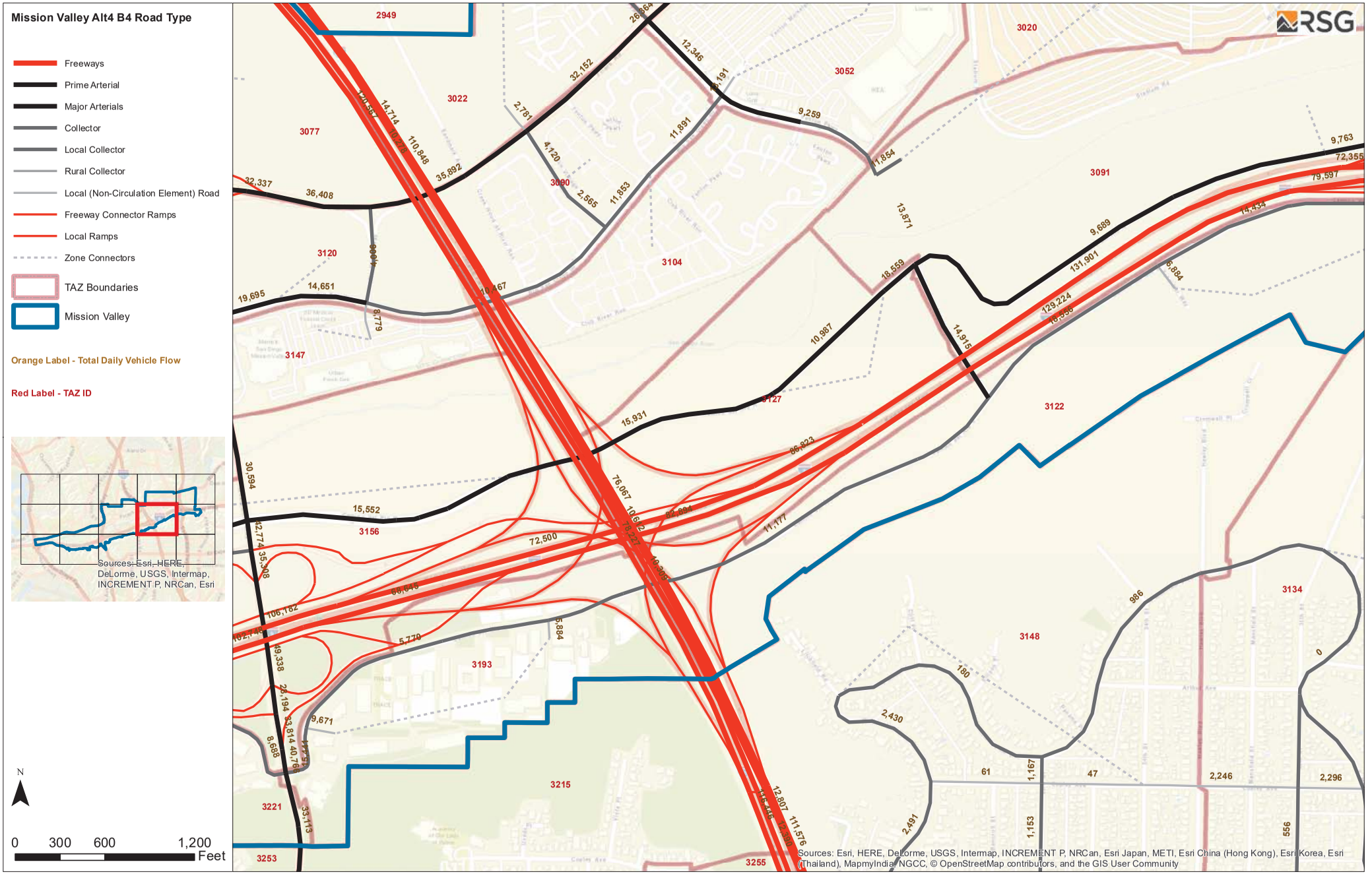
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

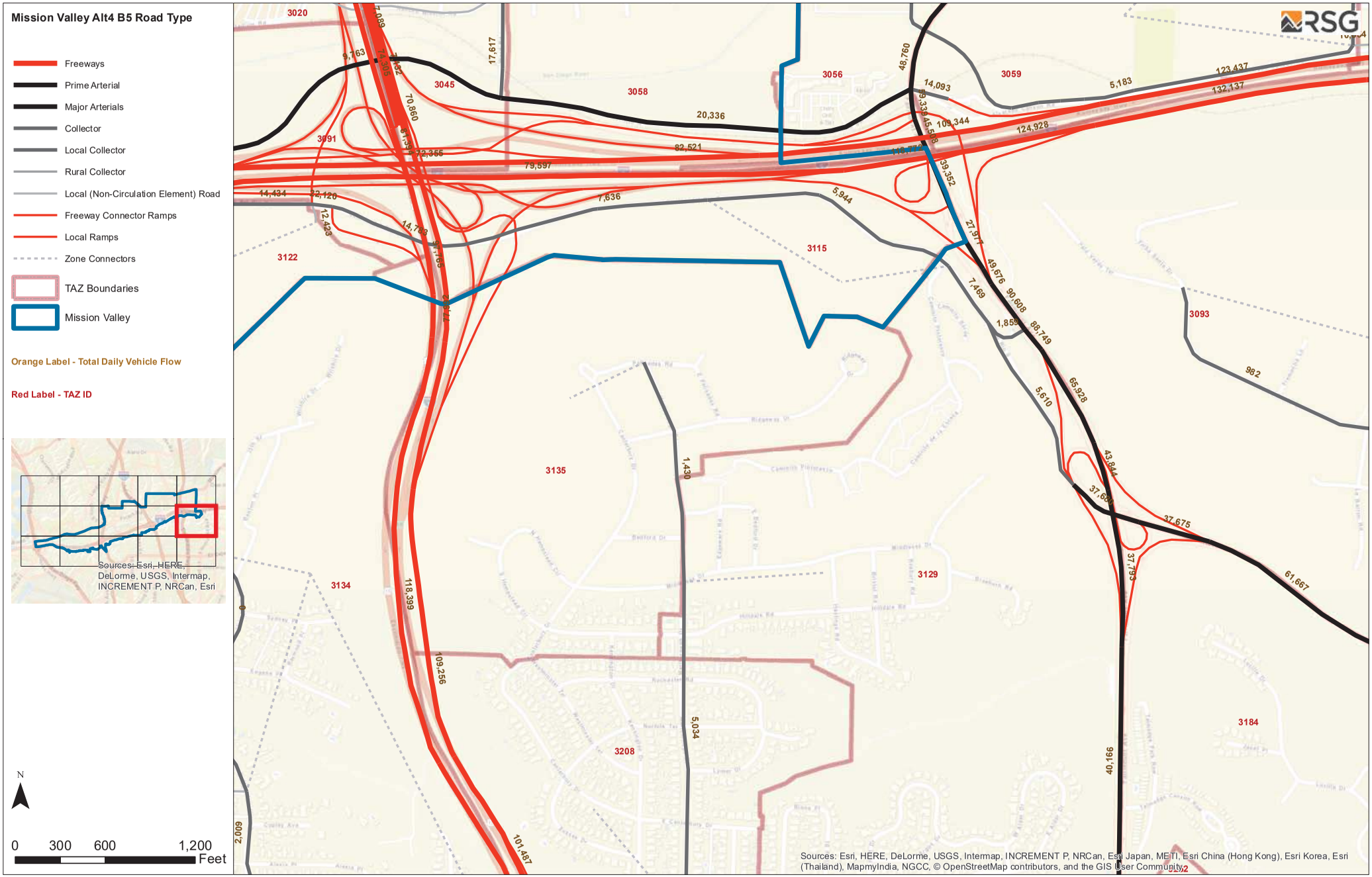

Mission Valley Alt4 A5 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
2767
2741
2826
2937
2800
2907
2916
2975
2977
2978
2990
3007
3014
3002
3045
3020
3058
3056
3059
3040
116,084
126,365
19,097
21,873
27,505
1,473
1,727
8,645
14,245
13,997
3,238
12,757
26,076
19,534
5,681
1,999
62,042
63,000
70,293
50,612
55,614
83,272
55,843
73,935
101,508
95,982
2,069
27,655
18,055
6,159
10,049
8,267
2,361
24,844
4,011
9,595
1,853
1,379
3,474
2,105
531
14,310
9,302
12,383
13,534
12,122
11,523
1,531
6,922
5,061
3,418
2,722
13,360
14,266
16,935
4,435
24,911
286
22,607
21,348
8,861
8,025
10,692
133,986
74,305
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

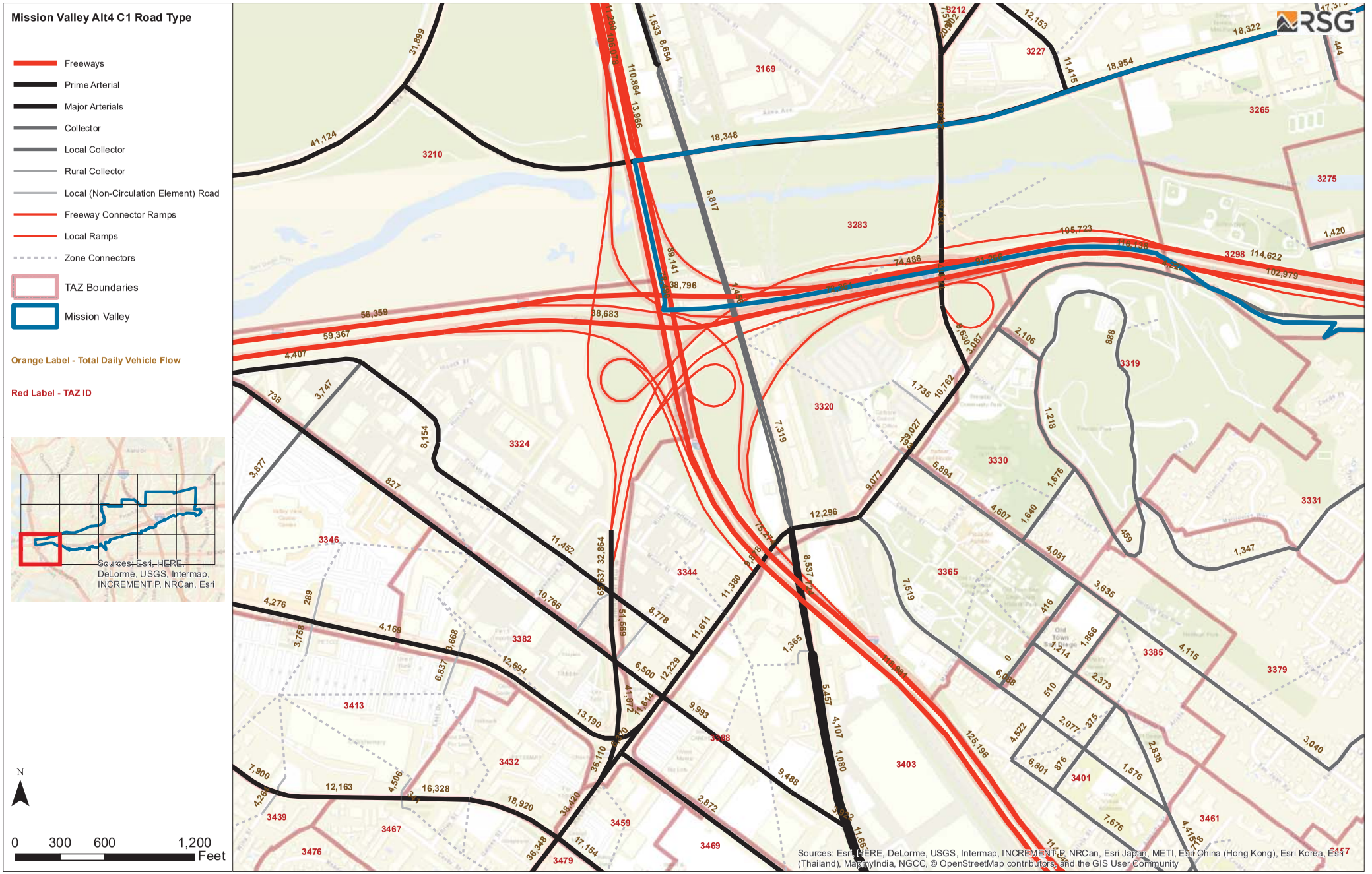

Mission Valley Alt4 B1 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
3072
3051
3057
3064
3085
3089
3066
3126
3149
2908
3144
3169
3201
3212
3210
3227
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

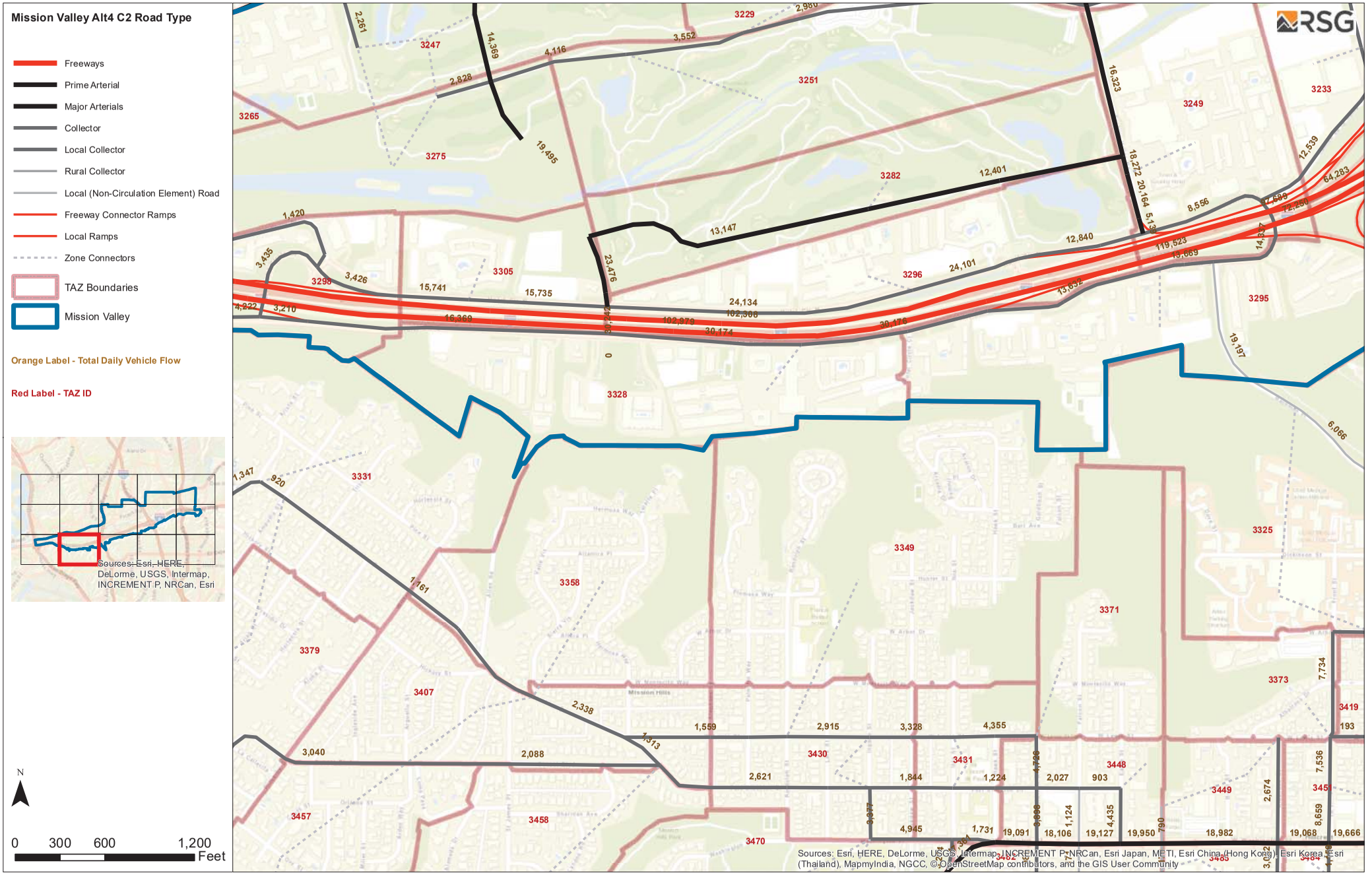

Mission Valley Alt4 B2 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
3064
3066
3068
3046
3062
3076
3103
3109
3144
3099
3166
3153
3173
3187
3201
3190
3217
3227
3229
3247
3233
3249
3251
2,137
2,972
3,089
6,060
3,451
6,770
7,814
14,812
3,776
721
23,900
18,329
2,895
6,482
14,986
151
2,596
25,840
1,635
27,157
16,227
9,725
1,754
14,074
18,623
13,375
7,072
5,859
7,957
2,261
12,540
22,037
24,314
14,284
17,379
21,083
22,190
24,813
5,324
25,029
23,689
41,662
17,973
5,524
8,217
7,800
14,648
10,271
11,860
16,922
13,509
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

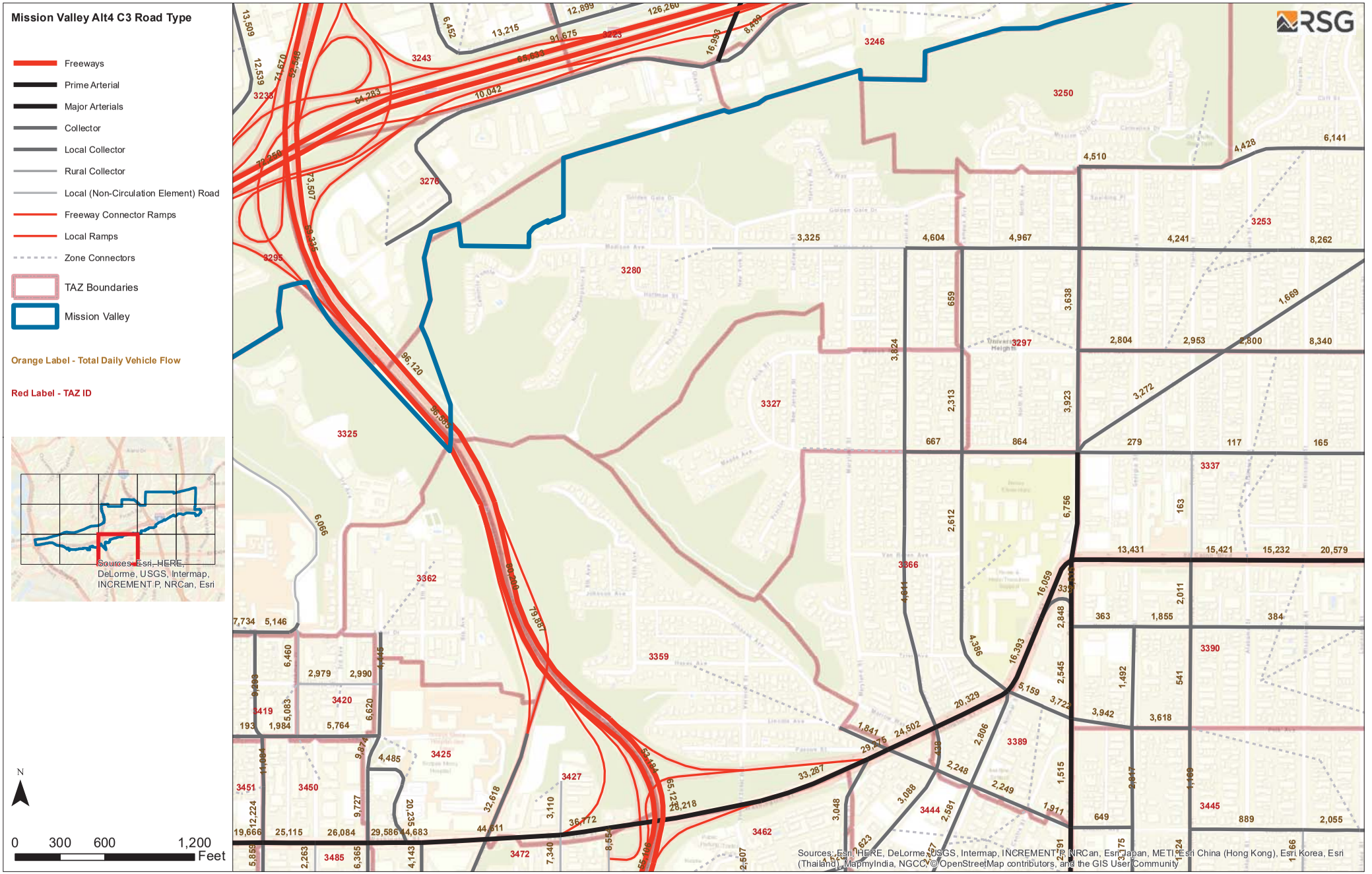

Mission Valley Alt4 B3 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

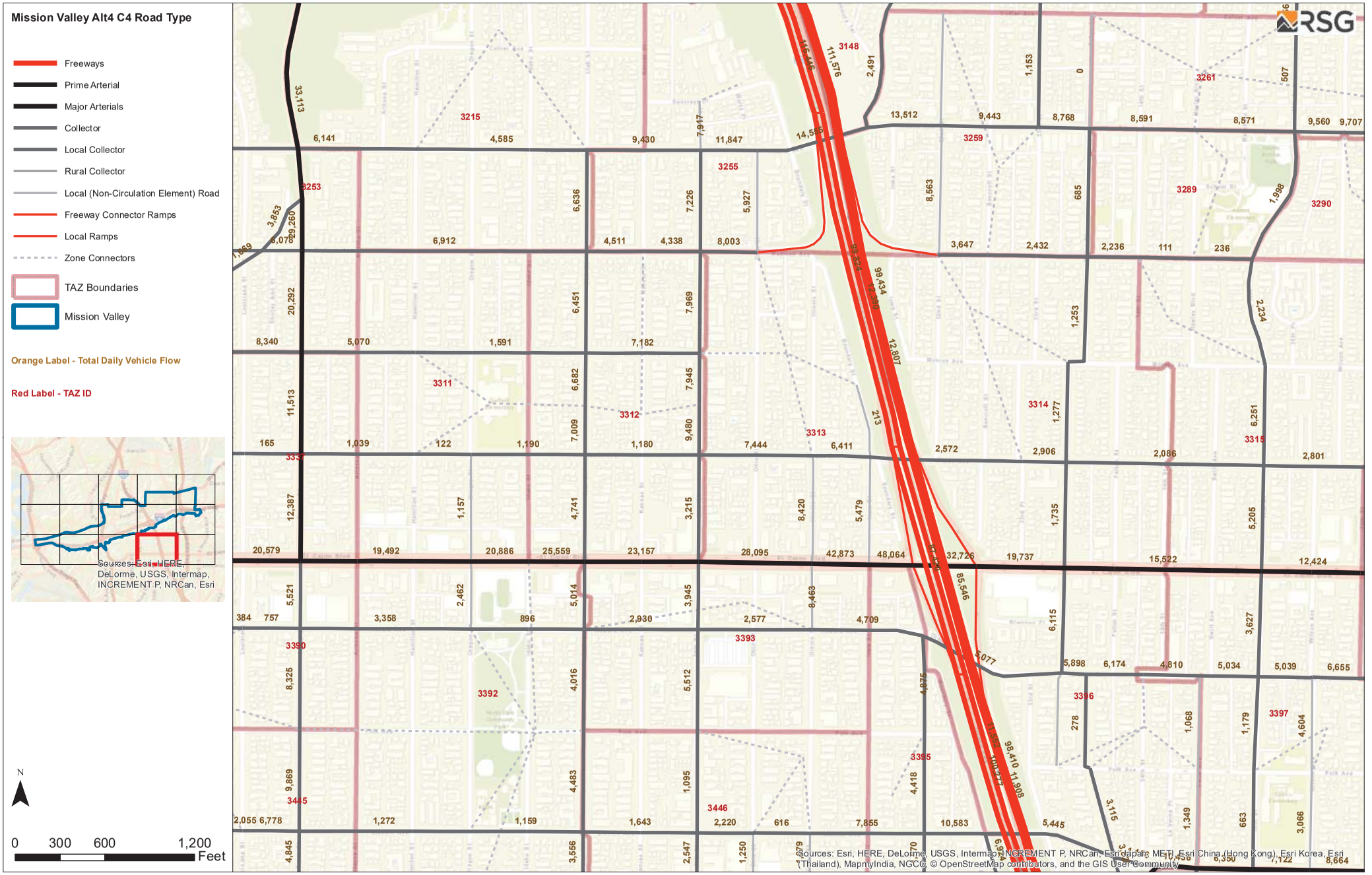

Mission Valley Alt4 B4 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
2949
3020
3052
3022
3077
3091
3120
3104
3147
3122
3156
3148
3134
3193
3215
3221
3253
3255
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

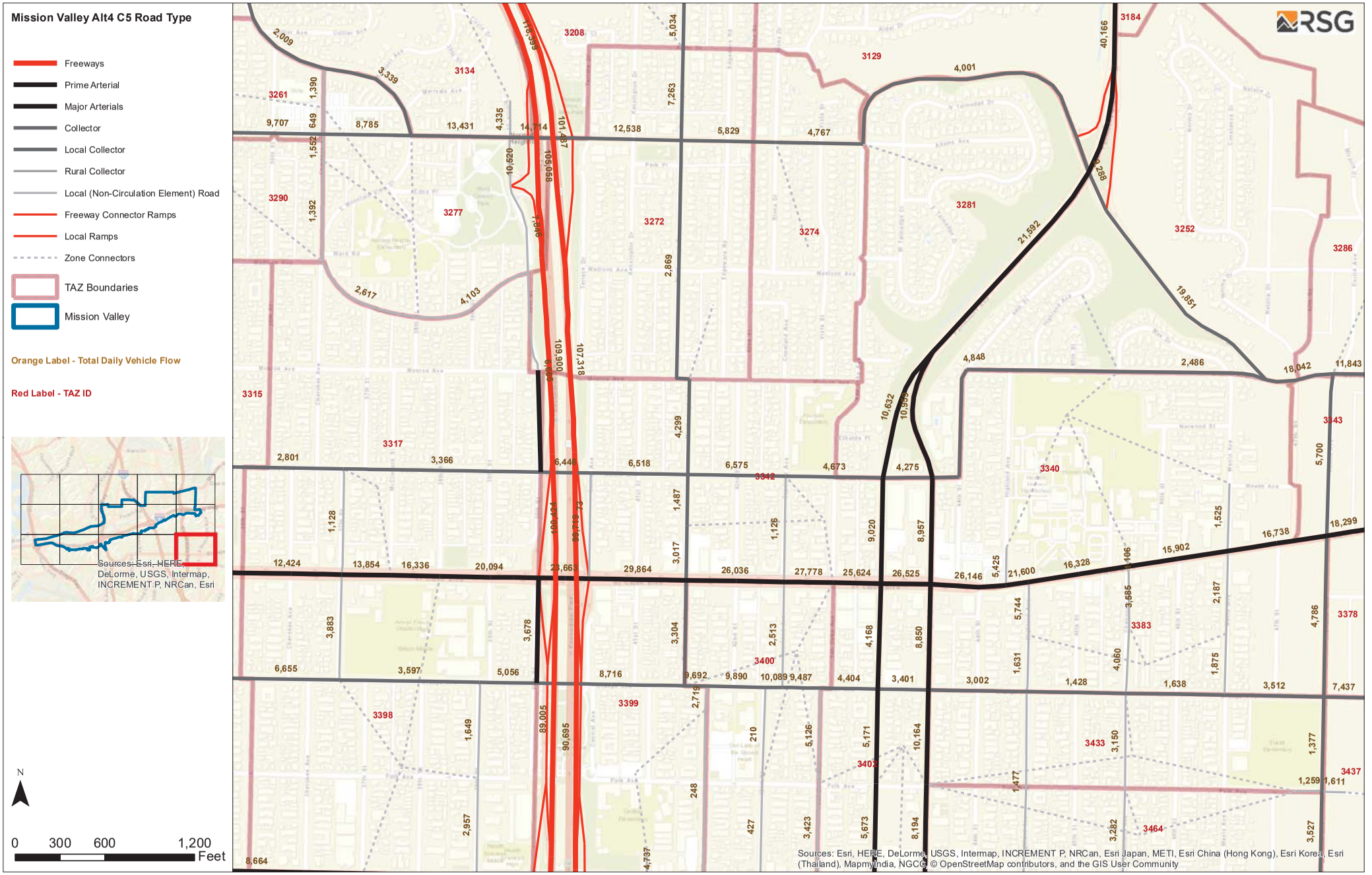

Mission Valley Alt4 B5 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
3020
3045
3058
3056
3059
3091
3122
3115
3093
982
3135
3134
3129
3184
3208
17,617
48,760
14,093
5,183
123,437
132,137
124,928
109,344
20,336
82,521
79,597
39,352
5,944
7,636
27,971
49,676
90,608
88,749
65,928
5,610
43,844
37,675
37,793
61,667
1,430
118,399
109,256
5,034
40,166
101,487
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

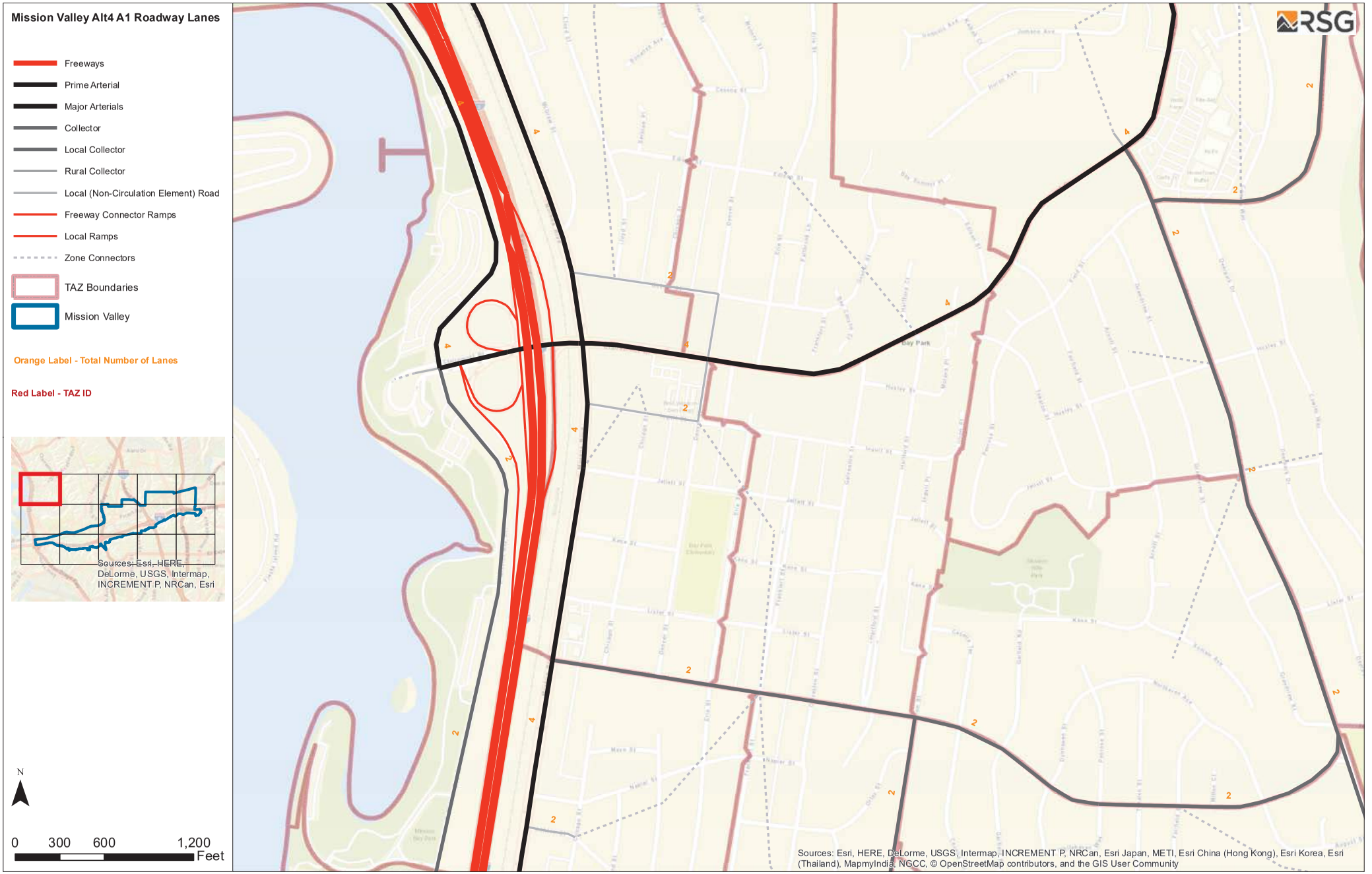

Mission Valley Alt4 C1 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

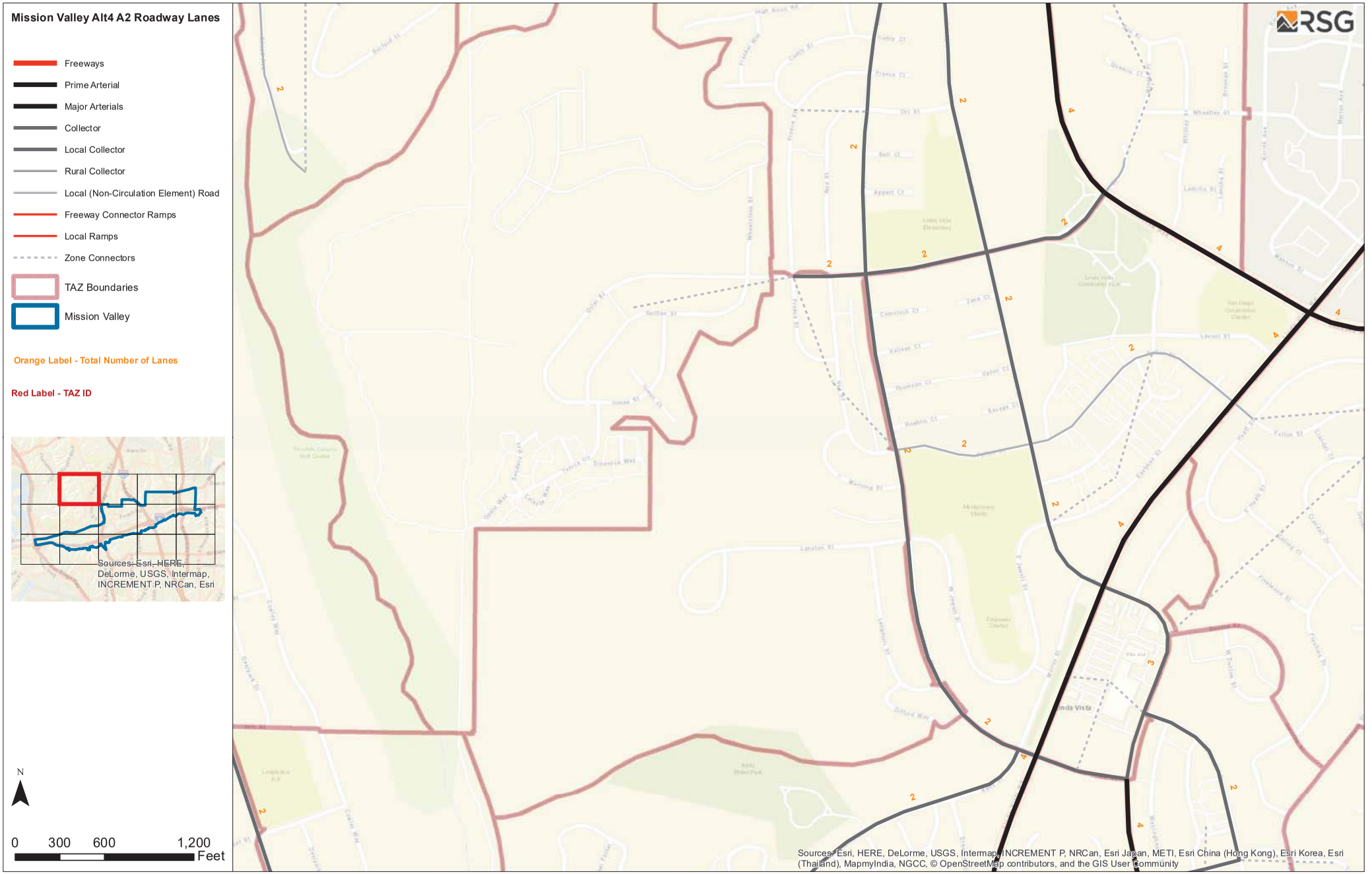

Mission Valley Alt4 C2 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

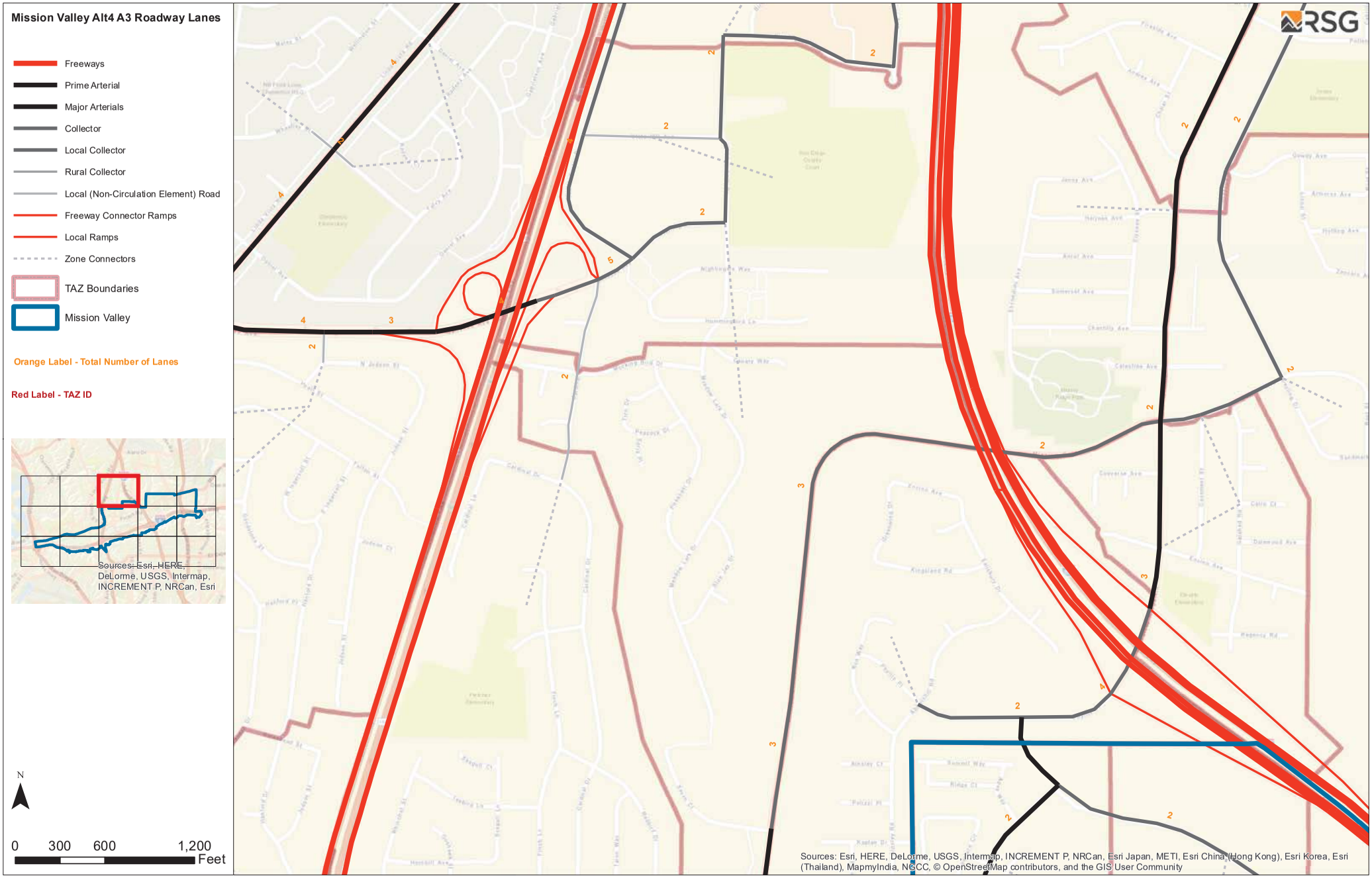

Mission Valley Alt4 C3 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

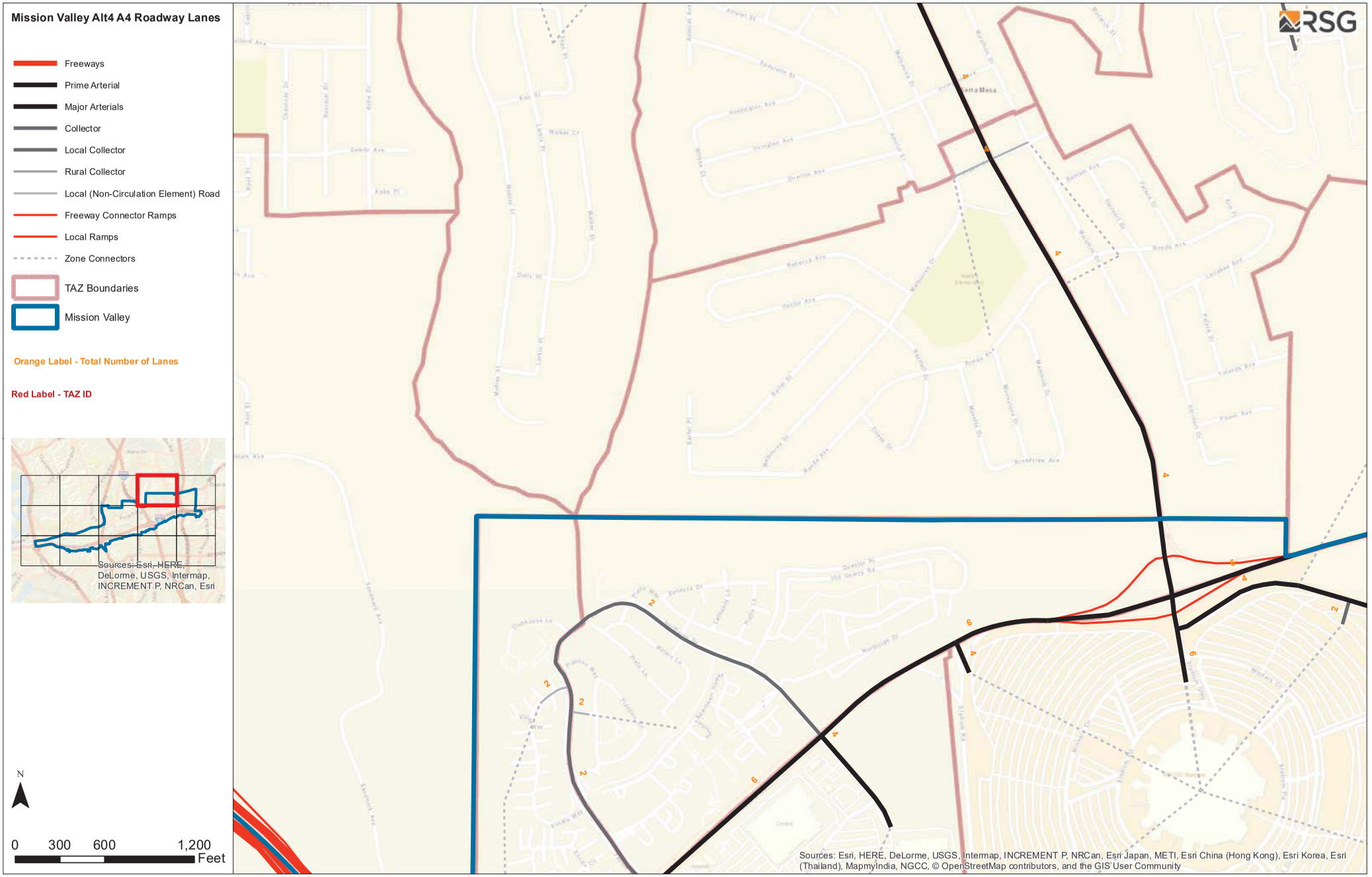

Mission Valley Alt4 C4 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

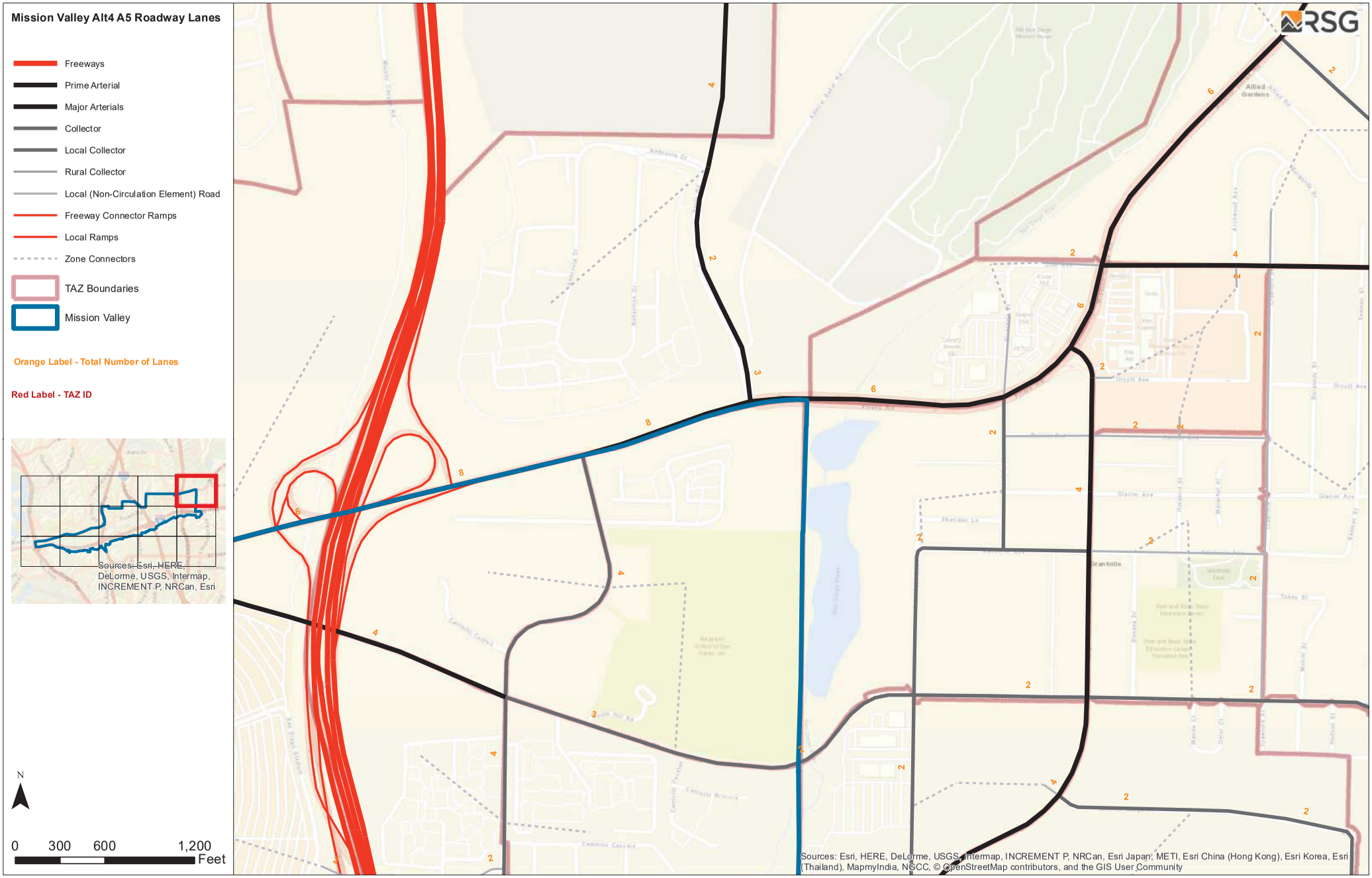

Mission Valley Alt4 C5 Road Type
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Daily Vehicle Flow
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), Mapmyindia, NGCC, © OpenStreetMap contributors, and the GIS User Community

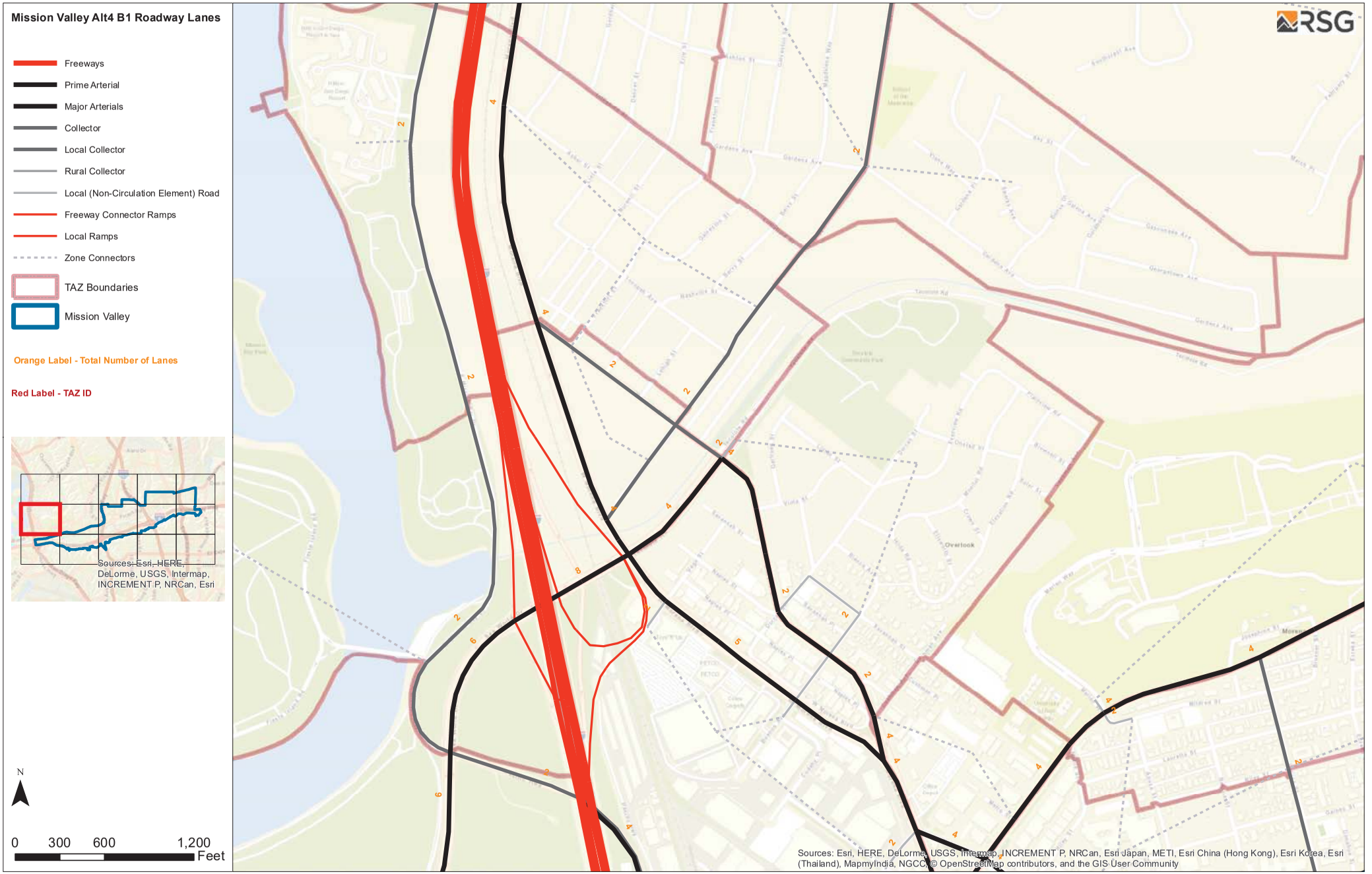

Mission Valley Alt4 A1 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 A2 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 A3 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 A4 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 A5 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

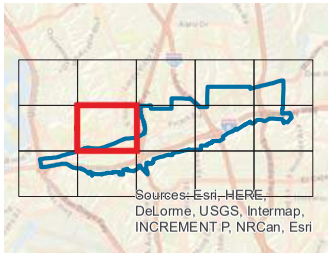

Mission Valley Alt4 B1 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt4 B2 Roadway Lanes

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Total Number of Lanes

Red Label - TAZ ID

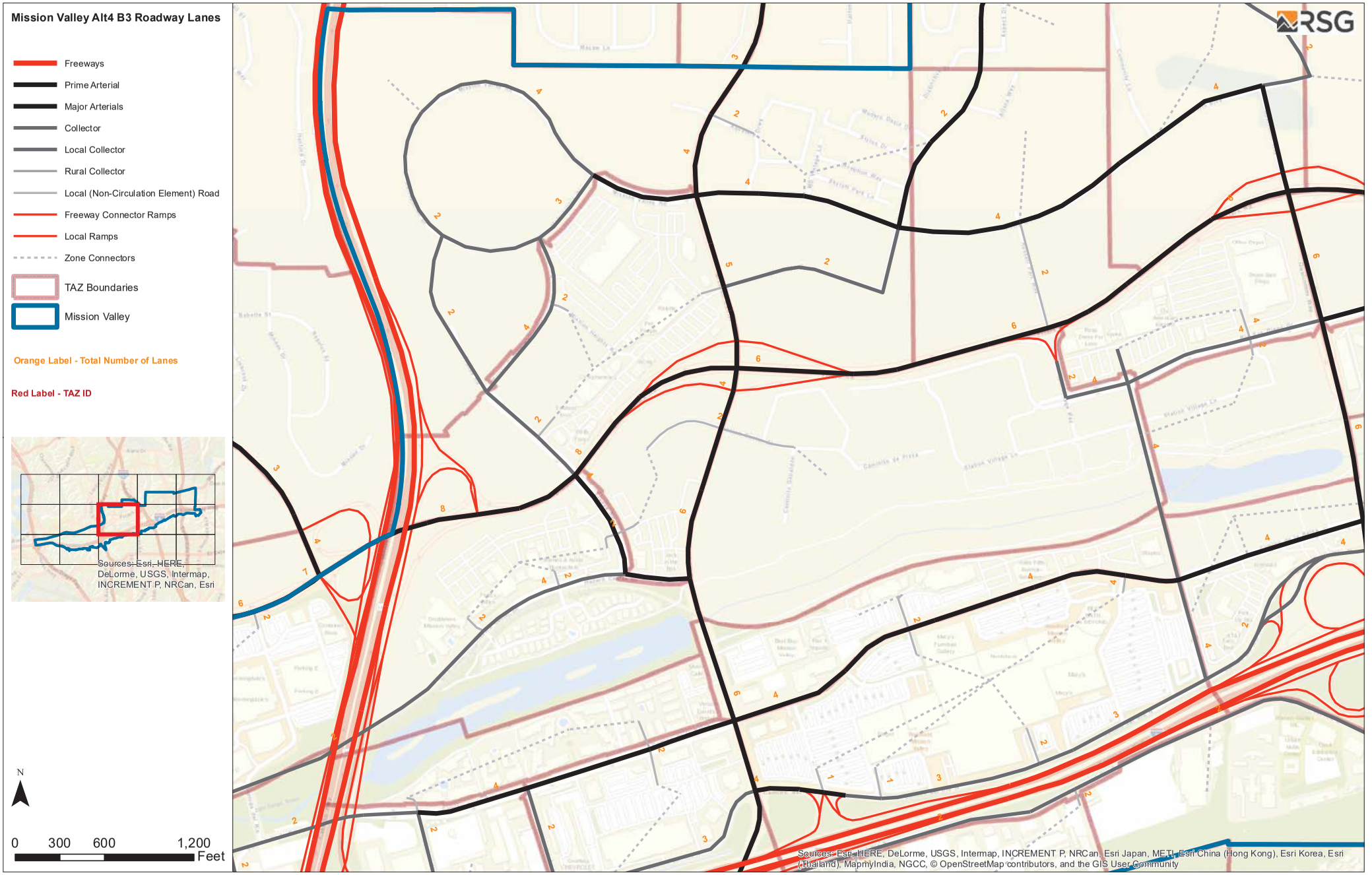


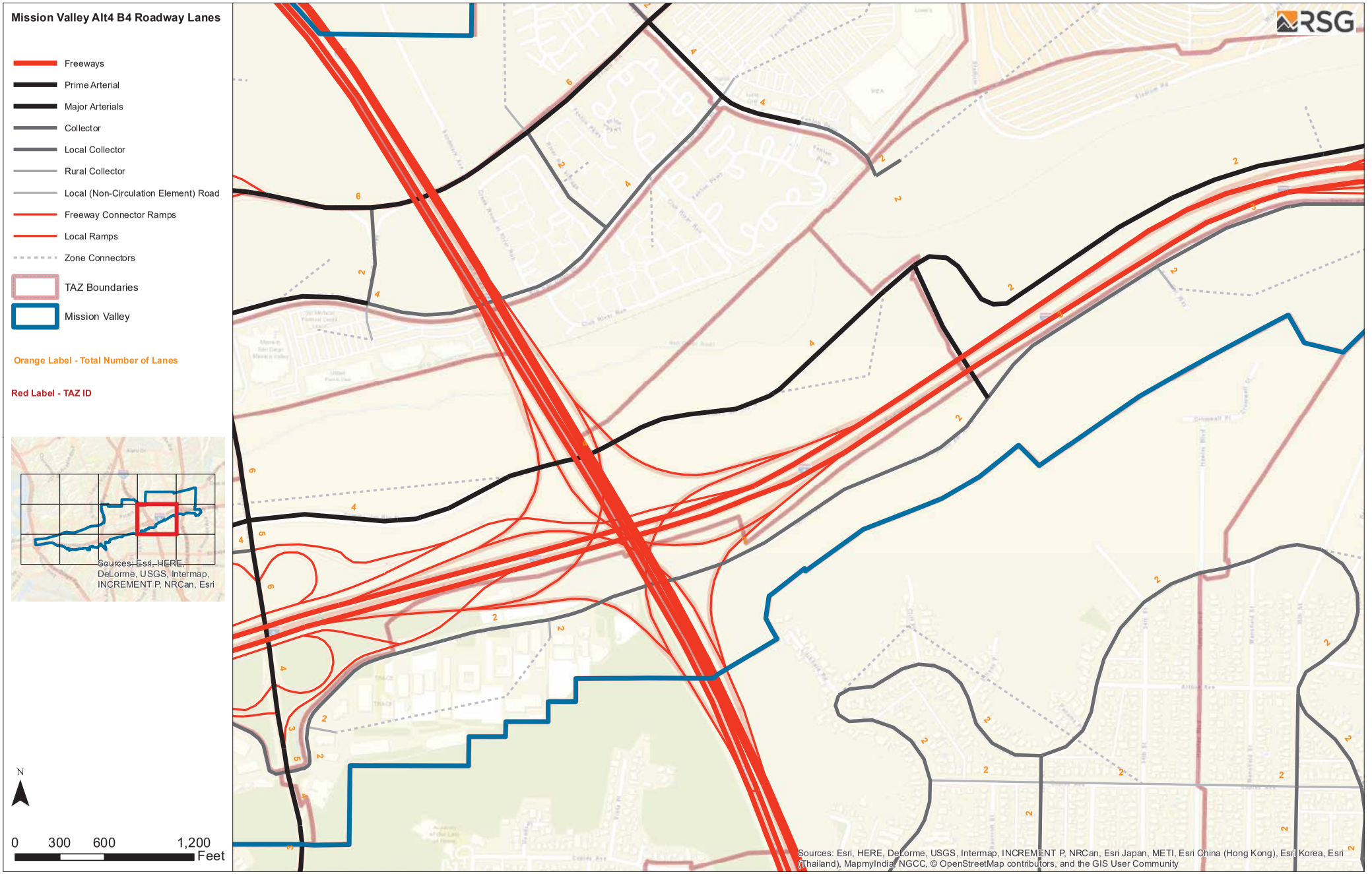
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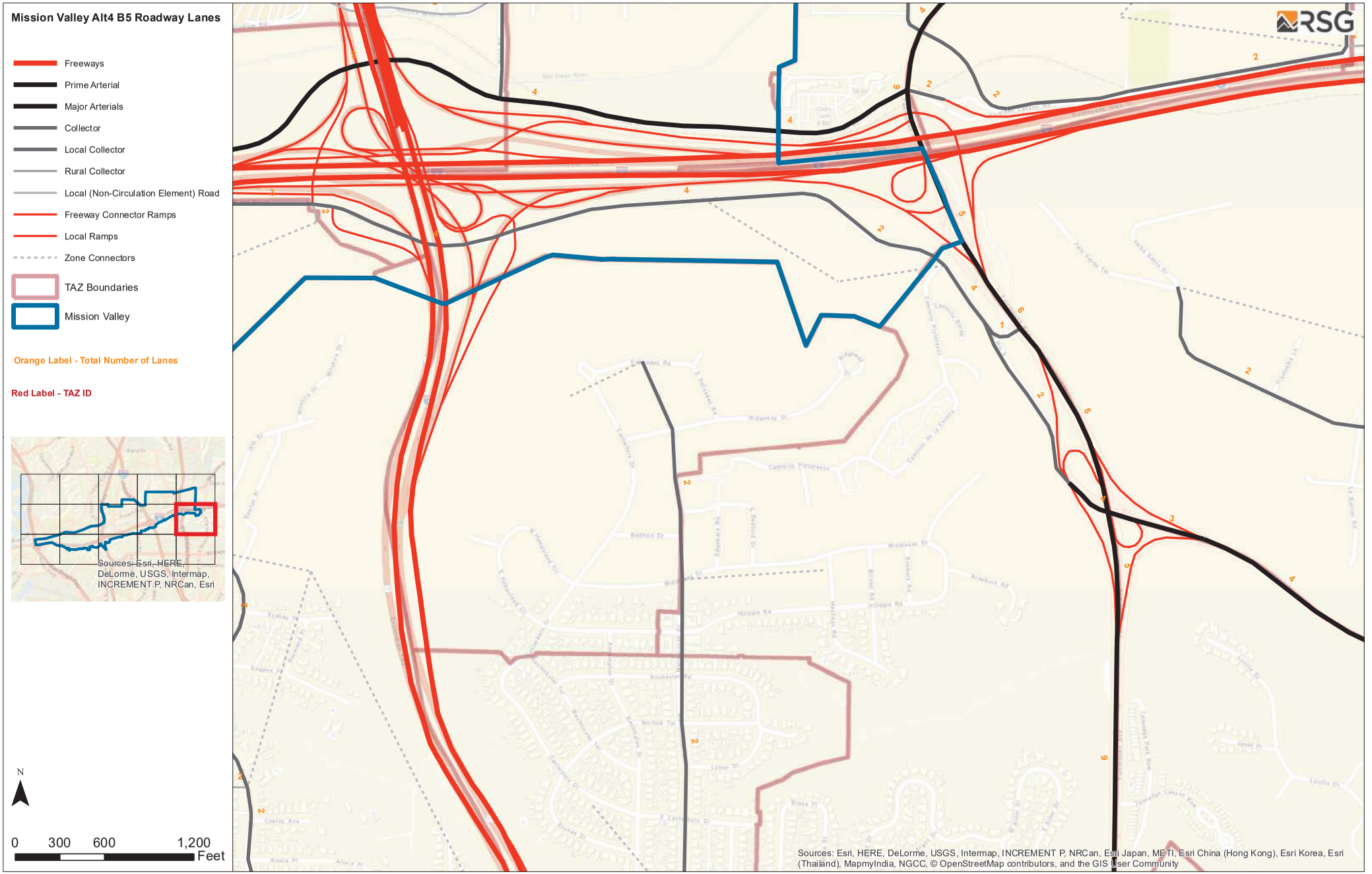
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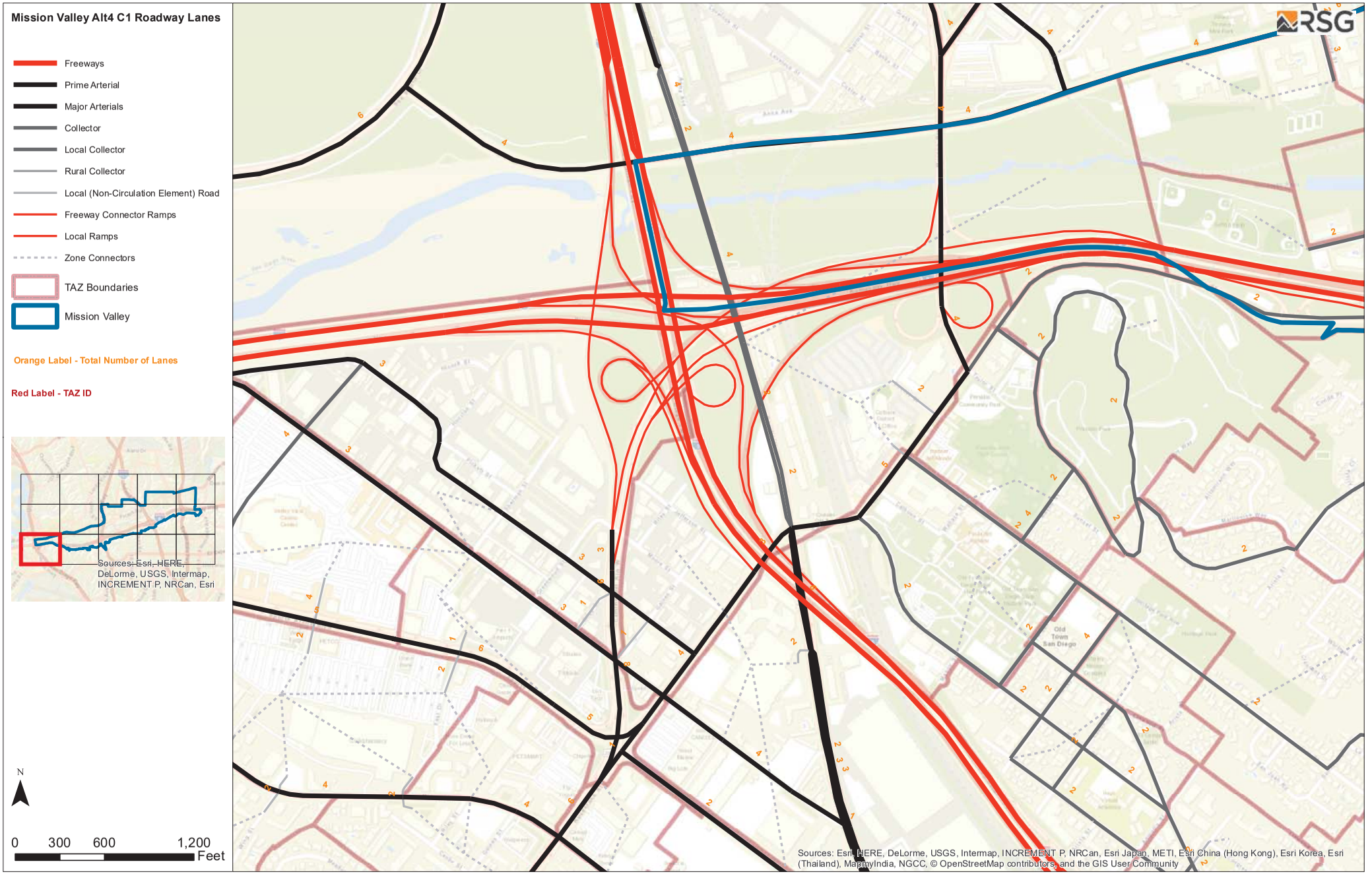
RSG

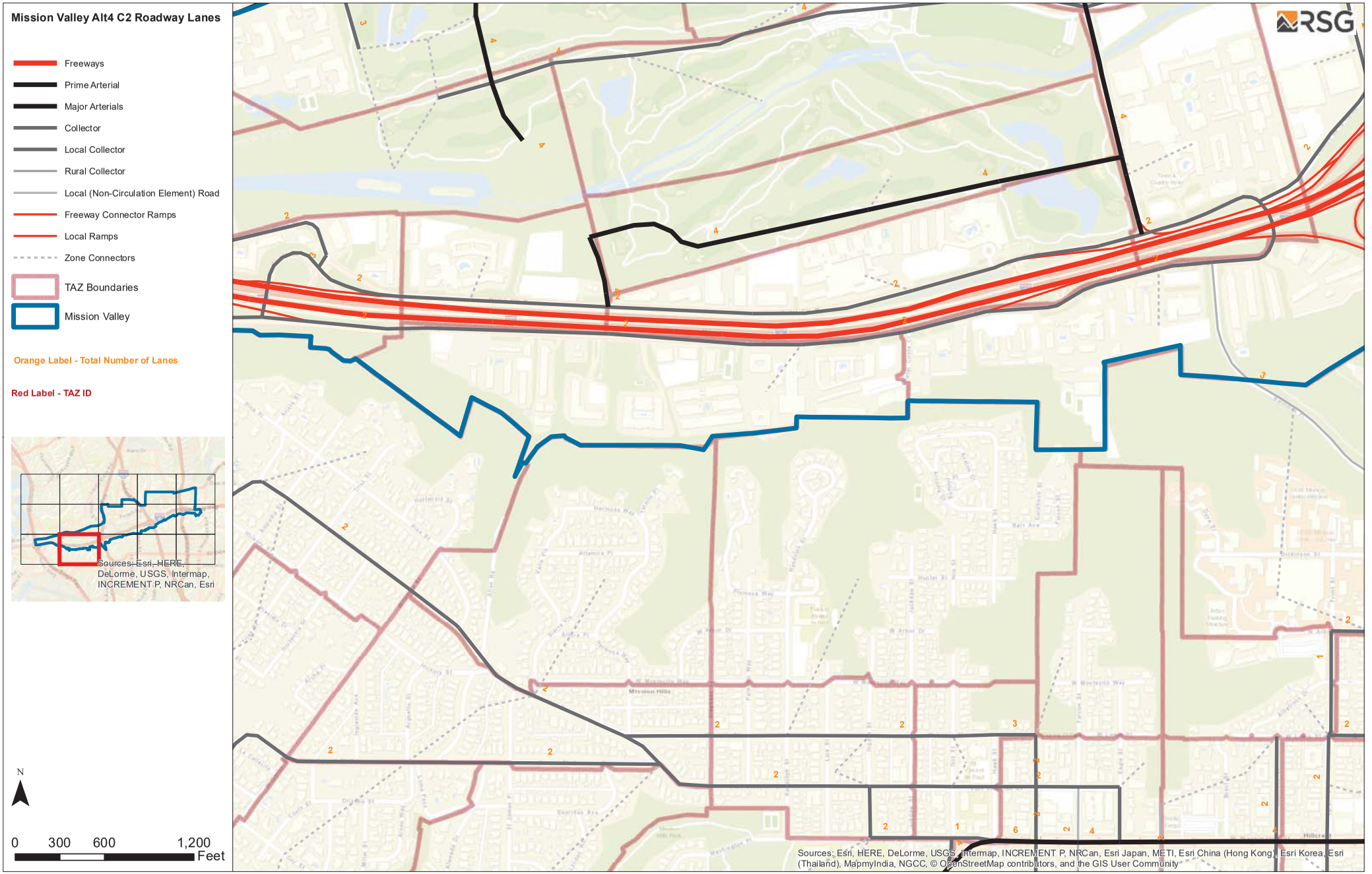
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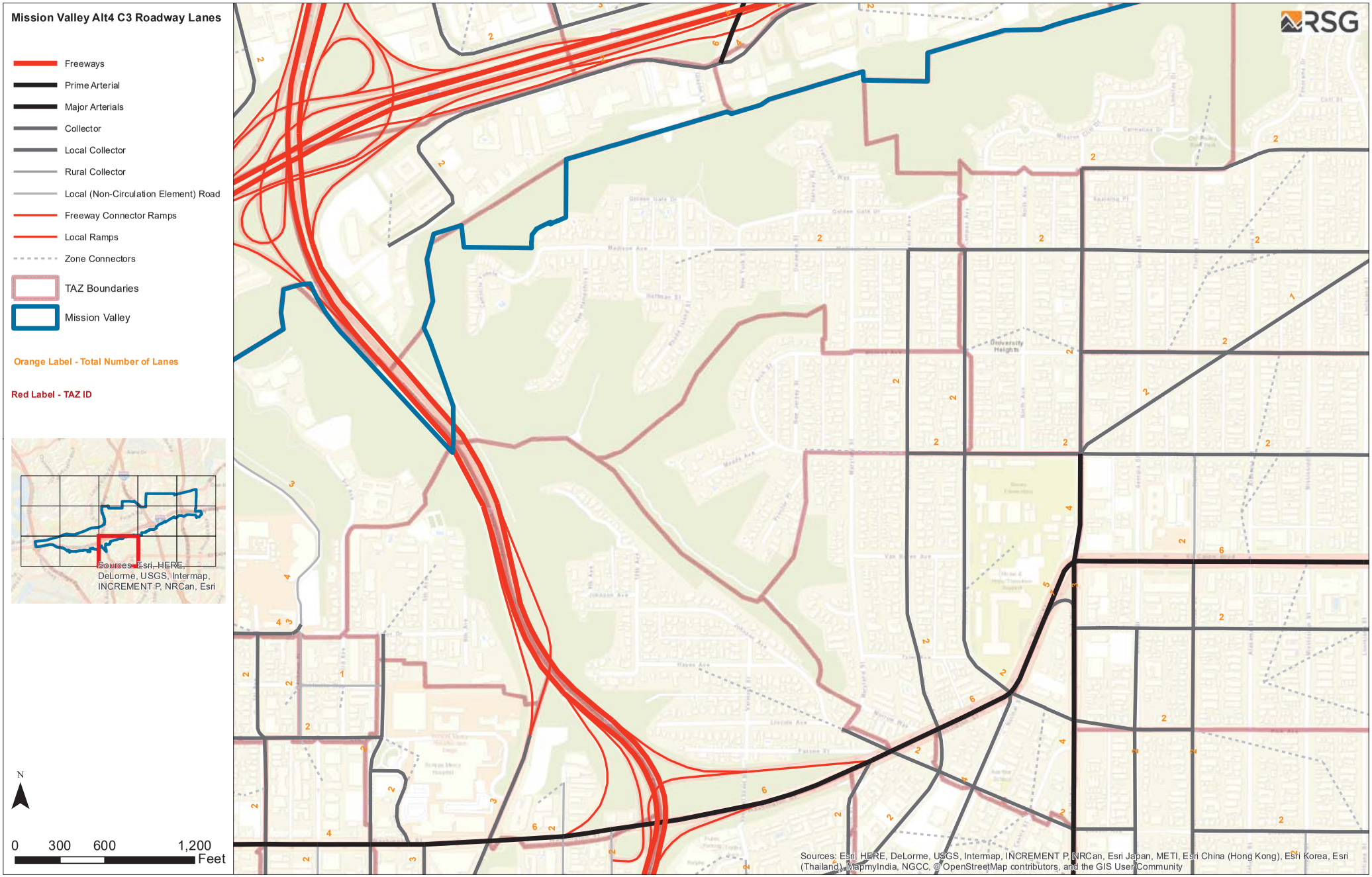

Mission Valley Alt4 B3 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 B4 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 B5 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 C1 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 C2 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

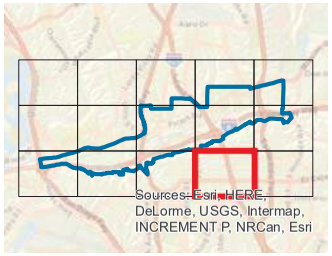

Mission Valley Alt4 C3 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt4 C4 Roadway Lanes

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Total Number of Lanes

Red Label - TAZ ID

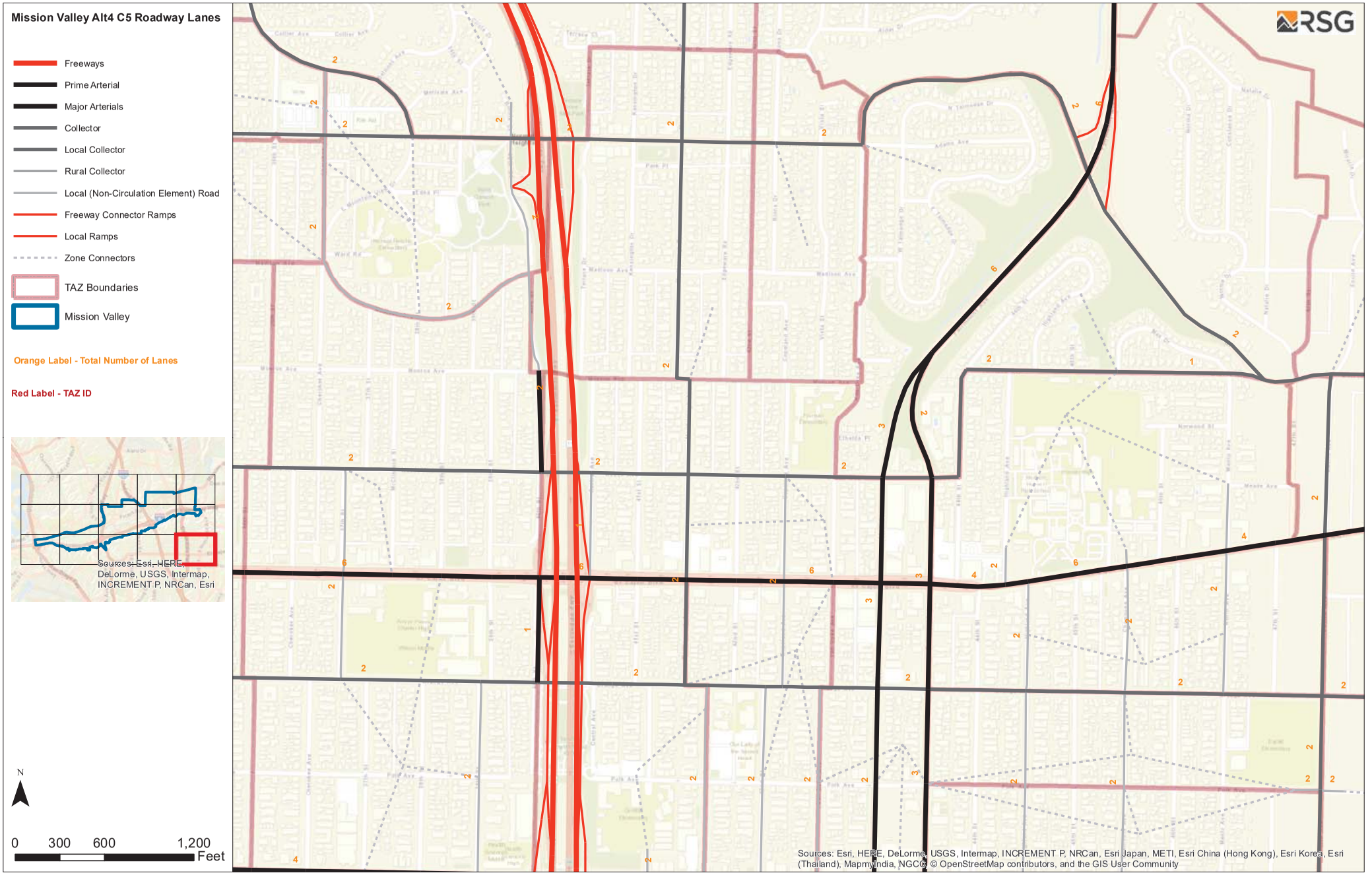


N

0 300 600 1,200 Feet

RSG

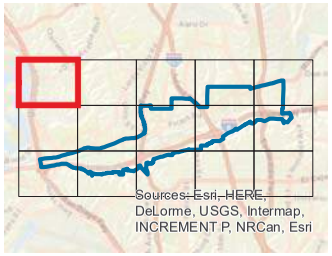
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Mission Valley Alt4 C5 Roadway Lanes
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt4 A1 Medians

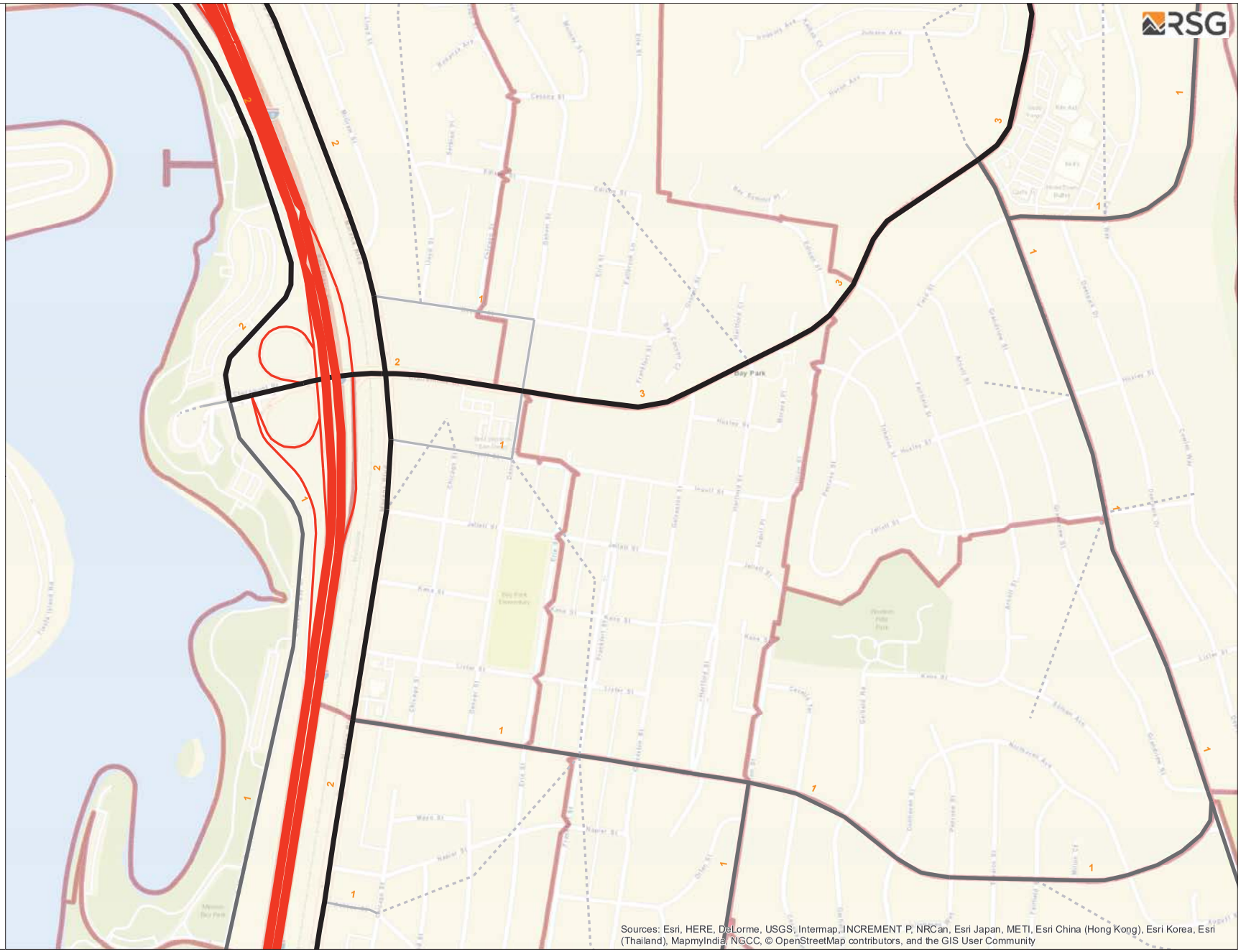
- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

0 300 600 1,200 Feet

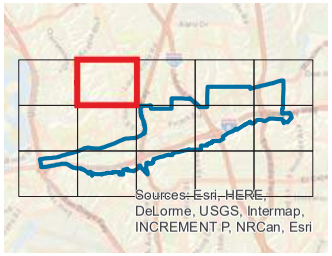


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Mission Valley Alt4 A2 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

0 300 600 1,200 Feet

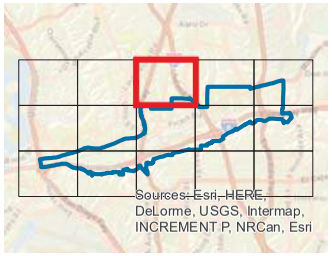
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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt4 A3 Medians

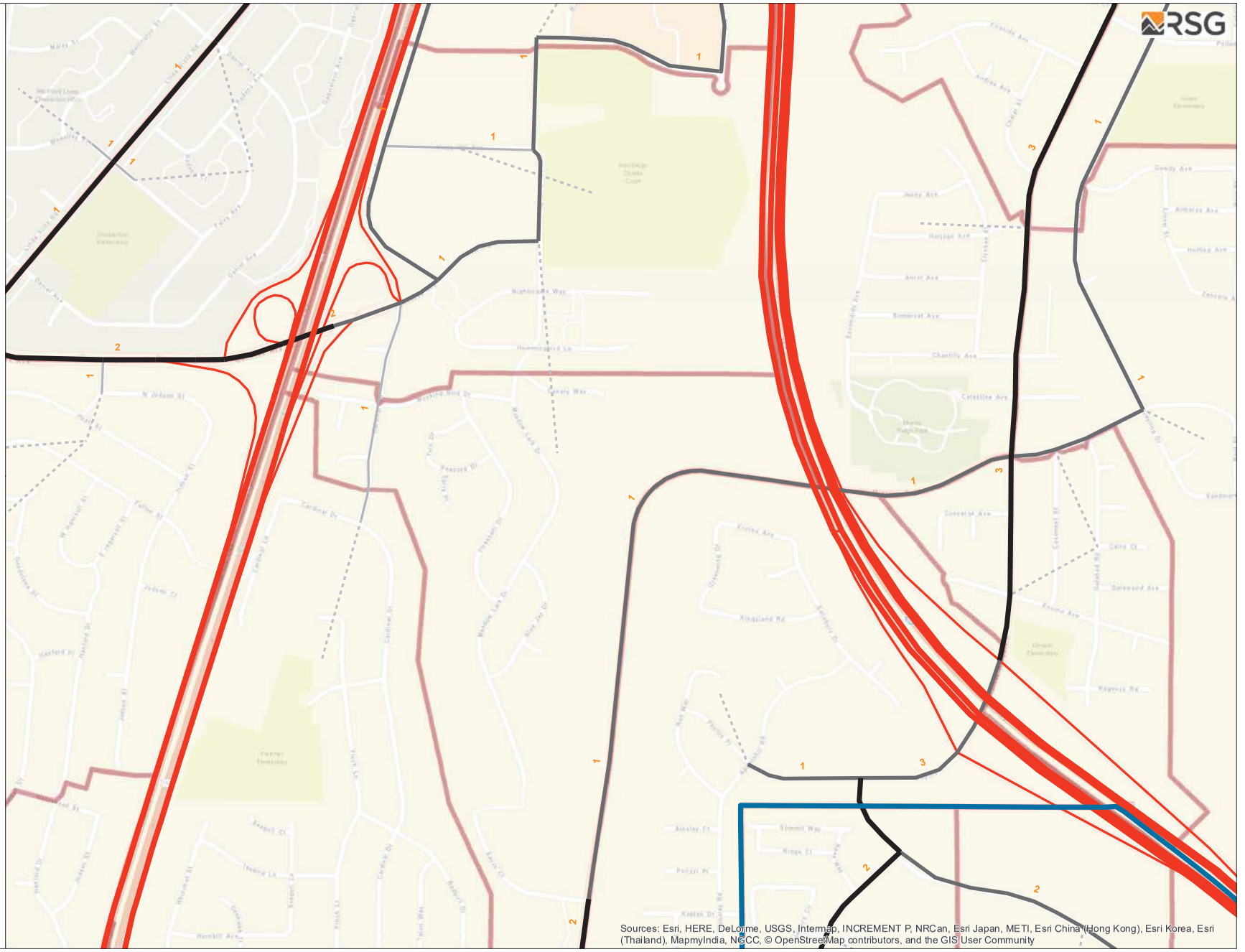
- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

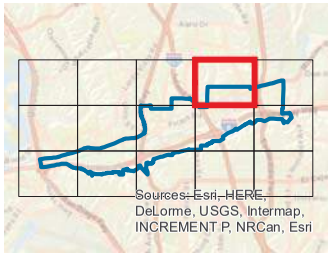
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Mission Valley Alt4 A4 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

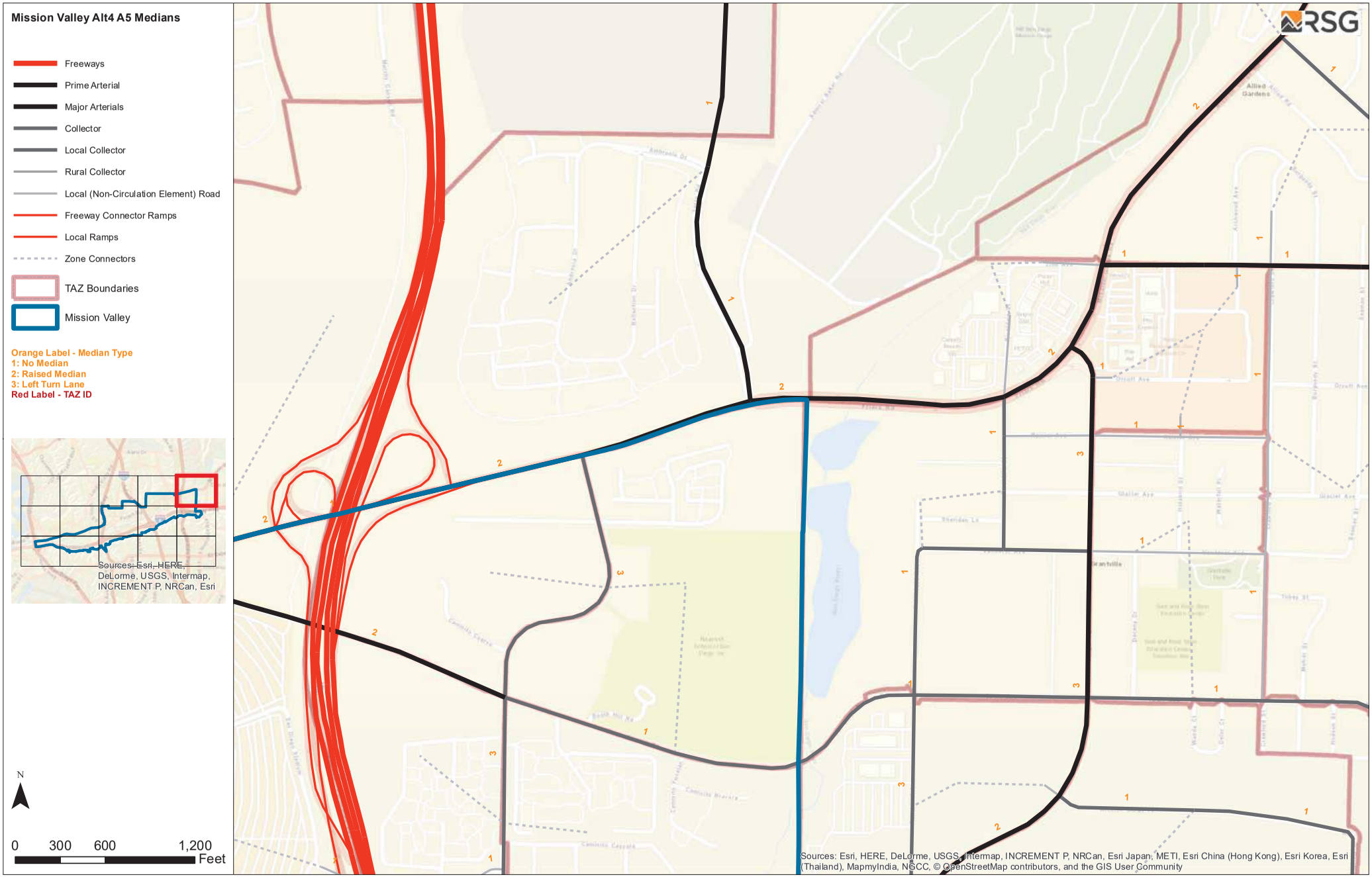
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

0 300 600 1,200 Feet

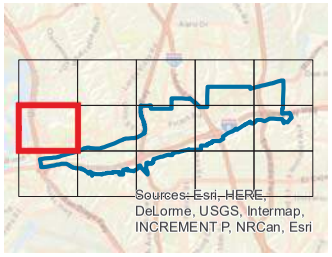
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Mission Valley Alt4 A5 Medians
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt4 B1 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

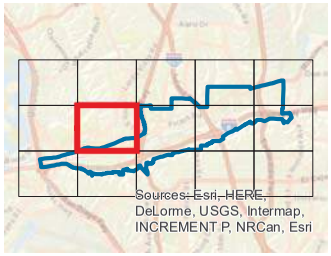
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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt4 B2 Medians

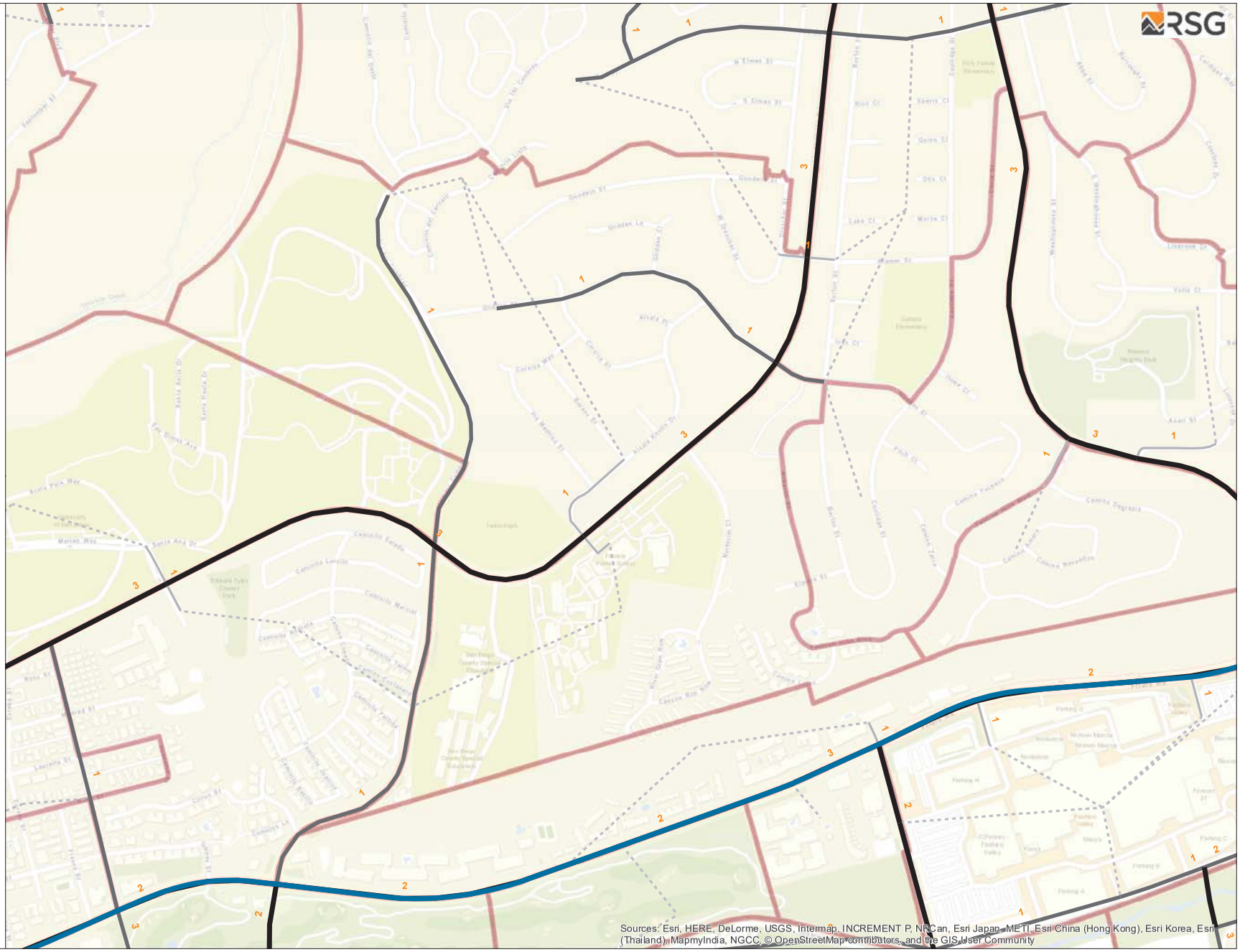
- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

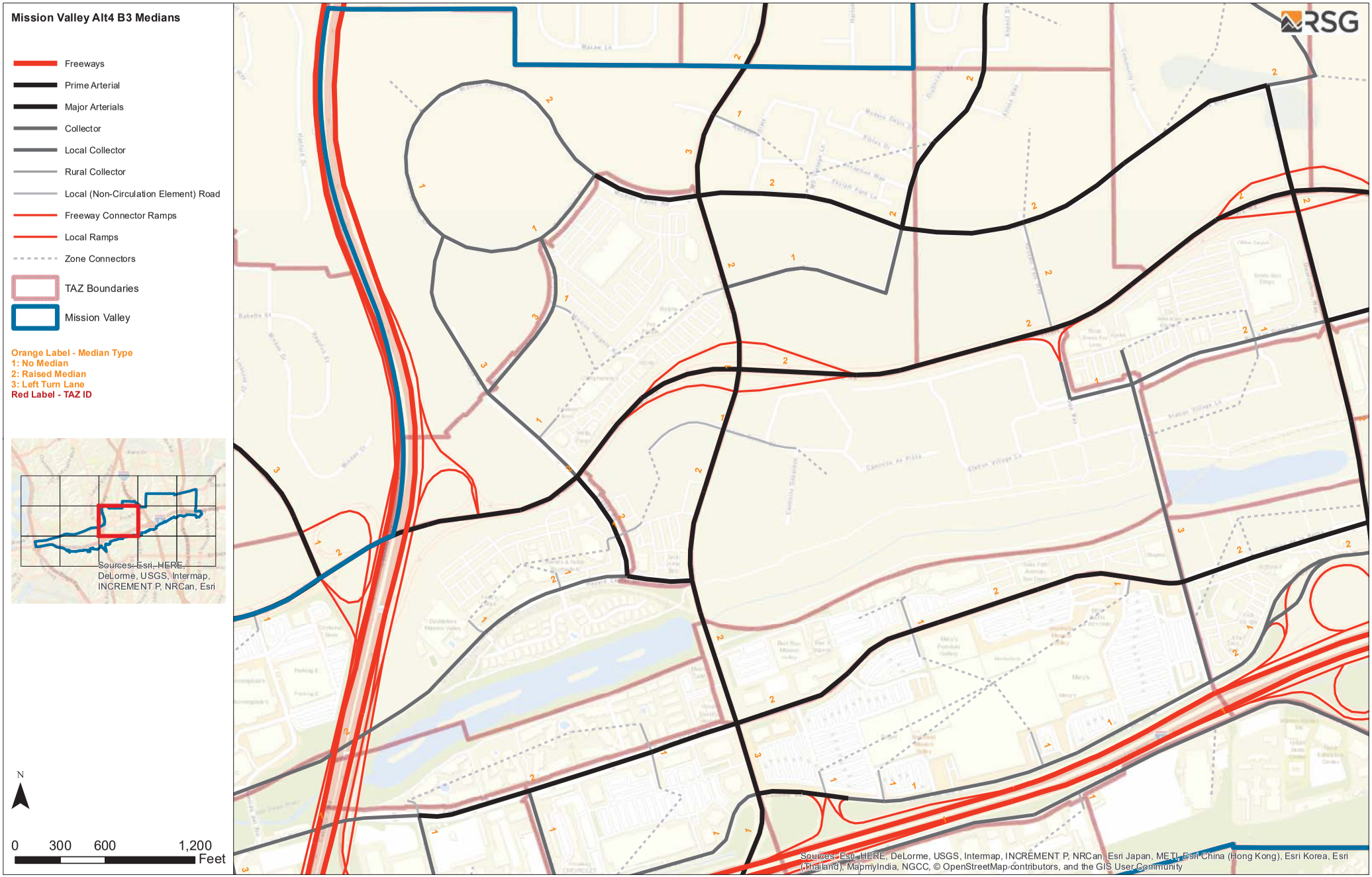
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID

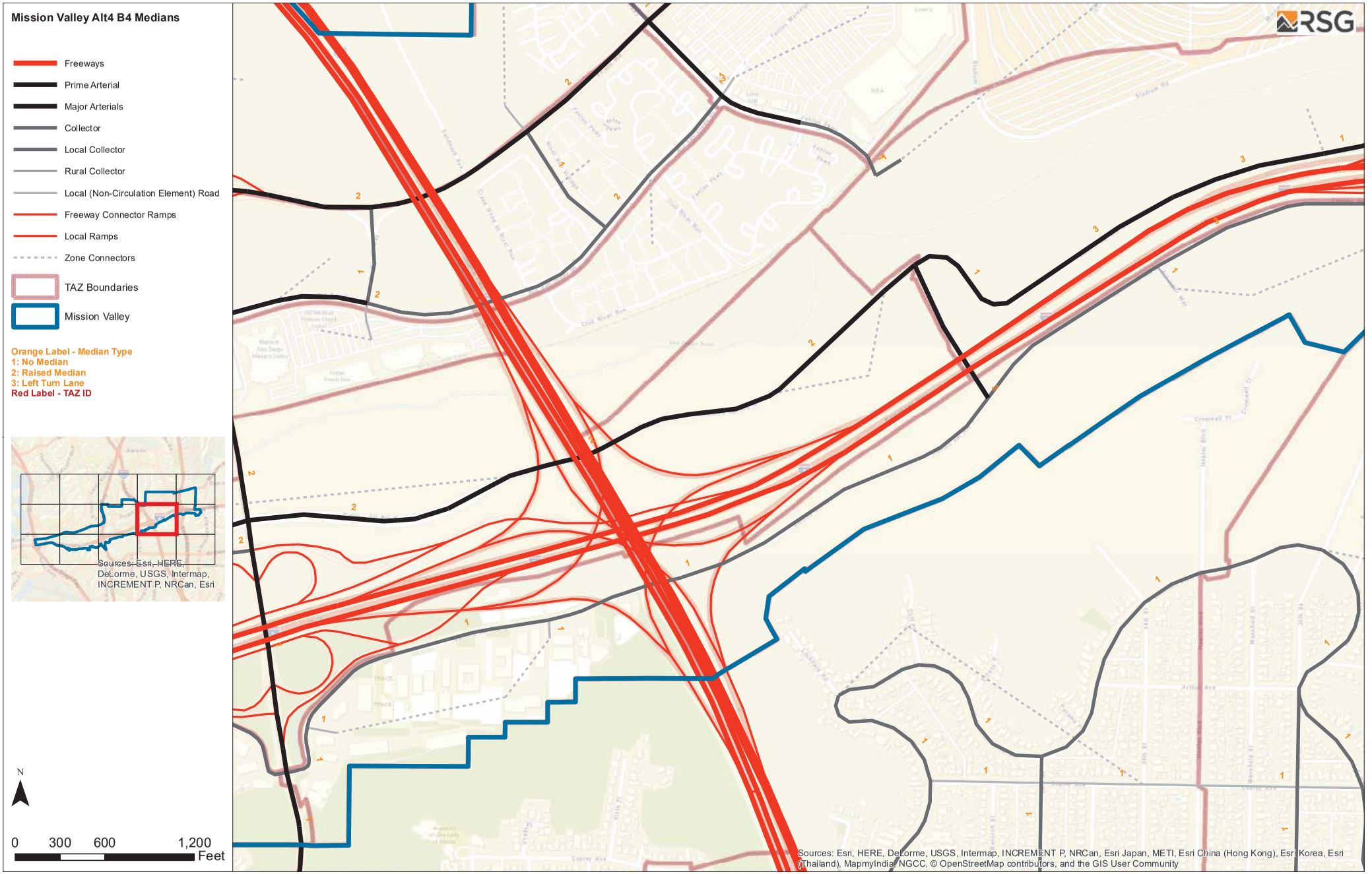


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0 300 600 1,200 Feet



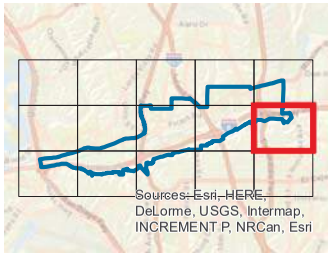

Mission Valley Alt4 B3 Medians
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 B4 Medians
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt4 B5 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

0 300 600 1,200 Feet

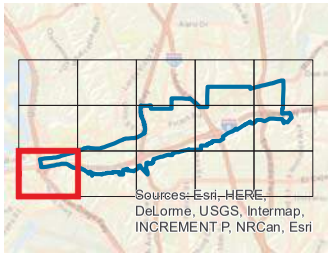
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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt4 C1 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

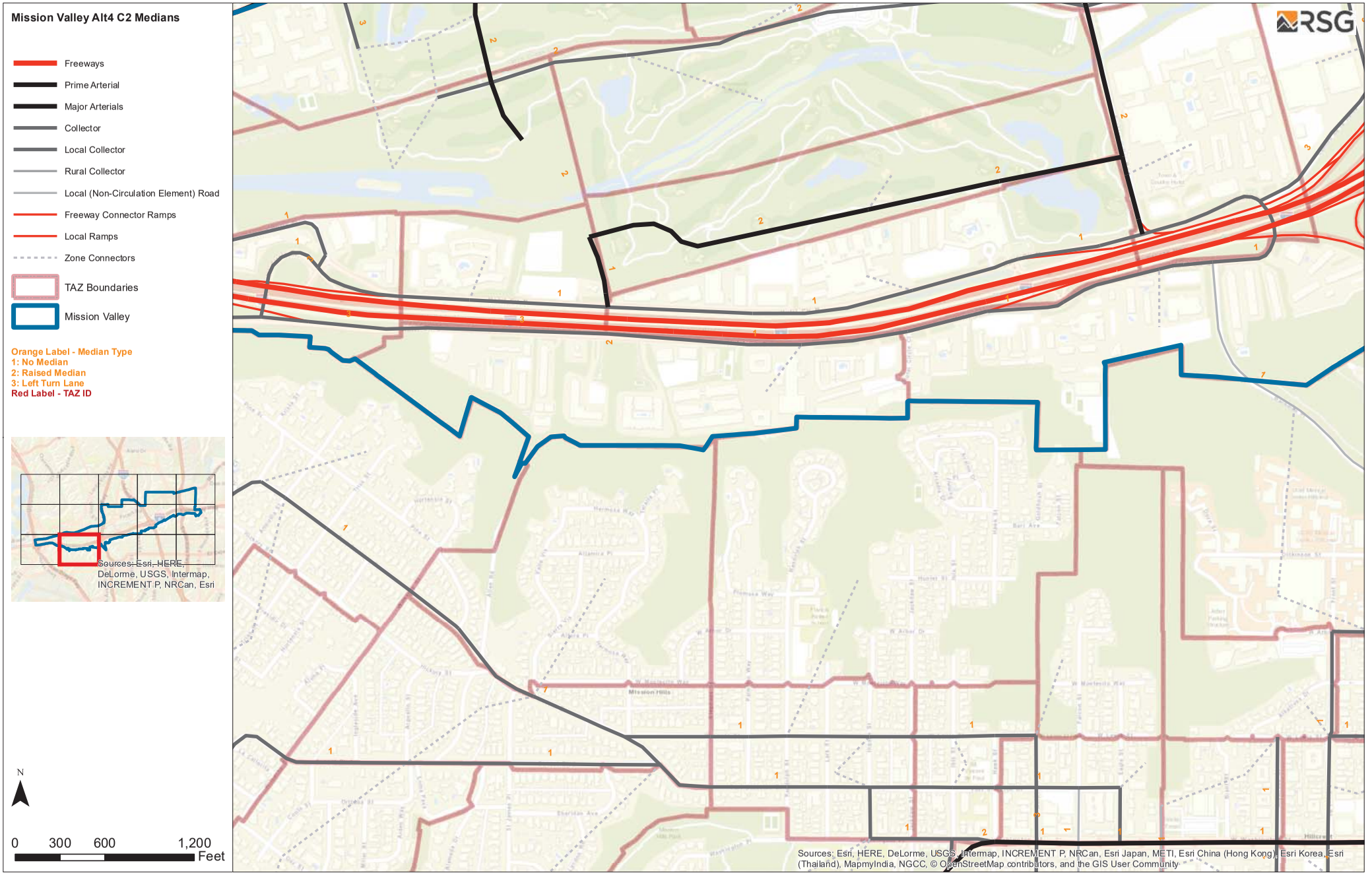
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2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID

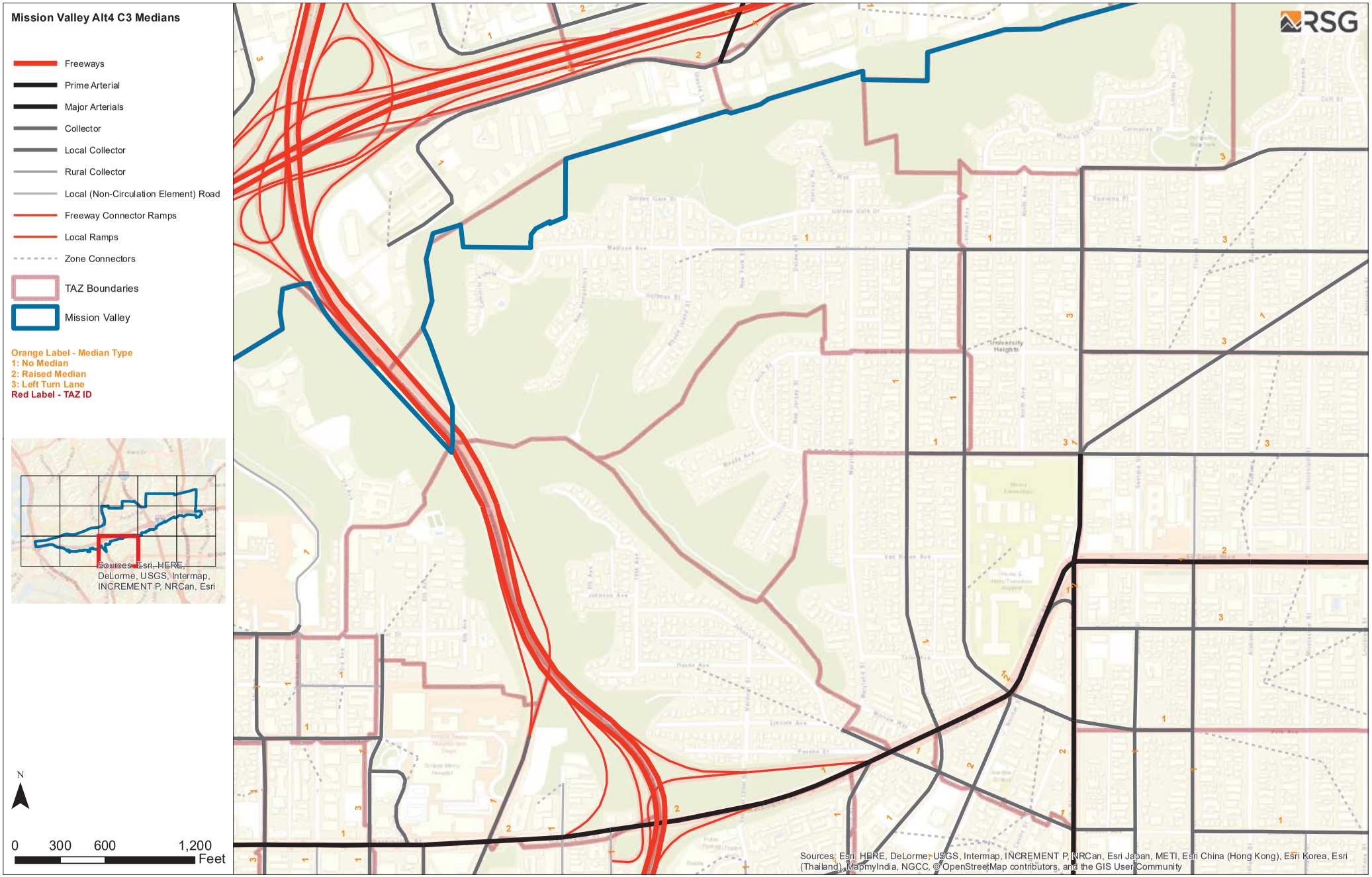


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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

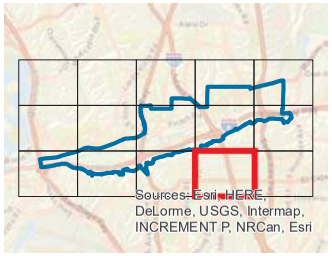

Mission Valley Alt4 C2 Medians
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 C3 Medians
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt4 C4 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
1: No Median
2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID



N

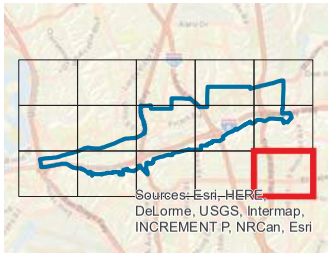
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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Mission Valley Alt4 C5 Medians

- Freeways
- Prime Arterial
- Major Arterials
- Collector
- Local Collector
- Rural Collector
- Local (Non-Circulation Element) Road
- Freeway Connector Ramps
- Local Ramps
- Zone Connectors
- TAZ Boundaries
- Mission Valley

Orange Label - Median Type
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2: Raised Median
3: Left Turn Lane
Red Label - TAZ ID

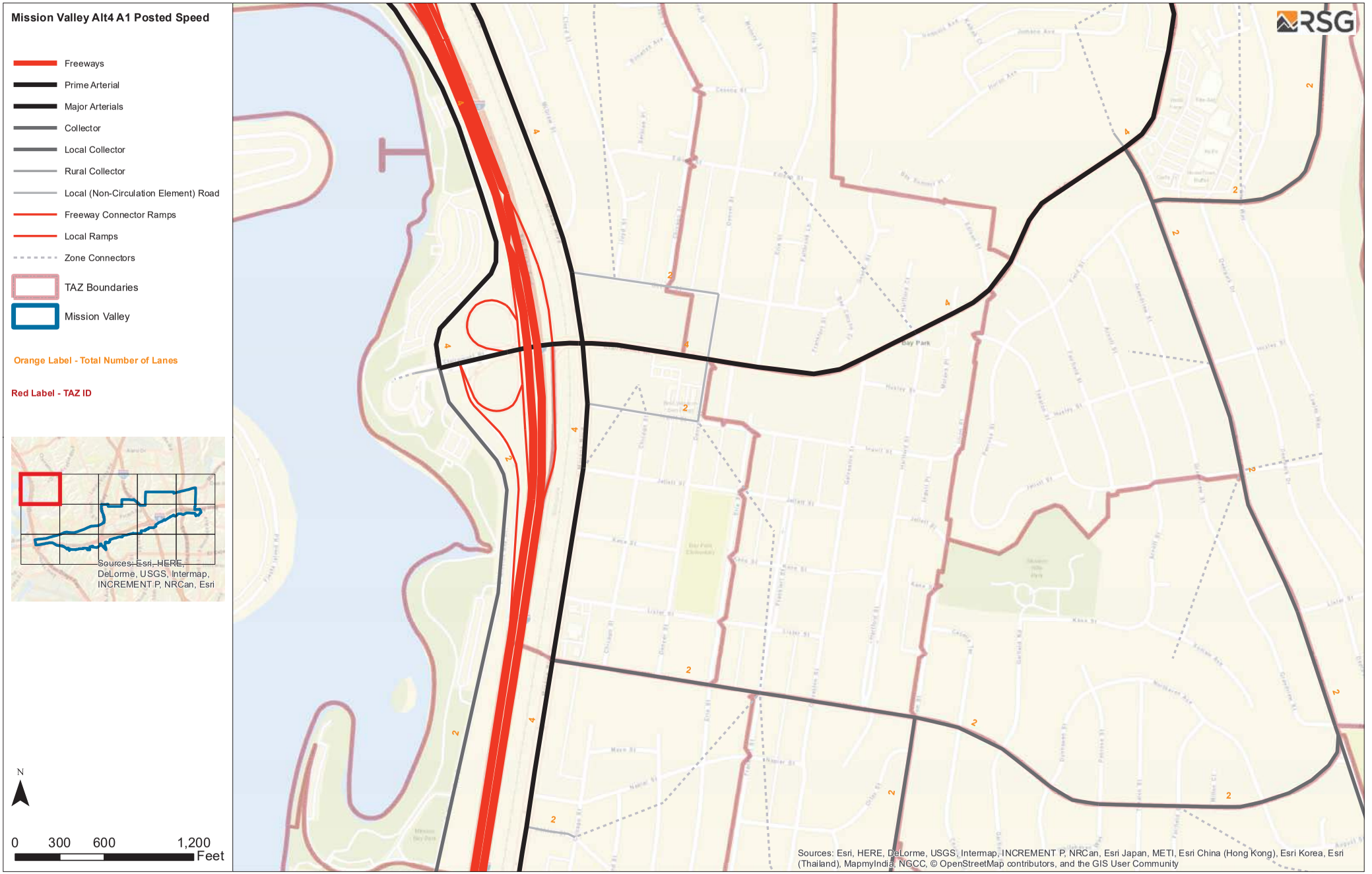


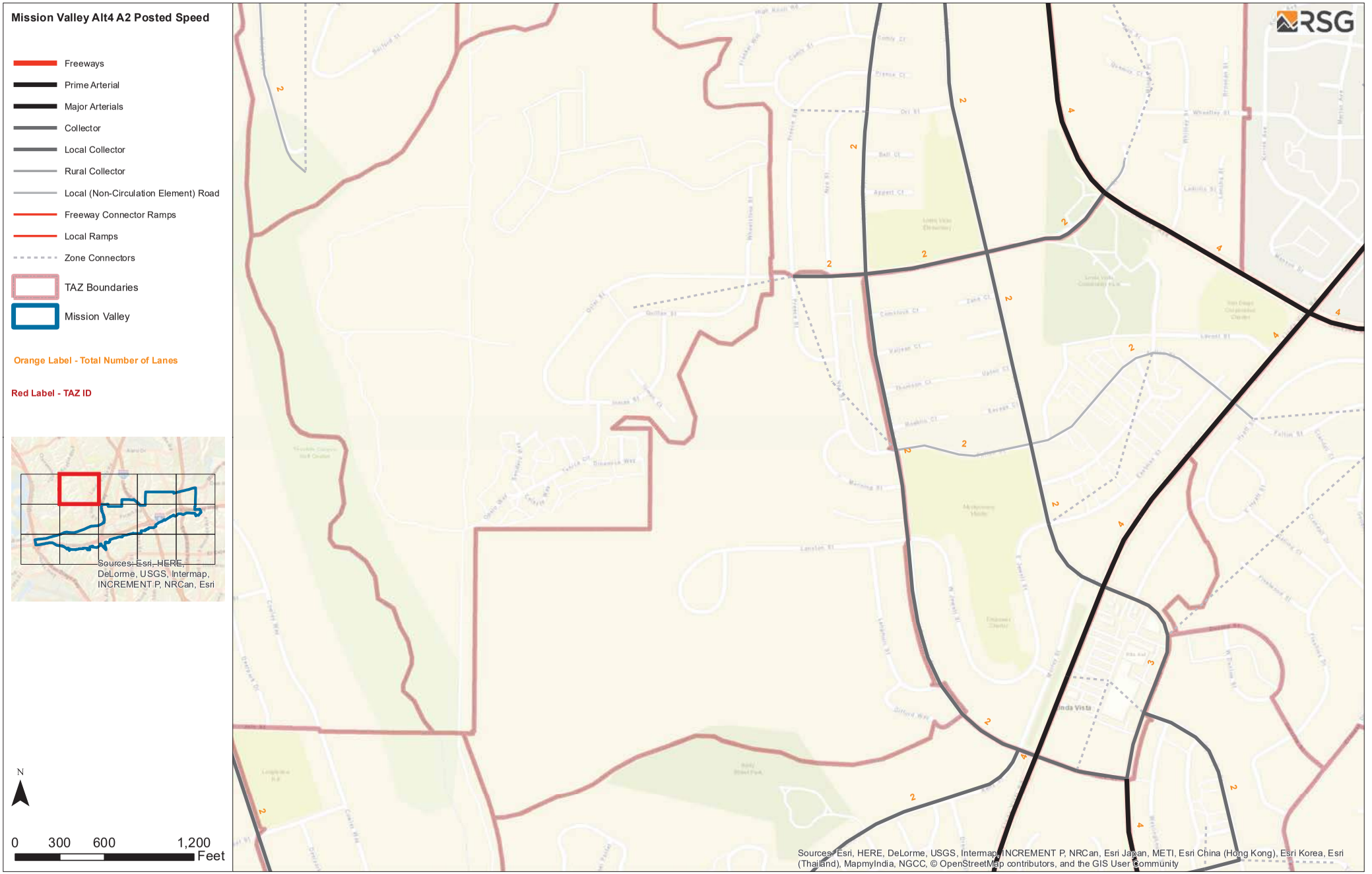
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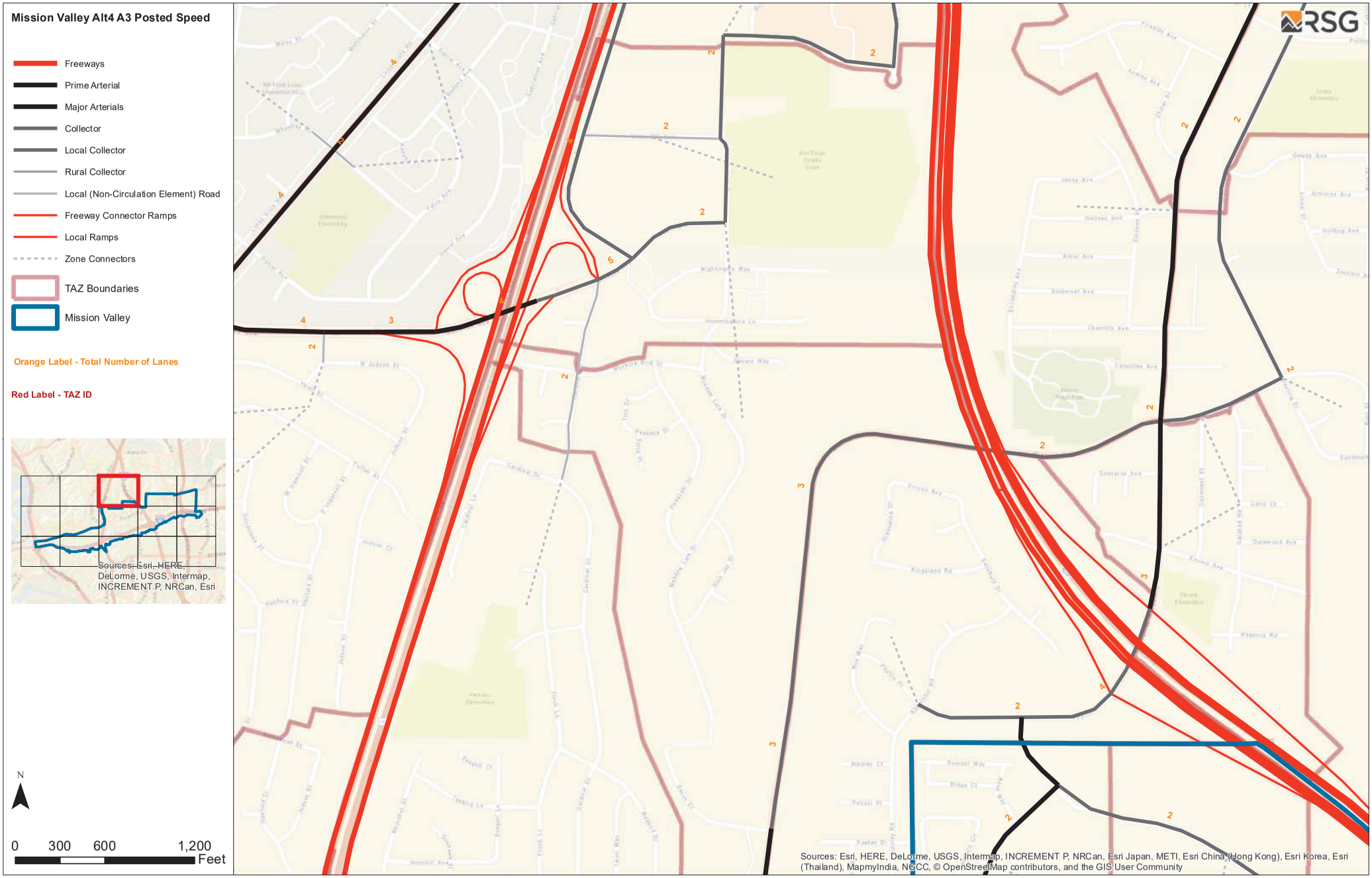
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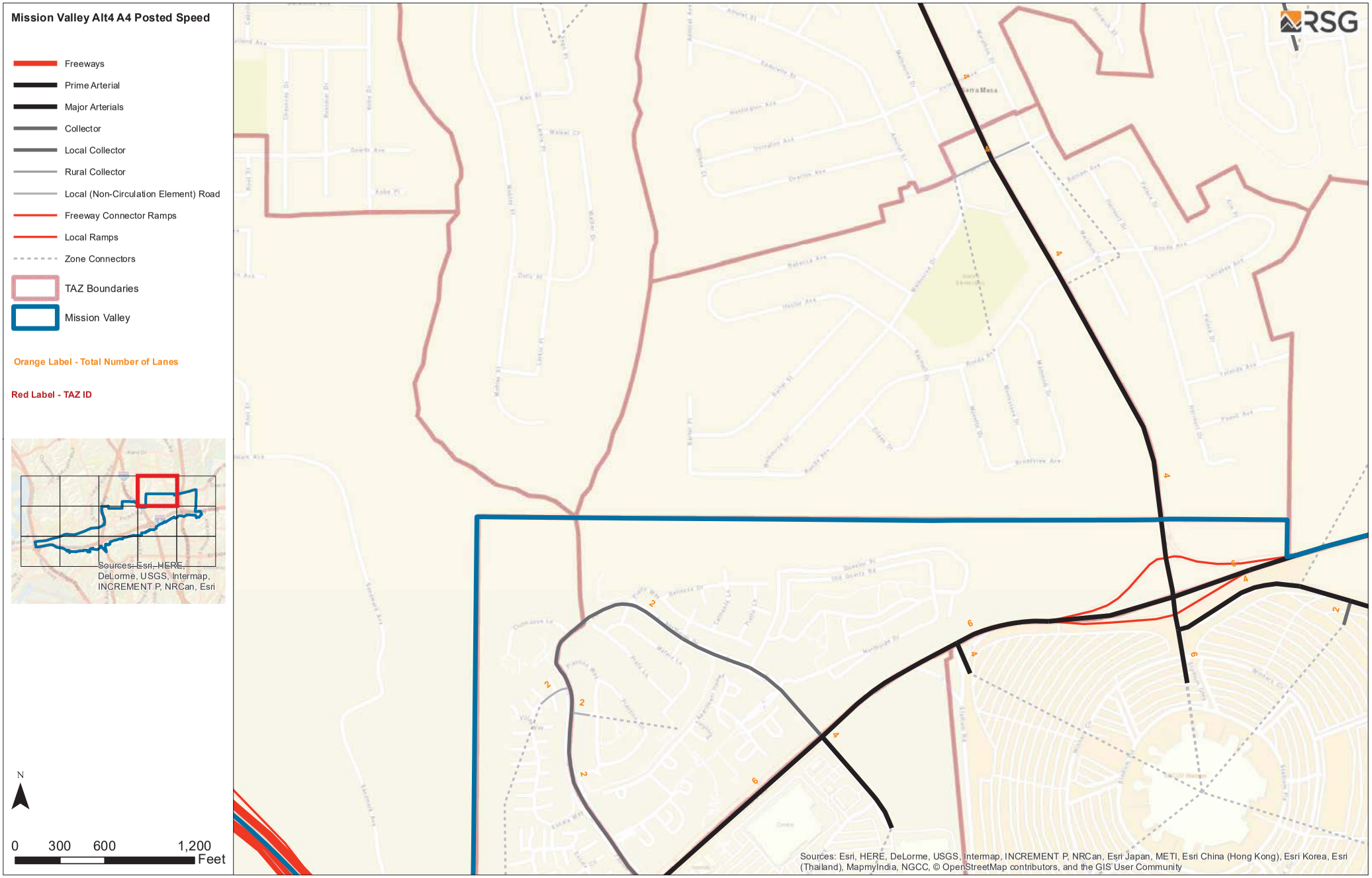
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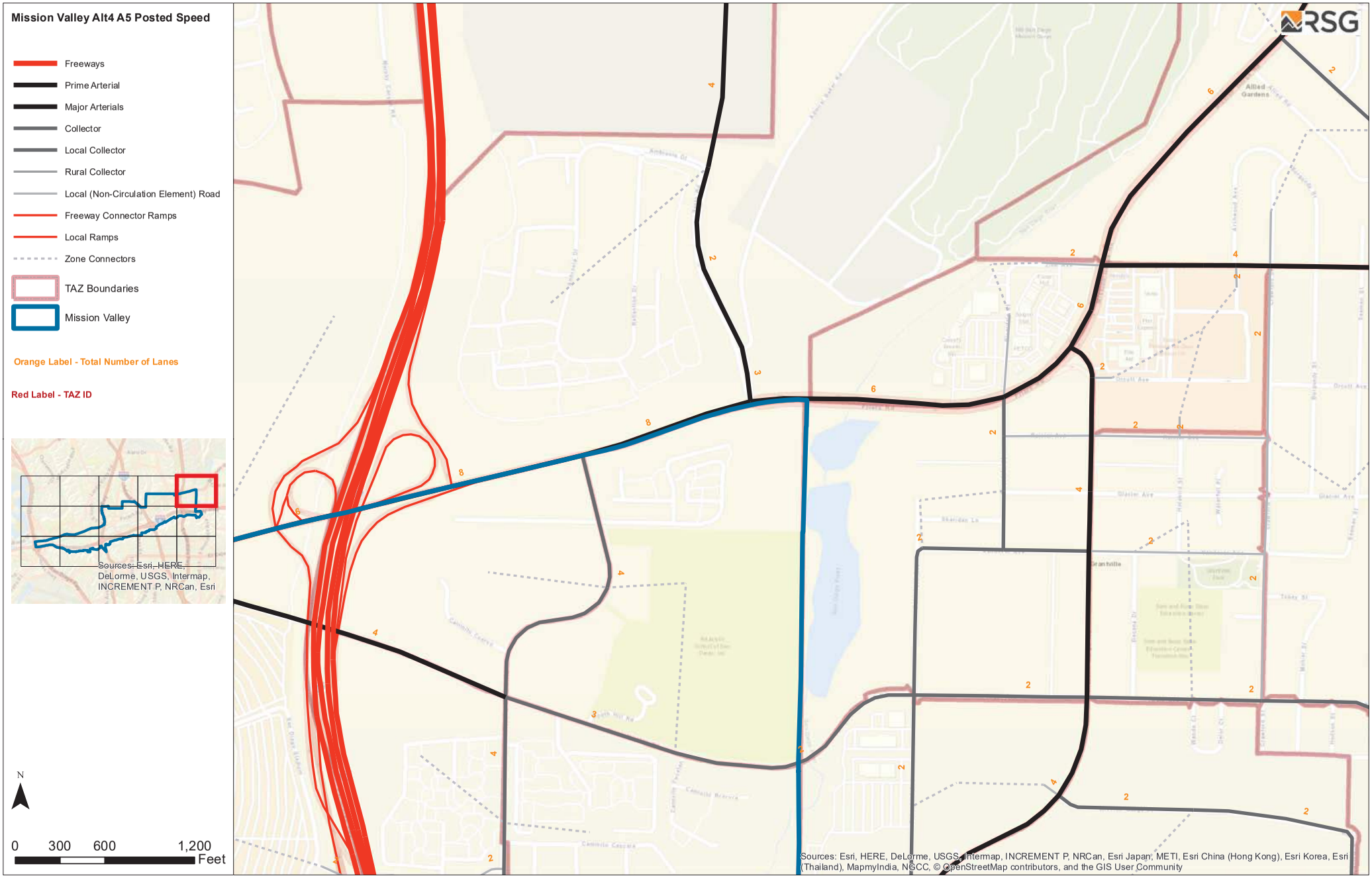
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

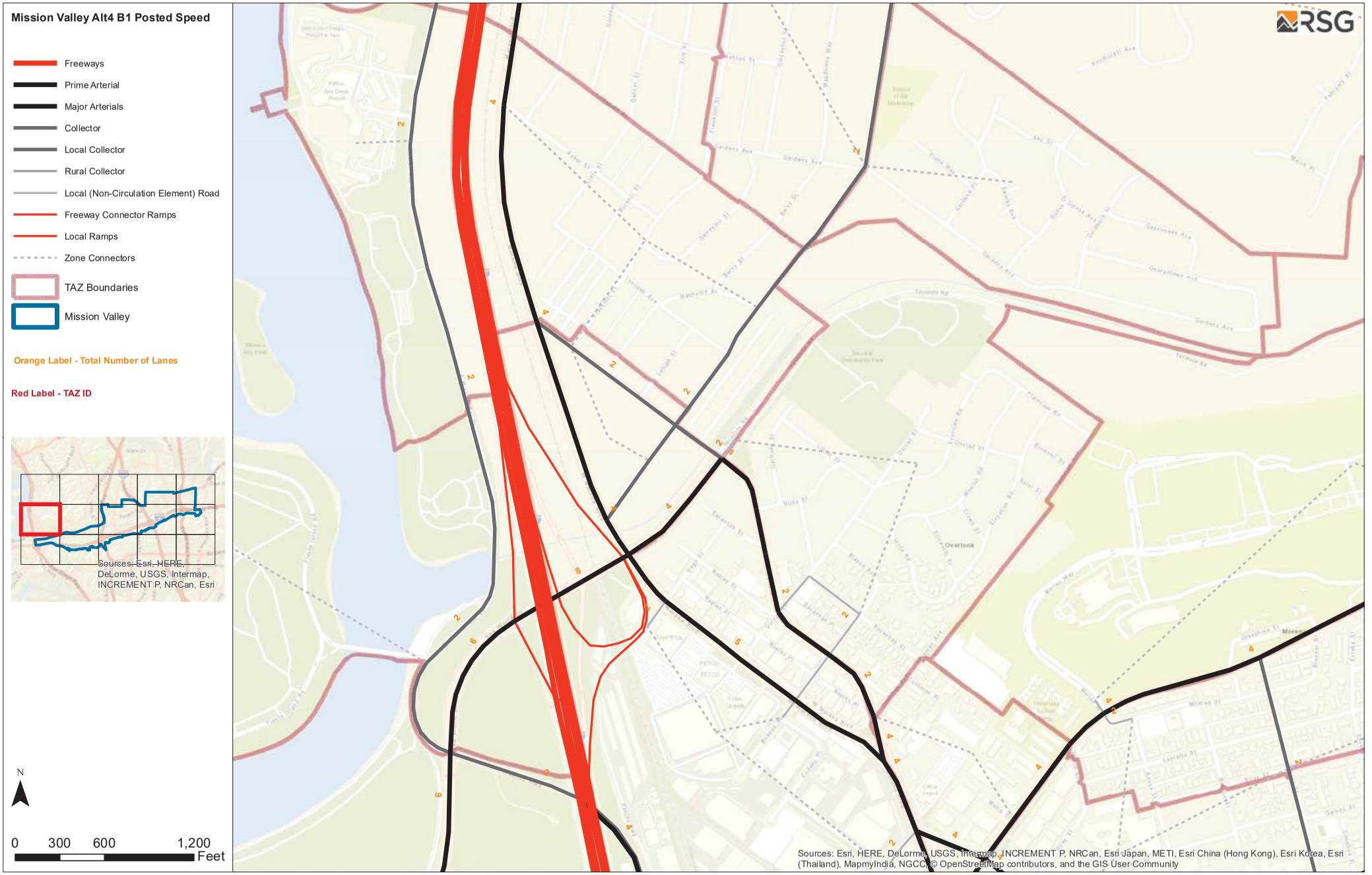

Mission Valley Alt4 A1 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

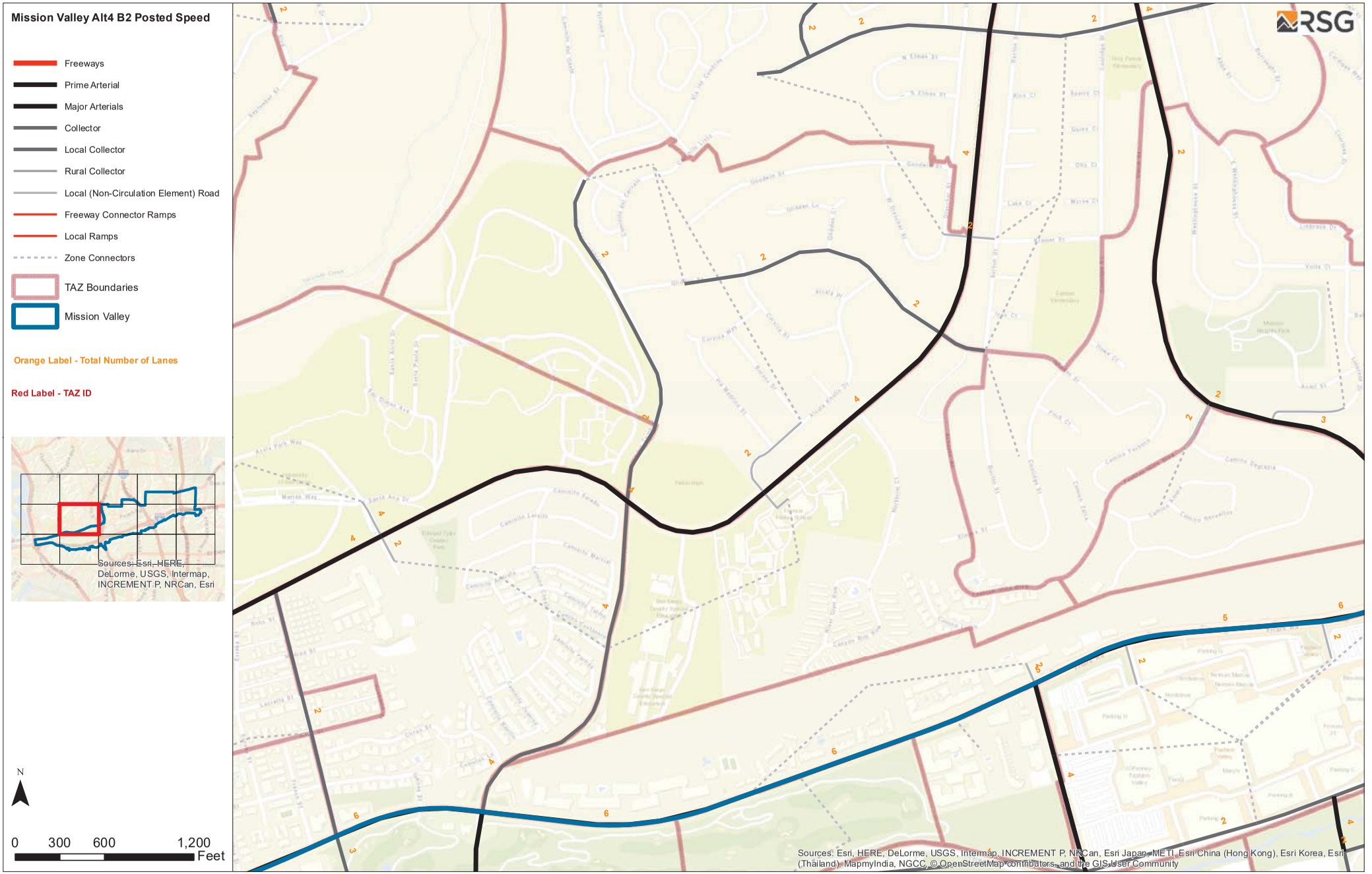

Mission Valley Alt4 A2 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

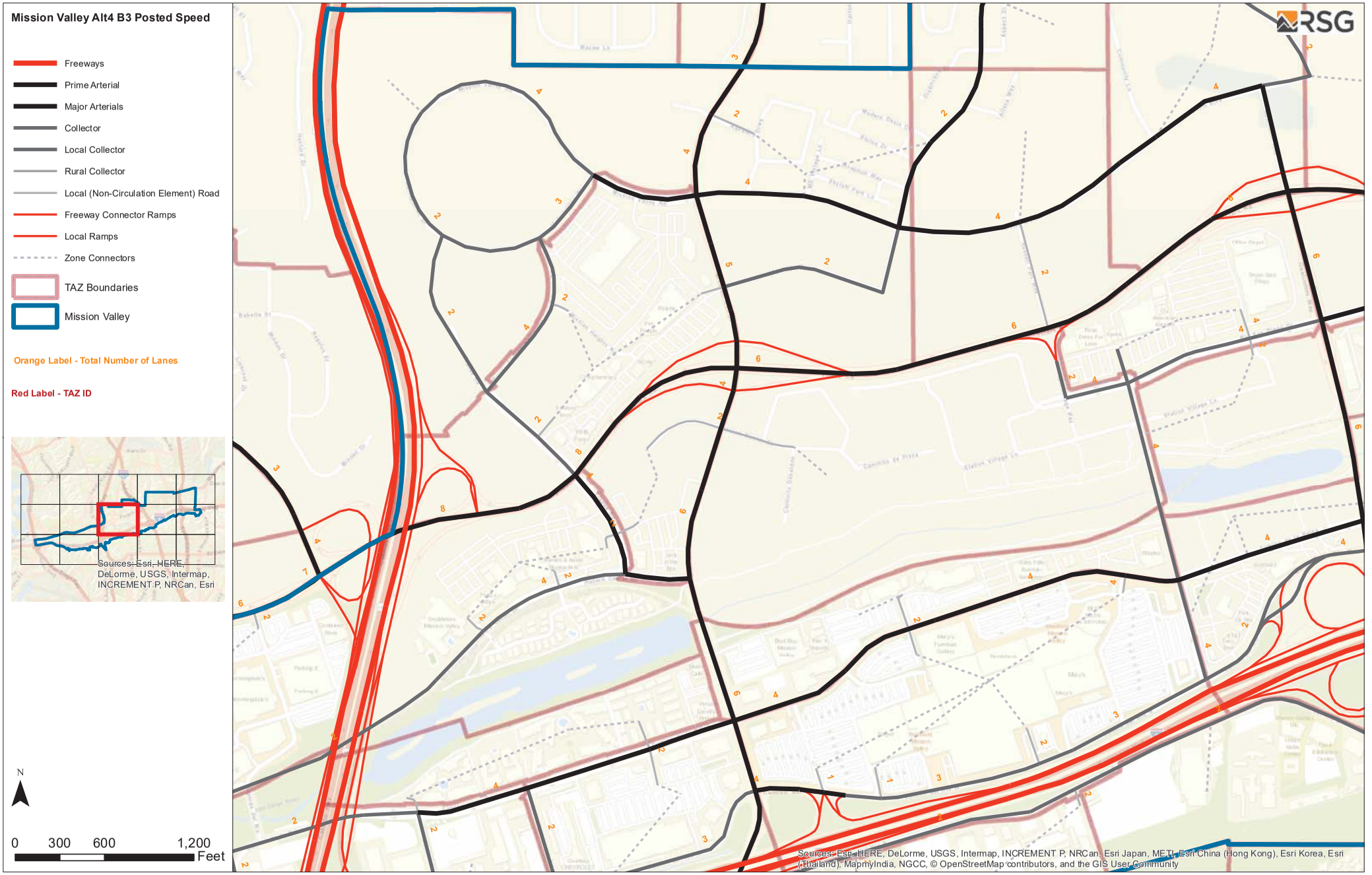

Mission Valley Alt4 A3 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

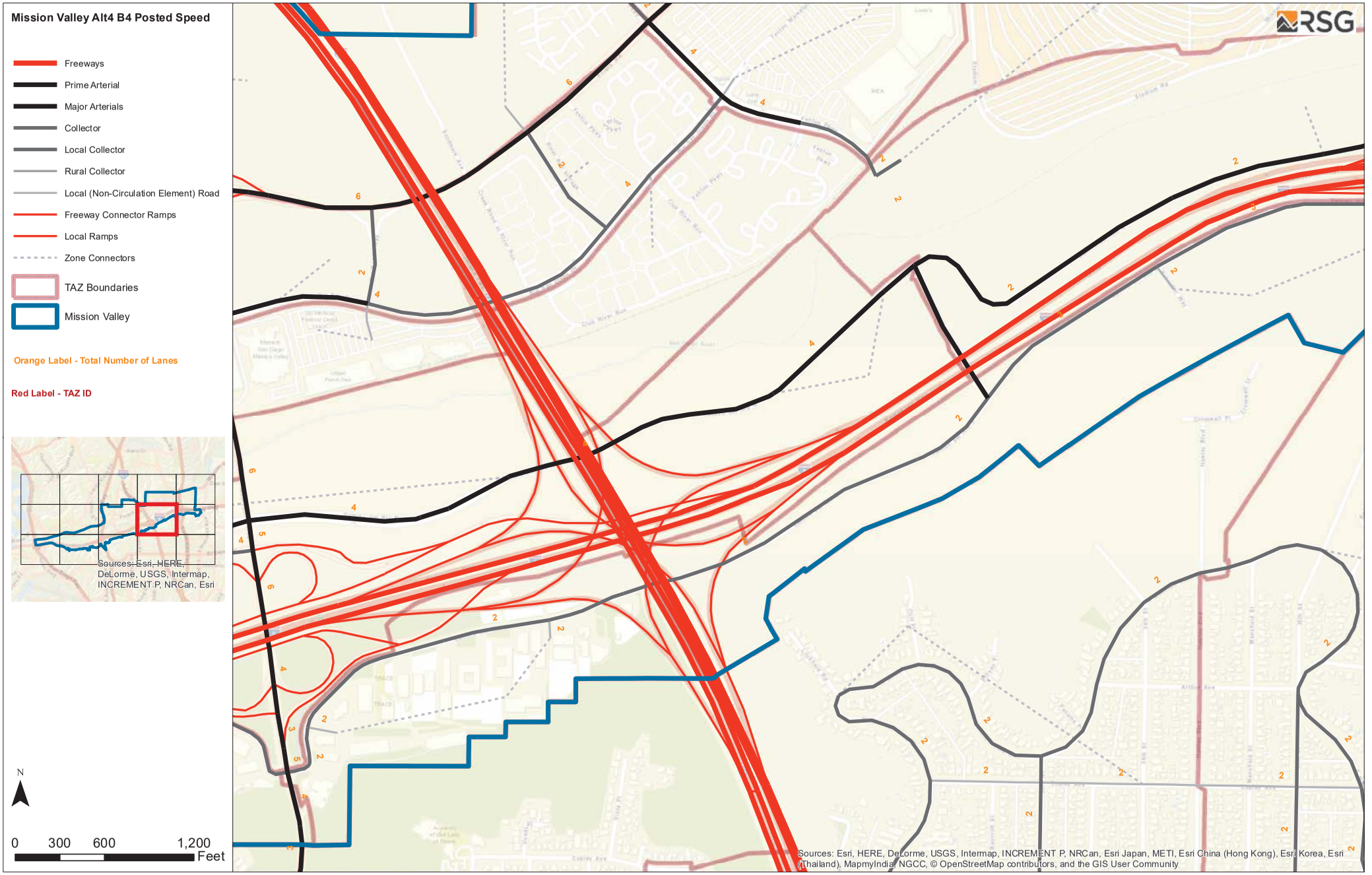

Mission Valley Alt4 A4 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

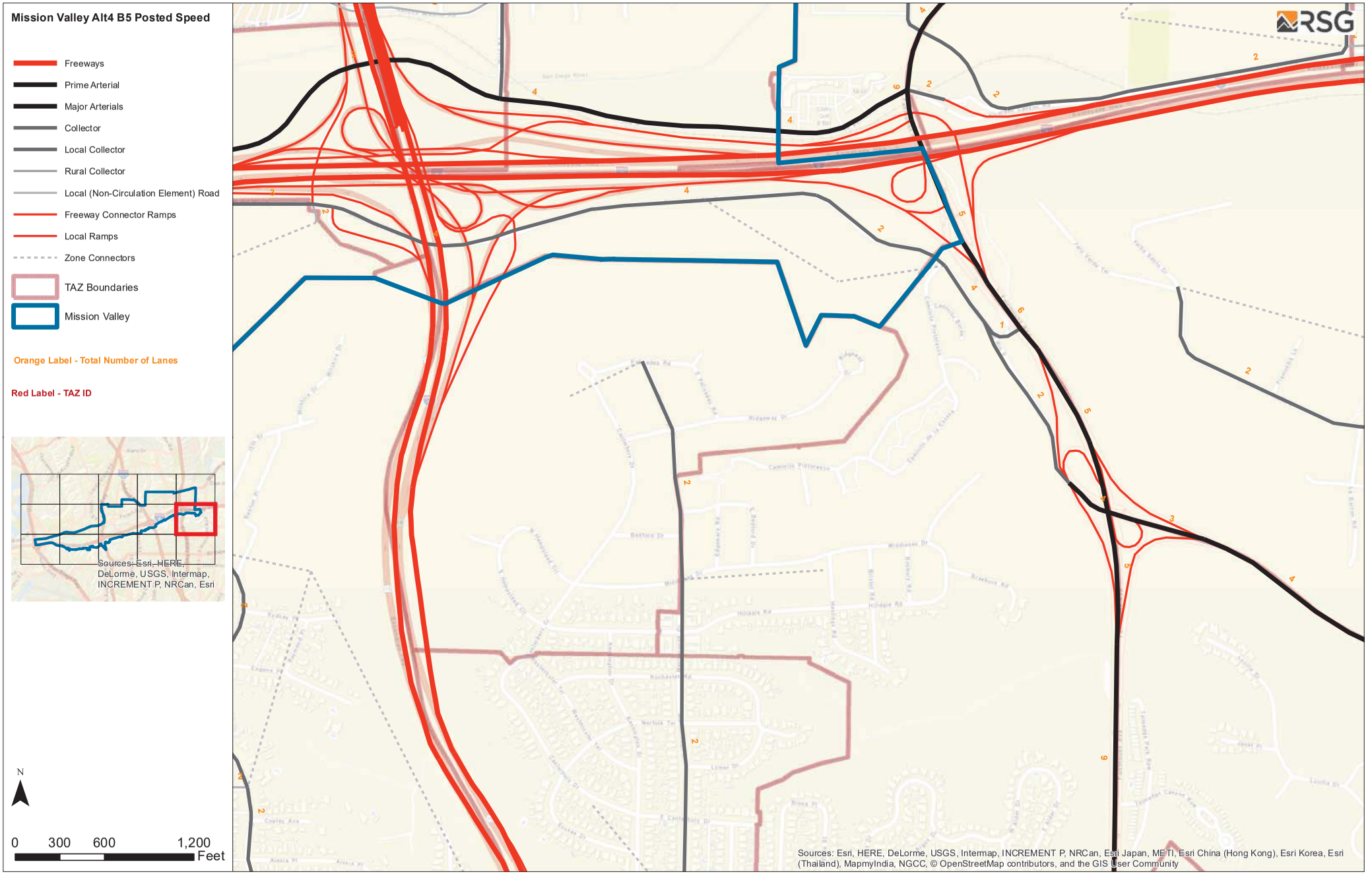

Mission Valley Alt4 A5 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

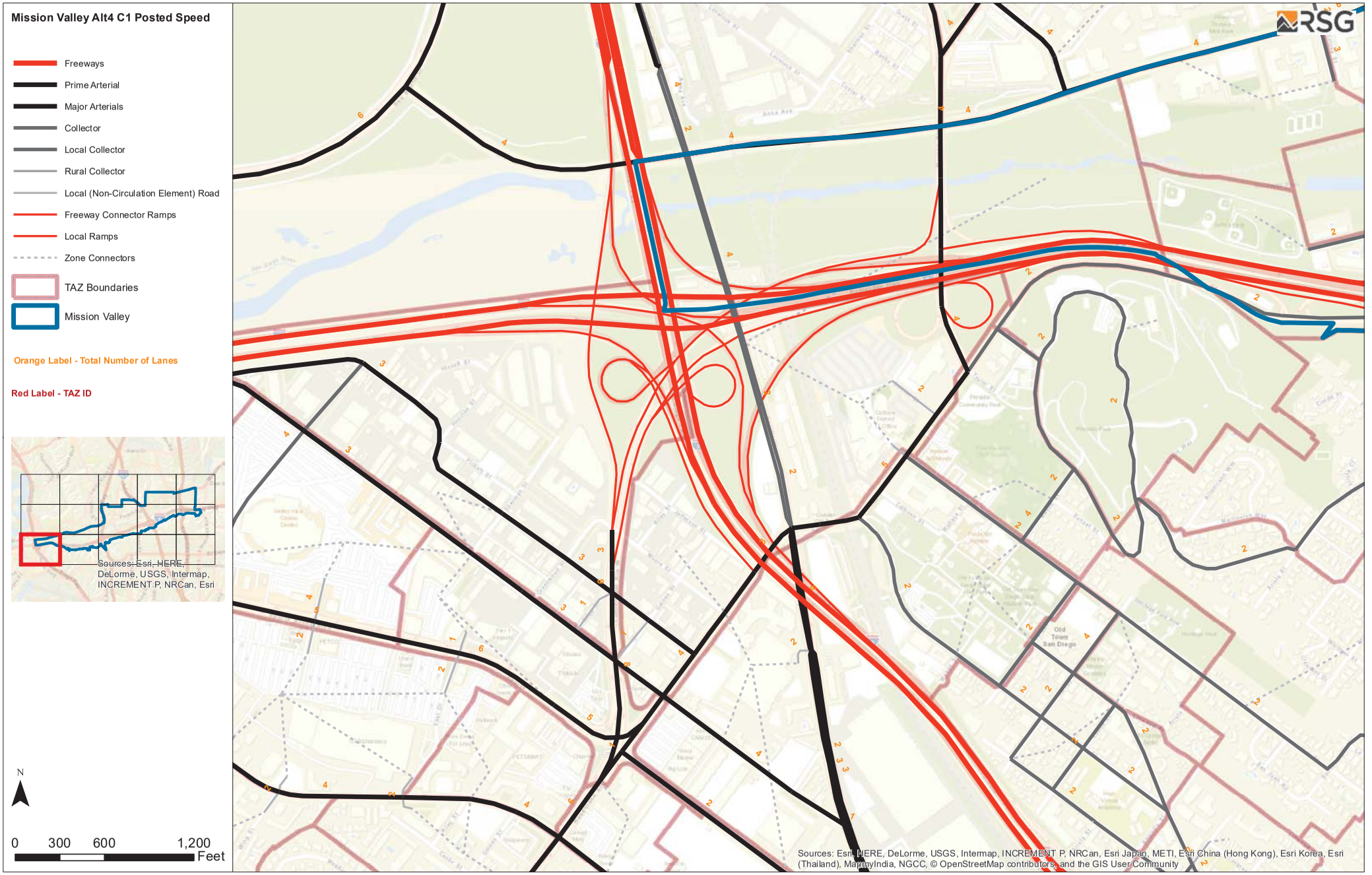

Mission Valley Alt4 B1 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

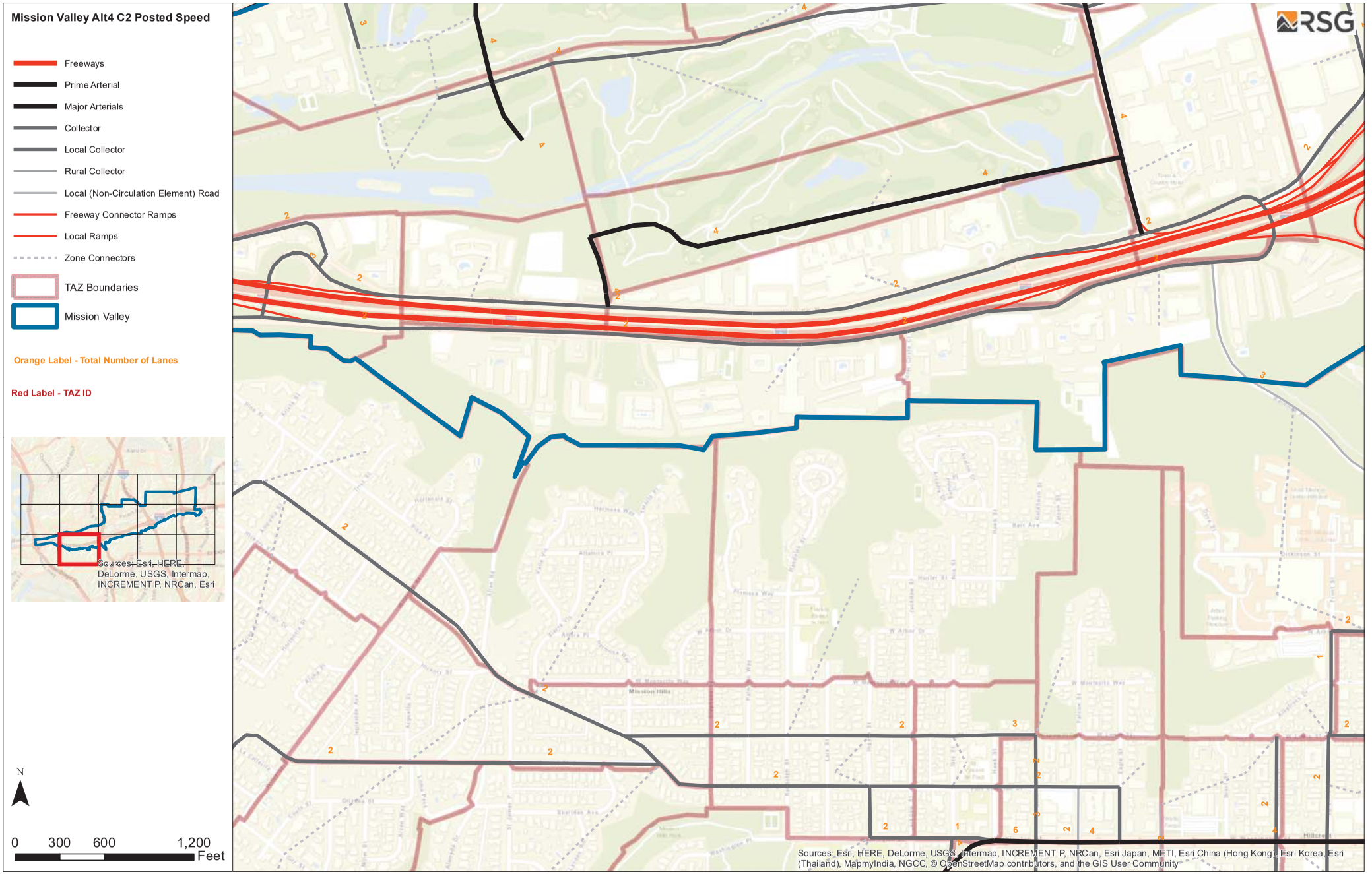

Mission Valley Alt4 B2 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

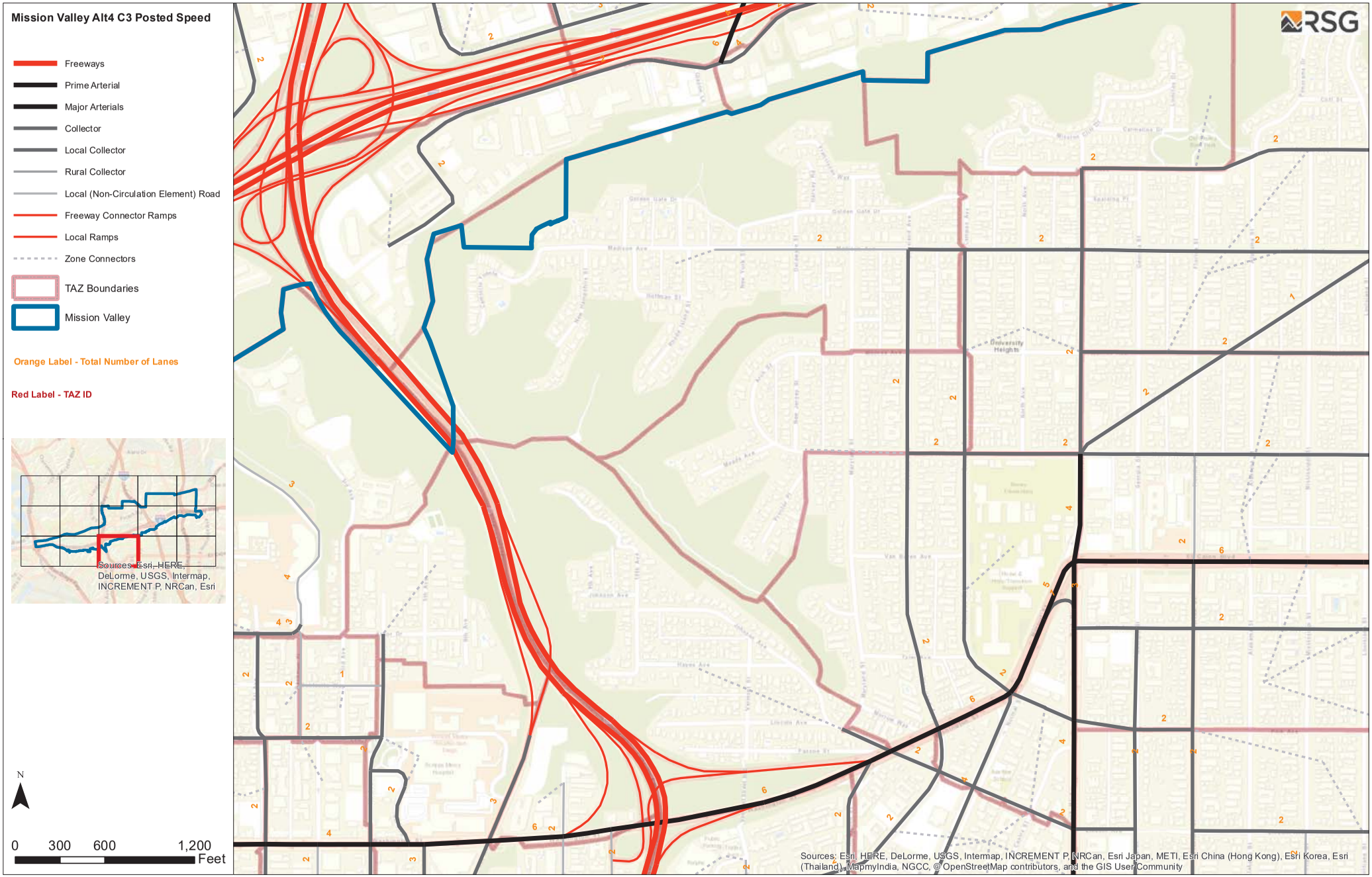

Mission Valley Alt4 B3 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

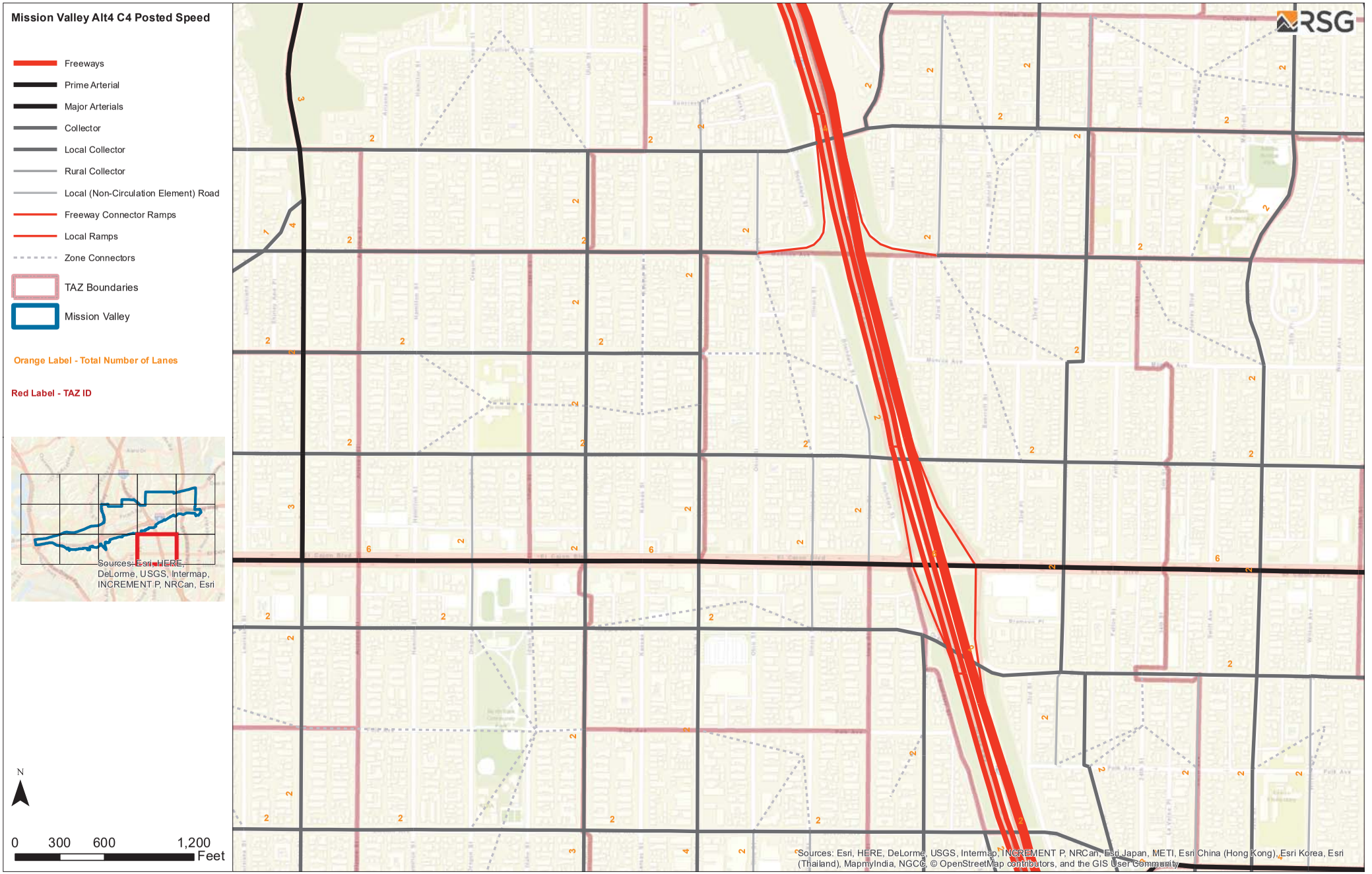

Mission Valley Alt4 B4 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

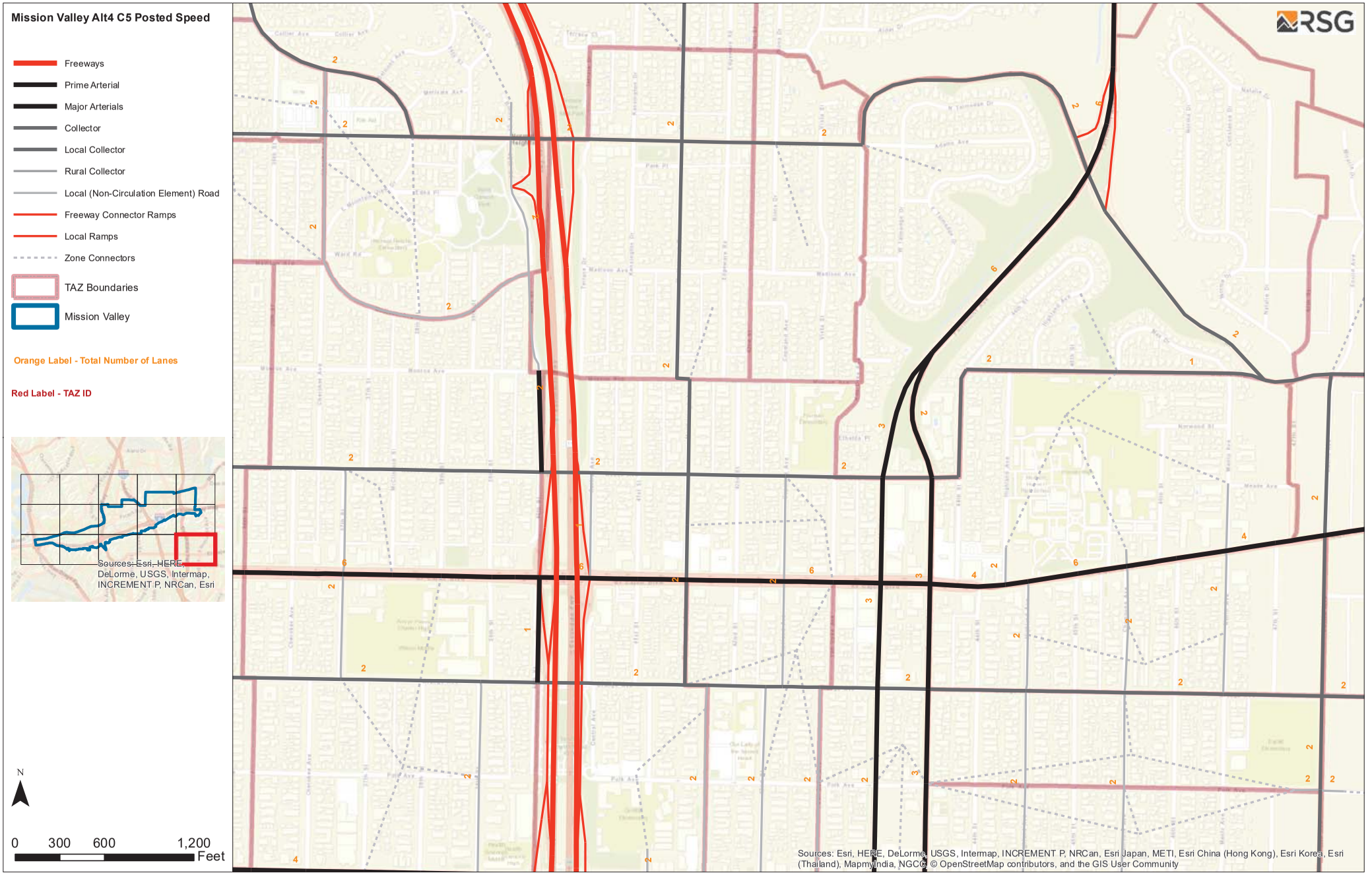

Mission Valley Alt4 B5 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 C1 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 C2 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 C3 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community


Mission Valley Alt4 C4 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
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Mission Valley Alt4 C5 Posted Speed
Freeways
Prime Arterial
Major Arterials
Collector
Local Collector
Rural Collector
Local (Non-Circulation Element) Road
Freeway Connector Ramps
Local Ramps
Zone Connectors
TAZ Boundaries
Mission Valley
Orange Label - Total Number of Lanes
Red Label - TAZ ID
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri
N
0 300 600 1,200
Feet
RSG
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Appendix G
Connectivity Assessment Paper

Assessment of Need for Missing Roadway Connections for the Mission Valley Community Plan Update

Issue: The Fenton Parkway connection over the San Diego River (to Camino del Rio North and Mission City Parkway), the Via Las Cumbres (VLC) roadway connection between Friars Road and Hotel Circle North and South, and the VLC interchange with I-8, are included in the adopted Mission Valley Community Plan and the Levi-Cushman Specific Plan. Analysis was conducted to determine whether these connections and interchange (modified version based on Caltrans Phase 2 Concept) should be recommended for inclusion in the Mission Valley Community Plan Update (MV CPU).

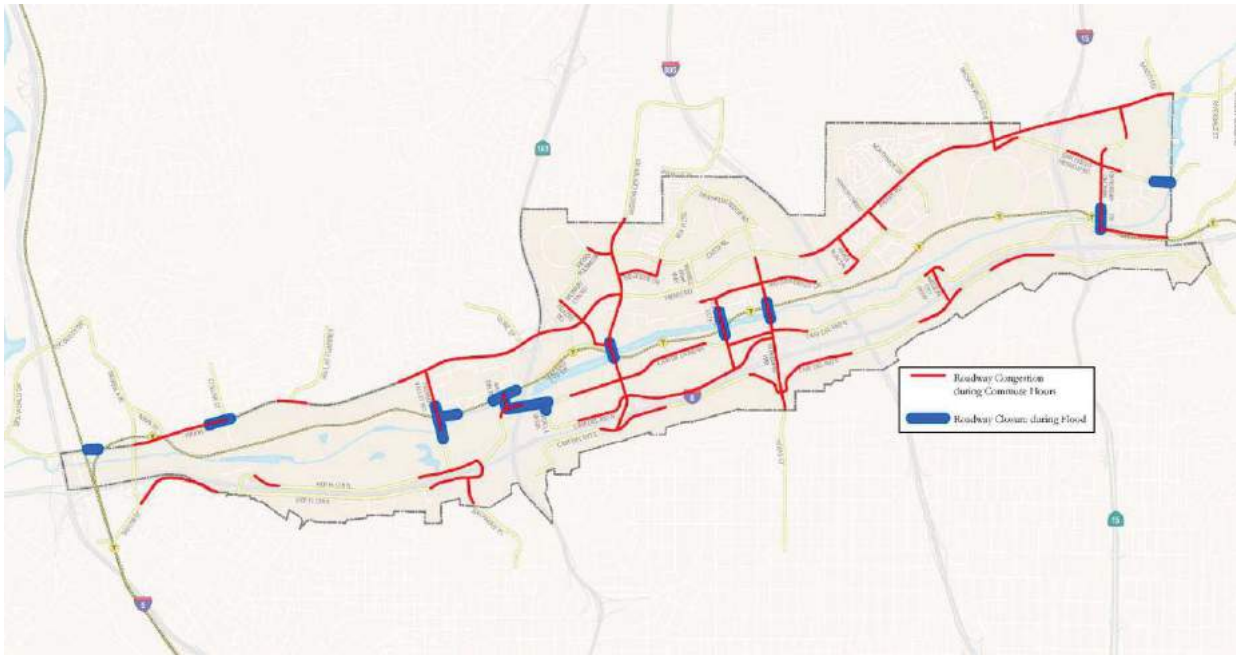
Conclusion: Based on the information below, staff recommends that the Via Las Cumbres roadway connection over the San Diego River and the VLC/I-8 interchange via Hotel Circle North/South (HCN/S) one-way couplet (per Caltrans Phase 2 Draft Concept), and the Fenton Parkway connection across the San Diego River, be included in the MV CPU to support the draft Plan's growth in Mission Valley.

Context: Steep slopes, the San Diego River, five freeways, and the San Diego Trolley form barriers to connectivity within as well as to and from Mission Valley. This has resulted in a planned street network that consists of fewer and wider streets and intersections to accommodate the movement of people and goods, and less distributed/more concentrated traffic flows, making many of these streets and intersections barriers in and of themselves, especially for transit users, cyclists and pedestrians.

Analysis:

Flooding

During recurring flooding events in Mission Valley every street crossing the San Diego River (seven) and some roadways adjacent to the River (three) become impassable.



The only ways to travel across the San Diego River in Mission Valley during these events are via SR 163 and I-15. Since pedestrians and cyclists cannot use the freeway, they are unable to cross the river during flooding events.

Following are the surface streets that close due to flooding:

- Fashion Valley Road across river
- Riverwalk Drive (behind Fashion Valley Mall) adjacent to river
- Avenida del Rio across river
- Camino de la Reina from just west of Avenida del Rio to just east of Camino de la Siesta
- Mission Center Road across river
- Camino del Este across river
- Qualcomm Way across river
- Ward Road across river
- San Diego Mission Road across river
- Friars Road from west of Colusa to just east of Colusa Street

Following are transit services that are rerouted and impacted/delayed due to flooding:

- Significant flooding at Fashion Valley Road and Fashion Valley Transit Center has required transit operations to relocate to the Mission Valley Center Transit Station affecting all transit routes that utilize the Fashion Valley Transit Center. Flooding-related closures of the Fashion Valley Transit Center impact Routes 1, 6, 20, 25, 41, 88, 120, and 928, and may also require Sycuan Green Line service to bypass the station.
    - Route 6 normally uses Avenida Del Rio and the Fashion Valley Transit Center.
    - Routes 1, 88, and 120 normally use Fashion Valley Road to access the Fashion Valley Transit Center.
    - Route 14 normally uses Ward Road to access the Mission San Diego and Grantville Trolley Stations.

- Transit services not rerouted but impacted/delayed due to flooding:
    - Transit routes that are not rerouted during a flooding event are affected by increased traffic and congestion along their routes caused by the other rerouted vehicular traffic.

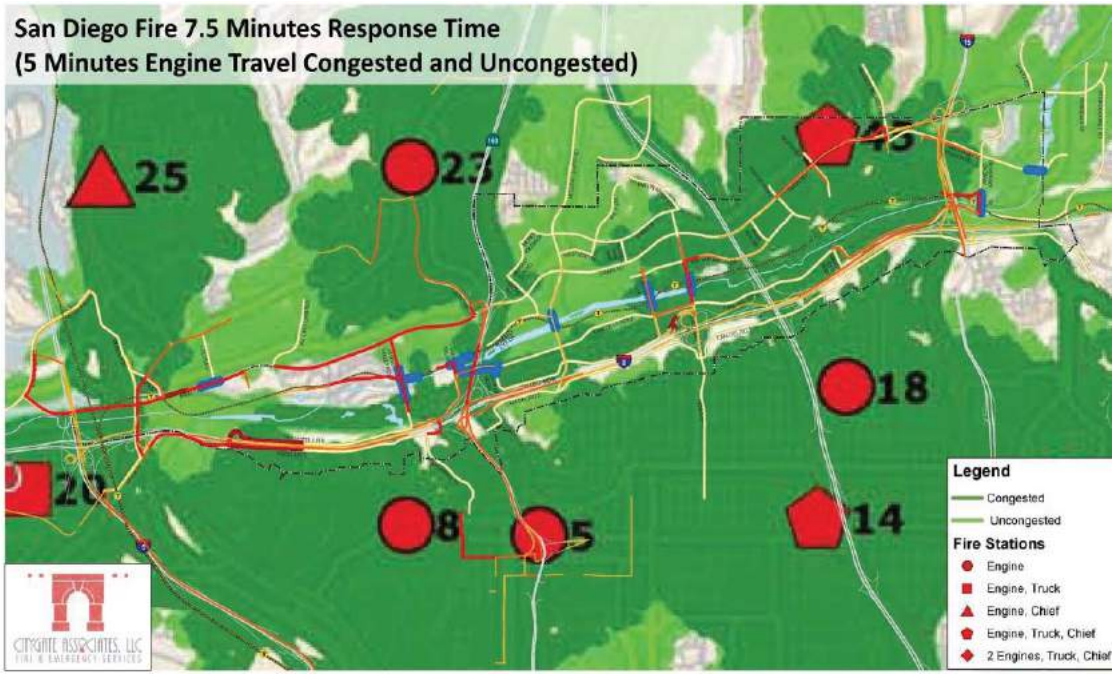
Emergency response concerns during flooding

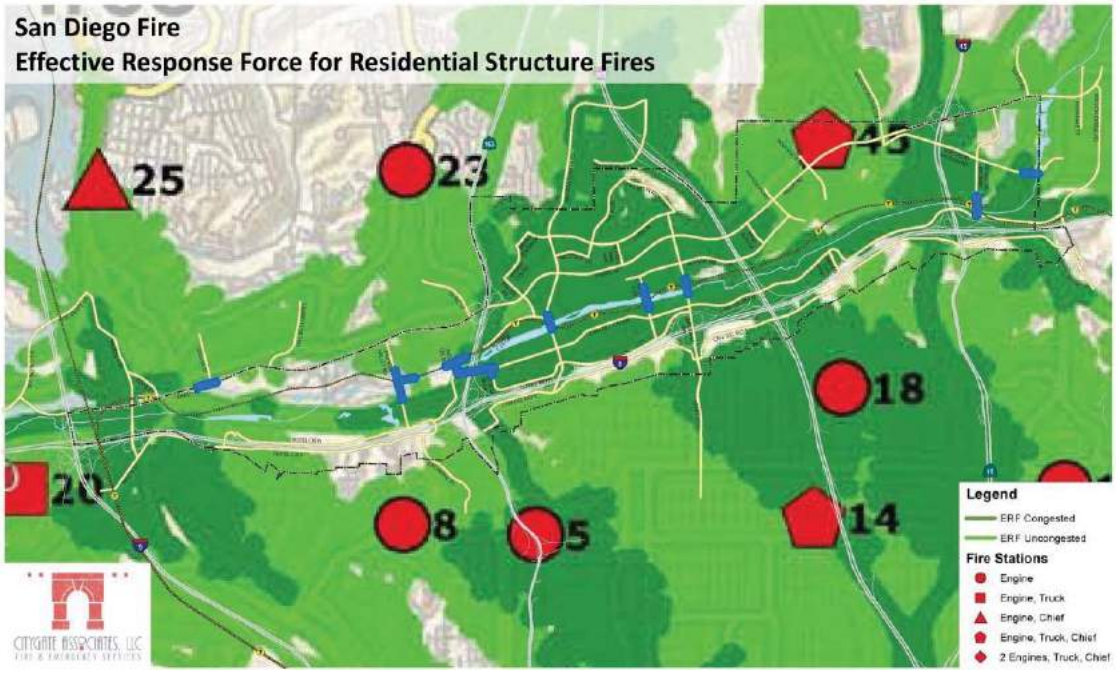
- Emergency response during flooding events (for both flood-related emergencies/rescues and non-flood-related emergencies) is significantly hampered by a lack of north-south connectivity in the community.
- See below for general Public Safety and Emergency Response considerations, which are more critical during flooding events, due to the extensive street closures that occur.

<u>Public Safety and Emergency Response considerations</u>

- Citygate Report (2017) does not specifically call out any gaps in Mission Valley in their 2017 analysis however, the Map Atlas shows gaps in coverage within Mission Valley, specifically in:
    - Map 3b 5 Minute Engine Travel Congested and Uncongested (Pg. 17) – There is an apparent gap around the Riverwalk Golf Course (See map inserted below.);
    - Map 4b ISO 1.5 Mile Travel Distance – There are gaps at the Riverwalk Golf Course and central Mission Valley around Mission Center Road (See map inserted below.); and
    - Several other maps show some gap in coverage in the Riverwalk Golf Course.
- Connections would provide improved police, fire-rescue, lifeguard/swift-water rescue, and ambulance emergency response times.
- Connections would provide improved emergency transport times to hospitals.
- Connections would reduce the risk that an area of the community will become inaccessible if all or a part of a roadway is blocked.
- Connections would allow fire stations to serve a greater area; especially important when multiple stations are responding to incidents and/or covering for stations that are busy.

- Connections would provide multiple approach route options for emergency response and alternate routes for diverting traffic during emergencies that close road(s); important because there are often multiple responders to an incident who need to gain access from different directions to the area and stage.
- Connections would improve access to UCSD Medical Center.





Additional notes on public safety – emergency/disaster planning, response and recovery:

- The most frequently recurring hazard is flooding which has repeatedly closed every surface street that crosses the San Diego River in Mission Valley.

- Much of Mission Valley is in the very high fire hazard severity zone and is identified as a High Potential area for liquefaction in the Seismic Safety Study. (Links: VHFHSZ, Seismic Safety Study)
- Potential for multiple co-occurring incidents is greater, such as freeway/transportation incident on limited number of facilities during evacuation and/or disaster response.
- Climate change adaptation and resilience considerations.

Vehicular Traffic Capacity and Operations

- Connections provide more direct travel between destinations.
- Connections decrease travel distance/out-of-direction travel.
- Connections distribute traffic and reduce volumes on streets and at intersections.
- Connections provide safety benefits of reduced conflicts at intersections.
- Connections provide more route options/redundancy/resiliency during incidents, construction and maintenance activity.
- Connections better connect adjacent communities – Linda Vista, Old Town, and Uptown to MV and each other.

Via Las Cumbres connection over San Diego River and Interchange with I-8 via Hotel Circle North and South one-way reconfiguration in Mission Valley

Projected Via Las Cumbres Average Daily Traffic (ADT) Volumes:

- 19,400 ADT over San Diego River;
- 23,200 ADT from Street B to HCN; and
- 30,300 ADT between Hotel Circle North and South.

Forecast Diverted Traffic Volumes without VLC & I-8/HCN/S Interchange			
Freeway or Roadway Segment	VLC IN Unadjusted ADT	VLC OUT Unadjusted ADT	Delta ADT
SR 163 Southbound	71,700	75,000	3,300
Friars Road west of SR 163	50,300	52,300	2,000
Friars Road east of Napa	18,900	23,700	4,800
Fashion Valley Road	7,800	11,600	3,800
FV Mall Dwy behind Mall	14,600	19,000	4,400
Avenida Del Rio	16,900	20,600	3,700
Camino de la Reina	13,500	15,600	2,100
Hotel Circle North	15,700	23,700	8,000
Hotel Circle South	16,400	23,300	6,900
Mission Center Road	38,000	38,700	700
First Avenue	12,200	15,000	2,800
Washington Street	44,700	46,700	2,000
Linda Vista Road	20,900	24,800	3,900
Morena Boulevard	28,400	32,700	4,300
Napa Street	12,200	13,500	1,300
Ulric Street	33,600	36,000	2,400

Fenton Parkway Connection over San Diego River to Mission City Parkway/Camino del Rio North

Projected Fenton Parkway Average Daily Traffic (ADT) Volumes:

- 13,800 ADT over San Diego River

Forecast Diverted Traffic Volumes without Fenton Parkway over SD River			
Freeway or Roadway Segment	FP IN Unadjusted ADT	FP OUT Unadjusted ADT	Delta ADT
I-15 SB	122,700	123,900	1,200
I-15 NB	134,000	135,500	1,500
Ramp from Friars Rd to I-8 WB	66,600	67,200	600
I-8 WB	131,900	132,600	700
I-8 EB	129,200	130,200	1,000
Friars Road east of Northside Dr.	51,700	55,800	4,100
Friars Road at SR 15 Interchange	83,300	86,400	3,200
Mission Village Drive at Stadium	47,000	48,900	1,900
Ward Road	17,600	20,400	2,800
Rio San Diego Drive	19,700	23,100	3,400
Camino del Rio North	9,700	11,800	2,100
Camino del Este	13,100	14,500	1,500
Qualcomm Way	30,600	33,700	3,100
Mission Center Road	24,300	25,100	700

Active Transportation, Transit

- Connections provide for a higher quality environment for pedestrians and cyclists.
- Connections allow pedestrians and cyclists to cross the river during a flooding event.
- Connections reduce traffic congestion on transit routes which improves the reliability of bus services in Mission Valley and other areas.
- Connections provide additional options for transit connectivity and improved bus routing.
- Connections improve access to one existing and two planned trolley stations for pedestrians, cyclists, shuttles, buses, and vehicles.

Appendix H
Signal Warrant Worksheets
Four Lane Via Las Cumbres Alternative

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Mission Center Road	# of Lanes:	2 or more
Minor St:	Civita Boulevard	# of Lanes:	1

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)**

URBAN (U)

Major St ADT (Total):	20200	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	8200		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 210% A / 140% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Friars Road	# of Lanes:	2 or more
Minor St:	Via Las Cumbres	# of Lanes:	1

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)**

URBAN (U)

Major St ADT (Total):	24600	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	7050		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 256% A / 171% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Avenida Del Rio	# of Lanes:	1
Minor St:	Camino De La Reina	# of Lanes:	1

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)**

URBAN (U)

Major St ADT (Total):	18100	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	8500		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 226% A / 151% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Camino Del Rio North	# of Lanes:	2 or more
Minor St:	Mission City Parkway	# of Lanes:	2 or more

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)**

URBAN (U)

Major St ADT (Total):	15500	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	6900		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 161% A / 108% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Phyllis Place	# of Lanes:	2 or more
Minor St:	Franklin Ridge Road	# of Lanes:	2 or more

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)** / **URBAN (U)**

Major St ADT (Total):	32300	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	15750		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 336% (A) 224% (B)		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Franlin Ridge Road	# of Lanes:	2 or more
Minor St:	Via Alta	# of Lanes:	1

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)** / **URBAN (U)**

Major St ADT (Total):	31500	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	5350		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 223% (A) 219% (B)		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Qualcomm Way	# of Lanes:	2 or more
Minor St:	Civita Boulevard	# of Lanes:	2 or more

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)** / **URBAN (U)**

Major St ADT (Total):	26200	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	5500		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 172% A, 182% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Franklin Ridge Road	# of Lanes:	1
Minor St:	Civita Boulevard	# of Lanes:	2 or more

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)**

URBAN (U)

Major St ADT (Total):	17100	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	11000		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 214% A / 143% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Fenton Parkway	# of Lanes:	2 or more
Minor St:	New Street "I"	# of Lanes:	1

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)** / **URBAN (U)**

Major St ADT (Total):	13800	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	5900		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied Not Satisfied X		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 144% A / 96% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Via Las Cumbres	# of Lanes:	2 or more
Minor St:	Riverwalk Drive	# of Lanes:	1

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)** / **URBAN (U)**

Major St ADT (Total):	19400	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	1500		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume

Satisfied ____ Not Satisfied X

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehichles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1	1	8000	5,600	2,400	1,680
2 or more	1	9,600	6,720	2,400	1,680
2 or more	2 or more	9,600	6,720	3,200	2,240
1	2 or more	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffc

Staisfied X Not Satisfied ____

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehichles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1	1	12,000	8,400	1,200	850
2 or more	1	14,400	10,080	1,200	850
2 or more	2 or more	14,400	10,080	1,600	1,120
1	2 or more	12,000	8,400	1,600	1,120

Combination of CONDITIONS A+B

Satisfied ____ Not Satisfied X

No one condition satisfied, but following conditions fulfilled 80% or More — 63% A — 125% B

2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Fashion Valley Road	# of Lanes:	2 or more
Minor St:	Riverwalk Drive	# of Lanes:	1

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)**

URBAN (U)

Major St ADT (Total):	17700	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	7050		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 184% A, 123% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Avenida Del Rio	# of Lanes:	2 or more
Minor St:	Riverwalk Drive	# of Lanes:	1

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)** / **URBAN (U)**

Major St ADT (Total):	18100	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	7050		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 189% A / 126% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Via Las Cumbres	# of Lanes:	2 or more
Minor St:	Levi Cushman Street "B"	# of Lanes:	2 or more

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)** / **URBAN (U)**

Major St ADT (Total):	23200	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	6650		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume

Satisfied X Not Satisfied

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1	1	8000	5,600	2,400	1,680
2 or more	1	9,600	6,720	2,400	1,680
2 or more	2 or more	9,600	6,720	3,200	2,240
1	2 or more	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffc

Staisfied X Not Satisfied

Number of lanes for moving traffic on each approach

Major Street	Minor Street	Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
1	1	12,000	8,400	1,200	850
2 or more	1	14,400	10,080	1,200	850
2 or more	2 or more	14,400	10,080	1,600	1,120
1	2 or more	12,000	8,400	1,600	1,120

Combination of CONDITIONS A+B

Satisfied X Not Satisfied

No one condition satisfied, but following conditions fulfilled 80% or More

	208%	161%
	A	B
Vehicles Per Day on Major Street (Total of Both Approaches)	2 CONDITIONS 80%	
Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)		2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Fashion Valley Road	# of Lanes:	2 or more
Minor St:	Levi Cushman Street "B"	# of Lanes:	2 or more

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)** / **URBAN (U)**

Major St ADT (Total):	22400	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	6650		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 208% A / 156% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Via Las Cumbres	# of Lanes:	2 or more
Minor St:	Hotel Circle North	# of Lanes:	2 or more

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)**

URBAN (U)

Major St ADT (Total):	30300	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	11950		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 316% A / 210% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Via Las Cumbres	# of Lanes:	2 or more
Minor St:	Hotel Circle South	# of Lanes:	2 or more

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)** / **URBAN (U)**

Major St ADT (Total):	30300	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	15000		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 316% A / 210% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Hotel Circle South	# of Lanes:	2 or more
Minor St:	Camino De La Reina	# of Lanes:	1

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)**

URBAN (U)

Major St ADT (Total):	14300	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	4400		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied Not Satisfied X		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 149% A / 99% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

		COUNT DATE	Future Year 2050
Major St:	Frazee Road	# of Lanes:	2 or more
Minor St:	Murray Canyon Road	# of Lanes:	1

Speed limit or critical speed on major street traffic > 64 km/h (40 mph) .....

In built up area of isolated community of < 10,000 population.....

or } **RURAL (R)**

URBAN (U)

Major St ADT (Total):	20300	Roadway Type:	Urban
Minor Street ADT (Highest Direction):	2700		

(Based on Estimated Average Daily Traffic - See Note)

CONDITION A - Minimum Vehicular Volume	Minimum Requirements EADT	
Satisfied X Not Satisfied	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	8000 / 5,600	2,400 / 1,680
2 or more / 1	9,600 / 6,720	2,400 / 1,680
2 or more / 2 or more	9,600 / 6,720	3,200 / 2,240
1 / 2 or more	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffc	Vehichles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Staisfied X Not Satisfied		
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 / 1	12,000 / 8,400	1,200 / 850
2 or more / 1	14,400 / 10,080	1,200 / 850
2 or more / 2 or more	14,400 / 10,080	1,600 / 1,120
1 / 2 or more	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A+B		
Satisfied X Not Satisfied	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or More — 113% A / 141% B		

Note: To be used only for NEW INTERSECTIONS or other locations wehre it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Appendix I
Peak Hour Intersection Worksheets
Four Lane Via Las Cumbres Alternative

AM Peak Hour

HCM 2010 Signalized Intersection Summary
1: I-5 SB Ramps & Seaworld Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1480	30	420	260	0	0	0	0	310	0	730
Future Volume (veh/h)	0	1480	30	420	260	0	0	0	0	310	0	730
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	0	1863
Adj Flow Rate, veh/h	0	1558	32	442	274	0				326	0	47
Adj No. of Lanes	0	2	1	2	2	0				1	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	1641	698	535	2407	0				358	0	320
Arrive On Green	0.00	0.46	0.46	0.16	0.68	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3632	1506	3442	3632	0				1774	0	1583
Grp Volume(v), veh/h	0	1558	32	442	274	0				326	0	47
Grp Sat Flow(s),veh/h/ln	0	1770	1506	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	38.0	1.0	11.2	2.4	0.0				16.2	0.0	2.2
Cycle Q Clear(g_c), s	0.0	38.0	1.0	11.2	2.4	0.0				16.2	0.0	2.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1641	698	535	2407	0				358	0	320
V/C Ratio(X)	0.00	0.95	0.05	0.83	0.11	0.00				0.91	0.00	0.15
Avail Cap(c_a), veh/h	0	1671	711	535	2407	0				373	0	332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.32	0.32	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.1	13.2	36.8	5.0	0.0				35.1	0.0	29.5
Incr Delay (d2), s/veh	0.0	13.1	0.1	3.3	0.0	0.0				24.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	21.4	0.5	5.6	1.2	0.0				10.3	0.0	1.0
LnGrp Delay(d),s/veh	0.0	36.2	13.4	40.1	5.0	0.0				59.4	0.0	29.6
LnGrp LOS		D	B	D	A					E		C
Approach Vol, veh/h		1590			716						373	
Approach Delay, s/veh		35.8			26.7						55.7	
Approach LOS		D			C						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	19.5	47.2		23.3		66.7		
Change Period (Y+Rc), s	5.5	* 5.5		5.1		5.5		
Max Green Setting (Gmax), s	13.3	* 43		18.9		60.5		
Max Q Clear Time (g_c+I1), s	13.2	40.0		18.2		4.4		
Green Ext Time (p_c), s	0.0	1.8		0.0		1.1		

Intersection Summary	
HCM 2010 Ctrl Delay	36.1
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
2: I-5 NB Ramps & Seaworld Drive/Tecolote Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1220	570	0	0	580	480	100	30	270	0	0	0
Future Volume (veh/h)	1220	570	0	0	580	480	100	30	270	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.94			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	1284	600	0	0	611	326	105	32	221			
Adj No. of Lanes	2	2	0	0	2	0	0	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	1215	2796	0	0	862	460	136	41	147			
Arrive On Green	0.35	0.79	0.00	0.00	0.39	0.39	0.10	0.10	0.10			
Sat Flow, veh/h	3442	3632	0	0	2302	1179	1375	419	1487			
Grp Volume(v), veh/h	1284	600	0	0	489	448	137	0	221			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1770	1618	1794	0	1487			
Q Serve(g_s), s	35.3	4.3	0.0	0.0	23.3	23.3	7.4	0.0	9.9			
Cycle Q Clear(g_c), s	35.3	4.3	0.0	0.0	23.3	23.3	7.4	0.0	9.9			
Prop In Lane	1.00		0.00	0.00		0.73	0.77		1.00			
Lane Grp Cap(c), veh/h	1215	2796	0	0	690	631	178	0	147			
V/C Ratio(X)	1.06	0.21	0.00	0.00	0.71	0.71	0.77	0.00	1.50			
Avail Cap(c_a), veh/h	1215	2796	0	0	690	631	178	0	147			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.29	0.29	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	32.3	2.7	0.0	0.0	25.7	25.7	43.9	0.0	45.0			
Incr Delay (d2), s/veh	32.0	0.1	0.0	0.0	6.1	6.6	17.0	0.0	257.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	22.1	2.1	0.0	0.0	12.4	11.5	4.5	0.0	18.3			
LnGrp Delay(d),s/veh	64.3	2.7	0.0	0.0	31.8	32.3	60.9	0.0	302.5			
LnGrp LOS	F	A			C	C	E		F			
Approach Vol, veh/h		1884			937			358				
Approach Delay, s/veh		44.7			32.1			210.1				
Approach LOS		D			C			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		85.0		15.0	40.0	45.0		
Change Period (Y+Rc), s		6.0		5.1	* 4.7	6.0		
Max Green Setting (Gmax), s		79.0		9.9	* 35	39.0		
Max Q Clear Time (g_c+I1), s		6.3		11.9	37.3	25.3		
Green Ext Time (p_c), s		2.5		0.0	0.0	3.2		

Intersection Summary	
HCM 2010 Ctrl Delay	59.6
HCM 2010 LOS	E

Notes

HCM 2010 Signalized Intersection Summary
3: I-805 SB Ramps & Phyllis Place

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	835	420	385	405	0	0	0	0	260	20	690
Future Volume (veh/h)	0	835	420	385	405	0	0	0	0	260	20	690
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1900
Adj Flow Rate, veh/h	0	879	407	405	426	0				274	21	706
Adj No. of Lanes	0	2	1	2	1	0				2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1028	450	465	874	0				1463	19	647
Arrive On Green	0.00	0.29	0.29	0.14	0.47	0.00				0.43	0.43	0.43
Sat Flow, veh/h	0	3632	1551	3442	1863	0				3442	45	1523
Grp Volume(v), veh/h	0	879	407	405	426	0				274	0	727
Grp Sat Flow(s),veh/h/ln	0	1770	1551	1721	1863	0				1721	0	1568
Q Serve(g_s), s	0.0	25.1	27.0	12.3	16.8	0.0				5.3	0.0	45.5
Cycle Q Clear(g_c), s	0.0	25.1	27.0	12.3	16.8	0.0				5.3	0.0	45.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.97
Lane Grp Cap(c), veh/h	0	1028	450	465	874	0				1463	0	667
V/C Ratio(X)	0.00	0.86	0.90	0.87	0.49	0.00				0.19	0.00	1.09
Avail Cap(c_a), veh/h	0	1098	481	492	926	0				1463	0	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	35.9	36.5	45.4	19.5	0.0				19.2	0.0	30.8
Incr Delay (d2), s/veh	0.0	6.0	18.8	14.2	0.2	0.0				0.0	0.0	62.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.1	13.9	6.8	8.7	0.0				2.5	0.0	31.1
LnGrp Delay(d),s/veh	0.0	41.9	55.3	59.6	19.7	0.0				19.2	0.0	92.8
LnGrp LOS		D	E	E	B					B		F
Approach Vol, veh/h		1286			831						1001	
Approach Delay, s/veh		46.1			39.2						72.7	
Approach LOS		D			D						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	19.2	36.9		51.0		56.0		
Change Period (Y+Rc), s	* 4.7	5.8		5.5		5.8		
Max Green Setting (Gmax), s	* 15	33.2		45.5		53.2		
Max Q Clear Time (g_c+I1), s	14.3	29.0		47.5		18.8		
Green Ext Time (p_c), s	0.1	2.1		0.0		1.7		

Intersection Summary	
HCM 2010 Ctrl Delay	52.8
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
4: I-805 NB Ramps & Phyllis Place

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	735	360	0	0	470	280	320	20	475	0	0	0
Future Volume (veh/h)	735	360	0	0	470	280	320	20	475	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	774	379	0	0	495	48	337	21	284			
Adj No. of Lanes	2	1	0	0	2	0	0	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	842	1060	0	0	860	83	490	31	447			
Arrive On Green	0.24	0.57	0.00	0.00	0.26	0.26	0.29	0.29	0.29			
Sat Flow, veh/h	3442	1863	0	0	3347	314	1675	104	1529			
Grp Volume(v), veh/h	774	379	0	0	268	275	358	0	284			
Grp Sat Flow(s),veh/h/ln	1721	1863	0	0	1770	1799	1779	0	1529			
Q Serve(g_s), s	17.2	8.7	0.0	0.0	10.3	10.4	14.0	0.0	12.7			
Cycle Q Clear(g_c), s	17.2	8.7	0.0	0.0	10.3	10.4	14.0	0.0	12.7			
Prop In Lane	1.00		0.00	0.00		0.17	0.94		1.00			
Lane Grp Cap(c), veh/h	842	1060	0	0	468	476	520	0	447			
V/C Ratio(X)	0.92	0.36	0.00	0.00	0.57	0.58	0.69	0.00	0.64			
Avail Cap(c_a), veh/h	845	1423	0	0	812	826	995	0	856			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	28.9	9.2	0.0	0.0	25.1	25.1	24.6	0.0	24.2			
Incr Delay (d2), s/veh	14.6	0.1	0.0	0.0	0.4	0.4	0.6	0.0	0.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.9	4.4	0.0	0.0	5.1	5.2	6.9	0.0	5.4			
LnGrp Delay(d),s/veh	43.5	9.2	0.0	0.0	25.5	25.5	25.3	0.0	24.7			
LnGrp LOS	D	A			C	C	C		C			
Approach Vol, veh/h		1153			543			642				
Approach Delay, s/veh		32.3			25.5			25.0				
Approach LOS		C			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		50.5			24.0	26.6		28.1
Change Period (Y+Rc), s		5.8			* 4.7	5.8		5.1
Max Green Setting (Gmax), s		60.1			* 19	36.1		44.0
Max Q Clear Time (g_c+I1), s		10.7			19.2	12.4		16.0
Green Ext Time (p_c), s		1.5			0.0	2.0		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	28.7
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
5: Mission Center Road & Civita Boulevard

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	50	100	280	190	70	480	190	60	30	300	290
Future Volume (veh/h)	80	50	100	280	190	70	480	190	60	30	300	290
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	84	53	44	295	200	6	505	200	16	32	316	42
Adj No. of Lanes	1	1	1	2	1	1	2	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	203	163	358	286	234	548	2224	986	41	1742	770
Arrive On Green	0.06	0.11	0.11	0.10	0.15	0.15	0.16	0.63	0.63	0.02	0.49	0.49
Sat Flow, veh/h	1774	1863	1496	3442	1863	1521	3442	3539	1568	1774	3539	1564
Grp Volume(v), veh/h	84	53	44	295	200	6	505	200	16	32	316	42
Grp Sat Flow(s),veh/h/ln	1774	1863	1496	1721	1863	1521	1721	1770	1568	1774	1770	1564
Q Serve(g_s), s	6.5	3.7	3.8	11.8	14.3	0.5	20.2	3.1	0.5	2.5	7.0	2.0
Cycle Q Clear(g_c), s	6.5	3.7	3.8	11.8	14.3	0.5	20.2	3.1	0.5	2.5	7.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	203	163	358	286	234	548	2224	986	41	1742	770
V/C Ratio(X)	0.80	0.26	0.27	0.82	0.70	0.03	0.92	0.09	0.02	0.79	0.18	0.05
Avail Cap(c_a), veh/h	324	440	354	629	440	360	556	2224	986	86	1742	770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	57.2	57.3	61.5	56.2	50.4	58.0	10.2	9.8	68.0	19.8	18.5
Incr Delay (d2), s/veh	5.2	2.0	2.6	4.8	7.8	0.1	19.5	0.1	0.0	11.6	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	2.0	1.7	5.9	8.0	0.2	11.1	1.6	0.2	1.4	3.4	0.9
LnGrp Delay(d),s/veh	70.2	59.2	59.8	66.3	64.0	50.5	77.4	10.3	9.8	79.6	20.0	18.7
LnGrp LOS	E	E	E	E	E	D	E	B	A	E	C	B
Approach Vol, veh/h		181			501			721			390	
Approach Delay, s/veh		64.4			65.2			57.3			24.8	
Approach LOS		E			E			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	93.3	19.0	20.1	26.7	74.2	12.7	26.4
Change Period (Y+Rc), s	4.4	5.3	4.4	4.9	4.4	5.3	4.4	4.9
Max Green Setting (Gmax), s	6.8	55.5	25.6	33.1	22.6	39.7	25.6	33.1
Max Q Clear Time (g_c+I1), s	4.5	5.1	13.8	5.8	22.2	9.0	8.5	16.3
Green Ext Time (p_c), s	0.0	1.8	0.8	0.9	0.1	5.5	0.1	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.2
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
6: Mission Center Road & Westside Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	20	185	195	40	40	245	620	65	30	560	90
Future Volume (veh/h)	70	20	185	195	40	40	245	620	65	30	560	90
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.97	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	74	21	39	205	42	21	258	653	28	32	589	21
Adj No. of Lanes	0	1	1	1	1	0	2	3	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	31	277	330	215	108	354	1640	501	46	869	373
Arrive On Green	0.08	0.08	0.08	0.19	0.19	0.19	0.10	0.32	0.32	0.03	0.25	0.25
Sat Flow, veh/h	1397	396	1462	1774	1159	579	3442	5085	1554	1774	3539	1519
Grp Volume(v), veh/h	95	0	39	205	0	63	258	653	28	32	589	21
Grp Sat Flow(s),veh/h/ln	1793	0	1462	1774	0	1738	1721	1695	1554	1774	1770	1519
Q Serve(g_s), s	4.0	0.0	1.7	8.2	0.0	2.3	5.6	7.6	1.0	1.4	11.5	0.8
Cycle Q Clear(g_c), s	4.0	0.0	1.7	8.2	0.0	2.3	5.6	7.6	1.0	1.4	11.5	0.8
Prop In Lane	0.78		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	140	0	277	330	0	323	354	1640	501	46	869	373
V/C Ratio(X)	0.68	0.00	0.14	0.62	0.00	0.19	0.73	0.40	0.06	0.70	0.68	0.06
Avail Cap(c_a), veh/h	728	0	756	674	0	660	835	3212	981	160	1695	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	26.4	28.7	0.0	26.3	33.3	20.2	17.9	37.0	26.2	22.1
Incr Delay (d2), s/veh	2.1	0.0	0.1	2.5	0.0	0.4	1.1	0.3	0.1	7.0	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.7	4.2	0.0	1.2	2.7	3.6	0.4	0.8	5.8	0.3
LnGrp Delay(d),s/veh	36.5	0.0	26.5	31.3	0.0	26.7	34.4	20.4	18.0	44.0	27.5	22.2
LnGrp LOS	D		C	C		C	C	C	B	D	C	C
Approach Vol, veh/h		134			268			939			642	
Approach Delay, s/veh		33.6			30.2			24.2			28.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.3	29.3		10.9	6.4	35.2		24.2
Change Period (Y+Rc), s	4.4	10.5		4.9	4.4	10.5		9.9
Max Green Setting (Gmax), s	18.6	36.7		31.1	6.9	48.4		29.1
Max Q Clear Time (g_c+I1), s	7.6	13.5		6.0	3.4	9.6		10.2
Green Ext Time (p_c), s	0.3	5.3		0.4	0.0	8.3		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
7: Seaworld Drive & Friar Roads

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	545	295	1250	570	190	760
Future Volume (veh/h)	545	295	1250	570	190	760
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	589	295	1316	600	200	800
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	810	361	1559	1043	285	2082
Arrive On Green	0.23	0.23	0.44	0.44	0.08	0.59
Sat Flow, veh/h	3548	1583	3632	1547	3442	3632
Grp Volume(v), veh/h	589	295	1316	600	200	800
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1547	1721	1770
Q Serve(g_s), s	10.4	11.9	22.4	14.2	3.8	8.1
Cycle Q Clear(g_c), s	10.4	11.9	22.4	14.2	3.8	8.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	810	361	1559	1043	285	2082
V/C Ratio(X)	0.73	0.82	0.84	0.58	0.70	0.38
Avail Cap(c_a), veh/h	1469	656	1602	1062	285	2167
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	24.7	16.9	6.1	30.2	7.4
Incr Delay (d2), s/veh	0.5	1.7	4.4	0.9	6.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	5.4	11.7	10.4	2.1	4.0
LnGrp Delay(d),s/veh	24.6	26.5	21.3	7.0	36.6	7.7
LnGrp LOS	C	C	C	A	D	A
Approach Vol, veh/h	884		1916			1000
Approach Delay, s/veh	25.2		16.8			13.5
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.0	36.0				46.0		21.6
Change Period (Y+Rc), s	4.4	6.2				* 6.2		6.2
Max Green Setting (Gmax), s	5.6	30.6				* 41		28.0
Max Q Clear Time (g_c+I1), s	5.8	24.4				10.1		13.9
Green Ext Time (p_c), s	0.0	5.4				11.4		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Notes

HCM 2010 Signalized Intersection Summary
8: Friar Roads & Napa Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	460	0	0	850	780	0	0	0	250	0	120
Future Volume (veh/h)	290	460	0	0	850	780	0	0	0	250	0	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	0	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	305	484	0	0	895	705	0	0	0	263	0	68
Adj No. of Lanes	1	2	0	0	2	1	0	1	0	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0	2	2	2
Cap, veh/h	340	2265	0	0	1424	856	0	2	0	487	0	219
Arrive On Green	0.19	0.64	0.00	0.00	0.40	0.40	0.00	0.00	0.00	0.14	0.00	0.14
Sat Flow, veh/h	1774	3632	0	0	3632	1560	0	-74510	0	3371	0	1518
Grp Volume(v), veh/h	305	484	0	0	895	705	0	0	0	263	0	68
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1560	0	1863	0	1685	0	1518
Q Serve(g_s), s	16.0	5.4	0.0	0.0	19.3	35.6	0.0	0.0	0.0	6.9	0.0	3.8
Cycle Q Clear(g_c), s	16.0	5.4	0.0	0.0	19.3	35.6	0.0	0.0	0.0	6.9	0.0	3.8
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	340	2265	0	0	1424	856	0	2	0	487	0	219
V/C Ratio(X)	0.90	0.21	0.00	0.00	0.63	0.82	0.00	0.00	0.00	0.54	0.00	0.31
Avail Cap(c_a), veh/h	459	2677	0	0	1428	858	0	528	0	924	0	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.6	7.1	0.0	0.0	22.7	17.8	0.0	0.0	0.0	37.8	0.0	36.5
Incr Delay (d2), s/veh	13.8	0.1	0.0	0.0	1.1	6.9	0.0	0.0	0.0	2.0	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	2.6	0.0	0.0	9.5	20.0	0.0	0.0	0.0	3.3	0.0	3.4
LnGrp Delay(d),s/veh	51.3	7.2	0.0	0.0	23.8	24.7	0.0	0.0	0.0	39.8	0.0	38.2
LnGrp LOS	D	A			C	C				D		D
Approach Vol, veh/h		789			1600			0			331	
Approach Delay, s/veh		24.3			24.2			0.0			39.4	
Approach LOS		C			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		71.5		23.7	22.6	48.9		0.0
Change Period (Y+Rc), s		* 11		* 9.9	4.4	* 11		4.0
Max Green Setting (Gmax), s		* 72		* 26	24.6	* 38		27.0
Max Q Clear Time (g_c+I1), s		7.4		8.9	18.0	37.6		0.0
Green Ext Time (p_c), s		5.9		2.3	0.3	0.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.1
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
9: Colusa Street & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	480	50	50	1720	150	70	20	50	90	20	50
Future Volume (veh/h)	55	480	50	50	1720	150	70	20	50	90	20	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.98		0.97	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	58	505	48	53	1811	153	74	21	17	95	21	21
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	1916	182	68	1929	160	287	74	342	276	187	187
Arrive On Green	0.04	0.59	0.59	0.04	0.58	0.58	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1774	3262	309	1774	3303	275	1005	332	1541	1335	843	843
Grp Volume(v), veh/h	58	273	280	53	957	1007	95	0	17	95	0	42
Grp Sat Flow(s),veh/h/ln	1774	1770	1802	1774	1770	1809	1337	0	1541	1335	0	1686
Q Serve(g_s), s	3.3	7.6	7.6	3.0	49.3	52.6	5.0	0.0	0.9	6.5	0.0	2.0
Cycle Q Clear(g_c), s	3.3	7.6	7.6	3.0	49.3	52.6	7.0	0.0	0.9	13.5	0.0	2.0
Prop In Lane	1.00		0.17	1.00		0.15	0.78		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	74	1039	1058	68	1033	1056	361	0	342	276	0	375
V/C Ratio(X)	0.78	0.26	0.26	0.78	0.93	0.95	0.26	0.00	0.05	0.34	0.00	0.11
Avail Cap(c_a), veh/h	85	1039	1058	157	1034	1057	484	0	476	392	0	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.7	10.1	10.1	48.0	19.0	19.7	33.5	0.0	30.8	38.9	0.0	31.2
Incr Delay (d2), s/veh	28.1	0.5	0.5	7.0	15.0	18.6	0.1	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.9	4.0	1.6	28.2	31.5	2.3	0.0	0.4	2.4	0.0	0.9
LnGrp Delay(d),s/veh	75.9	10.6	10.6	55.0	34.0	38.2	33.7	0.0	30.8	39.1	0.0	31.3
LnGrp LOS	E	B	B	D	C	D	C		C	D		C
Approach Vol, veh/h		611			2017			112			137	
Approach Delay, s/veh		16.8			36.7			33.2			36.7	
Approach LOS		B			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.3	65.1		27.3	8.6	64.8		27.3
Change Period (Y+Rc), s	4.4	* 6		4.9	4.4	6.0		4.9
Max Green Setting (Gmax), s	8.9	* 55		31.1	4.8	58.8		31.1
Max Q Clear Time (g_c+I1), s	5.0	9.6		15.5	5.3	54.6		9.0
Green Ext Time (p_c), s	0.0	9.6		0.2	0.0	4.1		0.3

Intersection Summary		
HCM 2010 Ctrl Delay		32.3
HCM 2010 LOS		C

Notes

HCM 2010 Signalized Intersection Summary
10: Via Las Cumbres & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	450	110	280	1270	465	120	170	210	140	210	140
Future Volume (veh/h)	140	450	110	280	1270	465	120	170	210	140	210	140
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	146	469	93	295	1337	331	126	179	126	147	221	105
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	169	954	188	323	1457	636	149	369	304	170	248	118
Arrive On Green	0.10	0.32	0.32	0.18	0.41	0.41	0.08	0.20	0.20	0.10	0.21	0.21
Sat Flow, veh/h	1774	2939	579	1774	3539	1545	1774	1863	1535	1774	1182	562
Grp Volume(v), veh/h	146	281	281	295	1337	331	126	179	126	147	0	326
Grp Sat Flow(s),veh/h/ln	1774	1770	1748	1774	1770	1545	1774	1863	1535	1774	0	1744
Q Serve(g_s), s	11.4	17.9	18.2	22.9	50.2	22.5	9.8	12.0	10.1	11.5	0.0	25.5
Cycle Q Clear(g_c), s	11.4	17.9	18.2	22.9	50.2	22.5	9.8	12.0	10.1	11.5	0.0	25.5
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	169	574	567	323	1457	636	149	369	304	170	0	366
V/C Ratio(X)	0.86	0.49	0.49	0.91	0.92	0.52	0.85	0.49	0.41	0.86	0.00	0.89
Avail Cap(c_a), veh/h	181	574	567	473	1548	676	155	425	350	181	0	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.6	38.1	38.1	56.3	39.1	30.9	63.4	50.0	49.2	62.6	0.0	53.9
Incr Delay (d2), s/veh	31.3	0.4	0.5	16.7	8.6	0.4	32.3	1.0	0.9	31.5	0.0	16.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	8.8	8.8	12.7	26.2	9.7	6.2	6.3	4.3	7.1	0.0	14.0
LnGrp Delay(d),s/veh	93.9	38.5	38.6	73.0	47.6	31.4	95.7	51.0	50.1	94.1	0.0	70.5
LnGrp LOS	F	D	D	E	D	C	F	D	D	F		E
Approach Vol, veh/h		708			1963			431			473	
Approach Delay, s/veh		50.0			48.7			63.8			77.8	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.3	56.5	17.5	35.2	19.1	68.7	19.2	33.5
Change Period (Y+Rc), s	5.7	* 11	5.7	* 5.7	5.7	* 11	5.7	5.7
Max Green Setting (Gmax), s	37.4	* 39	12.3	* 35	14.3	* 61	14.3	32.0
Max Q Clear Time (g_c+I1), s	24.9	20.2	11.8	27.5	13.4	52.2	13.5	14.0
Green Ext Time (p_c), s	0.7	2.4	0.0	0.7	0.0	5.6	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	54.6
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
11: Fashion Valley Road & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	580	80	120	1590	10	180	5	120	20	5	5
Future Volume (veh/h)	5	580	80	120	1590	10	180	5	120	20	5	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.98		0.97	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	5	611	58	126	1674	11	189	5	126	21	5	0
Adj No. of Lanes	1	3	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9	2071	194	154	1876	12	354	7	298	150	28	0
Arrive On Green	0.01	0.44	0.44	0.17	1.00	1.00	0.19	0.19	0.19	0.19	0.19	0.00
Sat Flow, veh/h	1774	4717	443	1774	3603	24	1418	38	1534	402	147	0
Grp Volume(v), veh/h	5	437	232	126	821	864	194	0	126	26	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1770	1774	1770	1857	1456	0	1534	549	0	0
Q Serve(g_s), s	0.3	7.5	7.6	6.2	0.0	0.0	0.0	0.0	6.5	1.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	7.5	7.6	6.2	0.0	0.0	10.9	0.0	6.5	11.9	0.0	0.0
Prop In Lane	1.00		0.25	1.00		0.01	0.97		1.00	0.81		0.00
Lane Grp Cap(c), veh/h	9	1488	777	154	921	967	362	0	298	179	0	0
V/C Ratio(X)	0.54	0.29	0.30	0.82	0.89	0.89	0.54	0.00	0.42	0.15	0.00	0.00
Avail Cap(c_a), veh/h	79	1488	777	177	921	967	632	0	597	435	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.70	0.70	0.70	0.86	0.00	0.86	1.00	0.00	0.00
Uniform Delay (d), s/veh	44.7	16.3	16.3	36.5	0.0	0.0	33.6	0.0	31.8	34.9	0.0	0.0
Incr Delay (d2), s/veh	16.9	0.5	1.0	14.6	9.4	9.2	0.6	0.0	0.4	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.6	3.9	3.6	2.4	2.5	4.5	0.0	2.8	0.6	0.0	0.0
LnGrp Delay(d),s/veh	61.6	16.8	17.3	51.1	9.4	9.2	34.2	0.0	32.3	35.1	0.0	0.0
LnGrp LOS	E	B	B	D	A	A	C		C	D		
Approach Vol, veh/h		674			1811			320			26	
Approach Delay, s/veh		17.3			12.2			33.4			35.1	
Approach LOS		B			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.2	50.4		27.4	4.9	57.8		27.4
Change Period (Y+Rc), s	4.4	* 11		* 9.9	4.4	* 11		* 9.9
Max Green Setting (Gmax), s	9.0	* 21		* 35	4.0	* 26		* 35
Max Q Clear Time (g_c+I1), s	8.2	9.6		13.9	2.3	2.0		12.9
Green Ext Time (p_c), s	0.0	2.9		0.1	0.0	16.0		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Notes

HCM 2010 Signalized Intersection Summary
12: Via De La Moda & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	750	30	70	1690	0	20	0	90	0	0	0
Future Volume (veh/h)	0	750	30	70	1690	0	20	0	90	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	0	1863	0	1863			
Adj Flow Rate, veh/h	0	789	32	74	1779	0	21	0	74			
Adj No. of Lanes	1	3	0	2	2	0	1	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	2	2	2	0	2	0	2			
Cap, veh/h	2	3712	150	129	2930	0	112	0	100			
Arrive On Green	0.00	1.00	1.00	0.04	0.83	0.00	0.06	0.00	0.06			
Sat Flow, veh/h	1774	5006	202	3442	3632	0	1774	0	1583			
Grp Volume(v), veh/h	0	534	287	74	1779	0	21	0	74			
Grp Sat Flow(s),veh/h/ln	1774	1695	1818	1721	1770	0	1774	0	1583			
Q Serve(g_s), s	0.0	0.0	0.0	1.9	15.7	0.0	1.0	0.0	4.1			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.9	15.7	0.0	1.0	0.0	4.1			
Prop In Lane	1.00		0.11	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	2	2514	1348	129	2930	0	112	0	100			
V/C Ratio(X)	0.00	0.21	0.21	0.57	0.61	0.00	0.19	0.00	0.74			
Avail Cap(c_a), veh/h	99	2514	1348	688	2930	0	631	0	563			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.94	0.94	0.88	0.88	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	42.6	2.7	0.0	40.0	0.0	41.4			
Incr Delay (d2), s/veh	0.0	0.2	0.3	1.3	0.8	0.0	0.3	0.0	4.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.1	0.9	7.8	0.0	0.5	0.0	1.9			
LnGrp Delay(d),s/veh	0.0	0.2	0.3	43.9	3.5	0.0	40.3	0.0	45.4			
LnGrp LOS		A	A	D	A		D		D			
Approach Vol, veh/h		821			1853			95				
Approach Delay, s/veh		0.2			5.1			44.3				
Approach LOS		A			A			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	7.8	72.1			0.0	79.9		10.1
Change Period (Y+Rc), s	4.4	5.4			4.4	* 5.4		4.4
Max Green Setting (Gmax), s	18.0	25.8			5.0	* 39		32.0
Max Q Clear Time (g_c+I1), s	3.9	2.0			0.0	17.7		6.1
Green Ext Time (p_c), s	0.1	6.3			0.0	15.6		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	5.0
HCM 2010 LOS	A

Notes

HCM 2010 Signalized Intersection Summary
13: Avenida De Las Tiendas & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	795	40	100	1680	40	20	5	30	40	5	10
Future Volume (veh/h)	5	795	40	100	1680	40	20	5	30	40	5	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	0.96		0.96	0.97		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	5	837	37	105	1768	42	21	13	11	42	5	8
Adj No. of Lanes	1	3	0	2	3	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9	1307	58	1377	3412	81	292	306	251	291	104	166
Arrive On Green	0.00	0.09	0.09	0.40	0.67	0.67	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1774	4984	220	3442	5105	121	1346	1863	1525	1334	631	1009
Grp Volume(v), veh/h	5	569	305	105	1174	636	21	13	11	42	0	13
Grp Sat Flow(s),veh/h/ln	1774	1695	1814	1721	1695	1836	1346	1863	1525	1334	0	1640
Q Serve(g_s), s	0.3	14.6	14.7	1.7	15.8	15.8	1.2	0.5	0.5	2.5	0.0	0.6
Cycle Q Clear(g_c), s	0.3	14.6	14.7	1.7	15.8	15.8	1.8	0.5	0.5	3.0	0.0	0.6
Prop In Lane	1.00		0.12	1.00		0.07	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	9	889	476	1377	2266	1227	292	306	251	291	0	269
V/C Ratio(X)	0.54	0.64	0.64	0.08	0.52	0.52	0.07	0.04	0.04	0.14	0.00	0.05
Avail Cap(c_a), veh/h	83	1443	772	1377	2266	1227	521	623	510	518	0	548
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.72	0.72	0.72	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.8	37.0	37.0	16.7	7.6	7.6	32.4	31.7	31.7	32.9	0.0	31.7
Incr Delay (d2), s/veh	16.6	3.4	6.4	0.0	0.6	1.1	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	7.3	8.2	0.8	7.5	8.3	0.5	0.3	0.2	0.9	0.0	0.3
LnGrp Delay(d),s/veh	61.4	40.4	43.4	16.7	8.2	8.7	32.5	31.7	31.7	33.0	0.0	31.7
LnGrp LOS	E	D	D	B	A	A	C	C	C	C		C
Approach Vol, veh/h		879			1915			45			55	
Approach Delay, s/veh		41.6			8.8			32.1			32.7	
Approach LOS		D			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	41.3	29.0		19.7	4.9	65.4		19.7
Change Period (Y+Rc), s	5.3	* 5.4		4.9	4.4	5.3		4.9
Max Green Setting (Gmax), s	6.9	* 38		30.1	4.2	41.1		30.1
Max Q Clear Time (g_c+I1), s	3.7	16.7		5.0	2.3	17.8		3.8
Green Ext Time (p_c), s	0.0	6.5		0.1	0.0	15.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	405	320	530	1150	480	560	20	810	350	20	110
Future Volume (veh/h)	140	405	320	530	1150	480	560	20	810	350	20	110
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	147	426	200	558	1211	242	589	21	511	368	21	37
Adj No. of Lanes	2	3	1	2	3	2	2	1	2	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	193	1816	860	621	2466	1753	661	358	1022	517	89	156
Arrive On Green	0.06	0.36	0.36	0.18	0.48	0.48	0.19	0.19	0.19	0.15	0.15	0.15
Sat Flow, veh/h	3442	5085	1557	3442	5085	2752	3442	1863	2700	3442	590	1039
Grp Volume(v), veh/h	147	426	200	558	1211	242	589	21	511	368	0	58
Grp Sat Flow(s),veh/h/ln	1721	1695	1557	1721	1695	1376	1721	1863	1350	1721	0	1629
Q Serve(g_s), s	6.3	8.8	10.0	23.8	24.1	5.3	25.0	1.4	22.0	15.3	0.0	4.7
Cycle Q Clear(g_c), s	6.3	8.8	10.0	23.8	24.1	5.3	25.0	1.4	22.0	15.3	0.0	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	193	1816	860	621	2466	1753	661	358	1022	517	0	245
V/C Ratio(X)	0.76	0.23	0.23	0.90	0.49	0.14	0.89	0.06	0.50	0.71	0.00	0.24
Avail Cap(c_a), veh/h	252	1816	860	766	2466	1753	792	428	1124	757	0	358
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	0.79	0.79	0.79	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.8	33.8	17.5	60.1	26.1	10.9	59.1	49.5	36.4	60.6	0.0	56.2
Incr Delay (d2), s/veh	9.3	0.3	0.6	9.6	0.6	0.1	9.8	0.0	0.1	0.7	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	4.2	6.3	12.1	11.5	2.9	12.8	0.7	8.2	7.3	0.0	2.1
LnGrp Delay(d),s/veh	79.1	34.1	18.1	69.7	26.7	11.1	68.8	49.5	36.5	61.3	0.0	56.3
LnGrp LOS	E	C	B	E	C	B	E	D	D	E		E
Approach Vol, veh/h		773			2011			1121			426	
Approach Delay, s/veh		38.5			36.7			53.8			60.6	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	31.6	58.1		27.0	12.4	77.2		33.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.0	4.5		4.5
Max Green Setting (Gmax), s	33.4	31.1		33.0	11.0	54.0		34.5
Max Q Clear Time (g_c+I1), s	25.8	12.0		17.3	8.3	26.1		27.0
Green Ext Time (p_c), s	1.3	3.4		0.8	0.1	11.3		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	43.8
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
15: Friar Roads & SR-163 NB Ramps



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	480	1085	1440	740	820	720
Future Volume (veh/h)	480	1085	1440	740	820	720
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	485	1096	1455	38	828	424
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1188	4571	1931	812	878	489
Arrive On Green	0.35	0.71	0.30	0.30	0.18	0.18
Sat Flow, veh/h	3442	6669	6669	2694	5003	2787
Grp Volume(v), veh/h	485	1096	1455	38	828	424
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1347	1668	1393
Q Serve(g_s), s	9.7	5.3	18.5	0.9	14.7	13.3
Cycle Q Clear(g_c), s	9.7	5.3	18.5	0.9	14.7	13.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1188	4571	1931	812	878	489
V/C Ratio(X)	0.41	0.24	0.75	0.05	0.94	0.87
Avail Cap(c_a), veh/h	1188	4571	2350	988	1278	712
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.33	0.33	1.00	1.00
Uniform Delay (d), s/veh	22.5	4.5	28.4	22.3	36.7	36.1
Incr Delay (d2), s/veh	0.1	0.1	0.9	0.0	10.7	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	2.4	8.3	0.3	7.6	10.1
LnGrp Delay(d),s/veh	22.5	4.6	29.3	22.3	47.3	43.8
LnGrp LOS	C	A	C	C	D	D
Approach Vol, veh/h		1581	1493		1252	
Approach Delay, s/veh		10.1	29.2		46.1	
Approach LOS		B	C		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		70.2		19.8	37.1	33.1		
Change Period (Y+Rc), s		6.0		4.0	6.0	* 6		
Max Green Setting (Gmax), s		57.0		23.0	19.0	* 33		
Max Q Clear Time (g_c+I1), s		7.3		15.3	11.7	20.5		
Green Ext Time (p_c), s		5.3		0.5	0.6	5.5		

Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
16: Frazee Road & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	630	790	425	80	1740	80	120	120	40	40	60	240
Future Volume (veh/h)	630	790	425	80	1740	80	120	120	40	40	60	240
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	656	823	157	83	1812	39	125	125	21	42	62	31
Adj No. of Lanes	2	4	2	2	3	1	2	2	0	2	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	636	3402	1452	130	1952	598	179	444	73	128	246	351
Arrive On Green	0.18	0.53	0.53	0.04	0.38	0.38	0.05	0.15	0.15	0.04	0.13	0.13
Sat Flow, veh/h	3442	6408	2734	3442	5085	1559	3442	3025	495	3442	1863	2660
Grp Volume(v), veh/h	656	823	157	83	1812	39	125	72	74	42	62	31
Grp Sat Flow(s),veh/h/ln	1721	1602	1367	1721	1695	1559	1721	1770	1751	1721	1863	1330
Q Serve(g_s), s	22.6	8.4	3.5	2.9	41.7	1.9	4.4	4.4	4.6	1.5	3.7	1.3
Cycle Q Clear(g_c), s	22.6	8.4	3.5	2.9	41.7	1.9	4.4	4.4	4.6	1.5	3.7	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	636	3402	1452	130	1952	598	179	260	257	128	246	351
V/C Ratio(X)	1.03	0.24	0.11	0.64	0.93	0.07	0.70	0.28	0.29	0.33	0.25	0.09
Avail Cap(c_a), veh/h	636	3402	1452	211	1964	602	284	637	630	169	684	977
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	15.4	14.3	58.0	36.0	23.8	57.0	46.4	46.5	57.3	47.6	46.6
Incr Delay (d2), s/veh	43.8	0.1	0.0	1.9	8.5	0.1	2.7	0.2	0.2	0.8	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.6	3.7	1.3	1.4	21.0	0.8	2.1	2.2	2.2	0.7	1.9	0.5
LnGrp Delay(d),s/veh	93.6	15.5	14.3	59.9	44.5	23.9	59.7	46.6	46.7	58.1	47.9	46.6
LnGrp LOS	F	B	B	E	D	C	E	D	D	E	D	D
Approach Vol, veh/h		1636			1934			271			135	
Approach Delay, s/veh		46.7			44.8			52.6			50.8	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	76.4	10.7	26.0	27.0	58.4	9.0	27.8
Change Period (Y+Rc), s	4.4	* 12	4.4	* 9.9	4.4	11.5	4.4	* 9.9
Max Green Setting (Gmax), s	7.5	* 63	10.1	* 45	22.6	47.2	6.0	* 44
Max Q Clear Time (g_c+I1), s	4.9	10.4	6.4	5.7	24.6	43.7	3.5	6.6
Green Ext Time (p_c), s	0.0	10.3	0.1	0.3	0.0	3.2	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	46.3
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
17: Mission Center Road & Friar WB

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	160	5	340	160	590	0	0	660	280
Future Volume (veh/h)	0	0	0	160	5	340	160	590	0	0	660	280
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.95	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				167	0	123	163	602	0	0	673	92
Adj No. of Lanes				2	0	1	2	2	0	0	2	1
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.95	0.95	0.98	0.98
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				452	0	192	215	2560	0	0	2228	981
Arrive On Green				0.13	0.00	0.13	0.12	1.00	0.00	0.00	0.63	0.63
Sat Flow, veh/h				3548	0	1509	3442	3632	0	0	3632	1558
Grp Volume(v), veh/h				167	0	123	163	602	0	0	673	92
Grp Sat Flow(s),veh/h/ln				1774	0	1509	1721	1770	0	0	1770	1558
Q Serve(g_s), s				6.0	0.0	10.8	6.4	0.0	0.0	0.0	12.2	3.3
Cycle Q Clear(g_c), s				6.0	0.0	10.8	6.4	0.0	0.0	0.0	12.2	3.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				452	0	192	215	2560	0	0	2228	981
V/C Ratio(X)				0.37	0.00	0.64	0.76	0.24	0.00	0.00	0.30	0.09
Avail Cap(c_a), veh/h				991	0	421	482	2560	0	0	2228	981
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.96	0.96	0.00	0.00	0.75	0.75
Uniform Delay (d), s/veh				55.9	0.0	58.0	60.2	0.0	0.0	0.0	11.9	10.2
Incr Delay (d2), s/veh				0.5	0.0	3.5	5.2	0.2	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.0	0.0	4.7	3.2	0.1	0.0	0.0	6.0	1.4
LnGrp Delay(d),s/veh				56.4	0.0	61.6	65.4	0.2	0.0	0.0	12.1	10.4
LnGrp LOS				E		E	E	A			B	B
Approach Vol, veh/h					290			765			765	
Approach Delay, s/veh					58.6			14.1			11.9	
Approach LOS					E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		112.3			13.1	99.1		27.7
Change Period (Y+Rc), s		* 11			4.4	11.0		9.9
Max Green Setting (Gmax), s		* 81			19.6	56.0		39.1
Max Q Clear Time (g_c+I1), s		2.0			8.4	14.2		12.8
Green Ext Time (p_c), s		8.7			0.3	10.3		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
18: Mission Center Road & Friar EB

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	20	190	0	0	0	0	580	160	190	630	0
Future Volume (veh/h)	170	20	190	0	0	0	0	580	160	190	630	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	194	0	200				0	611	168	200	663	0
Adj No. of Lanes	2	0	1				0	2	1	2	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	484	0	207				0	2166	953	249	2533	0
Arrive On Green	0.14	0.00	0.14				0.00	1.00	1.00	0.14	1.00	0.00
Sat Flow, veh/h	3548	0	1514				0	3632	1557	3442	3632	0
Grp Volume(v), veh/h	194	0	200				0	611	168	200	663	0
Grp Sat Flow(s),veh/h/ln	1774	0	1514				0	1770	1557	1721	1770	0
Q Serve(g_s), s	7.0	0.0	18.4				0.0	0.0	0.0	7.9	0.0	0.0
Cycle Q Clear(g_c), s	7.0	0.0	18.4				0.0	0.0	0.0	7.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	484	0	207				0	2166	953	249	2533	0
V/C Ratio(X)	0.40	0.00	0.97				0.00	0.28	0.18	0.80	0.26	0.00
Avail Cap(c_a), veh/h	484	0	207				0	2166	953	556	2533	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.96	0.96	0.96	0.96	0.00
Uniform Delay (d), s/veh	55.2	0.0	60.2				0.0	0.0	0.0	58.9	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	53.4				0.0	0.3	0.4	2.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	10.8				0.0	0.1	0.1	3.8	0.1	0.0
LnGrp Delay(d),s/veh	55.8	0.0	113.6				0.0	0.3	0.4	61.1	0.2	0.0
LnGrp LOS	E		F					A	A	E	A	
Approach Vol, veh/h		394						779			863	
Approach Delay, s/veh		85.1						0.3			14.3	
Approach LOS		F						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.5	96.5		29.0		111.0		
Change Period (Y+Rc), s	4.4	* 11		* 9.9		10.8		
Max Green Setting (Gmax), s	22.6	* 74		* 19		100.2		
Max Q Clear Time (g_c+I1), s	9.9	2.0		20.4		2.0		
Green Ext Time (p_c), s	0.3	7.9		0.0		6.1		

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
19: Qualcomm Way & WB Friar

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	320	20	270	510	520	0	0	630	190
Future Volume (veh/h)	0	0	0	320	20	270	510	520	0	0	630	190
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				327	20	92	520	531	0	0	643	16
Adj No. of Lanes				1	1	0	2	2	0	0	3	1
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.95	0.95	0.98	0.98
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				354	57	260	604	2360	0	0	2333	711
Arrive On Green				0.20	0.20	0.20	0.06	0.22	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1774	283	1302	3442	3632	0	0	5253	1549
Grp Volume(v), veh/h				327	0	112	520	531	0	0	643	16
Grp Sat Flow(s),veh/h/ln				1774	0	1585	1721	1770	0	0	1695	1549
Q Serve(g_s), s				27.1	0.0	9.1	22.5	18.5	0.0	0.0	11.7	0.8
Cycle Q Clear(g_c), s				27.1	0.0	9.1	22.5	18.5	0.0	0.0	11.7	0.8
Prop In Lane				1.00		0.82	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				354	0	317	604	2360	0	0	2333	711
V/C Ratio(X)				0.92	0.00	0.35	0.86	0.22	0.00	0.00	0.28	0.02
Avail Cap(c_a), veh/h				522	0	466	851	2360	0	0	2333	711
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.87	0.87	0.00	0.00	0.59	0.59
Uniform Delay (d), s/veh				58.9	0.0	51.7	68.8	26.7	0.0	0.0	25.1	22.2
Incr Delay (d2), s/veh				13.7	0.0	0.2	6.2	0.2	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				14.7	0.0	4.0	11.3	9.1	0.0	0.0	5.5	0.4
LnGrp Delay(d),s/veh				72.6	0.0	51.9	75.0	26.9	0.0	0.0	25.3	22.2
LnGrp LOS				E		D	E	C			C	C
Approach Vol, veh/h					439			1051			659	
Approach Delay, s/veh					67.3			50.7			25.2	
Approach LOS					E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		110.1			31.2	78.9		39.9
Change Period (Y+Rc), s		* 10			4.9	* 10		9.9
Max Green Setting (Gmax), s		* 86			37.1	* 44		44.1
Max Q Clear Time (g_c+I1), s		20.5			24.5	13.7		29.1
Green Ext Time (p_c), s		4.3			1.8	4.2		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	46.3
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
20: Qualcomm Way & EB Friar

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	5	130	0	0	0	0	970	300	220	730	0
Future Volume (veh/h)	60	5	130	0	0	0	0	970	300	220	730	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	67	0	53				0	1021	158	232	768	0
Adj No. of Lanes	2	0	1				0	2	1	2	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	348	0	146				0	2329	1026	279	2720	0
Arrive On Green	0.10	0.00	0.10				0.00	1.00	1.00	0.16	1.00	0.00
Sat Flow, veh/h	3548	0	1487				0	3632	1559	3442	3632	0
Grp Volume(v), veh/h	67	0	53				0	1021	158	232	768	0
Grp Sat Flow(s),veh/h/ln	1774	0	1487				0	1770	1559	1721	1770	0
Q Serve(g_s), s	2.6	0.0	5.0				0.0	0.0	0.0	9.8	0.0	0.0
Cycle Q Clear(g_c), s	2.6	0.0	5.0				0.0	0.0	0.0	9.8	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	348	0	146				0	2329	1026	279	2720	0
V/C Ratio(X)	0.19	0.00	0.36				0.00	0.44	0.15	0.83	0.28	0.00
Avail Cap(c_a), veh/h	807	0	338				0	2329	1026	748	2720	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.91	0.91	0.87	0.87	0.00
Uniform Delay (d), s/veh	62.2	0.0	63.3				0.0	0.0	0.0	61.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.6				0.0	0.5	0.3	2.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	2.1				0.0	0.2	0.1	4.7	0.1	0.0
LnGrp Delay(d),s/veh	62.3	0.0	63.8				0.0	0.5	0.3	64.0	0.2	0.0
LnGrp LOS	E		E					A	A	E	A	
Approach Vol, veh/h		120						1179			1000	
Approach Delay, s/veh		63.0						0.5			15.0	
Approach LOS		E						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	16.6	108.8		24.6		125.4		
Change Period (Y+Rc), s	4.4	* 10		* 9.9		* 10		
Max Green Setting (Gmax), s	32.6	* 59		* 34		* 96		
Max Q Clear Time (g_c+I1), s	11.8	2.0		7.0		2.0		
Green Ext Time (p_c), s	0.4	11.2		0.2		3.4		

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Notes

HCM 2010 Signalized Intersection Summary
21: River Run Drive & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	970	90	230	2005	220	160	60	120	30	20	40
Future Volume (veh/h)	130	970	90	230	2005	220	160	60	120	30	20	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	137	1021	55	242	2111	211	168	63	58	32	21	27
Adj No. of Lanes	1	3	1	1	3	0	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	150	1844	558	281	2049	202	294	91	461	101	68	56
Arrive On Green	0.08	0.36	0.36	0.16	0.44	0.44	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	5085	1540	1774	4695	463	743	305	1551	141	229	188
Grp Volume(v), veh/h	137	1021	55	242	1517	805	231	0	58	80	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1540	1774	1695	1768	1048	0	1551	558	0	0
Q Serve(g_s), s	6.5	13.6	2.0	11.3	37.2	37.2	0.0	0.0	2.3	0.9	0.0	0.0
Cycle Q Clear(g_c), s	6.5	13.6	2.0	11.3	37.2	37.2	19.3	0.0	2.3	20.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.26	0.73		1.00	0.40		0.34
Lane Grp Cap(c), veh/h	150	1844	558	281	1479	772	385	0	461	225	0	0
V/C Ratio(X)	0.91	0.55	0.10	0.86	1.03	1.04	0.60	0.00	0.13	0.36	0.00	0.00
Avail Cap(c_a), veh/h	150	1844	558	431	1479	772	465	0	548	307	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	38.7	21.7	18.0	35.0	24.0	24.0	27.7	0.0	21.9	23.7	0.0	0.0
Incr Delay (d2), s/veh	48.1	1.2	0.4	7.0	30.0	44.4	1.1	0.0	0.1	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	6.5	0.9	6.1	23.4	27.5	5.1	0.0	1.0	1.4	0.0	0.0
LnGrp Delay(d),s/veh	86.8	22.9	18.3	42.0	54.0	68.4	28.8	0.0	22.0	24.9	0.0	0.0
LnGrp LOS	F	C	B	D	F	F	C		C	C		
Approach Vol, veh/h		1213			2564			289			80	
Approach Delay, s/veh		29.9			57.4			27.4			24.9	
Approach LOS		C			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.9	37.1		30.2	11.6	43.4		30.2
Change Period (Y+Rc), s	4.4	6.2		4.9	4.4	6.2		4.9
Max Green Setting (Gmax), s	20.7	23.7		30.1	7.2	37.2		30.1
Max Q Clear Time (g_c+I1), s	13.3	15.6		22.2	8.5	39.2		21.3
Green Ext Time (p_c), s	0.2	6.7		0.2	0.0	0.0		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	46.6
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
22: Fenton Parkway & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	790	230	250	2075	40	290	80	160	90	160	90
Future Volume (veh/h)	100	790	230	250	2075	40	290	80	160	90	160	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	105	832	201	263	2184	29	305	84	26	95	168	-31
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	2369	861	310	2608	865	289	383	316	139	300	323
Arrive On Green	0.04	0.47	0.47	0.09	0.51	0.51	0.08	0.21	0.21	0.04	0.16	0.00
Sat Flow, veh/h	3442	5085	1563	3442	5085	1565	3442	1863	1537	3548	1863	1583
Grp Volume(v), veh/h	105	832	201	263	2184	29	305	84	26	95	168	-31
Grp Sat Flow(s),veh/h/ln	1721	1695	1563	1721	1695	1565	1721	1863	1537	1774	1863	1583
Q Serve(g_s), s	4.5	15.7	10.0	11.3	55.0	1.3	12.6	5.6	2.1	4.0	12.5	0.0
Cycle Q Clear(g_c), s	4.5	15.7	10.0	11.3	55.0	1.3	12.6	5.6	2.1	4.0	12.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	2369	861	310	2608	865	289	383	316	139	300	323
V/C Ratio(X)	0.71	0.35	0.23	0.85	0.84	0.03	1.06	0.22	0.08	0.68	0.56	-0.10
Avail Cap(c_a), veh/h	174	2369	861	413	2608	865	289	566	467	213	522	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	0.48	0.48	0.48	0.92	0.92	0.92	1.00	1.00	0.00
Uniform Delay (d), s/veh	70.9	25.6	17.4	67.2	31.2	15.3	68.7	49.6	48.1	71.1	58.1	0.0
Incr Delay (d2), s/veh	6.5	0.4	0.5	4.8	1.7	0.0	66.1	0.7	0.3	2.2	7.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	7.4	4.4	5.6	26.1	0.6	8.6	3.0	0.9	2.0	7.1	0.0
LnGrp Delay(d),s/veh	77.3	25.9	18.0	72.1	32.9	15.4	134.8	50.3	48.4	73.3	65.5	0.0
LnGrp LOS	E	C	B	E	C	B	F	D	D	E	E	
Approach Vol, veh/h		1138			2476			415			232	
Approach Delay, s/veh		29.3			36.8			112.3			77.4	
Approach LOS		C			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.9	81.1	17.0	34.0	10.8	88.1	10.3	40.7
Change Period (Y+Rc), s	4.4	11.2	4.4	* 9.9	4.4	11.2	4.4	* 9.9
Max Green Setting (Gmax), s	18.0	47.5	12.6	* 42	7.6	57.9	9.0	* 46
Max Q Clear Time (g_c+I1), s	13.3	17.7	14.6	14.5	6.5	57.0	6.0	7.6
Green Ext Time (p_c), s	0.2	16.3	0.0	2.9	0.0	0.9	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	44.4
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
23: Northside Drive & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	830	180	470	2135	50	110	120	270	90	170	120
Future Volume (veh/h)	30	830	180	470	2135	50	110	120	270	90	170	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	31	865	73	490	2224	11	115	125	182	94	177	0
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	2209	678	492	2821	929	173	363	526	131	341	289
Arrive On Green	0.02	0.43	0.43	0.14	0.55	0.55	0.05	0.20	0.20	0.04	0.18	0.00
Sat Flow, veh/h	3442	5085	1561	3442	5085	1566	3442	1863	1535	3442	1863	1583
Grp Volume(v), veh/h	31	865	73	490	2224	11	115	125	182	94	177	0
Grp Sat Flow(s),veh/h/ln	1721	1695	1561	1721	1695	1566	1721	1863	1535	1721	1863	1583
Q Serve(g_s), s	0.9	12.2	2.9	14.9	36.3	0.3	3.4	6.1	9.4	2.8	9.0	0.0
Cycle Q Clear(g_c), s	0.9	12.2	2.9	14.9	36.3	0.3	3.4	6.1	9.4	2.8	9.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	2209	678	492	2821	929	173	363	526	131	341	289
V/C Ratio(X)	0.40	0.39	0.11	1.00	0.79	0.01	0.66	0.34	0.35	0.72	0.52	0.00
Avail Cap(c_a), veh/h	131	2209	678	492	2821	929	229	656	767	131	603	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.6	20.2	17.6	45.0	18.5	8.8	49.0	36.5	26.1	49.9	38.7	0.0
Incr Delay (d2), s/veh	1.1	0.5	0.3	39.6	2.3	0.0	1.5	1.4	1.0	14.9	5.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.8	1.3	9.8	17.5	0.1	1.7	3.3	4.1	1.6	5.1	0.0
LnGrp Delay(d),s/veh	51.7	20.7	17.9	84.6	20.8	8.8	50.5	37.9	27.1	64.9	44.3	0.0
LnGrp LOS	D	C	B	F	C	A	D	D	C	E	D	
Approach Vol, veh/h		969			2725			422			271	
Approach Delay, s/veh		21.5			32.2			36.7			51.4	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.4	51.8	9.7	24.1	6.8	64.4	8.4	25.4
Change Period (Y+Rc), s	4.4	* 6.2	4.4	4.9	4.4	6.2	4.4	4.9
Max Green Setting (Gmax), s	15.0	* 29	7.0	34.0	4.0	40.1	4.0	37.0
Max Q Clear Time (g_c+I1), s	16.9	14.2	5.4	11.0	2.9	38.3	4.8	11.4
Green Ext Time (p_c), s	0.0	8.7	0.0	3.3	0.0	1.7	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	31.5
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
24: MissioN Village Drive & Friar Road WB

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	340	20	350	570	570	0	0	400	240
Future Volume (veh/h)	0	0	0	340	20	350	570	570	0	0	400	240
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.94
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				358	21	0	600	600	0	0	421	74
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				444	26	418	634	2079	0	0	579	243
Arrive On Green				0.26	0.26	0.00	0.36	0.59	0.00	0.00	0.16	0.16
Sat Flow, veh/h				1680	99	1583	1774	3632	0	0	3632	1487
Grp Volume(v), veh/h				379	0	0	600	600	0	0	421	74
Grp Sat Flow(s),veh/h/ln				1779	0	1583	1774	1770	0	0	1770	1487
Q Serve(g_s), s				16.0	0.0	0.0	26.3	6.7	0.0	0.0	9.0	3.5
Cycle Q Clear(g_c), s				16.0	0.0	0.0	26.3	6.7	0.0	0.0	9.0	3.5
Prop In Lane				0.94		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				470	0	418	634	2079	0	0	579	243
V/C Ratio(X)				0.81	0.00	0.00	0.95	0.29	0.00	0.00	0.73	0.30
Avail Cap(c_a), veh/h				644	0	573	680	2390	0	0	800	336
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.6	0.0	0.0	25.0	8.2	0.0	0.0	31.8	29.5
Incr Delay (d2), s/veh				3.7	0.0	0.0	20.9	0.1	0.0	0.0	2.6	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.3	0.0	0.0	16.5	3.3	0.0	0.0	4.7	1.5
LnGrp Delay(d),s/veh				31.3	0.0	0.0	45.9	8.3	0.0	0.0	34.4	30.4
LnGrp LOS				C			D	A			C	C
Approach Vol, veh/h					379			1200			495	
Approach Delay, s/veh					31.3			27.1			33.8	
Approach LOS					C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	34.0	20.1				54.1		26.1
Change Period (Y+Rc), s	5.3	7.0				7.0		4.9
Max Green Setting (Gmax), s	30.7	18.1				54.1		29.0
Max Q Clear Time (g_c+I1), s	28.3	11.0				8.7		18.0
Green Ext Time (p_c), s	0.3	2.1				6.2		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
25: MissioN Village Drive & Friar Road eb

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	5	280	0	0	0	0	960	550	290	450	0
Future Volume (veh/h)	180	5	280	0	0	0	0	960	550	290	450	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	189	5	295				0	1011	511	305	474	0
Adj No. of Lanes	0	1	1				0	1	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	277	7	244				0	944	787	302	602	0
Arrive On Green	0.16	0.16	0.16				0.00	0.51	0.51	0.17	0.17	0.00
Sat Flow, veh/h	1730	46	1524				0	1863	1552	1774	3632	0
Grp Volume(v), veh/h	194	0	295				0	1011	511	305	474	0
Grp Sat Flow(s),veh/h/ln	1776	0	1524				0	1863	1552	1774	1770	0
Q Serve(g_s), s	10.3	0.0	16.0				0.0	50.7	24.2	17.0	12.8	0.0
Cycle Q Clear(g_c), s	10.3	0.0	16.0				0.0	50.7	24.2	17.0	12.8	0.0
Prop In Lane	0.97		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	284	0	244				0	944	787	302	602	0
V/C Ratio(X)	0.68	0.00	1.21				0.00	1.07	0.65	1.01	0.79	0.00
Avail Cap(c_a), veh/h	284	0	244				0	944	787	302	602	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.6	0.0	42.0				0.0	24.7	18.1	41.5	39.8	0.0
Incr Delay (d2), s/veh	6.5	0.0	126.3				0.0	50.1	4.1	54.7	6.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	15.3				0.0	38.8	11.3	12.9	6.8	0.0
LnGrp Delay(d),s/veh	46.2	0.0	168.3				0.0	74.7	22.2	96.3	46.7	0.0
LnGrp LOS	D		F					F	C	F	D	
Approach Vol, veh/h		489						1522			779	
Approach Delay, s/veh		119.8						57.1			66.1	
Approach LOS		F						E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		55.6		21.2		23.2		
Change Period (Y+Rc), s		4.9		5.2		6.2		
Max Green Setting (Gmax), s		50.7		16.0		17.0		
Max Q Clear Time (g_c+I1), s		52.7		18.0		19.0		
Green Ext Time (p_c), s		0.0		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	70.6
HCM 2010 LOS	E

HCM 2010 Signalized Intersection Summary
26: I-15 SB Ramps & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	720	430	410	1795	520	0	0	0	850	0	740
Future Volume (veh/h)	420	720	430	410	1795	520	0	0	0	850	0	740
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	433	742	422	423	1851	0				876	0	763
Adj No. of Lanes	1	3	1	1	3	1				3	0	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.95	0.97
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	541	2210	672	450	1839	572				992	0	1538
Arrive On Green	0.31	0.43	0.43	0.08	0.12	0.00				0.19	0.00	0.19
Sat Flow, veh/h	1774	5085	1547	1774	5085	1583				5322	0	3065
Grp Volume(v), veh/h	433	742	422	423	1851	0				876	0	763
Grp Sat Flow(s),veh/h/ln	1774	1695	1547	1774	1695	1583				1774	0	1532
Q Serve(g_s), s	29.2	12.6	27.6	30.8	47.0	0.0				20.8	0.0	0.0
Cycle Q Clear(g_c), s	29.2	12.6	27.6	30.8	47.0	0.0				20.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	541	2210	672	450	1839	572				992	0	1538
V/C Ratio(X)	0.80	0.34	0.63	0.94	1.01	0.00				0.88	0.00	0.50
Avail Cap(c_a), veh/h	541	2210	672	611	1839	572				1429	0	1789
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	41.5	24.3	28.6	58.6	57.2	0.0				51.5	0.0	22.1
Incr Delay (d2), s/veh	7.7	0.4	4.4	2.3	8.0	0.0				3.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	5.9	12.5	15.4	23.4	0.0				10.6	0.0	13.7
LnGrp Delay(d),s/veh	49.3	24.7	33.0	60.9	65.3	0.0				55.2	0.0	22.2
LnGrp LOS	D	C	C	E	F					E		C
Approach Vol, veh/h		1597			2274						1639	
Approach Delay, s/veh		33.6			64.4						39.8	
Approach LOS		C			E						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	37.2	63.5		29.3	46.7	54.0		
Change Period (Y+Rc), s	* 4.2	7.0		5.1	7.0	* 7		
Max Green Setting (Gmax), s	* 45	34.0		34.9	31.3	* 47		
Max Q Clear Time (g_c+I1), s	32.8	29.6		22.8	31.2	49.0		
Green Ext Time (p_c), s	0.1	1.8		1.4	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	48.2
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
27: I-15 NB Ramps & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	640	930	0	0	2120	1170	0	0	390	0	0	605
Future Volume (veh/h)	640	930	0	0	2120	1170	0	0	390	0	0	605
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	0	1863	1900	0	1863	1900
Adj Flow Rate, veh/h	674	979	0	0	2232	0	0	0	0	0	0	0
Adj No. of Lanes	1	3	0	0	3	1	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	2	0	2	2
Cap, veh/h	484	4851	0	0	3611	1023	0	1	0	0	1	0
Arrive On Green	0.18	0.64	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	5253	0	0	5588	1583	0	-74510	0	0	-74510	0
Grp Volume(v), veh/h	674	979	0	0	2232	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	0	0	1863	1583	0	1863	0	0	1863	0
Q Serve(g_s), s	35.5	10.4	0.0	0.0	30.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	35.5	10.4	0.0	0.0	30.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	484	4851	0	0	3611	1023	0	1	0	0	1	0
V/C Ratio(X)	1.39	0.20	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	484	4851	0	0	3611	1023	0	258	0	0	258	0
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	53.1	3.0	0.0	0.0	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	183.5	0.1	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	42.1	4.9	0.0	0.0	15.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	236.6	3.0	0.0	0.0	14.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	F	A			B							
Approach Vol, veh/h		1653			2232			0			0	
Approach Delay, s/veh		98.2			14.1			0.0			0.0	
Approach LOS		F			B							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		130.0		0.0	40.0	90.0		0.0
Change Period (Y+Rc), s		* 6		4.0	4.5	6.0		4.0
Max Green Setting (Gmax), s		* 1E2		18.0	35.5	62.0		18.0
Max Q Clear Time (g_c+I1), s		12.4		0.0	37.5	32.6		0.0
Green Ext Time (p_c), s		2.1		0.0	0.0	13.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.9
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
28: Rancho Mission Road & Friar Roads

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	980	340	220	2610	580	350
Future Volume (veh/h)	980	340	220	2610	580	350
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1032	195	232	2747	627	314
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2618	1148	259	4450	781	349
Arrive On Green	0.34	0.34	0.15	0.69	0.22	0.22
Sat Flow, veh/h	5253	1553	1774	6669	3548	1583
Grp Volume(v), veh/h	1032	195	232	2747	627	314
Grp Sat Flow(s),veh/h/ln	1695	1553	1774	1602	1774	1583
Q Serve(g_s), s	20.0	6.4	16.7	29.8	21.8	25.1
Cycle Q Clear(g_c), s	20.0	6.4	16.7	29.8	21.8	25.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2618	1148	259	4450	781	349
V/C Ratio(X)	0.39	0.17	0.90	0.62	0.80	0.90
Avail Cap(c_a), veh/h	2618	1148	445	4450	1062	474
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	7.3	54.6	10.6	48.0	49.3
Incr Delay (d2), s/veh	0.4	0.3	6.4	0.6	2.3	13.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	5.1	8.6	13.2	10.9	12.3
LnGrp Delay(d),s/veh	27.6	7.6	61.0	11.3	50.3	63.0
LnGrp LOS	C	A	E	B	D	E
Approach Vol, veh/h	1227			2979	941	
Approach Delay, s/veh	24.5			15.1	54.5	
Approach LOS	C			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	23.3	72.9				96.3		33.7
Change Period (Y+Rc), s	4.4	* 6				6.0		5.1
Max Green Setting (Gmax), s	32.6	* 43				80.0		38.9
Max Q Clear Time (g_c+I1), s	18.7	22.0				31.8		27.1
Green Ext Time (p_c), s	0.2	10.4				46.0		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
29: Friar Roads & Santo Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	340	990	2420	340	130	410
Future Volume (veh/h)	340	990	2420	340	130	410
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	351	1021	2495	313	134	415
Adj No. of Lanes	2	3	4	0	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1188	4346	2697	334	212	644
Arrive On Green	0.35	0.85	0.62	0.62	0.06	0.06
Sat Flow, veh/h	3442	5253	6065	719	3442	1583
Grp Volume(v), veh/h	351	1021	2060	748	134	415
Grp Sat Flow(s),veh/h/ln	1721	1695	1602	1717	1721	1583
Q Serve(g_s), s	9.7	4.8	49.5	51.4	4.9	0.0
Cycle Q Clear(g_c), s	9.7	4.8	49.5	51.4	4.9	0.0
Prop In Lane	1.00			0.42	1.00	1.00
Lane Grp Cap(c), veh/h	1188	4346	2233	798	212	644
V/C Ratio(X)	0.30	0.23	0.92	0.94	0.63	0.64
Avail Cap(c_a), veh/h	1188	4346	2248	803	1032	1022
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.32	0.32	1.00	1.00
Uniform Delay (d), s/veh	31.0	1.7	22.8	23.1	59.6	31.0
Incr Delay (d2), s/veh	0.1	0.1	2.8	8.3	1.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	2.2	22.1	25.8	2.4	14.9
LnGrp Delay(d),s/veh	31.1	1.8	25.6	31.4	60.7	31.4
LnGrp LOS	C	A	C	C	E	C
Approach Vol, veh/h		1372	2808		549	
Approach Delay, s/veh		9.3	27.1		38.6	
Approach LOS		A	C		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		117.6		12.4	51.4	66.2		
Change Period (Y+Rc), s		6.5		4.4	6.5	* 5.8		
Max Green Setting (Gmax), s		80.1		39.0	15.6	* 61		
Max Q Clear Time (g_c+I1), s		6.8		6.9	11.7	53.4		
Green Ext Time (p_c), s		9.5		1.1	0.3	7.0		

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
30: Riverdale Street & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	750	190	180	2260	230	110	50	40	80	40	190
Future Volume (veh/h)	130	750	190	180	2260	230	110	50	40	80	40	190
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.99		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	789	32	189	2379	221	116	53	16	84	42	168
Adj No. of Lanes	1	3	1	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	158	2607	796	215	2579	235	212	340	103	340	80	319
Arrive On Green	0.18	1.00	1.00	0.12	0.54	0.54	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	5085	1552	1774	4736	431	1151	1366	412	1299	320	1280
Grp Volume(v), veh/h	137	789	32	189	1689	911	116	0	69	84	0	210
Grp Sat Flow(s),veh/h/ln	1774	1695	1552	1774	1695	1777	1151	0	1778	1299	0	1600
Q Serve(g_s), s	9.8	0.0	0.0	13.6	58.8	62.3	12.6	0.0	3.9	7.0	0.0	14.7
Cycle Q Clear(g_c), s	9.8	0.0	0.0	13.6	58.8	62.3	27.3	0.0	3.9	11.0	0.0	14.7
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.23	1.00		0.80
Lane Grp Cap(c), veh/h	158	2607	796	215	1846	968	212	0	443	340	0	399
V/C Ratio(X)	0.87	0.30	0.04	0.88	0.91	0.94	0.55	0.00	0.16	0.25	0.00	0.53
Avail Cap(c_a), veh/h	158	2607	796	317	1846	968	236	0	480	367	0	432
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	0.47	0.47	0.47	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.6	0.0	0.0	56.2	26.9	27.7	54.0	0.0	38.1	42.4	0.0	42.2
Incr Delay (d2), s/veh	34.2	0.3	0.1	6.7	4.4	10.2	0.8	0.0	0.1	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.1	0.0	7.1	28.6	33.1	4.0	0.0	1.9	2.5	0.0	6.6
LnGrp Delay(d),s/veh	86.8	0.3	0.1	62.9	31.3	37.8	54.8	0.0	38.2	42.5	0.0	42.6
LnGrp LOS	F	A	A	E	C	D	D		D	D		D
Approach Vol, veh/h		958			2789			185			294	
Approach Delay, s/veh		12.7			35.6			48.6			42.6	
Approach LOS		B			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.1	72.6		37.3	16.0	76.7		37.3
Change Period (Y+Rc), s	4.4	* 5.9		4.9	4.4	5.9		4.9
Max Green Setting (Gmax), s	23.2	* 57		35.1	11.6	68.1		35.1
Max Q Clear Time (g_c+I1), s	15.6	2.0		16.7	11.8	64.3		29.3
Green Ext Time (p_c), s	0.1	7.7		1.0	0.0	3.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	31.4
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
31: Mission Gorge Road & Friar Roads

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	640	230	450	0	360	290
Future Volume (veh/h)	640	230	450	0	360	290
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	674	0	474	0	379	197
Adj No. of Lanes	3	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	0	2	2
Cap, veh/h	954	297	1596	0	403	1925
Arrive On Green	0.19	0.00	0.46	0.00	0.23	0.23
Sat Flow, veh/h	5253	1583	3442	474	1774	2787
Grp Volume(v), veh/h	674	0	474	20.1	379	197
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	C	1774	1393
Q Serve(g_s), s	14.9	0.0	10.3		25.2	0.0
Cycle Q Clear(g_c), s	14.9	0.0	10.3		25.2	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	954	297	1596		403	1925
V/C Ratio(X)	0.71	0.00	0.30		0.94	0.10
Avail Cap(c_a), veh/h	1661	517	1596		408	1933
HCM Platoon Ratio	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	0.97	0.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	45.7	0.0	20.0		45.6	6.2
Incr Delay (d2), s/veh	4.3	0.0	0.0		29.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.0	4.9		15.6	1.1
LnGrp Delay(d),s/veh	49.9	0.0	20.1		74.9	6.2
LnGrp LOS	D		C		E	A
Approach Vol, veh/h	674				576	
Approach Delay, s/veh	49.9				51.4	
Approach LOS	D				D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2						8
Phs Duration (G+Y+Rc), s	60.0	28.3						31.7
Change Period (Y+Rc), s	4.4	5.8						4.4
Max Green Setting (Gmax), s	38.6	39.2						27.6
Max Q Clear Time (g_c+I1), s	12.3	16.9						27.2
Green Ext Time (p_c), s	0.8	4.6						0.1

Intersection Summary	
HCM 2010 Ctrl Delay	42.2
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
32: Mission Center Road & Mission Center Ct

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	40	70	130	40	100	100	600	60	80	660	80
Future Volume (veh/h)	40	40	70	130	40	100	100	600	60	80	660	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.83	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	42	63	137	42	84	105	632	52	84	695	73
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	66	328	223	54	280	128	1955	859	105	1909	838
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.07	0.55	0.55	0.06	0.54	0.54
Sat Flow, veh/h	186	311	1539	833	255	1316	1774	3539	1555	1774	3539	1554
Grp Volume(v), veh/h	84	0	63	179	0	84	105	632	52	84	695	73
Grp Sat Flow(s),veh/h/ln	498	0	1539	1088	0	1316	1774	1770	1555	1774	1770	1554
Q Serve(g_s), s	5.2	0.0	4.7	0.0	0.0	7.5	8.2	13.6	2.2	6.5	15.8	3.2
Cycle Q Clear(g_c), s	27.6	0.0	4.7	22.4	0.0	7.5	8.2	13.6	2.2	6.5	15.8	3.2
Prop In Lane	0.50		1.00	0.77		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	0	328	277	0	280	128	1955	859	105	1909	838
V/C Ratio(X)	0.58	0.00	0.19	0.65	0.00	0.30	0.82	0.32	0.06	0.80	0.36	0.09
Avail Cap(c_a), veh/h	244	0	430	373	0	367	261	1955	859	223	1909	838
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.93	0.93	0.95	0.95	0.95
Uniform Delay (d), s/veh	57.7	0.0	45.2	52.2	0.0	46.3	64.1	17.1	14.5	65.1	18.5	15.6
Incr Delay (d2), s/veh	1.4	0.0	0.1	0.9	0.0	0.2	4.6	0.4	0.1	5.0	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	2.0	6.6	0.0	2.8	4.2	6.8	1.0	3.4	7.9	1.4
LnGrp Delay(d),s/veh	59.0	0.0	45.3	53.1	0.0	46.5	68.7	17.5	14.6	70.1	19.0	15.8
LnGrp LOS	E		D	D		D	E	B	B	E	B	B
Approach Vol, veh/h		147			263			789			852	
Approach Delay, s/veh		53.2			51.0			24.1			23.8	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.7	87.6		39.7	14.5	85.8		39.7
Change Period (Y+Rc), s	4.4	10.3		* 9.9	4.4	10.3		* 9.9
Max Green Setting (Gmax), s	17.6	58.7		* 39	20.6	55.7		* 39
Max Q Clear Time (g_c+I1), s	8.5	15.6		29.6	10.2	17.8		24.4
Green Ext Time (p_c), s	0.1	3.9		0.2	0.1	7.9		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
33: Qualcomm Way & Rio San Diego Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	20	160	220	60	90	130	1070	640	90	590	180
Future Volume (veh/h)	110	20	160	220	60	90	130	1070	640	90	590	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	21	89	232	63	16	137	1126	227	95	621	136
Adj No. of Lanes	2	1	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	215	257	279	531	228	183	2893	885	137	2826	870
Arrive On Green	0.05	0.12	0.12	0.08	0.15	0.15	0.04	0.38	0.38	0.05	0.74	0.74
Sat Flow, veh/h	3442	1863	1501	3442	3539	1520	3442	5085	1555	3442	5085	1566
Grp Volume(v), veh/h	116	21	89	232	63	16	137	1126	227	95	621	136
Grp Sat Flow(s),veh/h/ln	1721	1863	1501	1721	1770	1520	1721	1695	1555	1721	1695	1566
Q Serve(g_s), s	5.0	1.5	7.9	10.0	2.3	1.4	5.9	24.1	15.0	4.1	5.7	3.8
Cycle Q Clear(g_c), s	5.0	1.5	7.9	10.0	2.3	1.4	5.9	24.1	15.0	4.1	5.7	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	215	257	279	531	228	183	2893	885	137	2826	870
V/C Ratio(X)	0.72	0.10	0.35	0.83	0.12	0.07	0.75	0.39	0.26	0.69	0.22	0.16
Avail Cap(c_a), veh/h	243	394	401	404	913	392	266	2893	885	197	2826	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.55	0.55	0.55	0.96	0.96	0.96
Uniform Delay (d), s/veh	70.6	59.3	55.1	67.9	55.2	54.8	71.4	27.5	24.7	70.1	9.4	9.2
Incr Delay (d2), s/veh	2.3	0.2	0.8	6.4	0.1	0.1	1.7	0.2	0.4	2.2	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.8	3.3	5.0	1.1	0.6	2.9	11.4	6.5	2.0	2.7	1.7
LnGrp Delay(d),s/veh	72.9	59.5	55.9	74.3	55.3	54.9	73.1	27.7	25.0	72.4	9.6	9.6
LnGrp LOS	E	E	E	E	E	D	E	C	C	E	A	A
Approach Vol, veh/h		226			311			1490			852	
Approach Delay, s/veh		65.0			69.4			31.5			16.6	
Approach LOS		E			E			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	95.4	16.6	27.6	12.4	93.5	11.4	32.8
Change Period (Y+Rc), s	4.4	* 10	4.4	10.3	4.4	* 10	4.4	10.3
Max Green Setting (Gmax), s	8.6	* 63	17.6	31.7	11.6	* 60	10.6	38.7
Max Q Clear Time (g_c+I1), s	6.1	26.1	12.0	9.9	7.9	7.7	7.0	4.3
Green Ext Time (p_c), s	0.0	15.0	0.2	0.3	0.1	8.9	0.1	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C

Notes

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	485	631	63	316
Demand Flow Rate, veh/h	494	643	63	323
Vehicles Circulating, veh/h	161	160	580	514
Vehicles Exiting, veh/h	676	483	75	289
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	20	20	20	20
Ped Cap Adj	0.997	0.997	0.997	0.997
Approach Delay, s/veh	10.4	14.6	6.9	12.8
Approach LOS	B	B	A	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	494	643	63	323
Cap Entry Lane, veh/h	962	963	633	676
Entry HV Adj Factor	0.981	0.981	0.993	0.979
Flow Entry, veh/h	485	631	63	316
Cap Entry, veh/h	941	942	627	660
V/C Ratio	0.515	0.670	0.100	0.479
Control Delay, s/veh	10.4	14.6	6.9	12.8
LOS	B	B	A	B
95th %tile Queue, veh	3	5	0	3

HCM 2010 Signalized Intersection Summary
35: Fenton Parkway & Rio San Diego Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	110	270	120	160	90	260	330	90	150	310	180
Future Volume (veh/h)	110	110	270	120	160	90	260	330	90	150	310	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	116	116	262	126	168	48	274	347	93	158	326	84
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	397	328	159	298	85	310	1041	450	232	661	280
Arrive On Green	0.08	0.21	0.21	0.09	0.22	0.22	0.17	0.29	0.29	0.07	0.19	0.19
Sat Flow, veh/h	1774	1863	1539	1774	1379	394	1774	3539	1529	3442	3539	1499
Grp Volume(v), veh/h	116	116	262	126	0	216	274	347	93	158	326	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1539	1774	0	1773	1774	1770	1529	1721	1770	1499
Q Serve(g_s), s	5.7	4.7	14.4	6.2	0.0	9.7	13.4	6.8	4.1	4.0	7.3	4.3
Cycle Q Clear(g_c), s	5.7	4.7	14.4	6.2	0.0	9.7	13.4	6.8	4.1	4.0	7.3	4.3
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	397	328	159	0	383	310	1041	450	232	661	280
V/C Ratio(X)	0.78	0.29	0.80	0.79	0.00	0.56	0.88	0.33	0.21	0.68	0.49	0.30
Avail Cap(c_a), veh/h	697	628	519	697	0	598	371	1340	579	445	1054	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	29.4	33.2	39.7	0.0	31.2	35.9	24.6	23.6	40.6	32.4	31.2
Incr Delay (d2), s/veh	5.5	0.2	3.0	3.4	0.0	0.5	17.3	0.9	1.0	1.3	2.6	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	2.4	6.4	3.2	0.0	4.8	8.0	3.5	1.9	2.0	3.8	2.0
LnGrp Delay(d),s/veh	45.5	29.6	36.2	43.1	0.0	31.7	53.2	25.5	24.7	41.9	35.0	33.9
LnGrp LOS	D	C	D	D		C	D	C	C	D	D	C
Approach Vol, veh/h		494			342			714			568	
Approach Delay, s/veh		36.8			35.9			36.0			36.8	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	36.6	12.9	29.2	19.9	27.0	12.6	29.4
Change Period (Y+Rc), s	4.4	* 10	4.9	10.2	4.4	* 10	5.2	* 10
Max Green Setting (Gmax), s	11.5	* 34	35.0	30.0	18.6	* 27	35.0	* 30
Max Q Clear Time (g_c+I1), s	6.0	8.8	8.2	16.4	15.4	9.3	7.7	11.7
Green Ext Time (p_c), s	0.1	8.0	0.1	0.9	0.1	6.0	0.2	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	36.4
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
36: Northside Drive & Rio San Diego Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	70	20	30	20	60	60	120	20	350	120	70
Future Volume (veh/h)	320	70	20	30	20	60	60	120	20	350	120	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.92	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	216	243	21	32	21	47	63	126	16	368	126	21
Adj No. of Lanes	1	1	0	0	1	1	1	2	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	392	372	32	132	87	182	80	462	191	416	596	847
Arrive On Green	0.22	0.22	0.22	0.12	0.12	0.12	0.05	0.13	0.13	0.23	0.32	0.32
Sat Flow, veh/h	1774	1683	145	1092	716	1505	1774	3539	1462	1774	1863	1554
Grp Volume(v), veh/h	216	0	264	53	0	47	63	126	16	368	126	21
Grp Sat Flow(s),veh/h/ln	1774	0	1829	1808	0	1505	1774	1770	1462	1774	1863	1554
Q Serve(g_s), s	7.0	0.0	8.6	1.7	0.0	1.8	2.3	2.1	0.6	13.1	3.2	0.4
Cycle Q Clear(g_c), s	7.0	0.0	8.6	1.7	0.0	1.8	2.3	2.1	0.6	13.1	3.2	0.4
Prop In Lane	1.00		0.08	0.60		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	392	0	404	219	0	182	80	462	191	416	596	847
V/C Ratio(X)	0.55	0.00	0.65	0.24	0.00	0.26	0.79	0.27	0.08	0.88	0.21	0.02
Avail Cap(c_a), veh/h	762	0	785	832	0	692	261	1048	433	506	809	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	0.0	23.1	26.0	0.0	26.0	30.8	25.5	24.9	24.1	16.2	7.0
Incr Delay (d2), s/veh	0.5	0.0	0.7	0.2	0.0	0.3	6.3	0.1	0.1	13.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	4.4	0.9	0.0	0.8	1.3	1.0	0.3	7.9	1.7	0.3
LnGrp Delay(d),s/veh	23.0	0.0	23.8	26.2	0.0	26.3	37.1	25.7	25.0	37.3	16.6	7.0
LnGrp LOS	C		C	C		C	D	C	C	D	B	A
Approach Vol, veh/h		480			100			205			515	
Approach Delay, s/veh		23.4			26.2			29.1			31.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.7	13.4		19.3	7.3	25.8		12.8
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	18.6	19.3		28.0	9.6	28.3		30.0
Max Q Clear Time (g_c+I1), s	15.1	4.1		10.6	4.3	5.2		3.8
Green Ext Time (p_c), s	0.2	0.4		1.1	0.0	1.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
37: Rancho Mission Road & San Diego Mission Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	210	160	170	450	160	290	270	100	200	240	120
Future Volume (veh/h)	120	210	160	170	450	160	290	270	100	200	240	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	221	89	179	474	42	305	284	54	211	253	48
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	158	417	162	214	710	302	341	436	362	247	338	278
Arrive On Green	0.09	0.17	0.17	0.12	0.20	0.20	0.19	0.23	0.23	0.14	0.18	0.18
Sat Flow, veh/h	1774	2466	956	1774	3539	1504	1774	1863	1543	1774	1863	1531
Grp Volume(v), veh/h	126	156	154	179	474	42	305	284	54	211	253	48
Grp Sat Flow(s),veh/h/ln	1774	1770	1653	1774	1770	1504	1774	1863	1543	1774	1863	1531
Q Serve(g_s), s	5.9	6.8	7.3	8.4	10.5	2.0	14.3	11.7	2.4	9.9	10.9	2.3
Cycle Q Clear(g_c), s	5.9	6.8	7.3	8.4	10.5	2.0	14.3	11.7	2.4	9.9	10.9	2.3
Prop In Lane	1.00		0.58	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	158	299	280	214	710	302	341	436	362	247	338	278
V/C Ratio(X)	0.80	0.52	0.55	0.84	0.67	0.14	0.89	0.65	0.15	0.85	0.75	0.17
Avail Cap(c_a), veh/h	313	633	591	230	1107	471	376	684	566	292	592	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	32.2	32.4	36.6	31.4	28.0	33.5	29.4	25.8	35.7	32.9	29.4
Incr Delay (d2), s/veh	3.4	2.1	2.6	20.1	1.8	0.3	20.5	0.6	0.1	16.5	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.5	3.5	5.3	5.3	0.8	8.9	6.1	1.0	5.9	5.7	1.0
LnGrp Delay(d),s/veh	41.4	34.3	34.9	56.7	33.2	28.3	54.0	30.0	25.9	52.2	34.2	29.5
LnGrp LOS	D	C	C	E	C	C	D	C	C	D	C	C
Approach Vol, veh/h		436			695			643			512	
Approach Delay, s/veh		36.6			38.9			41.0			41.2	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	24.9	20.3	25.5	11.6	27.5	15.9	30.0
Change Period (Y+Rc), s	4.0	10.5	4.0	* 10	4.0	* 11	4.0	* 10
Max Green Setting (Gmax), s	11.0	30.4	18.0	* 27	15.0	* 27	14.0	* 31
Max Q Clear Time (g_c+I1), s	10.4	9.3	16.3	12.9	7.9	12.5	11.9	13.7
Green Ext Time (p_c), s	0.0	2.5	0.1	0.7	0.1	4.0	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	39.6
HCM 2010 LOS	D

Notes

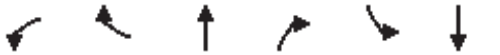
HCM 2010 Signalized Intersection Summary
38: Mission Center Road & Harzard Center Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	20	210	30	20	20	300	600	80	40	490	150
Future Volume (veh/h)	90	20	210	30	20	20	300	600	80	40	490	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.90	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	110	0	79	32	21	18	316	632	15	42	516	142
Adj No. of Lanes	2	0	1	0	1	1	2	2	1	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	493	0	408	49	32	64	435	1273	541	58	1054	281
Arrive On Green	0.14	0.00	0.14	0.04	0.04	0.04	0.13	0.36	0.36	0.03	0.27	0.27
Sat Flow, veh/h	3548	0	1495	1092	716	1431	3442	3539	1505	1774	3965	1056
Grp Volume(v), veh/h	110	0	79	53	0	18	316	632	15	42	439	219
Grp Sat Flow(s),veh/h/ln	1774	0	1495	1808	0	1431	1721	1770	1505	1774	1695	1631
Q Serve(g_s), s	1.8	0.0	2.6	1.9	0.0	0.8	5.7	8.9	0.4	1.5	7.0	7.3
Cycle Q Clear(g_c), s	1.8	0.0	2.6	1.9	0.0	0.8	5.7	8.9	0.4	1.5	7.0	7.3
Prop In Lane	1.00		1.00	0.60		1.00	1.00		1.00	1.00		0.65
Lane Grp Cap(c), veh/h	493	0	408	81	0	64	435	1273	541	58	901	434
V/C Ratio(X)	0.22	0.00	0.19	0.65	0.00	0.28	0.73	0.50	0.03	0.72	0.49	0.51
Avail Cap(c_a), veh/h	1604	0	876	310	0	245	1126	2686	1143	249	1680	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	0.0	18.3	30.2	0.0	29.6	27.0	16.0	13.3	30.7	19.9	20.0
Incr Delay (d2), s/veh	0.3	0.0	0.3	3.3	0.0	0.9	0.9	0.6	0.0	6.1	0.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.1	1.0	0.0	0.3	2.7	4.4	0.2	0.8	3.4	3.5
LnGrp Delay(d),s/veh	24.8	0.0	18.6	33.5	0.0	30.5	27.8	16.6	13.3	36.8	20.6	21.7
LnGrp LOS	C		B	C		C	C	B	B	D	C	C
Approach Vol, veh/h		189			71			963			700	
Approach Delay, s/veh		22.2			32.7			20.2			21.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	33.3		17.9	12.1	27.3		6.9
Change Period (Y+Rc), s	4.0	* 10		9.0	4.0	10.2		4.0
Max Green Setting (Gmax), s	9.0	* 49		29.0	21.0	31.8		11.0
Max Q Clear Time (g_c+I1), s	3.5	10.9		4.6	7.7	9.3		3.9
Green Ext Time (p_c), s	0.0	8.6		0.9	0.5	7.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	610	310	150	250	90	120
Future Volume (veh/h)	610	310	150	250	90	120
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.95	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	642	21	158	42	95	126
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	760	785	369	298	120	670
Arrive On Green	0.43	0.43	0.20	0.20	0.07	0.36
Sat Flow, veh/h	1774	1583	1863	1503	1774	1863
Grp Volume(v), veh/h	642	21	158	42	95	126
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1503	1774	1863
Q Serve(g_s), s	13.8	0.3	3.2	1.0	2.2	2.0
Cycle Q Clear(g_c), s	13.8	0.3	3.2	1.0	2.2	2.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	760	785	369	298	120	670
V/C Ratio(X)	0.84	0.03	0.43	0.14	0.79	0.19
Avail Cap(c_a), veh/h	2235	2102	812	655	209	1207
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.9	5.5	14.9	14.0	19.5	9.3
Incr Delay (d2), s/veh	2.7	0.0	0.8	0.2	11.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.1	1.7	0.4	1.5	1.0
LnGrp Delay(d),s/veh	13.6	5.5	15.7	14.3	30.6	9.5
LnGrp LOS	B	A	B	B	C	A
Approach Vol, veh/h	663		200			221
Approach Delay, s/veh	13.3		15.4			18.6
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.9	12.9				19.8		22.7
Change Period (Y+Rc), s	4.0	4.5				4.5		4.5
Max Green Setting (Gmax), s	5.0	18.5				27.5		53.5
Max Q Clear Time (g_c+I1), s	4.2	5.2				4.0		15.8
Green Ext Time (p_c), s	0.0	0.8				0.6		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
40: Mission Center Road & Camino De La Reina

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	90	70	130	390	250	210	570	120	150	390	140
Future Volume (veh/h)	90	90	70	130	390	250	210	570	120	150	390	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	95	95	42	137	411	174	221	600	110	158	411	23
Adj No. of Lanes	2	2	0	2	2	0	2	3	0	2	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	652	270	214	685	286	201	1049	189	201	1236	369
Arrive On Green	0.05	0.27	0.27	0.06	0.28	0.28	0.06	0.24	0.24	0.06	0.24	0.24
Sat Flow, veh/h	3442	2414	1000	3442	2407	1005	3442	4316	777	3442	5085	1518
Grp Volume(v), veh/h	95	68	69	137	301	284	221	469	241	158	411	23
Grp Sat Flow(s),veh/h/ln	1721	1770	1644	1721	1770	1643	1721	1695	1702	1721	1695	1518
Q Serve(g_s), s	2.1	2.3	2.5	3.1	11.5	11.8	4.6	9.6	9.8	3.6	5.3	0.9
Cycle Q Clear(g_c), s	2.1	2.3	2.5	3.1	11.5	11.8	4.6	9.6	9.8	3.6	5.3	0.9
Prop In Lane	1.00		0.61	1.00		0.61	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	164	478	444	214	504	468	201	824	414	201	1236	369
V/C Ratio(X)	0.58	0.14	0.16	0.64	0.60	0.61	1.10	0.57	0.58	0.79	0.33	0.06
Avail Cap(c_a), veh/h	2033	1610	1496	471	807	749	201	1242	624	201	1876	560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	21.9	21.9	36.1	24.3	24.4	37.2	26.2	26.3	36.7	24.6	23.0
Incr Delay (d2), s/veh	1.2	0.1	0.2	1.2	2.2	2.5	93.3	1.1	2.3	17.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.1	1.2	1.5	5.9	5.7	4.7	4.6	4.9	2.2	2.5	0.4
LnGrp Delay(d),s/veh	38.0	22.0	22.1	37.3	26.5	26.9	130.4	27.3	28.6	53.8	24.9	23.1
LnGrp LOS	D	C	C	D	C	C	F	C	C	D	C	C
Approach Vol, veh/h		232			722			931			592	
Approach Delay, s/veh		28.6			28.7			52.2			32.5	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	29.4	9.3	31.2	9.0	29.4	8.2	32.4
Change Period (Y+Rc), s	4.4	10.2	4.4	* 9.9	4.4	* 10	4.4	* 9.9
Max Green Setting (Gmax), s	4.6	28.9	10.8	* 72	4.6	* 29	46.6	* 36
Max Q Clear Time (g_c+I1), s	5.6	11.8	5.1	4.5	6.6	7.3	4.1	13.8
Green Ext Time (p_c), s	0.0	6.4	0.1	0.9	0.0	4.5	0.2	6.5

Intersection Summary	
HCM 2010 Ctrl Delay	38.4
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
41: Camino Del Este & Camino De La Reina

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	160	90	130	620	70	120	90	80	140	290	120
Future Volume (veh/h)	80	160	90	130	620	70	120	90	80	140	290	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	0.99		0.98	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	84	168	66	137	653	59	126	95	66	147	305	73
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	867	373	173	998	431	325	1009	442	428	1009	436
Arrive On Green	0.06	0.24	0.24	0.10	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	3539	1522	1774	3539	1527	990	3539	1550	1200	3539	1529
Grp Volume(v), veh/h	84	168	66	137	653	59	126	95	66	147	305	73
Grp Sat Flow(s),veh/h/ln	1774	1770	1522	1774	1770	1527	990	1770	1550	1200	1770	1529
Q Serve(g_s), s	3.1	2.5	2.2	4.9	10.6	1.9	7.5	1.3	2.1	6.7	4.4	2.3
Cycle Q Clear(g_c), s	3.1	2.5	2.2	4.9	10.6	1.9	11.9	1.3	2.1	8.0	4.4	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	867	373	173	998	431	325	1009	442	428	1009	436
V/C Ratio(X)	0.78	0.19	0.18	0.79	0.65	0.14	0.39	0.09	0.15	0.34	0.30	0.17
Avail Cap(c_a), veh/h	152	1518	653	233	1674	722	557	1836	804	709	1836	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	19.6	19.5	28.9	20.7	17.6	23.0	17.2	17.5	20.2	18.3	17.6
Incr Delay (d2), s/veh	9.8	0.1	0.2	8.7	0.7	0.1	0.5	0.0	0.1	0.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.2	1.0	2.9	5.3	0.8	2.1	0.6	0.9	2.2	2.2	1.0
LnGrp Delay(d),s/veh	40.2	19.7	19.8	37.6	21.4	17.7	23.5	17.2	17.6	20.5	18.4	17.7
LnGrp LOS	D	B	B	D	C	B	C	B	B	C	B	B
Approach Vol, veh/h		318			849			287			525	
Approach Delay, s/veh		25.1			23.8			20.1			18.9	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.8	26.1		28.6	8.4	28.6		28.6
Change Period (Y+Rc), s	4.4	* 10		* 9.9	4.4	* 10		* 9.9
Max Green Setting (Gmax), s	8.6	* 28		* 34	5.6	* 31		* 34
Max Q Clear Time (g_c+I1), s	6.9	4.5		10.0	5.1	12.6		13.9
Green Ext Time (p_c), s	0.0	1.3		2.2	0.0	4.5		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
42: Qualcomm Way & Camino De La Reina

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	140	140	300	440	270	320	1480	430	120	740	110
Future Volume (veh/h)	90	140	140	300	440	270	320	1480	430	120	740	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	92	153	75	306	449	164	327	1510	255	122	755	51
Adj No. of Lanes	1	2	1	2	2	1	2	2	1	2	3	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	113	568	401	367	678	290	375	1618	705	493	2353	714
Arrive On Green	0.06	0.15	0.15	0.11	0.19	0.19	0.11	0.46	0.46	0.05	0.15	0.15
Sat Flow, veh/h	1774	3725	1499	3442	3539	1514	3442	3539	1543	3442	5085	1543
Grp Volume(v), veh/h	92	153	75	306	449	164	327	1510	255	122	755	51
Grp Sat Flow(s),veh/h/ln	1774	1863	1499	1721	1770	1514	1721	1770	1543	1721	1695	1543
Q Serve(g_s), s	7.7	5.4	3.9	13.1	17.6	14.7	14.0	60.6	16.1	5.1	19.8	3.3
Cycle Q Clear(g_c), s	7.7	5.4	3.9	13.1	17.6	14.7	14.0	60.6	16.1	5.1	19.8	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	113	568	401	367	678	290	375	1618	705	493	2353	714
V/C Ratio(X)	0.82	0.27	0.19	0.83	0.66	0.57	0.87	0.93	0.36	0.25	0.32	0.07
Avail Cap(c_a), veh/h	181	844	512	381	819	350	482	1678	731	493	2353	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	0.49	0.49	0.49	0.95	0.95	0.95
Uniform Delay (d), s/veh	69.4	56.2	20.8	65.7	56.1	55.0	65.8	38.6	26.5	63.7	42.5	21.1
Incr Delay (d2), s/veh	6.1	0.2	0.2	13.3	0.9	0.6	5.9	6.3	0.7	0.1	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	2.8	1.9	6.9	8.7	6.2	7.0	31.0	7.0	2.5	9.4	1.8
LnGrp Delay(d),s/veh	75.5	56.4	21.0	79.0	57.0	55.6	71.8	44.8	27.2	63.8	42.9	21.3
LnGrp LOS	E	E	C	E	E	E	E	D	C	E	D	C
Approach Vol, veh/h		320			919			2092			928	
Approach Delay, s/veh		53.6			64.1			46.9			44.4	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.4	75.3	20.4	28.0	27.3	74.3	13.9	34.4
Change Period (Y+Rc), s	4.9	* 6.7	4.4	5.1	11.0	4.9	4.4	5.7
Max Green Setting (Gmax), s	7.7	* 71	16.6	34.0	21.0	53.0	15.3	34.7
Max Q Clear Time (g_c+I1), s	7.1	62.6	15.1	7.4	16.0	21.8	9.7	19.6
Green Ext Time (p_c), s	0.0	6.0	0.1	0.5	0.3	11.5	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	50.6
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
43: Fenton Parkway & Camino Del Rio North

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	150	60	140	450	90	180	380	90	70	400	190
Future Volume (veh/h)	80	150	60	140	450	90	180	380	90	70	400	190
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	84	158	17	147	474	87	189	400	43	74	421	105
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	555	649	174	513	94	216	645	69	94	463	115
Arrive On Green	0.06	0.30	0.30	0.10	0.34	0.34	0.12	0.39	0.39	0.05	0.32	0.32
Sat Flow, veh/h	1774	1863	1530	1774	1527	280	1774	1649	177	1774	1434	358
Grp Volume(v), veh/h	84	158	17	147	0	561	189	0	443	74	0	526
Grp Sat Flow(s),veh/h/ln	1774	1863	1530	1774	0	1807	1774	0	1826	1774	0	1792
Q Serve(g_s), s	5.7	7.9	0.8	9.9	0.0	36.4	12.8	0.0	23.7	5.0	0.0	34.3
Cycle Q Clear(g_c), s	5.7	7.9	0.8	9.9	0.0	36.4	12.8	0.0	23.7	5.0	0.0	34.3
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.10	1.00		0.20
Lane Grp Cap(c), veh/h	106	555	649	174	0	607	216	0	715	94	0	578
V/C Ratio(X)	0.80	0.28	0.03	0.84	0.00	0.92	0.87	0.00	0.62	0.79	0.00	0.91
Avail Cap(c_a), veh/h	118	555	649	300	0	696	243	0	849	134	0	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.5	32.8	20.7	54.0	0.0	39.0	52.6	0.0	29.8	57.0	0.0	39.5
Incr Delay (d2), s/veh	27.9	0.3	0.0	4.2	0.0	17.0	25.9	0.0	0.5	17.6	0.0	13.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.1	0.3	5.1	0.0	20.9	7.8	0.0	12.0	2.9	0.0	19.1
LnGrp Delay(d),s/veh	84.4	33.1	20.8	58.2	0.0	56.0	78.5	0.0	30.3	74.6	0.0	52.8
LnGrp LOS	F	C	C	E		E	E		C	E		D
Approach Vol, veh/h		259			708			632			600	
Approach Delay, s/veh		48.9			56.5			44.7			55.5	
Approach LOS		D			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	41.9	19.3	44.2	11.7	46.5	11.0	52.6
Change Period (Y+Rc), s	4.4	5.6	4.5	* 4.9	4.5	* 5.6	4.5	4.9
Max Green Setting (Gmax), s	20.6	34.2	16.7	* 50	8.1	* 47	9.2	56.6
Max Q Clear Time (g_c+I1), s	11.9	9.9	14.8	36.3	7.7	38.4	7.0	25.7
Green Ext Time (p_c), s	0.1	0.9	0.1	3.0	0.0	2.5	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	51.9
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
44: Camino Del Rio North & Rancho Mission Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	120	110	490	330	250	270
Future Volume (veh/h)	120	110	490	330	250	270
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	116	516	89	263	158
Adj No. of Lanes	1	2	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	161	1499	889	382	334	441
Arrive On Green	0.09	0.42	0.25	0.25	0.19	0.19
Sat Flow, veh/h	1774	3632	3632	1520	1774	1583
Grp Volume(v), veh/h	126	116	516	89	263	158
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1520	1774	1583
Q Serve(g_s), s	3.7	1.1	6.9	2.5	7.6	4.3
Cycle Q Clear(g_c), s	3.7	1.1	6.9	2.5	7.6	4.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	161	1499	889	382	334	441
V/C Ratio(X)	0.78	0.08	0.58	0.23	0.79	0.36
Avail Cap(c_a), veh/h	231	2413	1289	554	761	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	9.2	17.7	16.0	20.8	15.5
Incr Delay (d2), s/veh	6.2	0.0	0.9	0.5	1.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.5	3.5	1.1	3.9	4.1
LnGrp Delay(d),s/veh	30.2	9.3	18.6	16.5	22.4	15.7
LnGrp LOS	C	A	B	B	C	B
Approach Vol, veh/h		242	605		421	
Approach Delay, s/veh		20.2	18.3		19.9	
Approach LOS		C	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		33.8		20.0	9.3	24.5		
Change Period (Y+Rc), s		* 11		* 9.9	4.4	11.0		
Max Green Setting (Gmax), s		* 37		* 23	7.0	19.6		
Max Q Clear Time (g_c+I1), s		3.1		9.6	5.7	8.9		
Green Ext Time (p_c), s		1.0		0.5	0.0	3.7		

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Notes

HCM 2010 Signalized Intersection Summary
45: Mission Gorge Road & Camino Del Rio North/I-8 WB Off Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	90	430	440	480	310	460	1480	280	20	850	190
Future Volume (veh/h)	150	90	430	440	480	310	460	1480	280	20	850	190
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	124	136	376	303	707	186	474	1526	222	21	876	98
Adj No. of Lanes	1	1	1	1	2	1	1	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	140	523	398	836	364	464	1940	858	39	1056	463
Arrive On Green	0.08	0.08	0.08	0.22	0.22	0.22	0.26	0.55	0.55	0.01	0.30	0.30
Sat Flow, veh/h	1774	1863	1457	1774	3725	1541	1774	3539	1566	3442	3539	1551
Grp Volume(v), veh/h	124	136	376	303	707	186	474	1526	222	21	876	98
Grp Sat Flow(s),veh/h/ln	1774	1863	1457	1774	1863	1541	1774	1770	1566	1721	1770	1551
Q Serve(g_s), s	10.1	10.6	10.9	23.2	26.3	15.2	37.9	49.7	10.8	0.9	33.5	6.9
Cycle Q Clear(g_c), s	10.1	10.6	10.9	23.2	26.3	15.2	37.9	49.7	10.8	0.9	33.5	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	140	523	398	836	364	464	1940	858	39	1056	463
V/C Ratio(X)	0.93	0.97	0.72	0.76	0.85	0.51	1.02	0.79	0.26	0.53	0.83	0.21
Avail Cap(c_a), veh/h	133	140	523	440	925	401	464	1940	858	69	1056	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.48	0.48	0.48	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.7	66.9	42.5	52.6	53.8	48.1	53.5	26.0	17.2	71.3	47.4	38.1
Incr Delay (d2), s/veh	56.1	66.8	4.1	5.8	6.1	0.4	34.7	1.6	0.4	4.1	7.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	8.0	13.8	12.0	14.3	6.5	23.0	24.6	4.8	0.4	17.4	3.1
LnGrp Delay(d),s/veh	122.8	133.7	46.6	58.4	59.9	48.5	88.3	27.6	17.6	75.4	55.0	39.2
LnGrp LOS	F	F	D	E	E	D	F	C	B	E	E	D
Approach Vol, veh/h		636			1196			2222			995	
Approach Delay, s/veh		80.1			57.8			39.6			53.9	
Approach LOS		F			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.8	84.6		16.0	43.0	48.3		37.7
Change Period (Y+Rc), s	5.1	5.1		5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	2.9	74.8		10.9	37.9	39.8		36.0
Max Q Clear Time (g_c+I1), s	2.9	51.7		12.9	39.9	35.5		28.3
Green Ext Time (p_c), s	0.0	8.4		0.0	0.0	1.7		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	51.8
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	450	50	0	150
Future Volume (veh/h)	0	0	450	50	0	150
Number			8	18	1	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.98	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1900	1863	1863
Adj Flow Rate, veh/h			474	53	0	158
Adj No. of Lanes			2	0	1	1
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1780	198	0	0
Arrive On Green			0.56	0.56	0.00	0.00
Sat Flow, veh/h			3298	357	0	
Grp Volume(v), veh/h			261	266	0.0	
Grp Sat Flow(s),veh/h/ln			1770	1792		
Q Serve(g_s), s			0.8	0.8		
Cycle Q Clear(g_c), s			0.8	0.8		
Prop In Lane				0.20		
Lane Grp Cap(c), veh/h			983	995		
V/C Ratio(X)			0.27	0.27		
Avail Cap(c_a), veh/h			2710	2745		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			1.2	1.2		
Incr Delay (d2), s/veh			0.1	0.1		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			0.4	0.4		
LnGrp Delay(d),s/veh			1.3	1.3		
LnGrp LOS			A	A		
Approach Vol, veh/h			527			
Approach Delay, s/veh			1.3			
Approach LOS			A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs								8
Phs Duration (G+Y+Rc), s								10.1
Change Period (Y+Rc), s								4.5
Max Green Setting (Gmax), s								15.5
Max Q Clear Time (g_c+I1), s								2.8
Green Ext Time (p_c), s								2.6

Intersection Summary	
HCM 2010 Ctrl Delay	1.3
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
48: Hotel Circle North/Camino De La Reina & Fashion Valley Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	400	200	1	240
Future Volume (veh/h)	0	0	400	200	1	240
Number			2	12	7	14
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.92	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	1863	1863
Adj Flow Rate, veh/h			421	96	1	179
Adj No. of Lanes			2	1	1	2
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			650	269	0	0
Arrive On Green			0.18	0.18	0.00	0.00
Sat Flow, veh/h			3632	1464	0	
Grp Volume(v), veh/h			421	96	0.0	
Grp Sat Flow(s),veh/h/ln			1770	1464		
Q Serve(g_s), s			9.9	5.2		
Cycle Q Clear(g_c), s			9.9	5.2		
Prop In Lane				1.00		
Lane Grp Cap(c), veh/h			650	269		
V/C Ratio(X)			0.65	0.36		
Avail Cap(c_a), veh/h			1813	750		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			34.0	32.1		
Incr Delay (d2), s/veh			1.5	1.1		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			5.0	2.2		
LnGrp Delay(d),s/veh			35.5	33.2		
LnGrp LOS			D	C		
Approach Vol, veh/h			517			
Approach Delay, s/veh			35.1			
Approach LOS			D			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		26.4						
Change Period (Y+Rc), s		* 9.9						
Max Green Setting (Gmax), s		* 46						
Max Q Clear Time (g_c+I1), s		11.9						
Green Ext Time (p_c), s		4.6						

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
49: Mission Center Road & Camino Del Rio N

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	170	180	280	320	510	170	310	290	220	320	60
Future Volume (veh/h)	20	170	180	280	320	510	170	310	290	220	320	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	177	0	292	333	203	177	323	0	229	333	37
Adj No. of Lanes	1	2	1	2	1	1	2	2	1	2	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	32	485	217	369	421	348	250	1415	633	307	1474	641
Arrive On Green	0.02	0.14	0.00	0.11	0.23	0.23	0.02	0.13	0.00	0.09	0.42	0.42
Sat Flow, veh/h	1774	3539	1583	3442	1863	1541	3442	3539	1583	3442	3539	1538
Grp Volume(v), veh/h	21	177	0	292	333	203	177	323	0	229	333	37
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1863	1541	1721	1770	1583	1721	1770	1538
Q Serve(g_s), s	1.1	4.1	0.0	7.4	15.2	10.6	4.6	7.4	0.0	5.8	5.5	1.3
Cycle Q Clear(g_c), s	1.1	4.1	0.0	7.4	15.2	10.6	4.6	7.4	0.0	5.8	5.5	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	32	485	217	369	421	348	250	1415	633	307	1474	641
V/C Ratio(X)	0.65	0.37	0.00	0.79	0.79	0.58	0.71	0.23	0.00	0.75	0.23	0.06
Avail Cap(c_a), veh/h	79	1077	482	497	642	531	264	1415	633	421	1474	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.86	0.86	0.86	0.83	0.83	0.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	43.9	35.3	0.0	39.2	32.8	31.0	43.0	26.6	0.0	40.0	16.9	15.7
Incr Delay (d2), s/veh	8.0	0.5	0.0	3.7	1.6	0.5	5.5	0.3	0.0	4.4	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.0	0.0	3.7	8.0	4.5	2.4	3.7	0.0	3.0	2.7	0.6
LnGrp Delay(d),s/veh	51.9	35.7	0.0	42.8	34.4	31.5	48.5	26.9	0.0	44.4	17.2	15.9
LnGrp LOS	D	D		D	C	C	D	C		D	B	B
Approach Vol, veh/h		198			828			500			599	
Approach Delay, s/veh		37.5			36.7			34.6			27.5	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	40.9	14.1	22.6	10.9	42.4	6.0	30.6
Change Period (Y+Rc), s	4.4	4.9	4.4	* 10	4.4	4.9	4.4	10.3
Max Green Setting (Gmax), s	11.0	20.0	13.0	* 27	6.9	24.1	4.0	31.0
Max Q Clear Time (g_c+I1), s	7.8	9.4	9.4	6.1	6.6	7.5	3.1	17.2
Green Ext Time (p_c), s	0.2	0.9	0.2	1.1	0.0	2.9	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	33.7
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
50: I-8 WB Ramps/Mission Valley Mall Driveway & Camino Del Rio N

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	270	410	140	260	0	850	90	120	0	0	0
Future Volume (veh/h)	0	270	410	140	260	0	850	90	120	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	0	284	0	147	274	0	963	0	0			
Adj No. of Lanes	0	2	1	1	2	0	2	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2			
Cap, veh/h	0	906	405	179	1528	0	1335	0	596			
Arrive On Green	0.00	0.26	0.00	0.10	0.43	0.00	0.38	0.00	0.00			
Sat Flow, veh/h	0	3632	1583	1774	3632	0	3548	0	1583			
Grp Volume(v), veh/h	0	284	0	147	274	0	963	0	0			
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0	1774	0	1583			
Q Serve(g_s), s	0.0	4.1	0.0	5.1	3.0	0.0	14.5	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	4.1	0.0	5.1	3.0	0.0	14.5	0.0	0.0			
Prop In Lane	0.00		1.00	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	906	405	179	1528	0	1335	0	596			
V/C Ratio(X)	0.00	0.31	0.00	0.82	0.18	0.00	0.72	0.00	0.00			
Avail Cap(c_a), veh/h	0	906	405	179	1528	0	2894	0	1292			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	18.8	0.0	27.6	10.9	0.0	16.7	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.9	0.0	24.1	0.1	0.0	1.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	2.1	0.0	3.7	1.5	0.0	7.3	0.0	0.0			
LnGrp Delay(d),s/veh	0.0	19.7	0.0	51.7	11.0	0.0	17.8	0.0	0.0			
LnGrp LOS		B		D	B		B					
Approach Vol, veh/h		284			421			963				
Approach Delay, s/veh		19.7			25.2			17.8				
Approach LOS		B			C			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.0	22.0		29.5		33.0		
Change Period (Y+Rc), s	* 4.7	6.0		6.0		6.0		
Max Green Setting (Gmax), s	* 6.3	16.0		51.0		27.0		
Max Q Clear Time (g_c+I1), s	7.1	6.1		16.5		5.0		
Green Ext Time (p_c), s	0.0	1.3		7.0		1.8		

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	B

Notes

HCM 2010 Signalized Intersection Summary
51: Camino Del Rio N & Camino Del Este



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	150	250	230	260	270	120
Future Volume (veh/h)	150	250	230	260	270	120
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	158	263	242	232	284	84
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	120	1201	1802	790	359	320
Arrive On Green	0.07	0.64	0.51	0.51	0.20	0.20
Sat Flow, veh/h	1774	1863	3632	1552	1774	1583
Grp Volume(v), veh/h	158	263	242	232	284	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1552	1774	1583
Q Serve(g_s), s	4.0	3.4	2.1	5.1	9.0	2.6
Cycle Q Clear(g_c), s	4.0	3.4	2.1	5.1	9.0	2.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	120	1201	1802	790	359	320
V/C Ratio(X)	1.31	0.22	0.13	0.29	0.79	0.26
Avail Cap(c_a), veh/h	120	1201	1802	790	542	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	4.3	7.6	8.3	22.3	19.8
Incr Delay (d2), s/veh	187.4	0.4	0.2	0.9	5.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	1.9	1.1	2.3	4.9	2.5
LnGrp Delay(d),s/veh	214.9	4.7	7.8	9.3	28.1	20.4
LnGrp LOS	F	A	A	A	C	C
Approach Vol, veh/h		421	474		368	
Approach Delay, s/veh		83.6	8.5		26.3	
Approach LOS		F	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		42.5		16.4	8.0	34.5		
Change Period (Y+Rc), s		4.5		4.5	4.0	4.5		
Max Green Setting (Gmax), s		38.0		18.0	4.0	30.0		
Max Q Clear Time (g_c+I1), s		5.4		11.0	6.0	7.1		
Green Ext Time (p_c), s		1.4		1.0	0.0	2.0		

Intersection Summary	
HCM 2010 Ctrl Delay	38.7
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
52: Qualcomm Way & Camino Del Rio N/I-8 WB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	0	180	30	180	530	300	1600	250	0	690	490
Future Volume (veh/h)	100	0	180	30	180	530	300	1600	250	0	690	490
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	105	0	110	32	189	226	316	1684	0	0	726	253
Adj No. of Lanes	0	1	1	0	1	1	1	3	1	0	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	261	0	223	51	301	292	228	2786	867	0	1373	605
Arrive On Green	0.15	0.00	0.15	0.19	0.19	0.19	0.13	0.55	0.00	0.00	0.13	0.13
Sat Flow, veh/h	1774	0	1519	268	1582	1533	1774	5085	1583	0	3632	1559
Grp Volume(v), veh/h	105	0	110	221	0	226	316	1684	0	0	726	253
Grp Sat Flow(s),veh/h/ln	1774	0	1519	1849	0	1533	1774	1695	1583	0	1770	1559
Q Serve(g_s), s	8.0	0.0	10.0	16.5	0.0	21.0	19.3	33.6	0.0	0.0	28.8	22.4
Cycle Q Clear(g_c), s	8.0	0.0	10.0	16.5	0.0	21.0	19.3	33.6	0.0	0.0	28.8	22.4
Prop In Lane	1.00		1.00	0.14		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	261	0	223	352	0	292	228	2786	867	0	1373	605
V/C Ratio(X)	0.40	0.00	0.49	0.63	0.00	0.77	1.38	0.60	0.00	0.00	0.53	0.42
Avail Cap(c_a), veh/h	485	0	415	456	0	378	228	2786	867	0	1373	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.77	0.77	0.00	0.00	0.90	0.90
Uniform Delay (d), s/veh	58.0	0.0	58.8	55.8	0.0	57.7	65.3	22.9	0.0	0.0	52.6	49.8
Incr Delay (d2), s/veh	0.4	0.0	0.6	0.7	0.0	5.2	192.5	0.8	0.0	0.0	1.3	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	4.2	8.5	0.0	9.3	21.7	15.9	0.0	0.0	14.4	10.0
LnGrp Delay(d),s/veh	58.4	0.0	59.4	56.5	0.0	62.9	257.9	23.7	0.0	0.0	53.9	51.7
LnGrp LOS	E		E	E		E	F	C			D	D
Approach Vol, veh/h		215			447			2000			979	
Approach Delay, s/veh		58.9			59.7			60.7			53.3	
Approach LOS		E			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		89.2		27.2	24.0	65.2		33.7
Change Period (Y+Rc), s		7.0		5.1	* 4.7	7.0		5.1
Max Green Setting (Gmax), s		54.8		41.0	* 19	30.8		37.0
Max Q Clear Time (g_c+I1), s		35.6		12.0	21.3	30.8		23.0
Green Ext Time (p_c), s		8.0		0.1	0.0	0.0		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	58.5
HCM 2010 LOS	E

Notes

HCM 2010 Signalized Intersection Summary
53: Morena Boulevard & Taylor Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	120	20	60	860	520	0	10	20	90	10	230
Future Volume (veh/h)	310	120	20	60	860	520	0	10	20	90	10	230
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	0	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	326	126	10	63	905	526	0	11	0	103	0	221
Adj No. of Lanes	2	2	0	1	2	0	0	1	0	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	2
Cap, veh/h	385	1835	144	81	1053	598	0	13	0	690	0	476
Arrive On Green	0.11	0.55	0.55	0.05	0.49	0.49	0.00	0.01	0.00	0.19	0.00	0.19
Sat Flow, veh/h	3442	3320	261	1774	2167	1230	0	1863	0	3548	0	1534
Grp Volume(v), veh/h	326	67	69	63	735	696	0	11	0	103	0	221
Grp Sat Flow(s),veh/h/ln	1721	1770	1811	1774	1770	1628	0	1863	0	1774	0	1534
Q Serve(g_s), s	8.8	1.7	1.7	3.3	34.6	36.3	0.0	0.6	0.0	2.3	0.0	11.1
Cycle Q Clear(g_c), s	8.8	1.7	1.7	3.3	34.6	36.3	0.0	0.6	0.0	2.3	0.0	11.1
Prop In Lane	1.00		0.14	1.00		0.76	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	978	1001	81	860	791	0	13	0	690	0	476
V/C Ratio(X)	0.85	0.07	0.07	0.78	0.85	0.88	0.00	0.87	0.00	0.15	0.00	0.46
Avail Cap(c_a), veh/h	385	1022	1046	86	910	837	0	130	0	1128	0	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.2	9.8	9.9	44.7	21.4	21.8	0.0	47.0	0.0	31.6	0.0	26.6
Incr Delay (d2), s/veh	15.1	0.0	0.0	30.5	8.0	10.5	0.0	43.7	0.0	0.2	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.8	0.9	2.3	18.7	18.5	0.0	0.4	0.0	1.1	0.0	10.0
LnGrp Delay(d),s/veh	56.4	9.9	9.9	75.2	29.3	32.4	0.0	90.6	0.0	31.8	0.0	27.8
LnGrp LOS	E	A	A	E	C	C		F		C		C
Approach Vol, veh/h		462			1494			11			324	
Approach Delay, s/veh		42.7			32.7			90.6			29.1	
Approach LOS		D			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.7	57.2		23.7	15.0	50.9		5.0
Change Period (Y+Rc), s	4.4	4.9		5.3	4.4	4.9		4.4
Max Green Setting (Gmax), s	4.6	54.7		30.1	10.6	48.7		6.6
Max Q Clear Time (g_c+I1), s	5.3	3.7		13.1	10.8	38.3		2.6
Green Ext Time (p_c), s	0.0	0.9		1.8	0.0	7.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.5
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	130	0	0	100	500
Future Volume (veh/h)	0	130	0	0	100	500
Number	7	4			5	12
Initial Q (Qb), veh	0	0			0	0
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00
Parking Bus, Adj	1.00	1.00			1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863			1863	1863
Adj Flow Rate, veh/h	0	137			105	526
Adj No. of Lanes	0	1			1	1
Peak Hour Factor	0.95	0.95			0.95	0.95
Percent Heavy Veh, %	0	2			2	2
Cap, veh/h	0	444			0	0
Arrive On Green	0.00	0.24			0.00	0.00
Sat Flow, veh/h	0	1863			0	
Grp Volume(v), veh/h	0	137			0.0	
Grp Sat Flow(s),veh/h/ln	0	1863				
Q Serve(g_s), s	0.0	0.4				
Cycle Q Clear(g_c), s	0.0	0.4				
Prop In Lane	0.00					
Lane Grp Cap(c), veh/h	0	444				
V/C Ratio(X)	0.00	0.31				
Avail Cap(c_a), veh/h	0	7407				
HCM Platoon Ratio	1.00	1.00				
Upstream Filter(I)	0.00	1.00				
Uniform Delay (d), s/veh	0.0	1.8				
Incr Delay (d2), s/veh	0.0	0.4				
Initial Q Delay(d3),s/veh	0.0	0.0				
%ile BackOfQ(50%),veh/ln	0.0	0.2				
LnGrp Delay(d),s/veh	0.0	2.2				
LnGrp LOS		A				
Approach Vol, veh/h		137				
Approach Delay, s/veh		2.2				
Approach LOS		A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				
Phs Duration (G+Y+Rc), s				5.9				
Change Period (Y+Rc), s				4.5				
Max Green Setting (Gmax), s				23.5				
Max Q Clear Time (g_c+I1), s				2.4				
Green Ext Time (p_c), s				0.6				

Intersection Summary	
HCM 2010 Ctrl Delay	2.2
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
57: Bachman Place & Hotel Circle South

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	150	750	0	0	0	740
Future Volume (veh/h)	150	750	0	0	0	740
Number	2	12			7	14
Initial Q (Qb), veh	0	0			0	0
Ped-Bike Adj(A_pbT)		0.98			1.00	1.00
Parking Bus, Adj	1.00	1.00			1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900			1863	1863
Adj Flow Rate, veh/h	158	736			0	654
Adj No. of Lanes	2	0			1	2
Peak Hour Factor	0.95	0.95			0.95	0.95
Percent Heavy Veh, %	2	2			2	2
Cap, veh/h	1054	928			0	0
Arrive On Green	0.60	0.60			0.00	0.00
Sat Flow, veh/h	1863	1557			0	
Grp Volume(v), veh/h	158	736			0.0	
Grp Sat Flow(s),veh/h/ln	1770	1557				
Q Serve(g_s), s	1.0	9.0				
Cycle Q Clear(g_c), s	1.0	9.0				
Prop In Lane		1.00				
Lane Grp Cap(c), veh/h	1054	928				
V/C Ratio(X)	0.15	0.79				
Avail Cap(c_a), veh/h	1245	1095				
HCM Platoon Ratio	1.00	1.00				
Upstream Filter(I)	1.00	1.00				
Uniform Delay (d), s/veh	2.2	3.8				
Incr Delay (d2), s/veh	0.1	3.8				
Initial Q Delay(d3),s/veh	0.0	0.0				
%ile BackOfQ(50%),veh/ln	0.5	4.7				
LnGrp Delay(d),s/veh	2.3	7.6				
LnGrp LOS	A	A				
Approach Vol, veh/h	894					
Approach Delay, s/veh	6.7					
Approach LOS	A					

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		24.7						
Change Period (Y+Rc), s		10.0						
Max Green Setting (Gmax), s		17.4						
Max Q Clear Time (g_c+I1), s		11.0						
Green Ext Time (p_c), s		3.8						

Intersection Summary	
HCM 2010 Ctrl Delay	6.7
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
58: Mission Center Road & I-8 EB Ramp

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	430	0	420	0	0	0	0	340	140	350	430	0
Future Volume (veh/h)	430	0	420	0	0	0	0	340	140	350	430	0
Number	5	2	12				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	453	0	0				0	358	0	274	585	0
Adj No. of Lanes	2	1	0				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1483	803	0				0	441	197	449	944	0
Arrive On Green	0.43	0.00	0.00				0.00	0.04	0.00	0.08	0.08	0.00
Sat Flow, veh/h	3442	1863	0				0	3632	1583	1774	3725	0
Grp Volume(v), veh/h	453	0	0				0	358	0	274	585	0
Grp Sat Flow(s),veh/h/ln	1721	1863	0				0	1770	1583	1774	1863	0
Q Serve(g_s), s	7.8	0.0	0.0				0.0	9.0	0.0	13.4	13.7	0.0
Cycle Q Clear(g_c), s	7.8	0.0	0.0				0.0	9.0	0.0	13.4	13.7	0.0
Prop In Lane	1.00		0.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1483	803	0				0	441	197	449	944	0
V/C Ratio(X)	0.31	0.00	0.00				0.00	0.81	0.00	0.61	0.62	0.00
Avail Cap(c_a), veh/h	1483	803	0				0	511	229	749	1573	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.94	0.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	16.8	0.0	0.0				0.0	42.1	0.0	36.9	37.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0				0.0	6.9	0.0	0.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	0.0				0.0	4.8	0.0	6.7	7.1	0.0
LnGrp Delay(d),s/veh	17.3	0.0	0.0				0.0	49.0	0.0	37.4	37.3	0.0
LnGrp LOS	B							D		D	D	
Approach Vol, veh/h		453						358			859	
Approach Delay, s/veh		17.3						49.0			37.3	
Approach LOS		B						D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		44.9		16.2				28.9
Change Period (Y+Rc), s		6.1		5.0				6.1
Max Green Setting (Gmax), s		21.8		13.0				38.0
Max Q Clear Time (g_c+I1), s		9.8		11.0				15.7
Green Ext Time (p_c), s		0.8		0.2				2.7

Intersection Summary	
HCM 2010 Ctrl Delay	34.4
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
59: Mission Center Road & Camino Del Rio South

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	90	20	20	260	230	20	30	20	330	100	420
Future Volume (veh/h)	220	90	20	20	260	230	20	30	20	330	100	420
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.94	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	232	95	21	21	274	242	21	32	21	226	274	442
Adj No. of Lanes	2	1	0	0	2	1	0	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	162	36	44	600	761	92	140	191	555	583	469
Arrive On Green	0.11	0.11	0.11	0.18	0.18	0.18	0.13	0.13	0.13	0.31	0.31	0.31
Sat Flow, veh/h	3548	1461	323	246	3374	1494	724	1103	1508	1774	1863	1498
Grp Volume(v), veh/h	232	0	116	158	137	242	53	0	21	226	274	442
Grp Sat Flow(s),veh/h/ln	1774	0	1784	1850	1770	1494	1827	0	1508	1774	1863	1498
Q Serve(g_s), s	5.6	0.0	5.6	6.9	6.2	8.9	2.3	0.0	1.1	9.0	10.7	25.9
Cycle Q Clear(g_c), s	5.6	0.0	5.6	6.9	6.2	8.9	2.3	0.0	1.1	9.0	10.7	25.9
Prop In Lane	1.00		0.18	0.13		1.00	0.40		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	394	0	198	329	315	761	232	0	191	555	583	469
V/C Ratio(X)	0.59	0.00	0.59	0.48	0.44	0.32	0.23	0.00	0.11	0.41	0.47	0.94
Avail Cap(c_a), veh/h	548	0	276	329	315	761	232	0	191	568	596	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	38.0	0.0	38.0	33.3	33.0	13.9	35.3	0.0	34.8	24.3	24.9	30.1
Incr Delay (d2), s/veh	0.5	0.0	1.0	0.4	0.4	0.1	0.5	0.0	0.3	1.8	2.2	25.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	2.8	3.5	3.1	5.9	1.2	0.0	0.5	4.7	5.8	14.0
LnGrp Delay(d),s/veh	38.6	0.0	39.1	33.7	33.3	14.0	35.8	0.0	35.0	26.1	27.1	55.4
LnGrp LOS	D		D	C	C	B	D		D	C	C	E
Approach Vol, veh/h		348			537			74			942	
Approach Delay, s/veh		38.7			24.7			35.6			40.1	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		17.5		22.1		34.3		16.1
Change Period (Y+Rc), s		6.1		6.1		6.1		6.1
Max Green Setting (Gmax), s		6.9		16.0		28.8		13.9
Max Q Clear Time (g_c+I1), s		4.3		10.9		27.9		7.6
Green Ext Time (p_c), s		0.0		0.8		0.3		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
60: Qualcomm Way & I-8 EB Ramp

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	490	0	1300	630	270
Future Volume (veh/h)	0	490	0	1300	630	270
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	0	321	0	1368	663	0
Adj No. of Lanes	1	2	0	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	273	429	0	2312	2312	1034
Arrive On Green	0.00	0.15	0.00	0.65	0.65	0.00
Sat Flow, veh/h	1774	2787	0	3725	3632	1583
Grp Volume(v), veh/h	0	321	0	1368	663	0
Grp Sat Flow(s),veh/h/ln	1774	1393	0	1770	1770	1583
Q Serve(g_s), s	0.0	6.1	0.0	12.0	4.4	0.0
Cycle Q Clear(g_c), s	0.0	6.1	0.0	12.0	4.4	0.0
Prop In Lane	1.00	1.00	0.00			1.00
Lane Grp Cap(c), veh/h	273	429	0	2312	2312	1034
V/C Ratio(X)	0.00	0.75	0.00	0.59	0.29	0.00
Avail Cap(c_a), veh/h	516	811	0	2312	2312	1034
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.09	0.35	0.00
Uniform Delay (d), s/veh	0.0	22.2	0.0	5.4	4.1	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	0.0	5.7	2.2	0.0
LnGrp Delay(d),s/veh	0.0	23.2	0.0	5.5	4.2	0.0
LnGrp LOS		C		A	A	
Approach Vol, veh/h	321			1368	663	
Approach Delay, s/veh	23.2			5.5	4.2	
Approach LOS	C			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		41.0		14.0		41.0		
Change Period (Y+Rc), s		5.1		5.5		5.1		
Max Green Setting (Gmax), s		28.4		16.0		28.4		
Max Q Clear Time (g_c+I1), s		14.0		8.1		6.4		
Green Ext Time (p_c), s		5.6		0.5		2.6		

Intersection Summary	
HCM 2010 Ctrl Delay	7.5
HCM 2010 LOS	A

Notes

HCM 2010 Signalized Intersection Summary
61: Qualcomm Way & Camino Del Rio South

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	90	90	60	90	160	140	1360	180	450	590	280
Future Volume (veh/h)	110	90	90	60	90	160	140	1360	180	450	590	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.91	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	112	92	32	61	92	60	143	1388	133	459	602	97
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	161	268	137	144	465	160	1645	157	396	2260	975
Arrive On Green	0.09	0.09	0.09	0.08	0.08	0.08	0.09	0.51	0.51	0.22	0.64	0.64
Sat Flow, veh/h	1774	1863	1453	1774	1863	1440	1774	3253	310	1774	3539	1526
Grp Volume(v), veh/h	112	92	32	61	92	60	143	751	770	459	602	97
Grp Sat Flow(s),veh/h/ln	1774	1863	1453	1774	1863	1440	1774	1770	1793	1774	1770	1526
Q Serve(g_s), s	12.3	9.5	3.7	6.6	9.6	6.1	16.0	72.9	74.4	44.6	14.8	4.9
Cycle Q Clear(g_c), s	12.3	9.5	3.7	6.6	9.6	6.1	16.0	72.9	74.4	44.6	14.8	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	153	161	268	137	144	465	160	895	907	396	2260	975
V/C Ratio(X)	0.73	0.57	0.12	0.44	0.64	0.13	0.89	0.84	0.85	1.16	0.27	0.10
Avail Cap(c_a), veh/h	239	251	339	266	279	569	233	895	907	396	2260	975
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	89.1	87.8	69.3	88.2	89.5	51.1	90.0	42.4	42.8	77.7	15.7	13.9
Incr Delay (d2), s/veh	6.6	3.2	0.2	0.8	1.7	0.0	19.3	9.3	9.8	94.1	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	5.0	1.5	3.3	5.0	2.4	8.7	38.0	39.2	32.2	7.3	2.1
LnGrp Delay(d),s/veh	95.7	91.0	69.5	89.0	91.3	51.1	109.3	51.7	52.6	171.8	16.0	14.1
LnGrp LOS	F	F	E	F	F	D	F	D	D	F	B	B
Approach Vol, veh/h		236			213			1664			1158	
Approach Delay, s/veh		90.3			79.3			57.1			77.6	
Approach LOS		F			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	49.0	108.2		22.2	22.4	134.7		20.7
Change Period (Y+Rc), s	4.4	7.0		4.9	4.4	* 7		5.2
Max Green Setting (Gmax), s	44.6	76.9		27.0	26.3	* 97		30.0
Max Q Clear Time (g_c+I1), s	46.6	76.4		14.3	18.0	16.8		11.6
Green Ext Time (p_c), s	0.0	0.5		0.5	0.1	6.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	68.2
HCM 2010 LOS	E

Notes

HCM 2010 Signalized Intersection Summary
62: Camino Del Rio South & Fenton Parkway



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	160	220	580	490	280	320
Future Volume (veh/h)	160	220	580	490	280	320
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	168	232	611	138	295	212
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	215	1144	743	947	371	331
Arrive On Green	0.12	0.61	0.40	0.40	0.21	0.21
Sat Flow, veh/h	1774	1863	1863	1544	1774	1583
Grp Volume(v), veh/h	168	232	611	138	295	212
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1544	1774	1583
Q Serve(g_s), s	4.9	2.9	15.6	0.0	8.4	6.5
Cycle Q Clear(g_c), s	4.9	2.9	15.6	0.0	8.4	6.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	215	1144	743	947	371	331
V/C Ratio(X)	0.78	0.20	0.82	0.15	0.79	0.64
Avail Cap(c_a), veh/h	534	1667	953	1121	767	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	4.5	14.3	1.3	19.9	19.2
Incr Delay (d2), s/veh	2.3	0.1	4.9	0.1	1.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.5	9.0	2.1	4.3	5.7
LnGrp Delay(d),s/veh	25.0	4.6	19.2	1.4	21.4	20.0
LnGrp LOS	C	A	B	A	C	B
Approach Vol, veh/h		400	749		507	
Approach Delay, s/veh		13.2	15.9		20.8	
Approach LOS		B	B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		37.7		15.5	11.4	26.2		
Change Period (Y+Rc), s		5.0		4.4	5.0	* 5		
Max Green Setting (Gmax), s		47.6		23.0	16.0	* 27		
Max Q Clear Time (g_c+I1), s		4.9		10.4	6.9	17.6		
Green Ext Time (p_c), s		1.6		0.7	0.1	3.3		

Intersection Summary	
HCM 2010 Ctrl Delay	16.8
HCM 2010 LOS	B

Notes

HCM 2010 Signalized Intersection Summary
63: I-15 SB Ramps & Camino Del Rio South

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	140	30	30	880	0	20	0	20	240	0	450
Future Volume (veh/h)	0	140	30	30	880	0	20	0	20	240	0	450
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0	1900	1863	1900	1863	0	1863
Adj Flow Rate, veh/h	0	147	21	32	926	0	21	0	19	253	0	274
Adj No. of Lanes	0	2	0	1	1	0	0	1	0	1	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	0	2
Cap, veh/h	0	1674	235	67	1282	0	39	0	35	0	0	0
Arrive On Green	0.00	0.54	0.54	0.04	0.69	0.00	0.05	0.00	0.05	0.00	0.00	0.00
Sat Flow, veh/h	0	3203	436	1774	1863	0	861	0	779		0	
Grp Volume(v), veh/h	0	82	86	32	926	0	40	0	0		0.0	
Grp Sat Flow(s),veh/h/ln	0	1770	1776	1774	1863	0	1639	0	0			
Q Serve(g_s), s	0.0	0.8	0.9	0.7	11.6	0.0	0.9	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.8	0.9	0.7	11.6	0.0	0.9	0.0	0.0			
Prop In Lane	0.00		0.25	1.00		0.00	0.52		0.47			
Lane Grp Cap(c), veh/h	0	953	956	67	1282	0	74	0	0			
V/C Ratio(X)	0.00	0.09	0.09	0.48	0.72	0.00	0.54	0.00	0.00			
Avail Cap(c_a), veh/h	0	1391	1396	251	1936	0	218	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	4.2	4.2	17.7	3.6	0.0	17.5	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.9	0.3	0.0	2.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.4	0.4	0.4	5.8	0.0	0.4	0.0	0.0			
LnGrp Delay(d),s/veh	0.0	4.2	4.2	19.6	3.9	0.0	19.8	0.0	0.0			
LnGrp LOS		A	A	B	A		B					
Approach Vol, veh/h		168			958			40				
Approach Delay, s/veh		4.2			4.4			19.8				
Approach LOS		A			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	5.6	25.7				31.3		6.2
Change Period (Y+Rc), s	* 4.2	5.5				5.5		4.5
Max Green Setting (Gmax), s	* 5.3	29.5				39.0		5.0
Max Q Clear Time (g_c+I1), s	2.7	2.9				13.6		2.9
Green Ext Time (p_c), s	0.0	0.5				1.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	4.9
HCM 2010 LOS	A

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	320	80	140	910	0	0
Future Volume (veh/h)	320	80	140	910	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863		
Adj Flow Rate, veh/h	337	0	147	958		
Adj No. of Lanes	2	0	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2125	0	197	2960		
Arrive On Green	0.60	0.00	0.11	0.84		
Sat Flow, veh/h	3725	0	1774	3632		
Grp Volume(v), veh/h	337	0	147	958		
Grp Sat Flow(s),veh/h/ln	1770	0	1774	1770		
Q Serve(g_s), s	1.4	0.0	2.7	2.0		
Cycle Q Clear(g_c), s	1.4	0.0	2.7	2.0		
Prop In Lane		0.00	1.00			
Lane Grp Cap(c), veh/h	2125	0	197	2960		
V/C Ratio(X)	0.16	0.00	0.75	0.32		
Avail Cap(c_a), veh/h	2369	0	412	3632		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	3.0	0.0	14.5	0.6		
Incr Delay (d2), s/veh	0.0	0.0	2.1	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.4	0.9		
LnGrp Delay(d),s/veh	3.0	0.0	16.6	0.6		
LnGrp LOS	A		B	A		
Approach Vol, veh/h	337			1105		
Approach Delay, s/veh	3.0			2.8		
Approach LOS	A			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	7.9	25.7				33.6		
Change Period (Y+Rc), s	* 4.2	5.5				5.5		
Max Green Setting (Gmax), s	* 7.8	22.5				34.5		
Max Q Clear Time (g_c+I1), s	4.7	3.4				4.0		
Green Ext Time (p_c), s	0.0	0.5				4.3		

Intersection Summary	
HCM 2010 Ctrl Delay	2.8
HCM 2010 LOS	A

Notes

HCM 2010 Signalized Intersection Summary
65: I-15 NB Ramps & Camino Del Rio South

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	210	0	0	400	150	650	10	110	0	0	0
Future Volume (veh/h)	110	210	0	0	400	150	650	10	110	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1900			
Adj Flow Rate, veh/h	116	221	0	0	421	105	684	11	105			
Adj No. of Lanes	1	2	0	0	1	1	1	1	0			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	142	1370	0	0	454	370	711	60	575			
Arrive On Green	0.08	0.39	0.00	0.00	0.24	0.24	0.40	0.40	0.40			
Sat Flow, veh/h	1774	3632	0	0	1863	1518	1774	150	1434			
Grp Volume(v), veh/h	116	221	0	0	421	105	684	0	116			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1863	1518	1774	0	1584			
Q Serve(g_s), s	7.3	4.6	0.0	0.0	25.0	6.4	42.6	0.0	5.4			
Cycle Q Clear(g_c), s	7.3	4.6	0.0	0.0	25.0	6.4	42.6	0.0	5.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.91			
Lane Grp Cap(c), veh/h	142	1370	0	0	454	370	711	0	635			
V/C Ratio(X)	0.82	0.16	0.00	0.00	0.93	0.28	0.96	0.00	0.18			
Avail Cap(c_a), veh/h	154	1469	0	0	494	402	768	0	686			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	51.3	22.7	0.0	0.0	41.8	34.8	33.1	0.0	21.9			
Incr Delay (d2), s/veh	24.2	0.0	0.0	0.0	22.1	0.2	22.2	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.5	2.2	0.0	0.0	15.6	2.7	25.1	0.0	2.4			
LnGrp Delay(d),s/veh	75.5	22.7	0.0	0.0	63.9	34.9	55.3	0.0	22.0			
LnGrp LOS	E	C			E	C	E		C			
Approach Vol, veh/h		337			526			800				
Approach Delay, s/veh		40.9			58.1			50.5				
Approach LOS		D			E			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		55.8		57.4	16.2	39.6		
Change Period (Y+Rc), s		12.0		12.0	* 7.2	12.0		
Max Green Setting (Gmax), s		47.0		49.0	* 9.8	30.0		
Max Q Clear Time (g_c+I1), s		6.6		44.6	9.3	27.0		
Green Ext Time (p_c), s		0.8		0.8	0.0	0.6		

Intersection Summary	
HCM 2010 Ctrl Delay	51.0
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
66: Mission Gorge Road & I-8 EB Off Ramps

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1120	1340	210	1160	950	320
Future Volume (veh/h)	1120	1340	210	1160	950	320
Number	1	16	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	1179	1164	221	1221	1000	242
Adj No. of Lanes	2	3	1	2	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1267	1329	267	1761	1088	263
Arrive On Green	0.37	0.37	0.15	0.50	0.27	0.27
Sat Flow, veh/h	3442	3610	1774	3632	4224	979
Grp Volume(v), veh/h	1179	1164	221	1221	835	407
Grp Sat Flow(s),veh/h/ln	1721	1203	1774	1770	1695	1645
Q Serve(g_s), s	19.6	17.9	7.2	15.8	14.3	14.3
Cycle Q Clear(g_c), s	19.6	17.9	7.2	15.8	14.3	14.3
Prop In Lane	1.00	1.00	1.00			0.60
Lane Grp Cap(c), veh/h	1267	1329	267	1761	910	442
V/C Ratio(X)	0.93	0.88	0.83	0.69	0.92	0.92
Avail Cap(c_a), veh/h	1270	1332	277	1781	910	442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.1	17.6	24.6	11.5	21.2	21.2
Incr Delay (d2), s/veh	12.1	6.8	16.8	1.2	14.0	24.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	6.8	4.7	7.9	8.4	9.4
LnGrp Delay(d),s/veh	30.3	24.4	41.4	12.6	35.2	45.8
LnGrp LOS	C	C	D	B	D	D
Approach Vol, veh/h	2343			1442	1242	
Approach Delay, s/veh	27.3			17.0	38.7	
Approach LOS	C			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			13.7	20.0		26.0		33.7
Change Period (Y+Rc), s			* 4.7	4.0		4.0		4.0
Max Green Setting (Gmax), s			* 9.3	16.0		22.0		30.0
Max Q Clear Time (g_c+I1), s			9.2	16.3		21.6		17.8
Green Ext Time (p_c), s			0.0	0.0		0.3		6.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.2
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
67: Qualcomm Way & Madison Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	50	40	30	60	510	70	910	60	70	610	120
Future Volume (veh/h)	360	50	40	30	60	510	70	910	60	70	610	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	379	53	15	32	63	305	74	958	52	74	642	115
Adj No. of Lanes	1	1	1	1	1	1	1	1	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	333	273	348	366	301	94	838	696	60	1288	230
Arrive On Green	0.18	0.18	0.18	0.20	0.20	0.20	0.05	0.45	0.45	0.03	0.43	0.43
Sat Flow, veh/h	1774	1863	1530	1774	1863	1535	1774	1863	1548	1774	2989	534
Grp Volume(v), veh/h	379	53	15	32	63	305	74	958	52	74	380	377
Grp Sat Flow(s),veh/h/ln	1774	1863	1530	1774	1863	1535	1774	1863	1548	1774	1770	1753
Q Serve(g_s), s	24.1	3.2	1.1	2.0	3.8	26.5	5.6	60.7	2.6	4.6	21.0	21.1
Cycle Q Clear(g_c), s	24.1	3.2	1.1	2.0	3.8	26.5	5.6	60.7	2.6	4.6	21.0	21.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	317	333	273	348	366	301	94	838	696	60	763	756
V/C Ratio(X)	1.20	0.16	0.05	0.09	0.17	1.01	0.79	1.14	0.07	1.22	0.50	0.50
Avail Cap(c_a), veh/h	317	333	273	348	366	301	160	838	696	60	763	756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	46.9	46.0	44.4	45.1	54.2	63.2	37.1	21.2	65.2	27.8	27.8
Incr Delay (d2), s/veh	115.1	0.1	0.0	0.0	0.1	55.0	5.5	78.8	0.1	188.1	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.9	1.7	0.5	1.0	2.0	15.9	2.9	49.5	1.1	5.4	10.4	10.3
LnGrp Delay(d),s/veh	170.6	47.0	46.0	44.4	45.2	109.3	68.7	115.9	21.2	253.3	28.5	28.6
LnGrp LOS	F	D	D	D	D	F	E	F	C	F	C	C
Approach Vol, veh/h		447			400			1084			831	
Approach Delay, s/veh		151.7			94.0			108.1			48.5	
Approach LOS		F			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	65.6		29.0	11.5	63.1		31.4
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	4.6	60.7		24.1	12.2	53.1		26.5
Max Q Clear Time (g_c+I1), s	6.6	62.7		26.1	7.6	23.1		28.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	6.7		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		95.2
HCM 2010 LOS		F

HCM 2010 Signalized Intersection Summary
68: Franklin Ridge Road & Phyllis Place

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	65	35	1035	60	35	1190
Future Volume (veh/h)	65	35	1035	60	35	1190
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	68	0	1089	63	37	82
Adj No. of Lanes	2	0	2	1	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	678	0	1425	1317	160	1405
Arrive On Green	0.19	0.00	0.41	0.71	0.09	0.09
Sat Flow, veh/h	3725	0	3442	1863	1774	2787
Grp Volume(v), veh/h	68	0	1089	63	37	82
Grp Sat Flow(s),veh/h/ln	1770	0	1721	1863	1774	1393
Q Serve(g_s), s	0.7	0.0	12.0	0.5	0.9	0.7
Cycle Q Clear(g_c), s	0.7	0.0	12.0	0.5	0.9	0.7
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	678	0	1425	1317	160	1405
V/C Ratio(X)	0.10	0.00	0.76	0.05	0.23	0.06
Avail Cap(c_a), veh/h	2154	0	2522	2688	1080	2850
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	11.1	2.0	18.7	5.6
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	5.8	0.2	0.5	0.3
LnGrp Delay(d),s/veh	14.8	0.0	12.0	2.0	19.5	5.6
LnGrp LOS	B		B	A	B	A
Approach Vol, veh/h	68			1152	119	
Approach Delay, s/veh	14.8			11.5	9.9	
Approach LOS	B			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		8.5	22.9	13.0				35.9
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		27.0	32.5	27.0				64.0
Max Q Clear Time (g_c+I1), s		2.9	14.0	2.7				2.5
Green Ext Time (p_c), s		0.4	4.3	0.3				0.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
69: Franklin Ridge Road & Via Alta

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	455	10	170	20	20	20	120	750	10	10	580	480
Future Volume (veh/h)	455	10	170	20	20	20	120	750	10	10	580	480
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	479	11	116	21	21	10	126	789	6	11	611	242
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	572	49	519	241	232	99	128	886	7	19	779	647
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.07	0.48	0.48	0.01	0.42	0.42
Sat Flow, veh/h	1357	137	1443	513	645	276	1774	1846	14	1774	1863	1545
Grp Volume(v), veh/h	479	0	127	52	0	0	126	0	795	11	611	242
Grp Sat Flow(s),veh/h/ln	1357	0	1579	1434	0	0	1774	0	1860	1774	1863	1545
Q Serve(g_s), s	26.0	0.0	5.1	0.1	0.0	0.0	6.4	0.0	35.1	0.6	25.6	9.7
Cycle Q Clear(g_c), s	31.1	0.0	5.1	5.1	0.0	0.0	6.4	0.0	35.1	0.6	25.6	9.7
Prop In Lane	1.00		0.91	0.40		0.19	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	572	0	569	572	0	0	128	0	892	19	779	647
V/C Ratio(X)	0.84	0.00	0.22	0.09	0.00	0.00	0.99	0.00	0.89	0.58	0.78	0.37
Avail Cap(c_a), veh/h	572	0	569	572	0	0	128	0	1236	79	1186	984
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	0.0	20.1	19.1	0.0	0.0	41.8	0.0	21.3	44.5	22.7	18.1
Incr Delay (d2), s/veh	10.5	0.0	0.2	0.1	0.0	0.0	75.3	0.0	6.4	25.1	2.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.4	0.0	2.2	0.9	0.0	0.0	5.8	0.0	19.5	0.4	13.5	4.2
LnGrp Delay(d),s/veh	38.9	0.0	20.3	19.1	0.0	0.0	117.1	0.0	27.8	69.5	24.7	18.5
LnGrp LOS	D		C	B			F		C	E	C	B
Approach Vol, veh/h		606			52			921			864	
Approach Delay, s/veh		35.0			19.1			40.0			23.5	
Approach LOS		C			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	47.8		37.0	11.0	42.3		37.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	4.0	60.0		32.5	6.5	57.5		32.5
Max Q Clear Time (g_c+I1), s	2.6	37.1		33.1	8.4	27.6		7.1
Green Ext Time (p_c), s	0.0	6.3		0.0	0.0	5.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
70: Qualcomm Way & Civita Boulevard

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	200	320	500	170	240	550
Future Volume (veh/h)	200	320	500	170	240	550
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.94	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	211	232	526	179	253	453
Adj No. of Lanes	2	1	2	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	631	266	604	715	1685	1053
Arrive On Green	0.18	0.18	0.18	0.38	0.49	0.49
Sat Flow, veh/h	3632	1494	3442	1863	3442	1583
Grp Volume(v), veh/h	211	232	526	179	253	453
Grp Sat Flow(s),veh/h/ln	1770	1494	1721	1863	1721	1583
Q Serve(g_s), s	7.8	22.7	22.3	9.8	6.1	20.1
Cycle Q Clear(g_c), s	7.8	22.7	22.3	9.8	6.1	20.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	631	266	604	715	1685	1053
V/C Ratio(X)	0.33	0.87	0.87	0.25	0.15	0.43
Avail Cap(c_a), veh/h	1026	433	1296	1298	1685	1053
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.96	0.96	0.98	0.98
Uniform Delay (d), s/veh	53.9	60.0	60.2	31.5	21.1	11.8
Incr Delay (d2), s/veh	0.3	10.5	3.9	0.2	0.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	10.1	10.9	5.1	2.9	9.1
LnGrp Delay(d),s/veh	54.2	70.5	64.1	31.7	21.3	13.0
LnGrp LOS	D	E	E	C	C	B
Approach Vol, veh/h	443			705	706	
Approach Delay, s/veh	62.7			55.9	16.0	
Approach LOS	E			E	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		83.0	30.8	36.2				67.0
Change Period (Y+Rc), s		9.5	4.5	9.5				9.5
Max Green Setting (Gmax), s		26.5	56.5	43.5				104.5
Max Q Clear Time (g_c+I1), s		22.1	24.3	24.7				11.8
Green Ext Time (p_c), s		1.2	2.0	2.1				1.1

Intersection Summary	
HCM 2010 Ctrl Delay	42.3
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
71: Franklin Ridge Road & Civita Boulevard

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	700	50	50	20	100	620
Future Volume (veh/h)	700	50	50	20	100	620
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	737	21	53	21	105	21
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	836	746	130	643	335	1015
Arrive On Green	0.47	0.47	0.07	0.35	0.18	0.18
Sat Flow, veh/h	1774	1583	1774	1863	1863	1495
Grp Volume(v), veh/h	737	21	53	21	105	21
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1495
Q Serve(g_s), s	18.4	0.3	1.4	0.4	2.4	0.2
Cycle Q Clear(g_c), s	18.4	0.3	1.4	0.4	2.4	0.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	836	746	130	643	335	1015
V/C Ratio(X)	0.88	0.03	0.41	0.03	0.31	0.02
Avail Cap(c_a), veh/h	1393	1244	253	1235	798	1387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.7	6.9	21.7	10.6	17.5	3.0
Incr Delay (d2), s/veh	3.9	0.0	2.0	0.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.4	0.8	0.2	1.3	0.2
LnGrp Delay(d),s/veh	15.6	7.0	23.7	10.7	18.0	3.0
LnGrp LOS	B	A	C	B	B	A
Approach Vol, veh/h	758			74	126	
Approach Delay, s/veh	15.4			20.0	15.5	
Approach LOS	B			C	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		21.4		27.6	8.1	13.3		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		32.5		38.5	7.0	21.0		
Max Q Clear Time (g_c+I1), s		2.4		20.4	3.4	4.4		
Green Ext Time (p_c), s		0.1		2.7	0.0	0.5		

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Notes

HCM 2010 Signalized Intersection Summary
72: Fenton Parkway & Street "I"

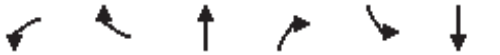


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	280	320	380	80	120	380
Future Volume (veh/h)	280	320	380	80	120	380
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	295	14	400	39	126	400
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	390	348	878	85	246	1885
Arrive On Green	0.22	0.22	0.27	0.27	0.14	0.53
Sat Flow, veh/h	1774	1583	3341	315	1774	3632
Grp Volume(v), veh/h	295	14	217	222	126	400
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1793	1774	1770
Q Serve(g_s), s	5.7	0.3	3.7	3.8	2.4	2.2
Cycle Q Clear(g_c), s	5.7	0.3	3.7	3.8	2.4	2.2
Prop In Lane	1.00	1.00		0.18	1.00	
Lane Grp Cap(c), veh/h	390	348	478	485	246	1885
V/C Ratio(X)	0.76	0.04	0.45	0.46	0.51	0.21
Avail Cap(c_a), veh/h	888	792	900	912	478	3192
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	11.2	11.0	11.1	14.5	4.5
Incr Delay (d2), s/veh	3.0	0.0	0.7	0.7	1.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.1	1.9	1.9	1.3	1.1
LnGrp Delay(d),s/veh	16.3	11.2	11.7	11.7	16.2	4.5
LnGrp LOS	B	B	B	B	B	A
Approach Vol, veh/h	309		439			526
Approach Delay, s/veh	16.0		11.7			7.3
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.5	14.3				23.9		12.5
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	9.8	18.5				32.8		18.2
Max Q Clear Time (g_c+I1), s	4.4	5.8				4.2		7.7
Green Ext Time (p_c), s	0.1	2.2				2.9		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
73: Via Las Cumbres & Riverwalk Drive



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	90	40	530	60	20	620
Future Volume (veh/h)	90	40	530	60	20	620
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	95	10	558	42	21	653
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	228	204	993	75	66	1649
Arrive On Green	0.13	0.13	0.30	0.30	0.04	0.47
Sat Flow, veh/h	1774	1583	3421	250	1774	3632
Grp Volume(v), veh/h	95	10	296	304	21	653
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1808	1774	1770
Q Serve(g_s), s	1.7	0.2	4.9	4.9	0.4	4.2
Cycle Q Clear(g_c), s	1.7	0.2	4.9	4.9	0.4	4.2
Prop In Lane	1.00	1.00		0.14	1.00	
Lane Grp Cap(c), veh/h	228	204	528	540	66	1649
V/C Ratio(X)	0.42	0.05	0.56	0.56	0.32	0.40
Avail Cap(c_a), veh/h	1393	1243	1143	1168	365	3988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.8	13.2	10.2	10.2	16.2	6.0
Incr Delay (d2), s/veh	1.2	0.1	0.9	0.9	2.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.1	2.4	2.6	0.2	2.0
LnGrp Delay(d),s/veh	15.1	13.3	11.1	11.1	19.0	6.2
LnGrp LOS	B	B	B	B	B	A
Approach Vol, veh/h	105		600			674
Approach Delay, s/veh	14.9		11.1			6.6
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	5.8	19.8				25.6		8.9
Change Period (Y+Rc), s	4.5	9.5				* 9.5		4.5
Max Green Setting (Gmax), s	7.1	22.3				* 39		27.1
Max Q Clear Time (g_c+I1), s	2.4	6.9				6.2		3.7
Green Ext Time (p_c), s	0.0	3.1				4.8		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	9.2
HCM 2010 LOS	A

Notes

HCM 2010 Signalized Intersection Summary
74: Fashion Valley Road & Riverwalk Drive/Avenida Del Rio

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	350	90	70	150	90	180	370	150	80	200	70
Future Volume (veh/h)	90	350	90	70	150	90	180	370	150	80	200	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	95	368	74	74	158	53	189	389	74	84	211	11
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	407	82	116	354	119	220	1003	189	121	968	50
Arrive On Green	0.07	0.27	0.27	0.07	0.27	0.27	0.25	0.68	0.68	0.07	0.28	0.28
Sat Flow, veh/h	1774	1500	302	1774	1327	445	1774	2957	557	1774	3417	177
Grp Volume(v), veh/h	95	0	442	74	0	211	189	231	232	84	109	113
Grp Sat Flow(s),veh/h/ln	1774	0	1801	1774	0	1772	1774	1770	1745	1774	1770	1824
Q Serve(g_s), s	4.7	0.0	21.3	3.7	0.0	8.9	9.2	5.1	5.2	4.2	4.2	4.3
Cycle Q Clear(g_c), s	4.7	0.0	21.3	3.7	0.0	8.9	9.2	5.1	5.2	4.2	4.2	4.3
Prop In Lane	1.00		0.17	1.00		0.25	1.00		0.32	1.00		0.10
Lane Grp Cap(c), veh/h	125	0	489	116	0	472	220	600	592	121	501	517
V/C Ratio(X)	0.76	0.00	0.90	0.64	0.00	0.45	0.86	0.38	0.39	0.69	0.22	0.22
Avail Cap(c_a), veh/h	207	0	550	140	0	475	268	600	592	193	501	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	0.86	0.86	0.86
Uniform Delay (d), s/veh	41.1	0.0	31.7	41.0	0.0	27.5	33.1	10.4	10.4	41.0	24.6	24.6
Incr Delay (d2), s/veh	9.0	0.0	17.2	6.8	0.0	0.7	19.4	1.8	1.9	6.0	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	12.9	2.0	0.0	4.4	5.6	2.7	2.7	2.3	2.2	2.3
LnGrp Delay(d),s/veh	50.1	0.0	48.8	47.8	0.0	28.2	52.4	12.2	12.3	47.0	25.5	25.5
LnGrp LOS	D		D	D		C	D	B	B	D	C	C
Approach Vol, veh/h		537			285			652			306	
Approach Delay, s/veh		49.0			33.3			23.9			31.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	40.0	10.4	28.9	15.7	35.0	10.8	28.5
Change Period (Y+Rc), s	4.5	9.5	4.5	4.5	4.5	9.5	4.5	4.5
Max Green Setting (Gmax), s	9.8	22.6	7.1	27.5	13.6	18.8	10.5	24.1
Max Q Clear Time (g_c+I1), s	6.2	7.2	5.7	23.3	11.2	6.3	6.7	10.9
Green Ext Time (p_c), s	0.0	2.3	0.0	1.1	0.1	0.9	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
75: Avenida Del Rio & Harzard Center Drive & Fashion Valley Mall

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	350	100	60	280	30	150	150	160	20	50	20
Future Volume (veh/h)	50	350	100	60	280	30	150	150	160	20	50	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.96	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	53	368	84	63	295	21	158	158	94	21	53	10
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	445	101	141	535	38	210	262	156	62	241	46
Arrive On Green	0.07	0.30	0.30	0.08	0.31	0.31	0.12	0.24	0.24	0.04	0.16	0.16
Sat Flow, veh/h	1774	1462	334	1774	1714	122	1774	1077	641	1774	1506	284
Grp Volume(v), veh/h	53	0	452	63	0	316	158	0	252	21	0	63
Grp Sat Flow(s),veh/h/ln	1774	0	1796	1774	0	1836	1774	0	1717	1774	0	1790
Q Serve(g_s), s	1.5	0.0	12.5	1.8	0.0	7.6	4.6	0.0	6.9	0.6	0.0	1.6
Cycle Q Clear(g_c), s	1.5	0.0	12.5	1.8	0.0	7.6	4.6	0.0	6.9	0.6	0.0	1.6
Prop In Lane	1.00		0.19	1.00		0.07	1.00		0.37	1.00		0.16
Lane Grp Cap(c), veh/h	127	0	546	141	0	573	210	0	419	62	0	287
V/C Ratio(X)	0.42	0.00	0.83	0.45	0.00	0.55	0.75	0.00	0.60	0.34	0.00	0.22
Avail Cap(c_a), veh/h	233	0	690	236	0	709	536	0	882	233	0	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	17.3	23.4	0.0	15.2	22.7	0.0	17.9	25.1	0.0	19.5
Incr Delay (d2), s/veh	2.2	0.0	6.7	2.2	0.0	0.8	5.3	0.0	1.4	3.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	7.2	1.0	0.0	4.0	2.5	0.0	3.5	0.4	0.0	0.8
LnGrp Delay(d),s/veh	25.9	0.0	24.0	25.6	0.0	16.1	28.1	0.0	19.3	28.3	0.0	19.9
LnGrp LOS	C		C	C		B	C		B	C		B
Approach Vol, veh/h		505			379			410			84	
Approach Delay, s/veh		24.2			17.6			22.7			22.0	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	17.5	8.7	20.7	10.8	13.0	8.3	21.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.0	27.4	7.1	20.5	16.1	18.3	7.0	20.6
Max Q Clear Time (g_c+I1), s	2.6	8.9	3.8	14.5	6.6	3.6	3.5	9.6
Green Ext Time (p_c), s	0.0	1.4	0.0	1.5	0.3	0.2	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
76: Via Las Cumbres & Levi Cushman Street "B"



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	510	90	500	250	90	620
Future Volume (veh/h)	510	90	500	250	90	620
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	537	11	526	105	95	653
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	615	549	784	156	185	1650
Arrive On Green	0.35	0.35	0.27	0.27	0.10	0.47
Sat Flow, veh/h	1774	1583	3016	580	1774	3632
Grp Volume(v), veh/h	537	11	317	314	95	653
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1734	1774	1770
Q Serve(g_s), s	13.7	0.2	7.7	7.8	2.4	5.8
Cycle Q Clear(g_c), s	13.7	0.2	7.7	7.8	2.4	5.8
Prop In Lane	1.00	1.00		0.33	1.00	
Lane Grp Cap(c), veh/h	615	549	475	465	185	1650
V/C Ratio(X)	0.87	0.02	0.67	0.67	0.51	0.40
Avail Cap(c_a), veh/h	792	707	661	648	258	2168
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	10.3	15.7	15.7	20.4	8.4
Incr Delay (d2), s/veh	8.6	0.0	1.6	1.7	2.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.1	3.9	3.9	1.3	2.8
LnGrp Delay(d),s/veh	23.4	10.4	17.3	17.5	22.6	8.6
LnGrp LOS	C	B	B	B	C	A
Approach Vol, veh/h	548		631			748
Approach Delay, s/veh	23.1		17.4			10.3
Approach LOS	C		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.5	17.4				27.0		21.2
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	7.0	18.0				29.5		21.5
Max Q Clear Time (g_c+I1), s	4.4	9.8				7.8		15.7
Green Ext Time (p_c), s	0.0	2.4				4.4		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

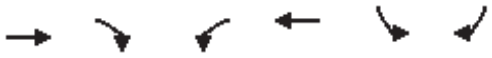
HCM 2010 Signalized Intersection Summary
77: Fashion Valley Road & Levi Cushman Street "B"



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	150	130	350	650	110	250
Future Volume (veh/h)	150	130	350	650	110	250
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	158	21	368	684	116	21
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	199	177	405	2592	1360	240
Arrive On Green	0.11	0.11	0.23	0.73	0.45	0.45
Sat Flow, veh/h	1774	1583	1774	3632	3089	529
Grp Volume(v), veh/h	158	21	368	684	67	70
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1755
Q Serve(g_s), s	7.8	1.1	18.2	5.8	1.9	2.0
Cycle Q Clear(g_c), s	7.8	1.1	18.2	5.8	1.9	2.0
Prop In Lane	1.00	1.00	1.00			0.30
Lane Grp Cap(c), veh/h	199	177	405	2592	803	797
V/C Ratio(X)	0.79	0.12	0.91	0.26	0.08	0.09
Avail Cap(c_a), veh/h	463	413	463	2592	803	797
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.89	0.89	0.94	0.94
Uniform Delay (d), s/veh	38.9	36.0	33.8	4.0	14.0	14.0
Incr Delay (d2), s/veh	6.6	0.3	18.2	0.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	1.0	10.9	2.8	1.0	1.0
LnGrp Delay(d),s/veh	45.5	36.2	52.0	4.2	14.1	14.2
LnGrp LOS	D	D	D	A	B	B
Approach Vol, veh/h	179			1052	137	
Approach Delay, s/veh	44.4			20.9	14.2	
Approach LOS	D			C	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		75.4		14.6	25.1	50.3		
Change Period (Y+Rc), s		9.5		4.5	4.5	9.5		
Max Green Setting (Gmax), s		52.5		23.5	23.5	24.5		
Max Q Clear Time (g_c+I1), s		7.8		9.8	20.2	4.0		
Green Ext Time (p_c), s		5.3		0.4	0.4	0.6		

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C



Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1558	32	442	274	326	768
v/c Ratio	0.91	0.04	0.88	0.11	0.92	0.49
Control Delay	31.3	0.1	58.6	5.2	68.3	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	0.1	58.6	5.2	68.3	1.1
Queue Length 50th (ft)	422	0	128	25	181	0
Queue Length 95th (ft)	#588	0	#210	38	#331	0
Internal Link Dist (ft)	1049			488		
Turn Bay Length (ft)		400	120			180
Base Capacity (vph)	1713	781	507	2414	371	1552
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.04	0.87	0.11	0.88	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	1284	600	1116	137	284
v/c Ratio	0.97	0.21	0.90	0.81	0.72
Control Delay	51.8	2.8	37.9	78.6	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	2.8	37.9	78.6	16.5
Queue Length 50th (ft)	~466	41	313	86	0
Queue Length 95th (ft)	#596	53	400	#186	#85
Internal Link Dist (ft)		488	1239	905	
Turn Bay Length (ft)	225				
Base Capacity (vph)	1317	2817	1324	180	403
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.97	0.21	0.84	0.76	0.70

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	879	442	405	426	274	747
v/c Ratio	0.83	0.60	0.81	0.46	0.21	0.94
Control Delay	41.6	8.4	56.8	19.7	20.6	38.2
Queue Delay	0.7	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	8.4	56.8	19.7	20.6	38.2
Queue Length 50th (ft)	302	20	145	195	62	316
Queue Length 95th (ft)	382	110	#224	281	91	#586
Internal Link Dist (ft)	365			594		1186
Turn Bay Length (ft)		200	250			
Base Capacity (vph)	1229	790	549	1037	1634	901
Starvation Cap Reductn	111	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.56	0.74	0.41	0.17	0.83

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	774	379	790	358	500
v/c Ratio	0.98	0.36	0.77	0.68	0.69
Control Delay	65.6	13.6	31.4	34.0	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	65.6	13.6	31.4	34.0	11.9
Queue Length 50th (ft)	191	88	162	159	43
Queue Length 95th (ft)	#508	233	307	296	166
Internal Link Dist (ft)		594	1043	1756	
Turn Bay Length (ft)	200				
Base Capacity (vph)	789	1334	1484	933	976
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.98	0.28	0.53	0.38	0.51

Intersection Summary

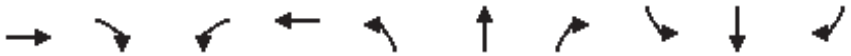
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	84	53	105	295	200	74	505	200	63	32	316	305
v/c Ratio	0.60	0.11	0.22	0.70	0.36	0.14	0.92	0.12	0.08	0.42	0.27	0.44
Control Delay	79.5	34.2	4.5	67.5	37.6	1.2	80.7	28.3	3.8	81.1	41.6	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.5	34.2	4.5	67.5	37.6	1.2	80.7	28.3	3.8	81.1	41.6	7.2
Queue Length 50th (ft)	75	30	0	135	115	0	236	70	0	29	135	0
Queue Length 95th (ft)	129	64	30	178	184	6	#337	103	21	65	185	85
Internal Link Dist (ft)		193			1307			610			1184	
Turn Bay Length (ft)	170			290		200	240			200		200
Base Capacity (vph)	323	591	571	627	640	601	560	1852	834	85	1345	765
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.09	0.18	0.47	0.31	0.12	0.90	0.11	0.08	0.38	0.23	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	95	195	205	84	258	653	68	32	589	95
v/c Ratio	0.50	0.41	0.59	0.23	0.58	0.36	0.12	0.29	0.69	0.21
Control Delay	53.5	8.7	43.8	25.7	46.9	25.2	0.7	55.8	38.9	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	8.7	43.8	25.7	46.9	25.2	0.7	55.8	38.9	1.6
Queue Length 50th (ft)	54	15	112	26	74	110	0	18	164	0
Queue Length 95th (ft)	125	49	223	78	141	174	3	59	279	5
Internal Link Dist (ft)	251			993		253			610	
Turn Bay Length (ft)		70	120		120		200	150		200
Base Capacity (vph)	610	583	563	557	698	2692	794	133	1421	666
Starvation Cap Reductn	0	0	0	0	0	500	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.33	0.36	0.15	0.37	0.30	0.09	0.24	0.41	0.14

Intersection Summary



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	605	280	1316	600	200	800
v/c Ratio	0.69	0.57	0.87	0.56	0.74	0.39
Control Delay	27.7	13.7	28.0	5.7	51.7	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	13.7	28.0	5.7	51.7	9.7
Queue Length 50th (ft)	122	40	258	67	44	86
Queue Length 95th (ft)	170	113	#492	108	#110	171
Internal Link Dist (ft)	1397		566			1235
Turn Bay Length (ft)		230			280	
Base Capacity (vph)	1360	660	1535	1284	272	2077
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.42	0.86	0.47	0.74	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	305	484	895	821	263	126
v/c Ratio	0.78	0.22	0.79	0.77	0.74	0.15
Control Delay	56.0	9.4	40.4	10.8	54.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.0	9.4	40.4	10.8	54.1	0.4
Queue Length 50th (ft)	209	73	304	127	186	0
Queue Length 95th (ft)	#349	98	382	254	#320	0
Internal Link Dist (ft)		3086	1666			
Turn Bay Length (ft)	220			190		120
Base Capacity (vph)	393	2302	1228	1067	356	835
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.21	0.73	0.77	0.74	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	58	558	53	1969	95	53	95	74
v/c Ratio	0.67	0.26	0.42	0.88	0.42	0.16	0.44	0.23
Control Delay	83.3	11.1	55.9	24.0	39.6	5.0	40.4	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.3	11.1	55.9	24.0	39.6	5.0	40.4	14.5
Queue Length 50th (ft)	33	64	29	414	52	0	52	11
Queue Length 95th (ft)	#115	153	77	#943	97	19	98	47
Internal Link Dist (ft)		1666		908	489			1477
Turn Bay Length (ft)	160		200				40	
Base Capacity (vph)	87	2161	163	2231	427	542	408	558
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.26	0.33	0.88	0.22	0.10	0.23	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	146	584	295	1337	489	126	179	221	147	368
v/c Ratio	0.84	0.57	0.82	0.94	0.67	0.83	0.47	0.45	0.85	0.92
Control Delay	101.5	45.0	73.4	55.3	21.1	104.9	55.1	9.0	101.9	80.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	101.5	45.0	73.4	55.3	21.1	104.9	55.1	9.0	101.9	80.9
Queue Length 50th (ft)	143	244	280	648	188	124	154	0	144	334
Queue Length 95th (ft)	#273	331	370	#795	322	#246	233	72	#277	#521
Internal Link Dist (ft)		931		958			859			325
Turn Bay Length (ft)	190				200	250			115	
Base Capacity (vph)	179	1022	470	1543	771	154	423	516	179	439
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.57	0.63	0.87	0.63	0.82	0.42	0.43	0.82	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	5	695	126	1685	194	126	31
v/c Ratio	0.05	0.38	0.59	0.91	0.65	0.36	0.12
Control Delay	41.2	23.2	44.9	23.1	33.8	23.0	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	23.2	44.9	23.1	33.8	23.0	21.7
Queue Length 50th (ft)	3	95	69	319	117	54	12
Queue Length 95th (ft)	14	164	m88	#828	166	74	30
Internal Link Dist (ft)		999		594	1292		249
Turn Bay Length (ft)	180		200				
Base Capacity (vph)	95	1850	222	1849	505	597	498
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.38	0.57	0.91	0.38	0.21	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	821	74	1779	21	95
v/c Ratio	0.25	0.30	0.67	0.07	0.25
Control Delay	16.5	39.6	12.7	24.9	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.5	39.6	12.7	24.9	3.2
Queue Length 50th (ft)	35	21	117	12	0
Queue Length 95th (ft)	180	33	#674	24	15
Internal Link Dist (ft)	594		1246		
Turn Bay Length (ft)		300			
Base Capacity (vph)	3296	686	2666	629	634
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.11	0.67	0.03	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	5	879	105	1810	21	21	16	42	16
v/c Ratio	0.06	0.28	0.27	0.47	0.09	0.08	0.04	0.18	0.05
Control Delay	31.8	7.6	36.1	9.6	25.6	12.6	0.2	28.1	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	7.6	36.1	9.6	25.6	12.6	0.2	28.1	14.0
Queue Length 50th (ft)	3	6	29	81	11	3	0	23	3
Queue Length 95th (ft)	m13	193	46	368	24	18	0	40	16
Internal Link Dist (ft)		1246		672		252			222
Turn Bay Length (ft)	150		410						
Base Capacity (vph)	90	3388	410	3864	457	523	586	454	554
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.26	0.26	0.47	0.05	0.04	0.03	0.09	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	147	426	337	558	1211	505	589	21	853	368	137
v/c Ratio	0.59	0.28	0.35	0.81	0.55	0.28	0.84	0.05	0.72	0.63	0.38
Control Delay	77.1	43.6	2.2	67.3	34.7	1.4	68.0	45.8	31.5	61.9	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.7
Total Delay	77.1	43.6	2.2	67.3	34.7	1.4	68.0	45.8	31.5	65.2	15.8
Queue Length 50th (ft)	72	126	0	267	346	0	286	17	307	166	17
Queue Length 95th (ft)	112	171	27	331	417	25	342	40	354	221	78
Internal Link Dist (ft)		672			1085			378			209
Turn Bay Length (ft)			100						300		
Base Capacity (vph)	264	1544	985	772	2205	1947	799	433	1259	755	435
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	286	119
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.28	0.34	0.72	0.55	0.26	0.74	0.05	0.68	0.78	0.43

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	485	1096	1455	747	828	727
v/c Ratio	0.77	0.26	0.55	0.49	0.69	0.63
Control Delay	43.8	7.1	21.9	2.8	34.4	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	7.1	21.9	2.8	34.4	5.9
Queue Length 50th (ft)	135	72	187	0	148	10
Queue Length 95th (ft)	184	88	231	39	191	59
Internal Link Dist (ft)		1085	634		856	
Turn Bay Length (ft)	260					
Base Capacity (vph)	724	4165	2631	1529	1279	1196
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.26	0.55	0.49	0.65	0.61

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	656	823	443	83	1813	83	125	167	42	63	250
v/c Ratio	1.11	0.26	0.30	0.48	0.99	0.13	0.56	0.22	0.27	0.16	0.33
Control Delay	122.3	23.3	2.8	75.6	63.4	0.4	74.0	34.2	72.5	40.8	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	122.3	23.3	2.8	75.6	63.4	0.4	74.0	34.2	72.5	40.8	5.5
Queue Length 50th (ft)	~415	153	0	41	~752	0	62	51	21	45	0
Queue Length 95th (ft)	#541	181	36	71	#846	0	98	83	43	84	35
Internal Link Dist (ft)		634			586			693		685	
Turn Bay Length (ft)	200			130			200		140		
Base Capacity (vph)	589	3121	1467	195	1824	633	263	1150	156	635	1085
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.11	0.26	0.30	0.43	0.99	0.13	0.48	0.15	0.27	0.10	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	81	87	347	163	602	673	286
v/c Ratio	0.35	0.37	0.79	0.56	0.24	0.32	0.31
Control Delay	55.0	55.7	28.2	66.0	8.8	16.8	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.2	1.0	0.7
Total Delay	55.0	55.7	28.2	66.0	9.0	17.7	3.6
Queue Length 50th (ft)	67	72	74	80	129	174	0
Queue Length 95th (ft)	115	124	185	95	93	246	48
Internal Link Dist (ft)		857			286	253	
Turn Bay Length (ft)	370		370				
Base Capacity (vph)	454	457	608	480	2526	2087	916
Starvation Cap Reductn	0	0	0	0	1116	1081	351
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.19	0.57	0.34	0.43	0.67	0.51

Intersection Summary



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	100	100	200	611	168	200	663
v/c Ratio	0.60	0.58	0.60	0.27	0.18	0.65	0.25
Control Delay	74.0	72.7	14.9	9.9	1.1	68.6	4.6
Queue Delay	0.0	0.0	0.1	0.8	0.8	0.0	0.3
Total Delay	74.0	72.7	15.0	10.7	1.9	68.6	4.9
Queue Length 50th (ft)	93	93	0	86	0	86	46
Queue Length 95th (ft)	152	152	74	124	11	141	121
Internal Link Dist (ft)		604		170			286
Turn Bay Length (ft)	250		100			120	
Base Capacity (vph)	218	224	376	2226	941	554	2649
Starvation Cap Reductn	0	0	0	1238	534	0	1294
Spillback Cap Reductn	0	0	9	0	0	0	168
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.45	0.54	0.62	0.41	0.36	0.49

Intersection Summary



Lane Group	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	327	296	520	531	643	194
v/c Ratio	0.85	0.53	0.80	0.23	0.30	0.29
Control Delay	75.4	9.7	44.3	14.2	14.5	1.4
Queue Delay	0.0	0.0	0.6	1.6	0.0	0.0
Total Delay	75.4	9.7	44.8	15.8	14.5	1.4
Queue Length 50th (ft)	309	15	201	174	54	0
Queue Length 95th (ft)	395	93	227	192	101	11
Internal Link Dist (ft)		714		277	424	
Turn Bay Length (ft)	320					
Base Capacity (vph)	499	643	849	2267	2139	676
Starvation Cap Reductn	0	0	95	1511	0	0
Spillback Cap Reductn	0	0	0	0	36	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.46	0.69	0.70	0.31	0.29

Intersection Summary



Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	68	137	1021	316	232	768
v/c Ratio	0.31	0.42	0.48	0.35	0.70	0.30
Control Delay	58.6	11.8	15.4	3.7	69.9	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.9
Total Delay	58.6	11.8	15.4	3.7	69.9	9.4
Queue Length 50th (ft)	60	0	124	0	94	181
Queue Length 95th (ft)	109	60	185	27	143	321
Internal Link Dist (ft)	357		608			277
Turn Bay Length (ft)		360				
Base Capacity (vph)	373	450	2139	911	746	2592
Starvation Cap Reductn	0	0	0	0	0	1465
Spillback Cap Reductn	0	0	13	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.30	0.48	0.35	0.31	0.68

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	137	1021	95	242	2343	231	126	95
v/c Ratio	0.86	0.54	0.15	0.74	1.00	0.67	0.26	0.24
Control Delay	83.0	23.7	2.9	45.8	42.7	36.7	4.3	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.0	23.7	2.9	45.8	42.7	36.7	4.3	15.4
Queue Length 50th (ft)	66	135	0	111	380	104	0	21
Queue Length 95th (ft)	#194	245	20	201	#668	175	29	55
Internal Link Dist (ft)		1668			1034	780		453
Turn Bay Length (ft)	220			240			60	
Base Capacity (vph)	160	1903	637	460	2339	529	671	579
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.54	0.15	0.53	1.00	0.44	0.19	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	105	832	242	263	2184	42	305	84	168	95	210	53
v/c Ratio	0.51	0.40	0.26	0.73	0.95	0.05	1.06	0.19	0.34	0.52	0.59	0.10
Control Delay	76.9	34.0	3.0	76.8	50.0	0.2	132.8	45.2	7.6	79.4	57.8	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.9	34.0	3.0	76.8	50.0	0.2	132.8	45.2	7.6	79.4	57.8	0.4
Queue Length 50th (ft)	52	226	0	130	~848	0	~168	63	0	47	180	0
Queue Length 95th (ft)	84	281	45	175	#972	1	#268	110	58	79	270	0
Internal Link Dist (ft)		1034			1478			660			718	
Turn Bay Length (ft)	240		240	260		260	200			210		210
Base Capacity (vph)	211	2068	930	421	2299	882	288	566	579	205	482	529
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.40	0.26	0.62	0.95	0.05	1.06	0.15	0.29	0.46	0.44	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

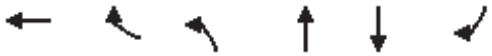
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	31	865	188	490	2224	52	115	125	281	94	177	125
v/c Ratio	0.21	0.49	0.29	0.82	0.86	0.06	0.53	0.26	0.39	0.72	0.42	0.26
Control Delay	52.2	29.4	5.6	55.4	29.6	2.9	56.7	30.4	13.0	80.1	35.7	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	29.4	5.6	55.4	29.6	2.9	56.7	30.4	13.0	80.1	35.7	2.9
Queue Length 50th (ft)	10	164	0	158	463	0	39	71	81	32	108	0
Queue Length 95th (ft)	26	229	52	#280	#739	15	68	102	120	#74	146	19
Internal Link Dist (ft)		1478			1233			692			645	
Turn Bay Length (ft)	300		300	260		260	180			190		300
Base Capacity (vph)	149	1762	653	596	2591	893	228	656	717	130	603	612
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.49	0.29	0.82	0.86	0.06	0.50	0.19	0.39	0.72	0.29	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	379	368	600	600	421	253
v/c Ratio	0.84	0.24	0.94	0.28	0.67	0.55
Control Delay	47.1	0.4	54.6	9.4	39.4	9.4
Queue Delay	0.0	0.0	18.2	0.0	0.0	0.0
Total Delay	47.1	0.4	72.7	9.4	39.4	9.4
Queue Length 50th (ft)	195	0	318	76	113	0
Queue Length 95th (ft)	307	0	#603	124	174	66
Internal Link Dist (ft)	702			344	646	
Turn Bay Length (ft)						
Base Capacity (vph)	593	1555	636	2244	750	502
Starvation Cap Reductn	0	0	53	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.24	1.03	0.27	0.56	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

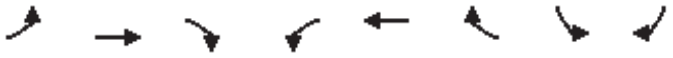


Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	194	295	1011	579	305	474
v/c Ratio	0.71	1.23	1.07	0.61	1.02	0.79
Control Delay	55.4	171.5	76.1	7.7	98.9	50.4
Queue Delay	0.0	0.0	14.0	7.2	0.0	0.0
Total Delay	55.4	171.5	90.1	15.0	98.9	50.4
Queue Length 50th (ft)	119	~233	~719	59	~200	154
Queue Length 95th (ft)	#215	#398	#961	161	#372	#224
Internal Link Dist (ft)	760		133			344
Turn Bay Length (ft)						
Base Capacity (vph)	273	240	944	956	300	601
Starvation Cap Reductn	0	0	315	327	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	1.23	1.61	0.92	1.02	0.79

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	433	742	443	423	1851	536	876	763
v/c Ratio	1.02	0.43	0.56	0.89	1.01	0.35	1.01	0.54
Control Delay	96.5	35.7	6.3	32.2	27.5	0.1	81.1	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.5	35.7	6.3	32.2	27.5	0.1	81.1	19.8
Queue Length 50th (ft)	~377	178	0	289	~496	0	~416	215
Queue Length 95th (ft)	#593	242	91	m154	m315	m0	#564	273
Internal Link Dist (ft)		737			1071			
Turn Bay Length (ft)							600	600
Base Capacity (vph)	426	1712	796	609	1838	1536	864	1414
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.43	0.56	0.69	1.01	0.35	1.01	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	674	979	2663	801	411	637
v/c Ratio	1.40	0.24	1.20	1.27	1.06	1.15
Control Delay	225.1	1.2	120.0	157.2	88.8	106.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	225.1	1.2	120.0	157.2	88.8	106.3
Queue Length 50th (ft)	~772	1	~1046	~984	~220	~323
Queue Length 95th (ft)	m#880	m1	#1136	#1267	#426	#560
Internal Link Dist (ft)		1071	878		868	773
Turn Bay Length (ft)	520					
Base Capacity (vph)	483	4068	2228	633	388	553
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.40	0.24	1.20	1.27	1.06	1.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1032	358	232	2747	640	339
v/c Ratio	0.41	0.31	0.79	0.62	0.82	0.59
Control Delay	18.8	4.9	79.1	4.3	56.5	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	4.9	79.1	4.3	56.5	8.3
Queue Length 50th (ft)	182	64	206	67	264	0
Queue Length 95th (ft)	m280	m69	m201	105	311	84
Internal Link Dist (ft)	878			425	699	
Turn Bay Length (ft)		400	160		160	
Base Capacity (vph)	2492	1262	443	4405	1025	652
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.28	0.52	0.62	0.62	0.52

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	351	1021	2846	134	423
v/c Ratio	0.58	0.28	0.89	0.19	0.72
Control Delay	35.4	5.0	25.7	40.2	38.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	5.0	25.7	40.2	38.4
Queue Length 50th (ft)	114	54	~891	42	199
Queue Length 95th (ft)	#222	84	#777	68	371
Internal Link Dist (ft)		589	1602	1556	
Turn Bay Length (ft)	200			200	
Base Capacity (vph)	606	3627	3346	1029	590
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.58	0.28	0.85	0.13	0.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	137	789	200	189	2621	116	95	84	242
v/c Ratio	0.85	0.29	0.23	0.78	0.90	0.85	0.25	0.33	0.52
Control Delay	101.9	18.9	6.8	75.1	30.5	93.1	27.9	44.4	17.1
Queue Delay	0.0	0.0	0.0	0.0	25.8	0.0	0.0	0.0	0.0
Total Delay	101.9	18.9	6.8	75.1	56.3	93.1	27.9	44.4	17.1
Queue Length 50th (ft)	112	201	44	156	~783	87	42	56	47
Queue Length 95th (ft)	#242	251	45	230	#927	#174	88	103	125
Internal Link Dist (ft)		1602			513		932		815
Turn Bay Length (ft)	220		315	190		150		130	
Base Capacity (vph)	165	2745	882	315	2916	177	484	332	551
Starvation Cap Reductn	0	0	0	0	426	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.29	0.23	0.60	1.05	0.66	0.20	0.25	0.44

Intersection Summary

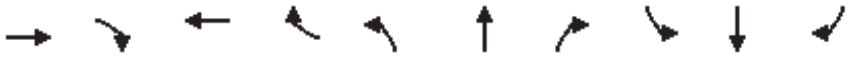
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	NBL	NBR
Lane Group Flow (vph)	674	242	474	379	305
v/c Ratio	0.30	0.16	0.78	0.82	0.24
Control Delay	23.7	0.2	56.5	55.7	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	0.2	56.5	55.7	11.3
Queue Length 50th (ft)	123	0	182	273	48
Queue Length 95th (ft)	178	0	228	372	64
Internal Link Dist (ft)	513			1532	
Turn Bay Length (ft)		90	190	140	
Base Capacity (vph)	2230	1555	1104	475	1371
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.30	0.16	0.43	0.80	0.22

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	84	74	179	105	105	632	63	84	695	84
v/c Ratio	0.41	0.22	0.81	0.33	0.66	0.31	0.08	0.60	0.35	0.10
Control Delay	56.1	6.7	81.0	10.7	79.9	17.3	1.9	96.7	20.2	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.2	0.6
Total Delay	56.1	6.7	81.0	10.7	79.9	17.3	1.9	96.9	21.4	6.8
Queue Length 50th (ft)	69	0	158	0	94	150	0	80	159	5
Queue Length 95th (ft)	115	29	230	49	153	236	13	138	334	17
Internal Link Dist (ft)	291		308			999			170	
Turn Bay Length (ft)		200		200	120			120		
Base Capacity (vph)	337	487	366	454	260	2039	835	222	1997	845
Starvation Cap Reductn	0	0	0	0	0	0	0	12	1011	538
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.15	0.49	0.23	0.40	0.31	0.08	0.40	0.70	0.27

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	116	21	168	232	63	95	137	1126	674	95	621	189
v/c Ratio	0.54	0.08	0.40	0.52	0.11	0.28	0.58	0.42	0.64	0.49	0.24	0.22
Control Delay	77.0	50.5	15.0	66.2	48.8	6.0	64.8	38.8	19.8	67.9	24.6	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.0	50.5	15.0	66.2	48.8	6.0	64.8	38.8	19.8	67.9	24.6	14.2
Queue Length 50th (ft)	57	17	34	115	25	0	72	371	317	50	186	84
Queue Length 95th (ft)	91	42	89	158	45	31	m91	373	352	77	267	170
Internal Link Dist (ft)		1252			1355			1284			608	
Turn Bay Length (ft)	140		120	120		160	335		200	180		200
Base Capacity (vph)	251	393	440	468	913	477	274	2671	1057	213	2608	868
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.05	0.38	0.50	0.07	0.20	0.50	0.42	0.64	0.45	0.24	0.22

Intersection Summary

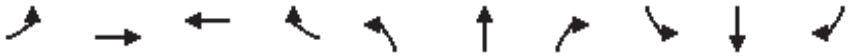
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	116	116	284	126	263	274	347	95	158	326	189
v/c Ratio	0.57	0.32	0.55	0.60	0.75	0.81	0.34	0.19	0.51	0.49	0.44
Control Delay	54.5	37.8	8.6	55.4	48.9	60.4	30.7	3.3	51.1	39.9	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.5	37.8	8.6	55.4	48.9	60.4	30.7	3.3	51.1	39.9	9.3
Queue Length 50th (ft)	68	62	0	75	144	163	88	0	48	95	0
Queue Length 95th (ft)	143	126	70	152	257	#385	158	21	95	163	62
Internal Link Dist (ft)		1071			1444		453			660	
Turn Bay Length (ft)	250					160		200	300		200
Base Capacity (vph)	638	576	663	638	548	339	1229	581	407	966	532
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.20	0.43	0.20	0.48	0.81	0.28	0.16	0.39	0.34	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	233	199	53	63	63	126	21	368	126	74
v/c Ratio	0.66	0.55	0.18	0.17	0.38	0.27	0.07	0.79	0.18	0.08
Control Delay	40.9	36.3	31.3	1.0	48.8	38.4	0.4	48.7	29.4	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	36.3	31.3	1.0	48.8	38.4	0.4	48.7	29.4	3.6
Queue Length 50th (ft)	89	72	20	0	24	24	0	129	38	0
Queue Length 95th (ft)	240	202	61	0	88	72	0	#516	131	23
Internal Link Dist (ft)		1444	569			544			692	
Turn Bay Length (ft)	130			200	70		200	100		
Base Capacity (vph)	665	670	766	733	240	965	500	465	768	1110
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.30	0.07	0.09	0.26	0.13	0.04	0.79	0.16	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	126	389	179	474	168	305	284	105	211	253	126
v/c Ratio	0.63	0.51	0.86	0.66	0.39	0.89	0.66	0.23	0.80	0.74	0.32
Control Delay	56.7	21.5	79.9	40.5	8.5	69.4	42.3	3.1	64.7	50.7	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.7	21.5	79.9	40.5	8.5	69.4	42.3	3.1	64.7	50.7	6.3
Queue Length 50th (ft)	73	61	107	137	0	180	155	0	123	144	0
Queue Length 95th (ft)	152	115	#287	220	55	#430	271	18	#311	254	36
Internal Link Dist (ft)		1694		1560			1721			574	
Turn Bay Length (ft)	80		200		200	70			120		120
Base Capacity (vph)	284	1167	208	1009	535	341	623	604	265	539	543
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.33	0.86	0.47	0.31	0.89	0.46	0.17	0.80	0.47	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	58	58	221	53	21	316	632	84	42	674
v/c Ratio	0.19	0.19	0.31	0.32	0.06	0.59	0.42	0.12	0.28	0.59
Control Delay	30.7	30.6	4.4	45.1	0.3	38.5	20.6	1.8	45.5	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.7	30.6	4.4	45.1	0.3	38.5	20.6	1.8	45.5	28.7
Queue Length 50th (ft)	24	24	12	22	0	65	106	0	17	85
Queue Length 95th (ft)	69	68	45	74	0	148	232	12	64	179
Internal Link Dist (ft)		357		605			887			999
Turn Bay Length (ft)	230				200	200		200	240	
Base Capacity (vph)	682	695	1063	278	411	1008	2403	1032	223	2195
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.08	0.21	0.19	0.05	0.31	0.26	0.08	0.19	0.31

Intersection Summary



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	642	326	158	263	95	126
v/c Ratio	0.78	0.33	0.44	0.53	0.57	0.19
Control Delay	20.1	1.7	26.3	8.0	46.3	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	1.7	26.3	8.0	46.3	15.7
Queue Length 50th (ft)	153	1	43	0	29	26
Queue Length 95th (ft)	328	26	118	57	#131	81
Internal Link Dist (ft)	612		631			319
Turn Bay Length (ft)		175				
Base Capacity (vph)	1599	1003	652	687	167	970
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.33	0.24	0.38	0.57	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	95	169	137	674	221	726	158	411	147
v/c Ratio	0.33	0.18	0.41	0.68	1.18	0.62	0.84	0.34	0.32
Control Delay	42.5	14.5	42.1	27.2	159.8	31.3	78.6	28.6	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	14.5	42.1	27.2	159.8	31.3	78.6	28.6	7.0
Queue Length 50th (ft)	24	20	35	142	~71	119	42	65	0
Queue Length 95th (ft)	54	47	71	222	#170	182	#118	106	45
Internal Link Dist (ft)		2153		1856		444		887	
Turn Bay Length (ft)	290		140		160		320		
Base Capacity (vph)	1912	2780	443	1463	188	1715	188	1769	604
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.06	0.31	0.46	1.18	0.42	0.84	0.23	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	84	168	95	137	653	74	126	95	84	147	305	126
v/c Ratio	0.53	0.20	0.21	0.59	0.67	0.15	0.50	0.11	0.18	0.48	0.35	0.27
Control Delay	49.1	22.3	3.4	44.3	25.7	1.5	28.6	19.3	2.1	26.7	21.3	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	22.3	3.4	44.3	25.7	1.5	28.6	19.3	2.1	26.7	21.3	5.3
Queue Length 50th (ft)	28	25	0	45	105	0	40	14	0	46	48	0
Queue Length 95th (ft)	#119	61	20	#165	211	7	97	34	11	108	92	33
Internal Link Dist (ft)		1214			1167			627			1301	
Turn Bay Length (ft)	120		200	260		200	160		200	160		200
Base Capacity (vph)	158	1590	755	243	1754	805	565	1924	893	687	1924	893
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.11	0.13	0.56	0.37	0.09	0.22	0.05	0.09	0.21	0.16	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	92	179	107	306	449	276	327	1510	439	122	755	112
v/c Ratio	0.60	0.33	0.26	0.76	0.68	0.64	0.79	0.80	0.48	0.68	0.34	0.15
Control Delay	81.4	49.2	6.4	77.2	61.3	26.4	57.5	46.8	24.3	84.4	28.8	12.9
Queue Delay	0.0	0.8	1.3	0.0	0.0	0.0	58.2	50.9	56.4	0.0	0.7	0.0
Total Delay	81.4	50.0	7.7	77.2	61.3	26.4	115.6	97.7	80.7	84.4	29.5	12.9
Queue Length 50th (ft)	86	70	6	153	206	85	170	767	283	63	201	43
Queue Length 95th (ft)	148	108	38	#221	266	186	m212	m845	m366	#108	250	92
Internal Link Dist (ft)		1167			1022			145			1284	
Turn Bay Length (ft)	250		325	250		200			200	250		200
Base Capacity (vph)	185	753	440	402	818	486	480	1883	914	184	2192	727
Starvation Cap Reductn	0	0	0	0	0	0	196	1150	523	0	0	0
Spillback Cap Reductn	0	338	195	0	0	0	0	0	0	0	1024	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.43	0.44	0.76	0.55	0.57	1.15	2.06	1.12	0.66	0.65	0.15

Intersection Summary

Description: 6 seconds was added to NBL Y and R to mimic LT transit only phasing

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	84	158	63	147	569	189	495	74	621
v/c Ratio	0.81	0.31	0.10	0.74	0.96	0.90	0.67	0.66	0.97
Control Delay	112.1	43.1	2.8	81.0	72.6	101.0	38.3	90.8	72.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	112.1	43.1	2.8	81.0	72.6	101.0	38.3	90.8	72.4
Queue Length 50th (ft)	77	114	0	131	496	172	361	67	548
Queue Length 95th (ft)	#175	188	18	201	#727	#318	494	#138	#807
Internal Link Dist (ft)		1226			476		964		611
Turn Bay Length (ft)				70		80			
Base Capacity (vph)	104	506	652	264	619	214	737	118	638
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.31	0.10	0.56	0.92	0.88	0.67	0.63	0.97

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	126	116	516	347	263	284
v/c Ratio	0.64	0.06	0.60	0.55	0.66	0.41
Control Delay	46.4	8.5	24.5	6.5	30.4	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	8.5	24.5	6.5	30.4	9.5
Queue Length 50th (ft)	45	10	87	0	89	44
Queue Length 95th (ft)	#144	26	156	60	166	97
Internal Link Dist (ft)		1474	1627		1721	
Turn Bay Length (ft)	95			80		
Base Capacity (vph)	205	2150	1148	730	677	694
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.05	0.45	0.48	0.39	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	139	109	443	304	677	288	474	1526	289	21	876	196
v/c Ratio	1.10	0.83	0.75	0.81	0.92	0.67	0.97	0.82	0.33	0.24	0.90	0.38
Control Delay	169.7	107.7	35.4	69.4	72.1	37.3	86.2	33.8	9.2	76.6	64.0	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0
Total Delay	169.7	107.7	35.4	69.4	72.1	37.3	86.2	36.3	9.2	76.6	64.0	16.9
Queue Length 50th (ft)	~156	108	220	294	357	171	~475	630	60	10	422	47
Queue Length 95th (ft)	#307	#226	364	#424	#465	282	#697	734	121	26	#537	119
Internal Link Dist (ft)		1010			920			738			884	
Turn Bay Length (ft)	130			520		140	220		200	90		150
Base Capacity (vph)	126	132	587	399	782	430	487	1856	883	87	971	515
Starvation Cap Reductn	0	0	0	0	0	0	0	210	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.83	0.75	0.76	0.87	0.67	0.97	0.93	0.33	0.24	0.90	0.38

Intersection Summary

Description: min green reduce to match split

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	SBR
Lane Group Flow (vph)	527	158
v/c Ratio	0.28	0.36
Control Delay	6.7	4.5
Queue Delay	0.0	0.0
Total Delay	6.7	4.5
Queue Length 50th (ft)	28	0
Queue Length 95th (ft)	59	23
Internal Link Dist (ft)	302	
Turn Bay Length (ft)		
Base Capacity (vph)	2020	622
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.26	0.25

Intersection Summary



Lane Group	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	421	211	1	253
v/c Ratio	0.62	0.46	0.00	0.14
Control Delay	37.3	7.9	9.0	3.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	37.3	7.9	9.0	3.0
Queue Length 50th (ft)	116	0	0	0
Queue Length 95th (ft)	155	54	m1	34
Internal Link Dist (ft)	598		723	
Turn Bay Length (ft)		150		
Base Capacity (vph)	1812	873	1141	1796
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.23	0.24	0.00	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	21	177	188	292	333	531	177	323	302	229	333	63
v/c Ratio	0.21	0.29	0.12	0.66	0.71	0.82	0.57	0.25	0.19	0.57	0.24	0.08
Control Delay	46.0	31.2	0.2	44.3	38.5	21.3	42.7	33.6	0.2	43.2	21.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	31.2	0.2	44.3	38.5	21.3	42.7	33.6	0.2	43.2	21.5	0.2
Queue Length 50th (ft)	12	49	0	82	174	98	37	68	0	63	60	0
Queue Length 95th (ft)	35	63	0	120	232	207	m#90	151	m0	101	121	0
Internal Link Dist (ft)		650			381			678			444	
Turn Bay Length (ft)	70		70	160			190		190	150		
Base Capacity (vph)	98	1077	1555	507	641	755	313	1319	1554	433	1416	758
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.16	0.12	0.58	0.52	0.70	0.57	0.24	0.19	0.53	0.24	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	284	432	147	274	492	498	126
v/c Ratio	0.35	0.28	0.92	0.20	0.67	0.67	0.08
Control Delay	26.9	0.5	92.3	17.5	19.9	19.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	0.5	92.3	17.5	19.9	19.8	0.1
Queue Length 50th (ft)	53	0	64	39	167	169	0
Queue Length 95th (ft)	113	0	#215	91	257	260	0
Internal Link Dist (ft)	381			779		361	
Turn Bay Length (ft)			110		560		560
Base Capacity (vph)	814	1536	160	1374	1268	1283	1536
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.28	0.92	0.20	0.39	0.39	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	158	263	242	274	284	126
v/c Ratio	1.39	0.23	0.14	0.31	0.67	0.27
Control Delay	249.8	6.6	9.7	2.6	29.7	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	249.8	6.6	9.7	2.6	29.7	5.9
Queue Length 50th (ft)	~83	40	25	0	96	0
Queue Length 95th (ft)	#192	78	46	35	167	34
Internal Link Dist (ft)		1771	694		627	
Turn Bay Length (ft)	200			90		
Base Capacity (vph)	114	1145	1717	890	515	535
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.39	0.23	0.14	0.31	0.55	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	105	189	221	558	316	1684	263	726	516
v/c Ratio	0.31	0.43	0.46	0.97	0.89	0.76	0.17	1.00	0.77
Control Delay	51.1	8.4	51.1	59.9	83.1	40.4	0.2	89.8	30.7
Queue Delay	0.1	0.0	0.0	24.5	0.0	48.2	0.0	38.2	24.9
Total Delay	51.2	8.4	51.1	84.3	83.1	88.6	0.2	128.0	55.7
Queue Length 50th (ft)	80	0	187	346	~410	571	0	~303	268
Queue Length 95th (ft)	134	61	273	#601	#607	639	0	#505	347
Internal Link Dist (ft)	573		350			965		145	
Turn Bay Length (ft)				200	100				
Base Capacity (vph)	483	555	476	578	356	2228	1536	726	668
Starvation Cap Reductn	0	0	0	0	0	0	0	316	163
Spillback Cap Reductn	31	0	0	50	0	843	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.34	0.46	1.06	0.89	1.22	0.17	1.77	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	326	147	63	1452	32	57	49	242
v/c Ratio	0.72	0.07	0.62	0.85	0.28	0.19	0.16	0.42
Control Delay	53.2	11.5	76.9	27.1	34.1	35.4	34.9	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	11.5	76.9	27.1	34.1	35.4	34.9	7.8
Queue Length 50th (ft)	98	15	37	327	6	33	28	24
Queue Length 95th (ft)	#226	44	#133	#688	41	70	63	68
Internal Link Dist (ft)		1165		492	202		357	
Turn Bay Length (ft)	190		90			140		
Base Capacity (vph)	454	2250	101	2046	141	631	640	575
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.07	0.62	0.71	0.23	0.09	0.08	0.42

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	SBL	SBR
Lane Group Flow (vph)	137	105	526
v/c Ratio	0.32	0.09	0.51
Control Delay	13.9	0.1	3.2
Queue Delay	0.0	0.0	0.0
Total Delay	13.9	0.1	3.2
Queue Length 50th (ft)	20	0	0
Queue Length 95th (ft)	58	0	41
Internal Link Dist (ft)	719	273	
Turn Bay Length (ft)			
Base Capacity (vph)	1234	1503	1303
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.11	0.07	0.40

Intersection Summary



Lane Group	EBT	NBR
Lane Group Flow (vph)	947	779
v/c Ratio	0.63	0.60
Control Delay	3.9	2.7
Queue Delay	0.0	0.0
Total Delay	3.9	2.7
Queue Length 50th (ft)	8	0
Queue Length 95th (ft)	42	16
Internal Link Dist (ft)	1023	
Turn Bay Length (ft)		
Base Capacity (vph)	1948	1900
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.49	0.41

Intersection Summary



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	453	442	358	147	265	556
v/c Ratio	0.34	0.51	0.79	0.09	0.57	0.57
Control Delay	23.2	5.0	38.7	0.1	41.0	38.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	5.0	38.7	0.1	41.0	38.4
Queue Length 50th (ft)	79	0	105	0	178	185
Queue Length 95th (ft)	163	68	88	0	252	230
Internal Link Dist (ft)		711	193			678
Turn Bay Length (ft)				80	330	
Base Capacity (vph)	1335	871	511	1555	679	1418
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	5	0	0	0	37
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.51	0.70	0.09	0.39	0.40

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	116	232	295	242	53	21	229	223	442
v/c Ratio	0.55	0.54	0.47	0.26	0.36	0.08	0.37	0.36	0.53
Control Delay	46.3	39.5	36.1	3.9	45.9	0.6	16.9	16.6	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.5
Total Delay	46.3	39.5	36.1	3.9	45.9	0.6	17.6	17.3	4.9
Queue Length 50th (ft)	70	67	80	14	29	0	47	45	3
Queue Length 95th (ft)	123	100	120	51	66	0	208	203	182
Internal Link Dist (ft)		393	464		304			193	
Turn Bay Length (ft)	280			220		100			
Base Capacity (vph)	254	519	626	939	154	283	623	639	845
Starvation Cap Reductn	0	0	0	0	0	0	174	187	121
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.45	0.47	0.26	0.34	0.07	0.51	0.49	0.61

Intersection Summary



Lane Group	EBR	NBT	SBT	SBR
Lane Group Flow (vph)	516	1368	663	284
v/c Ratio	0.72	0.60	0.29	0.27
Control Delay	13.9	8.0	5.4	1.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.9	8.0	5.4	1.6
Queue Length 50th (ft)	32	110	40	0
Queue Length 95th (ft)	68	218	83	26
Internal Link Dist (ft)		396	965	
Turn Bay Length (ft)				
Base Capacity (vph)	1012	2268	2268	1070
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.60	0.29	0.27

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	112	92	92	61	92	163	143	1572	459	602	286
v/c Ratio	0.59	0.46	0.24	0.31	0.45	0.25	0.80	1.17	0.91	0.29	0.30
Control Delay	96.4	89.6	11.0	83.1	87.8	22.8	117.9	137.4	89.3	24.3	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.3	0.6	0.7
Total Delay	96.4	89.6	11.0	83.1	87.8	22.8	117.9	137.4	136.6	24.9	7.2
Queue Length 50th (ft)	139	112	13	72	110	79	187	~1304	~712	241	34
Queue Length 95th (ft)	214	180	50	126	176	142	267	#1437	#955	306	104
Internal Link Dist (ft)		351			536			1138		396	
Turn Bay Length (ft)	80		35	60		60	100				160
Base Capacity (vph)	238	251	428	265	279	664	232	1341	503	2064	941
Starvation Cap Reductn	0	0	0	0	0	0	0	0	89	1023	361
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.37	0.21	0.23	0.33	0.25	0.62	1.17	1.11	0.58	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	168	232	611	516	295	337
v/c Ratio	0.60	0.20	0.83	0.48	0.71	0.55
Control Delay	36.8	6.8	33.0	3.6	34.4	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.8	6.8	33.0	3.6	34.4	6.7
Queue Length 50th (ft)	66	37	221	26	113	0
Queue Length 95th (ft)	134	82	#506	74	206	59
Internal Link Dist (ft)		1605	2056		964	
Turn Bay Length (ft)	160			230	75	
Base Capacity (vph)	433	1357	775	1152	622	745
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.17	0.79	0.45	0.47	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NBT	SBL	SBR
Lane Group Flow (vph)	179	32	926	42	253	474
v/c Ratio	0.11	0.24	0.94	0.15	0.59	0.98
Control Delay	10.2	37.4	35.1	1.2	31.6	58.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.2	37.4	35.1	1.2	31.6	58.3
Queue Length 50th (ft)	16	14	384	0	108	~179
Queue Length 95th (ft)	41	40	#653	0	#186	#358
Internal Link Dist (ft)	1169		1	255		
Turn Bay Length (ft)		80				
Base Capacity (vph)	1670	139	1079	271	431	484
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.23	0.86	0.15	0.59	0.98

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT
Lane Group Flow (vph)	421	147	958
v/c Ratio	0.19	0.49	0.27
Control Delay	3.4	20.1	0.2
Queue Delay	0.0	0.0	0.0
Total Delay	3.4	20.1	0.2
Queue Length 50th (ft)	13	26	0
Queue Length 95th (ft)	30	65	0
Internal Link Dist (ft)	1		1248
Turn Bay Length (ft)		350	
Base Capacity (vph)	2350	359	3281
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.18	0.41	0.29

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT
Lane Group Flow (vph)	116	221	421	158	684	127
v/c Ratio	0.83	0.16	0.93	0.33	0.96	0.20
Control Delay	94.5	23.8	70.9	9.1	59.7	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.5	23.8	70.9	9.1	59.7	23.8
Queue Length 50th (ft)	90	57	317	7	503	62
Queue Length 95th (ft)	#193	86	#503	61	#752	107
Internal Link Dist (ft)		1248	1726			753
Turn Bay Length (ft)	115			180	190	
Base Capacity (vph)	151	1455	488	499	758	672
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.15	0.86	0.32	0.90	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	1179	1411	221	1221	1337
v/c Ratio	0.93	0.40	0.84	0.69	0.96
Control Delay	33.6	0.3	54.9	14.1	36.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.6	0.3	54.9	14.1	36.9
Queue Length 50th (ft)	205	0	79	164	157
Queue Length 95th (ft)	#331	0	#180	228	#252
Internal Link Dist (ft)	658			1165	738
Turn Bay Length (ft)			180		
Base Capacity (vph)	1270	3502	277	1786	1399
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.93	0.40	0.80	0.68	0.96

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	379	53	42	32	63	537	74	958	63	74	768
v/c Ratio	1.20	0.16	0.11	0.09	0.17	1.36	0.59	1.14	0.09	1.23	0.52
Control Delay	164.3	48.4	0.6	45.4	46.7	209.1	79.3	114.0	1.9	243.2	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	164.3	48.4	0.6	45.4	46.7	209.1	79.3	114.0	1.9	243.2	30.2
Queue Length 50th (ft)	~402	40	0	23	46	~527	64	~981	0	~80	260
Queue Length 95th (ft)	#604	80	0	53	89	#756	116	#1238	13	#185	333
Internal Link Dist (ft)		920			701			1175			1055
Turn Bay Length (ft)				110		110	85		200	190	
Base Capacity (vph)	315	332	371	347	365	395	159	837	700	60	1465
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.16	0.11	0.09	0.17	1.36	0.47	1.14	0.09	1.23	0.52

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

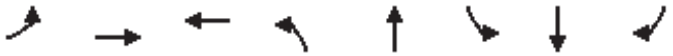
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	105	1089	63	37	1253
v/c Ratio	0.17	0.67	0.05	0.12	0.57
Control Delay	19.1	23.7	5.5	27.5	1.9
Queue Delay	0.0	0.1	0.0	0.0	0.0
Total Delay	19.1	23.8	5.5	27.5	1.9
Queue Length 50th (ft)	12	118	4	12	3
Queue Length 95th (ft)	37	#492	28	43	38
Internal Link Dist (ft)	928		365	360	
Turn Bay Length (ft)					
Base Capacity (vph)	1474	1813	1595	776	2240
Starvation Cap Reductn	0	103	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.07	0.64	0.04	0.05	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	479	190	63	126	800	11	611	505
v/c Ratio	0.97	0.29	0.11	0.99	0.82	0.14	0.78	0.56
Control Delay	66.7	6.3	18.2	126.5	26.3	52.1	30.1	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1
Total Delay	66.7	6.3	18.2	126.5	26.3	52.1	30.5	4.0
Queue Length 50th (ft)	267	4	16	74	346	6	294	0
Queue Length 95th (ft)	#610	58	55	#231	605	27	415	50
Internal Link Dist (ft)		713	111		622		360	
Turn Bay Length (ft)								
Base Capacity (vph)	494	663	569	127	1231	78	1184	1110
Starvation Cap Reductn	0	0	0	0	0	0	201	80
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.29	0.11	0.99	0.65	0.14	0.62	0.49

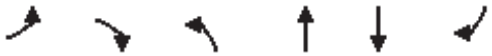
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	211	337	526	179	253	579
v/c Ratio	0.57	0.74	0.75	0.28	0.14	0.47
Control Delay	69.5	16.2	62.7	35.8	10.5	6.8
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	69.5	16.2	62.9	35.8	10.5	6.8
Queue Length 50th (ft)	104	0	252	128	25	210
Queue Length 95th (ft)	143	100	299	166	48	252
Internal Link Dist (ft)	871			304	424	
Turn Bay Length (ft)					150	
Base Capacity (vph)	1026	667	1293	1297	1834	1438
Starvation Cap Reductn	0	0	147	0	0	50
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.51	0.46	0.14	0.14	0.42

Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	737	53	53	21	386	372
v/c Ratio	0.84	0.07	0.24	0.03	0.76	0.31
Control Delay	26.3	3.9	35.9	14.7	25.8	1.3
Queue Delay	0.7	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	3.9	35.9	14.7	25.8	1.3
Queue Length 50th (ft)	284	0	24	6	106	8
Queue Length 95th (ft)	#536	17	60	19	#243	22
Internal Link Dist (ft)	304			65	1294	
Turn Bay Length (ft)						
Base Capacity (vph)	1183	1015	225	1103	688	1278
Starvation Cap Reductn	173	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.05	0.24	0.02	0.56	0.29

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	295	337	484	126	400
v/c Ratio	0.58	0.49	0.50	0.35	0.23
Control Delay	20.6	5.1	16.0	23.2	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	5.1	16.0	23.2	6.8
Queue Length 50th (ft)	71	0	54	31	26
Queue Length 95th (ft)	155	50	103	86	54
Internal Link Dist (ft)	646		611		592
Turn Bay Length (ft)					
Base Capacity (vph)	797	876	1719	429	2572
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.37	0.38	0.28	0.29	0.16

Intersection Summary



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	95	42	621	21	653
v/c Ratio	0.23	0.11	0.33	0.07	0.28
Control Delay	16.2	6.3	11.6	22.9	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.2	6.3	11.6	22.9	6.3
Queue Length 50th (ft)	17	0	42	4	31
Queue Length 95th (ft)	60	19	177	29	122
Internal Link Dist (ft)	1499		980		859
Turn Bay Length (ft)	250			250	
Base Capacity (vph)	1180	1039	1872	295	3056
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.08	0.04	0.33	0.07	0.21

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	95	463	74	253	189	547	84	285
v/c Ratio	0.51	0.88	0.48	0.52	0.76	0.49	0.48	0.32
Control Delay	47.3	49.5	50.3	28.4	51.0	25.1	60.1	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.3	49.5	50.3	28.4	51.0	25.1	60.1	18.7
Queue Length 50th (ft)	52	231	40	99	107	142	50	58
Queue Length 95th (ft)	100	#401	#92	181	#201	193	97	64
Internal Link Dist (ft)		1066		876		637		1292
Turn Bay Length (ft)	250		250				250	
Base Capacity (vph)	211	562	154	501	267	1141	192	917
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.82	0.48	0.50	0.71	0.48	0.44	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	53	473	63	327	158	326	21	74
v/c Ratio	0.24	0.71	0.28	0.48	0.48	0.53	0.09	0.25
Control Delay	32.7	28.7	33.3	22.2	30.2	16.5	31.4	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	28.7	33.3	22.2	30.2	16.5	31.4	21.7
Queue Length 50th (ft)	19	160	23	101	57	73	8	19
Queue Length 95th (ft)	60	#425	68	232	126	177	31	55
Internal Link Dist (ft)		637		648		319		139
Turn Bay Length (ft)	250		250					
Base Capacity (vph)	222	669	225	679	512	856	222	589
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.71	0.28	0.48	0.31	0.38	0.09	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	537	95	789	95	653
v/c Ratio	0.83	0.15	0.72	0.38	0.41
Control Delay	30.9	4.3	18.9	29.7	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	4.3	18.9	29.7	10.4
Queue Length 50th (ft)	174	0	106	33	72
Queue Length 95th (ft)	#336	25	164	72	105
Internal Link Dist (ft)	3409		547		980
Turn Bay Length (ft)	250			250	
Base Capacity (vph)	760	712	1282	247	2086
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.71	0.13	0.62	0.38	0.31

Intersection Summary

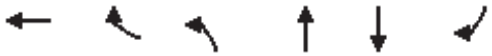
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	158	137	368	684	379
v/c Ratio	0.58	0.39	0.79	0.28	0.29
Control Delay	43.4	9.2	42.6	6.1	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	9.2	42.6	6.1	15.6
Queue Length 50th (ft)	85	0	193	66	22
Queue Length 95th (ft)	139	47	277	120	m68
Internal Link Dist (ft)	3409			723	637
Turn Bay Length (ft)	250		250		
Base Capacity (vph)	462	497	501	2445	1316
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.34	0.28	0.73	0.28	0.29

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	463	368	547	421	971	218
v/c Ratio	0.69	0.62	0.91	0.17	0.94	0.44
Control Delay	48.6	9.0	57.3	7.1	56.7	20.1
Queue Delay	0.0	0.0	51.3	1.2	0.0	0.0
Total Delay	48.6	9.0	108.6	8.2	56.7	20.1
Queue Length 50th (ft)	169	0	377	52	390	72
Queue Length 95th (ft)	215	81	#634	83	#540	154
Internal Link Dist (ft)	1234			164	547	
Turn Bay Length (ft)		250				
Base Capacity (vph)	815	637	603	2426	1032	490
Starvation Cap Reductn	0	0	272	1736	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.58	1.65	0.61	0.94	0.44

Intersection Summary

Description: 600 car are expected to make the texas u-turn thus not entering the intersection

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	421	769	189	1579	105
v/c Ratio	1.00	0.92	0.78	0.97	0.12
Control Delay	90.6	62.0	69.4	47.5	18.7
Queue Delay	0.0	0.0	0.0	43.3	1.4
Total Delay	90.6	62.0	69.4	90.9	20.1
Queue Length 50th (ft)	~329	306	134	615	46
Queue Length 95th (ft)	#540	#424	#230	#794	80
Internal Link Dist (ft)		1870	317		164
Turn Bay Length (ft)	250				
Base Capacity (vph)	420	834	270	1629	883
Starvation Cap Reductn	0	0	0	624	628
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.00	0.92	0.70	1.57	0.41

Intersection Summary

Description: 400 cars are expected to make the texas u turn thus not entering the intersection

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBR	NBT
Lane Group Flow (vph)	168	937
v/c Ratio	0.38	0.46
Control Delay	5.8	4.5
Queue Delay	0.0	0.0
Total Delay	5.8	4.5
Queue Length 50th (ft)	0	29
Queue Length 95th (ft)	31	66
Internal Link Dist (ft)		594
Turn Bay Length (ft)		
Base Capacity (vph)	827	2075
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.20	0.45

Intersection Summary



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	95	242	495	100	147
v/c Ratio	0.26	0.11	0.32	0.22	0.30
Control Delay	19.8	5.3	9.7	14.9	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	5.3	9.7	14.9	5.3
Queue Length 50th (ft)	18	10	35	19	0
Queue Length 95th (ft)	71	36	89	55	33
Internal Link Dist (ft)		1709	357	693	
Turn Bay Length (ft)	150				
Base Capacity (vph)	384	3249	2555	1343	1166
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.07	0.19	0.07	0.13

Intersection Summary

Midday Peak Hour

HCM 2010 Signalized Intersection Summary
78: Via Las Cumbres & Hotel Circle North

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	100	340	350	520	400	0	0	900	230
Future Volume (veh/h)	0	0	0	100	340	350	520	400	0	0	900	230
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.96	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				105	358	10	547	421	0	0	947	95
Adj No. of Lanes				0	2	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				133	482	262	551	2232	0	0	1047	435
Arrive On Green				0.17	0.17	0.17	0.31	0.63	0.00	0.00	0.28	0.28
Sat Flow, veh/h				777	2817	1528	1774	3632	0	0	3725	1550
Grp Volume(v), veh/h				247	216	10	547	421	0	0	947	95
Grp Sat Flow(s),veh/h/ln				1824	1770	1528	1774	1770	0	0	1863	1550
Q Serve(g_s), s				14.9	13.3	0.6	35.4	5.7	0.0	0.0	28.2	5.4
Cycle Q Clear(g_c), s				14.9	13.3	0.6	35.4	5.7	0.0	0.0	28.2	5.4
Prop In Lane				0.43		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				312	303	262	551	2232	0	0	1047	435
V/C Ratio(X)				0.79	0.71	0.04	0.99	0.19	0.00	0.00	0.90	0.22
Avail Cap(c_a), veh/h				428	415	359	551	2277	0	0	1095	455
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.24	0.24	0.00	0.00	0.77	0.77
Uniform Delay (d), s/veh				45.7	45.0	39.8	39.5	8.9	0.0	0.0	39.9	31.7
Incr Delay (d2), s/veh				6.7	3.6	0.1	17.3	0.0	0.0	0.0	10.2	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.1	6.8	0.3	20.0	2.8	0.0	0.0	15.9	2.4
LnGrp Delay(d),s/veh				52.4	48.6	39.8	56.8	8.9	0.0	0.0	50.0	32.6
LnGrp LOS				D	D	D	E	A			D	C
Approach Vol, veh/h					473			968			1042	
Approach Delay, s/veh					50.4			36.0			48.4	
Approach LOS					D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		77.0			40.2	36.8		29.2
Change Period (Y+Rc), s		4.5			4.5	4.5		9.5
Max Green Setting (Gmax), s		74.0			35.7	33.8		27.0
Max Q Clear Time (g_c+I1), s		7.7			37.4	30.2		16.9
Green Ext Time (p_c), s		3.0			0.0	2.1		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	44.0
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
79: Via Las Cumbres & Hotel Circle South

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	400	700	30	0	0	0	0	120	60	1500	100	0
Future Volume (veh/h)	400	700	30	0	0	0	0	120	60	1500	100	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	421	737	21				0	126	52	1579	105	0
Adj No. of Lanes	1	2	0				0	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	421	834	24				0	186	77	1577	854	0
Arrive On Green	0.08	0.08	0.08				0.00	0.15	0.15	0.46	0.46	0.00
Sat Flow, veh/h	1774	3510	100				0	1237	511	3442	1863	0
Grp Volume(v), veh/h	421	372	386				0	0	178	1579	105	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1840				0	0	1748	1721	1863	0
Q Serve(g_s), s	28.5	24.9	25.0				0.0	0.0	11.6	55.0	3.9	0.0
Cycle Q Clear(g_c), s	28.5	24.9	25.0				0.0	0.0	11.6	55.0	3.9	0.0
Prop In Lane	1.00		0.05				0.00		0.29	1.00		0.00
Lane Grp Cap(c), veh/h	421	420	437				0	0	262	1577	854	0
V/C Ratio(X)	1.00	0.88	0.88				0.00	0.00	0.68	1.00	0.12	0.00
Avail Cap(c_a), veh/h	421	420	437				0	0	262	1577	854	0
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09				0.00	0.00	1.00	0.23	0.23	0.00
Uniform Delay (d), s/veh	55.3	53.7	53.7				0.0	0.0	48.3	32.5	18.7	0.0
Incr Delay (d2), s/veh	13.0	2.3	2.2				0.0	0.0	6.9	11.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	12.5	13.0				0.0	0.0	6.1	28.5	2.0	0.0
LnGrp Delay(d),s/veh	68.2	56.0	55.9				0.0	0.0	55.2	43.5	18.7	0.0
LnGrp LOS	E	E	E						E	F	B	
Approach Vol, veh/h		1179						178			1684	
Approach Delay, s/veh		60.3						55.2			42.0	
Approach LOS		E						E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		22.5		38.0		59.5		
Change Period (Y+Rc), s		4.5		9.5		4.5		
Max Green Setting (Gmax), s		18.0		28.5		55.0		
Max Q Clear Time (g_c+I1), s		13.6		30.5		57.0		
Green Ext Time (p_c), s		0.4		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	49.9
HCM 2010 LOS	D



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	160	440	450	0	0
Future Volume (veh/h)	0	160	440	450	0	0
Number	7	14	2	12		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900		
Adj Flow Rate, veh/h	0	10	463	42		
Adj No. of Lanes	1	1	2	0		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	0	0	1447	131		
Arrive On Green	0.00	0.00	0.44	0.44		
Sat Flow, veh/h	0		3369	296		
Grp Volume(v), veh/h	0.0		249	256		
Grp Sat Flow(s),veh/h/ln			1770	1802		
Q Serve(g_s), s			1.6	1.6		
Cycle Q Clear(g_c), s			1.6	1.6		
Prop In Lane				0.16		
Lane Grp Cap(c), veh/h			782	796		
V/C Ratio(X)			0.32	0.32		
Avail Cap(c_a), veh/h			1872	1906		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			3.1	3.1		
Incr Delay (d2), s/veh			0.2	0.2		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			0.7	0.8		
LnGrp Delay(d),s/veh			3.3	3.3		
LnGrp LOS			A	A		
Approach Vol, veh/h			505			
Approach Delay, s/veh			3.3			
Approach LOS			A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		17.0						
Change Period (Y+Rc), s		9.5						
Max Green Setting (Gmax), s		18.0						
Max Q Clear Time (g_c+I1), s		3.6						
Green Ext Time (p_c), s		2.5						

Intersection Summary	
HCM 2010 Ctrl Delay	3.3
HCM 2010 LOS	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	90	230	320	150	95	140
Future Volume (veh/h)	90	230	320	150	95	140
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	95	242	337	21	100	31
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	227	1926	899	56	275	246
Arrive On Green	0.13	0.54	0.27	0.27	0.16	0.16
Sat Flow, veh/h	1774	3632	3470	209	1774	1583
Grp Volume(v), veh/h	95	242	176	182	100	31
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1816	1774	1583
Q Serve(g_s), s	1.5	1.0	2.4	2.5	1.5	0.5
Cycle Q Clear(g_c), s	1.5	1.0	2.4	2.5	1.5	0.5
Prop In Lane	1.00			0.12	1.00	1.00
Lane Grp Cap(c), veh/h	227	1926	471	484	275	246
V/C Ratio(X)	0.42	0.13	0.37	0.38	0.36	0.13
Avail Cap(c_a), veh/h	444	4609	1596	1638	1600	1428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.0	3.3	8.9	9.0	11.3	10.9
Incr Delay (d2), s/veh	1.2	0.0	0.5	0.5	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.5	1.2	1.3	0.8	0.5
LnGrp Delay(d),s/veh	13.3	3.4	9.4	9.4	12.1	11.1
LnGrp LOS	B	A	A	A	B	B
Approach Vol, veh/h		337	358		131	
Approach Delay, s/veh		6.2	9.4		11.9	
Approach LOS		A	A		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				20.8		9.1	8.3	12.5
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				39.0		27.0	7.5	27.0
Max Q Clear Time (g_c+I1), s				3.0		3.5	3.5	4.5
Green Ext Time (p_c), s				1.8		0.3	0.1	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	8.5
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
8: Friar Roads & Napa Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	0	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	-116	0	0	0	0	0	-58
Adj No. of Lanes	1	2	0	0	2	1	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0	2	2	2
Cap, veh/h	9999	9999	0	0	9999	0	0	9999	0	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3632	0	0	-109995	1583	0	-74510	0	1597	1863	1583
Grp Volume(v), veh/h	0	0	0	0	0	-116	0	0	0	0	0	-58
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	0	1863	0	1597	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	3208192	6400	3436544	0	6400	03437	4889	403648	3368	86020096	288	7373	4364	8602	2863	3114624
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	4619797	2862	4597177856	0	1804896	8886	6187	5516041216	9095	224492032	1876	7925	7389	5291	3964	2407552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		0			-116			0			-58	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS					A						A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		0.0		0.0	0.0	0.0		0.0
Change Period (Y+Rc), s		6.0		4.9	4.4	* 6		4.0
Max Green Setting (Gmax), s		46.6		6.5	14.4	* 28		27.0
Max Q Clear Time (g_c+I1), s		0.0		0.0	0.0	0.0		0.0
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Notes

HCM 2010 Signalized Intersection Summary
11: Fashion Valley Road & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1215	175	195	655	35	190	20	150	10	5	5
Future Volume (veh/h)	10	1215	175	195	655	35	190	20	150	10	5	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.98		0.97	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	10	1240	153	199	668	36	194	20	153	10	5	0
Adj No. of Lanes	1	3	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	1868	230	216	1775	96	326	27	335	113	45	0
Arrive On Green	0.01	0.41	0.41	0.24	1.00	1.00	0.22	0.22	0.22	0.22	0.22	0.00
Sat Flow, veh/h	1774	4570	564	1774	3407	183	1186	122	1540	244	208	0
Grp Volume(v), veh/h	10	920	473	199	347	357	214	0	153	15	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1744	1774	1770	1821	1308	0	1540	451	0	0
Q Serve(g_s), s	0.6	22.0	22.0	10.9	0.0	0.0	0.0	0.0	8.6	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.6	22.0	22.0	10.9	0.0	0.0	15.9	0.0	8.6	16.0	0.0	0.0
Prop In Lane	1.00		0.32	1.00		0.10	0.91		1.00	0.67		0.00
Lane Grp Cap(c), veh/h	17	1385	713	216	922	949	353	0	335	158	0	0
V/C Ratio(X)	0.58	0.66	0.66	0.92	0.38	0.38	0.61	0.00	0.46	0.09	0.00	0.00
Avail Cap(c_a), veh/h	71	1385	713	216	922	949	541	0	539	338	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	49.3	24.0	24.0	37.3	0.0	0.0	36.8	0.0	34.0	32.0	0.0	0.0
Incr Delay (d2), s/veh	11.0	2.5	4.8	37.3	1.1	1.1	0.9	0.0	0.5	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	10.7	11.5	7.6	0.3	0.3	5.6	0.0	3.7	0.3	0.0	0.0
LnGrp Delay(d),s/veh	60.3	26.5	28.8	74.7	1.1	1.1	37.7	0.0	34.5	32.1	0.0	0.0
LnGrp LOS	E	C	C	E	A	A	D		C	C		
Approach Vol, veh/h		1403			903			367			15	
Approach Delay, s/veh		27.5			17.3			36.4			32.1	
Approach LOS		C			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.6	51.8		31.6	5.4	63.0		31.6
Change Period (Y+Rc), s	4.4	* 11		* 9.9	4.4	* 11		* 9.9
Max Green Setting (Gmax), s	12.2	* 28		* 35	4.0	* 36		* 35
Max Q Clear Time (g_c+I1), s	12.9	24.0		18.0	2.6	2.0		17.9
Green Ext Time (p_c), s	0.0	2.5		0.0	0.0	5.7		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
12: Via De La Moda & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1360	105	605	910	0	75	0	295	0	0	0
Future Volume (veh/h)	10	1360	105	605	910	0	75	0	295	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	0	1863	0	1863			
Adj Flow Rate, veh/h	11	1432	111	637	958	0	79	0	290			
Adj No. of Lanes	1	3	0	2	2	0	1	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	2	2	2	0	2	0	2			
Cap, veh/h	19	2293	178	606	2278	0	362	0	323			
Arrive On Green	0.02	0.96	0.96	0.18	0.64	0.00	0.20	0.00	0.20			
Sat Flow, veh/h	1774	4796	372	3442	3632	0	1774	0	1583			
Grp Volume(v), veh/h	11	1012	531	637	958	0	79	0	290			
Grp Sat Flow(s),veh/h/ln	1774	1695	1777	1721	1770	0	1774	0	1583			
Q Serve(g_s), s	0.6	3.2	3.2	17.6	13.2	0.0	3.7	0.0	17.9			
Cycle Q Clear(g_c), s	0.6	3.2	3.2	17.6	13.2	0.0	3.7	0.0	17.9			
Prop In Lane	1.00		0.21	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	19	1621	850	606	2278	0	362	0	323			
V/C Ratio(X)	0.59	0.62	0.62	1.05	0.42	0.00	0.22	0.00	0.90			
Avail Cap(c_a), veh/h	71	1621	850	606	2278	0	554	0	494			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.59	0.59	0.59	0.93	0.93	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	48.7	1.2	1.2	41.2	8.7	0.0	33.2	0.0	38.8			
Incr Delay (d2), s/veh	6.3	1.1	2.1	49.5	0.5	0.0	0.1	0.0	9.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.3	1.1	1.4	12.5	6.6	0.0	1.8	0.0	8.7			
LnGrp Delay(d),s/veh	55.0	2.3	3.3	90.7	9.2	0.0	33.3	0.0	48.6			
LnGrp LOS	E	A	A	F	A		C		D			
Approach Vol, veh/h		1554			1595			369				
Approach Delay, s/veh		3.0			41.8			45.3				
Approach LOS		A			D			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	22.0	53.2			5.5	69.8		24.8
Change Period (Y+Rc), s	4.4	5.4			4.4	* 5.4		4.4
Max Green Setting (Gmax), s	17.6	37.0			4.0	* 51		31.2
Max Q Clear Time (g_c+I1), s	19.6	5.2			2.6	15.2		19.9
Green Ext Time (p_c), s	0.0	15.5			0.0	9.6		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	25.0
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
13: Avenida De Las Tiendas & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1540	105	935	1465	10	45	5	265	15	5	5
Future Volume (veh/h)	10	1540	105	935	1465	10	45	5	265	15	5	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.95		0.95	0.97		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	11	1621	106	984	1542	11	47	0	267	16	5	2
Adj No. of Lanes	1	3	0	2	3	0	1	0	2	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	2299	150	1046	3990	28	212	0	380	183	157	63
Arrive On Green	0.01	0.47	0.47	0.30	0.77	0.77	0.13	0.00	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1774	4869	318	3442	5208	37	1338	0	3016	1071	1247	499
Grp Volume(v), veh/h	11	1128	599	984	1004	549	47	0	267	16	0	7
Grp Sat Flow(s),veh/h/ln	1774	1695	1797	1721	1695	1855	1338	0	1508	1071	0	1745
Q Serve(g_s), s	0.9	39.5	39.6	41.8	14.8	14.8	4.8	0.0	12.7	2.0	0.0	0.5
Cycle Q Clear(g_c), s	0.9	39.5	39.6	41.8	14.8	14.8	5.3	0.0	12.7	2.0	0.0	0.5
Prop In Lane	1.00		0.18	1.00		0.02	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	17	1601	848	1046	2598	1421	212	0	380	183	0	220
V/C Ratio(X)	0.63	0.70	0.71	0.94	0.39	0.39	0.22	0.00	0.70	0.09	0.00	0.03
Avail Cap(c_a), veh/h	47	1601	848	1285	2598	1421	311	0	603	262	0	349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.31	0.31	0.31	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	74.0	31.3	31.3	50.9	5.8	5.8	59.9	0.0	62.9	58.2	0.0	57.5
Incr Delay (d2), s/veh	9.6	1.9	3.5	4.1	0.1	0.2	0.2	0.0	0.9	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	18.9	20.5	20.4	6.9	7.6	1.8	0.0	5.4	0.6	0.0	0.3
LnGrp Delay(d),s/veh	83.6	33.2	34.8	55.0	6.0	6.1	60.1	0.0	63.8	58.2	0.0	57.5
LnGrp LOS	F	C	C	E	A	A	E		E	E		E
Approach Vol, veh/h		1738			2537			314			23	
Approach Delay, s/veh		34.1			25.0			63.2			58.0	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	50.0	76.2		23.8	5.9	120.3		23.8
Change Period (Y+Rc), s	4.4	5.4		4.9	4.4	* 5.4		4.9
Max Green Setting (Gmax), s	56.0	49.3		30.0	4.0	* 1E2		30.0
Max Q Clear Time (g_c+I1), s	43.8	41.6		4.0	2.9	16.8		14.7
Green Ext Time (p_c), s	1.8	6.2		0.0	0.0	21.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
14: SR-163 SB Ramps/Ulric Street & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	1075	665	490	1735	420	550	75	705	295	10	125
Future Volume (veh/h)	200	1075	665	490	1735	420	550	75	705	295	10	125
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	211	1132	458	516	1826	137	579	79	479	311	11	53
Adj No. of Lanes	2	3	1	2	3	2	2	1	2	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	272	1851	866	588	2317	1565	650	360	998	386	31	150
Arrive On Green	0.08	0.36	0.36	0.17	0.46	0.46	0.19	0.19	0.19	0.11	0.12	0.12
Sat Flow, veh/h	3442	5085	1557	3442	5085	2750	3442	1863	2700	3442	267	1287
Grp Volume(v), veh/h	211	1132	458	516	1826	137	579	79	479	311	0	64
Grp Sat Flow(s),veh/h/ln	1721	1695	1557	1721	1695	1375	1721	1863	1350	1721	0	1554
Q Serve(g_s), s	6.6	20.0	20.4	16.0	33.4	1.3	18.0	3.9	15.0	9.7	0.0	4.2
Cycle Q Clear(g_c), s	6.6	20.0	20.4	16.0	33.4	1.3	18.0	3.9	15.0	9.7	0.0	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.83
Lane Grp Cap(c), veh/h	272	1851	866	588	2317	1565	650	360	998	386	0	181
V/C Ratio(X)	0.77	0.61	0.53	0.88	0.79	0.09	0.89	0.22	0.48	0.81	0.00	0.35
Avail Cap(c_a), veh/h	314	2088	938	675	2645	1743	722	629	1387	597	0	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.5	28.5	15.5	44.3	25.3	4.0	43.4	37.2	26.9	47.5	0.0	44.6
Incr Delay (d2), s/veh	10.1	0.5	0.5	11.5	1.5	0.0	12.4	0.1	0.1	4.6	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	9.4	8.9	8.5	15.9	0.6	9.6	2.0	5.6	4.8	0.0	1.8
LnGrp Delay(d),s/veh	59.6	29.0	16.1	55.8	26.8	4.0	55.8	37.3	27.1	52.1	0.0	45.0
LnGrp LOS	E	C	B	E	C	A	E	D	C	D		D
Approach Vol, veh/h		1801			2479			1137			375	
Approach Delay, s/veh		29.3			31.6			42.4			50.9	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.2	44.4	24.7	17.3	13.2	54.4	16.3	25.7
Change Period (Y+Rc), s	4.5	4.5	4.0	4.5	4.5	* 4.5	4.0	4.5
Max Green Setting (Gmax), s	21.5	45.0	23.0	33.0	10.0	* 57	19.0	37.0
Max Q Clear Time (g_c+I1), s	18.0	22.4	20.0	6.2	8.6	35.4	11.7	17.0
Green Ext Time (p_c), s	0.7	10.6	0.7	0.2	0.1	14.5	0.6	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.2
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
16: Frazee Road & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	555	1175	595	120	1590	125	395	110	115	125	190	490
Future Volume (veh/h)	555	1175	595	120	1590	125	395	110	115	125	190	490
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	578	1224	334	125	1656	86	411	115	99	130	198	291
Adj No. of Lanes	2	4	2	2	3	1	2	2	0	2	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	632	3241	1381	179	1902	583	479	421	328	171	253	362
Arrive On Green	0.18	0.51	0.51	0.05	0.37	0.37	0.14	0.23	0.23	0.05	0.14	0.14
Sat Flow, veh/h	3442	6408	2732	3442	5085	1558	3442	1870	1458	3442	1863	2664
Grp Volume(v), veh/h	578	1224	334	125	1656	86	411	108	106	130	198	291
Grp Sat Flow(s),veh/h/ln	1721	1602	1366	1721	1695	1558	1721	1770	1558	1721	1863	1332
Q Serve(g_s), s	19.9	14.1	8.3	4.3	36.5	4.4	14.1	6.1	6.8	4.5	12.4	12.8
Cycle Q Clear(g_c), s	19.9	14.1	8.3	4.3	36.5	4.4	14.1	6.1	6.8	4.5	12.4	12.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.94	1.00		1.00
Lane Grp Cap(c), veh/h	632	3241	1381	179	1902	583	479	398	351	171	253	362
V/C Ratio(X)	0.91	0.38	0.24	0.70	0.87	0.15	0.86	0.27	0.30	0.76	0.78	0.80
Avail Cap(c_a), veh/h	673	3241	1381	285	1947	597	719	719	633	171	460	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	18.2	16.8	56.3	35.1	25.0	50.8	38.6	38.9	56.6	50.4	50.6
Incr Delay (d2), s/veh	15.9	0.1	0.1	1.8	4.8	0.2	5.1	0.1	0.2	16.6	3.3	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	6.2	3.2	2.1	17.9	1.9	7.0	3.0	3.0	2.5	6.6	4.8
LnGrp Delay(d),s/veh	64.3	18.3	16.9	58.1	39.8	25.2	55.9	38.7	39.0	73.2	53.7	53.2
LnGrp LOS	E	B	B	E	D	C	E	D	D	E	D	D
Approach Vol, veh/h		2136			1867			625			619	
Approach Delay, s/veh		30.5			40.4			50.1			57.6	
Approach LOS		C			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	67.5	21.2	21.3	26.6	51.6	10.4	32.1
Change Period (Y+Rc), s	4.4	* 6.5	4.4	4.9	4.4	6.5	4.4	4.9
Max Green Setting (Gmax), s	10.0	* 61	25.2	29.8	23.6	46.2	6.0	49.0
Max Q Clear Time (g_c+I1), s	6.3	16.1	16.1	14.8	21.9	38.5	6.5	8.8
Green Ext Time (p_c), s	0.1	18.8	0.7	1.6	0.3	6.7	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	39.5
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
22: Fenton Parkway & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1295	590	250	880	30	335	30	390	30	25	70
Future Volume (veh/h)	70	1295	590	250	880	30	335	30	390	30	25	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	71	1308	557	253	889	18	338	30	258	30	25	-50
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	2336	881	259	2550	817	355	400	331	72	246	262
Arrive On Green	0.03	0.46	0.46	0.15	1.00	1.00	0.10	0.21	0.21	0.02	0.13	0.00
Sat Flow, veh/h	3442	5085	1563	3442	5085	1564	3442	1863	1539	3548	1863	1583
Grp Volume(v), veh/h	71	1308	557	253	889	18	338	30	258	30	25	-50
Grp Sat Flow(s),veh/h/ln	1721	1695	1563	1721	1695	1564	1721	1863	1539	1774	1863	1583
Q Serve(g_s), s	2.6	24.3	31.5	9.5	0.0	0.0	12.7	1.7	20.6	1.1	1.5	0.0
Cycle Q Clear(g_c), s	2.6	24.3	31.5	9.5	0.0	0.0	12.7	1.7	20.6	1.1	1.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	2336	881	259	2550	817	355	400	331	72	246	262
V/C Ratio(X)	0.62	0.56	0.63	0.98	0.35	0.02	0.95	0.07	0.78	0.42	0.10	-0.19
Avail Cap(c_a), veh/h	302	2336	881	259	2550	817	355	665	549	246	602	564
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	0.83	0.83	0.83	1.00	1.00	0.00
Uniform Delay (d), s/veh	62.0	25.6	19.3	55.1	0.0	0.0	58.0	40.7	48.1	62.9	49.6	0.0
Incr Delay (d2), s/veh	2.0	1.0	3.4	46.5	0.3	0.0	31.4	0.2	8.4	1.4	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	11.6	14.3	6.2	0.1	0.0	7.6	0.9	9.5	0.5	0.8	0.0
LnGrp Delay(d),s/veh	64.1	26.6	22.8	101.6	0.3	0.0	89.4	40.9	56.5	64.3	50.4	0.0
LnGrp LOS	E	C	C	F	A	A	F	D	E	E	D	
Approach Vol, veh/h		1936			1160			626			5	
Approach Delay, s/veh		26.9			22.4			73.5			638.1	
Approach LOS		C			C			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	70.9	17.8	27.1	8.7	76.4	7.0	37.8
Change Period (Y+Rc), s	4.4	11.2	4.4	* 9.9	4.4	11.2	4.4	* 9.9
Max Green Setting (Gmax), s	9.8	34.9	13.4	* 42	11.4	33.3	9.0	* 46
Max Q Clear Time (g_c+I1), s	11.5	33.5	14.7	3.5	4.6	2.0	3.1	22.6
Green Ext Time (p_c), s	0.0	1.3	0.0	0.3	0.0	15.2	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	34.1
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
23: Northside Drive & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	1125	465	690	825	65	235	30	620	105	20	100
Future Volume (veh/h)	125	1125	465	690	825	65	235	30	620	105	20	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	129	1160	386	711	851	27	242	31	541	108	21	-21
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	1666	509	651	2366	799	296	530	741	156	455	386
Arrive On Green	0.10	0.66	0.66	0.19	0.47	0.47	0.09	0.28	0.28	0.05	0.24	0.00
Sat Flow, veh/h	3442	5085	1554	3442	5085	1563	3442	1863	1550	3442	1863	1583
Grp Volume(v), veh/h	129	1160	386	711	851	27	242	31	541	108	21	-21
Grp Sat Flow(s),veh/h/ln	1721	1695	1554	1721	1695	1563	1721	1863	1550	1721	1863	1583
Q Serve(g_s), s	4.7	18.8	22.1	24.6	14.0	1.1	9.0	1.6	36.7	4.0	1.1	0.0
Cycle Q Clear(g_c), s	4.7	18.8	22.1	24.6	14.0	1.1	9.0	1.6	36.7	4.0	1.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	178	1666	509	651	2366	799	296	530	741	156	455	386
V/C Ratio(X)	0.73	0.70	0.76	1.09	0.36	0.03	0.82	0.06	0.73	0.69	0.05	-0.05
Avail Cap(c_a), veh/h	254	1666	509	651	2366	799	402	530	741	175	455	386
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	1.00	1.00	1.00	0.78	0.78	0.78	1.00	1.00	0.00
Uniform Delay (d), s/veh	57.4	18.3	18.9	52.7	22.3	15.8	58.4	33.8	27.6	61.1	37.6	0.0
Incr Delay (d2), s/veh	1.7	1.7	7.1	62.9	0.4	0.1	5.3	0.1	4.0	7.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	8.8	10.3	17.4	6.6	0.5	4.5	0.8	16.5	2.1	0.6	0.0
LnGrp Delay(d),s/veh	59.1	20.0	26.0	115.6	22.7	15.9	63.7	33.9	31.6	68.4	37.8	0.0
LnGrp LOS	E	B	C	F	C	B	E	C	C	E	D	
Approach Vol, veh/h		1675			1589			814			108	
Approach Delay, s/veh		24.4			64.2			41.2			75.8	
Approach LOS		C			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	48.8	15.6	36.6	11.1	66.7	10.3	41.9
Change Period (Y+Rc), s	4.4	* 6.2	4.4	4.9	4.4	6.2	4.4	4.9
Max Green Setting (Gmax), s	24.6	* 42	15.2	28.4	9.6	56.9	6.6	37.0
Max Q Clear Time (g_c+I1), s	26.6	24.1	11.0	3.1	6.7	16.0	6.0	38.7
Green Ext Time (p_c), s	0.0	14.0	0.2	0.2	0.0	13.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.1
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
36: Northside Drive & Rio San Diego Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	580	20	20	15	25	125	20	180	30	140	295	395
Future Volume (veh/h)	580	20	20	15	25	125	20	180	30	140	295	395
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	646	0	0	16	26	116	21	189	27	147	311	332
Adj No. of Lanes	2	1	0	0	1	1	1	2	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	894	470	0	111	181	244	35	660	279	186	506	819
Arrive On Green	0.25	0.00	0.00	0.16	0.16	0.16	0.02	0.19	0.19	0.10	0.27	0.27
Sat Flow, veh/h	3548	1863	0	696	1132	1524	1774	3539	1498	1774	1863	1548
Grp Volume(v), veh/h	646	0	0	42	0	116	21	189	27	147	311	332
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1828	0	1524	1774	1770	1498	1774	1863	1548
Q Serve(g_s), s	10.7	0.0	0.0	1.3	0.0	4.5	0.8	3.0	1.0	5.2	9.4	8.4
Cycle Q Clear(g_c), s	10.7	0.0	0.0	1.3	0.0	4.5	0.8	3.0	1.0	5.2	9.4	8.4
Prop In Lane	1.00		0.00	0.38		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	894	470	0	292	0	244	35	660	279	186	506	819
V/C Ratio(X)	0.72	0.00	0.00	0.14	0.00	0.48	0.61	0.29	0.10	0.79	0.62	0.41
Avail Cap(c_a), veh/h	1550	814	0	853	0	711	110	996	422	268	689	972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	0.0	0.0	23.2	0.0	24.6	31.3	22.5	21.7	28.1	20.5	9.3
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.1	0.0	0.5	6.3	0.1	0.1	6.0	3.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	0.0	0.6	0.0	1.9	0.4	1.5	0.4	2.8	5.3	5.6
LnGrp Delay(d),s/veh	22.4	0.0	0.0	23.3	0.0	25.1	37.6	22.6	21.7	34.1	23.6	10.1
LnGrp LOS	C			C		C	D	C	C	C	C	B
Approach Vol, veh/h		646			158			237			790	
Approach Delay, s/veh		22.4			24.6			23.8			19.9	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.1	16.9		21.1	5.7	22.4		15.2
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	9.7	18.1		28.1	4.0	23.8		30.0
Max Q Clear Time (g_c+I1), s	7.2	5.0		12.7	2.8	11.4		6.5
Green Ext Time (p_c), s	0.0	0.7		1.2	0.0	5.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.7
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
37: Rancho Mission Road & San Diego Mission Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	-79	0	0	-126	0	0	-51	0	0	-78
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9999	9999	419	9999	9999	9999	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	3632	0	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	0	-79	-79	0	0	-126	0	0	-51	0	0	-78
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2650	2459	2426	2004	48	2650	2459	2398	2758	2326	2534	1536
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	3975	3689	3639	4706	816	2915	2706	2640	2758	2326	2534	1536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS												
Approach Vol, veh/h		-158			-126			-51			-78	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change Period (Y+Rc), s	4.0	10.5	4.0	* 10	4.0	* 11	4.0	* 10
Max Green Setting (Gmax), s	11.0	30.4	18.0	* 27	15.0	* 27	14.0	* 31
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Notes

HCM 2010 Signalized Intersection Summary
38: Mission Center Road & Harzard Center Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	10	400	30	15	15	325	810	50	85	880	95
Future Volume (veh/h)	155	10	400	30	15	15	325	810	50	85	880	95
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.88	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	171	0	274	32	16	11	342	853	42	89	926	79
Adj No. of Lanes	2	0	1	0	1	1	2	2	1	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	805	0	503	46	23	53	342	1178	500	114	1417	121
Arrive On Green	0.23	0.00	0.23	0.04	0.04	0.04	0.10	0.33	0.33	0.06	0.30	0.30
Sat Flow, veh/h	3548	0	1522	1202	601	1392	3442	3539	1502	1774	4761	405
Grp Volume(v), veh/h	171	0	274	48	0	11	342	853	42	89	659	346
Grp Sat Flow(s),veh/h/ln	1774	0	1522	1803	0	1392	1721	1770	1502	1774	1695	1775
Q Serve(g_s), s	3.2	0.0	11.9	2.1	0.0	0.6	8.0	17.1	1.5	4.0	13.6	13.7
Cycle Q Clear(g_c), s	3.2	0.0	11.9	2.1	0.0	0.6	8.0	17.1	1.5	4.0	13.6	13.7
Prop In Lane	1.00		1.00	0.67		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	805	0	503	69	0	53	342	1178	500	114	1009	528
V/C Ratio(X)	0.21	0.00	0.55	0.69	0.00	0.21	1.00	0.72	0.08	0.78	0.65	0.66
Avail Cap(c_a), veh/h	1410	0	762	358	0	277	342	1481	628	132	1128	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	22.3	38.3	0.0	37.5	36.3	23.6	18.4	37.1	24.6	24.7
Incr Delay (d2), s/veh	0.2	0.0	1.2	4.6	0.0	0.7	48.7	2.0	0.1	19.0	1.7	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	5.1	1.1	0.0	0.2	6.1	8.6	0.7	2.6	6.6	7.2
LnGrp Delay(d),s/veh	25.5	0.0	23.5	42.9	0.0	38.2	85.0	25.6	18.6	56.1	26.3	27.9
LnGrp LOS	C		C	D		D	F	C	B	E	C	C
Approach Vol, veh/h		445			59			1237			1094	
Approach Delay, s/veh		24.2			42.0			41.8			29.2	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.2	37.0		27.3	12.0	34.2		7.1
Change Period (Y+Rc), s	4.0	* 10		9.0	4.0	10.2		4.0
Max Green Setting (Gmax), s	6.0	* 34		32.0	8.0	26.8		16.0
Max Q Clear Time (g_c+I1), s	6.0	19.1		13.9	10.0	15.7		4.1
Green Ext Time (p_c), s	0.0	7.7		2.1	0.0	6.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	34.2
HCM 2010 LOS	C

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	300	425	140	330	395	120
Future Volume (veh/h)	300	425	140	330	395	120
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	316	352	147	252	416	126
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	415	794	458	374	474	1101
Arrive On Green	0.23	0.23	0.25	0.25	0.27	0.59
Sat Flow, veh/h	1774	1583	1863	1519	1774	1863
Grp Volume(v), veh/h	316	352	147	252	416	126
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1519	1774	1863
Q Serve(g_s), s	8.5	7.3	3.3	7.7	11.5	1.5
Cycle Q Clear(g_c), s	8.5	7.3	3.3	7.7	11.5	1.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	415	794	458	374	474	1101
V/C Ratio(X)	0.76	0.44	0.32	0.67	0.88	0.11
Avail Cap(c_a), veh/h	621	977	652	531	517	1267
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	8.2	15.9	17.5	18.0	4.6
Incr Delay (d2), s/veh	3.1	0.4	0.4	2.1	14.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	3.3	1.8	3.4	7.5	0.8
LnGrp Delay(d),s/veh	21.4	8.6	16.3	19.7	32.9	4.7
LnGrp LOS	C	A	B	B	C	A
Approach Vol, veh/h	668		399			542
Approach Delay, s/veh	14.7		18.4			26.3
Approach LOS	B		B			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.7	17.1				34.9		16.5
Change Period (Y+Rc), s	4.0	4.5				4.5		4.5
Max Green Setting (Gmax), s	15.0	18.0				35.0		18.0
Max Q Clear Time (g_c+I1), s	13.5	9.7				3.5		10.5
Green Ext Time (p_c), s	0.2	1.1				0.7		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
40: Mission Center Road & Camino De La Reina

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	440	260	370	350	340	230	565	285	390	640	260
Future Volume (veh/h)	280	440	260	370	350	340	230	565	285	390	640	260
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	286	449	194	378	357	276	235	577	220	398	653	173
Adj No. of Lanes	2	2	0	2	2	0	2	3	0	2	3	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	366	598	256	458	523	397	228	832	308	332	1319	395
Arrive On Green	0.11	0.25	0.25	0.13	0.28	0.28	0.07	0.23	0.23	0.10	0.26	0.26
Sat Flow, veh/h	3442	2387	1021	3442	1887	1431	3442	3629	1344	3442	5085	1522
Grp Volume(v), veh/h	286	332	311	378	334	299	235	538	259	398	653	173
Grp Sat Flow(s),veh/h/ln	1721	1770	1637	1721	1770	1548	1721	1695	1583	1721	1695	1522
Q Serve(g_s), s	8.1	17.2	17.5	10.6	16.7	17.2	6.6	14.5	15.0	9.6	10.9	9.4
Cycle Q Clear(g_c), s	8.1	17.2	17.5	10.6	16.7	17.2	6.6	14.5	15.0	9.6	10.9	9.4
Prop In Lane	1.00		0.62	1.00		0.92	1.00		0.85	1.00		1.00
Lane Grp Cap(c), veh/h	366	444	410	458	491	429	228	777	363	332	1319	395
V/C Ratio(X)	0.78	0.75	0.76	0.83	0.68	0.70	1.03	0.69	0.71	1.20	0.50	0.44
Avail Cap(c_a), veh/h	1612	1039	961	837	640	560	228	985	460	332	1641	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	34.4	34.5	42.0	32.0	32.2	46.4	35.1	35.3	44.9	31.3	30.8
Incr Delay (d2), s/veh	1.4	2.7	3.0	1.5	3.4	4.3	67.3	2.3	5.5	114.7	0.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	8.7	8.2	5.1	8.6	7.8	5.2	7.0	7.1	9.8	5.1	4.1
LnGrp Delay(d),s/veh	44.7	37.0	37.5	43.5	35.5	36.5	113.9	37.4	40.8	159.7	31.9	32.3
LnGrp LOS	D	D	D	D	D	D	F	D	D	F	C	C
Approach Vol, veh/h		929			1011			1032			1224	
Approach Delay, s/veh		39.5			38.7			55.7			73.5	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	33.0	17.6	34.8	11.0	36.0	15.0	37.5
Change Period (Y+Rc), s	4.4	10.2	4.4	* 9.9	4.4	* 10	4.4	* 9.9
Max Green Setting (Gmax), s	9.6	28.9	24.2	* 58	6.6	* 32	46.6	* 36
Max Q Clear Time (g_c+I1), s	11.6	17.0	12.6	19.5	8.6	12.9	10.1	19.2
Green Ext Time (p_c), s	0.0	5.8	0.6	4.9	0.0	7.9	0.5	6.2

Intersection Summary	
HCM 2010 Ctrl Delay	53.2
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
41: Camino Del Este & Camino De La Reina

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	525	235	185	425	40	150	130	100	120	285	265
Future Volume (veh/h)	205	525	235	185	425	40	150	130	100	120	285	265
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	0.99		0.98	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	214	547	193	193	443	32	156	135	73	125	297	214
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	254	844	363	233	803	343	307	1075	471	415	1075	465
Arrive On Green	0.14	0.24	0.24	0.13	0.23	0.23	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	3539	1521	1774	3539	1514	878	3539	1552	1153	3539	1531
Grp Volume(v), veh/h	214	547	193	193	443	32	156	135	73	125	297	214
Grp Sat Flow(s),veh/h/ln	1774	1770	1521	1774	1770	1514	878	1770	1552	1153	1770	1531
Q Serve(g_s), s	8.8	10.4	8.3	7.9	8.3	1.2	12.3	2.1	2.6	6.6	4.8	8.5
Cycle Q Clear(g_c), s	8.8	10.4	8.3	7.9	8.3	1.2	17.0	2.1	2.6	8.6	4.8	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	254	844	363	233	803	343	307	1075	471	415	1075	465
V/C Ratio(X)	0.84	0.65	0.53	0.83	0.55	0.09	0.51	0.13	0.15	0.30	0.28	0.46
Avail Cap(c_a), veh/h	275	1368	588	304	1420	607	440	1610	706	589	1610	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	25.6	24.8	31.6	25.5	22.8	26.3	18.8	19.0	22.0	19.8	21.1
Incr Delay (d2), s/veh	18.0	0.9	1.3	10.7	0.6	0.1	0.9	0.0	0.1	0.3	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	5.2	3.6	4.6	4.1	0.5	3.0	1.0	1.1	2.1	2.3	3.6
LnGrp Delay(d),s/veh	49.2	26.5	26.1	42.4	26.1	22.9	27.1	18.9	19.1	22.2	19.9	21.5
LnGrp LOS	D	C	C	D	C	C	C	B	B	C	B	C
Approach Vol, veh/h		954			668			364			636	
Approach Delay, s/veh		31.5			30.7			22.5			20.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.2	27.9		32.6	15.1	27.1		32.6
Change Period (Y+Rc), s	4.4	* 10		* 9.9	4.4	* 10		* 9.9
Max Green Setting (Gmax), s	12.8	* 29		* 34	11.6	* 30		* 34
Max Q Clear Time (g_c+I1), s	9.9	12.4		10.6	10.8	10.3		19.0
Green Ext Time (p_c), s	0.1	4.2		2.5	0.0	2.9		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
48: Hotel Circle North/Camino De La Reina & Fashion Valley Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	405	450	0	490
Future Volume (veh/h)	0	0	405	450	0	490
Number			2	12	7	14
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.95	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	1863	1863
Adj Flow Rate, veh/h			426	358	0	421
Adj No. of Lanes			2	1	1	2
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1110	470	0	0
Arrive On Green			0.31	0.31	0.00	0.00
Sat Flow, veh/h			3632	1500	0	
Grp Volume(v), veh/h			426	358	0.0	
Grp Sat Flow(s),veh/h/ln			1770	1500		
Q Serve(g_s), s			6.1	14.0		
Cycle Q Clear(g_c), s			6.1	14.0		
Prop In Lane				1.00		
Lane Grp Cap(c), veh/h			1110	470		
V/C Ratio(X)			0.38	0.76		
Avail Cap(c_a), veh/h			1530	649		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			17.4	20.1		
Incr Delay (d2), s/veh			0.3	4.3		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			3.0	6.3		
LnGrp Delay(d),s/veh			17.7	24.5		
LnGrp LOS			B	C		
Approach Vol, veh/h			784			
Approach Delay, s/veh			20.8			
Approach LOS			C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		30.3						
Change Period (Y+Rc), s		* 9.9						
Max Green Setting (Gmax), s		* 28						
Max Q Clear Time (g_c+I1), s		16.0						
Green Ext Time (p_c), s		4.4						

Intersection Summary	
HCM 2010 Ctrl Delay	20.8
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
49: Mission Center Road & Camino Del Rio N

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	325	145	335	325	600	220	465	515	315	690	85
Future Volume (veh/h)	15	325	145	335	325	600	220	465	515	315	690	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	15	335	0	345	335	413	227	479	0	325	711	67
Adj No. of Lanes	1	2	1	2	1	1	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	689	308	442	575	479	311	842	377	418	953	410
Arrive On Green	0.01	0.19	0.00	0.13	0.31	0.31	0.09	0.24	0.00	0.12	0.27	0.27
Sat Flow, veh/h	1774	3539	1583	3442	1863	1553	3442	3539	1583	3442	3539	1523
Grp Volume(v), veh/h	15	335	0	345	335	413	227	479	0	325	711	67
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1863	1553	1721	1770	1583	1721	1770	1523
Q Serve(g_s), s	0.6	6.4	0.0	7.3	11.5	18.9	4.9	9.0	0.0	6.9	13.9	2.5
Cycle Q Clear(g_c), s	0.6	6.4	0.0	7.3	11.5	18.9	4.9	9.0	0.0	6.9	13.9	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	25	689	308	442	575	479	311	842	377	418	953	410
V/C Ratio(X)	0.59	0.49	0.00	0.78	0.58	0.86	0.73	0.57	0.00	0.78	0.75	0.16
Avail Cap(c_a), veh/h	94	1184	530	687	763	636	346	922	412	514	1095	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	27.1	0.0	31.9	22.0	24.6	33.5	25.4	0.0	32.2	25.3	21.1
Incr Delay (d2), s/veh	7.9	0.5	0.0	1.2	0.3	7.4	5.5	0.3	0.0	6.0	3.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.2	0.0	3.6	5.9	9.0	2.5	4.4	0.0	3.6	7.1	1.1
LnGrp Delay(d),s/veh	45.0	27.6	0.0	33.1	22.4	32.0	39.0	25.7	0.0	38.2	28.2	21.4
LnGrp LOS	D	C		C	C	C	D	C		D	C	C
Approach Vol, veh/h		350			1093			706			1103	
Approach Delay, s/veh		28.4			29.4			30.0			30.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	22.9	14.1	25.0	11.2	25.3	5.5	33.7
Change Period (Y+Rc), s	4.4	4.9	4.4	* 10	4.4	4.9	4.4	10.3
Max Green Setting (Gmax), s	11.3	19.7	15.1	* 25	7.6	23.4	4.0	31.0
Max Q Clear Time (g_c+I1), s	8.9	11.0	9.3	8.4	6.9	15.9	2.6	20.9
Green Ext Time (p_c), s	0.3	1.3	0.4	2.0	0.0	3.8	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.9
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
50: I-8 WB Ramps/Mission Valley Mall Driveway & Camino Del Rio N

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	430	725	330	465	0	795	255	275	0	0	0
Future Volume (veh/h)	0	430	725	330	465	0	795	255	275	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	0	453	0	347	489	0	552	666	0			
Adj No. of Lanes	0	2	1	1	2	0	1	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2			
Cap, veh/h	0	692	310	382	1645	0	704	739	629			
Arrive On Green	0.00	0.20	0.00	0.22	0.46	0.00	0.40	0.40	0.00			
Sat Flow, veh/h	0	3632	1583	1774	3632	0	1774	1863	1583			
Grp Volume(v), veh/h	0	453	0	347	489	0	552	666	0			
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0	1774	1863	1583			
Q Serve(g_s), s	0.0	10.3	0.0	16.6	7.5	0.0	23.7	29.2	0.0			
Cycle Q Clear(g_c), s	0.0	10.3	0.0	16.6	7.5	0.0	23.7	29.2	0.0			
Prop In Lane	0.00		1.00	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	692	310	382	1645	0	704	739	629			
V/C Ratio(X)	0.00	0.65	0.00	0.91	0.30	0.00	0.78	0.90	0.00			
Avail Cap(c_a), veh/h	0	692	310	414	1710	0	735	772	656			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00			
Uniform Delay (d), s/veh	0.0	32.2	0.0	33.3	14.4	0.0	22.9	24.6	0.0			
Incr Delay (d2), s/veh	0.0	4.8	0.0	21.6	0.1	0.0	5.7	13.7	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	5.5	0.0	10.4	3.6	0.0	12.6	17.8	0.0			
LnGrp Delay(d),s/veh	0.0	37.0	0.0	54.8	14.5	0.0	28.7	38.3	0.0			
LnGrp LOS		D		D	B		C	D				
Approach Vol, veh/h		453			836			1218				
Approach Delay, s/veh		37.0			31.3			33.9				
Approach LOS		D			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	23.4	23.0		40.5		46.4		
Change Period (Y+Rc), s	* 4.7	6.0		6.0		6.0		
Max Green Setting (Gmax), s	* 20	17.0		36.0		42.0		
Max Q Clear Time (g_c+I1), s	18.6	12.3		31.2		9.5		
Green Ext Time (p_c), s	0.1	1.3		3.3		3.8		

Intersection Summary			
HCM 2010 Ctrl Delay		33.6	
HCM 2010 LOS		C	

Notes

HCM 2010 Signalized Intersection Summary
51: Camino Del Rio N & Camino Del Este



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	240	295	325	195	425	185
Future Volume (veh/h)	240	295	325	195	425	185
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	247	304	335	160	438	150
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	285	1145	1428	623	481	429
Arrive On Green	0.16	0.61	0.40	0.40	0.27	0.27
Sat Flow, veh/h	1774	1863	3632	1544	1774	1583
Grp Volume(v), veh/h	247	304	335	160	438	150
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1544	1774	1583
Q Serve(g_s), s	10.7	5.9	4.9	5.4	18.9	6.0
Cycle Q Clear(g_c), s	10.7	5.9	4.9	5.4	18.9	6.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	285	1145	1428	623	481	429
V/C Ratio(X)	0.87	0.27	0.23	0.26	0.91	0.35
Avail Cap(c_a), veh/h	292	1145	1428	623	506	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	7.0	15.5	15.7	27.8	23.1
Incr Delay (d2), s/veh	21.6	0.6	0.4	1.0	20.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	3.2	2.4	2.5	12.0	5.7
LnGrp Delay(d),s/veh	53.9	7.6	15.9	16.7	48.3	23.8
LnGrp LOS	D	A	B	B	D	C
Approach Vol, veh/h		551	495		588	
Approach Delay, s/veh		28.3	16.1		42.0	
Approach LOS		C	B		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		53.0		25.9	16.7	36.3		
Change Period (Y+Rc), s		4.5		4.5	4.0	4.5		
Max Green Setting (Gmax), s		48.5		22.5	13.0	31.5		
Max Q Clear Time (g_c+I1), s		7.9		20.9	12.7	7.4		
Green Ext Time (p_c), s		1.7		0.5	0.0	2.3		

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
58: Mission Center Road & I-8 EB Ramp

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	735	0	270	0	0	0	0	465	220	605	565	0
Future Volume (veh/h)	735	0	270	0	0	0	0	465	220	605	565	0
Number	5	2	12				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	774	0	0				0	489	0	688	524	0
Adj No. of Lanes	2	1	0				0	2	1	2	1	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1233	667	0				0	393	176	1205	633	0
Arrive On Green	0.36	0.00	0.00				0.00	0.11	0.00	0.34	0.34	0.00
Sat Flow, veh/h	3442	1863	0				0	3632	1583	3548	1863	0
Grp Volume(v), veh/h	774	0	0				0	489	0	688	524	0
Grp Sat Flow(s),veh/h/ln	1721	1863	0				0	1770	1583	1774	1863	0
Q Serve(g_s), s	16.8	0.0	0.0				0.0	10.0	0.0	14.3	23.3	0.0
Cycle Q Clear(g_c), s	16.8	0.0	0.0				0.0	10.0	0.0	14.3	23.3	0.0
Prop In Lane	1.00		0.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1233	667	0				0	393	176	1205	633	0
V/C Ratio(X)	0.63	0.00	0.00				0.00	1.24	0.00	0.57	0.83	0.00
Avail Cap(c_a), veh/h	1233	667	0				0	393	176	1612	847	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.87	0.00	0.74	0.74	0.00
Uniform Delay (d), s/veh	23.9	0.0	0.0				0.0	40.0	0.0	24.3	27.3	0.0
Incr Delay (d2), s/veh	2.4	0.0	0.0				0.0	127.0	0.0	0.1	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	0.0	0.0				0.0	11.8	0.0	7.0	12.4	0.0
LnGrp Delay(d),s/veh	26.3	0.0	0.0				0.0	167.0	0.0	24.5	30.2	0.0
LnGrp LOS	C							F		C	C	
Approach Vol, veh/h		774						489			1212	
Approach Delay, s/veh		26.3						167.0			27.0	
Approach LOS		C						F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		38.3		15.0				36.7
Change Period (Y+Rc), s		6.1		5.0				6.1
Max Green Setting (Gmax), s		21.9		10.0				40.9
Max Q Clear Time (g_c+I1), s		18.8		12.0				25.3
Green Ext Time (p_c), s		0.7		0.0				3.1

Intersection Summary	
HCM 2010 Ctrl Delay	54.4
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
59: Mission Center Road & Camino Del Rio South

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	375	155	10	15	80	280	5	30	10	380	50	405
Future Volume (veh/h)	375	155	10	15	80	280	5	30	10	380	50	405
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.94	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	395	163	0	16	84	263	5	32	6	438	0	405
Adj No. of Lanes	2	1	0	0	2	1	0	1	1	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	474	249	0	56	625	755	23	148	137	1059	0	446
Arrive On Green	0.13	0.13	0.00	0.19	0.19	0.19	0.09	0.09	0.09	0.30	0.00	0.30
Sat Flow, veh/h	3548	1863	0	296	3322	1499	250	1600	1481	3548	0	1496
Grp Volume(v), veh/h	395	163	0	100	0	263	37	0	6	438	0	405
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1848	1770	1499	1850	0	1481	1774	0	1496
Q Serve(g_s), s	9.2	7.1	0.0	3.9	0.0	9.3	1.6	0.0	0.3	8.4	0.0	22.1
Cycle Q Clear(g_c), s	9.2	7.1	0.0	3.9	0.0	9.3	1.6	0.0	0.3	8.4	0.0	22.1
Prop In Lane	1.00		0.00	0.16		1.00	0.14		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	474	249	0	348	333	755	171	0	137	1059	0	446
V/C Ratio(X)	0.83	0.65	0.00	0.29	0.00	0.35	0.22	0.00	0.04	0.41	0.00	0.91
Avail Cap(c_a), veh/h	497	261	0	348	333	755	171	0	137	1156	0	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.71	0.00	0.71
Uniform Delay (d), s/veh	35.9	35.0	0.0	29.6	0.0	13.6	35.7	0.0	35.1	23.9	0.0	28.7
Incr Delay (d2), s/veh	10.4	4.1	0.0	0.2	0.0	0.1	0.6	0.0	0.1	0.8	0.0	19.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	3.9	0.0	2.0	0.0	6.1	0.8	0.0	0.1	4.2	0.0	11.5
LnGrp Delay(d),s/veh	46.3	39.1	0.0	29.8	0.0	13.7	36.3	0.0	35.3	24.7	0.0	47.9
LnGrp LOS	D	D		C		B	D		D	C		D
Approach Vol, veh/h		558			363			43			843	
Approach Delay, s/veh		44.2			18.1			36.2			35.8	
Approach LOS		D			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		14.0		22.1		31.5		17.5
Change Period (Y+Rc), s		6.1		6.1		6.1		6.1
Max Green Setting (Gmax), s		5.0		16.0		27.7		11.9
Max Q Clear Time (g_c+I1), s		3.6		11.3		24.1		11.2
Green Ext Time (p_c), s		0.0		0.4		0.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
60: Qualcomm Way & I-8 EB Ramp



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	520	0	1220	965	500
Future Volume (veh/h)	0	520	0	1220	965	500
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	0	342	0	1245	985	234
Adj No. of Lanes	1	2	0	2	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	331	520	0	1798	1798	772
Arrive On Green	0.00	0.19	0.00	0.51	0.51	0.51
Sat Flow, veh/h	1774	2787	0	3725	3632	1520
Grp Volume(v), veh/h	0	342	0	1245	985	234
Grp Sat Flow(s),veh/h/ln	1774	1393	0	1770	1770	1520
Q Serve(g_s), s	0.0	4.0	0.0	9.3	6.6	3.1
Cycle Q Clear(g_c), s	0.0	4.0	0.0	9.3	6.6	3.1
Prop In Lane	1.00	1.00	0.00			1.00
Lane Grp Cap(c), veh/h	331	520	0	1798	1798	772
V/C Ratio(X)	0.00	0.66	0.00	0.69	0.55	0.30
Avail Cap(c_a), veh/h	2172	3412	0	4782	4782	2054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	13.1	0.0	6.5	5.8	5.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.6	0.0	4.4	3.2	1.3
LnGrp Delay(d),s/veh	0.0	13.6	0.0	6.7	5.9	5.0
LnGrp LOS		B		A	A	A
Approach Vol, veh/h	342			1245	1219	
Approach Delay, s/veh	13.6			6.7	5.8	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		22.7		12.0		22.7		
Change Period (Y+Rc), s		5.1		5.5		5.1		
Max Green Setting (Gmax), s		46.9		42.5		46.9		
Max Q Clear Time (g_c+I1), s		11.3		6.0		8.6		
Green Ext Time (p_c), s		6.4		0.8		3.4		

Intersection Summary	
HCM 2010 Ctrl Delay	7.1
HCM 2010 LOS	A

Notes

HCM 2010 Signalized Intersection Summary
61: Texas Street/Qualcomm Way & Camino Del Rio South

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	105	100	110	70	455	85	910	155	410	745	280
Future Volume (veh/h)	195	105	100	110	70	455	85	910	155	410	745	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.94	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	205	111	52	116	74	142	89	958	121	432	784	274
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	270	284	328	213	224	528	112	1030	130	392	1720	738
Arrive On Green	0.15	0.15	0.15	0.12	0.12	0.12	0.06	0.33	0.33	0.22	0.49	0.49
Sat Flow, veh/h	1774	1863	1501	1774	1863	1484	1774	3141	397	1774	3539	1519
Grp Volume(v), veh/h	205	111	52	116	74	142	89	540	539	432	784	274
Grp Sat Flow(s),veh/h/ln	1774	1863	1501	1774	1863	1484	1774	1770	1768	1774	1770	1519
Q Serve(g_s), s	13.3	6.5	3.4	7.4	4.4	8.4	6.0	35.5	35.5	26.6	17.6	13.6
Cycle Q Clear(g_c), s	13.3	6.5	3.4	7.4	4.4	8.4	6.0	35.5	35.5	26.6	17.6	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	270	284	328	213	224	528	112	580	580	392	1720	738
V/C Ratio(X)	0.76	0.39	0.16	0.54	0.33	0.27	0.80	0.93	0.93	1.10	0.46	0.37
Avail Cap(c_a), veh/h	398	418	437	442	464	720	218	587	586	392	1720	738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	46.0	38.4	49.8	48.5	28.9	55.6	39.1	39.1	46.9	20.4	19.4
Incr Delay (d2), s/veh	4.8	0.9	0.2	0.8	0.3	0.1	4.8	22.5	22.6	75.8	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	3.4	1.4	3.7	2.3	3.5	3.1	20.9	20.9	21.2	8.7	5.8
LnGrp Delay(d),s/veh	53.7	46.9	38.6	50.6	48.8	29.0	60.4	61.6	61.7	122.7	20.7	19.8
LnGrp LOS	D	D	D	D	D	C	E	E	E	F	C	B
Approach Vol, veh/h		368			332			1168			1490	
Approach Delay, s/veh		49.5			41.0			61.5			50.1	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	31.0	46.5		23.2	12.0	65.5		19.7
Change Period (Y+Rc), s	4.4	7.0		4.9	4.4	* 7		5.2
Max Green Setting (Gmax), s	26.6	39.9		27.0	14.8	* 54		30.0
Max Q Clear Time (g_c+I1), s	28.6	37.5		15.3	8.0	19.6		10.4
Green Ext Time (p_c), s	0.0	2.0		1.1	0.0	9.2		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	53.1
HCM 2010 LOS	D

Notes

PM Peak Hour

HCM 2010 Signalized Intersection Summary
1: I-5 SB Ramps & Seaworld Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1140	160	290	580	0	0	0	0	330	0	1320
Future Volume (veh/h)	0	1140	160	290	580	0	0	0	0	330	0	1320
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	0	1863
Adj Flow Rate, veh/h	0	1188	167	302	604	0				344	0	88
Adj No. of Lanes	0	2	1	2	2	0				1	0	1
Peak Hour Factor	0.95	0.96	0.96	0.96	0.96	0.95				0.96	0.95	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	1323	559	930	2456	0				372	0	332
Arrive On Green	0.00	0.37	0.37	0.27	0.69	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	3632	1495	3442	3632	0				1774	0	1583
Grp Volume(v), veh/h	0	1188	167	302	604	0				344	0	88
Grp Sat Flow(s),veh/h/ln	0	1770	1495	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	34.8	8.7	7.7	6.9	0.0				20.9	0.0	5.1
Cycle Q Clear(g_c), s	0.0	34.8	8.7	7.7	6.9	0.0				20.9	0.0	5.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1323	559	930	2456	0				372	0	332
V/C Ratio(X)	0.00	0.90	0.30	0.32	0.25	0.00				0.93	0.00	0.27
Avail Cap(c_a), veh/h	0	1528	646	930	2456	0				514	0	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	32.5	24.3	32.1	6.2	0.0				42.6	0.0	36.4
Incr Delay (d2), s/veh	0.0	9.8	1.4	0.0	0.0	0.0				15.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	18.8	3.8	3.7	3.4	0.0				11.9	0.0	2.3
LnGrp Delay(d),s/veh	0.0	42.3	25.6	32.1	6.2	0.0				58.5	0.0	36.5
LnGrp LOS		D	C	C	A					E		D
Approach Vol, veh/h		1355			906						432	
Approach Delay, s/veh		40.3			14.9						54.0	
Approach LOS		D			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	35.2	46.6		28.2		81.8		
Change Period (Y+Rc), s	5.5	* 5.5		5.1		5.5		
Max Green Setting (Gmax), s	15.3	* 48		31.9		67.5		
Max Q Clear Time (g_c+I1), s	9.7	36.8		22.9		8.9		
Green Ext Time (p_c), s	0.3	4.3		0.1		2.5		

Intersection Summary	
HCM 2010 Ctrl Delay	33.9
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
2: I-5 NB Ramps & Seaworld Drive/Tecolote Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	810	660	0	0	550	530	320	20	620	0	0	0
Future Volume (veh/h)	810	660	0	0	550	530	320	20	620	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	844	688	0	0	573	292	333	21	438			
Adj No. of Lanes	2	2	0	0	2	0	0	1	1			
Peak Hour Factor	0.96	0.96	0.95	0.95	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	875	2164	0	0	714	363	495	31	459			
Arrive On Green	0.25	0.61	0.00	0.00	0.32	0.32	0.30	0.30	0.30			
Sat Flow, veh/h	3442	3632	0	0	2338	1142	1674	106	1551			
Grp Volume(v), veh/h	844	688	0	0	452	413	354	0	438			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1770	1618	1779	0	1551			
Q Serve(g_s), s	29.1	11.3	0.0	0.0	28.0	28.1	21.0	0.0	33.2			
Cycle Q Clear(g_c), s	29.1	11.3	0.0	0.0	28.0	28.1	21.0	0.0	33.2			
Prop In Lane	1.00		0.00	0.00		0.71	0.94		1.00			
Lane Grp Cap(c), veh/h	875	2164	0	0	563	515	527	0	459			
V/C Ratio(X)	0.96	0.32	0.00	0.00	0.80	0.80	0.67	0.00	0.95			
Avail Cap(c_a), veh/h	875	2164	0	0	563	515	550	0	480			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.65	0.65	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.2	11.2	0.0	0.0	37.5	37.5	37.1	0.0	41.4			
Incr Delay (d2), s/veh	16.7	0.3	0.0	0.0	11.5	12.5	2.4	0.0	28.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	15.9	5.5	0.0	0.0	15.5	14.3	10.7	0.0	17.9			
LnGrp Delay(d),s/veh	60.9	11.5	0.0	0.0	48.9	50.0	39.5	0.0	70.0			
LnGrp LOS	E	B			D	D	D		E			
Approach Vol, veh/h		1532			865			792				
Approach Delay, s/veh		38.7			49.4			56.4				
Approach LOS		D			D			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		79.4		40.6	35.2	44.2		
Change Period (Y+Rc), s		6.0		5.1	* 4.7	6.0		
Max Green Setting (Gmax), s		71.8		37.1	* 31	36.6		
Max Q Clear Time (g_c+I1), s		13.3		35.2	31.1	30.1		
Green Ext Time (p_c), s		2.9		0.3	0.0	2.0		

Intersection Summary	
HCM 2010 Ctrl Delay	46.0
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
3: I-805 SB Ramps & Phyllis Place

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1090	350	570	690	0	0	0	0	370	10	920
Future Volume (veh/h)	0	1090	350	570	690	0	0	0	0	370	10	920
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1900
Adj Flow Rate, veh/h	0	1147	157	600	726	0				389	11	547
Adj No. of Lanes	0	2	1	2	1	0				2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1149	505	448	933	0				1338	12	596
Arrive On Green	0.00	0.32	0.32	0.13	0.50	0.00				0.39	0.39	0.39
Sat Flow, veh/h	0	3632	1554	3442	1863	0				3442	31	1533
Grp Volume(v), veh/h	0	1147	157	600	726	0				389	0	558
Grp Sat Flow(s),veh/h/ln	0	1770	1554	1721	1863	0				1721	0	1564
Q Serve(g_s), s	0.0	33.1	7.8	13.3	32.6	0.0				8.0	0.0	34.7
Cycle Q Clear(g_c), s	0.0	33.1	7.8	13.3	32.6	0.0				8.0	0.0	34.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.98
Lane Grp Cap(c), veh/h	0	1149	505	448	933	0				1338	0	608
V/C Ratio(X)	0.00	1.00	0.31	1.34	0.78	0.00				0.29	0.00	0.92
Avail Cap(c_a), veh/h	0	1149	505	448	933	0				1935	0	879
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	34.5	25.9	44.5	20.9	0.0				21.5	0.0	29.7
Incr Delay (d2), s/veh	0.0	26.1	0.1	167.6	3.9	0.0				0.0	0.0	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	20.2	3.3	16.7	17.7	0.0				3.8	0.0	16.4
LnGrp Delay(d),s/veh	0.0	60.6	26.1	212.1	24.7	0.0				21.6	0.0	38.5
LnGrp LOS		E	C	F	C					C		D
Approach Vol, veh/h		1304			1326						947	
Approach Delay, s/veh		56.4			109.5						31.5	
Approach LOS		E			F						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.0	39.0		45.3		57.0		
Change Period (Y+Rc), s	* 4.7	5.8		5.5		5.8		
Max Green Setting (Gmax), s	* 13	33.2		57.5		51.2		
Max Q Clear Time (g_c+I1), s	15.3	35.1		36.7		34.6		
Green Ext Time (p_c), s	0.0	0.0		3.1		3.0		

Intersection Summary	
HCM 2010 Ctrl Delay	69.5
HCM 2010 LOS	E

Notes

HCM 2010 Signalized Intersection Summary
4: I-805 NB Ramps & Phyllis Place

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1030	430	0	0	720	440	540	10	520	0	0	0
Future Volume (veh/h)	1030	430	0	0	720	440	540	10	520	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1900	1863	1863			
Adj Flow Rate, veh/h	1084	453	0	0	758	216	568	11	284			
Adj No. of Lanes	2	1	0	0	2	0	0	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	957	1120	0	0	786	224	564	11	497			
Arrive On Green	0.28	0.60	0.00	0.00	0.29	0.29	0.32	0.32	0.32			
Sat Flow, veh/h	3442	1863	0	0	2799	771	1742	34	1534			
Grp Volume(v), veh/h	1084	453	0	0	496	478	579	0	284			
Grp Sat Flow(s),veh/h/ln	1721	1863	0	0	1770	1708	1776	0	1534			
Q Serve(g_s), s	40.3	18.6	0.0	0.0	40.0	40.0	46.9	0.0	22.3			
Cycle Q Clear(g_c), s	40.3	18.6	0.0	0.0	40.0	40.0	46.9	0.0	22.3			
Prop In Lane	1.00		0.00	0.00		0.45	0.98		1.00			
Lane Grp Cap(c), veh/h	957	1120	0	0	514	496	575	0	497			
V/C Ratio(X)	1.13	0.40	0.00	0.00	0.96	0.96	1.01	0.00	0.57			
Avail Cap(c_a), veh/h	957	1121	0	0	515	497	575	0	497			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	52.3	15.2	0.0	0.0	50.7	50.7	49.0	0.0	40.7			
Incr Delay (d2), s/veh	72.8	0.1	0.0	0.0	30.3	31.0	39.4	0.0	1.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	28.7	9.6	0.0	0.0	23.9	23.1	29.3	0.0	9.6			
LnGrp Delay(d),s/veh	125.1	15.3	0.0	0.0	81.0	81.7	88.4	0.0	41.7			
LnGrp LOS	F	B			F	F	F		D			
Approach Vol, veh/h		1537			974			863				
Approach Delay, s/veh		92.7			81.3			73.0				
Approach LOS		F			F			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		92.9			45.0	47.9		52.0
Change Period (Y+Rc), s		5.8			* 4.7	5.8		5.1
Max Green Setting (Gmax), s		87.2			* 40	42.2		46.9
Max Q Clear Time (g_c+I1), s		20.6			42.3	42.0		48.9
Green Ext Time (p_c), s		1.8			0.0	0.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	84.4
HCM 2010 LOS	F

Notes

HCM 2010 Signalized Intersection Summary
5: Mission Center Road & Civita Boulevard

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	280	350	120	10	80	160	370	130	60	430	75
Future Volume (veh/h)	180	280	350	120	10	80	160	370	130	60	430	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	189	295	368	126	11	84	168	389	137	63	453	79
Adj No. of Lanes	1	1	1	2	1	1	2	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	541	450	181	418	346	1038	1613	712	81	681	295
Arrive On Green	0.12	0.29	0.29	0.05	0.22	0.22	0.10	0.15	0.15	0.05	0.19	0.19
Sat Flow, veh/h	1774	1863	1551	3442	1863	1541	3442	3539	1562	1774	3539	1534
Grp Volume(v), veh/h	189	295	368	126	11	84	168	389	137	63	453	79
Grp Sat Flow(s),veh/h/ln	1774	1863	1551	1721	1863	1541	1721	1770	1562	1774	1770	1534
Q Serve(g_s), s	13.1	16.7	27.6	4.5	0.6	5.6	5.6	12.1	7.2	4.4	14.8	4.1
Cycle Q Clear(g_c), s	13.1	16.7	27.6	4.5	0.6	5.6	5.6	12.1	7.2	4.4	14.8	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	541	450	181	418	346	1038	1613	712	81	681	295
V/C Ratio(X)	0.87	0.55	0.82	0.70	0.03	0.24	0.16	0.24	0.19	0.78	0.66	0.27
Avail Cap(c_a), veh/h	406	702	584	319	449	371	1038	1613	712	193	926	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	37.4	41.3	58.2	37.8	39.7	41.8	34.1	18.7	59.0	46.7	24.3
Incr Delay (d2), s/veh	4.2	2.5	11.4	4.8	0.1	0.9	0.0	0.3	0.6	5.9	5.1	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	9.0	13.3	2.3	0.3	2.5	2.7	6.0	4.1	2.3	7.7	2.4
LnGrp Delay(d),s/veh	58.1	39.9	52.7	63.0	37.9	40.7	41.9	34.4	19.3	65.0	51.8	26.5
LnGrp LOS	E	D	D	E	D	D	D	C	B	E	D	C
Approach Vol, veh/h		852			221			694			595	
Approach Delay, s/veh		49.5			53.3			33.2			49.8	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	62.3	11.5	41.2	43.0	29.4	19.7	33.0
Change Period (Y+Rc), s	4.4	5.3	4.9	* 4.9	5.3	* 5.3	4.4	4.9
Max Green Setting (Gmax), s	13.6	33.7	11.6	* 47	14.6	* 33	28.6	30.1
Max Q Clear Time (g_c+I1), s	6.4	14.1	6.5	29.6	7.6	16.8	15.1	7.6
Green Ext Time (p_c), s	0.0	3.6	0.1	6.7	0.2	6.0	0.2	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	45.1
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
6: Mission Center Road & Westside Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	110	410	110	30	30	340	510	150	40	750	110
Future Volume (veh/h)	120	110	410	110	30	30	340	510	150	40	750	110
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	116	221	116	32	21	358	537	105	42	789	74
Adj No. of Lanes	0	1	1	1	1	0	2	3	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	135	384	214	124	81	319	2320	713	54	1394	608
Arrive On Green	0.16	0.16	0.16	0.12	0.12	0.12	0.09	0.46	0.46	0.01	0.13	0.13
Sat Flow, veh/h	945	870	1522	1774	1028	674	3442	5085	1563	1774	3539	1543
Grp Volume(v), veh/h	242	0	221	116	0	53	358	537	105	42	789	74
Grp Sat Flow(s),veh/h/ln	1815	0	1522	1774	0	1702	1721	1695	1563	1774	1770	1543
Q Serve(g_s), s	16.2	0.0	16.0	7.7	0.0	3.5	11.6	8.0	4.9	3.0	26.2	5.3
Cycle Q Clear(g_c), s	16.2	0.0	16.0	7.7	0.0	3.5	11.6	8.0	4.9	3.0	26.2	5.3
Prop In Lane	0.52		1.00	1.00		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	0	384	214	0	205	319	2320	713	54	1394	608
V/C Ratio(X)	0.86	0.00	0.58	0.54	0.00	0.26	1.12	0.23	0.15	0.78	0.57	0.12
Avail Cap(c_a), veh/h	450	0	524	369	0	354	319	2320	713	102	1394	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.92	0.92	0.92	0.91	0.91	0.91
Uniform Delay (d), s/veh	51.4	0.0	41.3	51.7	0.0	49.9	56.7	20.7	19.8	61.5	44.4	35.3
Incr Delay (d2), s/veh	5.3	0.0	0.5	2.8	0.0	0.9	85.2	0.2	0.4	7.9	1.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	0.0	6.7	3.9	0.0	1.7	9.3	3.8	2.2	1.6	13.1	2.3
LnGrp Delay(d),s/veh	56.7	0.0	41.8	54.6	0.0	50.8	141.9	20.9	20.2	69.3	45.9	35.6
LnGrp LOS	E		D	D		D	F	C	C	E	D	D
Approach Vol, veh/h		463			169			1000			905	
Approach Delay, s/veh		49.6			53.4			64.1			46.1	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.0	59.7		24.3	8.2	67.5		24.9
Change Period (Y+Rc), s	4.4	10.5		4.9	4.4	10.5		9.9
Max Green Setting (Gmax), s	11.6	26.7		31.0	7.2	31.1		26.0
Max Q Clear Time (g_c+I1), s	13.6	28.2		18.2	5.0	10.0		9.7
Green Ext Time (p_c), s	0.0	0.0		1.2	0.0	6.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	54.3
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
7: Seaworld Drive & Friar Roads

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	510	180	1410	760	480	1390
Future Volume (veh/h)	510	180	1410	760	480	1390
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	531	188	1469	792	500	1448
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	639	285	1643	1005	568	2404
Arrive On Green	0.18	0.18	0.46	0.46	0.17	0.68
Sat Flow, veh/h	3548	1583	3632	1549	3442	3632
Grp Volume(v), veh/h	531	188	1469	792	500	1448
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1549	1721	1770
Q Serve(g_s), s	12.7	9.7	33.5	32.8	12.5	19.6
Cycle Q Clear(g_c), s	12.7	9.7	33.5	32.8	12.5	19.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	639	285	1643	1005	568	2404
V/C Ratio(X)	0.83	0.66	0.89	0.79	0.88	0.60
Avail Cap(c_a), veh/h	1126	503	1661	1012	577	2464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	33.6	21.6	11.4	36.0	7.7
Incr Delay (d2), s/veh	1.1	1.0	6.8	4.5	13.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	4.3	17.9	20.4	7.1	9.7
LnGrp Delay(d),s/veh	35.9	34.6	28.4	15.9	49.9	8.4
LnGrp LOS	D	C	C	B	D	A
Approach Vol, veh/h	719		2261			1948
Approach Delay, s/veh	35.6		24.0			19.0
Approach LOS	D		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	19.0	47.1				66.1		22.1
Change Period (Y+Rc), s	4.4	6.2				* 6.2		6.2
Max Green Setting (Gmax), s	14.8	41.4				* 61		28.0
Max Q Clear Time (g_c+I1), s	14.5	35.5				21.6		14.7
Green Ext Time (p_c), s	0.0	5.4				26.3		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
8: Napa Street & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	1040	0	0	430	360	0	0	0	510	0	220
Future Volume (veh/h)	160	1040	0	0	430	360	0	0	0	510	0	220
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	0	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	168	1095	0	0	453	274	0	0	0	537	0	179
Adj No. of Lanes	1	2	0	0	2	1	0	1	0	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0	2	2	2
Cap, veh/h	208	1594	0	0	965	845	0	3	0	901	0	414
Arrive On Green	0.12	0.45	0.00	0.00	0.27	0.27	0.00	0.00	0.00	0.27	0.00	0.27
Sat Flow, veh/h	1774	3632	0	0	3632	1548	0	-74510	0	3371	0	1548
Grp Volume(v), veh/h	168	1095	0	0	453	274	0	0	0	537	0	179
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1548	0	1863	0	1685	0	1548
Q Serve(g_s), s	6.7	17.9	0.0	0.0	7.7	7.2	0.0	0.0	0.0	10.1	0.0	7.0
Cycle Q Clear(g_c), s	6.7	17.9	0.0	0.0	7.7	7.2	0.0	0.0	0.0	10.1	0.0	7.0
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	1594	0	0	965	845	0	3	0	901	0	414
V/C Ratio(X)	0.81	0.69	0.00	0.00	0.47	0.32	0.00	0.00	0.00	0.60	0.00	0.43
Avail Cap(c_a), veh/h	332	2194	0	0	1092	901	0	693	0	2001	0	919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.3	15.9	0.0	0.0	22.0	9.3	0.0	0.0	0.0	23.2	0.0	22.0
Incr Delay (d2), s/veh	3.2	1.0	0.0	0.0	0.5	0.3	0.0	0.0	0.0	1.4	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	8.9	0.0	0.0	3.8	4.9	0.0	0.0	0.0	4.9	0.0	6.4
LnGrp Delay(d),s/veh	34.5	16.8	0.0	0.0	22.6	9.7	0.0	0.0	0.0	24.5	0.0	23.6
LnGrp LOS	C	B			C	A				C		C
Approach Vol, veh/h		1263			727			0			716	
Approach Delay, s/veh		19.2			17.7			0.0			24.3	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		43.3		29.3	12.9	30.4		0.0
Change Period (Y+Rc), s		* 11		* 9.9	4.4	* 11		4.0
Max Green Setting (Gmax), s		* 45		* 43	13.6	* 22		27.0
Max Q Clear Time (g_c+I1), s		19.9		12.1	8.7	9.7		0.0
Green Ext Time (p_c), s		12.8		6.7	0.1	4.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.1
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
9: Colusa Street & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1495	50	50	880	75	20	20	30	180	20	75
Future Volume (veh/h)	20	1495	50	50	880	75	20	20	30	180	20	75
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.98		1.00	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	21	1557	47	52	917	73	21	21	-4	188	21	47
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	1828	55	65	1789	142	229	206	377	432	120	268
Arrive On Green	0.02	0.52	0.52	0.04	0.54	0.54	0.24	0.24	0.00	0.24	0.24	0.24
Sat Flow, veh/h	1774	3506	106	1774	3316	264	659	867	1583	1358	503	1126
Grp Volume(v), veh/h	21	784	820	52	489	501	42	0	-4	188	0	68
Grp Sat Flow(s),veh/h/ln	1774	1770	1842	1774	1770	1810	1525	0	1583	1358	0	1630
Q Serve(g_s), s	0.9	28.6	28.8	2.2	13.2	13.2	0.0	0.0	0.0	5.9	0.0	2.5
Cycle Q Clear(g_c), s	0.9	28.6	28.8	2.2	13.2	13.2	2.5	0.0	0.0	8.4	0.0	2.5
Prop In Lane	1.00		0.06	1.00		0.15	0.50		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	34	923	960	65	955	976	435	0	377	432	0	388
V/C Ratio(X)	0.63	0.85	0.85	0.79	0.51	0.51	0.10	0.00	-0.01	0.44	0.00	0.18
Avail Cap(c_a), veh/h	128	936	974	99	955	976	705	0	656	671	0	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.6	15.4	15.5	35.9	11.0	11.0	22.3	0.0	0.0	24.8	0.0	22.7
Incr Delay (d2), s/veh	6.9	9.2	9.1	11.7	1.9	1.9	0.0	0.0	0.0	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	16.1	17.0	1.3	6.9	7.1	0.7	0.0	0.0	3.4	0.0	1.1
LnGrp Delay(d),s/veh	43.5	24.6	24.6	47.6	12.9	12.9	22.3	0.0	0.0	25.1	0.0	22.8
LnGrp LOS	D	C	C	D	B	B	C			C		C
Approach Vol, veh/h		1625			1042			38			256	
Approach Delay, s/veh		24.9			14.7			24.7			24.5	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.2	45.1		22.8	5.8	46.5		22.8
Change Period (Y+Rc), s	4.4	* 6		4.9	4.4	6.0		4.9
Max Green Setting (Gmax), s	4.2	* 40		31.1	5.4	38.2		31.1
Max Q Clear Time (g_c+I1), s	4.2	30.8		10.4	2.9	15.2		4.5
Green Ext Time (p_c), s	0.0	8.3		0.5	0.0	14.6		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
10: Via Las Cumbres & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1090	90	90	610	260	110	420	170	105	360	120
Future Volume (veh/h)	180	1090	90	90	610	260	110	420	170	105	360	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	188	1135	52	94	635	209	115	438	115	109	375	73
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	1225	56	118	1060	458	141	500	415	134	400	78
Arrive On Green	0.12	0.36	0.36	0.07	0.30	0.30	0.08	0.27	0.27	0.08	0.26	0.26
Sat Flow, veh/h	1774	3444	158	1774	3539	1530	1774	1863	1548	1774	1509	294
Grp Volume(v), veh/h	188	583	604	94	635	209	115	438	115	109	0	448
Grp Sat Flow(s),veh/h/ln	1774	1770	1832	1774	1770	1530	1774	1863	1548	1774	0	1803
Q Serve(g_s), s	12.5	38.0	38.0	6.3	18.4	13.3	7.7	27.0	7.0	7.3	0.0	29.1
Cycle Q Clear(g_c), s	12.5	38.0	38.0	6.3	18.4	13.3	7.7	27.0	7.0	7.3	0.0	29.1
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	218	629	652	118	1060	458	141	500	415	134	0	477
V/C Ratio(X)	0.86	0.93	0.93	0.79	0.60	0.46	0.82	0.88	0.28	0.81	0.00	0.94
Avail Cap(c_a), veh/h	352	669	692	241	1110	480	182	579	482	197	0	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.6	37.1	37.1	55.1	35.9	34.1	54.4	42.0	34.7	54.6	0.0	43.1
Incr Delay (d2), s/veh	11.6	18.2	17.8	11.3	0.7	0.5	19.6	12.8	0.4	14.7	0.0	19.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	21.6	22.4	3.5	9.1	5.7	4.5	15.6	3.0	4.1	0.0	17.1
LnGrp Delay(d),s/veh	63.2	55.3	55.0	66.4	36.5	34.6	74.0	54.8	35.0	69.2	0.0	62.4
LnGrp LOS	E	E	D	E	D	C	E	D	D	E		E
Approach Vol, veh/h		1375			938			668			557	
Approach Delay, s/veh		56.2			39.1			54.7			63.7	
Approach LOS		E			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	53.5	15.2	37.5	20.5	46.8	14.8	37.9
Change Period (Y+Rc), s	5.7	* 11	5.7	* 5.7	5.7	* 11	5.7	5.7
Max Green Setting (Gmax), s	16.3	* 45	12.3	* 39	23.8	* 38	13.3	37.3
Max Q Clear Time (g_c+I1), s	8.3	40.0	9.7	31.1	14.5	20.4	9.3	29.0
Green Ext Time (p_c), s	0.1	2.6	0.1	0.5	0.3	3.3	0.1	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	52.6
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
11: Fashion Valley Road & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1560	270	220	880	30	180	20	190	10	10	10
Future Volume (veh/h)	20	1560	270	220	880	30	180	20	190	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	21	1642	231	232	926	32	189	21	126	11	11	6
Adj No. of Lanes	1	3	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	1649	231	254	1877	65	252	23	437	44	40	14
Arrive On Green	0.02	0.37	0.37	0.29	1.00	1.00	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1774	4490	629	1774	3485	120	732	81	1550	38	141	49
Grp Volume(v), veh/h	21	1238	635	232	470	488	210	0	126	28	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1729	1774	1770	1836	813	0	1550	228	0	0
Q Serve(g_s), s	1.8	54.6	55.1	18.9	0.0	0.0	0.0	0.0	9.5	0.7	0.0	0.0
Cycle Q Clear(g_c), s	1.8	54.6	55.1	18.9	0.0	0.0	39.5	0.0	9.5	40.2	0.0	0.0
Prop In Lane	1.00		0.36	1.00		0.07	0.90		1.00	0.39		0.21
Lane Grp Cap(c), veh/h	28	1245	635	254	953	988	275	0	437	98	0	0
V/C Ratio(X)	0.76	0.99	1.00	0.91	0.49	0.49	0.76	0.00	0.29	0.29	0.00	0.00
Avail Cap(c_a), veh/h	71	1245	635	254	953	988	355	0	524	182	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	0.59	0.00	0.59	1.00	0.00	0.00
Uniform Delay (d), s/veh	73.6	47.3	47.4	52.6	0.0	0.0	52.9	0.0	42.1	43.8	0.0	0.0
Incr Delay (d2), s/veh	14.7	24.1	35.7	31.8	1.7	1.6	3.4	0.0	0.1	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	29.6	32.6	11.5	0.5	0.5	8.8	0.0	4.1	0.9	0.0	0.0
LnGrp Delay(d),s/veh	88.2	71.4	83.1	84.3	1.7	1.6	56.3	0.0	42.2	44.7	0.0	0.0
LnGrp LOS	F	E	F	F	A	A	E		D	D		
Approach Vol, veh/h		1894			1190			336			28	
Approach Delay, s/veh		75.5			17.8			51.0			44.7	
Approach LOS		E			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	31.8	66.0		52.2	6.7	91.1		52.2
Change Period (Y+Rc), s	* 10	* 11		* 9.9	4.4	10.3		* 9.9
Max Green Setting (Gmax), s	* 19	* 55		* 51	6.0	68.7		* 51
Max Q Clear Time (g_c+I1), s	20.9	57.1		42.2	3.8	2.0		41.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	9.4		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	50.6
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
12: Via De La Moda & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1820	140	340	1020	0	110	0	220	0	0	0
Future Volume (veh/h)	0	1820	140	340	1020	0	110	0	220	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	0	1863	0	1863			
Adj Flow Rate, veh/h	0	1857	123	347	1041	0	112	0	163			
Adj No. of Lanes	1	3	0	2	2	0	1	0	1			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.95	0.98	0.95	0.98			
Percent Heavy Veh, %	2	2	2	2	2	0	2	0	2			
Cap, veh/h	1	2060	136	1232	2895	0	208	0	186			
Arrive On Green	0.00	0.85	0.85	0.72	1.00	0.00	0.12	0.00	0.12			
Sat Flow, veh/h	1774	4857	321	3442	3632	0	1774	0	1583			
Grp Volume(v), veh/h	0	1294	686	347	1041	0	112	0	163			
Grp Sat Flow(s),veh/h/ln	1774	1695	1788	1721	1770	0	1774	0	1583			
Q Serve(g_s), s	0.0	36.7	37.6	5.4	0.0	0.0	8.9	0.0	15.2			
Cycle Q Clear(g_c), s	0.0	36.7	37.6	5.4	0.0	0.0	8.9	0.0	15.2			
Prop In Lane	1.00		0.18	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	1	1438	758	1232	2895	0	208	0	186			
V/C Ratio(X)	0.00	0.90	0.90	0.28	0.36	0.00	0.54	0.00	0.88			
Avail Cap(c_a), veh/h	47	1776	937	1232	2895	0	386	0	344			
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.56	0.56	0.96	0.96	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	9.3	9.4	14.4	0.0	0.0	62.4	0.0	65.1			
Incr Delay (d2), s/veh	0.0	5.6	10.2	0.0	0.3	0.0	0.8	0.0	5.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	16.9	19.3	2.5	0.1	0.0	4.4	0.0	6.9			
LnGrp Delay(d),s/veh	0.0	15.0	19.6	14.5	0.3	0.0	63.2	0.0	70.3			
LnGrp LOS		B	B	B	A		E		E			
Approach Vol, veh/h		1980			1388			275				
Approach Delay, s/veh		16.6			3.9			67.4				
Approach LOS		B			A			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			5	6		8
Phs Duration (G+Y+Rc), s	59.0	69.0			0.0	128.0		22.0
Change Period (Y+Rc), s	5.3	* 5.4			4.4	5.3		4.4
Max Green Setting (Gmax), s	24.6	* 79			4.0	99.3		32.6
Max Q Clear Time (g_c+I1), s	7.4	39.6			0.0	2.0		17.2
Green Ext Time (p_c), s	0.6	24.1			0.0	12.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Notes

HCM 2010 Signalized Intersection Summary
13: Avenida De Las Tiendas & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1900	110	680	1080	20	70	5	230	30	10	10
Future Volume (veh/h)	30	1900	110	680	1080	20	70	5	230	30	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	0.94		0.94	0.95		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	32	2000	111	716	1137	21	74	0	230	32	11	8
Adj No. of Lanes	1	3	0	2	3	0	1	0	2	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	2885	159	765	4034	74	157	0	278	150	91	66
Arrive On Green	0.05	1.00	1.00	0.22	0.79	0.79	0.09	0.00	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1774	4925	272	3442	5137	95	1306	0	2964	1093	973	708
Grp Volume(v), veh/h	32	1374	737	716	750	408	74	0	230	32	0	19
Grp Sat Flow(s),veh/h/ln	1774	1695	1807	1721	1695	1842	1306	0	1482	1093	0	1681
Q Serve(g_s), s	2.7	0.0	0.0	30.6	9.2	9.2	8.3	0.0	11.4	4.1	0.0	1.6
Cycle Q Clear(g_c), s	2.7	0.0	0.0	30.6	9.2	9.2	9.8	0.0	11.4	4.1	0.0	1.6
Prop In Lane	1.00		0.15	1.00		0.05	1.00		1.00	1.00		0.42
Lane Grp Cap(c), veh/h	41	1986	1059	765	2662	1446	157	0	278	150	0	158
V/C Ratio(X)	0.78	0.69	0.70	0.94	0.28	0.28	0.47	0.00	0.83	0.21	0.00	0.12
Avail Cap(c_a), veh/h	83	1986	1059	844	2662	1446	297	0	595	267	0	337
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	0.73	0.73	0.73	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.2	0.0	0.0	57.3	4.4	4.4	66.8	0.0	66.8	63.5	0.0	62.3
Incr Delay (d2), s/veh	8.8	1.5	2.8	12.5	0.2	0.4	0.8	0.0	2.4	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.4	0.8	15.9	4.3	4.8	3.0	0.0	4.8	1.3	0.0	0.7
LnGrp Delay(d),s/veh	79.9	1.5	2.8	69.8	4.6	4.8	67.6	0.0	69.2	63.7	0.0	62.4
LnGrp LOS	E	A	A	E	A	A	E		E	E		E
Approach Vol, veh/h		2143			1874			304			51	
Approach Delay, s/veh		3.1			29.5			68.8			63.2	
Approach LOS		A			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	37.8	93.3		19.0	7.8	123.2		19.0
Change Period (Y+Rc), s	4.4	5.4		4.9	4.4	* 5.4		4.9
Max Green Setting (Gmax), s	36.8	68.4		30.1	7.0	* 98		30.1
Max Q Clear Time (g_c+I1), s	32.6	2.0		6.1	4.7	11.2		13.4
Green Ext Time (p_c), s	0.7	35.5		0.1	0.0	12.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.7
HCM 2010 LOS	B

Notes

HCM 2010 Signalized Intersection Summary
14: SR-163 SB Ramps/Ulric Street & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	1190	750	480	1180	280	410	60	950	480	30	190
Future Volume (veh/h)	220	1190	750	480	1180	280	410	60	950	480	30	190
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	224	1214	561	490	1204	194	418	61	637	490	31	117
Adj No. of Lanes	2	3	1	2	3	2	2	1	2	2	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	1699	886	384	1894	1536	796	431	938	636	62	232
Arrive On Green	0.08	0.33	0.33	0.11	0.37	0.37	0.23	0.23	0.23	0.18	0.18	0.18
Sat Flow, veh/h	3442	5085	1555	3442	5085	2742	3442	1863	2714	3442	333	1258
Grp Volume(v), veh/h	224	1214	561	490	1204	194	418	61	637	490	0	148
Grp Sat Flow(s),veh/h/ln	1721	1695	1555	1721	1695	1371	1721	1863	1357	1721	0	1591
Q Serve(g_s), s	8.4	27.1	31.9	14.5	25.3	4.4	13.8	3.4	26.2	17.6	0.0	10.9
Cycle Q Clear(g_c), s	8.4	27.1	31.9	14.5	25.3	4.4	13.8	3.4	26.2	17.6	0.0	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	265	1699	886	384	1894	1536	796	431	938	636	0	294
V/C Ratio(X)	0.85	0.71	0.63	1.28	0.64	0.13	0.53	0.14	0.68	0.77	0.00	0.50
Avail Cap(c_a), veh/h	265	1699	886	384	1894	1536	874	473	1000	874	0	404
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.56	0.72	0.72	0.72	1.00	1.00	1.00	0.74	0.00	0.74
Uniform Delay (d), s/veh	59.2	37.9	19.2	57.8	33.5	13.7	43.7	39.7	36.7	50.4	0.0	47.6
Incr Delay (d2), s/veh	13.3	1.5	1.9	138.5	0.5	0.0	0.2	0.1	1.3	1.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	12.9	20.6	14.3	11.9	2.4	6.6	1.8	9.9	8.5	0.0	4.8
LnGrp Delay(d),s/veh	72.6	39.3	21.2	196.2	34.1	13.7	43.9	39.8	38.0	51.7	0.0	48.0
LnGrp LOS	E	D	C	F	C	B	D	D	D	D		D
Approach Vol, veh/h		1999			1888			1116			638	
Approach Delay, s/veh		38.0			74.1			40.3			50.9	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.0	47.9		28.5	14.0	52.9		34.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.0	4.5		4.5
Max Green Setting (Gmax), s	14.5	31.5		33.0	10.0	36.5		33.0
Max Q Clear Time (g_c+I1), s	16.5	33.9		19.6	10.4	27.3		28.2
Green Ext Time (p_c), s	0.0	0.0		1.3	0.0	5.7		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	52.0
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
15: Friar Roads & SR-163 NB Ramps

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	660	1960	1150	990	720	790
Future Volume (veh/h)	660	1960	1150	990	720	790
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	673	2000	1173	653	735	500
Adj No. of Lanes	2	4	4	2	3	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	931	4250	2003	843	1018	567
Arrive On Green	0.27	0.66	0.63	0.63	0.20	0.20
Sat Flow, veh/h	3442	6669	6669	2698	5003	2787
Grp Volume(v), veh/h	673	2000	1173	653	735	500
Grp Sat Flow(s),veh/h/ln	1721	1602	1602	1349	1668	1393
Q Serve(g_s), s	13.3	11.5	8.1	13.2	10.3	13.1
Cycle Q Clear(g_c), s	13.3	11.5	8.1	13.2	10.3	13.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	931	4250	2003	843	1018	567
V/C Ratio(X)	0.72	0.47	0.59	0.77	0.72	0.88
Avail Cap(c_a), veh/h	931	4250	2649	1115	1067	594
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.40	0.40	0.63	0.63	1.00	1.00
Uniform Delay (d), s/veh	24.8	6.2	11.2	12.1	27.9	29.0
Incr Delay (d2), s/veh	1.0	0.1	0.8	4.4	2.3	14.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	5.0	3.6	5.1	4.9	10.4
LnGrp Delay(d),s/veh	25.8	6.3	12.0	16.6	30.2	43.1
LnGrp LOS	C	A	B	B	C	D
Approach Vol, veh/h		2673	1826		1235	
Approach Delay, s/veh		11.2	13.6		35.4	
Approach LOS		B	B		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		55.7		19.3	26.3	29.4		
Change Period (Y+Rc), s		6.0		4.0	6.0	* 6		
Max Green Setting (Gmax), s		49.0		16.0	13.0	* 31		
Max Q Clear Time (g_c+I1), s		13.5		15.1	15.3	15.2		
Green Ext Time (p_c), s		12.9		0.2	0.0	6.5		

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Notes

HCM 2010 Signalized Intersection Summary
16: Frazee Road & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	1760	550	320	1250	350	380	130	270	190	230	510
Future Volume (veh/h)	370	1760	550	320	1250	350	380	130	270	190	230	510
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	378	1796	337	327	1276	296	388	133	256	194	235	296
Adj No. of Lanes	2	4	2	2	3	1	2	2	0	2	1	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	631	2621	1112	371	1454	443	439	388	338	238	300	432
Arrive On Green	0.37	0.82	0.82	0.11	0.29	0.29	0.13	0.22	0.22	0.07	0.16	0.16
Sat Flow, veh/h	3442	6408	2719	3442	5085	1550	3442	1770	1540	3442	1863	2683
Grp Volume(v), veh/h	378	1796	337	327	1276	296	388	133	256	194	235	296
Grp Sat Flow(s),veh/h/ln	1721	1602	1359	1721	1695	1550	1721	1770	1540	1721	1863	1341
Q Serve(g_s), s	13.4	17.4	4.5	14.1	35.9	19.1	16.6	9.5	23.3	8.3	18.2	9.7
Cycle Q Clear(g_c), s	13.4	17.4	4.5	14.1	35.9	19.1	16.6	9.5	23.3	8.3	18.2	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	631	2621	1112	371	1454	443	439	388	338	238	300	432
V/C Ratio(X)	0.60	0.69	0.30	0.88	0.88	0.67	0.88	0.34	0.76	0.81	0.78	0.69
Avail Cap(c_a), veh/h	631	2621	1112	404	1492	455	567	519	452	266	446	642
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	9.7	8.5	66.0	51.0	26.9	64.3	49.4	54.8	68.9	60.4	22.8
Incr Delay (d2), s/veh	0.9	1.2	0.6	17.7	7.8	7.8	8.3	0.1	2.3	14.6	3.8	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	7.4	1.7	7.6	17.8	9.7	8.4	4.7	10.2	4.4	9.6	5.2
LnGrp Delay(d),s/veh	43.9	10.9	9.1	83.6	58.8	34.7	72.6	49.6	57.2	83.5	64.2	24.0
LnGrp LOS	D	B	A	F	E	C	E	D	E	F	E	C
Approach Vol, veh/h		2511			1899			777			725	
Approach Delay, s/veh		15.6			59.3			63.6			52.9	
Approach LOS		B			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.6	71.9	23.5	34.0	38.0	54.4	14.8	42.8
Change Period (Y+Rc), s	4.4	10.5	4.4	* 9.9	10.5	* 12	4.4	* 9.9
Max Green Setting (Gmax), s	17.6	47.6	24.7	* 36	20.2	* 44	11.6	* 44
Max Q Clear Time (g_c+I1), s	16.1	19.4	18.6	20.2	15.4	37.9	10.3	25.3
Green Ext Time (p_c), s	0.1	21.3	0.5	1.8	0.3	5.0	0.1	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	40.5
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
17: Mission Center Road & Friar WB

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	370	10	240	270	760	0	0	940	330
Future Volume (veh/h)	0	0	0	370	10	240	270	760	0	0	940	330
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.96	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				397	0	21	284	800	0	0	989	147
Adj No. of Lanes				2	0	1	2	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				534	0	229	899	2489	0	0	1278	556
Arrive On Green				0.15	0.00	0.15	0.26	0.70	0.00	0.00	0.36	0.36
Sat Flow, veh/h				3548	0	1520	3442	3632	0	0	3632	1540
Grp Volume(v), veh/h				397	0	21	284	800	0	0	989	147
Grp Sat Flow(s),veh/h/ln				1774	0	1520	1721	1770	0	0	1770	1540
Q Serve(g_s), s				14.6	0.0	1.6	9.0	11.8	0.0	0.0	33.7	9.2
Cycle Q Clear(g_c), s				14.6	0.0	1.6	9.0	11.8	0.0	0.0	33.7	9.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				534	0	229	899	2489	0	0	1278	556
V/C Ratio(X)				0.74	0.00	0.09	0.32	0.32	0.00	0.00	0.77	0.26
Avail Cap(c_a), veh/h				809	0	347	899	2489	0	0	1587	691
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.76	0.76	0.00	0.00	0.62	0.62
Uniform Delay (d), s/veh				55.3	0.0	49.8	40.5	7.7	0.0	0.0	38.5	30.7
Incr Delay (d2), s/veh				2.1	0.0	0.2	0.2	0.3	0.0	0.0	2.9	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.3	0.0	0.7	4.3	5.8	0.0	0.0	17.0	4.0
LnGrp Delay(d),s/veh				57.3	0.0	49.9	40.6	8.0	0.0	0.0	41.4	31.4
LnGrp LOS				E		D	D	A			D	C
Approach Vol, veh/h					418			1084			1136	
Approach Delay, s/veh					57.0			16.5			40.1	
Approach LOS					E			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		105.6			45.5	60.1		30.4
Change Period (Y+Rc), s		10.0			10.0	* 11		9.9
Max Green Setting (Gmax), s		85.0			18.6	* 61		31.0
Max Q Clear Time (g_c+I1), s		13.8			11.0	35.7		16.6
Green Ext Time (p_c), s		12.8			0.6	13.4		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
18: Mission Center Road & Friar EB

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	10	440	0	0	0	0	740	480	590	720	0
Future Volume (veh/h)	290	10	440	0	0	0	0	740	480	590	720	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	313	0	463				0	779	505	621	758	0
Adj No. of Lanes	2	0	1				0	2	1	2	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1025	0	448				0	1104	478	683	1931	0
Arrive On Green	0.29	0.00	0.29				0.00	0.31	0.31	0.20	0.55	0.00
Sat Flow, veh/h	3548	0	1550				0	3632	1533	3442	3632	0
Grp Volume(v), veh/h	313	0	463				0	779	505	621	758	0
Grp Sat Flow(s),veh/h/ln	1774	0	1550				0	1770	1533	1721	1770	0
Q Serve(g_s), s	8.6	0.0	36.1				0.0	24.3	39.0	22.1	15.5	0.0
Cycle Q Clear(g_c), s	8.6	0.0	36.1				0.0	24.3	39.0	22.1	15.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1025	0	448				0	1104	478	683	1931	0
V/C Ratio(X)	0.31	0.00	1.03				0.00	0.71	1.06	0.91	0.39	0.00
Avail Cap(c_a), veh/h	1025	0	448				0	1104	478	815	1931	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.82	0.82	0.80	0.80	0.00
Uniform Delay (d), s/veh	34.7	0.0	44.5				0.0	37.9	43.0	49.0	16.4	0.0
Incr Delay (d2), s/veh	0.2	0.0	51.6				0.0	3.1	53.0	9.7	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	21.8				0.0	12.3	23.5	11.4	7.7	0.0
LnGrp Delay(d),s/veh	34.8	0.0	96.0				0.0	41.1	96.0	58.7	16.9	0.0
LnGrp LOS	C		F					D	F	E	B	
Approach Vol, veh/h		776						1284			1379	
Approach Delay, s/veh		71.3						62.7			35.7	
Approach LOS		E						E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	29.2	49.8		46.0		79.0		
Change Period (Y+Rc), s	4.4	* 11		* 9.9		10.8		
Max Green Setting (Gmax), s	29.6	* 35		* 36		68.2		
Max Q Clear Time (g_c+I1), s	24.1	41.0		38.1		17.5		
Green Ext Time (p_c), s	0.7	0.0		0.0		7.1		

Intersection Summary	
HCM 2010 Ctrl Delay	53.8
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
19: Qualcomm Way & WB Friar

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	430	10	450	640	1150	0	0	890	290
Future Volume (veh/h)	0	0	0	430	10	450	640	1150	0	0	890	290
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1900	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				439	10	173	653	1173	0	0	908	112
Adj No. of Lanes				1	1	0	2	2	0	0	3	1
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.95	0.95	0.98	0.98
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				469	23	390	846	2115	0	0	1441	433
Arrive On Green				0.26	0.26	0.26	0.49	1.00	0.00	0.00	0.28	0.28
Sat Flow, veh/h				1774	85	1477	3442	3632	0	0	5253	1527
Grp Volume(v), veh/h				439	0	183	653	1173	0	0	908	112
Grp Sat Flow(s),veh/h/ln				1774	0	1562	1721	1770	0	0	1695	1527
Q Serve(g_s), s				35.1	0.0	14.2	22.5	0.0	0.0	0.0	22.6	8.2
Cycle Q Clear(g_c), s				35.1	0.0	14.2	22.5	0.0	0.0	0.0	22.6	8.2
Prop In Lane				1.00		0.95	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				469	0	413	846	2115	0	0	1441	433
V/C Ratio(X)				0.94	0.00	0.44	0.77	0.55	0.00	0.00	0.63	0.26
Avail Cap(c_a), veh/h				613	0	540	846	2115	0	0	1441	433
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.40	0.40	0.00	0.00	0.70	0.70
Uniform Delay (d), s/veh				52.1	0.0	44.4	33.5	0.0	0.0	0.0	45.3	40.2
Incr Delay (d2), s/veh				16.9	0.0	0.3	1.9	0.4	0.0	0.0	1.5	1.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				19.4	0.0	6.1	10.8	0.1	0.0	0.0	10.8	3.6
LnGrp Delay(d),s/veh				69.0	0.0	44.7	35.4	0.4	0.0	0.0	46.8	41.2
LnGrp LOS				E		D	D	A			D	D
Approach Vol, veh/h					622			1826			1020	
Approach Delay, s/veh					61.9			12.9			46.2	
Approach LOS					E			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		96.8			45.8	51.0		48.2
Change Period (Y+Rc), s		* 10			* 10	* 9.9		9.9
Max Green Setting (Gmax), s		* 75			* 29	* 41		50.1
Max Q Clear Time (g_c+I1), s		2.0			24.5	24.6		37.1
Green Ext Time (p_c), s		12.8			1.3	4.8		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	31.5
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
20: Qualcomm Way & EB Friar

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	585	10	320	0	0	0	0	1205	930	270	1050	0
Future Volume (veh/h)	585	10	320	0	0	0	0	1205	930	270	1050	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	624	0	253				0	1268	821	284	1105	0
Adj No. of Lanes	2	0	1				0	2	1	2	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	702	0	304				0	1940	852	294	2351	0
Arrive On Green	0.20	0.00	0.20				0.00	0.55	0.55	0.17	1.00	0.00
Sat Flow, veh/h	3548	0	1535				0	3632	1554	3442	3632	0
Grp Volume(v), veh/h	624	0	253				0	1268	821	284	1105	0
Grp Sat Flow(s),veh/h/ln	1774	0	1535				0	1770	1554	1721	1770	0
Q Serve(g_s), s	24.8	0.0	22.9				0.0	36.6	73.3	11.9	0.0	0.0
Cycle Q Clear(g_c), s	24.8	0.0	22.9				0.0	36.6	73.3	11.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	702	0	304				0	1940	852	294	2351	0
V/C Ratio(X)	0.89	0.00	0.83				0.00	0.65	0.96	0.96	0.47	0.00
Avail Cap(c_a), veh/h	1162	0	503				0	1940	852	294	2351	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.59	0.59	0.73	0.73	0.00
Uniform Delay (d), s/veh	56.6	0.0	55.8				0.0	23.1	31.4	59.9	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.0	2.4				0.0	1.0	16.4	35.3	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	0.0	10.0				0.0	18.1	35.1	7.1	0.2	0.0
LnGrp Delay(d),s/veh	59.5	0.0	58.3				0.0	24.1	47.7	95.2	0.5	0.0
LnGrp LOS	E		E					C	D	F	A	
Approach Vol, veh/h		877						2089			1389	
Approach Delay, s/veh		59.1						33.4			19.9	
Approach LOS		E						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	16.8	89.6		38.6		106.4		
Change Period (Y+Rc), s	4.4	* 10		* 9.9		* 10		
Max Green Setting (Gmax), s	12.4	* 61		* 48		* 78		
Max Q Clear Time (g_c+I1), s	13.9	75.3		26.8		2.0		
Green Ext Time (p_c), s	0.0	0.0		1.7		5.5		

Intersection Summary	
HCM 2010 Ctrl Delay	34.2
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
21: River Run Drive & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2515	160	180	1800	60	150	10	180	190	20	80
Future Volume (veh/h)	40	2515	160	180	1800	60	150	10	180	190	20	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	42	2647	126	189	1895	42	158	11	126	200	21	63
Adj No. of Lanes	1	3	1	1	3	0	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	54	2577	786	186	2975	66	382	23	401	193	15	45
Arrive On Green	0.03	0.51	0.51	0.11	0.58	0.58	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	5085	1552	1774	5117	113	1251	87	1547	546	57	172
Grp Volume(v), veh/h	42	2647	126	189	1255	682	169	0	126	284	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1552	1774	1695	1840	1338	0	1547	776	0	0
Q Serve(g_s), s	2.8	60.8	5.2	12.6	29.5	29.6	0.0	0.0	7.9	18.2	0.0	0.0
Cycle Q Clear(g_c), s	2.8	60.8	5.2	12.6	29.5	29.6	12.9	0.0	7.9	31.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.06	0.93		1.00	0.70		0.22
Lane Grp Cap(c), veh/h	54	2577	786	186	1971	1070	405	0	401	252	0	0
V/C Ratio(X)	0.78	1.03	0.16	1.01	0.64	0.64	0.42	0.00	0.31	1.13	0.00	0.00
Avail Cap(c_a), veh/h	105	2577	786	186	1971	1070	405	0	401	252	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	57.8	29.6	15.9	53.7	16.7	16.7	37.7	0.0	35.9	52.7	0.0	0.0
Incr Delay (d2), s/veh	8.8	25.1	0.4	69.8	1.6	2.9	0.5	0.0	0.3	94.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	34.2	2.3	9.8	14.2	15.8	4.8	0.0	3.4	15.0	0.0	0.0
LnGrp Delay(d),s/veh	66.6	54.7	16.3	123.6	18.3	19.6	38.2	0.0	36.2	147.7	0.0	0.0
LnGrp LOS	E	F	B	F	B	B	D		D	F		
Approach Vol, veh/h		2815			2126			295			284	
Approach Delay, s/veh		53.2			28.1			37.3			147.7	
Approach LOS		D			C			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.0	67.0		36.0	8.0	76.0		36.0
Change Period (Y+Rc), s	4.4	6.2		4.9	4.4	6.2		4.9
Max Green Setting (Gmax), s	12.6	60.8		31.1	7.1	66.3		31.1
Max Q Clear Time (g_c+I1), s	14.6	62.8		33.1	4.8	31.6		14.9
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	32.5		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	47.5
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
22: Fenton Parkway & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	2335	410	320	1650	80	320	70	435	50	20	70
Future Volume (veh/h)	140	2335	410	320	1650	80	320	70	435	50	20	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	143	2383	296	327	1684	51	327	71	322	51	43	35
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	2327	862	976	3680	1172	320	420	348	81	341	362
Arrive On Green	0.05	0.46	0.46	0.28	0.72	0.72	0.09	0.23	0.23	0.02	0.18	0.18
Sat Flow, veh/h	3442	5085	1563	3442	5085	1570	3442	1863	1541	3548	1863	1531
Grp Volume(v), veh/h	143	2383	296	327	1684	51	327	71	322	51	43	35
Grp Sat Flow(s),veh/h/ln	1721	1695	1563	1721	1695	1570	1721	1863	1541	1774	1863	1531
Q Serve(g_s), s	8.2	91.5	10.9	15.0	27.4	0.5	18.6	6.1	40.9	2.8	3.9	3.6
Cycle Q Clear(g_c), s	8.2	91.5	10.9	15.0	27.4	0.5	18.6	6.1	40.9	2.8	3.9	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	2327	862	976	3680	1172	320	420	348	81	341	362
V/C Ratio(X)	0.81	1.02	0.34	0.34	0.46	0.04	1.02	0.17	0.93	0.63	0.13	0.10
Avail Cap(c_a), veh/h	241	2327	862	976	3680	1172	320	479	396	163	391	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.13	0.13	0.13	0.91	0.91	0.91	0.61	0.61	0.61	1.00	1.00	1.00
Uniform Delay (d), s/veh	93.9	54.2	20.8	56.7	11.4	8.4	90.7	62.3	75.8	96.9	68.3	60.0
Incr Delay (d2), s/veh	1.3	14.1	0.1	0.1	0.4	0.1	44.7	0.3	20.4	2.9	0.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	45.9	6.8	7.2	12.9	0.8	10.8	3.2	19.4	1.4	2.1	1.6
LnGrp Delay(d),s/veh	95.2	68.4	21.0	56.8	11.8	8.4	135.5	62.6	96.2	99.8	69.1	60.5
LnGrp LOS	F	F	C	E	B	A	F	E	F	F	E	E
Approach Vol, veh/h		2822			2062			720			129	
Approach Delay, s/veh		64.8			18.9			110.7			78.9	
Approach LOS		E			B			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	68.4	102.7	23.0	46.5	14.7	156.4	14.5	55.0
Change Period (Y+Rc), s	11.2	* 11	4.4	* 9.9	4.4	11.2	* 9.9	* 9.9
Max Green Setting (Gmax), s	18.0	* 92	18.6	* 42	14.0	95.5	* 9.2	* 51
Max Q Clear Time (g_c+I1), s	17.0	93.5	20.6	5.9	10.2	29.4	4.8	42.9
Green Ext Time (p_c), s	0.1	0.0	0.0	1.1	0.1	49.1	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	54.3
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
23: Northside Drive & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	2210	350	520	1130	150	250	60	760	100	20	80
Future Volume (veh/h)	170	2210	350	520	1130	150	250	60	760	100	20	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	177	2302	271	542	1177	114	260	62	480	104	21	-42
Adj No. of Lanes	2	3	1	2	3	1	2	1	1	2	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	2136	656	905	3198	1035	506	267	633	106	50	42
Arrive On Green	0.06	0.42	0.42	0.26	0.63	0.63	0.15	0.14	0.14	0.03	0.03	0.00
Sat Flow, veh/h	3442	5085	1561	3442	5085	1568	3442	1863	1517	3442	1863	1583
Grp Volume(v), veh/h	177	2302	271	542	1177	114	260	62	480	104	21	-42
Grp Sat Flow(s),veh/h/ln	1721	1695	1561	1721	1695	1568	1721	1863	1517	1721	1863	1583
Q Serve(g_s), s	7.6	63.0	18.3	20.7	16.8	1.1	10.5	4.4	0.0	4.5	1.7	0.0
Cycle Q Clear(g_c), s	7.6	63.0	18.3	20.7	16.8	1.1	10.5	4.4	0.0	4.5	1.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	2136	656	905	3198	1035	506	267	633	106	50	42
V/C Ratio(X)	0.80	1.08	0.41	0.60	0.37	0.11	0.51	0.23	0.76	0.99	0.42	-0.99
Avail Cap(c_a), veh/h	301	2136	656	905	3198	1035	506	484	811	106	299	254
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.25	0.25	0.25	1.00	1.00	1.00	0.71	0.71	0.71	1.00	1.00	0.00
Uniform Delay (d), s/veh	69.2	43.5	30.5	48.4	13.4	3.2	59.0	57.0	38.0	72.7	71.9	0.0
Incr Delay (d2), s/veh	1.9	37.7	0.5	0.8	0.3	0.2	0.3	0.9	4.2	82.6	24.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	36.9	8.0	10.0	7.9	0.9	5.0	2.3	17.5	3.4	1.2	0.0
LnGrp Delay(d),s/veh	71.0	81.2	31.0	49.1	13.8	3.4	59.3	57.9	42.2	155.2	96.1	0.0
LnGrp LOS	E	F	C	D	B	A	E	E	D	F	F	
Approach Vol, veh/h		2750			1833			802			83	
Approach Delay, s/veh		75.6			23.6			49.0			218.8	
Approach LOS		E			C			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	45.6	69.0	26.5	8.9	14.1	100.5	9.0	26.4
Change Period (Y+Rc), s	6.2	* 6	4.4	4.9	4.4	6.2	4.4	4.9
Max Green Setting (Gmax), s	23.7	* 63	19.5	24.1	13.1	73.4	4.6	39.0
Max Q Clear Time (g_c+I1), s	22.7	65.0	12.5	3.7	9.6	18.8	6.5	6.4
Green Ext Time (p_c), s	0.3	0.0	0.3	0.2	0.1	24.7	0.0	6.8

Intersection Summary	
HCM 2010 Ctrl Delay	56.4
HCM 2010 LOS	E

Notes

HCM 2010 Signalized Intersection Summary
24: MissioN Village Drive & Friar Road WB

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	870	10	280	510	420	0	0	900	520
Future Volume (veh/h)	0	0	0	870	10	280	510	420	0	0	900	520
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				916	11	0	537	442	0	0	947	326
Adj No. of Lanes				0	1	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				703	8	635	417	1809	0	0	839	359
Arrive On Green				0.40	0.40	0.00	0.23	0.51	0.00	0.00	0.24	0.24
Sat Flow, veh/h				1754	21	1583	1774	3632	0	0	3632	1517
Grp Volume(v), veh/h				927	0	0	537	442	0	0	947	326
Grp Sat Flow(s),veh/h/ln				1775	0	1583	1774	1770	0	0	1770	1517
Q Serve(g_s), s				54.1	0.0	0.0	31.7	9.4	0.0	0.0	32.0	28.2
Cycle Q Clear(g_c), s				54.1	0.0	0.0	31.7	9.4	0.0	0.0	32.0	28.2
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				711	0	635	417	1809	0	0	839	359
V/C Ratio(X)				1.30	0.00	0.00	1.29	0.24	0.00	0.00	1.13	0.91
Avail Cap(c_a), veh/h				711	0	635	417	1809	0	0	839	359
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				40.5	0.0	0.0	51.6	18.4	0.0	0.0	51.5	50.1
Incr Delay (d2), s/veh				146.6	0.0	0.0	147.1	0.1	0.0	0.0	72.9	26.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				55.4	0.0	0.0	32.5	4.6	0.0	0.0	24.1	14.4
LnGrp Delay(d),s/veh				187.0	0.0	0.0	198.8	18.5	0.0	0.0	124.4	76.1
LnGrp LOS				F			F	B			F	E
Approach Vol, veh/h					927			979			1273	
Approach Delay, s/veh					187.0			117.4			112.0	
Approach LOS					F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	37.0	39.0				76.0		59.0
Change Period (Y+Rc), s	5.3	7.0				7.0		4.9
Max Green Setting (Gmax), s	31.7	32.0				69.0		54.1
Max Q Clear Time (g_c+I1), s	33.7	34.0				11.4		56.1
Green Ext Time (p_c), s	0.0	0.0				4.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	135.6
HCM 2010 LOS	F

HCM 2010 Signalized Intersection Summary
25: MissioN Village Drive & Friar Road eb

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	10	340	0	0	0	0	580	620	460	1310	0
Future Volume (veh/h)	350	10	340	0	0	0	0	580	620	460	1310	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	368	11	358				0	611	421	484	1379	0
Adj No. of Lanes	0	1	1				0	1	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	356	11	317				0	575	473	639	1274	0
Arrive On Green	0.21	0.21	0.21				0.00	0.31	0.31	0.36	0.36	0.00
Sat Flow, veh/h	1725	52	1537				0	1863	1532	1774	3632	0
Grp Volume(v), veh/h	379	0	358				0	611	421	484	1379	0
Grp Sat Flow(s),veh/h/ln	1776	0	1537				0	1863	1532	1774	1770	0
Q Serve(g_s), s	26.8	0.0	26.8				0.0	40.1	34.1	31.2	46.8	0.0
Cycle Q Clear(g_c), s	26.8	0.0	26.8				0.0	40.1	34.1	31.2	46.8	0.0
Prop In Lane	0.97		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	366	0	317				0	575	473	639	1274	0
V/C Ratio(X)	1.03	0.00	1.13				0.00	1.06	0.89	0.76	1.08	0.00
Avail Cap(c_a), veh/h	366	0	317				0	575	473	639	1274	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.6	0.0	51.6				0.0	45.0	42.9	36.6	41.6	0.0
Incr Delay (d2), s/veh	56.3	0.0	90.3				0.0	55.5	21.6	5.2	50.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.9	0.0	19.3				0.0	29.5	17.2	16.3	31.8	0.0
LnGrp Delay(d),s/veh	107.9	0.0	141.9				0.0	100.5	64.5	41.8	92.2	0.0
LnGrp LOS	F		F					F	E	D	F	
Approach Vol, veh/h		737						1032			1863	
Approach Delay, s/veh		124.4						85.8			79.1	
Approach LOS		F						F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		45.0		32.0		53.0		
Change Period (Y+Rc), s		4.9		5.2		6.2		
Max Green Setting (Gmax), s		40.1		26.8		46.8		
Max Q Clear Time (g_c+I1), s		42.1		28.8		48.8		
Green Ext Time (p_c), s		0.0		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	90.2
HCM 2010 LOS	F

HCM 2010 Signalized Intersection Summary
26: I-15 SB Ramps & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	570	2070	840	350	1720	450	0	0	0	1160	0	970
Future Volume (veh/h)	570	2070	840	350	1720	450	0	0	0	1160	0	970
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863				1863	1863	1863
Adj Flow Rate, veh/h	582	2112	551	357	1755	0				1184	0	837
Adj No. of Lanes	1	3	1	1	3	1				3	0	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2				2	2	2
Cap, veh/h	478	2254	686	705	3004	935				1277	0	1593
Arrive On Green	0.27	0.44	0.44	0.40	0.59	0.00				0.24	0.00	0.24
Sat Flow, veh/h	1774	5085	1548	1774	5085	1583				5322	0	3087
Grp Volume(v), veh/h	582	2112	551	357	1755	0				1184	0	837
Grp Sat Flow(s),veh/h/ln	1774	1695	1548	1774	1695	1583				1774	0	1544
Q Serve(g_s), s	32.3	47.5	36.9	18.2	25.9	0.0				26.1	0.0	21.9
Cycle Q Clear(g_c), s	32.3	47.5	36.9	18.2	25.9	0.0				26.1	0.0	21.9
Prop In Lane	1.00		1.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	478	2254	686	705	3004	935				1277	0	1593
V/C Ratio(X)	1.22	0.94	0.80	0.51	0.58	0.00				0.93	0.00	0.53
Avail Cap(c_a), veh/h	478	2288	696	705	3004	935				1326	0	1622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.28	0.28	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	43.8	31.8	28.9	27.3	15.4	0.0				44.6	0.0	19.8
Incr Delay (d2), s/veh	116.3	9.0	9.7	0.1	0.2	0.0				10.8	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	31.2	24.0	17.6	8.9	12.1	0.0				14.1	0.0	20.7
LnGrp Delay(d),s/veh	160.1	40.8	38.5	27.3	15.6	0.0				55.4	0.0	20.0
LnGrp LOS	F	D	D	C	B					E		B
Approach Vol, veh/h		3245			2112						2021	
Approach Delay, s/veh		61.8			17.6						40.7	
Approach LOS		E			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	55.6	60.2		33.9	37.0	78.8		
Change Period (Y+Rc), s	7.0	* 7		5.1	* 4.7	7.0		
Max Green Setting (Gmax), s	19.8	* 54		29.9	* 32	41.0		
Max Q Clear Time (g_c+I1), s	20.2	49.5		28.1	34.3	27.9		
Green Ext Time (p_c), s	0.0	3.7		0.7	0.0	6.6		

Intersection Summary	
HCM 2010 Ctrl Delay	43.4
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
27: I-15 NB Ramps & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	770	2460	0	0	1360	800	0	0	1030	0	0	1160
Future Volume (veh/h)	770	2460	0	0	1360	800	0	0	1030	0	0	1160
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	0	1863	1900	0	1863	1900
Adj Flow Rate, veh/h	786	2510	0	0	1388	0	0	0	0	0	0	0
Adj No. of Lanes	1	3	0	0	3	1	0	1	0	0	1	0
Peak Hour Factor	0.98	0.98	0.95	0.95	0.98	0.98	0.95	0.98	0.98	0.95	0.98	0.98
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	2	0	2	2
Cap, veh/h	389	4851	0	0	3912	1108	0	1	0	0	1	0
Arrive On Green	0.22	0.95	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	5253	0	0	5588	1583	0	-74510	0	0	-74510	0
Grp Volume(v), veh/h	786	2510	0	0	1388	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	0	0	1863	1583	0	1863	0	0	1863	0
Q Serve(g_s), s	28.5	5.8	0.0	0.0	12.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	28.5	5.8	0.0	0.0	12.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	389	4851	0	0	3912	1108	0	1	0	0	1	0
V/C Ratio(X)	2.02	0.52	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	389	4851	0	0	3912	1108	0	516	0	0	516	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	50.8	0.3	0.0	0.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	460.3	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	63.7	2.3	0.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	511.0	0.3	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	F	A			A							
Approach Vol, veh/h		3296			1388			0			0	
Approach Delay, s/veh		122.1			8.0			0.0			0.0	
Approach LOS		F			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		130.0		0.0	33.0	97.0		0.0
Change Period (Y+Rc), s		* 6		4.0	4.5	6.0		4.0
Max Green Setting (Gmax), s		* 86		36.0	28.5	51.0		36.0
Max Q Clear Time (g_c+I1), s		7.8		0.0	30.5	14.9		0.0
Green Ext Time (p_c), s		8.7		0.0	0.0	6.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	88.3
HCM 2010 LOS	F

Notes

HCM 2010 Signalized Intersection Summary
28: Rancho Mission Road & Friar Roads

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2880	610	210	1620	540	350
Future Volume (veh/h)	2880	610	210	1620	540	350
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	2969	443	216	1670	570	285
Adj No. of Lanes	3	1	1	4	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2937	1209	212	4660	696	311
Arrive On Green	0.58	0.58	0.12	0.73	0.20	0.20
Sat Flow, veh/h	5253	1556	1774	6669	3548	1583
Grp Volume(v), veh/h	2969	443	216	1670	570	285
Grp Sat Flow(s),veh/h/ln	1695	1556	1774	1602	1774	1583
Q Serve(g_s), s	83.7	13.1	17.3	13.9	22.3	25.6
Cycle Q Clear(g_c), s	83.7	13.1	17.3	13.9	22.3	25.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2937	1209	212	4660	696	311
V/C Ratio(X)	1.01	0.37	1.02	0.36	0.82	0.92
Avail Cap(c_a), veh/h	2937	1209	212	4660	783	349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	5.2	63.9	7.3	55.8	57.1
Incr Delay (d2), s/veh	15.5	0.5	67.3	0.2	5.5	25.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.2	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	43.1	10.6	12.4	6.2	11.5	13.4
LnGrp Delay(d),s/veh	46.1	5.7	131.3	7.5	61.3	82.4
LnGrp LOS	F	A	F	A	E	F
Approach Vol, veh/h	3412			1886	855	
Approach Delay, s/veh	40.8			21.7	68.3	
Approach LOS	D			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	21.7	89.7				111.4		33.6
Change Period (Y+Rc), s	4.4	* 6				6.0		5.1
Max Green Setting (Gmax), s	17.3	* 80				101.9		32.0
Max Q Clear Time (g_c+I1), s	19.3	85.7				15.9		27.6
Green Ext Time (p_c), s	0.0	0.0				43.5		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	38.8
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
29: Friar Roads & Santo Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	390	2840	1370	340	210	460
Future Volume (veh/h)	390	2840	1370	340	210	460
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	402	2928	1412	310	216	466
Adj No. of Lanes	2	3	4	0	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	466	3158	2341	513	947	650
Arrive On Green	0.14	0.62	0.44	0.44	0.28	0.28
Sat Flow, veh/h	3442	5253	5537	1157	3442	1583
Grp Volume(v), veh/h	402	2928	1286	436	216	466
Grp Sat Flow(s),veh/h/ln	1721	1695	1602	1627	1721	1583
Q Serve(g_s), s	12.0	54.0	21.3	21.4	5.1	25.8
Cycle Q Clear(g_c), s	12.0	54.0	21.3	21.4	5.1	25.8
Prop In Lane	1.00			0.71	1.00	1.00
Lane Grp Cap(c), veh/h	466	3158	2132	722	947	650
V/C Ratio(X)	0.86	0.93	0.60	0.60	0.23	0.72
Avail Cap(c_a), veh/h	538	3158	2132	722	1213	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.17	0.17	1.00	1.00
Uniform Delay (d), s/veh	44.4	17.8	22.2	22.2	29.4	25.8
Incr Delay (d2), s/veh	11.0	6.1	0.2	0.7	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	26.7	9.4	9.7	2.4	21.8
LnGrp Delay(d),s/veh	55.4	23.9	22.4	22.9	29.5	27.7
LnGrp LOS	E	C	C	C	C	C
Approach Vol, veh/h		3330	1722		682	
Approach Delay, s/veh		27.7	22.5		28.3	
Approach LOS		C	C		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		71.7		33.3	18.6	53.1		
Change Period (Y+Rc), s		6.5		4.4	4.4	* 6.5		
Max Green Setting (Gmax), s		57.1		37.0	16.4	* 37		
Max Q Clear Time (g_c+I1), s		56.0		27.8	14.0	23.4		
Green Ext Time (p_c), s		1.1		1.1	0.2	9.4		

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
30: Riverdale Street & Friar Roads

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	2460	310	90	1160	110	330	90	120	160	40	220
Future Volume (veh/h)	280	2460	310	90	1160	110	330	90	120	160	40	220
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	295	2589	263	95	1221	95	347	95	105	168	42	106
Adj No. of Lanes	1	3	1	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	422	2471	753	112	1435	112	375	261	289	334	151	381
Arrive On Green	0.24	0.49	0.49	0.06	0.30	0.30	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1774	5085	1551	1774	4799	373	1219	801	886	1164	463	1168
Grp Volume(v), veh/h	295	2589	263	95	863	453	347	0	200	168	0	148
Grp Sat Flow(s),veh/h/ln	1774	1695	1551	1774	1695	1782	1219	0	1687	1164	0	1631
Q Serve(g_s), s	18.2	58.3	12.6	6.4	28.7	28.7	31.0	0.0	10.9	15.5	0.0	8.1
Cycle Q Clear(g_c), s	18.2	58.3	12.6	6.4	28.7	28.7	39.1	0.0	10.9	26.4	0.0	8.1
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.52	1.00		0.72
Lane Grp Cap(c), veh/h	422	2471	753	112	1014	533	375	0	550	334	0	531
V/C Ratio(X)	0.70	1.05	0.35	0.85	0.85	0.85	0.93	0.00	0.36	0.50	0.00	0.28
Avail Cap(c_a), veh/h	422	2471	753	112	1133	595	375	0	550	334	0	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.8	30.9	19.1	55.6	39.5	39.5	45.9	0.0	30.9	41.0	0.0	30.0
Incr Delay (d2), s/veh	2.3	28.0	0.7	5.3	0.9	1.7	27.9	0.0	0.2	0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	33.6	5.5	3.3	13.5	14.4	14.4	0.0	5.1	5.0	0.0	3.6
LnGrp Delay(d),s/veh	44.1	58.8	19.8	60.9	40.4	41.2	73.8	0.0	31.1	41.5	0.0	30.1
LnGrp LOS	D	F	B	E	D	D	E		C	D		C
Approach Vol, veh/h		3147			1411			547			316	
Approach Delay, s/veh		54.2			42.1			58.2			36.2	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	64.0		44.0	34.2	41.8		44.0
Change Period (Y+Rc), s	4.4	5.7		4.9	5.7	* 5.9		4.9
Max Green Setting (Gmax), s	7.6	58.3		39.1	25.6	* 40		39.1
Max Q Clear Time (g_c+I1), s	8.4	60.3		28.4	20.2	30.7		41.1
Green Ext Time (p_c), s	0.0	0.0		0.7	0.2	5.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	50.4
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
31: Mission Gorge Road & Friar Roads

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2350	390	310	0	370	670
Future Volume (veh/h)	2350	390	310	0	370	670
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	2398	0	316	0	378	623
Adj No. of Lanes	3	1	2	0	1	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	0	2	2
Cap, veh/h	2462	767	709	0	334	1099
Arrive On Green	0.64	0.00	0.21	0.00	0.19	0.19
Sat Flow, veh/h	5253	1583	3442	316	1774	2787
Grp Volume(v), veh/h	2398	0	316	41.8	378	623
Grp Sat Flow(s),veh/h/ln	1695	1583	1721	D	1774	1393
Q Serve(g_s), s	54.1	0.0	9.6		22.6	0.0
Cycle Q Clear(g_c), s	54.1	0.0	9.6		22.6	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2462	767	709		334	1099
V/C Ratio(X)	0.97	0.00	0.45		1.13	0.57
Avail Cap(c_a), veh/h	2466	768	709		334	1099
HCM Platoon Ratio	1.33	1.33	1.00		1.00	1.00
Upstream Filter(I)	0.09	0.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	41.7		48.7	28.4
Incr Delay (d2), s/veh	2.1	0.0	0.2		89.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	25.3	0.0	4.6		19.4	8.0
LnGrp Delay(d),s/veh	22.7	0.0	41.8		138.4	28.8
LnGrp LOS	C		D		F	C
Approach Vol, veh/h	2398				1001	
Approach Delay, s/veh	22.7				70.2	
Approach LOS	C				E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2						8
Phs Duration (G+Y+Rc), s	29.1	63.9						27.0
Change Period (Y+Rc), s	4.4	5.8						4.4
Max Green Setting (Gmax), s	24.6	58.2						22.6
Max Q Clear Time (g_c+I1), s	11.6	56.1						24.6
Green Ext Time (p_c), s	0.5	2.0						0.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.1
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
32: Mission Center Road & Mission Center Ct

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	20	140	100	50	210	130	890	110	200	800	160
Future Volume (veh/h)	120	20	140	100	50	210	130	890	110	200	800	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.99		0.97	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	21	126	105	53	126	137	937	84	211	842	126
Adj No. of Lanes	0	1	1	0	1	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	200	27	336	278	130	336	447	1602	701	234	1011	437
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.25	0.45	0.45	0.26	0.57	0.57
Sat Flow, veh/h	670	122	1540	1054	596	1540	1774	3539	1548	1774	3539	1528
Grp Volume(v), veh/h	147	0	126	158	0	126	137	937	84	211	842	126
Grp Sat Flow(s),veh/h/ln	792	0	1540	1649	0	1540	1774	1770	1548	1774	1770	1528
Q Serve(g_s), s	14.2	0.0	8.7	0.0	0.0	8.7	7.8	24.6	3.9	14.4	24.3	5.3
Cycle Q Clear(g_c), s	24.3	0.0	8.7	10.2	0.0	8.7	7.8	24.6	3.9	14.4	24.3	5.3
Prop In Lane	0.86		1.00	0.66		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	0	336	408	0	336	447	1602	701	234	1011	437
V/C Ratio(X)	0.65	0.00	0.37	0.39	0.00	0.37	0.31	0.58	0.12	0.90	0.83	0.29
Avail Cap(c_a), veh/h	244	0	358	430	0	358	447	1602	701	349	1515	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.87	0.87	0.87	0.79	0.79	0.79
Uniform Delay (d), s/veh	52.4	0.0	41.6	42.1	0.0	41.6	37.9	25.5	19.8	45.2	24.3	20.3
Incr Delay (d2), s/veh	3.8	0.0	0.3	0.2	0.0	0.3	0.1	1.4	0.3	11.8	6.5	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	3.7	4.7	0.0	3.7	3.9	12.3	1.7	7.7	12.5	2.4
LnGrp Delay(d),s/veh	56.2	0.0	41.8	42.3	0.0	41.8	38.0	26.8	20.1	57.0	30.8	21.6
LnGrp LOS	E		D	D		D	D	C	C	E	C	C
Approach Vol, veh/h		273			284			1158			1179	
Approach Delay, s/veh		49.6			42.1			27.7			34.5	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.9	66.9		37.2	41.8	46.0		37.2
Change Period (Y+Rc), s	4.4	10.3		* 9.9	10.3	* 10		* 9.9
Max Green Setting (Gmax), s	24.6	46.7		* 29	17.8	* 54		* 29
Max Q Clear Time (g_c+I1), s	16.4	26.6		26.3	9.8	26.3		12.2
Green Ext Time (p_c), s	0.2	5.6		0.2	0.1	9.4		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.9
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
33: Qualcomm Way & Rio San Diego Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	270	470	740	320	390	320	1075	230	190	820	260
Future Volume (veh/h)	370	270	470	740	320	390	320	1075	230	190	820	260
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	381	278	392	763	330	309	330	1108	175	196	845	175
Adj No. of Lanes	2	1	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	430	422	522	801	1183	633	377	1327	766	245	1132	541
Arrive On Green	0.12	0.23	0.23	0.23	0.33	0.33	0.11	0.26	0.26	0.07	0.22	0.22
Sat Flow, veh/h	3442	1863	1541	3442	3539	1555	3442	5085	1523	3442	5085	1541
Grp Volume(v), veh/h	381	278	392	763	330	309	330	1108	175	196	845	175
Grp Sat Flow(s),veh/h/ln	1721	1863	1541	1721	1770	1555	1721	1695	1523	1721	1695	1541
Q Serve(g_s), s	15.3	19.0	31.7	30.6	9.6	20.6	13.2	28.8	9.2	7.9	21.7	11.7
Cycle Q Clear(g_c), s	15.3	19.0	31.7	30.6	9.6	20.6	13.2	28.8	9.2	7.9	21.7	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	430	422	522	801	1183	633	377	1327	766	245	1132	541
V/C Ratio(X)	0.89	0.66	0.75	0.95	0.28	0.49	0.88	0.83	0.23	0.80	0.75	0.32
Avail Cap(c_a), veh/h	489	422	522	801	1183	633	408	1327	766	334	1132	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.17	0.17	0.17	0.78	0.78	0.78
Uniform Delay (d), s/veh	60.3	49.2	41.4	52.9	34.2	30.9	61.4	48.9	20.3	64.0	50.7	33.6
Incr Delay (d2), s/veh	15.0	3.7	6.0	20.8	0.1	0.6	3.5	1.2	0.1	5.2	3.5	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	10.2	14.4	16.8	4.7	9.0	6.5	13.7	3.9	3.9	10.5	5.2
LnGrp Delay(d),s/veh	75.3	53.0	47.4	73.7	34.3	31.5	64.9	50.0	20.4	69.2	54.3	34.9
LnGrp LOS	E	D	D	E	C	C	E	D	C	E	D	C
Approach Vol, veh/h		1051			1402			1613			1216	
Approach Delay, s/veh		59.0			55.1			49.9			53.9	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	46.6	37.0	42.0	19.7	41.3	21.9	57.1
Change Period (Y+Rc), s	4.4	* 10	4.4	10.3	4.4	* 10	4.4	10.3
Max Green Setting (Gmax), s	13.6	* 33	32.6	31.7	16.6	* 30	19.9	44.4
Max Q Clear Time (g_c+I1), s	9.9	30.8	32.6	33.7	15.2	23.7	17.3	22.6
Green Ext Time (p_c), s	0.1	1.6	0.0	0.0	0.1	4.0	0.2	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	54.0
HCM 2010 LOS	D

Notes

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	632	500	30	265
Demand Flow Rate, veh/h	644	510	30	270
Vehicles Circulating, veh/h	240	166	822	354
Vehicles Exiting, veh/h	384	686	62	322
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	20	20	20	20
Ped Cap Adj	0.997	0.997	0.997	0.997
Approach Delay, s/veh	17.9	10.8	8.1	8.7
Approach LOS	C	B	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	644	510	30	270
Cap Entry Lane, veh/h	889	957	497	793
Entry HV Adj Factor	0.981	0.980	0.993	0.981
Flow Entry, veh/h	632	500	30	265
Cap Entry, veh/h	869	936	492	776
V/C Ratio	0.727	0.534	0.061	0.341
Control Delay, s/veh	17.9	10.8	8.1	8.7
LOS	C	B	A	A
95th %tile Queue, veh	7	3	0	2

HCM 2010 Signalized Intersection Summary
35: Fenton Parkway & Rio San Diego Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	380	190	205	300	240	150	480	180	420	320	110
Future Volume (veh/h)	150	380	190	205	300	240	150	480	180	420	320	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	153	388	123	209	306	153	153	490	113	429	327	30
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	2	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	481	399	240	332	166	181	691	293	491	835	358
Arrive On Green	0.10	0.26	0.26	0.14	0.29	0.29	0.10	0.20	0.20	0.14	0.24	0.24
Sat Flow, veh/h	1774	1863	1547	1774	1158	579	1774	3539	1502	3442	3539	1516
Grp Volume(v), veh/h	153	388	123	209	0	459	153	490	113	429	327	30
Grp Sat Flow(s),veh/h/ln	1774	1863	1547	1774	0	1737	1774	1770	1502	1721	1770	1516
Q Serve(g_s), s	9.4	21.7	7.1	12.9	0.0	28.5	9.4	14.4	7.3	13.6	8.7	1.7
Cycle Q Clear(g_c), s	9.4	21.7	7.1	12.9	0.0	28.5	9.4	14.4	7.3	13.6	8.7	1.7
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	481	399	240	0	499	181	691	293	491	835	358
V/C Ratio(X)	0.83	0.81	0.31	0.87	0.00	0.92	0.85	0.71	0.39	0.87	0.39	0.08
Avail Cap(c_a), veh/h	558	711	590	558	0	663	186	779	331	563	982	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	38.7	33.3	47.2	0.0	38.5	49.1	41.8	39.0	46.7	35.8	33.1
Incr Delay (d2), s/veh	5.9	3.2	0.3	3.8	0.0	13.3	26.6	6.1	3.8	11.8	1.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	11.6	3.1	6.6	0.0	15.5	6.0	7.6	3.3	7.2	4.4	0.8
LnGrp Delay(d),s/veh	54.8	41.9	33.6	50.9	0.0	51.7	75.7	47.9	42.8	58.6	37.2	33.6
LnGrp LOS	D	D	C	D		D	E	D	D	E	D	C
Approach Vol, veh/h		664			668			756			786	
Approach Delay, s/veh		43.3			51.5			52.8			48.7	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.3	32.1	20.0	38.9	15.7	36.7	16.7	42.2
Change Period (Y+Rc), s	4.4	* 10	4.9	10.2	4.4	* 10	5.2	* 10
Max Green Setting (Gmax), s	18.2	* 25	35.0	42.5	11.7	* 31	35.0	* 43
Max Q Clear Time (g_c+I1), s	15.6	16.4	14.9	23.7	11.4	10.7	11.4	30.5
Green Ext Time (p_c), s	0.3	4.9	0.3	1.8	0.0	6.0	0.2	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	49.2
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
36: Northside Drive & Rio San Diego Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	490	20	20	20	50	270	20	250	10	120	240	340
Future Volume (veh/h)	490	20	20	20	50	270	20	250	10	120	240	340
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.94	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	551	0	0	21	53	268	21	263	6	126	253	305
Adj No. of Lanes	2	1	0	0	1	1	1	2	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	796	418	0	125	315	370	34	604	254	160	450	728
Arrive On Green	0.22	0.00	0.00	0.24	0.24	0.24	0.02	0.17	0.17	0.09	0.24	0.24
Sat Flow, veh/h	3548	1863	0	521	1315	1544	1774	3539	1491	1774	1863	1544
Grp Volume(v), veh/h	551	0	0	74	0	268	21	263	6	126	253	305
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1837	0	1544	1774	1770	1491	1774	1863	1544
Q Serve(g_s), s	9.9	0.0	0.0	2.2	0.0	11.1	0.8	4.6	0.2	4.8	8.3	9.1
Cycle Q Clear(g_c), s	9.9	0.0	0.0	2.2	0.0	11.1	0.8	4.6	0.2	4.8	8.3	9.1
Prop In Lane	1.00		0.00	0.28		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	796	418	0	440	0	370	34	604	254	160	450	728
V/C Ratio(X)	0.69	0.00	0.00	0.17	0.00	0.72	0.62	0.44	0.02	0.79	0.56	0.42
Avail Cap(c_a), veh/h	1432	752	0	794	0	668	102	934	393	246	642	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	0.0	20.9	0.0	24.3	33.8	25.8	24.0	30.9	23.1	12.3
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.1	0.0	1.0	6.6	0.2	0.0	4.2	2.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	0.0	1.1	0.0	4.8	0.5	2.3	0.1	2.5	4.6	5.7
LnGrp Delay(d),s/veh	25.1	0.0	0.0	21.0	0.0	25.3	40.3	26.0	24.0	35.1	25.9	13.3
LnGrp LOS	C			C		C	D	C	C	D	C	B
Approach Vol, veh/h		551			342			290			684	
Approach Delay, s/veh		25.1			24.4			27.0			22.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.7	16.7		20.5	5.7	21.7		21.5
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	9.6	18.3		28.0	4.0	23.9		30.0
Max Q Clear Time (g_c+I1), s	6.8	6.6		11.9	2.8	11.1		13.1
Green Ext Time (p_c), s	0.0	0.9		1.0	0.0	4.5		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
37: Rancho Mission Road & San Diego Mission Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	550	480	130	120	180	150	350	120	170	280	190
Future Volume (veh/h)	190	550	480	130	120	180	150	350	120	170	280	190
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	200	579	379	137	126	147	158	368	84	179	295	147
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	662	434	157	1007	435	186	404	334	205	424	351
Arrive On Green	0.13	0.33	0.33	0.09	0.28	0.28	0.10	0.22	0.22	0.12	0.23	0.23
Sat Flow, veh/h	1774	2035	1332	1774	3539	1528	1774	1863	1540	1774	1863	1542
Grp Volume(v), veh/h	200	503	455	137	126	147	158	368	84	179	295	147
Grp Sat Flow(s),veh/h/ln	1774	1770	1598	1774	1770	1528	1774	1863	1540	1774	1863	1542
Q Serve(g_s), s	12.5	30.2	30.2	8.6	3.0	8.6	9.9	21.7	5.1	11.2	16.4	9.2
Cycle Q Clear(g_c), s	12.5	30.2	30.2	8.6	3.0	8.6	9.9	21.7	5.1	11.2	16.4	9.2
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	576	520	157	1007	435	186	404	334	205	424	351
V/C Ratio(X)	0.87	0.87	0.87	0.87	0.13	0.34	0.85	0.91	0.25	0.87	0.70	0.42
Avail Cap(c_a), veh/h	346	620	560	157	1007	435	205	481	397	205	478	395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	35.8	35.8	50.7	29.9	31.9	49.6	43.1	36.6	49.1	40.0	37.2
Incr Delay (d2), s/veh	10.0	13.2	14.4	36.2	0.1	0.8	23.7	17.9	0.1	30.7	2.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	16.8	15.3	5.8	1.5	3.7	6.0	13.2	2.2	7.2	8.8	4.0
LnGrp Delay(d),s/veh	58.1	49.0	50.2	86.9	30.0	32.7	73.3	61.0	36.7	79.7	42.8	37.5
LnGrp LOS	E	D	D	F	C	C	E	E	D	E	D	D
Approach Vol, veh/h		1158			410			610			621	
Approach Delay, s/veh		51.1			50.0			60.8			52.2	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	47.2	15.8	35.7	18.6	42.6	17.0	34.5
Change Period (Y+Rc), s	4.0	10.5	4.0	* 10	4.0	* 11	4.0	* 10
Max Green Setting (Gmax), s	10.0	39.5	13.0	* 29	22.0	* 28	13.0	* 29
Max Q Clear Time (g_c+I1), s	10.6	32.2	11.9	18.4	14.5	10.6	13.2	23.7
Green Ext Time (p_c), s	0.0	4.4	0.0	0.9	0.2	1.8	0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	53.3
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
38: Mission Center Road & Harzard Center Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	20	720	80	50	50	460	830	20	60	900	80
Future Volume (veh/h)	250	20	720	80	50	50	460	830	20	60	900	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.93	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	275	0	490	83	52	21	479	865	11	62	938	62
Adj No. of Lanes	2	0	1	0	1	1	2	2	1	1	3	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	943	0	659	100	63	134	549	1321	562	80	1256	83
Arrive On Green	0.27	0.00	0.27	0.09	0.09	0.09	0.16	0.37	0.37	0.04	0.26	0.26
Sat Flow, veh/h	3548	0	1528	1111	696	1478	3442	3539	1507	1774	4862	321
Grp Volume(v), veh/h	275	0	490	135	0	21	479	865	11	62	653	347
Grp Sat Flow(s),veh/h/ln	1774	0	1528	1807	0	1478	1721	1770	1507	1774	1695	1792
Q Serve(g_s), s	7.4	0.0	32.0	8.8	0.0	1.6	16.4	24.4	0.6	4.2	21.3	21.4
Cycle Q Clear(g_c), s	7.4	0.0	32.0	8.8	0.0	1.6	16.4	24.4	0.6	4.2	21.3	21.4
Prop In Lane	1.00		1.00	0.61		1.00	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	943	0	659	163	0	134	549	1321	562	80	876	463
V/C Ratio(X)	0.29	0.00	0.74	0.83	0.00	0.16	0.87	0.66	0.02	0.78	0.75	0.75
Avail Cap(c_a), veh/h	943	0	659	195	0	160	1172	2107	897	162	1036	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	0.0	29.3	53.8	0.0	50.5	49.4	31.3	23.8	56.9	41.0	41.1
Incr Delay (d2), s/veh	0.2	0.0	4.8	18.4	0.0	0.2	1.7	1.1	0.0	6.0	3.3	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	14.7	5.3	0.0	0.7	7.9	12.1	0.2	2.2	10.4	11.4
LnGrp Delay(d),s/veh	35.4	0.0	34.1	72.3	0.0	50.7	51.1	32.4	23.9	62.9	44.3	47.2
LnGrp LOS	D		C	E		D	D	C	C	E	D	D
Approach Vol, veh/h		765			156			1355			1062	
Approach Delay, s/veh		34.5			69.4			39.0			46.3	
Approach LOS		C			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.4	55.1		41.0	23.2	41.3		14.9
Change Period (Y+Rc), s	4.0	* 10		9.0	4.0	10.2		4.0
Max Green Setting (Gmax), s	11.0	* 72		32.0	41.0	36.8		13.0
Max Q Clear Time (g_c+I1), s	6.2	26.4		34.0	18.4	23.4		10.8
Green Ext Time (p_c), s	0.0	13.4		0.0	0.9	7.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	41.7
HCM 2010 LOS	D

Notes



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	390	490	290	490	490	280
Future Volume (veh/h)	390	490	290	490	490	280
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	411	284	305	284	516	295
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	463	910	459	375	556	1146
Arrive On Green	0.26	0.26	0.25	0.25	0.31	0.62
Sat Flow, veh/h	1774	1583	1863	1519	1774	1863
Grp Volume(v), veh/h	411	284	305	284	516	295
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1519	1774	1863
Q Serve(g_s), s	16.2	6.8	10.7	12.6	20.5	5.3
Cycle Q Clear(g_c), s	16.2	6.8	10.7	12.6	20.5	5.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	463	910	459	375	556	1146
V/C Ratio(X)	0.89	0.31	0.66	0.76	0.93	0.26
Avail Cap(c_a), veh/h	512	954	564	460	586	1281
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	8.0	24.7	25.4	24.2	6.4
Incr Delay (d2), s/veh	16.1	0.2	2.1	5.7	20.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	3.0	5.8	5.9	13.2	2.7
LnGrp Delay(d),s/veh	41.9	8.2	26.8	31.1	44.8	6.5
LnGrp LOS	D	A	C	C	D	A
Approach Vol, veh/h	695		589			811
Approach Delay, s/veh	28.1		28.9			30.9
Approach LOS	C		C			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	26.8	22.4				49.2		23.5
Change Period (Y+Rc), s	4.0	4.5				4.5		4.5
Max Green Setting (Gmax), s	24.0	22.0				50.0		21.0
Max Q Clear Time (g_c+I1), s	22.5	14.6				7.3		18.2
Green Ext Time (p_c), s	0.3	1.8				1.9		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.4
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
40: Mission Center Road & Camino De La Reina

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	560	300	300	310	290	250	720	250	460	920	290
Future Volume (veh/h)	260	560	300	300	310	290	250	720	250	460	920	290
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	274	589	221	316	326	210	263	758	200	484	968	210
Adj No. of Lanes	2	2	0	2	2	0	2	3	0	2	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	347	738	276	385	632	397	208	960	250	302	1361	408
Arrive On Green	0.10	0.30	0.30	0.11	0.31	0.31	0.06	0.24	0.24	0.09	0.27	0.27
Sat Flow, veh/h	3442	2496	934	3442	2060	1292	3442	3996	1042	3442	5085	1524
Grp Volume(v), veh/h	274	417	393	316	279	257	263	642	316	484	968	210
Grp Sat Flow(s),veh/h/ln	1721	1770	1661	1721	1770	1582	1721	1695	1647	1721	1695	1524
Q Serve(g_s), s	8.5	23.8	23.9	9.8	14.2	14.7	6.6	19.4	19.7	9.6	18.8	12.8
Cycle Q Clear(g_c), s	8.5	23.8	23.9	9.8	14.2	14.7	6.6	19.4	19.7	9.6	18.8	12.8
Prop In Lane	1.00		0.56	1.00		0.82	1.00		0.63	1.00		1.00
Lane Grp Cap(c), veh/h	347	523	491	385	543	486	208	815	396	302	1361	408
V/C Ratio(X)	0.79	0.80	0.80	0.82	0.51	0.53	1.27	0.79	0.80	1.60	0.71	0.51
Avail Cap(c_a), veh/h	1467	1000	939	655	583	521	208	896	435	302	1493	447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	35.5	35.5	47.5	31.2	31.4	51.4	38.9	39.0	49.9	36.2	34.0
Incr Delay (d2), s/veh	1.5	3.0	3.2	1.7	1.5	1.7	152.1	5.1	10.7	285.8	1.9	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	12.0	11.3	4.7	7.1	6.7	7.5	9.7	10.1	16.5	9.0	5.6
LnGrp Delay(d),s/veh	49.6	38.5	38.7	49.1	32.6	33.1	203.5	44.0	49.8	335.7	38.1	36.0
LnGrp LOS	D	D	D	D	C	C	F	D	D	F	D	D
Approach Vol, veh/h		1084			852			1221			1662	
Approach Delay, s/veh		41.4			38.9			79.8			124.5	
Approach LOS		D			D			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	36.5	16.6	42.2	11.0	39.5	15.4	43.4
Change Period (Y+Rc), s	4.4	10.2	4.4	* 9.9	4.4	* 10	4.4	* 9.9
Max Green Setting (Gmax), s	9.6	28.9	20.8	* 62	6.6	* 32	46.6	* 36
Max Q Clear Time (g_c+I1), s	11.6	21.7	11.8	25.9	8.6	20.8	10.5	16.7
Green Ext Time (p_c), s	0.0	4.5	0.4	6.5	0.0	7.6	0.5	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	79.3
HCM 2010 LOS	E

Notes

HCM 2010 Signalized Intersection Summary
41: Camino Del Este & Camino De La Reina

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	630	180	240	590	50	150	170	160	150	330	220
Future Volume (veh/h)	210	630	180	240	590	50	150	170	160	150	330	220
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	0.99		0.98	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	221	663	157	253	621	42	158	179	147	158	347	179
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	260	881	379	293	947	408	279	1064	466	357	1064	460
Arrive On Green	0.15	0.25	0.25	0.16	0.27	0.27	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	3539	1523	1774	3539	1524	866	3539	1552	1037	3539	1531
Grp Volume(v), veh/h	221	663	157	253	621	42	158	179	147	158	347	179
Grp Sat Flow(s),veh/h/ln	1774	1770	1523	1774	1770	1524	866	1770	1552	1037	1770	1531
Q Serve(g_s), s	10.4	14.8	7.4	11.9	13.3	1.8	14.8	3.2	6.3	11.3	6.5	7.9
Cycle Q Clear(g_c), s	10.4	14.8	7.4	11.9	13.3	1.8	21.3	3.2	6.3	14.5	6.5	7.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	881	379	293	947	408	279	1064	466	357	1064	460
V/C Ratio(X)	0.85	0.75	0.41	0.86	0.66	0.10	0.57	0.17	0.32	0.44	0.33	0.39
Avail Cap(c_a), veh/h	427	1163	501	490	1283	553	363	1408	617	458	1408	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	29.7	26.9	34.8	27.8	23.6	31.4	22.0	23.1	27.4	23.2	23.7
Incr Delay (d2), s/veh	4.1	2.0	0.8	4.1	0.8	0.1	1.2	0.1	0.3	0.6	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	7.4	3.2	6.2	6.6	0.8	3.6	1.5	2.7	3.3	3.2	3.4
LnGrp Delay(d),s/veh	39.7	31.7	27.6	38.8	28.6	23.7	32.7	22.1	23.4	28.0	23.3	24.0
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		1041			916			484			684	
Approach Delay, s/veh		32.8			31.2			25.9			24.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.5	31.4		35.6	16.9	33.0		35.6
Change Period (Y+Rc), s	4.4	* 10		* 9.9	4.4	* 10		* 9.9
Max Green Setting (Gmax), s	23.6	* 28		* 34	20.6	* 31		* 34
Max Q Clear Time (g_c+I1), s	13.9	16.8		16.5	12.4	15.3		23.3
Green Ext Time (p_c), s	0.3	4.0		2.8	0.2	3.9		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
42: Qualcomm Way & Camino De La Reina/Camino Del Rio North

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	320	350	80	330	250	250	1420	300	295	1795	250
Future Volume (veh/h)	285	320	350	80	330	250	250	1420	300	295	1795	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	291	292	380	82	337	173	255	1449	224	301	1832	184
Adj No. of Lanes	1	1	2	2	2	1	2	2	1	2	3	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	252	499	1119	124	572	243	256	1590	693	275	2313	702
Arrive On Green	0.14	0.27	0.27	0.04	0.16	0.16	0.07	0.45	0.45	0.08	0.45	0.45
Sat Flow, veh/h	1774	1863	3054	3442	3539	1505	3442	3539	1543	3442	5085	1543
Grp Volume(v), veh/h	291	292	380	82	337	173	255	1449	224	301	1832	184
Grp Sat Flow(s),veh/h/ln	1774	1863	1527	1721	1770	1505	1721	1770	1543	1721	1695	1543
Q Serve(g_s), s	20.6	19.7	13.1	3.4	12.8	15.8	10.7	55.3	13.6	11.6	44.5	10.7
Cycle Q Clear(g_c), s	20.6	19.7	13.1	3.4	12.8	15.8	10.7	55.3	13.6	11.6	44.5	10.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	252	499	1119	124	572	243	256	1590	693	275	2313	702
V/C Ratio(X)	1.15	0.59	0.34	0.66	0.59	0.71	1.00	0.91	0.32	1.09	0.79	0.26
Avail Cap(c_a), veh/h	252	615	1310	173	830	353	280	1590	693	275	2313	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	1.00	1.00	1.00	0.70	0.70	0.70	0.51	0.51	0.51
Uniform Delay (d), s/veh	62.2	46.1	33.6	69.0	56.3	57.6	67.1	37.2	25.7	66.7	33.7	24.5
Incr Delay (d2), s/veh	97.0	0.6	0.1	2.2	0.4	1.4	41.7	6.9	0.9	66.4	1.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.9	10.2	5.5	1.7	6.3	6.7	6.6	28.5	5.9	8.0	21.2	4.6
LnGrp Delay(d),s/veh	159.2	46.7	33.7	71.2	56.7	59.0	108.8	44.1	26.6	133.1	35.1	24.9
LnGrp LOS	F	D	C	E	E	E	F	D	C	F	D	C
Approach Vol, veh/h		963			592			1928			2317	
Approach Delay, s/veh		75.6			59.4			50.6			47.1	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	71.9	9.6	44.5	18.2	72.7	25.0	29.1
Change Period (Y+Rc), s	4.4	6.7	4.4	* 5.7	4.4	* 6.7	4.4	5.7
Max Green Setting (Gmax), s	14.6	54.6	7.3	* 48	14.8	* 56	20.6	34.0
Max Q Clear Time (g_c+I1), s	14.6	57.3	5.4	21.7	13.7	46.5	22.6	17.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.1	9.2	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	54.2
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
43: Fenton Parkway & Camino Del Rio North

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	300	340	230	260	80	180	280	190	120	360	180
Future Volume (veh/h)	150	300	340	230	260	80	180	280	190	120	360	180
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	158	316	305	242	274	63	189	295	168	126	379	157
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	413	526	267	386	89	214	390	222	154	398	165
Arrive On Green	0.11	0.22	0.22	0.15	0.26	0.26	0.12	0.35	0.35	0.09	0.32	0.32
Sat Flow, veh/h	1774	1863	1512	1774	1459	335	1774	1103	628	1774	1245	516
Grp Volume(v), veh/h	158	316	305	242	0	337	189	0	463	126	0	536
Grp Sat Flow(s),veh/h/ln	1774	1863	1512	1774	0	1794	1774	0	1730	1774	0	1760
Q Serve(g_s), s	9.0	16.5	17.2	13.9	0.0	17.6	10.9	0.0	24.5	7.2	0.0	30.9
Cycle Q Clear(g_c), s	9.0	16.5	17.2	13.9	0.0	17.6	10.9	0.0	24.5	7.2	0.0	30.9
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.36	1.00		0.29
Lane Grp Cap(c), veh/h	189	413	526	267	0	475	214	0	612	154	0	563
V/C Ratio(X)	0.84	0.77	0.58	0.91	0.00	0.71	0.88	0.00	0.76	0.82	0.00	0.95
Avail Cap(c_a), veh/h	236	529	620	267	0	544	214	0	612	156	0	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.4	37.8	28.1	43.3	0.0	34.5	44.8	0.0	29.5	46.5	0.0	34.5
Incr Delay (d2), s/veh	18.7	5.2	1.1	30.9	0.0	3.7	32.1	0.0	4.8	27.6	0.0	26.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	9.0	7.3	9.1	0.0	9.2	7.2	0.0	12.5	4.7	0.0	19.0
LnGrp Delay(d),s/veh	64.0	43.0	29.2	74.2	0.0	38.2	76.9	0.0	34.4	74.1	0.0	60.7
LnGrp LOS	E	D	C	E		D	E		C	E		E
Approach Vol, veh/h		779			579			652			662	
Approach Delay, s/veh		41.8			53.2			46.7			63.2	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	28.6	17.0	38.0	15.5	33.0	13.5	41.5
Change Period (Y+Rc), s	4.4	5.6	4.5	* 4.9	4.5	* 5.6	4.5	4.9
Max Green Setting (Gmax), s	15.6	29.4	12.5	* 34	13.8	* 31	9.1	36.5
Max Q Clear Time (g_c+I1), s	15.9	19.2	12.9	32.9	11.0	19.6	9.2	26.5
Green Ext Time (p_c), s	0.0	2.4	0.0	0.3	0.1	1.6	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	50.8
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
44: Camino Del Rio North & Rancho Mission Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	270	490	210	290	660	290
Future Volume (veh/h)	270	490	210	290	660	290
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.94	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	284	516	221	210	695	231
Adj No. of Lanes	1	2	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	294	1363	616	260	711	897
Arrive On Green	0.17	0.39	0.17	0.17	0.40	0.40
Sat Flow, veh/h	1774	3632	3632	1492	1774	1583
Grp Volume(v), veh/h	284	516	221	210	695	231
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1492	1774	1583
Q Serve(g_s), s	15.5	10.2	5.4	13.2	37.7	7.2
Cycle Q Clear(g_c), s	15.5	10.2	5.4	13.2	37.7	7.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	294	1363	616	260	711	897
V/C Ratio(X)	0.96	0.38	0.36	0.81	0.98	0.26
Avail Cap(c_a), veh/h	294	1657	703	297	711	897
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	21.6	35.5	38.7	28.8	10.7
Incr Delay (d2), s/veh	42.4	0.3	0.5	15.1	28.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	5.1	2.7	6.5	23.9	9.0
LnGrp Delay(d),s/veh	82.9	21.9	36.0	53.8	56.9	10.8
LnGrp LOS	F	C	D	D	E	B
Approach Vol, veh/h		800	431		926	
Approach Delay, s/veh		43.5	44.7		45.4	
Approach LOS		D	D		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		48.6		49.0	20.6	28.0		
Change Period (Y+Rc), s		* 11		* 9.9	4.4	11.0		
Max Green Setting (Gmax), s		* 46		* 39	16.2	19.4		
Max Q Clear Time (g_c+I1), s		12.2		39.7	17.5	15.2		
Green Ext Time (p_c), s		5.6		0.0	0.0	1.2		

Intersection Summary	
HCM 2010 Ctrl Delay	44.6
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
45: Mission Gorge Road & Camino Del Rio North/I-8 WB Off Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	130	610	670	80	290	340	970	220	50	1520	90
Future Volume (veh/h)	110	130	610	670	80	290	340	970	220	50	1520	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	113	134	402	691	175	124	351	1000	175	52	1567	31
Adj No. of Lanes	1	1	1	2	1	1	1	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	101	370	796	418	447	329	1828	808	220	1398	616
Arrive On Green	0.05	0.05	0.05	0.22	0.22	0.22	0.19	0.52	0.52	0.06	0.39	0.39
Sat Flow, veh/h	1774	1863	1409	3548	1863	1541	1774	3539	1565	3442	3539	1559
Grp Volume(v), veh/h	113	134	402	691	175	124	351	1000	175	52	1567	31
Grp Sat Flow(s),veh/h/ln	1774	1863	1409	1774	1863	1541	1774	1770	1565	1721	1770	1559
Q Serve(g_s), s	7.9	7.9	7.9	27.2	11.7	0.0	26.9	27.6	8.8	2.1	57.3	1.8
Cycle Q Clear(g_c), s	7.9	7.9	7.9	27.2	11.7	0.0	26.9	27.6	8.8	2.1	57.3	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	101	371	796	418	447	329	1828	808	220	1398	616
V/C Ratio(X)	1.17	1.32	1.09	0.87	0.42	0.28	1.07	0.55	0.22	0.24	1.12	0.05
Avail Cap(c_a), veh/h	97	101	371	903	474	493	329	1828	808	220	1398	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.6	68.6	55.4	54.2	48.1	39.8	59.0	23.6	19.1	64.5	43.9	27.1
Incr Delay (d2), s/veh	144.1	197.5	71.5	7.5	0.2	0.1	60.2	0.8	0.4	0.2	64.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	9.6	22.2	14.2	6.1	3.8	18.7	13.7	3.9	1.0	40.5	0.8
LnGrp Delay(d),s/veh	212.6	266.1	126.9	61.7	48.4	40.0	119.2	24.4	19.5	64.7	108.4	27.2
LnGrp LOS	F	F	F	E	D	D	F	C	B	E	F	C
Approach Vol, veh/h		649			990			1526			1650	
Approach Delay, s/veh		170.6			56.6			45.7			105.5	
Approach LOS		F			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.4	80.0		13.0	32.0	62.4		37.6
Change Period (Y+Rc), s	5.1	5.1		5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	4.9	74.9		7.9	26.9	52.9		36.9
Max Q Clear Time (g_c+I1), s	4.1	29.6		9.9	28.9	59.3		29.2
Green Ext Time (p_c), s	0.0	5.0		0.0	0.0	0.0		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	85.2
HCM 2010 LOS	F

Notes



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	200	100	0	90
Future Volume (veh/h)	0	0	200	100	0	90
Number			8	18	1	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1900	1863	1863
Adj Flow Rate, veh/h			211	105	0	95
Adj No. of Lanes			2	0	1	1
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			784	373	0	0
Arrive On Green			0.34	0.34	0.00	0.00
Sat Flow, veh/h			2397	1096	0	
Grp Volume(v), veh/h			160	156	0.0	
Grp Sat Flow(s),veh/h/ln			1770	1630		
Q Serve(g_s), s			0.9	1.0		
Cycle Q Clear(g_c), s			0.9	1.0		
Prop In Lane				0.67		
Lane Grp Cap(c), veh/h			602	555		
V/C Ratio(X)			0.27	0.28		
Avail Cap(c_a), veh/h			2027	1868		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			3.4	3.5		
Incr Delay (d2), s/veh			0.2	0.3		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			0.5	0.5		
LnGrp Delay(d),s/veh			3.7	3.7		
LnGrp LOS			A	A		
Approach Vol, veh/h			316			
Approach Delay, s/veh			3.7			
Approach LOS			A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs								8
Phs Duration (G+Y+Rc), s								14.4
Change Period (Y+Rc), s								9.5
Max Green Setting (Gmax), s								16.5
Max Q Clear Time (g_c+I1), s								3.0
Green Ext Time (p_c), s								1.5

Intersection Summary	
HCM 2010 Ctrl Delay	3.7
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
48: Hotel Circle North/Camino De La Reina & Fashion Valley Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	550	440	1	460
Future Volume (veh/h)	0	0	550	440	1	460
Number			2	12	7	14
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.95	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	1863	1863
Adj Flow Rate, veh/h			579	358	1	379
Adj No. of Lanes			2	1	1	2
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1145	486	0	0
Arrive On Green			0.32	0.32	0.00	0.00
Sat Flow, veh/h			3632	1502	0	
Grp Volume(v), veh/h			579	358	0.0	
Grp Sat Flow(s),veh/h/ln			1770	1502		
Q Serve(g_s), s			11.9	19.1		
Cycle Q Clear(g_c), s			11.9	19.1		
Prop In Lane				1.00		
Lane Grp Cap(c), veh/h			1145	486		
V/C Ratio(X)			0.51	0.74		
Avail Cap(c_a), veh/h			1931	819		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			24.6	27.0		
Incr Delay (d2), s/veh			0.5	3.0		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			5.9	8.3		
LnGrp Delay(d),s/veh			25.1	30.0		
LnGrp LOS			C	C		
Approach Vol, veh/h			937			
Approach Delay, s/veh			27.0			
Approach LOS			C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		39.0						
Change Period (Y+Rc), s		* 9.9						
Max Green Setting (Gmax), s		* 49						
Max Q Clear Time (g_c+I1), s		21.1						
Green Ext Time (p_c), s		8.1						

Intersection Summary	
HCM 2010 Ctrl Delay	27.0
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
49: Mission Center Road & Camino Del Rio N

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	210	260	280	280	490	240	590	670	410	980	130
Future Volume (veh/h)	140	210	260	280	280	490	240	590	670	410	980	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	144	216	0	289	289	443	247	608	0	423	1010	103
Adj No. of Lanes	1	2	1	2	1	1	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	898	402	360	487	405	298	910	407	493	1111	480
Arrive On Green	0.10	0.25	0.00	0.10	0.26	0.26	0.09	0.26	0.00	0.14	0.31	0.31
Sat Flow, veh/h	1774	3539	1583	3442	1863	1547	3442	3539	1583	3442	3539	1529
Grp Volume(v), veh/h	144	216	0	289	289	443	247	608	0	423	1010	103
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1863	1547	1721	1770	1583	1721	1770	1529
Q Serve(g_s), s	7.9	4.8	0.0	8.2	13.5	26.0	7.0	15.3	0.0	11.9	27.2	4.9
Cycle Q Clear(g_c), s	7.9	4.8	0.0	8.2	13.5	26.0	7.0	15.3	0.0	11.9	27.2	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	898	402	360	487	405	298	910	407	493	1111	480
V/C Ratio(X)	0.84	0.24	0.00	0.80	0.59	1.09	0.83	0.67	0.00	0.86	0.91	0.21
Avail Cap(c_a), veh/h	171	954	427	492	487	405	298	910	407	544	1132	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	29.5	0.0	43.5	32.1	36.7	44.7	33.1	0.0	41.6	32.7	25.1
Incr Delay (d2), s/veh	28.1	0.1	0.0	4.7	1.3	72.7	16.6	1.5	0.0	12.1	11.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	2.4	0.0	4.1	7.1	19.2	4.0	7.7	0.0	6.5	15.0	2.1
LnGrp Delay(d),s/veh	72.2	29.6	0.0	48.2	33.4	109.4	61.2	34.7	0.0	53.7	43.8	25.5
LnGrp LOS	E	C		D	C	F	E	C		D	D	C
Approach Vol, veh/h		360			1021			855			1536	
Approach Delay, s/veh		46.7			70.6			42.3			45.3	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	30.4	14.8	35.5	13.0	36.1	14.0	36.3
Change Period (Y+Rc), s	4.4	4.9	4.4	* 10	4.4	4.9	4.4	10.3
Max Green Setting (Gmax), s	15.7	24.7	14.2	* 27	8.6	31.8	9.6	26.0
Max Q Clear Time (g_c+I1), s	13.9	17.3	10.2	6.8	9.0	29.2	9.9	28.0
Green Ext Time (p_c), s	0.3	1.6	0.2	1.3	0.0	2.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	51.6
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
50: I-8 WB Ramps/Mission Valley Mall Driveway & Camino Del Rio N

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	340	950	290	310	0	740	190	270	0	0	0
Future Volume (veh/h)	0	340	950	290	310	0	740	190	270	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	0	351	0	299	320	0	480	593	0			
Adj No. of Lanes	0	2	1	1	2	0	1	1	1			
Peak Hour Factor	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2			
Cap, veh/h	0	1314	588	276	1975	0	642	674	573			
Arrive On Green	0.00	0.37	0.00	0.16	0.56	0.00	0.36	0.36	0.00			
Sat Flow, veh/h	0	3632	1583	1774	3632	0	1774	1863	1583			
Grp Volume(v), veh/h	0	351	0	299	320	0	480	593	0			
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0	1774	1863	1583			
Q Serve(g_s), s	0.0	10.4	0.0	23.3	6.6	0.0	35.5	44.7	0.0			
Cycle Q Clear(g_c), s	0.0	10.4	0.0	23.3	6.6	0.0	35.5	44.7	0.0			
Prop In Lane	0.00		1.00	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	1314	588	276	1975	0	642	674	573			
V/C Ratio(X)	0.00	0.27	0.00	1.09	0.16	0.00	0.75	0.88	0.00			
Avail Cap(c_a), veh/h	0	1314	588	276	1975	0	757	795	676			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.85	0.00	1.00	1.00	0.00	1.00	1.00	0.00			
Uniform Delay (d), s/veh	0.0	32.9	0.0	63.3	16.1	0.0	41.8	44.8	0.0			
Incr Delay (d2), s/veh	0.0	0.4	0.0	78.8	0.2	0.0	4.0	10.6	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	5.1	0.0	17.4	3.2	0.0	18.0	24.9	0.0			
LnGrp Delay(d),s/veh	0.0	33.3	0.0	142.1	16.3	0.0	45.8	55.3	0.0			
LnGrp LOS		C		F	B		D	E				
Approach Vol, veh/h		351			619			1073				
Approach Delay, s/veh		33.3			77.1			51.1				
Approach LOS		C			E			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	28.0	61.7		60.3		89.7		
Change Period (Y+Rc), s	* 4.7	6.0		6.0		6.0		
Max Green Setting (Gmax), s	* 23	46.0		64.0		74.0		
Max Q Clear Time (g_c+I1), s	25.3	12.4		46.7		8.6		
Green Ext Time (p_c), s	0.0	2.6		7.6		2.5		

Intersection Summary			
HCM 2010 Ctrl Delay		55.9	
HCM 2010 LOS		E	

Notes

HCM 2010 Signalized Intersection Summary
51: Camino Del Rio N & Camino Del Este



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	270	430	350	230	460	330
Future Volume (veh/h)	270	430	350	230	460	330
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	284	453	368	200	484	305
Adj No. of Lanes	1	1	2	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	289	1108	1352	589	519	463
Arrive On Green	0.16	0.59	0.38	0.38	0.29	0.29
Sat Flow, veh/h	1774	1863	3632	1542	1774	1583
Grp Volume(v), veh/h	284	453	368	200	484	305
Grp Sat Flow(s),veh/h/ln	1774	1863	1770	1542	1774	1583
Q Serve(g_s), s	12.7	10.4	5.7	7.4	21.2	13.5
Cycle Q Clear(g_c), s	12.7	10.4	5.7	7.4	21.2	13.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	289	1108	1352	589	519	463
V/C Ratio(X)	0.98	0.41	0.27	0.34	0.93	0.66
Avail Cap(c_a), veh/h	289	1108	1352	589	522	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	8.7	17.0	17.5	27.5	24.8
Incr Delay (d2), s/veh	48.0	1.1	0.5	1.6	24.1	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	5.6	2.9	3.4	13.8	12.0
LnGrp Delay(d),s/veh	81.4	9.8	17.5	19.1	51.6	28.5
LnGrp LOS	F	A	B	B	D	C
Approach Vol, veh/h		737	568		789	
Approach Delay, s/veh		37.4	18.1		42.7	
Approach LOS		D	B		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		52.0		27.8	17.0	35.0		
Change Period (Y+Rc), s		4.5		4.5	4.0	4.5		
Max Green Setting (Gmax), s		47.5		23.5	13.0	30.5		
Max Q Clear Time (g_c+I1), s		12.4		23.2	14.7	9.4		
Green Ext Time (p_c), s		2.7		0.1	0.0	2.6		

Intersection Summary	
HCM 2010 Ctrl Delay	34.1
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
52: Qualcomm Way & Camino Del Rio N/I-8 WB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	0	490	130	250	375	290	1285	250	0	1475	750
Future Volume (veh/h)	310	0	490	130	250	375	290	1285	250	0	1475	750
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1900	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	316	0	408	133	255	291	296	1311	0	0	1505	459
Adj No. of Lanes	1	0	1	0	1	1	1	3	1	0	2	1
Peak Hour Factor	0.98	0.95	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.95	0.98	0.98
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	119	228	291	640	3814	1187	0	1255	552
Arrive On Green	0.00	0.00	0.00	0.19	0.19	0.19	0.36	0.75	0.00	0.00	0.35	0.35
Sat Flow, veh/h		0		628	1204	1533	1774	5085	1583	0	3632	1557
Grp Volume(v), veh/h		0.0		388	0	291	296	1311	0	0	1505	459
Grp Sat Flow(s),veh/h/ln				1831	0	1533	1774	1695	1583	0	1770	1557
Q Serve(g_s), s				37.9	0.0	37.9	25.6	17.4	0.0	0.0	70.9	54.0
Cycle Q Clear(g_c), s				37.9	0.0	37.9	25.6	17.4	0.0	0.0	70.9	54.0
Prop In Lane				0.34		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				347	0	291	640	3814	1187	0	1255	552
V/C Ratio(X)				1.12	0.00	1.00	0.46	0.34	0.00	0.00	1.20	0.83
Avail Cap(c_a), veh/h				347	0	291	640	3814	1187	0	1255	552
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.86	0.86	0.00	0.00	0.57	0.57
Uniform Delay (d), s/veh				81.1	0.0	81.1	49.1	8.4	0.0	0.0	64.6	59.1
Incr Delay (d2), s/veh				84.1	0.0	53.2	0.2	0.2	0.0	0.0	94.4	8.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				27.3	0.0	20.4	12.6	8.2	0.0	0.0	51.1	24.5
LnGrp Delay(d),s/veh				165.2	0.0	134.2	49.3	8.6	0.0	0.0	159.0	67.4
LnGrp LOS				F		F	D	A			F	E
Approach Vol, veh/h					679			1607			1964	
Approach Delay, s/veh					151.9			16.1			137.6	
Approach LOS					F			B			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		157.0			79.1	77.9		43.0
Change Period (Y+Rc), s		7.0			7.0	* 7		5.1
Max Green Setting (Gmax), s		103.9			28.3	* 71		37.9
Max Q Clear Time (g_c+I1), s		19.4			27.6	72.9		39.9
Green Ext Time (p_c), s		6.9			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	93.9
HCM 2010 LOS	F

Notes

HCM 2010 Signalized Intersection Summary
53: Morena Boulevard & Taylor Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	520	510	30	20	220	90	0	10	40	260	20	450
Future Volume (veh/h)	520	510	30	20	220	90	0	10	40	260	20	450
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	0	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	547	537	21	21	232	63	0	11	0	289	0	274
Adj No. of Lanes	2	2	0	1	2	0	0	1	0	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	2	2	2	2
Cap, veh/h	457	1060	41	36	531	140	0	12	0	1013	0	653
Arrive On Green	0.13	0.31	0.31	0.02	0.19	0.19	0.00	0.01	0.00	0.29	0.00	0.29
Sat Flow, veh/h	3442	3468	135	1774	2749	727	0	1863	0	3548	0	1550
Grp Volume(v), veh/h	547	274	284	21	147	148	0	11	0	289	0	274
Grp Sat Flow(s),veh/h/ln	1721	1770	1833	1774	1770	1707	0	1863	0	1774	0	1550
Q Serve(g_s), s	6.6	6.3	6.3	0.6	3.6	3.8	0.0	0.3	0.0	3.2	0.0	6.2
Cycle Q Clear(g_c), s	6.6	6.3	6.3	0.6	3.6	3.8	0.0	0.3	0.0	3.2	0.0	6.2
Prop In Lane	1.00		0.07	1.00		0.43	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	457	541	560	36	342	330	0	12	0	1013	0	653
V/C Ratio(X)	1.20	0.51	0.51	0.58	0.43	0.45	0.00	0.91	0.00	0.29	0.00	0.42
Avail Cap(c_a), veh/h	457	904	936	143	811	783	0	247	0	2140	0	1145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.6	14.2	14.2	24.2	17.7	17.7	0.0	24.7	0.0	13.8	0.0	10.2
Incr Delay (d2), s/veh	108.5	0.8	0.8	5.5	1.1	1.3	0.0	52.1	0.0	0.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	3.2	3.3	0.3	1.9	1.9	0.0	0.3	0.0	1.6	0.0	6.1
LnGrp Delay(d),s/veh	130.1	15.0	15.0	29.6	18.8	19.0	0.0	76.8	0.0	14.1	0.0	10.9
LnGrp LOS	F	B	B	C	B	B		E		B		B
Approach Vol, veh/h		1105			316			11			563	
Approach Delay, s/veh		72.0			19.6			76.8			12.5	
Approach LOS		E			B			E			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	20.1		19.5	11.0	14.5		4.7
Change Period (Y+Rc), s	4.4	4.9		5.3	4.4	4.9		4.4
Max Green Setting (Gmax), s	4.0	25.4		30.0	6.6	22.8		6.6
Max Q Clear Time (g_c+I1), s	2.6	8.3		8.2	8.6	5.8		2.3
Green Ext Time (p_c), s	0.0	3.3		3.6	0.0	1.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.0
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	190	0	0	100	190
Future Volume (veh/h)	0	190	0	0	100	190
Number	7	4			1	16
Initial Q (Qb), veh	0	0			0	0
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00
Parking Bus, Adj	1.00	1.00			1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863			1863	1863
Adj Flow Rate, veh/h	0	200			105	168
Adj No. of Lanes	0	1			1	1
Peak Hour Factor	0.95	0.95			0.95	0.95
Percent Heavy Veh, %	0	2			2	2
Cap, veh/h	0	605			0	0
Arrive On Green	0.00	0.32			0.00	0.00
Sat Flow, veh/h	0	1863			0	
Grp Volume(v), veh/h	0	200			0.0	
Grp Sat Flow(s),veh/h/ln	0	1863				
Q Serve(g_s), s	0.0	0.5				
Cycle Q Clear(g_c), s	0.0	0.5				
Prop In Lane	0.00					
Lane Grp Cap(c), veh/h	0	605				
V/C Ratio(X)	0.00	0.33				
Avail Cap(c_a), veh/h	0	6287				
HCM Platoon Ratio	1.00	1.00				
Upstream Filter(I)	0.00	1.00				
Uniform Delay (d), s/veh	0.0	1.7				
Incr Delay (d2), s/veh	0.0	0.3				
Initial Q Delay(d3),s/veh	0.0	0.0				
%ile BackOfQ(50%),veh/ln	0.0	0.3				
LnGrp Delay(d),s/veh	0.0	2.0				
LnGrp LOS		A				
Approach Vol, veh/h		200				
Approach Delay, s/veh		2.0				
Approach LOS		A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				
Phs Duration (G+Y+Rc), s				6.7				
Change Period (Y+Rc), s				4.5				
Max Green Setting (Gmax), s				22.5				
Max Q Clear Time (g_c+I1), s				2.5				
Green Ext Time (p_c), s				1.0				

Intersection Summary	
HCM 2010 Ctrl Delay	2.0
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
57: Bachman Place & Hotel Circle South

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	300	950	0	0	0	900
Future Volume (veh/h)	300	950	0	0	0	900
Number	2	12			3	18
Initial Q (Qb), veh	0	0			0	0
Ped-Bike Adj(A_pbT)		0.99			1.00	1.00
Parking Bus, Adj	1.00	1.00			1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900			1863	1863
Adj Flow Rate, veh/h	316	905			0	852
Adj No. of Lanes	2	0			1	2
Peak Hour Factor	0.95	0.95			0.95	0.95
Percent Heavy Veh, %	2	2			2	2
Cap, veh/h	1188	1047			0	0
Arrive On Green	0.67	0.67			0.00	0.00
Sat Flow, veh/h	1863	1560			0	
Grp Volume(v), veh/h	316	905			0.0	
Grp Sat Flow(s),veh/h/ln	1770	1560				
Q Serve(g_s), s	2.2	13.8				
Cycle Q Clear(g_c), s	2.2	13.8				
Prop In Lane		1.00				
Lane Grp Cap(c), veh/h	1188	1047				
V/C Ratio(X)	0.27	0.86				
Avail Cap(c_a), veh/h	1279	1128				
HCM Platoon Ratio	1.00	1.00				
Upstream Filter(I)	1.00	1.00				
Uniform Delay (d), s/veh	2.0	3.9				
Incr Delay (d2), s/veh	0.2	7.0				
Initial Q Delay(d3),s/veh	0.0	0.0				
%ile BackOfQ(50%),veh/ln	1.0	7.6				
LnGrp Delay(d),s/veh	2.2	10.9				
LnGrp LOS	A	B				
Approach Vol, veh/h	1221					
Approach Delay, s/veh	8.7					
Approach LOS	A					

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		30.4						
Change Period (Y+Rc), s		10.0						
Max Green Setting (Gmax), s		22.0						
Max Q Clear Time (g_c+I1), s		15.8						
Green Ext Time (p_c), s		4.6						

Intersection Summary	
HCM 2010 Ctrl Delay	8.7
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
58: Mission Center Road & I-8 EB Ramp

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	840	0	370	0	0	0	0	530	270	990	530	0
Future Volume (veh/h)	840	0	370	0	0	0	0	530	270	990	530	0
Number	5	2	12				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	884	0	0				0	558	0	1042	558	0
Adj No. of Lanes	2	1	0				0	2	1	2	1	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1432	775	0				0	625	280	1038	545	0
Arrive On Green	0.42	0.00	0.00				0.00	0.06	0.00	0.29	0.29	0.00
Sat Flow, veh/h	3442	1863	0				0	3632	1583	3548	1863	0
Grp Volume(v), veh/h	884	0	0				0	558	0	1042	558	0
Grp Sat Flow(s),veh/h/ln	1721	1863	0				0	1770	1583	1774	1863	0
Q Serve(g_s), s	30.3	0.0	0.0				0.0	23.5	0.0	43.9	43.9	0.0
Cycle Q Clear(g_c), s	30.3	0.0	0.0				0.0	23.5	0.0	43.9	43.9	0.0
Prop In Lane	1.00		0.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1432	775	0				0	625	280	1038	545	0
V/C Ratio(X)	0.62	0.00	0.00				0.00	0.89	0.00	1.00	1.02	0.00
Avail Cap(c_a), veh/h	1432	775	0				0	873	391	1038	545	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.86	0.00	0.62	0.62	0.00
Uniform Delay (d), s/veh	34.4	0.0	0.0				0.0	69.2	0.0	53.1	53.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0				0.0	6.1	0.0	22.8	36.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.8	0.0	0.0				0.0	12.1	0.0	24.8	28.1	0.0
LnGrp Delay(d),s/veh	36.4	0.0	0.0				0.0	75.3	0.0	75.9	89.5	0.0
LnGrp LOS	D							E		F	F	
Approach Vol, veh/h		884						558			1600	
Approach Delay, s/veh		36.4						75.3			80.6	
Approach LOS		D						E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		68.5		31.5				50.0
Change Period (Y+Rc), s		6.1		5.0				6.1
Max Green Setting (Gmax), s		51.9		37.0				43.9
Max Q Clear Time (g_c+I1), s		32.3		25.5				45.9
Green Ext Time (p_c), s		1.8		1.0				0.0

Intersection Summary	
HCM 2010 Ctrl Delay	66.8
HCM 2010 LOS	E

Notes

HCM 2010 Signalized Intersection Summary
59: Mission Center Road & Camino Del Rio South

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	360	20	10	190	430	30	40	30	525	30	345
Future Volume (veh/h)	330	360	20	10	190	430	30	40	30	525	30	345
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.85	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1900	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	245	521	10	11	200	453	32	42	32	576	0	363
Adj No. of Lanes	1	2	0	0	2	1	0	1	1	2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	598	11	6	233	848	101	132	193	1701	0	727
Arrive On Green	0.16	0.16	0.16	0.07	0.07	0.07	0.13	0.13	0.13	0.48	0.00	0.48
Sat Flow, veh/h	1774	3640	70	97	3531	1343	788	1035	1509	3548	0	1517
Grp Volume(v), veh/h	245	266	265	211	0	453	74	0	32	576	0	363
Grp Sat Flow(s),veh/h/ln	1774	1863	1847	1858	1770	1343	1823	0	1509	1774	0	1517
Q Serve(g_s), s	20.1	20.9	21.0	9.9	0.0	9.9	5.5	0.0	2.8	15.1	0.0	24.6
Cycle Q Clear(g_c), s	20.1	20.9	21.0	9.9	0.0	9.9	5.5	0.0	2.8	15.1	0.0	24.6
Prop In Lane	1.00		0.04	0.05		1.00	0.43		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	306	304	123	117	848	233	0	193	1701	0	727
V/C Ratio(X)	0.84	0.87	0.87	1.72	0.00	0.53	0.32	0.00	0.17	0.34	0.00	0.50
Avail Cap(c_a), veh/h	377	396	393	123	117	848	233	0	193	1701	0	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.63	0.00	0.63
Uniform Delay (d), s/veh	60.8	61.1	61.1	70.1	0.0	17.8	59.5	0.0	58.3	24.3	0.0	26.7
Incr Delay (d2), s/veh	10.1	12.8	13.1	356.2	0.0	0.3	0.8	0.0	0.4	0.3	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	11.9	11.8	17.2	0.0	18.8	2.8	0.0	1.2	7.5	0.0	10.6
LnGrp Delay(d),s/veh	70.8	73.9	74.2	426.3	0.0	18.1	60.3	0.0	58.7	24.6	0.0	28.3
LnGrp LOS	E	E	E	F		B	E		E	C		C
Approach Vol, veh/h		776			664			106			939	
Approach Delay, s/veh		73.0			147.8			59.8			26.0	
Approach LOS		E			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		25.2		16.0		78.0		30.8
Change Period (Y+Rc), s		6.1		6.1		6.1		6.1
Max Green Setting (Gmax), s		11.9		9.9		71.9		31.9
Max Q Clear Time (g_c+I1), s		7.5		11.9		26.6		23.0
Green Ext Time (p_c), s		0.1		0.0		1.8		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	74.7
HCM 2010 LOS	E

Notes

HCM 2010 Signalized Intersection Summary
60: Qualcomm Way & I-8 EB Ramp



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	450	0	1255	1580	515
Future Volume (veh/h)	0	450	0	1255	1580	515
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	0	279	0	1321	1663	258
Adj No. of Lanes	1	2	0	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	2	2	2
Cap, veh/h	206	323	0	2870	2870	1242
Arrive On Green	0.00	0.12	0.00	1.00	0.81	0.81
Sat Flow, veh/h	1774	2787	0	3725	3632	1532
Grp Volume(v), veh/h	0	279	0	1321	1663	258
Grp Sat Flow(s),veh/h/ln	1774	1393	0	1770	1770	1532
Q Serve(g_s), s	0.0	14.3	0.0	0.0	24.3	5.6
Cycle Q Clear(g_c), s	0.0	14.3	0.0	0.0	24.3	5.6
Prop In Lane	1.00	1.00	0.00			1.00
Lane Grp Cap(c), veh/h	206	323	0	2870	2870	1242
V/C Ratio(X)	0.00	0.86	0.00	0.46	0.58	0.21
Avail Cap(c_a), veh/h	422	663	0	2870	2870	1242
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.11	0.09	0.09
Uniform Delay (d), s/veh	0.0	63.0	0.0	0.0	4.9	3.1
Incr Delay (d2), s/veh	0.0	2.7	0.0	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.6	0.0	0.0	11.6	2.3
LnGrp Delay(d),s/veh	0.0	65.6	0.0	0.1	5.0	3.2
LnGrp LOS		E		A	A	A
Approach Vol, veh/h	279			1321	1921	
Approach Delay, s/veh	65.6			0.1	4.7	
Approach LOS	E			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		122.7		22.3		122.7		
Change Period (Y+Rc), s		5.1		5.5		5.1		
Max Green Setting (Gmax), s		99.9		34.5		99.9		
Max Q Clear Time (g_c+I1), s		2.0		16.3		26.3		
Green Ext Time (p_c), s		7.2		0.6		8.9		

Intersection Summary	
HCM 2010 Ctrl Delay	7.8
HCM 2010 LOS	A

Notes

HCM 2010 Signalized Intersection Summary
61: Texas Street/Qualcomm Way & Camino Del Rio South

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	220	270	220	80	620	90	820	170	320	1290	420
Future Volume (veh/h)	290	220	270	220	80	620	90	820	170	320	1290	420
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.94	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	305	232	210	232	84	453	95	863	147	337	1358	368
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	344	379	297	312	602	111	824	140	391	1596	683
Arrive On Green	0.18	0.18	0.18	0.17	0.17	0.17	0.06	0.28	0.28	0.44	0.90	0.90
Sat Flow, veh/h	1774	1863	1512	1774	1863	1507	1774	2996	510	1774	3539	1516
Grp Volume(v), veh/h	305	232	210	232	84	453	95	510	500	337	1358	368
Grp Sat Flow(s),veh/h/ln	1774	1863	1512	1774	1863	1507	1774	1770	1736	1774	1770	1516
Q Serve(g_s), s	24.5	16.8	17.6	18.2	5.7	3.8	7.7	39.9	39.9	24.8	23.5	6.7
Cycle Q Clear(g_c), s	24.5	16.8	17.6	18.2	5.7	3.8	7.7	39.9	39.9	24.8	23.5	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	328	344	379	297	312	602	111	487	478	391	1596	683
V/C Ratio(X)	0.93	0.67	0.55	0.78	0.27	0.75	0.85	1.05	1.05	0.86	0.85	0.54
Avail Cap(c_a), veh/h	330	347	381	367	385	661	111	487	478	391	1596	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	58.2	55.0	47.7	57.8	52.6	38.0	67.3	52.6	52.6	38.5	5.1	4.2
Incr Delay (d2), s/veh	31.8	5.0	1.7	6.5	0.2	3.7	42.0	53.6	54.0	12.0	4.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.9	9.1	7.5	9.4	3.0	15.6	5.1	26.7	26.3	13.4	10.9	2.9
LnGrp Delay(d),s/veh	90.0	60.0	49.4	64.3	52.8	41.7	109.3	106.1	106.5	50.5	9.2	6.3
LnGrp LOS	F	E	D	E	D	D	F	F	F	D	A	A
Approach Vol, veh/h		747			769			1105			2063	
Approach Delay, s/veh		69.3			49.7			106.6			15.4	
Approach LOS		E			D			F			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	36.9	46.9		31.7	13.5	70.3		29.5
Change Period (Y+Rc), s	4.9	* 7		4.9	4.4	4.9		5.2
Max Green Setting (Gmax), s	26.6	* 40		27.0	9.1	59.5		30.0
Max Q Clear Time (g_c+I1), s	26.8	41.9		26.5	9.7	25.5		20.2
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	18.3		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	51.1
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
62: Camino Del Rio South & Fenton Parkway



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	250	580	320	400	650	280
Future Volume (veh/h)	250	580	320	400	650	280
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	263	611	337	43	684	170
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	304	871	430	999	727	649
Arrive On Green	0.17	0.47	0.23	0.23	0.41	0.41
Sat Flow, veh/h	1774	1863	1863	1515	1774	1583
Grp Volume(v), veh/h	263	611	337	43	684	170
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1515	1774	1583
Q Serve(g_s), s	11.1	20.0	13.0	0.0	28.4	5.4
Cycle Q Clear(g_c), s	11.1	20.0	13.0	0.0	28.4	5.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	304	871	430	999	727	649
V/C Ratio(X)	0.87	0.70	0.78	0.04	0.94	0.26
Avail Cap(c_a), veh/h	370	1068	573	1115	846	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	16.2	27.7	2.2	21.7	15.0
Incr Delay (d2), s/veh	14.4	1.7	5.5	0.0	15.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	10.6	7.3	0.9	17.1	5.7
LnGrp Delay(d),s/veh	45.4	17.9	33.2	2.2	37.6	15.0
LnGrp LOS	D	B	C	A	D	B
Approach Vol, veh/h		874	380		854	
Approach Delay, s/veh		26.2	29.7		33.1	
Approach LOS		C	C		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		40.9		35.9	18.1	22.7		
Change Period (Y+Rc), s		5.0		4.4	5.0	* 5		
Max Green Setting (Gmax), s		44.0		36.6	16.0	* 24		
Max Q Clear Time (g_c+I1), s		22.0		30.4	13.1	15.0		
Green Ext Time (p_c), s		4.7		1.1	0.1	1.4		

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
63: I-15 SB Ramps & Camino Del Rio South

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1750	20	40	290	0	20	0	40	290	0	160
Future Volume (veh/h)	0	1750	20	40	290	0	20	0	40	290	0	160
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.94	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0	1900	1863	1900	1863	0	1863
Adj Flow Rate, veh/h	0	1842	10	42	305	0	21	0	40	305	0	-32
Adj No. of Lanes	0	2	0	1	1	0	0	1	0	1	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	0	2
Cap, veh/h	0	2260	12	78	1399	0	31	0	58	0	0	0
Arrive On Green	0.00	0.63	0.63	0.04	0.75	0.00	0.06	0.00	0.06	0.00	0.00	0.00
Sat Flow, veh/h	0	3702	20	1774	1863	0	542	0	1032		0	
Grp Volume(v), veh/h	0	902	950	42	305	0	61	0	0		0.0	
Grp Sat Flow(s),veh/h/ln	0	1770	1859	1774	1863	0	1573	0	0			
Q Serve(g_s), s	0.0	20.2	20.3	1.2	2.5	0.0	2.0	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	20.2	20.3	1.2	2.5	0.0	2.0	0.0	0.0			
Prop In Lane	0.00		0.01	1.00		0.00	0.34		0.66			
Lane Grp Cap(c), veh/h	0	1108	1164	78	1399	0	89	0	0			
V/C Ratio(X)	0.00	0.81	0.82	0.54	0.22	0.00	0.69	0.00	0.00			
Avail Cap(c_a), veh/h	0	1794	1884	174	2222	0	155	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	7.4	7.4	24.3	1.9	0.0	24.0	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.6	0.6	2.2	0.0	0.0	3.5	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	9.7	10.2	0.6	1.3	0.0	0.9	0.0	0.0			
LnGrp Delay(d),s/veh	0.0	8.0	8.0	26.5	2.0	0.0	27.5	0.0	0.0			
LnGrp LOS		A	A	C	A		C					
Approach Vol, veh/h		1852			347			61				
Approach Delay, s/veh		8.0			4.9			27.5				
Approach LOS		A			A			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.5	38.0				44.5		7.4
Change Period (Y+Rc), s	* 4.2	5.5				5.5		4.5
Max Green Setting (Gmax), s	* 5.1	52.6				61.9		5.1
Max Q Clear Time (g_c+I1), s	3.2	22.3				4.5		4.0
Green Ext Time (p_c), s	0.0	10.2				1.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	8.1
HCM 2010 LOS	A

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1420	660	100	330	0	0
Future Volume (veh/h)	1420	660	100	330	0	0
Number	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863		
Adj Flow Rate, veh/h	1495	0	105	347		
Adj No. of Lanes	2	0	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2176	0	166	2954		
Arrive On Green	0.61	0.00	0.09	0.83		
Sat Flow, veh/h	3725	0	1774	3632		
Grp Volume(v), veh/h	1495	0	105	347		
Grp Sat Flow(s),veh/h/ln	1770	0	1774	1770		
Q Serve(g_s), s	9.4	0.0	1.9	0.6		
Cycle Q Clear(g_c), s	9.4	0.0	1.9	0.6		
Prop In Lane		0.00	1.00			
Lane Grp Cap(c), veh/h	2176	0	166	2954		
V/C Ratio(X)	0.69	0.00	0.63	0.12		
Avail Cap(c_a), veh/h	8359	0	630	10063		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00		
Uniform Delay (d), s/veh	4.3	0.0	14.5	0.5		
Incr Delay (d2), s/veh	0.1	0.0	1.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.4	0.0	1.0	0.2		
LnGrp Delay(d),s/veh	4.4	0.0	16.0	0.5		
LnGrp LOS	A		B	A		
Approach Vol, veh/h	1495			452		
Approach Delay, s/veh	4.4			4.1		
Approach LOS	A			A		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		
Phs Duration (G+Y+Rc), s	7.3	25.9				33.2		
Change Period (Y+Rc), s	* 4.2	5.5				5.5		
Max Green Setting (Gmax), s	* 12	78.5				94.5		
Max Q Clear Time (g_c+I1), s	3.9	11.4				2.6		
Green Ext Time (p_c), s	0.0	8.9				1.4		

Intersection Summary	
HCM 2010 Ctrl Delay	4.3
HCM 2010 LOS	A

Notes

HCM 2010 Signalized Intersection Summary
65: I-15 NB Ramps & Camino Del Rio South

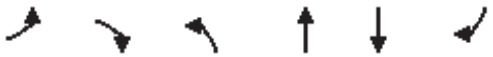
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	970	0	0	230	80	200	0	90	0	0	0
Future Volume (veh/h)	450	970	0	0	230	80	200	0	90	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.94	1.00		0.96			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1900			
Adj Flow Rate, veh/h	474	1021	0	0	242	32	211	0	95			
Adj No. of Lanes	1	2	0	0	1	1	1	1	0			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	508	1967	0	0	331	266	248	0	212			
Arrive On Green	0.29	0.56	0.00	0.00	0.18	0.18	0.14	0.00	0.14			
Sat Flow, veh/h	1774	3632	0	0	1863	1494	1774	0	1515			
Grp Volume(v), veh/h	474	1021	0	0	242	32	211	0	95			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1863	1494	1774	0	1515			
Q Serve(g_s), s	20.5	14.2	0.0	0.0	9.7	1.4	9.1	0.0	4.5			
Cycle Q Clear(g_c), s	20.5	14.2	0.0	0.0	9.7	1.4	9.1	0.0	4.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	508	1967	0	0	331	266	248	0	212			
V/C Ratio(X)	0.93	0.52	0.00	0.00	0.73	0.12	0.85	0.00	0.45			
Avail Cap(c_a), veh/h	565	2471	0	0	537	431	248	0	212			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.4	10.9	0.0	0.0	30.6	27.2	33.1	0.0	31.1			
Incr Delay (d2), s/veh	20.5	0.1	0.0	0.0	1.2	0.1	22.7	0.0	0.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.9	6.8	0.0	0.0	5.1	0.6	6.0	0.0	1.9			
LnGrp Delay(d),s/veh	47.9	11.0	0.0	0.0	31.8	27.3	55.7	0.0	31.7			
LnGrp LOS	D	B			C	C	E		C			
Approach Vol, veh/h		1495			274			306				
Approach Delay, s/veh		22.7			31.3			48.3				
Approach LOS		C			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		55.8		23.0	29.8	26.0		
Change Period (Y+Rc), s		12.0		12.0	* 7.2	12.0		
Max Green Setting (Gmax), s		55.0		11.0	* 25	22.7		
Max Q Clear Time (g_c+I1), s		16.2		11.1	22.5	11.7		
Green Ext Time (p_c), s		4.8		0.0	0.1	0.6		

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
66: Mission Gorge Road & I-8 EB Off Ramps



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	950	2150	90	650	1540	0
Future Volume (veh/h)	950	2150	90	650	1540	0
Number	1	16	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	1000	1221	95	684	1621	0
Adj No. of Lanes	2	3	1	2	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	0
Cap, veh/h	1198	1256	121	1958	2171	0
Arrive On Green	0.35	0.35	0.07	0.55	0.43	0.00
Sat Flow, veh/h	3442	3610	1774	3632	5421	0
Grp Volume(v), veh/h	1000	1221	95	684	1621	0
Grp Sat Flow(s),veh/h/ln	1721	1203	1774	1770	1695	0
Q Serve(g_s), s	21.6	27.0	4.3	8.7	21.7	0.0
Cycle Q Clear(g_c), s	21.6	27.0	4.3	8.7	21.7	0.0
Prop In Lane	1.00	1.00	1.00			0.00
Lane Grp Cap(c), veh/h	1198	1256	121	1958	2171	0
V/C Ratio(X)	0.83	0.97	0.78	0.35	0.75	0.00
Avail Cap(c_a), veh/h	1198	1256	134	2350	2699	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.3	26.0	37.2	10.0	19.5	0.0
Incr Delay (d2), s/veh	5.3	18.9	20.9	0.1	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	11.1	2.8	4.2	10.2	0.0
LnGrp Delay(d),s/veh	29.5	45.0	58.0	10.1	20.4	0.0
LnGrp LOS	C	D	E	B	C	
Approach Vol, veh/h	2221			779	1621	
Approach Delay, s/veh	38.0			16.0	20.4	
Approach LOS	D			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			10.2	38.6		32.2		48.8
Change Period (Y+Rc), s			* 4.7	4.0		4.0		4.0
Max Green Setting (Gmax), s			* 6.1	43.0		28.2		53.8
Max Q Clear Time (g_c+I1), s			6.3	23.7		29.0		10.7
Green Ext Time (p_c), s			0.0	10.9		0.0		4.6

Intersection Summary	
HCM 2010 Ctrl Delay	28.1
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
67: Texas Street & Madison Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	90	60	80	70	290	150	570	160	210	1360	210
Future Volume (veh/h)	220	90	60	80	70	290	150	570	160	210	1360	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	232	95	31	84	74	137	158	600	94	221	1432	158
Adj No. of Lanes	1	1	1	1	1	1	1	1	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	269	219	206	216	174	171	860	716	245	1617	177
Arrive On Green	0.14	0.14	0.14	0.12	0.12	0.12	0.10	0.46	0.46	0.14	0.50	0.50
Sat Flow, veh/h	1774	1863	1518	1774	1863	1502	1774	1863	1549	1774	3211	351
Grp Volume(v), veh/h	232	95	31	84	74	137	158	600	94	221	784	806
Grp Sat Flow(s),veh/h/ln	1774	1863	1518	1774	1863	1502	1774	1863	1549	1774	1770	1792
Q Serve(g_s), s	17.6	6.3	2.4	6.0	5.0	12.2	12.1	35.0	4.8	16.8	54.1	55.6
Cycle Q Clear(g_c), s	17.6	6.3	2.4	6.0	5.0	12.2	12.1	35.0	4.8	16.8	54.1	55.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	256	269	219	206	216	174	171	860	716	245	891	903
V/C Ratio(X)	0.91	0.35	0.14	0.41	0.34	0.79	0.92	0.70	0.13	0.90	0.88	0.89
Avail Cap(c_a), veh/h	263	276	225	247	260	209	171	866	720	295	947	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.7	52.8	51.2	56.2	55.7	58.9	61.4	29.3	21.1	58.1	30.3	30.7
Incr Delay (d2), s/veh	30.6	0.3	0.1	0.5	0.3	12.2	46.7	2.7	0.1	23.7	9.5	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	3.3	1.0	3.0	2.6	5.7	8.1	18.6	2.1	9.8	28.7	30.0
LnGrp Delay(d),s/veh	88.3	53.1	51.3	56.7	56.1	71.1	108.1	31.9	21.2	81.8	39.8	41.3
LnGrp LOS	F	D	D	E	E	E	F	C	C	F	D	D
Approach Vol, veh/h		358			295			852			1811	
Approach Delay, s/veh		75.7			63.2			44.9			45.6	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.3	68.2		24.7	17.6	73.9		20.8
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	22.8	63.7		20.3	13.2	73.3		19.1
Max Q Clear Time (g_c+I1), s	18.8	37.0		19.6	14.1	57.6		14.2
Green Ext Time (p_c), s	0.1	5.9		0.1	0.0	11.4		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	50.2
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
68: Franklin Ridge Road & Phyllis Place

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	160	60	1500	110	50	1280
Future Volume (veh/h)	160	60	1500	110	50	1280
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.93	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	168	42	1579	116	53	926
Adj No. of Lanes	2	0	2	1	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	377	91	1803	1325	329	1977
Arrive On Green	0.14	0.14	0.52	0.71	0.19	0.19
Sat Flow, veh/h	2875	669	3442	1863	1774	2787
Grp Volume(v), veh/h	104	106	1579	116	53	926
Grp Sat Flow(s),veh/h/ln	1770	1682	1721	1863	1774	1393
Q Serve(g_s), s	4.7	5.0	35.1	1.7	2.2	12.6
Cycle Q Clear(g_c), s	4.7	5.0	35.1	1.7	2.2	12.6
Prop In Lane		0.40	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	240	228	1803	1325	329	1977
V/C Ratio(X)	0.44	0.46	0.88	0.09	0.16	0.47
Avail Cap(c_a), veh/h	366	348	2791	1993	367	2037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	34.7	18.2	3.9	29.7	5.5
Incr Delay (d2), s/veh	1.2	1.5	2.2	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.4	17.0	0.8	1.1	4.8
LnGrp Delay(d),s/veh	35.8	36.1	20.4	3.9	30.0	5.7
LnGrp LOS	D	D	C	A	C	A
Approach Vol, veh/h	210			1695	979	
Approach Delay, s/veh	36.0			19.2	7.0	
Approach LOS	D			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.6	50.0	16.3				66.3
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		18.0	70.5	18.0				93.0
Max Q Clear Time (g_c+I1), s		14.6	37.1	7.0				3.7
Green Ext Time (p_c), s		1.5	8.5	0.8				0.7

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
69: Franklin Ridge Road & Via Alta

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	470	20	80	10	20	10	85	850	40	20	890	570
Future Volume (veh/h)	470	20	80	10	20	10	85	850	40	20	890	570
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	0.99		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	495	21	63	11	21	6	89	895	31	21	937	453
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	516	137	410	174	322	87	93	978	34	29	951	792
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.05	0.55	0.55	0.02	0.51	0.51
Sat Flow, veh/h	1357	406	1217	415	957	257	1774	1789	62	1774	1863	1552
Grp Volume(v), veh/h	495	0	84	38	0	0	89	0	926	21	937	453
Grp Sat Flow(s),veh/h/ln	1357	0	1622	1629	0	0	1774	0	1850	1774	1863	1552
Q Serve(g_s), s	43.6	0.0	4.9	0.0	0.0	0.0	6.8	0.0	61.3	1.6	66.9	27.2
Cycle Q Clear(g_c), s	45.5	0.0	4.9	1.9	0.0	0.0	6.8	0.0	61.3	1.6	66.9	27.2
Prop In Lane	1.00		0.75	0.29		0.16	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	516	0	547	584	0	0	93	0	1012	29	951	792
V/C Ratio(X)	0.96	0.00	0.15	0.07	0.00	0.00	0.95	0.00	0.92	0.73	0.99	0.57
Avail Cap(c_a), veh/h	516	0	547	584	0	0	93	0	1012	85	951	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	0.0	31.3	30.3	0.0	0.0	63.8	0.0	27.7	66.1	32.6	22.9
Incr Delay (d2), s/veh	29.4	0.0	0.1	0.0	0.0	0.0	77.9	0.0	12.5	29.9	25.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.6	0.0	2.2	1.0	0.0	0.0	5.3	0.0	34.6	1.0	40.9	11.8
LnGrp Delay(d),s/veh	75.4	0.0	31.4	30.4	0.0	0.0	141.7	0.0	40.3	96.0	58.2	23.8
LnGrp LOS	E		C	C			F		D	F	E	C
Approach Vol, veh/h		579			38			1015			1411	
Approach Delay, s/veh		69.0			30.4			49.2			47.7	
Approach LOS		E			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.7	78.3		50.0	11.6	73.4		50.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	69.5		45.5	7.1	68.9		45.5
Max Q Clear Time (g_c+I1), s	3.6	63.3		47.5	8.8	68.9		3.9
Green Ext Time (p_c), s	0.0	3.4		0.0	0.0	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	52.0
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
70: Qualcomm Way & Civita Boulevard

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	375	310	640	360	575	665
Future Volume (veh/h)	375	310	640	360	575	665
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.93	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	395	179	674	379	605	489
Adj No. of Lanes	2	1	2	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	531	222	783	864	1252	936
Arrive On Green	0.15	0.15	0.23	0.46	0.36	0.36
Sat Flow, veh/h	3632	1478	3442	1863	3442	1583
Grp Volume(v), veh/h	395	179	674	379	605	489
Grp Sat Flow(s),veh/h/ln	1770	1478	1721	1863	1721	1583
Q Serve(g_s), s	11.7	12.9	20.7	15.1	14.9	0.0
Cycle Q Clear(g_c), s	11.7	12.9	20.7	15.1	14.9	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	531	222	783	864	1252	936
V/C Ratio(X)	0.74	0.81	0.86	0.44	0.48	0.52
Avail Cap(c_a), veh/h	660	275	1173	1058	1252	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.58	0.58	0.76	0.76
Uniform Delay (d), s/veh	44.7	45.2	40.8	19.9	27.0	13.3
Incr Delay (d2), s/veh	3.6	13.4	2.7	0.2	1.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	6.1	10.1	7.7	7.2	9.0
LnGrp Delay(d),s/veh	48.3	58.6	43.5	20.1	28.0	14.9
LnGrp LOS	D	E	D	C	C	B
Approach Vol, veh/h	574			1053	1094	
Approach Delay, s/veh	51.5			35.1	22.2	
Approach LOS	D			D	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		49.5	34.5	26.0				60.5
Change Period (Y+Rc), s		9.5	9.5	* 9.5				9.5
Max Green Setting (Gmax), s		28.5	37.5	* 21				62.5
Max Q Clear Time (g_c+I1), s		16.9	22.7	14.9				17.1
Green Ext Time (p_c), s		3.3	2.3	1.6				2.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.3
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
71: Franklin Ridge Road & Civita Boulevard

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	915	125	110	80	120	890
Future Volume (veh/h)	915	125	110	80	120	890
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	963	100	116	84	261	216
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1008	900	146	600	345	277
Arrive On Green	0.57	0.57	0.08	0.32	0.19	0.19
Sat Flow, veh/h	1774	1583	1774	1863	1863	1498
Grp Volume(v), veh/h	963	100	116	84	261	216
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1498
Q Serve(g_s), s	42.1	2.4	5.3	2.6	10.9	11.3
Cycle Q Clear(g_c), s	42.1	2.4	5.3	2.6	10.9	11.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1008	900	146	600	345	277
V/C Ratio(X)	0.96	0.11	0.79	0.14	0.76	0.78
Avail Cap(c_a), veh/h	1091	974	151	692	431	347
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	8.2	37.0	19.8	31.7	31.9
Incr Delay (d2), s/veh	16.9	0.1	24.0	0.1	5.9	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.1	3.3	3.6	1.4	6.1	5.3
LnGrp Delay(d),s/veh	33.7	8.2	61.0	19.9	37.6	40.5
LnGrp LOS	C	A	E	B	D	D
Approach Vol, veh/h	1063			200	477	
Approach Delay, s/veh	31.3			43.7	38.9	
Approach LOS	C			D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		30.9		51.2	11.3	19.7		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		30.5		50.5	7.0	19.0		
Max Q Clear Time (g_c+I1), s		4.6		44.1	7.3	13.3		
Green Ext Time (p_c), s		0.4		2.6	0.0	1.2		

Intersection Summary	
HCM 2010 Ctrl Delay	34.8
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
72: Fenton Parkway & Street "I"



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	280	320	430	80	120	380
Future Volume (veh/h)	280	320	430	80	120	380
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	295	14	453	39	126	400
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	389	347	927	79	243	1910
Arrive On Green	0.22	0.22	0.28	0.28	0.14	0.54
Sat Flow, veh/h	1774	1583	3382	282	1774	3632
Grp Volume(v), veh/h	295	14	243	249	126	400
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1801	1774	1770
Q Serve(g_s), s	5.8	0.3	4.3	4.3	2.5	2.2
Cycle Q Clear(g_c), s	5.8	0.3	4.3	4.3	2.5	2.2
Prop In Lane	1.00	1.00		0.16	1.00	
Lane Grp Cap(c), veh/h	389	347	499	508	243	1910
V/C Ratio(X)	0.76	0.04	0.49	0.49	0.52	0.21
Avail Cap(c_a), veh/h	866	773	878	894	466	3114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	11.5	11.1	11.2	14.9	4.5
Incr Delay (d2), s/veh	3.1	0.0	0.7	0.7	1.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.1	2.1	2.2	1.3	1.1
LnGrp Delay(d),s/veh	16.7	11.5	11.9	11.9	16.7	4.5
LnGrp LOS	B	B	B	B	B	A
Approach Vol, veh/h	309		492			526
Approach Delay, s/veh	16.5		11.9			7.4
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.6	15.0				24.6		12.7
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	9.8	18.5				32.8		18.2
Max Q Clear Time (g_c+I1), s	4.5	6.3				4.2		7.8
Green Ext Time (p_c), s	0.1	2.5				2.9		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.2
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
73: Via Las Cumbres & Riverwalk Drive



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	150	80	1020	120	130	980
Future Volume (veh/h)	150	80	1020	120	130	980
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	158	52	1074	105	137	1032
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	232	207	1258	123	209	2101
Arrive On Green	0.13	0.13	0.39	0.39	0.12	0.59
Sat Flow, veh/h	1774	1583	3342	317	1774	3632
Grp Volume(v), veh/h	158	52	585	594	137	1032
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1797	1774	1770
Q Serve(g_s), s	4.3	1.5	15.4	15.4	3.7	8.5
Cycle Q Clear(g_c), s	4.3	1.5	15.4	15.4	3.7	8.5
Prop In Lane	1.00	1.00		0.18	1.00	
Lane Grp Cap(c), veh/h	232	207	685	696	209	2101
V/C Ratio(X)	0.68	0.25	0.85	0.85	0.66	0.49
Avail Cap(c_a), veh/h	632	564	728	739	262	2641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	19.8	14.2	14.3	21.4	5.9
Incr Delay (d2), s/veh	3.5	0.6	9.3	9.2	4.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.7	9.2	9.4	2.1	4.1
LnGrp Delay(d),s/veh	24.6	20.5	23.5	23.5	25.4	6.1
LnGrp LOS	C	C	C	C	C	A
Approach Vol, veh/h	210		1179			1169
Approach Delay, s/veh	23.6		23.5			8.4
Approach LOS	C		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.5	29.2				39.6		11.1
Change Period (Y+Rc), s	4.5	9.5				* 9.5		4.5
Max Green Setting (Gmax), s	7.5	20.9				* 38		18.1
Max Q Clear Time (g_c+I1), s	5.7	17.4				10.5		6.3
Green Ext Time (p_c), s	0.1	2.3				8.2		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Notes

HCM 2010 Signalized Intersection Summary
74: Fashion Valley Road & Riverwalk Drive/Avenida Del Rio

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	190	130	150	520	190	190	320	410	100	300	160
Future Volume (veh/h)	140	190	130	150	520	190	190	320	410	100	300	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	147	200	74	158	547	105	200	337	295	105	316	84
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	387	143	138	454	87	138	519	444	133	796	208
Arrive On Green	0.08	0.30	0.30	0.08	0.30	0.30	0.03	0.10	0.10	0.07	0.29	0.29
Sat Flow, veh/h	1774	1290	477	1774	1514	291	1774	1778	1522	1774	2756	719
Grp Volume(v), veh/h	147	0	274	158	0	652	200	335	297	105	201	199
Grp Sat Flow(s),veh/h/ln	1774	0	1767	1774	0	1804	1774	1770	1531	1774	1770	1706
Q Serve(g_s), s	7.0	0.0	11.6	7.0	0.0	27.0	7.0	16.4	16.8	5.2	8.2	8.5
Cycle Q Clear(g_c), s	7.0	0.0	11.6	7.0	0.0	27.0	7.0	16.4	16.8	5.2	8.2	8.5
Prop In Lane	1.00		0.27	1.00		0.16	1.00		0.99	1.00		0.42
Lane Grp Cap(c), veh/h	138	0	530	138	0	541	138	516	447	133	511	493
V/C Ratio(X)	1.07	0.00	0.52	1.15	0.00	1.20	1.45	0.65	0.66	0.79	0.39	0.40
Avail Cap(c_a), veh/h	138	0	530	138	0	541	138	516	447	171	511	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.93	0.93	0.27	0.27	0.27
Uniform Delay (d), s/veh	41.5	0.0	26.1	41.5	0.0	31.5	43.8	36.2	36.4	40.9	25.7	25.8
Incr Delay (d2), s/veh	95.1	0.0	0.9	120.9	0.0	108.6	235.9	5.8	7.1	5.1	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	5.8	8.0	0.0	29.7	12.5	8.9	8.0	2.8	4.1	4.1
LnGrp Delay(d),s/veh	136.7	0.0	27.0	162.4	0.0	140.1	279.7	42.0	43.5	46.1	26.3	26.4
LnGrp LOS	F		C	F		F	F	D	D	D	C	C
Approach Vol, veh/h		421			810			832			505	
Approach Delay, s/veh		65.3			144.4			99.7			30.5	
Approach LOS		E			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	35.8	11.5	31.5	11.5	35.5	11.5	31.5
Change Period (Y+Rc), s	4.5	9.5	4.5	4.5	4.5	9.5	4.5	4.5
Max Green Setting (Gmax), s	8.7	24.3	7.0	27.0	7.0	26.0	7.0	27.0
Max Q Clear Time (g_c+I1), s	7.2	18.8	9.0	13.6	9.0	10.5	9.0	29.0
Green Ext Time (p_c), s	0.0	1.9	0.0	1.4	0.0	2.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	95.0
HCM 2010 LOS	F

Notes

HCM 2010 Signalized Intersection Summary
75: Avenida Del Rio & Harzard Center Drive & Fashion Valley Mall

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	260	290	240	460	50	200	350	230	70	240	90
Future Volume (veh/h)	50	260	290	240	460	50	200	350	230	70	240	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	53	274	210	253	484	42	211	368	147	74	253	84
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	293	225	282	692	60	242	400	160	101	316	105
Arrive On Green	0.05	0.30	0.30	0.16	0.41	0.41	0.14	0.32	0.32	0.06	0.24	0.24
Sat Flow, veh/h	1774	970	744	1774	1686	146	1774	1254	501	1774	1323	439
Grp Volume(v), veh/h	53	0	484	253	0	526	211	0	515	74	0	337
Grp Sat Flow(s),veh/h/ln	1774	0	1714	1774	0	1833	1774	0	1755	1774	0	1763
Q Serve(g_s), s	3.2	0.0	30.3	15.4	0.0	26.2	12.9	0.0	31.2	4.5	0.0	19.8
Cycle Q Clear(g_c), s	3.2	0.0	30.3	15.4	0.0	26.2	12.9	0.0	31.2	4.5	0.0	19.8
Prop In Lane	1.00		0.43	1.00		0.08	1.00		0.29	1.00		0.25
Lane Grp Cap(c), veh/h	90	0	518	282	0	752	242	0	559	101	0	421
V/C Ratio(X)	0.59	0.00	0.93	0.90	0.00	0.70	0.87	0.00	0.92	0.73	0.00	0.80
Avail Cap(c_a), veh/h	114	0	556	304	0	791	301	0	640	114	0	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.2	0.0	37.4	45.5	0.0	26.9	46.7	0.0	36.2	51.2	0.0	39.5
Incr Delay (d2), s/veh	5.9	0.0	22.4	26.2	0.0	2.6	20.0	0.0	17.5	19.0	0.0	9.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	17.5	9.6	0.0	13.7	7.7	0.0	17.9	2.8	0.0	10.7
LnGrp Delay(d),s/veh	57.1	0.0	59.8	71.7	0.0	29.5	66.7	0.0	53.7	70.2	0.0	48.6
LnGrp LOS	E		E	E		C	E		D	E		D
Approach Vol, veh/h		537			779			726			411	
Approach Delay, s/veh		59.5			43.2			57.5			52.5	
Approach LOS		E			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	39.6	22.0	37.8	19.5	30.9	10.1	49.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.1	40.2	18.9	35.8	18.7	28.6	7.1	47.6
Max Q Clear Time (g_c+I1), s	6.5	33.2	17.4	32.3	14.9	21.8	5.2	28.2
Green Ext Time (p_c), s	0.0	1.9	0.1	1.1	0.2	1.1	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	52.5
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
76: Via Las Cumbres & Levi Cushman Street "B"



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	290	180	960	50	120	1010
Future Volume (veh/h)	290	180	960	50	120	1010
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	305	105	1011	-105	126	1063
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	428	382	1465	0	245	1816
Arrive On Green	0.24	0.24	0.25	0.00	0.14	0.51
Sat Flow, veh/h	1774	1583	3725	0	1774	3632
Grp Volume(v), veh/h	305	105	906	0	126	1063
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	0	1774	1770
Q Serve(g_s), s	5.8	2.0	0.0	0.0	2.4	7.7
Cycle Q Clear(g_c), s	5.8	2.0	0.0	0.0	2.4	7.7
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	428	382	0	0	245	1816
V/C Ratio(X)	0.71	0.27	0.00	0.00	0.51	0.59
Avail Cap(c_a), veh/h	1215	1084	0	0	353	3466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	11.3	0.0	0.0	14.7	6.2
Incr Delay (d2), s/veh	2.2	0.4	0.0	0.0	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.9	0.0	0.0	1.3	3.8
LnGrp Delay(d),s/veh	14.9	11.7	0.0	0.0	16.3	6.5
LnGrp LOS	B	B			B	A
Approach Vol, veh/h	410		906			1189
Approach Delay, s/veh	14.1		0.0			7.6
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.6	13.8				23.3		13.3
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	7.3	24.1				35.9		25.1
Max Q Clear Time (g_c+I1), s	4.4	2.0				9.7		7.8
Green Ext Time (p_c), s	0.1	6.3				8.4		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	5.9
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
77: Fashion Valley Road & Levi Cushman Street "B"



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	150	130	350	800	330	250
Future Volume (veh/h)	150	130	350	800	330	250
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	158	105	368	842	347	200
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	206	184	715	2578	472	266
Arrive On Green	0.12	0.12	0.40	0.73	0.07	0.07
Sat Flow, veh/h	1774	1583	1774	3632	2238	1207
Grp Volume(v), veh/h	158	105	368	842	285	262
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1582
Q Serve(g_s), s	7.8	5.7	14.1	7.6	14.2	14.6
Cycle Q Clear(g_c), s	7.8	5.7	14.1	7.6	14.2	14.6
Prop In Lane	1.00	1.00	1.00			0.76
Lane Grp Cap(c), veh/h	206	184	715	2578	389	348
V/C Ratio(X)	0.77	0.57	0.51	0.33	0.73	0.75
Avail Cap(c_a), veh/h	493	440	715	2578	472	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)	0.85	0.85	0.72	0.72	0.77	0.77
Uniform Delay (d), s/veh	38.6	37.7	20.2	4.4	39.1	39.3
Incr Delay (d2), s/veh	5.0	2.4	0.5	0.2	9.0	11.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	5.0	6.9	3.7	7.9	7.5
LnGrp Delay(d),s/veh	43.6	40.0	20.7	4.6	48.1	50.4
LnGrp LOS	D	D	C	A	D	D
Approach Vol, veh/h	263			1210	547	
Approach Delay, s/veh	42.2			9.5	49.2	
Approach LOS	D			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		75.1		14.9	45.8	29.3		
Change Period (Y+Rc), s		9.5		4.5	9.5	* 9.5		
Max Green Setting (Gmax), s		51.0		25.0	22.5	* 24		
Max Q Clear Time (g_c+I1), s		9.6		9.8	16.1	16.6		
Green Ext Time (p_c), s		6.8		0.7	0.6	2.0		

Intersection Summary	
HCM 2010 Ctrl Delay	24.5
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
78: Via Las Cumbres & Hotel Circle North

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	250	910	650	100	360	0	0	900	400
Future Volume (veh/h)	0	0	0	250	910	650	100	360	0	0	900	400
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				263	958	484	105	379	0	0	947	274
Adj No. of Lanes				0	2	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				267	1037	565	138	1439	0	0	1073	447
Arrive On Green				0.36	0.36	0.36	0.08	0.41	0.00	0.00	0.29	0.29
Sat Flow, veh/h				736	2859	1557	1774	3632	0	0	3725	1550
Grp Volume(v), veh/h				652	569	484	105	379	0	0	947	274
Grp Sat Flow(s),veh/h/ln				1826	1770	1557	1774	1770	0	0	1863	1550
Q Serve(g_s), s				39.0	33.2	31.6	6.4	7.8	0.0	0.0	26.7	16.8
Cycle Q Clear(g_c), s				39.0	33.2	31.6	6.4	7.8	0.0	0.0	26.7	16.8
Prop In Lane				0.40		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				662	642	565	138	1439	0	0	1073	447
V/C Ratio(X)				0.98	0.89	0.86	0.76	0.26	0.00	0.00	0.88	0.61
Avail Cap(c_a), veh/h				662	642	565	290	1805	0	0	1138	474
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.79	0.79	0.00	0.00	0.80	0.80
Uniform Delay (d), s/veh				34.7	32.9	32.4	49.7	21.7	0.0	0.0	37.4	33.9
Incr Delay (d2), s/veh				31.0	14.1	12.4	6.8	0.1	0.0	0.0	8.7	5.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				25.3	18.6	15.5	3.4	3.9	0.0	0.0	15.0	7.9
LnGrp Delay(d),s/veh				65.8	47.0	44.8	56.5	21.8	0.0	0.0	46.1	38.9
LnGrp LOS				E	D	D	E	C			D	D
Approach Vol, veh/h					1705			484			1221	
Approach Delay, s/veh					53.6			29.3			44.5	
Approach LOS					D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		49.2			13.0	36.2		49.4
Change Period (Y+Rc), s		4.5			4.5	4.5		9.5
Max Green Setting (Gmax), s		56.1			18.0	33.6		39.9
Max Q Clear Time (g_c+I1), s		9.8			8.4	28.7		41.0
Green Ext Time (p_c), s		2.7			0.1	3.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	46.9
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
79: Via Las Cumbres & Hotel Circle South

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	1000	40	0	0	0	0	20	40	1090	60	0
Future Volume (veh/h)	340	1000	40	0	0	0	0	20	40	1090	60	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	358	1053	31				0	21	31	1147	63	0
Adj No. of Lanes	1	2	0				0	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	539	1066	31				0	140	206	1187	642	0
Arrive On Green	0.30	0.30	0.30				0.00	0.21	0.21	0.34	0.34	0.00
Sat Flow, veh/h	1774	3507	103				0	668	986	3442	1863	0
Grp Volume(v), veh/h	358	531	553				0	0	52	1147	63	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1840				0	0	1654	1721	1863	0
Q Serve(g_s), s	22.9	38.8	38.8				0.0	0.0	3.3	42.6	3.0	0.0
Cycle Q Clear(g_c), s	22.9	38.8	38.8				0.0	0.0	3.3	42.6	3.0	0.0
Prop In Lane	1.00		0.06				0.00		0.60	1.00		0.00
Lane Grp Cap(c), veh/h	539	538	559				0	0	346	1187	642	0
V/C Ratio(X)	0.66	0.99	0.99				0.00	0.00	0.15	0.97	0.10	0.00
Avail Cap(c_a), veh/h	539	538	559				0	0	346	1191	645	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09				0.00	0.00	1.00	0.26	0.26	0.00
Uniform Delay (d), s/veh	39.5	45.0	45.0				0.0	0.0	42.0	41.8	28.9	0.0
Incr Delay (d2), s/veh	0.3	9.1	8.9				0.0	0.0	0.2	7.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	20.3	21.0				0.0	0.0	1.6	21.5	1.6	0.0
LnGrp Delay(d),s/veh	39.7	54.1	53.9				0.0	0.0	42.2	49.4	29.0	0.0
LnGrp LOS	D	D	D						D	D	C	
Approach Vol, veh/h		1442						52			1210	
Approach Delay, s/veh		50.5						42.2			48.4	
Approach LOS		D						D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		31.7		49.0		49.3		
Change Period (Y+Rc), s		4.5		9.5		4.5		
Max Green Setting (Gmax), s		27.0		39.5		45.0		
Max Q Clear Time (g_c+I1), s		5.3		40.8		44.6		
Green Ext Time (p_c), s		0.2		0.0		0.3		

Intersection Summary	
HCM 2010 Ctrl Delay	49.4
HCM 2010 LOS	D



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	350	650	550	0	0
Future Volume (veh/h)	0	350	650	550	0	0
Number	3	18	2	12		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900		
Adj Flow Rate, veh/h	0	210	684	147		
Adj No. of Lanes	1	1	2	0		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	0	0	1486	319		
Arrive On Green	0.00	0.00	0.51	0.51		
Sat Flow, veh/h	0		2981	620		
Grp Volume(v), veh/h	0.0		419	412		
Grp Sat Flow(s),veh/h/ln			1770	1739		
Q Serve(g_s), s			2.9	3.0		
Cycle Q Clear(g_c), s			2.9	3.0		
Prop In Lane				0.36		
Lane Grp Cap(c), veh/h			911	895		
V/C Ratio(X)			0.46	0.46		
Avail Cap(c_a), veh/h			2070	2034		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			3.0	3.0		
Incr Delay (d2), s/veh			0.4	0.4		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			1.5	1.5		
LnGrp Delay(d),s/veh			3.4	3.4		
LnGrp LOS			A	A		
Approach Vol, veh/h			831			
Approach Delay, s/veh			3.4			
Approach LOS			A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		19.6						
Change Period (Y+Rc), s		9.5						
Max Green Setting (Gmax), s		22.9						
Max Q Clear Time (g_c+I1), s		5.0						
Green Ext Time (p_c), s		5.0						

Intersection Summary	
HCM 2010 Ctrl Delay	3.4
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
81: Harzard Center Drive & Frazee Road

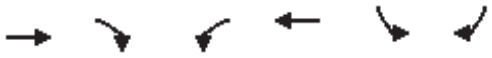


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	180	810	440	150	180	120
Future Volume (veh/h)	180	810	440	150	180	120
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	189	853	463	21	189	10
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	242	1600	754	34	252	225
Arrive On Green	0.14	0.45	0.22	0.22	0.14	0.14
Sat Flow, veh/h	1774	3632	3534	156	1774	1583
Grp Volume(v), veh/h	189	853	238	246	189	10
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1827	1774	1583
Q Serve(g_s), s	4.8	8.1	5.7	5.7	4.8	0.3
Cycle Q Clear(g_c), s	4.8	8.1	5.7	5.7	4.8	0.3
Prop In Lane	1.00			0.09	1.00	1.00
Lane Grp Cap(c), veh/h	242	1600	388	401	252	225
V/C Ratio(X)	0.78	0.53	0.61	0.62	0.75	0.04
Avail Cap(c_a), veh/h	398	2872	680	702	682	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	9.3	16.5	16.5	19.3	17.3
Incr Delay (d2), s/veh	5.4	0.3	1.6	1.5	4.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	4.0	2.9	3.0	2.6	0.2
LnGrp Delay(d),s/veh	24.9	9.5	18.1	18.0	23.7	17.4
LnGrp LOS	C	A	B	B	C	B
Approach Vol, veh/h		1042	484		199	
Approach Delay, s/veh		12.3	18.0		23.4	
Approach LOS		B	B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				30.7		16.2	10.9	19.8
Change Period (Y+Rc), s				* 9.5		9.5	4.5	9.5
Max Green Setting (Gmax), s				* 38		18.0	10.5	18.0
Max Q Clear Time (g_c+I1), s				10.1		6.8	6.8	7.7
Green Ext Time (p_c), s				7.1		0.4	0.2	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Notes



Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1188	167	302	604	344	1375
v/c Ratio	0.65	0.20	0.72	0.25	0.87	0.89
Control Delay	23.2	3.5	56.6	7.8	62.1	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	3.5	56.6	7.8	62.1	8.6
Queue Length 50th (ft)	316	0	106	78	234	0
Queue Length 95th (ft)	456	39	151	127	318	0
Internal Link Dist (ft)	1049			488		
Turn Bay Length (ft)		400	120			180
Base Capacity (vph)	1819	856	479	2403	513	1552
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.20	0.63	0.25	0.67	0.89

Intersection Summary



Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	844	688	1125	354	646
v/c Ratio	0.97	0.32	1.00	0.66	1.03
Control Delay	68.7	12.5	60.8	42.8	70.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	68.7	12.5	60.8	42.8	70.8
Queue Length 50th (ft)	334	132	~393	237	~407
Queue Length 95th (ft)	#464	167	#551	346	#640
Internal Link Dist (ft)		488	1239	905	
Turn Bay Length (ft)	225				
Base Capacity (vph)	872	2117	1126	539	628
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.97	0.32	1.00	0.66	1.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	1147	368	600	726	389	979
v/c Ratio	1.17	0.63	1.58	0.91	0.24	1.23
Control Delay	127.3	19.4	308.2	50.0	18.8	142.8
Queue Delay	0.5	0.0	0.0	9.6	0.0	0.0
Total Delay	127.8	19.4	308.2	59.6	18.8	142.8
Queue Length 50th (ft)	~557	92	~340	519	88	~899
Queue Length 95th (ft)	#693	201	#456	#765	121	#1154
Internal Link Dist (ft)	365			594		1186
Turn Bay Length (ft)		200	250			
Base Capacity (vph)	979	583	380	794	1644	794
Starvation Cap Reductn	90	0	0	60	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.29	0.63	1.58	0.99	0.24	1.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	1084	453	1221	579	547
v/c Ratio	1.14	0.40	1.20	1.01	0.74
Control Delay	121.0	16.6	138.8	88.0	19.5
Queue Delay	0.0	0.9	0.0	0.0	0.0
Total Delay	121.0	17.5	138.8	88.0	19.5
Queue Length 50th (ft)	~612	215	~701	~557	145
Queue Length 95th (ft)	#748	291	#842	#805	302
Internal Link Dist (ft)		594	1043	1756	
Turn Bay Length (ft)	200				
Base Capacity (vph)	954	1120	1021	574	741
Starvation Cap Reductn	0	402	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.14	0.63	1.20	1.01	0.74

Intersection Summary

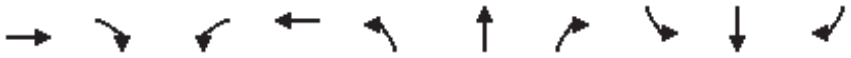
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	189	295	368	126	11	84	168	389	137	63	453	79
v/c Ratio	0.77	0.72	0.61	0.33	0.03	0.21	0.52	0.24	0.18	0.50	0.30	0.11
Control Delay	70.7	54.8	9.3	52.6	38.5	1.5	71.0	30.9	21.5	69.1	27.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.7	54.8	9.3	52.6	38.5	1.5	71.0	30.9	21.5	69.1	27.1	0.3
Queue Length 50th (ft)	149	222	12	47	7	0	74	140	56	50	131	0
Queue Length 95th (ft)	218	297	92	78	23	4	113	216	118	95	201	0
Internal Link Dist (ft)		193			1307			610			1184	
Turn Bay Length (ft)	170			290		200	240			200		200
Base Capacity (vph)	404	701	791	417	448	475	400	1634	777	192	1494	725
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.42	0.47	0.30	0.02	0.18	0.42	0.24	0.18	0.33	0.30	0.11

Intersection Summary



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	242	432	116	64	358	537	158	42	789	116
v/c Ratio	0.79	0.66	0.41	0.22	0.67	0.27	0.24	0.41	0.80	0.23
Control Delay	67.8	14.7	49.9	25.3	57.3	30.0	6.4	69.1	56.7	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	14.7	49.9	25.3	57.3	30.0	6.4	69.1	56.7	16.3
Queue Length 50th (ft)	190	67	80	21	141	119	0	35	~353	15
Queue Length 95th (ft)	264	119	138	61	#239	172	55	77	#503	64
Internal Link Dist (ft)	251			993		253			610	
Turn Bay Length (ft)		70	120		120		200	150		200
Base Capacity (vph)	450	650	368	376	533	1987	648	113	989	506
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.66	0.32	0.17	0.67	0.27	0.24	0.37	0.80	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	550	169	1469	792	500	1448
v/c Ratio	0.72	0.38	0.94	0.77	0.93	0.63
Control Delay	38.9	7.2	39.8	13.5	65.3	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	7.2	39.8	13.5	65.3	12.0
Queue Length 50th (ft)	156	0	416	212	151	227
Queue Length 95th (ft)	210	53	#663	327	#275	375
Internal Link Dist (ft)	1397		566			1235
Turn Bay Length (ft)		230			280	
Base Capacity (vph)	1022	533	1558	1147	540	2311
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.32	0.94	0.69	0.93	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	168	1095	453	379	537	232
v/c Ratio	0.71	0.75	0.68	0.34	0.83	0.22
Control Delay	60.4	28.9	43.3	1.3	38.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.4	28.9	43.3	1.3	38.8	0.5
Queue Length 50th (ft)	105	307	143	0	313	0
Queue Length 95th (ft)	#206	385	196	22	#543	0
Internal Link Dist (ft)		3086	1666			
Turn Bay Length (ft)	220			190		120
Base Capacity (vph)	239	1586	789	1117	649	1052
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.69	0.57	0.34	0.83	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	21	1609	52	995	42	31	188	99
v/c Ratio	0.18	0.84	0.55	0.49	0.11	0.07	0.60	0.23
Control Delay	42.5	24.3	62.3	14.0	22.1	0.3	33.8	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	24.3	62.3	14.0	22.1	0.3	33.8	8.9
Queue Length 50th (ft)	9	299	24	97	16	0	80	8
Queue Length 95th (ft)	35	#660	#87	298	38	0	141	41
Internal Link Dist (ft)		1666		908	489			1477
Turn Bay Length (ft)	160		200				40	
Base Capacity (vph)	123	1909	95	2024	635	671	536	691
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.84	0.55	0.49	0.07	0.05	0.35	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	188	1229	94	635	271	115	438	177	109	500
v/c Ratio	0.76	1.05	0.59	0.63	0.45	0.76	0.84	0.32	0.70	0.97
Control Delay	75.7	83.4	74.5	46.4	8.2	90.3	61.7	5.3	83.7	78.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.7	83.4	74.5	46.4	8.2	90.3	61.7	5.3	83.7	78.4
Queue Length 50th (ft)	162	~624	81	260	9	101	369	0	94	430
Queue Length 95th (ft)	246	#799	142	341	84	#201	#574	45	#174	#688
Internal Link Dist (ft)		931		958			859			325
Turn Bay Length (ft)	190				200				115	
Base Capacity (vph)	311	1172	213	1007	601	160	523	556	174	518
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	1.05	0.44	0.63	0.45	0.72	0.84	0.32	0.63	0.97

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	21	1926	232	958	210	200	33
v/c Ratio	0.28	0.77	1.04	0.44	0.79	0.65	0.12
Control Delay	78.4	33.9	129.0	13.7	75.9	63.5	33.4
Queue Delay	0.0	0.1	0.0	0.1	0.0	0.0	0.0
Total Delay	78.4	34.0	129.0	13.8	75.9	63.5	33.4
Queue Length 50th (ft)	20	579	~244	200	189	174	17
Queue Length 95th (ft)	50	684	#426	186	275	252	45
Internal Link Dist (ft)		999		594	1292		249
Turn Bay Length (ft)	180		200				
Base Capacity (vph)	80	2489	224	2158	445	515	514
Starvation Cap Reductn	0	0	0	270	0	0	0
Spillback Cap Reductn	0	64	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.79	1.04	0.51	0.47	0.39	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2000	347	1041	112	224
v/c Ratio	0.64	0.78	0.37	0.42	0.54
Control Delay	7.3	72.5	3.6	60.1	10.8
Queue Delay	0.1	0.0	0.0	0.0	0.0
Total Delay	7.4	72.5	3.6	60.1	10.8
Queue Length 50th (ft)	108	173	98	94	0
Queue Length 95th (ft)	412	229	53	154	74
Internal Link Dist (ft)	594		1246		
Turn Bay Length (ft)		300			
Base Capacity (vph)	3136	563	2777	384	505
Starvation Cap Reductn	296	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.70	0.62	0.37	0.29	0.44

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	32	2116	716	1158	74	128	119	32	22
v/c Ratio	0.43	0.79	0.91	0.31	0.39	0.41	0.39	0.25	0.09
Control Delay	93.9	13.1	72.9	8.4	61.0	13.0	11.8	57.4	31.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.9	13.1	72.9	8.4	61.0	13.0	11.8	57.4	31.6
Queue Length 50th (ft)	32	706	350	173	62	4	0	26	9
Queue Length 95th (ft)	m54	135	425	200	113	65	58	60	35
Internal Link Dist (ft)		1246		672		252			222
Turn Bay Length (ft)	150		410						
Base Capacity (vph)	83	2674	843	3762	269	390	384	181	347
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.79	0.85	0.31	0.28	0.33	0.31	0.18	0.06

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	224	1214	765	490	1204	286	418	61	969	490	225
v/c Ratio	0.69	0.92	0.79	0.74	0.65	0.17	0.60	0.16	0.86	0.70	0.48
Control Delay	68.3	58.4	11.7	58.2	39.2	1.7	49.7	40.8	41.3	53.2	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.9
Total Delay	68.3	58.4	11.7	58.2	39.2	1.7	49.7	40.8	41.3	59.3	13.2
Queue Length 50th (ft)	94	375	96	~216	351	0	158	41	382	190	23
Queue Length 95th (ft)	#168	#479	196	#381	410	21	203	77	#533	247	95
Internal Link Dist (ft)		672			1085			378			209
Turn Bay Length (ft)			100						300		
Base Capacity (vph)	326	1325	1031	664	1845	1791	878	476	1122	871	540
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	320	130
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.92	0.74	0.74	0.65	0.16	0.48	0.13	0.86	0.89	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	673	2000	1173	1010	735	806
v/c Ratio	0.80	0.47	0.53	0.64	0.71	0.81
Control Delay	38.6	6.8	13.8	8.4	32.0	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	6.8	13.8	8.4	32.0	15.9
Queue Length 50th (ft)	153	117	125	302	112	56
Queue Length 95th (ft)	#292	141	128	250	151	#135
Internal Link Dist (ft)		1085	634		856	
Turn Bay Length (ft)	260					
Base Capacity (vph)	842	4229	2648	1694	1064	1012
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.47	0.44	0.60	0.69	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	378	1796	561	327	1276	357	388	409	194	235	520
v/c Ratio	0.75	0.73	0.45	0.85	0.73	0.51	0.81	0.44	0.76	0.63	0.62
Control Delay	69.7	41.0	11.1	85.9	47.6	12.0	75.9	15.2	87.1	61.6	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.7	41.0	11.1	85.9	47.6	12.0	75.9	15.2	87.1	61.6	16.2
Queue Length 50th (ft)	192	505	47	163	433	52	191	51	97	196	59
Queue Length 95th (ft)	#264	551	107	#235	495	154	245	97	#148	294	128
Internal Link Dist (ft)		634			586			693		685	
Turn Bay Length (ft)	200			130			200		140		
Base Capacity (vph)	504	2476	1238	402	1752	706	565	1108	265	456	947
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.73	0.45	0.81	0.73	0.51	0.69	0.37	0.73	0.52	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	194	206	253	284	800	989	347
v/c Ratio	0.67	0.71	0.60	0.68	0.33	0.54	0.40
Control Delay	62.9	65.1	19.4	65.7	10.4	25.2	3.8
Queue Delay	0.0	0.0	0.0	0.0	1.1	7.6	0.8
Total Delay	62.9	65.1	19.4	65.7	11.5	32.8	4.6
Queue Length 50th (ft)	167	178	49	125	150	310	0
Queue Length 95th (ft)	241	254	130	169	217	443	61
Internal Link Dist (ft)		857			286	253	
Turn Bay Length (ft)	370		370				
Base Capacity (vph)	376	379	494	480	2403	1844	874
Starvation Cap Reductn	0	0	0	0	1288	808	273
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.54	0.51	0.59	0.72	0.95	0.58

Intersection Summary



Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	159	157	463	779	505	621	758
v/c Ratio	0.38	0.37	0.92	0.65	0.63	0.86	0.37
Control Delay	40.0	39.8	53.0	32.0	11.6	60.7	15.5
Queue Delay	0.0	0.0	4.1	2.2	1.4	2.7	1.2
Total Delay	40.0	39.8	57.1	34.2	13.0	63.4	16.7
Queue Length 50th (ft)	107	105	243	305	208	250	178
Queue Length 95th (ft)	173	171	#430	280	165	310	224
Internal Link Dist (ft)		604		170			286
Turn Bay Length (ft)	250		100			120	
Base Capacity (vph)	469	473	549	1194	801	812	2045
Starvation Cap Reductn	0	0	0	273	137	101	996
Spillback Cap Reductn	0	0	42	0	0	0	154
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.33	0.91	0.85	0.76	0.87	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	439	469	653	1173	908	296
v/c Ratio	0.79	0.93	0.95	0.60	0.57	0.47
Control Delay	56.0	67.8	65.1	18.9	43.9	6.8
Queue Delay	0.0	0.0	43.6	3.6	0.0	0.0
Total Delay	56.0	67.8	108.7	22.5	43.9	6.8
Queue Length 50th (ft)	366	381	323	308	271	0
Queue Length 95th (ft)	493	#568	m#360	m321	325	76
Internal Link Dist (ft)		714		277	424	
Turn Bay Length (ft)	320					
Base Capacity (vph)	611	553	688	1939	1603	627
Starvation Cap Reductn	0	0	119	655	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.85	1.15	0.91	0.57	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	627	337	1268	979	284	1105
v/c Ratio	1.14	0.61	0.86	1.02	0.97	0.58
Control Delay	125.5	35.1	45.2	45.9	120.5	10.5
Queue Delay	0.0	0.0	20.4	0.0	0.0	0.4
Total Delay	125.5	35.1	65.7	45.9	120.5	10.9
Queue Length 50th (ft)	~723	200	565	~570	145	188
Queue Length 95th (ft)	#974	308	666	#834	#237	211
Internal Link Dist (ft)	357		608			277
Turn Bay Length (ft)		360				
Base Capacity (vph)	552	555	1481	964	293	1896
Starvation Cap Reductn	0	0	180	0	0	320
Spillback Cap Reductn	2	0	250	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.14	0.61	1.03	1.02	0.97	0.70

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	42	2647	168	189	1958	169	189	305
v/c Ratio	0.45	1.03	0.21	1.02	0.68	0.58	0.38	1.07
Control Delay	70.2	54.9	6.2	125.0	19.8	48.0	14.9	114.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.2	54.9	6.2	125.0	19.8	48.0	14.9	114.1
Queue Length 50th (ft)	32	~802	20	~152	386	115	35	~253
Queue Length 95th (ft)	70	#892	58	#305	442	192	101	#435
Internal Link Dist (ft)		1668			1034	780		453
Turn Bay Length (ft)	220			240			60	
Base Capacity (vph)	104	2576	798	185	2896	291	492	285
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	1.03	0.21	1.02	0.68	0.58	0.38	1.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	143	2383	418	327	1684	82	327	71	444	51	51	40
v/c Ratio	0.69	0.95	0.39	1.06	0.63	0.09	0.79	0.17	0.93	0.34	0.18	0.09
Control Delay	108.8	56.6	6.1	150.3	36.6	2.0	98.3	61.8	69.9	98.8	31.5	0.4
Queue Delay	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.8	58.2	6.1	150.3	36.6	2.0	98.3	61.8	69.9	98.8	31.5	0.4
Queue Length 50th (ft)	96	~1216	82	~242	622	0	~235	75	364	33	22	0
Queue Length 95th (ft)	139	#1285	133	#355	682	19	#348	124	#531	61	69	0
Internal Link Dist (ft)		1034			1478			660			718	
Turn Bay Length (ft)	240		240	260		260	200			210		210
Base Capacity (vph)	240	2521	1066	308	2670	954	412	478	526	171	353	458
Starvation Cap Reductn	0	57	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.97	0.39	1.06	0.63	0.09	0.79	0.15	0.84	0.30	0.14	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

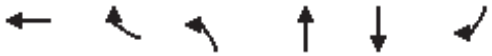


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	177	2302	365	542	1177	156	260	63	792	104	21	83
v/c Ratio	0.68	0.96	0.43	1.00	0.42	0.15	0.49	0.19	1.41	0.38	0.14	0.30
Control Delay	80.4	48.8	11.8	100.9	21.5	1.6	59.7	49.8	227.9	72.1	65.5	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.4	48.8	11.8	100.9	21.5	1.6	59.7	49.8	227.9	72.1	65.5	2.8
Queue Length 50th (ft)	88	~917	85	277	271	0	113	48	~867	52	19	0
Queue Length 95th (ft)	129	#1004	177	#403	316	22	160	90	#1124	#95	48	0
Internal Link Dist (ft)		1478			1233			692			645	
Turn Bay Length (ft)	300		300	260		260	180			190		300
Base Capacity (vph)	299	2409	840	542	2817	1038	596	484	561	275	299	382
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.96	0.43	1.00	0.42	0.15	0.44	0.13	1.41	0.38	0.07	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	927	295	537	442	947	547
v/c Ratio	1.34	0.19	1.29	0.24	1.13	0.82
Control Delay	197.2	0.3	190.5	18.9	119.7	22.1
Queue Delay	0.0	0.0	1.2	0.0	0.0	0.0
Total Delay	197.2	0.3	191.7	18.9	119.7	22.1
Queue Length 50th (ft)	~1058	0	~599	111	~505	106
Queue Length 95th (ft)	#1313	0	#825	145	#639	276
Internal Link Dist (ft)	702			344	548	
Turn Bay Length (ft)						
Base Capacity (vph)	691	1555	415	1808	838	671
Starvation Cap Reductn	0	0	46	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.19	1.46	0.24	1.13	0.82

Intersection Summary

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Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

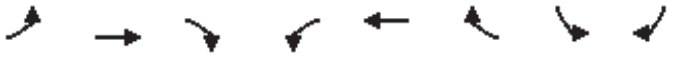


Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	379	358	611	653	484	1379
v/c Ratio	1.06	1.14	1.06	0.90	0.76	1.08
Control Delay	114.7	141.6	98.9	34.3	45.8	90.4
Queue Delay	0.0	0.0	19.9	47.7	50.3	8.6
Total Delay	114.7	141.6	118.9	82.0	96.1	98.9
Queue Length 50th (ft)	~352	~353	~567	245	357	~683
Queue Length 95th (ft)	#552	#549	#798	#502	496	#822
Internal Link Dist (ft)	760		133			344
Turn Bay Length (ft)						
Base Capacity (vph)	356	313	574	722	637	1274
Starvation Cap Reductn	0	0	280	161	194	326
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.06	1.14	2.08	1.16	1.09	1.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	582	2112	857	357	1755	459	1184	990
v/c Ratio	1.22	0.92	0.85	1.22	1.01	0.30	1.48	0.67
Control Delay	156.2	39.1	18.7	169.4	63.6	0.5	254.8	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	156.2	39.1	18.7	169.4	63.6	0.5	254.8	18.8
Queue Length 50th (ft)	~554	551	207	~340	~505	0	~693	251
Queue Length 95th (ft)	#775	627	#473	#529	#620	0	#835	323
Internal Link Dist (ft)		737			1071			
Turn Bay Length (ft)							600	600
Base Capacity (vph)	476	2288	1003	292	1737	1536	802	1485
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.22	0.92	0.85	1.22	1.01	0.30	1.48	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	786	2510	1674	530	1051	1184
v/c Ratio	2.03	0.75	0.92	1.02	2.20	1.65
Control Delay	497.9	16.5	46.5	84.3	571.6	321.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	497.9	16.5	46.5	84.3	571.6	321.4
Queue Length 50th (ft)	~1036	479	513	~550	~1397	~1199
Queue Length 95th (ft)	#1281	535	589	#806	#1660	#1466
Internal Link Dist (ft)		1071	878		682	773
Turn Bay Length (ft)	520					
Base Capacity (vph)	388	3363	1827	519	477	717
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.03	0.75	0.92	1.02	2.20	1.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2969	629	216	1670	586	332
v/c Ratio	1.05	0.54	0.89	0.36	0.86	0.77
Control Delay	62.6	6.5	95.5	7.9	68.8	34.9
Queue Delay	13.3	0.0	0.0	0.0	0.0	0.0
Total Delay	75.9	6.5	95.5	7.9	68.8	34.9
Queue Length 50th (ft)	~1119	146	204	159	274	139
Queue Length 95th (ft)	#1194	185	#385	188	339	271
Internal Link Dist (ft)	878			425	699	
Turn Bay Length (ft)		400	160		160	
Base Capacity (vph)	2835	1191	243	4641	757	455
Starvation Cap Reductn	84	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.53	0.89	0.36	0.77	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	402	2928	1763	216	474
v/c Ratio	0.61	0.82	0.60	0.32	0.78
Control Delay	44.0	17.5	22.5	35.1	34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	17.5	22.5	35.1	34.4
Queue Length 50th (ft)	118	281	218	72	268
Queue Length 95th (ft)	187	#884	343	78	287
Internal Link Dist (ft)		589	1602	1556	
Turn Bay Length (ft)	200			200	
Base Capacity (vph)	657	3564	2961	1209	605
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	0.82	0.60	0.18	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	295	2589	326	95	1337	347	221	168	274
v/c Ratio	0.68	1.05	0.38	0.85	0.88	1.30	0.38	0.54	0.41
Control Delay	51.5	63.1	5.0	117.1	34.7	196.2	24.6	41.0	8.2
Queue Delay	0.0	22.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	85.2	5.0	117.1	34.7	196.2	24.6	41.0	8.2
Queue Length 50th (ft)	210	~799	21	76	243	~344	94	106	22
Queue Length 95th (ft)	#349	#889	76	m#146	m269	#533	165	183	89
Internal Link Dist (ft)		1602			513		932		815
Turn Bay Length (ft)	220		315	190		150		130	
Base Capacity (vph)	431	2470	855	112	1676	266	584	310	671
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	485	0	0	0	0	5	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	1.30	0.38	0.85	0.80	1.30	0.38	0.54	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



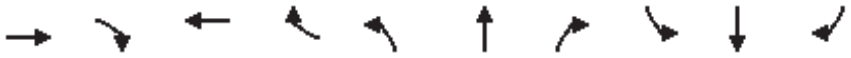
Lane Group	EBT	EBR	WBL	NBL	NBR
Lane Group Flow (vph)	2398	398	316	378	684
v/c Ratio	0.98	0.26	0.47	1.07	0.63
Control Delay	19.6	0.1	45.2	112.8	29.1
Queue Delay	42.4	0.0	0.0	0.0	0.0
Total Delay	61.9	0.1	45.2	112.8	29.1
Queue Length 50th (ft)	711	0	111	~341	222
Queue Length 95th (ft)	m693	m0	156	#534	289
Internal Link Dist (ft)	513			1532	
Turn Bay Length (ft)		90	190	140	
Base Capacity (vph)	2466	1555	703	354	1111
Starvation Cap Reductn	433	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.18	0.26	0.45	1.07	0.62

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	147	147	158	221	137	937	116	211	842	168
v/c Ratio	0.73	0.35	0.72	0.50	0.49	0.55	0.15	0.78	0.50	0.21
Control Delay	69.2	4.3	65.9	9.2	54.7	26.8	5.0	65.8	20.1	3.0
Queue Delay	3.0	0.0	0.0	0.8	0.0	0.4	0.0	6.6	1.0	0.7
Total Delay	72.3	4.3	65.9	10.0	54.7	27.1	5.0	72.4	21.2	3.7
Queue Length 50th (ft)	116	0	124	0	103	268	0	162	164	6
Queue Length 95th (ft)	177	24	186	64	167	420	40	m228	381	m35
Internal Link Dist (ft)	291		308			999			170	
Turn Bay Length (ft)		200		200	120			120		
Base Capacity (vph)	276	502	304	524	277	1710	757	351	1720	799
Starvation Cap Reductn	0	0	0	0	0	0	0	95	580	375
Spillback Cap Reductn	61	0	0	114	0	290	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.29	0.52	0.54	0.49	0.66	0.15	0.82	0.74	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	381	278	485	763	330	402	330	1108	237	196	845	268
v/c Ratio	0.84	0.78	0.78	0.96	0.32	0.58	0.83	0.77	0.26	0.68	0.66	0.35
Control Delay	76.2	68.4	36.4	76.5	39.1	24.2	78.7	51.4	7.7	73.9	51.0	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.2	68.4	36.4	76.5	39.1	24.2	78.7	51.4	7.7	73.9	51.0	9.8
Queue Length 50th (ft)	175	234	265	356	120	192	152	357	44	90	268	47
Queue Length 95th (ft)	#234	333	396	#481	162	279	#224	#449	93	132	320	113
Internal Link Dist (ft)		1252			1355			1284			608	
Turn Bay Length (ft)	140		120	120		160	335		200	180		200
Base Capacity (vph)	487	421	627	803	1122	713	414	1438	904	334	1285	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.66	0.77	0.95	0.29	0.56	0.80	0.77	0.26	0.59	0.66	0.35

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

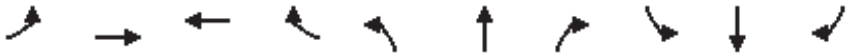


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	153	388	194	209	551	153	490	184	429	327	112
v/c Ratio	0.54	0.69	0.33	0.69	1.00	1.01	0.79	0.45	0.94	0.42	0.27
Control Delay	59.2	50.9	7.7	65.6	84.3	138.1	65.4	10.8	88.3	48.8	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	50.9	7.7	65.6	84.3	138.1	65.4	10.8	88.3	48.8	8.3
Queue Length 50th (ft)	127	328	7	179	~553	~160	237	0	212	142	0
Queue Length 95th (ft)	199	451	67	267	#787	#309	#308	71	#326	192	46
Internal Link Dist (ft)		1071			1444		453			660	
Turn Bay Length (ft)	250					160		200	300		200
Base Capacity (vph)	454	580	600	454	549	151	635	411	458	802	423
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.67	0.32	0.46	1.00	1.01	0.77	0.45	0.94	0.41	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	356	202	74	284	21	263	11	126	253	358
v/c Ratio	0.79	0.45	0.22	0.65	0.21	0.48	0.03	0.59	0.44	0.34
Control Delay	43.0	29.8	29.2	18.9	50.8	36.1	0.2	52.2	30.6	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	29.8	29.2	18.9	50.8	36.1	0.2	52.2	30.6	2.4
Queue Length 50th (ft)	141	69	29	39	9	55	0	51	81	0
Queue Length 95th (ft)	#384	190	73	130	40	124	0	#183	237	41
Internal Link Dist (ft)		1444	569			544			692	
Turn Bay Length (ft)	130			200	70		200	100		
Base Capacity (vph)	663	659	776	754	99	912	494	239	628	1190
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.31	0.10	0.38	0.21	0.29	0.02	0.53	0.40	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	200	1084	137	126	189	158	368	126	179	295	200
v/c Ratio	0.77	0.93	0.88	0.13	0.36	0.83	0.88	0.26	0.89	0.70	0.42
Control Delay	66.5	44.6	98.6	34.6	7.5	83.3	66.2	2.9	91.5	50.4	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.5	44.6	98.6	34.6	7.5	83.3	66.2	2.9	91.5	50.4	10.5
Queue Length 50th (ft)	150	354	107	38	0	121	270	0	139	207	14
Queue Length 95th (ft)	225	#491	#233	68	60	#239	#421	16	#281	306	77
Internal Link Dist (ft)		1694		1560			1721			574	
Turn Bay Length (ft)	80		200		200	70			120		120
Base Capacity (vph)	345	1257	156	935	523	203	480	522	203	477	519
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.86	0.88	0.13	0.36	0.78	0.77	0.24	0.88	0.62	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	159	122	750	135	52	479	865	21	63	1021
v/c Ratio	0.59	0.45	0.94	0.78	0.17	0.49	0.47	0.03	0.53	0.85
Control Delay	61.0	56.0	41.9	88.5	1.3	41.5	22.5	0.1	79.5	54.4
Queue Delay	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.0	56.0	44.0	88.5	1.3	41.5	22.5	0.1	79.5	54.4
Queue Length 50th (ft)	137	103	364	123	0	189	274	0	57	325
Queue Length 95th (ft)	224	176	#676	#247	0	251	340	0	109	387
Internal Link Dist (ft)		357		605			887			999
Turn Bay Length (ft)	230				200	200		200	240	
Base Capacity (vph)	434	438	865	189	310	1136	2048	855	157	1492
Starvation Cap Reductn	0	0	43	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.28	0.91	0.71	0.17	0.42	0.42	0.02	0.40	0.68

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	411	516	305	516	516	295
v/c Ratio	0.88	0.51	0.67	0.69	0.92	0.26
Control Delay	49.3	6.4	34.1	7.8	50.7	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	6.4	34.1	7.8	50.7	7.4
Queue Length 50th (ft)	191	60	132	0	244	59
Queue Length 95th (ft)	#359	129	213	77	#448	95
Internal Link Dist (ft)	612		631			319
Turn Bay Length (ft)		175				
Base Capacity (vph)	498	1010	549	804	569	1248
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.51	0.56	0.64	0.91	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	274	905	316	631	263	1021	484	968	305
v/c Ratio	0.67	0.86	0.72	0.57	1.38	0.84	1.73	0.70	0.50
Control Delay	60.1	44.9	60.5	27.8	239.5	48.8	378.9	43.7	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	44.9	60.5	27.8	239.5	48.8	378.9	43.7	8.8
Queue Length 50th (ft)	104	316	121	162	~137	260	~282	244	9
Queue Length 95th (ft)	165	420	187	232	#262	#410	#456	353	96
Internal Link Dist (ft)		2153		1856		444		887	
Turn Bay Length (ft)	290		140		160		320		
Base Capacity (vph)	1354	1767	604	1175	191	1219	279	1381	604
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.51	0.52	0.54	1.38	0.84	1.73	0.70	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	221	663	189	253	621	53	158	179	168	158	347	232
v/c Ratio	0.70	0.74	0.36	0.72	0.64	0.11	0.68	0.22	0.35	0.58	0.42	0.43
Control Delay	47.1	35.4	6.9	45.8	31.3	0.5	45.7	27.0	6.8	38.6	29.0	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	35.4	6.9	45.8	31.3	0.5	45.7	27.0	6.8	38.6	29.0	6.7
Queue Length 50th (ft)	103	157	0	117	141	0	72	38	0	70	77	0
Queue Length 95th (ft)	224	283	54	248	253	0	162	76	49	155	140	56
Internal Link Dist (ft)		1214			1167			627			1301	
Turn Bay Length (ft)	120		200	260		200	160		200	160		200
Base Capacity (vph)	470	1282	670	538	1415	660	438	1551	763	512	1551	800
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.52	0.28	0.47	0.44	0.08	0.36	0.12	0.22	0.31	0.22	0.29

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	291	416	268	82	337	255	255	1449	306	301	1832	255
v/c Ratio	1.16	0.45	0.46	0.51	0.52	0.58	0.95	0.99	0.43	0.90	0.81	0.34
Control Delay	159.7	40.9	24.4	78.4	55.4	17.6	109.9	64.3	18.5	93.5	40.2	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	19.2	39.6	6.5	0.0	0.0	0.0
Total Delay	159.7	40.9	24.4	78.4	55.4	17.6	129.0	103.9	25.1	93.5	40.2	14.5
Queue Length 50th (ft)	~324	155	135	39	143	42	125	~806	111	~165	603	73
Queue Length 95th (ft)	#514	207	214	68	192	129	#209	#947	200	#264	675	148
Internal Link Dist (ft)		1167			1022			145			1284	
Turn Bay Length (ft)	250		325	250		200			200	250		200
Base Capacity (vph)	251	1092	584	172	829	509	279	1458	711	333	2256	752
Starvation Cap Reductn	0	0	0	0	0	0	27	615	347	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.16	0.38	0.46	0.48	0.41	0.50	1.01	1.72	0.84	0.90	0.81	0.34

Intersection Summary

Description: Loss time adjust of 3 seconds to the NBL movement to account fo rthe transit crossing

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	158	316	358	242	358	189	495	126	568
v/c Ratio	0.73	0.78	0.57	0.91	0.79	0.88	0.80	0.81	0.98
Control Delay	65.4	51.4	17.0	80.7	48.0	84.5	40.2	83.7	67.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.4	51.4	17.0	80.7	48.0	84.5	40.2	83.7	67.2
Queue Length 50th (ft)	101	197	98	160	217	126	277	84	360
Queue Length 95th (ft)	#202	294	179	#329	323	#273	#488	#200	#640
Internal Link Dist (ft)		1226			476		964		611
Turn Bay Length (ft)				70		80			
Base Capacity (vph)	236	530	630	267	550	214	620	156	581
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.60	0.57	0.91	0.65	0.88	0.80	0.81	0.98

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	284	516	221	305	695	305
v/c Ratio	0.94	0.34	0.42	0.63	0.95	0.29
Control Delay	79.7	18.8	38.8	10.6	52.4	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.7	18.8	38.8	10.6	52.4	3.3
Queue Length 50th (ft)	166	106	64	0	380	19
Queue Length 95th (ft)	#348	145	99	73	#681	57
Internal Link Dist (ft)		1474	1627		1721	
Turn Bay Length (ft)	95			80		
Base Capacity (vph)	302	1708	725	552	730	1037
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.30	0.30	0.55	0.95	0.29

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

45: Mission Gorge Road & Camino Del Rio North/I-8 WB Off Ramps

10/17/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	102	145	629	463	340	269	351	1000	227	52	1567	93
v/c Ratio	1.12	1.51	1.41	1.13	0.44	0.57	1.07	0.55	0.26	0.45	1.21	0.15
Control Delay	189.8	319.0	226.5	133.7	46.6	30.6	124.2	25.0	4.2	81.1	143.5	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	189.8	319.0	226.5	133.7	46.6	30.6	124.2	25.0	4.2	81.1	143.5	6.2
Queue Length 50th (ft)	~115	~200	~650	~556	154	125	~366	326	13	25	~950	0
Queue Length 95th (ft)	#249	#354	#1002	#796	209	212	#570	390	56	49	#1089	39
Internal Link Dist (ft)		1010			920			738			884	
Turn Bay Length (ft)	130			520		140	220		200	90		150
Base Capacity (vph)	91	96	447	409	780	468	328	1828	888	116	1291	617
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.12	1.51	1.41	1.13	0.44	0.57	1.07	0.55	0.26	0.45	1.21	0.15

Intersection Summary

Description: min green reduce to match split

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	SBR
Lane Group Flow (vph)	316	95
v/c Ratio	0.14	0.14
Control Delay	3.5	0.5
Queue Delay	0.0	0.0
Total Delay	3.5	0.5
Queue Length 50th (ft)	11	0
Queue Length 95th (ft)	24	0
Internal Link Dist (ft)	302	
Turn Bay Length (ft)		
Base Capacity (vph)	2319	783
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.14	0.12

Intersection Summary



Lane Group	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	579	463	1	484
v/c Ratio	0.67	0.64	0.00	0.28
Control Delay	34.5	7.1	13.0	7.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	34.5	7.1	13.0	7.5
Queue Length 50th (ft)	157	0	0	70
Queue Length 95th (ft)	194	69	m1	107
Internal Link Dist (ft)	598		723	
Turn Bay Length (ft)		150		
Base Capacity (vph)	1930	1039	1048	1740
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.30	0.45	0.00	0.28

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	144	216	268	289	289	505	247	608	691	423	1010	134
v/c Ratio	0.80	0.24	0.17	0.66	0.71	0.88	0.77	0.67	0.44	0.77	0.88	0.21
Control Delay	74.4	28.8	0.2	47.0	43.8	32.1	60.0	36.1	0.9	48.8	41.0	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.4	28.8	0.2	47.0	43.8	32.1	60.0	36.1	0.9	48.8	41.0	0.7
Queue Length 50th (ft)	88	54	0	88	162	122	78	177	0	129	304	0
Queue Length 95th (ft)	#202	87	0	133	249	#301	#147	247	0	#202	#442	0
Internal Link Dist (ft)		650			381			678			444	
Turn Bay Length (ft)	70		70	160			190		190	150		
Base Capacity (vph)	186	1043	1555	536	532	655	324	961	1554	592	1237	676
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.21	0.17	0.54	0.54	0.77	0.76	0.63	0.44	0.71	0.82	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	351	979	299	320	420	539	278
v/c Ratio	0.32	0.64	0.85	0.17	0.66	0.84	0.18
Control Delay	40.5	2.0	79.8	18.5	43.7	54.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.5	2.0	79.8	18.5	43.7	54.3	0.3
Queue Length 50th (ft)	139	0	287	82	351	493	0
Queue Length 95th (ft)	185	0	#520	121	449	616	0
Internal Link Dist (ft)	381			779		361	
Turn Bay Length (ft)			110		560		560
Base Capacity (vph)	1110	1536	351	1925	717	731	1536
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.64	0.85	0.17	0.59	0.74	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	284	453	368	242	484	347
v/c Ratio	0.99	0.41	0.27	0.33	0.94	0.50
Control Delay	86.4	10.1	17.7	3.8	56.8	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.4	10.1	17.7	3.8	56.8	5.5
Queue Length 50th (ft)	143	110	65	0	234	0
Queue Length 95th (ft)	#295	171	97	43	#416	59
Internal Link Dist (ft)		1771	694		627	
Turn Bay Length (ft)	200			90		
Base Capacity (vph)	288	1109	1353	737	521	696
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.41	0.27	0.33	0.93	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBR	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	316	500	388	383	296	1311	255	1505	765
v/c Ratio	0.93	0.84	1.04	1.01	1.18	0.50	0.17	1.20	1.06
Control Delay	113.5	57.7	130.9	106.9	184.0	31.9	0.2	151.1	86.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	18.4
Total Delay	113.5	57.7	130.9	106.9	184.0	31.9	0.2	154.5	104.5
Queue Length 50th (ft)	409	457	~584	~457	~465	404	0	~1257	~834
Queue Length 95th (ft)	#584	618	#816	#691	#677	446	0	#1391	#1101
Internal Link Dist (ft)			350			965		145	
Turn Bay Length (ft)				200	100				
Base Capacity (vph)	362	595	372	378	250	2641	1536	1254	723
Starvation Cap Reductn	0	0	0	0	0	0	0	596	202
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.84	1.04	1.01	1.18	0.50	0.17	2.29	1.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	547	569	21	327	53	164	131	474
v/c Ratio	1.26	0.41	0.16	0.40	0.29	0.35	0.28	0.51
Control Delay	164.8	18.3	38.7	18.4	20.4	20.6	19.7	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	164.8	18.3	38.7	18.4	20.4	20.6	19.7	3.0
Queue Length 50th (ft)	~114	61	6	36	3	46	35	0
Queue Length 95th (ft)	#335	183	34	93	40	114	93	33
Internal Link Dist (ft)		1165		492	202		357	
Turn Bay Length (ft)	190		90			140		
Base Capacity (vph)	434	1703	135	1502	222	965	976	928
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.26	0.33	0.16	0.22	0.24	0.17	0.13	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	SBL	SBR
Lane Group Flow (vph)	200	105	200
v/c Ratio	0.40	0.10	0.25
Control Delay	13.9	0.2	2.8
Queue Delay	0.0	0.0	0.0
Total Delay	13.9	0.2	2.8
Queue Length 50th (ft)	23	0	0
Queue Length 95th (ft)	92	0	27
Internal Link Dist (ft)	719	273	
Turn Bay Length (ft)			
Base Capacity (vph)	1252	1385	1140
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.16	0.08	0.18

Intersection Summary



Lane Group	EBL	EBT
Lane Group Flow (vph)	1305	1316
v/c Ratio	0.75	0.37
Control Delay	3.0	0.3
Queue Delay	0.0	0.0
Total Delay	3.0	0.3
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)		726
Turn Bay Length (ft)		
Base Capacity (vph)	1747	3539
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.75	0.37

Intersection Summary

Lane Group	EBT	NBR
Lane Group Flow (vph)	1316	947
v/c Ratio	0.79	0.77
Control Delay	7.7	10.5
Queue Delay	0.0	0.0
Total Delay	7.7	10.5
Queue Length 50th (ft)	28	40
Queue Length 95th (ft)	103	122
Internal Link Dist (ft)	1023	
Turn Bay Length (ft)		
Base Capacity (vph)	2059	1741
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.64	0.54

Intersection Summary



Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	884	389	558	284	750	850
v/c Ratio	0.74	0.44	0.87	0.18	1.30	0.71
Control Delay	47.9	1.6	59.8	0.2	186.9	46.3
Queue Delay	0.0	0.0	2.0	0.0	0.0	0.7
Total Delay	47.9	1.6	61.8	0.2	186.9	47.1
Queue Length 50th (ft)	392	0	233	0	~1029	393
Queue Length 95th (ft)	473	0	283	m0	#1380	508
Internal Link Dist (ft)		711	193			678
Turn Bay Length (ft)				80	330	
Base Capacity (vph)	1187	883	872	1555	576	1193
Starvation Cap Reductn	0	0	178	0	0	0
Spillback Cap Reductn	0	18	0	0	0	118
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.45	0.80	0.18	1.30	0.79

Intersection Summary

Description: Set to pretime to mimic field phasing

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	173	574	211	453	74	32	365	220	363
v/c Ratio	0.55	0.89	0.91	0.47	0.59	0.16	0.43	0.26	0.38
Control Delay	61.4	75.5	108.2	12.2	86.3	1.8	17.9	13.1	3.9
Queue Delay	3.8	8.4	0.0	0.2	0.0	0.0	3.6	2.0	1.2
Total Delay	65.2	83.9	108.2	12.3	86.3	1.8	21.5	15.1	5.1
Queue Length 50th (ft)	168	300	110	151	71	0	313	134	95
Queue Length 95th (ft)	254	371	#190	241	127	0	412	165	68
Internal Link Dist (ft)		393	464		304			193	
Turn Bay Length (ft)	280			220		100			
Base Capacity (vph)	342	706	232	967	144	209	854	862	946
Starvation Cap Reductn	0	0	0	0	0	0	390	498	369
Spillback Cap Reductn	100	103	0	94	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.95	0.91	0.52	0.51	0.15	0.79	0.60	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBR	NBT	SBT	SBR
Lane Group Flow (vph)	474	1321	1663	542
v/c Ratio	0.86	0.50	0.63	0.45
Control Delay	64.1	6.4	11.1	1.8
Queue Delay	0.2	1.9	1.6	0.0
Total Delay	64.3	8.3	12.8	1.8
Queue Length 50th (ft)	215	198	361	0
Queue Length 95th (ft)	272	m220	517	35
Internal Link Dist (ft)		396	965	
Turn Bay Length (ft)				
Base Capacity (vph)	691	2626	2626	1211
Starvation Cap Reductn	0	1088	345	0
Spillback Cap Reductn	14	0	732	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.70	0.86	0.88	0.45

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	305	232	284	232	84	653	95	1042	337	1358	442
v/c Ratio	0.94	0.68	0.61	0.76	0.26	1.04	0.82	0.97	1.04	0.86	0.58
Control Delay	95.7	66.5	22.5	72.2	52.2	71.4	111.0	69.8	112.2	44.4	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	24.8	1.0
Total Delay	95.7	66.5	22.5	72.2	52.2	71.4	111.0	70.8	112.2	69.2	21.7
Queue Length 50th (ft)	287	206	89	202	67	289	91	~581	~349	675	233
Queue Length 95th (ft)	#467	302	151	297	117	#612	#201	#721	#546	#797	285
Internal Link Dist (ft)		351			536			1138		396	
Turn Bay Length (ft)	80		35	60		60	100				160
Base Capacity (vph)	329	346	466	366	385	625	117	1071	324	1572	762
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	271	129
Spillback Cap Reductn	0	0	0	0	0	0	0	7	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.67	0.61	0.63	0.22	1.04	0.81	0.98	1.04	1.04	0.70

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	263	611	337	421	684	295
v/c Ratio	0.83	0.70	0.77	0.40	0.93	0.38
Control Delay	57.8	22.9	43.0	4.5	45.3	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	22.9	43.0	4.5	45.3	3.8
Queue Length 50th (ft)	141	253	173	50	348	0
Queue Length 95th (ft)	#277	374	268	86	#598	48
Internal Link Dist (ft)		1605	2056		964	
Turn Bay Length (ft)	160			230	75	
Base Capacity (vph)	347	1004	539	1077	793	822
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.61	0.63	0.39	0.86	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NBT	SBL	SBR
Lane Group Flow (vph)	1863	42	305	63	305	168
v/c Ratio	0.93	0.43	0.26	0.32	0.90	0.40
Control Delay	31.0	59.6	9.2	4.3	69.4	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	59.6	9.2	4.3	69.4	9.0
Queue Length 50th (ft)	~597	27	81	0	193	0
Queue Length 95th (ft)	#795	#66	124	3	#354	55
Internal Link Dist (ft)	1169		1	255		
Turn Bay Length (ft)		80				
Base Capacity (vph)	2033	98	1262	201	356	429
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.43	0.24	0.31	0.86	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT
Lane Group Flow (vph)	2190	105	347
v/c Ratio	0.80	0.53	0.10
Control Delay	8.1	46.2	0.1
Queue Delay	0.0	0.0	0.0
Total Delay	8.1	46.2	0.1
Queue Length 50th (ft)	233	44	0
Queue Length 95th (ft)	428	118	0
Internal Link Dist (ft)	1		1248
Turn Bay Length (ft)		350	
Base Capacity (vph)	3103	314	3539
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.71	0.33	0.10

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT
Lane Group Flow (vph)	474	1021	242	84	211	95
v/c Ratio	0.91	0.50	0.66	0.19	0.90	0.48
Control Delay	53.4	11.3	40.3	0.9	76.5	43.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.4	11.3	40.3	0.9	76.5	43.6
Queue Length 50th (ft)	230	152	118	0	109	46
Queue Length 95th (ft)	#451	197	193	0	#257	100
Internal Link Dist (ft)		1248	1726			753
Turn Bay Length (ft)	115			180	190	
Base Capacity (vph)	536	2350	510	550	235	197
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.43	0.47	0.15	0.90	0.48

Intersection Summary

Description: 3 seconds of all red was added to all phase plus an additional 1.5 seconds to each of the two yellow phase to mimic the time loss to the bike p

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	1000	2263	95	684	1621
v/c Ratio	0.89	0.65	0.75	0.34	0.72
Control Delay	38.8	0.9	75.0	9.8	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	0.9	75.0	9.8	20.7
Queue Length 50th (ft)	254	0	51	93	247
Queue Length 95th (ft)	#405	0	#139	125	300
Internal Link Dist (ft)	658			1165	738
Turn Bay Length (ft)			180		
Base Capacity (vph)	1197	3502	133	2354	2703
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.84	0.65	0.71	0.29	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	232	95	63	84	74	305	158	600	168	221	1653
v/c Ratio	0.89	0.35	0.20	0.46	0.38	0.71	0.89	0.71	0.23	0.84	0.96
Control Delay	90.7	58.3	1.4	65.8	63.0	15.9	105.2	36.6	9.2	82.8	45.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.7	58.3	1.4	65.8	63.0	15.9	105.2	36.6	9.2	82.8	45.5
Queue Length 50th (ft)	220	82	0	73	64	0	152	462	28	204	758
Queue Length 95th (ft)	#386	142	0	130	117	95	#302	614	76	#332	#941
Internal Link Dist (ft)		920			701			1175			1055
Turn Bay Length (ft)				110		110	85		200	190	
Base Capacity (vph)	272	287	329	256	270	477	177	901	756	306	1913
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.33	0.19	0.33	0.27	0.64	0.89	0.67	0.22	0.72	0.86

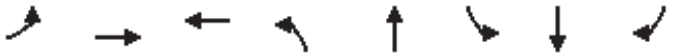
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	231	1579	116	53	1347
v/c Ratio	0.49	0.77	0.08	0.26	0.66
Control Delay	38.0	17.9	2.9	46.1	6.3
Queue Delay	0.0	0.5	0.0	0.0	0.2
Total Delay	38.0	18.4	2.9	46.1	6.5
Queue Length 50th (ft)	55	285	10	29	98
Queue Length 95th (ft)	113	552	31	76	201
Internal Link Dist (ft)	928		365	360	
Turn Bay Length (ft)					
Base Capacity (vph)	710	2635	1695	359	2408
Starvation Cap Reductn	0	572	0	0	346
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.77	0.07	0.15	0.65

Intersection Summary



Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	495	105	43	89	937	21	937	600
v/c Ratio	1.08	0.18	0.08	0.96	0.93	0.26	0.99	0.65
Control Delay	106.4	10.1	24.7	145.0	45.2	70.0	58.9	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	39.3	2.3
Total Delay	106.4	10.1	24.7	145.0	45.2	70.0	98.3	13.9
Queue Length 50th (ft)	~482	12	19	79	786	18	787	128
Queue Length 95th (ft)	#703	55	48	#192	#1098	47	#1095	258
Internal Link Dist (ft)		713	111		622		360	
Turn Bay Length (ft)								
Base Capacity (vph)	460	583	563	93	1009	85	950	920
Starvation Cap Reductn	0	0	0	0	0	0	265	195
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.18	0.08	0.96	0.93	0.25	1.37	0.83

Intersection Summary

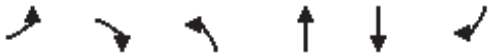
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	395	326	674	379	605	700
v/c Ratio	0.68	0.63	0.68	0.41	0.53	0.68
Control Delay	48.9	10.3	37.8	18.1	33.9	12.4
Queue Delay	0.0	0.0	0.8	1.2	0.0	0.0
Total Delay	48.9	10.3	38.6	19.3	33.9	12.4
Queue Length 50th (ft)	137	0	213	156	182	218
Queue Length 95th (ft)	187	80	258	200	260	344
Internal Link Dist (ft)	871			304	424	
Turn Bay Length (ft)					150	
Base Capacity (vph)	667	545	1173	1064	1153	1074
Starvation Cap Reductn	0	0	226	461	0	5
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.60	0.71	0.63	0.52	0.65

Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	963	132	116	84	538	525
v/c Ratio	0.98	0.15	0.83	0.13	1.19	0.73
Control Delay	44.7	2.2	85.8	21.4	128.2	9.8
Queue Delay	42.9	0.0	0.0	0.0	0.0	0.0
Total Delay	87.6	2.2	85.8	21.4	128.2	9.8
Queue Length 50th (ft)	492	0	66	33	~309	0
Queue Length 95th (ft)	#789	24	#163	65	#518	103
Internal Link Dist (ft)	304			65	1294	
Turn Bay Length (ft)						
Base Capacity (vph)	1004	893	139	638	454	720
Starvation Cap Reductn	209	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.21	0.15	0.83	0.13	1.19	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	295	337	537	126	400
v/c Ratio	0.58	0.50	0.53	0.36	0.23
Control Delay	21.4	5.2	16.4	24.0	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	5.2	16.4	24.0	6.8
Queue Length 50th (ft)	73	0	63	32	27
Queue Length 95th (ft)	156	50	117	86	54
Internal Link Dist (ft)	646		611		592
Turn Bay Length (ft)					
Base Capacity (vph)	778	863	1553	419	2512
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.39	0.35	0.30	0.16

Intersection Summary



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	158	84	1200	137	1032
v/c Ratio	0.46	0.23	0.71	0.59	0.41
Control Delay	25.0	6.9	21.9	38.0	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	6.9	21.9	38.0	5.7
Queue Length 50th (ft)	49	0	200	45	71
Queue Length 95th (ft)	95	28	#402	#127	154
Internal Link Dist (ft)	1499		980		859
Turn Bay Length (ft)	250			250	
Base Capacity (vph)	575	554	1682	238	2528
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.27	0.15	0.71	0.58	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	147	337	158	747	200	769	105	484
v/c Ratio	0.69	0.61	0.70	1.32	1.46	0.75	0.64	0.57
Control Delay	59.5	29.2	60.0	186.6	273.9	28.1	57.9	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	29.2	60.0	186.6	273.9	28.1	57.9	25.2
Queue Length 50th (ft)	82	145	88	~563	~161	128	58	96
Queue Length 95th (ft)	#212	236	#228	#785	#298	210	#126	137
Internal Link Dist (ft)		1066		876		637		1292
Turn Bay Length (ft)	250		250		250		250	
Base Capacity (vph)	214	553	225	564	137	1091	171	1026
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.61	0.70	1.32	1.46	0.70	0.61	0.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	53	579	253	537	211	610	74	348
v/c Ratio	0.51	1.09	0.92	0.71	0.83	1.04	0.71	0.78
Control Delay	72.2	102.0	87.7	35.9	75.2	85.0	89.9	53.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	24.1	0.0	0.0
Total Delay	72.2	102.0	87.7	35.9	75.2	109.1	89.9	53.7
Queue Length 50th (ft)	41	~478	195	348	159	~494	57	246
Queue Length 95th (ft)	#86	#703	#349	487	#274	#724	#136	#395
Internal Link Dist (ft)		637		648		319		139
Turn Bay Length (ft)	250		250					
Base Capacity (vph)	104	532	279	757	276	587	104	448
Starvation Cap Reductn	0	0	0	0	0	126	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	1.09	0.91	0.71	0.76	1.32	0.71	0.78

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	305	189	1064	126	1063
v/c Ratio	0.62	0.34	0.76	0.52	0.55
Control Delay	25.0	4.8	21.4	37.4	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	4.8	21.4	37.4	9.8
Queue Length 50th (ft)	100	0	166	44	102
Queue Length 95th (ft)	168	37	#336	#129	211
Internal Link Dist (ft)	3409		547		980
Turn Bay Length (ft)	250			250	
Base Capacity (vph)	852	839	1625	248	2347
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.23	0.65	0.51	0.45

Intersection Summary

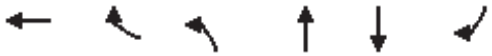
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	158	137	368	842	610
v/c Ratio	0.49	0.35	0.86	0.36	0.46
Control Delay	36.2	7.3	53.2	7.8	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	7.3	53.2	7.8	21.6
Queue Length 50th (ft)	85	0	192	85	73
Queue Length 95th (ft)	125	42	#349	150	193
Internal Link Dist (ft)	3409			723	637
Turn Bay Length (ft)	250		250		
Base Capacity (vph)	491	524	450	2338	1324
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.26	0.82	0.36	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	1221	684	105	379	989	379
v/c Ratio	0.86	0.81	0.55	0.23	0.93	0.73
Control Delay	37.3	21.8	57.0	17.9	51.7	31.7
Queue Delay	0.0	0.0	0.2	0.8	0.0	0.0
Total Delay	37.3	21.8	57.2	18.7	51.7	31.7
Queue Length 50th (ft)	396	196	71	84	374	180
Queue Length 95th (ft)	#569	#460	123	106	#520	314
Internal Link Dist (ft)	1234			164	547	
Turn Bay Length (ft)		250				
Base Capacity (vph)	1425	841	289	1804	1069	521
Starvation Cap Reductn	0	0	20	1108	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.81	0.39	0.54	0.93	0.73

Intersection Summary

Description: 300 car are expected to make the texas u-turn thus not entering the intersection

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	358	1095	63	1147	63
v/c Ratio	0.63	0.97	0.25	0.82	0.08
Control Delay	44.4	64.9	40.9	41.9	27.5
Queue Delay	0.0	0.0	0.0	49.4	0.0
Total Delay	44.4	64.9	40.9	91.3	27.5
Queue Length 50th (ft)	263	~516	38	487	36
Queue Length 95th (ft)	376	#655	80	#633	70
Internal Link Dist (ft)		1870	317		164
Turn Bay Length (ft)	250				
Base Capacity (vph)	567	1126	349	1398	758
Starvation Cap Reductn	0	0	0	551	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.97	0.18	1.35	0.08

Intersection Summary

Description: 100 cars are expected to make the texas u turn thus not entering the intersection

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBR	NBT
Lane Group Flow (vph)	368	1263
v/c Ratio	0.72	0.78
Control Delay	20.6	13.8
Queue Delay	0.0	0.0
Total Delay	20.6	13.8
Queue Length 50th (ft)	74	102
Queue Length 95th (ft)	149	#272
Internal Link Dist (ft)		594
Turn Bay Length (ft)		
Base Capacity (vph)	767	1723
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.48	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	189	853	621	189	126
v/c Ratio	0.66	0.42	0.69	0.55	0.33
Control Delay	38.9	8.5	23.5	29.4	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	8.5	23.5	29.4	7.4
Queue Length 50th (ft)	69	82	97	67	0
Queue Length 95th (ft)	#166	143	164	123	37
Internal Link Dist (ft)		1709	357	693	
Turn Bay Length (ft)	150				
Base Capacity (vph)	310	2246	1057	532	529
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	0.38	0.59	0.36	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group
Lane Group Flow (vph)
v/c Ratio
Control Delay
Queue Delay
Total Delay
Queue Length 50th (ft)
Queue Length 95th (ft)
Internal Link Dist (ft)
Turn Bay Length (ft)
Base Capacity (vph)
Starvation Cap Reductn
Spillback Cap Reductn
Storage Cap Reductn
Reduced v/c Ratio

Intersection Summary



Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	337	1584	2205
v/c Ratio	no cap	0.85	0.62
Control Delay		6.7	0.8
Queue Delay		0.0	0.0
Total Delay	Error	6.7	0.8
Queue Length 50th (ft)	0	0	0
Queue Length 95th (ft)	0	#27	0
Internal Link Dist (ft)	395	209	707
Turn Bay Length (ft)			
Base Capacity (vph)	1	1863	3539
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	337.00	0.85	0.62

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group
Lane Group Flow (vph)
v/c Ratio
Control Delay
Queue Delay
Total Delay
Queue Length 50th (ft)
Queue Length 95th (ft)
Internal Link Dist (ft)
Turn Bay Length (ft)
Base Capacity (vph)
Starvation Cap Reductn
Spillback Cap Reductn
Storage Cap Reductn
Reduced v/c Ratio

Intersection Summary

Lane Group
Lane Group Flow (vph)
v/c Ratio
Control Delay
Queue Delay
Total Delay
Queue Length 50th (ft)
Queue Length 95th (ft)
Internal Link Dist (ft)
Turn Bay Length (ft)
Base Capacity (vph)
Starvation Cap Reductn
Spillback Cap Reductn
Storage Cap Reductn
Reduced v/c Ratio

Intersection Summary



Lane Group	EBL	EBT
Lane Group Flow (vph)	158	579
v/c Ratio	0.36	0.74
Control Delay	11.4	9.7
Queue Delay	0.0	0.0
Total Delay	11.4	9.7
Queue Length 50th (ft)	22	25
Queue Length 95th (ft)	52	87
Internal Link Dist (ft)		968
Turn Bay Length (ft)		
Base Capacity (vph)	627	959
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.25	0.60

Intersection Summary



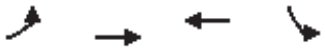
Lane Group	WBT
Lane Group Flow (vph)	1484
v/c Ratio	0.43
Control Delay	0.4
Queue Delay	0.0
Total Delay	0.4
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0
Internal Link Dist (ft)	1497
Turn Bay Length (ft)	
Base Capacity (vph)	3412
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.43

Intersection Summary



Lane Group	WBL
Lane Group Flow (vph)	366
v/c Ratio	no cap
Control Delay	
Queue Delay	
Total Delay	Error
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0
Internal Link Dist (ft)	371
Turn Bay Length (ft)	
Base Capacity (vph)	1
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	366.00

Intersection Summary



Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	53	642	821	295
v/c Ratio	0.29	0.86	1.11	0.42
Control Delay	13.2	27.1	84.7	8.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.2	27.1	84.7	8.3
Queue Length 50th (ft)	8	123	~224	30
Queue Length 95th (ft)	28	#281	#393	72
Internal Link Dist (ft)		648	609	572
Turn Bay Length (ft)	250			
Base Capacity (vph)	185	745	741	696
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.29	0.86	1.11	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	595	237	1126	394	1342
v/c Ratio	1.58	0.48	0.73	7.16	6.93dl
Control Delay	306.4	8.5	29.3	2819.3	1094.3
Queue Delay	0.0	0.0	0.0	0.0	0.7
Total Delay	306.4	8.5	29.3	2819.3	1095.0
Queue Length 50th (ft)	~656	0	355	~626	~1029
Queue Length 95th (ft)	#885	73	439	#846	#1174
Internal Link Dist (ft)	318		256		133
Turn Bay Length (ft)					
Base Capacity (vph)	376	494	1534	55	397
Starvation Cap Reductn	0	0	0	0	27
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.58	0.48	0.73	7.16	3.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Lane Group	EBT	SEL
Lane Group Flow (vph)	305	1253
v/c Ratio	0.41	1.36
Control Delay	10.7	184.8
Queue Delay	0.0	0.0
Total Delay	10.7	184.8
Queue Length 50th (ft)	46	~346
Queue Length 95th (ft)	90	#543
Internal Link Dist (ft)	385	676
Turn Bay Length (ft)		
Base Capacity (vph)	745	922
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.41	1.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group
Lane Group Flow (vph)
v/c Ratio
Control Delay
Queue Delay
Total Delay
Queue Length 50th (ft)
Queue Length 95th (ft)
Internal Link Dist (ft)
Turn Bay Length (ft)
Base Capacity (vph)
Starvation Cap Reductn
Spillback Cap Reductn
Storage Cap Reductn
Reduced v/c Ratio

Intersection Summary



Lane Group	WBT	SWR
Lane Group Flow (vph)	1158	1063
v/c Ratio	1.55	0.98
Control Delay	274.8	38.8
Queue Delay	0.0	0.0
Total Delay	274.8	38.8
Queue Length 50th (ft)	~393	121
Queue Length 95th (ft)	#575	#250
Internal Link Dist (ft)	585	
Turn Bay Length (ft)		
Base Capacity (vph)	745	1084
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.55	0.98

Intersection Summary
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Appendix J
HCS Analysis Worksheets
Four Lane Via Las Cumbres Alternative

AM Peak Hour

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Sunset Cliffs to Sports Arena*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*2644*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*59018*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*2644*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1399*	pc/h/ln
S	*69.5*	mph
D = v_p / S	*20.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Sports Arena Boulevard to I-5*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4196*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*95355*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*4196*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.28*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1480*	pc/h/ln
S	*69.1*	mph
D = v_p / S	*21.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-5 Interchange to Morena Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6141*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*134671*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6141*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2187*	pc/h/ln
S	*58.7*	mph
D = v_p / S	*37.3*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Morena Boulevard to Taylor St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7965*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*174680*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7965*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2127*	pc/h/ln
S	*60.0*	mph
D = v_p / S	*35.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Taylor Street to Hotel Circle*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7078*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*155213*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7078*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.76*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1891*	pc/h/ln
S	*64.5*	mph
D = v_p / S	*29.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7654*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*167843*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7654*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1636*	pc/h/ln
S	*64.2*	mph
D = v_p / S	*25.5*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*SR-163 to Mission Center Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6617*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*145100*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6617*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.88*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.8*	mph
FFS	*67.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1767*	pc/h/ln
S	*66.3*	mph
D = v_p / S	*26.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Mission Cntr Rd to Q Way/TX St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8568*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*187895*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8568*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.20*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.6*	mph
FFS	*66.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2289*	pc/h/ln
S	*53.8*	mph
D = v_p / S	*42.6*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Qualcomm Way/TX St to I-805*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6082*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*133380*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6082*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.94*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.0*	mph
FFS	*67.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1625*	pc/h/ln
S	*64.3*	mph
D = v_p / S	*25.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8871*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*194532*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8871*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1896*	pc/h/ln
S	*64.4*	mph
D = v_p / S	*29.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-15 to Fairmount Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7411*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*157009*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*7411*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.26*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1989*	pc/h/ln
S	*62.8*	mph
D = v_p / S	*31.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10478*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*242554*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*10478*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2239*	pc/h/ln
S	*57.5*	mph
D = v_p / S	*39.0*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*I-8 to Old Town Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10564*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*244532*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*10564*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2836*	pc/h/ln
S	*39.0*	mph
D = v_p / S	*72.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*Genesee Avenue to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10924*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*212935*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.09*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10924*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2346*	pc/h/ln
S	*54.8*	mph
D = v_p / S	*42.8*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7098*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*173978*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7098*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.71*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2540*	pc/h/ln
S	*49.2*	mph
D = v_p / S	*51.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to 6th Avenue*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7554*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*185137*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7554*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.81*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2690*	pc/h/ln
S	*44.2*	mph
D = v_p / S	*60.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6277*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*153846*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6277*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.72*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.5*	mph
FFS	*67.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2235*	pc/h/ln
S	*57.6*	mph
D = v_p / S	*38.8*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Mesa Col Dr to Murray Ridge Rd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*14917*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*266369*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*14917*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3250*	pc/h/ln
S	*21.3*	mph
D = v_p / S	*152.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11575*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*257215*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*11575*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.07*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.9*	mph
FFS	*69.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2522*	pc/h/ln
S	*49.7*	mph
D = v_p / S	*50.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to Adams Ave*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11418*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*253739*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*11418*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.10*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.0*	mph
FFS	*69.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3110*	pc/h/ln
S	*27.7*	mph
D = v_p / S	*112.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Adams Avenue to El Cajon Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10128*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*225070*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*10128*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.29*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.5*	mph
FFS	*68.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2759*	pc/h/ln
S	*41.8*	mph
D = v_p / S	*66.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*12374*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*257793*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*12374*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.79*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3338*	pc/h/ln
S	*17.0*	mph
D = v_p / S	*196.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10520*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*257834*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*10520*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2237*	pc/h/ln
S	*57.5*	mph
D = v_p / S	*38.9*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8786*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*215341*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8786*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2335*	pc/h/ln
S	*55.1*	mph
D = v_p / S	*42.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8374*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*205233*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8374*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2226*	pc/h/ln
S	*57.8*	mph
D = v_p / S	*38.5*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Sunset Cliffs to Sports Arena*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*2894*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*73816*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*2894*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.49*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.5*	mph
FFS	*70.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1531*	pc/h/ln
S	*68.7*	mph
D = v_p / S	*22.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Sports Arena Boulevard to I-5*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4444*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*115421*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*4444*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.96*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.7*	mph
FFS	*69.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1567*	pc/h/ln
S	*68.4*	mph
D = v_p / S	*22.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-5 Interchange to Morena Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7114*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*178299*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7114*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*1.64*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.9*	mph
FFS	*70.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1900*	pc/h/ln
S	*64.3*	mph
D = v_p / S	*29.5*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Morena Boulevard to Taylor St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9228*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*231269*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9228*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.51*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1972*	pc/h/ln
S	*63.1*	mph
D = v_p / S	*31.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Taylor Street to Hotel Circle*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8199*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*205496*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8199*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.76*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2190*	pc/h/ln
S	*58.6*	mph
D = v_p / S	*37.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8866*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*222218*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8866*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.93*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.9*	mph
FFS	*67.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1895*	pc/h/ln
S	*61.5*	mph
D = v_p / S	*30.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*SR-163 to Mission Center Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7665*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*192106*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7665*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.03*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2047*	pc/h/ln
S	*59.1*	mph
D = v_p / S	*34.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Mission Cntr Rd to Q Way/TX St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9926*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*248765*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9926*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.06*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2651*	pc/h/ln
S	*42.8*	mph
D = v_p / S	*61.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Qualcomm Way/TX St to I-805*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7046*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*176590*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7046*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1882*	pc/h/ln
S	*61.7*	mph
D = v_p / S	*30.5*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10276*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*257553*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10276*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2196*	pc/h/ln
S	*58.5*	mph
D = v_p / S	*37.5*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-15 to Fairmount Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9424*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228194*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*9424*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.41*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.7*	mph
FFS	*68.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2024*	pc/h/ln
S	*62.1*	mph
D = v_p / S	*32.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information			Site Information	
Analyst	*Chen Ryan Associates*		Highway/Direction of Travel	*I-5 SB*
Agency or Company	*Chen Ryan Associates*		From/To	*Seaworld Dr/Tecolote Rd to I-8*
Date Performed	*2018*		Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*		Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7810*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*206620*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*7810*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.37*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.6*	mph
FFS	*68.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1669*	pc/h/ln
S	*67.4*	mph
D = v_p / S	*24.7*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*I-8 to Old Town Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7874*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*208305*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*7874*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1691*	pc/h/ln
S	*67.2*	mph
D = v_p / S	*25.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Genesee Avenue to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7316*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*160439*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7316*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1964*	pc/h/ln
S	*63.2*	mph
D = v_p / S	*31.1*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7359*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*180356*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7359*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.56*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.1*	mph
FFS	*68.3*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1580*	pc/h/ln
S	*68.3*	mph
D = v_p / S	*23.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to 6th Avenue*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7830*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*191924*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7830*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.48*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.9*	mph
FFS	*68.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2091*	pc/h/ln
S	*60.8*	mph
D = v_p / S	*34.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6507*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*159486*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6507*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*2.36*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.6*	mph
FFS	*68.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3476*	pc/h/ln
S	*9.9*	mph
D = v_p / S	*350.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Mesa Col Dr to Murray Ridge Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6411*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*114485*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*6411*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1397*	pc/h/ln
S	*69.5*	mph
D = v_p / S	*20.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5255*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*87577*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*5255*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.21*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.3*	mph
FFS	*69.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1145*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*16.4*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5184*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*86394*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*5184*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*6*	
Total Ramp Density, TRD	*2.25*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*941*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*13.4*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*Adams Avenue to El Cajon Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4598*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*76632*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*4598*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.44*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1002*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*14.3*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8086*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*168452*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*8086*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1745*	pc/h/ln
S	*66.6*	mph
D = v_p / S	*26.2*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11157*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*273454*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*11157*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.14*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.4*	mph
FFS	*67.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2372*	pc/h/ln
S	*51.6*	mph
D = v_p / S	*46.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9318*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228387*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9318*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1981*	pc/h/ln
S	*62.9*	mph
D = v_p / S	*31.5*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-15 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*Adams Avenue to El Cajon Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8881*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*217666*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8881*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1888*	pc/h/ln
S	*64.5*	mph
D = v_p / S	*29.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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PM Peak Hour

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Sunset Cliffs to Sports Arena*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3307*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*73816*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*3307*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1749*	pc/h/ln
S	*66.5*	mph
D = v_p / S	*26.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Sports Arena Boulevard to I-5*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5079*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*115421*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*5079*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.28*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1791*	pc/h/ln
S	*65.9*	mph
D = v_p / S	*27.2*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-5 Interchange to Morena Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8130*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*178299*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8130*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2895*	pc/h/ln
S	*36.7*	mph
D = v_p / S	*78.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Morena Boulevard to Taylor St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10546*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*231269*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10546*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2817*	pc/h/ln
S	*39.7*	mph
D = v_p / S	*71.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Taylor Street to Hotel Circle*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9371*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*205496*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9371*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.67*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.3*	mph
FFS	*68.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2503*	pc/h/ln
S	*50.3*	mph
D = v_p / S	*49.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10133*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*222218*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10133*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2165*	pc/h/ln
S	*56.7*	mph
D = v_p / S	*38.2*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*SR-163 to Mission Center Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8760*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*192106*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8760*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.88*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.8*	mph
FFS	*67.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2340*	pc/h/ln
S	*54.9*	mph
D = v_p / S	*42.6*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Mission Cntr Rd to Q Way/TX St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11344*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*248765*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*11344*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.20*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.6*	mph
FFS	*66.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3030*	pc/h/ln
S	*27.3*	mph
D = v_p / S	*110.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Qualcomm Way/Texas St to I-805*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8053*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*176590*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8053*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.94*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.0*	mph
FFS	*67.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2151*	pc/h/ln
S	*57.0*	mph
D = v_p / S	*37.7*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11744*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*257553*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*11744*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2510*	pc/h/ln
S	*50.1*	mph
D = v_p / S	*50.1*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-15 to Fairmount Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10771*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228194*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*10771*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.26*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2891*	pc/h/ln
S	*36.8*	mph
D = v_p / S	*78.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-5 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Seaworld Dr/Tecolote Rd to I-8*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8926*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*206620*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*8926*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1907*	pc/h/ln
S	*64.2*	mph
D = v_p / S	*29.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*I-8 to Old Town Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8999*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*208305*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*8999*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2416*	pc/h/ln
S	*52.8*	mph
D = v_p / S	*45.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*Genesee Avenue to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8231*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*160439*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.09*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8231*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1767*	pc/h/ln
S	*66.3*	mph
D = v_p / S	*26.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7359*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*180356*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7359*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.71*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2634*	pc/h/ln
S	*46.1*	mph
D = v_p / S	*57.1*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to 6th Avenue*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7830*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*191924*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7830*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.60*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2789*	pc/h/ln
S	*40.7*	mph
D = v_p / S	*68.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6507*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*159486*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6507*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.40*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.7*	mph
FFS	*68.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2317*	pc/h/ln
S	*55.5*	mph
D = v_p / S	*41.7*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Mesa Col Dr/Murray Ridge Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6411*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*114485*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*6411*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1397*	pc/h/ln
S	*69.5*	mph
D = v_p / S	*20.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3941*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*87577*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*3941*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.07*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.9*	mph
FFS	*69.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*859*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*12.3*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to Adams Ave*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3888*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*86394*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*3888*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.10*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.0*	mph
FFS	*69.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1059*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*15.1*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3448*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*76632*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*3448*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.29*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.5*	mph
FFS	*68.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*939*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*13.4*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8086*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*168452*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*8086*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.79*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2181*	pc/h/ln
S	*58.8*	mph
D = v_p / S	*37.1*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information			Site Information	
Analyst	*Chen Ryan Associates*		Highway/Direction of Travel	*I-15 NB*
Agency or Company	*Chen Ryan Associates*		From/To	*Friars Road to I-8 Interchange*
Date Performed	*2018*		Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*		Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11157*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*273454*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*11157*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2372*	pc/h/ln
S	*54.1*	mph
D = v_p / S	*43.9*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-15 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to Adams Ave*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9318*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228387*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9318*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2477*	pc/h/ln
S	*51.1*	mph
D = v_p / S	*48.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8881*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*217666*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8881*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2360*	pc/h/ln
S	*54.4*	mph
D = v_p / S	*43.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Sunset Cliffs to Sports Arena*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*2314*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*59018*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*2314*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.49*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.5*	mph
FFS	*70.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1224*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*17.5*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Sports Arena Boulevard to I-5*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3671*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*95355*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*3671*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.96*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.7*	mph
FFS	*69.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1295*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.5*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-5 Interchange to Morena Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5373*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*134671*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*5373*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*1.64*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.9*	mph
FFS	*70.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1435*	pc/h/ln
S	*69.4*	mph
D = v_p / S	*20.7*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Morena Boulevard to Taylor St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6970*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*174680*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6970*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.51*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1489*	pc/h/ln
S	*69.0*	mph
D = v_p / S	*21.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Taylor Street to Hotel Circle*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6193*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*155213*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6193*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.67*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.3*	mph
FFS	*68.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1654*	pc/h/ln
S	*67.6*	mph
D = v_p / S	*24.5*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6697*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*167843*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6697*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.93*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.9*	mph
FFS	*67.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1431*	pc/h/ln
S	*65.0*	mph
D = v_p / S	*22.0*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*SR-163 to Mission Center Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5789*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*145100*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*5789*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.03*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1546*	pc/h/ln
S	*64.7*	mph
D = v_p / S	*23.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Mission Cntr Rd to Q Way/TX St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7497*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*187895*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7497*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.06*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2002*	pc/h/ln
S	*59.9*	mph
D = v_p / S	*33.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Qualcomm Way/Texas St to I-805*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5322*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*133380*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*5322*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1422*	pc/h/ln
S	*65.0*	mph
D = v_p / S	*21.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7762*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*194532*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7762*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1659*	pc/h/ln
S	*67.6*	mph
D = v_p / S	*24.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-15 to Fairmount Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6484*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*157009*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*6484*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.41*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.7*	mph
FFS	*68.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1392*	pc/h/ln
S	*69.6*	mph
D = v_p / S	*20.0*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9169*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*242554*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*9169*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.37*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.6*	mph
FFS	*68.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1959*	pc/h/ln
S	*63.3*	mph
D = v_p / S	*30.9*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*I-8 to Old Town Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9243*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*244532*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*9243*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1985*	pc/h/ln
S	*62.9*	mph
D = v_p / S	*31.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Genesee Avenue to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9710*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*212935*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9710*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2606*	pc/h/ln
S	*47.1*	mph
D = v_p / S	*55.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7098*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*173978*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7098*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.56*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.1*	mph
FFS	*68.3*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1524*	pc/h/ln
S	*68.8*	mph
D = v_p / S	*22.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to 6th Avenue*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7554*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*185137*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7554*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.29*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.5*	mph
FFS	*68.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2018*	pc/h/ln
S	*62.2*	mph
D = v_p / S	*32.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6277*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*153846*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6277*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*2.06*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.9*	mph
FFS	*69.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3353*	pc/h/ln
S	*16.2*	mph
D = v_p / S	*206.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Mesa Col Dr/Murray Ridge Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*14917*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*266369*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*14917*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3250*	pc/h/ln
S	*21.3*	mph
D = v_p / S	*152.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*15433*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*257215*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*15433*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.21*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.3*	mph
FFS	*69.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3363*	pc/h/ln
S	*15.7*	mph
D = v_p / S	*213.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*15224*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*253739*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*15224*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*6*	
Total Ramp Density, TRD	*2.25*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2764*	pc/h/ln
S	*41.6*	mph
D = v_p / S	*66.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*13504*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*225070*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*13504*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.44*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2942*	pc/h/ln
S	*34.8*	mph
D = v_p / S	*84.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*12374*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*257793*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*12374*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2670*	pc/h/ln
S	*44.9*	mph
D = v_p / S	*59.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information			Site Information	
Analyst	*Chen Ryan Associates*		Highway/Direction of Travel	*I-15 SB*
Agency or Company	*Chen Ryan Associates*		From/To	*Friars Road to I-8 Interchange*
Date Performed	*2018*		Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*		Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10520*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*257834*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*10520*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.14*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.4*	mph
FFS	*67.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2237*	pc/h/ln
S	*55.1*	mph
D = v_p / S	*40.6*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8786*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*215341*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8786*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1868*	pc/h/ln
S	*64.8*	mph
D = v_p / S	*28.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Proposed*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8374*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*205233*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8374*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1781*	pc/h/ln
S	*66.1*	mph
D = v_p / S	*27.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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Appendix K
Peak Hour Intersection Worksheets
Mitigated Four Lane Via Las Cumbres Alternative

AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	835	420	385	405	0	0	0	0	280	0	690
Future Volume (veh/h)	0	835	420	385	405	0	0	0	0	280	0	690
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	0	1863
Adj Flow Rate, veh/h	0	879	407	405	426	0				295	0	706
Adj No. of Lanes	0	2	1	2	1	0				1	0	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	1216	528	524	1064	0				440	0	896
Arrive On Green	0.00	0.34	0.34	0.15	0.57	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3632	1537	3442	1863	0				1774	0	3610
Grp Volume(v), veh/h	0	879	407	405	426	0				295	0	706
Grp Sat Flow(s),veh/h/ln	0	1770	1537	1721	1863	0				1774	0	1203
Q Serve(g_s), s	0.0	13.6	14.8	7.1	8.0	0.0				9.4	0.0	11.4
Cycle Q Clear(g_c), s	0.0	13.6	14.8	7.1	8.0	0.0				9.4	0.0	11.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1216	528	524	1064	0				440	0	896
V/C Ratio(X)	0.00	0.72	0.77	0.77	0.40	0.00				0.67	0.00	0.79
Avail Cap(c_a), veh/h	0	1878	816	842	1584	0				1290	0	2626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.9	18.3	25.5	7.5	0.0				21.2	0.0	22.0
Incr Delay (d2), s/veh	0.0	0.3	0.9	0.9	0.1	0.0				0.7	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.6	6.4	3.4	4.1	0.0				4.7	0.0	3.8
LnGrp Delay(d),s/veh	0.0	18.2	19.2	26.4	7.5	0.0				21.9	0.0	22.6
LnGrp LOS		B	B	C	A					C		C
Approach Vol, veh/h		1286			831						1001	
Approach Delay, s/veh		18.6			16.7						22.4	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.2	27.3		21.0		41.5		
Change Period (Y+Rc), s	* 4.7	5.8		5.5		5.8		
Max Green Setting (Gmax), s	* 15	33.2		45.5		53.2		
Max Q Clear Time (g_c+I1), s	9.1	16.8		13.4		10.0		
Green Ext Time (p_c), s	0.5	4.6		2.1		1.7		

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	735	360	0	0	470	280	320	20	475	0	0	0
Future Volume (veh/h)	735	360	0	0	470	280	320	20	475	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.96			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	774	379	0	0	495	48	352	0	284			
Adj No. of Lanes	2	1	0	0	2	0	2	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	849	1079	0	0	882	85	986	0	424			
Arrive On Green	0.25	0.58	0.00	0.00	0.27	0.27	0.28	0.00	0.28			
Sat Flow, veh/h	3442	1863	0	0	3347	314	3548	0	1526			
Grp Volume(v), veh/h	774	379	0	0	268	275	352	0	284			
Grp Sat Flow(s),veh/h/ln	1721	1863	0	0	1770	1799	1774	0	1526			
Q Serve(g_s), s	16.7	8.2	0.0	0.0	10.0	10.0	6.1	0.0	12.6			
Cycle Q Clear(g_c), s	16.7	8.2	0.0	0.0	10.0	10.0	6.1	0.0	12.6			
Prop In Lane	1.00		0.00	0.00		0.17	1.00		1.00			
Lane Grp Cap(c), veh/h	849	1079	0	0	480	487	986	0	424			
V/C Ratio(X)	0.91	0.35	0.00	0.00	0.56	0.56	0.36	0.00	0.67			
Avail Cap(c_a), veh/h	870	1466	0	0	836	850	2044	0	879			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	28.0	8.5	0.0	0.0	23.9	24.0	22.1	0.0	24.5			
Incr Delay (d2), s/veh	13.1	0.1	0.0	0.0	0.4	0.4	0.1	0.0	0.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.5	4.2	0.0	0.0	4.9	5.0	3.0	0.0	5.4			
LnGrp Delay(d),s/veh	41.0	8.6	0.0	0.0	24.3	24.3	22.2	0.0	25.1			
LnGrp LOS	D	A			C	C	C		C			
Approach Vol, veh/h		1153			543			636				
Approach Delay, s/veh		30.3			24.3			23.5				
Approach LOS		C			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		50.1			23.6	26.5		26.3
Change Period (Y+Rc), s		5.8			* 4.7	5.8		5.1
Max Green Setting (Gmax), s		60.1			* 19	36.1		44.0
Max Q Clear Time (g_c+I1), s		10.2			18.7	12.0		14.6
Green Ext Time (p_c), s		1.5			0.2	2.0		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	340	20	350	570	570	0	0	400	240
Future Volume (veh/h)	0	0	0	340	20	350	570	570	0	0	400	240
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.94
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				373	0	0	600	600	0	0	421	74
Adj No. of Lanes				2	0	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				669	0	299	650	2222	0	0	637	269
Arrive On Green				0.19	0.00	0.00	0.37	0.63	0.00	0.00	0.18	0.18
Sat Flow, veh/h				3548	0	1583	1774	3632	0	0	3632	1495
Grp Volume(v), veh/h				373	0	0	600	600	0	0	421	74
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1495
Q Serve(g_s), s				6.2	0.0	0.0	21.0	4.9	0.0	0.0	7.2	2.8
Cycle Q Clear(g_c), s				6.2	0.0	0.0	21.0	4.9	0.0	0.0	7.2	2.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				669	0	299	650	2222	0	0	637	269
V/C Ratio(X)				0.56	0.00	0.00	0.92	0.27	0.00	0.00	0.66	0.27
Avail Cap(c_a), veh/h				1586	0	708	840	2951	0	0	987	417
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				23.9	0.0	0.0	19.7	5.4	0.0	0.0	24.8	22.9
Incr Delay (d2), s/veh				0.3	0.0	0.0	11.9	0.1	0.0	0.0	1.5	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.0	0.0	0.0	12.3	2.4	0.0	0.0	3.6	1.2
LnGrp Delay(d),s/veh				24.1	0.0	0.0	31.5	5.5	0.0	0.0	26.3	23.6
LnGrp LOS				C			C	A			C	C
Approach Vol, veh/h					373			1200			495	
Approach Delay, s/veh					24.1			18.5			25.9	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	29.1	18.7				47.7		17.1
Change Period (Y+Rc), s	5.3	7.0				7.0		4.9
Max Green Setting (Gmax), s	30.7	18.1				54.1		29.0
Max Q Clear Time (g_c+I1), s	23.0	9.2				6.9		8.2
Green Ext Time (p_c), s	0.7	2.4				6.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	5	280	0	0	0	0	960	550	290	450	0
Future Volume (veh/h)	180	5	280	0	0	0	0	960	550	290	450	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	189	5	295				0	1011	511	305	474	0
Adj No. of Lanes	0	1	2				0	2	2	1	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	237	6	364				0	1844	1424	310	888	0
Arrive On Green	0.14	0.14	0.14				0.00	0.52	0.52	0.17	0.17	0.00
Sat Flow, veh/h	1730	46	2664				0	3632	2733	1774	5253	0
Grp Volume(v), veh/h	194	0	295				0	1011	511	305	474	0
Grp Sat Flow(s),veh/h/ln	1776	0	1332				0	1770	1367	1774	1695	0
Q Serve(g_s), s	10.3	0.0	10.5				0.0	18.6	10.7	16.7	8.3	0.0
Cycle Q Clear(g_c), s	10.3	0.0	10.5				0.0	18.6	10.7	16.7	8.3	0.0
Prop In Lane	0.97		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	243	0	364				0	1844	1424	310	888	0
V/C Ratio(X)	0.80	0.00	0.81				0.00	0.55	0.36	0.98	0.53	0.00
Avail Cap(c_a), veh/h	292	0	438				0	1844	1424	310	888	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.7	0.0	40.8				0.0	15.6	13.7	40.0	36.5	0.0
Incr Delay (d2), s/veh	12.3	0.0	9.3				0.0	1.2	0.7	46.6	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	4.3				0.0	9.3	4.2	12.1	3.9	0.0
LnGrp Delay(d),s/veh	53.0	0.0	50.0				0.0	16.8	14.4	86.6	37.2	0.0
LnGrp LOS	D		D					B	B	F	D	
Approach Vol, veh/h		489						1522			779	
Approach Delay, s/veh		51.2						16.0			56.5	
Approach LOS		D						B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		55.6		18.5		23.2		
Change Period (Y+Rc), s		4.9		5.2		6.2		
Max Green Setting (Gmax), s		50.7		16.0		17.0		
Max Q Clear Time (g_c+I1), s		20.6		12.5		18.7		
Green Ext Time (p_c), s		11.8		0.8		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	33.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	640	930	0	0	2120	1170	0	0	390	0	0	605
Future Volume (veh/h)	640	930	0	0	2120	1170	0	0	390	0	0	605
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	0	1863	1900	0	1863	1900
Adj Flow Rate, veh/h	674	979	0	0	2232	0	0	0	0	0	0	0
Adj No. of Lanes	2	3	0	0	3	1	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	2	0	2	2
Cap, veh/h	742	4851	0	0	3932	1114	0	1	0	0	1	0
Arrive On Green	0.14	0.64	0.00	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3442	5253	0	0	5588	1583	0	-74510	0	0	-74510	0
Grp Volume(v), veh/h	674	979	0	0	2232	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1721	1695	0	0	1863	1583	0	1863	0	0	1863	0
Q Serve(g_s), s	25.1	10.4	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	25.1	10.4	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	742	4851	0	0	3932	1114	0	1	0	0	1	0
V/C Ratio(X)	0.91	0.20	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	940	4851	0	0	3932	1114	0	258	0	0	258	0
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	54.3	3.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.9	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	4.9	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	60.2	3.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	E	A			A							
Approach Vol, veh/h		1653			2232			0			0	
Approach Delay, s/veh		26.3			1.9			0.0			0.0	
Approach LOS		C			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		130.0		0.0	32.5	97.5		0.0
Change Period (Y+Rc), s		* 6		4.0	4.5	6.0		4.0
Max Green Setting (Gmax), s		* 1E2		18.0	35.5	62.0		18.0
Max Q Clear Time (g_c+I1), s		12.4		0.0	27.1	9.1		0.0
Green Ext Time (p_c), s		2.1		0.0	1.0	16.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	90	70	130	390	250	210	570	120	150	390	140
Future Volume (veh/h)	90	90	70	130	390	250	210	570	120	150	390	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	95	42	137	411	174	221	600	110	158	411	23
Adj No. of Lanes	2	2	1	3	2	1	2	3	1	3	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	925	481	280	942	474	230	1320	448	282	1158	421
Arrive On Green	0.05	0.25	0.25	0.05	0.25	0.25	0.06	0.24	0.24	0.06	0.23	0.23
Sat Flow, veh/h	3548	3725	1525	5322	3725	1524	3548	5588	1543	5003	5085	1514
Grp Volume(v), veh/h	95	95	42	137	411	174	221	600	110	158	411	23
Grp Sat Flow(s),veh/h/ln	1774	1863	1525	1774	1863	1524	1774	1863	1543	1668	1695	1514
Q Serve(g_s), s	1.9	1.4	1.4	1.8	6.6	6.3	4.4	6.5	3.9	2.2	4.8	0.8
Cycle Q Clear(g_c), s	1.9	1.4	1.4	1.8	6.6	6.3	4.4	6.5	3.9	2.2	4.8	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	925	481	280	942	474	230	1320	448	282	1158	421
V/C Ratio(X)	0.56	0.10	0.09	0.49	0.44	0.37	0.96	0.45	0.25	0.56	0.35	0.05
Avail Cap(c_a), veh/h	2327	3926	1710	577	1887	861	230	2320	724	282	2082	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	20.6	17.2	32.7	22.3	19.1	33.1	23.2	19.4	32.7	23.1	18.9
Incr Delay (d2), s/veh	1.1	0.1	0.1	0.5	0.6	0.9	48.4	0.4	0.5	1.6	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.7	0.6	0.9	3.4	2.8	3.7	3.4	1.7	1.1	2.3	0.3
LnGrp Delay(d),s/veh	34.2	20.7	17.3	33.2	22.9	20.1	81.5	23.7	19.9	34.2	23.4	19.0
LnGrp LOS	C	C	B	C	C	C	F	C	B	C	C	B
Approach Vol, veh/h		232			722			931			592	
Approach Delay, s/veh		25.6			24.2			36.9			26.1	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	27.0	8.1	27.5	9.0	26.4	7.8	27.9
Change Period (Y+Rc), s	4.4	10.2	4.4	* 9.9	4.4	* 10	4.4	* 9.9
Max Green Setting (Gmax), s	4.0	29.5	7.7	* 75	4.6	* 29	46.6	* 36
Max Q Clear Time (g_c+I1), s	4.2	8.5	3.8	3.4	6.4	6.8	3.9	8.6
Green Ext Time (p_c), s	0.0	6.9	0.1	0.4	0.0	4.6	0.2	6.5

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

Notes

HCM 2010 Signalized Intersection Summary
45: Mission Gorge Road & Camino Del Rio North/I-8 WB Off Ramps

11/26/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	90	430	440	480	310	460	1480	280	20	850	190
Future Volume (veh/h)	150	90	430	440	480	310	460	1480	280	20	850	190
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	124	136	376	303	707	186	474	1526	222	21	876	98
Adj No. of Lanes	1	1	1	1	2	1	1	2	1	2	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	140	523	398	836	364	464	1940	858	39	1517	463
Arrive On Green	0.08	0.08	0.08	0.22	0.22	0.22	0.26	0.55	0.55	0.01	0.30	0.30
Sat Flow, veh/h	1774	1863	1457	1774	3725	1541	1774	3539	1566	3442	5085	1551
Grp Volume(v), veh/h	124	136	376	303	707	186	474	1526	222	21	876	98
Grp Sat Flow(s),veh/h/ln	1774	1863	1457	1774	1863	1541	1774	1770	1566	1721	1695	1551
Q Serve(g_s), s	10.1	10.6	10.9	23.2	26.3	15.2	37.9	49.7	10.8	0.9	21.2	6.9
Cycle Q Clear(g_c), s	10.1	10.6	10.9	23.2	26.3	15.2	37.9	49.7	10.8	0.9	21.2	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	140	523	398	836	364	464	1940	858	39	1517	463
V/C Ratio(X)	0.93	0.97	0.72	0.76	0.85	0.51	1.02	0.79	0.26	0.53	0.58	0.21
Avail Cap(c_a), veh/h	133	140	523	440	925	401	464	1940	858	69	1517	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.48	0.48	0.48	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.7	66.9	42.5	52.6	53.8	48.1	53.5	26.0	17.2	71.3	43.1	38.1
Incr Delay (d2), s/veh	56.1	66.8	4.1	5.8	6.1	0.4	34.7	1.6	0.4	4.1	1.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	8.0	13.8	12.0	14.3	6.5	23.0	24.6	4.8	0.4	10.1	3.1
LnGrp Delay(d),s/veh	122.8	133.7	46.6	58.4	59.9	48.5	88.3	27.6	17.6	75.4	44.7	39.2
LnGrp LOS	F	F	D	E	E	D	F	C	B	E	D	D
Approach Vol, veh/h		636			1196			2222			995	
Approach Delay, s/veh		80.1			57.8			39.6			44.8	
Approach LOS		F			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.8	84.6		16.0	43.0	48.3		37.7
Change Period (Y+Rc), s	5.1	5.1		5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	2.9	74.8		10.9	37.9	39.8		36.0
Max Q Clear Time (g_c+I1), s	2.9	51.7		12.9	39.9	23.2		28.3
Green Ext Time (p_c), s	0.0	8.4		0.0	0.0	3.6		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	50.0
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	270	410	140	260	0	850	90	120	0	0	0
Future Volume (veh/h)	0	270	410	140	260	0	850	90	120	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	0	284	0	147	274	0	963	0	0			
Adj No. of Lanes	0	2	1	2	2	0	2	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2			
Cap, veh/h	0	941	421	261	1486	0	1350	0	603			
Arrive On Green	0.00	0.27	0.00	0.08	0.42	0.00	0.38	0.00	0.00			
Sat Flow, veh/h	0	3632	1583	3442	3632	0	3548	0	1583			
Grp Volume(v), veh/h	0	284	0	147	274	0	963	0	0			
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0	1774	0	1583			
Q Serve(g_s), s	0.0	3.9	0.0	2.5	2.9	0.0	13.9	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	3.9	0.0	2.5	2.9	0.0	13.9	0.0	0.0			
Prop In Lane	0.00		1.00	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	941	421	261	1486	0	1350	0	603			
V/C Ratio(X)	0.00	0.30	0.00	0.56	0.18	0.00	0.71	0.00	0.00			
Avail Cap(c_a), veh/h	0	941	421	360	1588	0	3007	0	1342			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	0.0	17.6	0.0	26.8	11.0	0.0	15.8	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.7	0.1	0.0	1.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	2.0	0.0	1.2	1.4	0.0	6.9	0.0	0.0			
LnGrp Delay(d),s/veh	0.0	18.5	0.0	27.5	11.0	0.0	16.9	0.0	0.0			
LnGrp LOS		B		C	B		B					
Approach Vol, veh/h		284			421			963				
Approach Delay, s/veh		18.5			16.8			16.9				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	9.3	22.0		28.9		31.3		
Change Period (Y+Rc), s	* 4.7	6.0		6.0		6.0		
Max Green Setting (Gmax), s	* 6.3	16.0		51.0		27.0		
Max Q Clear Time (g_c+I1), s	4.5	5.9		15.9		4.9		
Green Ext Time (p_c), s	0.0	1.3		7.0		1.8		

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	0	180	30	180	530	300	1600	250	0	690	490
Future Volume (veh/h)	100	0	180	30	180	530	300	1600	250	0	690	490
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	105	0	110	32	189	226	316	1684	0	0	726	253
Adj No. of Lanes	1	0	1	1	1	1	1	4	1	0	4	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	337	354	291	228	4673	1155	0	3648	892
Arrive On Green	0.00	0.00	0.00	0.19	0.19	0.19	0.13	0.73	0.00	0.00	0.19	0.19
Sat Flow, veh/h		0		1774	1863	1533	1774	6408	1583	0	6669	1567
Grp Volume(v), veh/h		0.0		32	189	226	316	1684	0	0	726	253
Grp Sat Flow(s),veh/h/ln				1774	1863	1533	1774	1602	1583	0	1602	1567
Q Serve(g_s), s				2.2	13.7	21.0	19.3	14.5	0.0	0.0	14.3	20.8
Cycle Q Clear(g_c), s				2.2	13.7	21.0	19.3	14.5	0.0	0.0	14.3	20.8
Prop In Lane				1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				337	354	291	228	4673	1155	0	3648	892
V/C Ratio(X)				0.09	0.53	0.78	1.38	0.36	0.00	0.00	0.20	0.28
Avail Cap(c_a), veh/h				438	459	378	228	4673	1155	0	3648	892
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33
Upstream Filter(I)				1.00	1.00	1.00	0.77	0.77	0.00	0.00	0.90	0.90
Uniform Delay (d), s/veh				50.1	54.8	57.7	65.3	7.5	0.0	0.0	32.1	34.7
Incr Delay (d2), s/veh				0.0	0.5	5.3	192.5	0.2	0.0	0.0	0.1	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.1	7.1	9.3	21.7	6.4	0.0	0.0	6.4	9.2
LnGrp Delay(d),s/veh				50.1	55.2	63.0	257.9	7.6	0.0	0.0	32.2	35.4
LnGrp LOS				D	E	E	F	A			C	D
Approach Vol, veh/h					447			2000			979	
Approach Delay, s/veh					58.8			47.2			33.0	
Approach LOS					E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		116.4			24.0	92.4		33.6
Change Period (Y+Rc), s		7.0			* 4.7	7.0		5.1
Max Green Setting (Gmax), s		54.8			* 19	30.8		37.0
Max Q Clear Time (g_c+I1), s		16.5			21.3	22.8		23.0
Green Ext Time (p_c), s		9.9			0.0	5.0		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.6
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
58: Mission Center Road & I-8 EB Ramp

11/26/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	430	0	420	0	0	0	0	340	140	350	430	0
Future Volume (veh/h)	430	0	420	0	0	0	0	340	140	350	430	0
Number	5	2	12				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	453	0	0				0	358	0	368	453	0
Adj No. of Lanes	2	1	0				0	2	1	2	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1495	809	0				0	441	197	887	931	0
Arrive On Green	0.43	0.00	0.00				0.00	0.04	0.00	0.08	0.08	0.00
Sat Flow, veh/h	3442	1863	0				0	3632	1583	3548	3725	0
Grp Volume(v), veh/h	453	0	0				0	358	0	368	453	0
Grp Sat Flow(s),veh/h/ln	1721	1863	0				0	1770	1583	1774	1863	0
Q Serve(g_s), s	7.7	0.0	0.0				0.0	9.0	0.0	8.9	10.5	0.0
Cycle Q Clear(g_c), s	7.7	0.0	0.0				0.0	9.0	0.0	8.9	10.5	0.0
Prop In Lane	1.00		0.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1495	809	0				0	441	197	887	931	0
V/C Ratio(X)	0.30	0.00	0.00				0.00	0.81	0.00	0.41	0.49	0.00
Avail Cap(c_a), veh/h	1495	809	0				0	511	229	1498	1573	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.94	0.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	16.6	0.0	0.0				0.0	42.1	0.0	35.0	35.8	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0				0.0	6.9	0.0	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	0.0				0.0	4.8	0.0	4.4	5.4	0.0
LnGrp Delay(d),s/veh	17.1	0.0	0.0				0.0	49.0	0.0	35.1	35.9	0.0
LnGrp LOS	B							D		D	D	
Approach Vol, veh/h		453						358			821	
Approach Delay, s/veh		17.1						49.0			35.6	
Approach LOS		B						D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		45.2		16.2				28.6
Change Period (Y+Rc), s		6.1		5.0				6.1
Max Green Setting (Gmax), s		21.8		13.0				38.0
Max Q Clear Time (g_c+I1), s		9.7		11.0				12.5
Green Ext Time (p_c), s		0.8		0.2				2.5

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	90	90	60	90	160	140	1360	180	450	590	280
Future Volume (veh/h)	110	90	90	60	90	160	140	1360	180	450	590	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.91	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	112	92	32	61	92	60	143	1388	133	459	602	97
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	161	268	137	144	534	160	2171	208	474	2260	975
Arrive On Green	0.09	0.09	0.09	0.08	0.08	0.08	0.09	0.46	0.46	0.27	0.64	0.64
Sat Flow, veh/h	1774	1863	1453	1774	1863	1440	1774	4700	450	1774	3539	1526
Grp Volume(v), veh/h	112	92	32	61	92	60	143	1001	520	459	602	97
Grp Sat Flow(s),veh/h/ln	1774	1863	1453	1774	1863	1440	1774	1695	1760	1774	1770	1526
Q Serve(g_s), s	12.3	9.5	3.7	6.6	9.6	5.7	16.0	45.1	45.1	51.2	14.8	4.9
Cycle Q Clear(g_c), s	12.3	9.5	3.7	6.6	9.6	5.7	16.0	45.1	45.1	51.2	14.8	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	153	161	268	137	144	534	160	1566	813	474	2260	975
V/C Ratio(X)	0.73	0.57	0.12	0.44	0.64	0.11	0.89	0.64	0.64	0.97	0.27	0.10
Avail Cap(c_a), veh/h	240	252	340	266	279	639	234	1566	813	493	2260	975
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	89.1	87.8	69.3	88.2	89.5	44.9	90.0	41.1	41.1	72.5	15.7	13.9
Incr Delay (d2), s/veh	6.6	3.2	0.2	0.8	1.7	0.0	19.1	2.0	3.8	29.3	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	5.0	1.5	3.3	5.0	2.3	8.7	21.6	22.8	29.0	7.3	2.1
LnGrp Delay(d),s/veh	95.7	91.0	69.5	89.0	91.3	44.9	109.1	43.1	44.9	101.7	16.0	14.1
LnGrp LOS	F	F	E	F	F	D	F	D	D	F	B	B
Approach Vol, veh/h		236			213			1664			1158	
Approach Delay, s/veh		90.3			77.6			49.3			49.8	
Approach LOS		F			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	57.8	99.4		22.2	22.4	134.7		20.7
Change Period (Y+Rc), s	4.4	7.0		4.9	4.4	* 7		5.2
Max Green Setting (Gmax), s	55.6	65.8		27.1	26.4	* 97		30.0
Max Q Clear Time (g_c+I1), s	53.2	47.1		14.3	18.0	16.8		11.6
Green Ext Time (p_c), s	0.2	15.1		0.5	0.1	6.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	54.3
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	50	40	30	60	510	70	910	60	70	610	120
Future Volume (veh/h)	360	50	40	30	60	510	70	910	60	70	610	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	379	53	15	32	63	305	74	958	52	74	642	115
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	384	403	333	381	400	330	95	1215	66	73	1028	184
Arrive On Green	0.22	0.22	0.22	0.21	0.21	0.21	0.05	0.36	0.36	0.04	0.34	0.34
Sat Flow, veh/h	1774	1863	1539	1774	1863	1539	1774	3408	185	1774	2986	534
Grp Volume(v), veh/h	379	53	15	32	63	305	74	497	513	74	380	377
Grp Sat Flow(s),veh/h/ln	1774	1863	1539	1774	1863	1539	1774	1770	1824	1774	1770	1750
Q Serve(g_s), s	23.7	2.6	0.9	1.6	3.1	21.6	4.6	28.0	28.0	4.6	20.0	20.1
Cycle Q Clear(g_c), s	23.7	2.6	0.9	1.6	3.1	21.6	4.6	28.0	28.0	4.6	20.0	20.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		0.31
Lane Grp Cap(c), veh/h	384	403	333	381	400	330	95	631	650	73	609	603
V/C Ratio(X)	0.99	0.13	0.05	0.08	0.16	0.92	0.78	0.79	0.79	1.01	0.62	0.63
Avail Cap(c_a), veh/h	384	403	333	422	443	366	194	964	993	73	843	834
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.5	35.2	34.6	35.0	35.6	42.9	52.1	32.1	32.1	53.4	30.5	30.5
Incr Delay (d2), s/veh	42.6	0.1	0.0	0.0	0.1	26.0	5.2	3.3	3.2	108.2	1.4	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	1.3	0.4	0.8	1.6	11.6	2.4	14.3	14.7	4.4	10.0	9.9
LnGrp Delay(d),s/veh	86.1	35.3	34.6	35.0	35.6	68.9	57.3	35.4	35.3	161.7	31.9	32.0
LnGrp LOS	F	D	C	D	D	E	E	D	D	F	C	C
Approach Vol, veh/h		447			400			1084			831	
Approach Delay, s/veh		78.3			60.9			36.8			43.5	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	44.6		29.0	10.4	43.3		28.8
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	4.6	60.7		24.1	12.2	53.1		26.5
Max Q Clear Time (g_c+I1), s	6.6	30.0		25.7	6.6	22.1		23.6
Green Ext Time (p_c), s	0.0	9.7		0.0	0.0	6.8		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	49.1
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	65	35	1035	60	35	1190
Future Volume (veh/h)	65	35	1035	60	35	1190
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	68	0	1089	63	37	82
Adj No. of Lanes	2	0	2	1	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	678	0	1425	1317	160	1405
Arrive On Green	0.19	0.00	0.41	0.71	0.09	0.09
Sat Flow, veh/h	3725	0	3442	1863	1774	2787
Grp Volume(v), veh/h	68	0	1089	63	37	82
Grp Sat Flow(s),veh/h/ln	1770	0	1721	1863	1774	1393
Q Serve(g_s), s	0.7	0.0	12.0	0.5	0.9	0.7
Cycle Q Clear(g_c), s	0.7	0.0	12.0	0.5	0.9	0.7
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	678	0	1425	1317	160	1405
V/C Ratio(X)	0.10	0.00	0.76	0.05	0.23	0.06
Avail Cap(c_a), veh/h	2154	0	2522	2688	1080	2850
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	11.1	2.0	18.7	5.6
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	5.8	0.2	0.5	0.3
LnGrp Delay(d),s/veh	14.8	0.0	12.0	2.0	19.5	5.6
LnGrp LOS	B		B	A	B	A
Approach Vol, veh/h	68			1152	119	
Approach Delay, s/veh	14.8			11.5	9.9	
Approach LOS	B			B	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		8.5	22.9	13.0				35.9
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		27.0	32.5	27.0				64.0
Max Q Clear Time (g_c+I1), s		2.9	14.0	2.7				2.5
Green Ext Time (p_c), s		0.4	4.3	0.3				0.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	455	10	170	20	20	20	120	750	10	10	580	480
Future Volume (veh/h)	455	10	170	20	20	20	120	750	10	10	580	480
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	479	11	116	21	21	10	126	789	6	11	611	242
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	572	49	519	241	232	99	128	886	7	19	779	647
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.07	0.48	0.48	0.01	0.42	0.42
Sat Flow, veh/h	1357	137	1443	513	645	276	1774	1846	14	1774	1863	1545
Grp Volume(v), veh/h	479	0	127	52	0	0	126	0	795	11	611	242
Grp Sat Flow(s),veh/h/ln	1357	0	1579	1434	0	0	1774	0	1860	1774	1863	1545
Q Serve(g_s), s	26.0	0.0	5.1	0.1	0.0	0.0	6.4	0.0	35.1	0.6	25.6	9.7
Cycle Q Clear(g_c), s	31.1	0.0	5.1	5.1	0.0	0.0	6.4	0.0	35.1	0.6	25.6	9.7
Prop In Lane	1.00		0.91	0.40		0.19	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	572	0	569	572	0	0	128	0	892	19	779	647
V/C Ratio(X)	0.84	0.00	0.22	0.09	0.00	0.00	0.99	0.00	0.89	0.58	0.78	0.37
Avail Cap(c_a), veh/h	572	0	569	572	0	0	128	0	1236	79	1186	984
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	0.0	20.1	19.1	0.0	0.0	41.8	0.0	21.3	44.5	22.7	18.1
Incr Delay (d2), s/veh	10.5	0.0	0.2	0.1	0.0	0.0	75.3	0.0	6.4	25.1	2.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.4	0.0	2.2	0.9	0.0	0.0	5.8	0.0	19.5	0.4	13.5	4.2
LnGrp Delay(d),s/veh	38.9	0.0	20.3	19.1	0.0	0.0	117.1	0.0	27.8	69.5	24.7	18.5
LnGrp LOS	D		C	B			F		C	E	C	B
Approach Vol, veh/h		606			52			921			864	
Approach Delay, s/veh		35.0			19.1			40.0			23.5	
Approach LOS		C			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	47.8		37.0	11.0	42.3		37.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	4.0	60.0		32.5	6.5	57.5		32.5
Max Q Clear Time (g_c+I1), s	2.6	37.1		33.1	8.4	27.6		7.1
Green Ext Time (p_c), s	0.0	6.3		0.0	0.0	5.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1090	350	570	690	0	0	0	0	380	0	920
Future Volume (veh/h)	0	1090	350	570	690	0	0	0	0	380	0	920
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	0	1863
Adj Flow Rate, veh/h	0	1147	157	600	726	0				400	0	547
Adj No. of Lanes	0	2	1	2	1	0				1	0	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	1260	548	670	1137	0				436	0	888
Arrive On Green	0.00	0.36	0.36	0.19	0.61	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	3632	1539	3442	1863	0				1774	0	3610
Grp Volume(v), veh/h	0	1147	157	600	726	0				400	0	547
Grp Sat Flow(s),veh/h/ln	0	1770	1539	1721	1863	0				1774	0	1203
Q Serve(g_s), s	0.0	24.3	5.8	13.4	19.6	0.0				17.3	0.0	10.6
Cycle Q Clear(g_c), s	0.0	24.3	5.8	13.4	19.6	0.0				17.3	0.0	10.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1260	548	670	1137	0				436	0	888
V/C Ratio(X)	0.00	0.91	0.29	0.90	0.64	0.00				0.92	0.00	0.62
Avail Cap(c_a), veh/h	0	1314	572	670	1166	0				440	0	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	24.1	18.2	30.9	9.8	0.0				28.9	0.0	26.3
Incr Delay (d2), s/veh	0.0	9.1	0.1	14.3	0.9	0.0				23.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.4	2.5	7.7	10.2	0.0				11.3	0.0	3.6
LnGrp Delay(d),s/veh	0.0	33.2	18.3	45.2	10.6	0.0				52.2	0.0	27.3
LnGrp LOS		C	B	D	B					D		C
Approach Vol, veh/h		1304			1326						947	
Approach Delay, s/veh		31.4			26.3						37.8	
Approach LOS		C			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	20.0	33.8		24.8		53.8		
Change Period (Y+Rc), s	* 4.7	5.8		5.5		5.8		
Max Green Setting (Gmax), s	* 15	29.2		19.5		49.2		
Max Q Clear Time (g_c+I1), s	15.4	26.3		19.3		21.6		
Green Ext Time (p_c), s	0.0	1.7		0.1		3.3		

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1030	430	0	0	720	440	540	10	520	0	0	0
Future Volume (veh/h)	1030	430	0	0	720	440	540	10	520	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.96			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	1084	453	0	0	758	216	576	0	284			
Adj No. of Lanes	2	1	0	0	2	0	2	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	1112	1240	0	0	826	235	875	0	375			
Arrive On Green	0.32	0.67	0.00	0.00	0.31	0.31	0.25	0.00	0.25			
Sat Flow, veh/h	3442	1863	0	0	2800	771	3548	0	1519			
Grp Volume(v), veh/h	1084	453	0	0	496	478	576	0	284			
Grp Sat Flow(s),veh/h/ln	1721	1863	0	0	1770	1708	1774	0	1519			
Q Serve(g_s), s	38.8	13.4	0.0	0.0	33.7	33.7	18.2	0.0	21.6			
Cycle Q Clear(g_c), s	38.8	13.4	0.0	0.0	33.7	33.7	18.2	0.0	21.6			
Prop In Lane	1.00		0.00	0.00		0.45	1.00		1.00			
Lane Grp Cap(c), veh/h	1112	1240	0	0	540	522	875	0	375			
V/C Ratio(X)	0.98	0.37	0.00	0.00	0.92	0.92	0.66	0.00	0.76			
Avail Cap(c_a), veh/h	1112	1302	0	0	598	578	1334	0	571			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	41.7	9.2	0.0	0.0	41.8	41.8	42.3	0.0	43.5			
Incr Delay (d2), s/veh	21.1	0.1	0.0	0.0	17.3	17.7	0.3	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	21.6	6.8	0.0	0.0	19.1	18.5	9.0	0.0	9.2			
LnGrp Delay(d),s/veh	62.8	9.3	0.0	0.0	59.1	59.5	42.6	0.0	44.7			
LnGrp LOS	E	A			E	E	D		D			
Approach Vol, veh/h		1537			974			860				
Approach Delay, s/veh		47.0			59.3			43.3				
Approach LOS		D			E			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		88.9			45.0	43.9		35.9
Change Period (Y+Rc), s		5.8			* 4.7	5.8		5.1
Max Green Setting (Gmax), s		87.2			* 40	42.2		46.9
Max Q Clear Time (g_c+I1), s		15.4			40.8	35.7		23.6
Green Ext Time (p_c), s		1.8			0.0	2.4		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	49.6
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	870	10	280	510	420	0	0	900	520
Future Volume (veh/h)	0	0	0	870	10	280	510	420	0	0	900	520
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1863	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				924	0	0	537	442	0	0	947	326
Adj No. of Lanes				2	0	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				1016	0	453	496	2154	0	0	998	431
Arrive On Green				0.29	0.00	0.00	0.28	0.61	0.00	0.00	0.28	0.28
Sat Flow, veh/h				3548	0	1583	1774	3632	0	0	3632	1527
Grp Volume(v), veh/h				924	0	0	537	442	0	0	947	326
Grp Sat Flow(s),veh/h/ln				1774	0	1583	1774	1770	0	0	1770	1527
Q Serve(g_s), s				28.5	0.0	0.0	31.7	6.3	0.0	0.0	29.7	22.1
Cycle Q Clear(g_c), s				28.5	0.0	0.0	31.7	6.3	0.0	0.0	29.7	22.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1016	0	453	496	2154	0	0	998	431
V/C Ratio(X)				0.91	0.00	0.00	1.08	0.21	0.00	0.00	0.95	0.76
Avail Cap(c_a), veh/h				1695	0	756	496	2156	0	0	1000	431
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				39.0	0.0	0.0	40.8	9.9	0.0	0.0	39.9	37.1
Incr Delay (d2), s/veh				2.7	0.0	0.0	64.2	0.1	0.0	0.0	17.5	7.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				14.4	0.0	0.0	24.3	3.1	0.0	0.0	16.9	10.3
LnGrp Delay(d),s/veh				41.7	0.0	0.0	105.0	10.0	0.0	0.0	57.4	45.0
LnGrp LOS				D			F	A			E	D
Approach Vol, veh/h					924			979			1273	
Approach Delay, s/veh					41.7			62.1			54.2	
Approach LOS					D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	37.0	38.9				75.9		37.3
Change Period (Y+Rc), s	5.3	7.0				7.0		4.9
Max Green Setting (Gmax), s	31.7	32.0				69.0		54.1
Max Q Clear Time (g_c+I1), s	33.7	31.7				8.3		30.5
Green Ext Time (p_c), s	0.0	0.2				4.4		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.0
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	0	340	0	0	0	0	580	620	460	1310	0
Future Volume (veh/h)	360	0	340	0	0	0	0	580	620	460	1310	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	379	0	358				0	611	421	484	1379	0
Adj No. of Lanes	1	0	1				0	2	2	1	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	440	0	393				0	971	737	518	3164	0
Arrive On Green	0.25	0.00	0.25				0.00	0.27	0.27	0.29	0.62	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	2685	1774	5253	0
Grp Volume(v), veh/h	379	0	358				0	611	421	484	1379	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1343	1774	1695	0
Q Serve(g_s), s	17.9	0.0	19.3				0.0	13.3	11.8	23.3	12.3	0.0
Cycle Q Clear(g_c), s	17.9	0.0	19.3				0.0	13.3	11.8	23.3	12.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	440	0	393				0	971	737	518	3164	0
V/C Ratio(X)	0.86	0.00	0.91				0.00	0.63	0.57	0.93	0.44	0.00
Avail Cap(c_a), veh/h	461	0	411				0	971	737	541	3164	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.6	0.0	32.1				0.0	27.9	27.4	30.3	8.6	0.0
Incr Delay (d2), s/veh	14.8	0.0	23.6				0.0	3.1	3.2	23.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	0.0	11.0				0.0	6.9	4.7	14.8	5.8	0.0
LnGrp Delay(d),s/veh	46.4	0.0	55.7				0.0	31.0	30.6	53.5	8.7	0.0
LnGrp LOS	D		E					C	C	D	A	
Approach Vol, veh/h		737						1032			1863	
Approach Delay, s/veh		50.9						30.8			20.3	
Approach LOS		D						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	31.8	29.0		27.0		60.8		
Change Period (Y+Rc), s	6.2	4.9		5.2		6.2		
Max Green Setting (Gmax), s	26.8	24.1		22.8		26.8		
Max Q Clear Time (g_c+I1), s	25.3	15.3		21.3		14.3		
Green Ext Time (p_c), s	0.3	3.9		0.5		7.5		

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	770	2460	0	0	1360	800	0	0	1030	0	0	1160
Future Volume (veh/h)	770	2460	0	0	1360	800	0	0	1030	0	0	1160
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	0	1863	1900	0	1863	1900
Adj Flow Rate, veh/h	786	2510	0	0	1388	0	0	0	0	0	0	0
Adj No. of Lanes	2	3	0	0	3	1	0	1	0	0	1	0
Peak Hour Factor	0.98	0.98	0.95	0.95	0.98	0.98	0.95	0.98	0.98	0.95	0.98	0.98
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	2	0	2	2
Cap, veh/h	755	4851	0	0	3912	1108	0	1	0	0	1	0
Arrive On Green	0.22	0.95	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3442	5253	0	0	5588	1583	0	-74510	0	0	-74510	0
Grp Volume(v), veh/h	786	2510	0	0	1388	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1721	1695	0	0	1863	1583	0	1863	0	0	1863	0
Q Serve(g_s), s	28.5	5.8	0.0	0.0	12.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	28.5	5.8	0.0	0.0	12.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		1.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	755	4851	0	0	3912	1108	0	1	0	0	1	0
V/C Ratio(X)	1.04	0.52	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	755	4851	0	0	3912	1108	0	516	0	0	516	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	0.00	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	50.8	0.3	0.0	0.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	23.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.9	2.3	0.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	73.9	0.3	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	F	A			A							
Approach Vol, veh/h		3296			1388			0			0	
Approach Delay, s/veh		17.9			8.0			0.0			0.0	
Approach LOS		B			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		130.0		0.0	33.0	97.0		0.0
Change Period (Y+Rc), s		* 6		4.0	4.5	6.0		4.0
Max Green Setting (Gmax), s		* 86		36.0	28.5	51.0		36.0
Max Q Clear Time (g_c+I1), s		7.8		0.0	30.5	14.9		0.0
Green Ext Time (p_c), s		8.7		0.0	0.0	6.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	560	300	300	310	290	250	720	250	460	920	290
Future Volume (veh/h)	260	560	300	300	310	290	250	720	250	460	920	290
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	274	589	221	316	326	210	263	758	200	484	968	210
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	353	796	494	393	836	590	331	1151	530	502	1404	584
Arrive On Green	0.10	0.22	0.22	0.11	0.24	0.24	0.10	0.23	0.23	0.15	0.28	0.28
Sat Flow, veh/h	3442	3539	1521	3442	3539	1521	3442	5085	1541	3442	5085	1526
Grp Volume(v), veh/h	274	589	221	316	326	210	263	758	200	484	968	210
Grp Sat Flow(s),veh/h/ln	1721	1770	1521	1721	1770	1521	1721	1695	1541	1721	1695	1526
Q Serve(g_s), s	7.8	15.5	11.6	9.0	7.8	9.9	7.5	13.6	9.8	14.0	17.0	9.9
Cycle Q Clear(g_c), s	7.8	15.5	11.6	9.0	7.8	9.9	7.5	13.6	9.8	14.0	17.0	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	353	796	494	393	836	590	331	1151	530	502	1404	584
V/C Ratio(X)	0.78	0.74	0.45	0.80	0.39	0.36	0.80	0.66	0.38	0.96	0.69	0.36
Avail Cap(c_a), veh/h	1602	2157	1079	743	1273	778	419	1468	626	502	1600	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	36.1	27.0	43.2	32.1	22.2	44.3	35.2	25.0	42.5	32.4	22.4
Incr Delay (d2), s/veh	1.4	1.4	0.7	1.5	0.6	0.7	6.2	1.2	0.8	30.9	1.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	7.7	4.9	4.3	3.9	4.2	3.8	6.4	4.3	8.8	8.2	4.3
LnGrp Delay(d),s/veh	45.2	37.5	27.7	44.7	32.7	22.9	50.5	36.4	25.8	73.4	33.9	23.1
LnGrp LOS	D	D	C	D	C	C	D	D	C	E	C	C
Approach Vol, veh/h		1084			852			1221			1662	
Approach Delay, s/veh		37.4			34.8			37.7			44.0	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	32.9	15.8	32.4	14.0	37.8	14.7	33.6
Change Period (Y+Rc), s	4.4	10.2	4.4	* 9.9	4.4	* 10	4.4	* 9.9
Max Green Setting (Gmax), s	14.6	28.9	21.6	* 61	12.2	* 32	46.6	* 36
Max Q Clear Time (g_c+I1), s	16.0	15.6	11.0	17.5	9.5	19.0	9.8	11.9
Green Ext Time (p_c), s	0.0	7.0	0.5	3.2	0.1	8.2	0.5	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	39.3
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
45: Mission Gorge Road & Camino Del Rio North/I-8 WB Off Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	130	610	670	80	290	340	970	220	50	1520	90
Future Volume (veh/h)	110	130	610	670	80	290	340	970	220	50	1520	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	113	134	402	693	172	124	351	1000	173	52	1567	41
Adj No. of Lanes	1	1	1	3	1	1	1	2	1	2	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	101	370	976	342	633	329	1413	623	765	2217	681
Arrive On Green	0.05	0.05	0.05	0.18	0.18	0.18	0.19	0.40	0.40	0.22	0.44	0.44
Sat Flow, veh/h	1774	1863	1409	5322	1863	1532	1774	3539	1560	3442	5085	1562
Grp Volume(v), veh/h	113	134	402	693	172	124	351	1000	173	52	1567	41
Grp Sat Flow(s),veh/h/ln	1774	1863	1409	1774	1863	1532	1774	1770	1560	1721	1695	1562
Q Serve(g_s), s	7.9	7.9	7.9	17.7	12.0	0.0	26.9	34.3	10.9	1.7	36.4	2.2
Cycle Q Clear(g_c), s	7.9	7.9	7.9	17.7	12.0	0.0	26.9	34.3	10.9	1.7	36.4	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	101	370	976	342	633	329	1413	623	765	2217	681
V/C Ratio(X)	1.17	1.32	1.09	0.71	0.50	0.20	1.07	0.71	0.28	0.07	0.71	0.06
Avail Cap(c_a), veh/h	97	101	370	1354	474	742	329	1413	623	765	2217	681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.6	68.5	55.4	55.6	53.3	27.8	59.0	36.5	29.4	44.5	33.3	23.7
Incr Delay (d2), s/veh	144.1	197.5	71.5	0.5	0.4	0.1	60.2	2.1	0.8	0.0	1.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	9.6	22.2	8.8	6.3	3.2	18.7	17.2	4.8	0.8	17.4	1.0
LnGrp Delay(d),s/veh	212.6	266.1	126.9	56.0	53.7	27.9	119.2	38.6	30.2	44.6	35.3	23.9
LnGrp LOS	F	F	F	E	D	C	F	D	C	D	D	C
Approach Vol, veh/h		649			989			1524			1660	
Approach Delay, s/veh		170.6			52.1			56.2			35.3	
Approach LOS		F			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	37.3	63.0		13.0	32.0	68.3		31.7
Change Period (Y+Rc), s	5.1	5.1		5.1	5.1	5.1		5.1
Max Green Setting (Gmax), s	21.9	57.9		7.9	26.9	52.9		36.9
Max Q Clear Time (g_c+I1), s	3.7	36.3		9.9	28.9	38.4		19.7
Green Ext Time (p_c), s	0.1	4.6		0.0	0.0	6.5		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	63.5
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	340	950	290	310	0	740	190	270	0	0	0
Future Volume (veh/h)	0	340	950	290	310	0	740	190	270	0	0	0
Number	5	2	12	1	6	16	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	1900	1863	1863	1863			
Adj Flow Rate, veh/h	0	351	0	299	320	0	480	593	0			
Adj No. of Lanes	0	2	1	2	2	0	1	1	1			
Peak Hour Factor	0.95	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2			
Cap, veh/h	0	1505	673	349	1975	0	642	674	573			
Arrive On Green	0.00	0.43	0.00	0.10	0.56	0.00	0.36	0.36	0.00			
Sat Flow, veh/h	0	3632	1583	3442	3632	0	1774	1863	1583			
Grp Volume(v), veh/h	0	351	0	299	320	0	480	593	0			
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0	1774	1863	1583			
Q Serve(g_s), s	0.0	9.5	0.0	12.8	6.6	0.0	35.5	44.7	0.0			
Cycle Q Clear(g_c), s	0.0	9.5	0.0	12.8	6.6	0.0	35.5	44.7	0.0			
Prop In Lane	0.00		1.00	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	1505	673	349	1975	0	642	674	573			
V/C Ratio(X)	0.00	0.23	0.00	0.86	0.16	0.00	0.75	0.88	0.00			
Avail Cap(c_a), veh/h	0	1505	673	535	1975	0	757	795	676			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.85	0.00	1.00	1.00	0.00	1.00	1.00	0.00			
Uniform Delay (d), s/veh	0.0	27.5	0.0	66.3	16.1	0.0	41.8	44.8	0.0			
Incr Delay (d2), s/veh	0.0	0.3	0.0	5.4	0.2	0.0	4.0	10.6	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	4.7	0.0	6.4	3.2	0.0	18.0	24.9	0.0			
LnGrp Delay(d),s/veh	0.0	27.8	0.0	71.7	16.3	0.0	45.8	55.3	0.0			
LnGrp LOS		C		E	B		D	E				
Approach Vol, veh/h		351			619			1073				
Approach Delay, s/veh		27.8			43.0			51.1				
Approach LOS		C			D			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	19.9	69.8		60.3		89.7		
Change Period (Y+Rc), s	* 4.7	6.0		6.0		6.0		
Max Green Setting (Gmax), s	* 23	46.0		64.0		74.0		
Max Q Clear Time (g_c+I1), s	14.8	11.5		46.7		8.6		
Green Ext Time (p_c), s	0.4	2.6		7.6		2.5		

Intersection Summary	
HCM 2010 Ctrl Delay	44.6
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	0	490	130	250	375	290	1285	250	0	1475	750
Future Volume (veh/h)	310	0	490	130	250	375	290	1285	250	0	1475	750
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	316	0	408	133	255	291	296	1311	0	0	1505	459
Adj No. of Lanes	1	0	1	1	1	1	1	4	1	0	4	2
Peak Hour Factor	0.98	0.95	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.95	0.98	0.98
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	0	0	0	388	407	336	761	4491	1110	0	1444	600
Arrive On Green	0.00	0.00	0.00	0.22	0.22	0.22	0.43	0.70	0.00	0.00	0.23	0.23
Sat Flow, veh/h		0		1774	1863	1540	1774	6408	1583	0	6669	2663
Grp Volume(v), veh/h		0.0		133	255	291	296	1311	0	0	1505	459
Grp Sat Flow(s),veh/h/ln				1774	1863	1540	1774	1602	1583	0	1602	1331
Q Serve(g_s), s				9.5	18.6	27.3	17.2	11.5	0.0	0.0	33.8	24.2
Cycle Q Clear(g_c), s				9.5	18.6	27.3	17.2	11.5	0.0	0.0	33.8	24.2
Prop In Lane				1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				388	407	336	761	4491	1110	0	1444	600
V/C Ratio(X)				0.34	0.63	0.87	0.39	0.29	0.00	0.00	1.04	0.76
Avail Cap(c_a), veh/h				438	459	380	761	4491	1110	0	1444	600
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.86	0.86	0.00	0.00	0.57	0.57
Uniform Delay (d), s/veh				49.5	53.1	56.5	29.4	8.4	0.0	0.0	58.1	54.4
Incr Delay (d2), s/veh				0.2	1.3	15.6	0.1	0.1	0.0	0.0	30.1	5.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.7	9.7	13.1	8.4	5.1	0.0	0.0	18.0	9.4
LnGrp Delay(d),s/veh				49.7	54.4	72.0	29.5	8.6	0.0	0.0	88.2	59.7
LnGrp LOS				D	D	E	C	A			F	E
Approach Vol, veh/h					679			1607			1964	
Approach Delay, s/veh					61.1			12.4			81.5	
Approach LOS					E			B			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		112.1			71.3	40.8		37.9
Change Period (Y+Rc), s		7.0			7.0	* 7		5.1
Max Green Setting (Gmax), s		54.8			16.3	* 34		37.0
Max Q Clear Time (g_c+I1), s		13.5			19.2	35.8		29.3
Green Ext Time (p_c), s		6.8			0.0	0.0		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	52.1
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	840	0	370	0	0	0	0	530	270	990	530	0
Future Volume (veh/h)	840	0	370	0	0	0	0	530	270	990	530	0
Number	5	2	12				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	884	0	0				0	558	0	1042	558	0
Adj No. of Lanes	2	1	0				0	2	1	2	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1432	775	0				0	625	280	1038	1090	0
Arrive On Green	0.42	0.00	0.00				0.00	0.06	0.00	0.29	0.29	0.00
Sat Flow, veh/h	3442	1863	0				0	3632	1583	3548	3725	0
Grp Volume(v), veh/h	884	0	0				0	558	0	1042	558	0
Grp Sat Flow(s),veh/h/ln	1721	1863	0				0	1770	1583	1774	1863	0
Q Serve(g_s), s	30.3	0.0	0.0				0.0	23.5	0.0	43.9	18.7	0.0
Cycle Q Clear(g_c), s	30.3	0.0	0.0				0.0	23.5	0.0	43.9	18.7	0.0
Prop In Lane	1.00		0.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1432	775	0				0	625	280	1038	1090	0
V/C Ratio(X)	0.62	0.00	0.00				0.00	0.89	0.00	1.00	0.51	0.00
Avail Cap(c_a), veh/h	1432	775	0				0	873	391	1038	1090	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.86	0.00	0.62	0.62	0.00
Uniform Delay (d), s/veh	34.4	0.0	0.0				0.0	69.2	0.0	53.1	44.1	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0				0.0	6.1	0.0	22.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.8	0.0	0.0				0.0	12.1	0.0	24.8	9.6	0.0
LnGrp Delay(d),s/veh	36.4	0.0	0.0				0.0	75.3	0.0	75.9	44.2	0.0
LnGrp LOS	D							E		F	D	
Approach Vol, veh/h		884						558			1600	
Approach Delay, s/veh		36.4						75.3			64.9	
Approach LOS		D						E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		68.5		31.5				50.0
Change Period (Y+Rc), s		6.1		5.0				6.1
Max Green Setting (Gmax), s		51.9		37.0				43.9
Max Q Clear Time (g_c+I1), s		32.3		25.5				45.9
Green Ext Time (p_c), s		1.8		1.0				0.0

Intersection Summary	
HCM 2010 Ctrl Delay	58.5
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	220	270	220	80	620	90	820	170	320	1290	420
Future Volume (veh/h)	290	220	270	220	80	620	90	820	170	320	1290	420
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.94	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	305	232	210	232	84	453	95	863	147	337	1358	368
Adj No. of Lanes	1	1	1	1	1	1	1	3	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	344	379	297	311	639	111	1091	184	434	1598	684
Arrive On Green	0.18	0.18	0.18	0.17	0.17	0.17	0.06	0.25	0.25	0.49	0.90	0.90
Sat Flow, veh/h	1774	1863	1512	1774	1863	1507	1774	4335	733	1774	3539	1516
Grp Volume(v), veh/h	305	232	210	232	84	453	95	673	337	337	1358	368
Grp Sat Flow(s),veh/h/ln	1774	1863	1512	1774	1863	1507	1774	1695	1678	1774	1770	1516
Q Serve(g_s), s	24.5	16.8	17.6	18.2	5.7	0.0	7.7	26.9	27.2	22.7	23.2	6.6
Cycle Q Clear(g_c), s	24.5	16.8	17.6	18.2	5.7	0.0	7.7	26.9	27.2	22.7	23.2	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	328	344	379	297	311	639	111	853	422	434	1598	684
V/C Ratio(X)	0.93	0.67	0.55	0.78	0.27	0.71	0.85	0.79	0.80	0.78	0.85	0.54
Avail Cap(c_a), veh/h	330	347	381	367	385	699	111	933	462	434	1598	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	58.2	55.0	47.7	57.9	52.7	35.1	67.3	50.7	50.8	33.7	5.0	4.2
Incr Delay (d2), s/veh	31.9	5.0	1.7	6.6	0.2	2.4	42.0	7.3	14.5	5.4	4.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.9	9.1	7.5	9.4	3.0	15.3	5.1	13.5	14.3	11.6	10.9	2.9
LnGrp Delay(d),s/veh	90.1	60.1	49.4	64.5	52.8	37.5	109.3	58.0	65.2	39.2	9.0	6.2
LnGrp LOS	F	E	D	E	D	D	F	E	E	D	A	A
Approach Vol, veh/h		747			769			1105			2063	
Approach Delay, s/veh		69.3			47.3			64.6			13.4	
Approach LOS		E			D			E			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	40.4	43.5		31.7	13.5	70.4		29.4
Change Period (Y+Rc), s	4.9	* 7		4.9	4.4	4.9		5.2
Max Green Setting (Gmax), s	26.6	* 40		27.0	9.1	59.5		30.0
Max Q Clear Time (g_c+I1), s	24.7	29.2		26.5	9.7	25.2		20.2
Green Ext Time (p_c), s	0.1	7.3		0.2	0.0	18.4		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	40.0
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	90	60	80	70	290	150	570	160	210	1360	210
Future Volume (veh/h)	220	90	60	80	70	290	150	570	160	210	1360	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	232	95	31	84	74	137	158	600	94	221	1432	158
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	269	219	206	216	174	171	1412	221	245	1617	177
Arrive On Green	0.14	0.14	0.14	0.12	0.12	0.12	0.10	0.46	0.46	0.14	0.50	0.50
Sat Flow, veh/h	1774	1863	1518	1774	1863	1502	1774	3058	478	1774	3211	351
Grp Volume(v), veh/h	232	95	31	84	74	137	158	347	347	221	784	806
Grp Sat Flow(s),veh/h/ln	1774	1863	1518	1774	1863	1502	1774	1770	1766	1774	1770	1792
Q Serve(g_s), s	17.6	6.3	2.4	6.0	5.0	12.2	12.1	18.0	18.1	16.8	54.1	55.6
Cycle Q Clear(g_c), s	17.6	6.3	2.4	6.0	5.0	12.2	12.1	18.0	18.1	16.8	54.1	55.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.27	1.00		0.20
Lane Grp Cap(c), veh/h	256	269	219	206	216	174	171	817	816	245	891	903
V/C Ratio(X)	0.91	0.35	0.14	0.41	0.34	0.79	0.92	0.42	0.43	0.90	0.88	0.89
Avail Cap(c_a), veh/h	263	276	225	247	260	209	171	823	821	295	947	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.7	52.8	51.2	56.2	55.7	58.9	61.4	24.7	24.7	58.1	30.3	30.7
Incr Delay (d2), s/veh	30.6	0.3	0.1	0.5	0.3	12.2	46.7	0.5	0.5	23.7	9.5	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	3.3	1.0	3.0	2.6	5.7	8.1	8.9	8.9	9.8	28.7	30.0
LnGrp Delay(d),s/veh	88.3	53.1	51.3	56.7	56.1	71.1	108.1	25.1	25.2	81.8	39.8	41.3
LnGrp LOS	F	D	D	E	E	E	F	C	C	F	D	D
Approach Vol, veh/h		358			295			852			1811	
Approach Delay, s/veh		75.7			63.2			40.5			45.6	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	23.3	68.2		24.7	17.6	73.9		20.8
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	22.8	63.7		20.3	13.2	73.3		19.1
Max Q Clear Time (g_c+I1), s	18.8	20.1		19.6	14.1	57.6		14.2
Green Ext Time (p_c), s	0.1	6.4		0.1	0.0	11.4		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	49.1
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	190	130	150	520	190	190	320	410	100	300	160
Future Volume (veh/h)	140	190	130	150	520	190	190	320	410	100	300	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	147	200	74	158	547	105	200	337	295	105	316	84
Adj No. of Lanes	1	1	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	270	100	183	637	122	226	806	691	128	1092	285
Arrive On Green	0.10	0.21	0.21	0.10	0.22	0.22	0.13	0.45	0.45	0.07	0.40	0.40
Sat Flow, veh/h	1774	1286	476	1774	2950	564	1774	1788	1533	1774	2762	721
Grp Volume(v), veh/h	147	0	274	158	327	325	200	334	298	105	200	200
Grp Sat Flow(s),veh/h/ln	1774	0	1762	1774	1770	1744	1774	1770	1551	1774	1770	1713
Q Serve(g_s), s	11.4	0.0	20.4	12.3	24.9	25.1	15.5	17.9	18.3	8.2	10.8	11.2
Cycle Q Clear(g_c), s	11.4	0.0	20.4	12.3	24.9	25.1	15.5	17.9	18.3	8.2	10.8	11.2
Prop In Lane	1.00		0.27	1.00		0.32	1.00		0.99	1.00		0.42
Lane Grp Cap(c), veh/h	172	0	370	183	382	377	226	798	699	128	699	677
V/C Ratio(X)	0.86	0.00	0.74	0.86	0.86	0.86	0.88	0.42	0.43	0.82	0.29	0.29
Avail Cap(c_a), veh/h	247	0	472	260	487	480	331	798	699	196	699	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.27	0.27	0.27
Uniform Delay (d), s/veh	62.3	0.0	51.8	61.8	52.8	52.9	60.1	26.0	26.2	64.1	28.9	29.0
Incr Delay (d2), s/veh	17.8	0.0	4.6	18.4	11.5	12.3	16.4	1.5	1.8	4.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	10.4	6.9	13.4	13.4	8.6	9.0	8.2	4.2	5.3	5.3
LnGrp Delay(d),s/veh	80.0	0.0	56.4	80.2	64.3	65.1	76.4	27.5	27.9	68.5	29.1	29.3
LnGrp LOS	F		E	F	E	E	E	C	C	E	C	C
Approach Vol, veh/h		421			810			832			505	
Approach Delay, s/veh		64.6			67.7			39.4			37.4	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	72.6	18.9	33.9	22.4	64.8	18.1	34.8
Change Period (Y+Rc), s	4.5	9.5	4.5	4.5	4.5	9.5	4.5	4.5
Max Green Setting (Gmax), s	15.5	43.5	20.5	37.5	26.1	32.9	19.5	38.5
Max Q Clear Time (g_c+I1), s	10.2	20.3	14.3	22.4	17.5	13.2	13.4	27.1
Green Ext Time (p_c), s	0.1	4.1	0.2	1.5	0.3	2.2	0.2	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	52.1
HCM 2010 LOS	D

Notes

Appendix L
Peak Hour Intersection Worksheets
Two Lane Via Las Cumbres Alternative

AM Peak Hour

HCM 2010 Signalized Intersection Summary
10: Via Las Cumbres & Friar Roads

11/27/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	475	115	275	1245	455	95	135	165	135	205	135
Future Volume (veh/h)	145	475	115	275	1245	455	95	135	165	135	205	135
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	151	495	98	289	1311	321	100	142	79	142	216	100
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	973	192	319	1462	638	123	345	283	166	250	116
Arrive On Green	0.10	0.33	0.33	0.18	0.41	0.41	0.07	0.19	0.19	0.09	0.21	0.21
Sat Flow, veh/h	1774	2932	577	1774	3539	1545	1774	1863	1532	1774	1194	553
Grp Volume(v), veh/h	151	298	295	289	1311	321	100	142	79	142	0	316
Grp Sat Flow(s),veh/h/ln	1774	1770	1740	1774	1770	1545	1774	1863	1532	1774	0	1746
Q Serve(g_s), s	11.2	18.0	18.3	21.3	46.2	20.6	7.4	9.0	5.9	10.5	0.0	23.3
Cycle Q Clear(g_c), s	11.2	18.0	18.3	21.3	46.2	20.6	7.4	9.0	5.9	10.5	0.0	23.3
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	175	587	577	319	1462	638	123	345	283	166	0	366
V/C Ratio(X)	0.86	0.51	0.51	0.91	0.90	0.50	0.81	0.41	0.28	0.85	0.00	0.86
Avail Cap(c_a), veh/h	190	587	577	496	1626	710	163	446	367	190	0	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.3	35.9	35.9	53.7	36.6	29.1	61.4	48.1	46.8	59.7	0.0	51.0
Incr Delay (d2), s/veh	29.6	0.5	0.5	14.0	6.3	0.4	20.3	0.8	0.5	27.1	0.0	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	8.9	8.9	11.7	23.9	8.9	4.3	4.7	2.5	6.4	0.0	12.4
LnGrp Delay(d),s/veh	88.9	36.4	36.5	67.7	42.9	29.5	81.7	48.8	47.3	86.8	0.0	62.7
LnGrp LOS	F	D	D	E	D	C	F	D	D	F		E
Approach Vol, veh/h		744			1921			321			458	
Approach Delay, s/veh		47.1			44.4			58.7			70.1	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.7	55.3	15.0	33.7	18.9	66.1	18.2	30.4
Change Period (Y+Rc), s	5.7	* 11	5.7	* 5.7	5.7	* 11	5.7	5.7
Max Green Setting (Gmax), s	37.4	* 39	12.3	* 35	14.3	* 61	14.3	32.0
Max Q Clear Time (g_c+I1), s	23.3	20.3	9.4	25.3	13.2	48.2	12.5	11.0
Green Ext Time (p_c), s	0.7	2.6	0.1	0.8	0.0	7.0	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	49.7
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	575	80	120	1580	10	185	5	120	20	5	5
Future Volume (veh/h)	5	575	80	120	1580	10	185	5	120	20	5	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.98		0.97	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	5	605	58	126	1663	11	195	5	126	21	5	0
Adj No. of Lanes	1	3	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9	2048	194	156	1864	12	359	7	303	150	28	0
Arrive On Green	0.01	0.43	0.43	0.09	0.52	0.52	0.20	0.20	0.20	0.20	0.20	0.00
Sat Flow, veh/h	1774	4713	447	1774	3603	24	1420	36	1535	392	143	0
Grp Volume(v), veh/h	5	433	230	126	816	858	200	0	126	26	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1769	1774	1770	1857	1456	0	1535	536	0	0
Q Serve(g_s), s	0.3	7.5	7.6	6.3	37.2	37.3	0.0	0.0	6.5	1.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	7.5	7.6	6.3	37.2	37.3	11.2	0.0	6.5	12.2	0.0	0.0
Prop In Lane	1.00		0.25	1.00		0.01	0.97		1.00	0.81		0.00
Lane Grp Cap(c), veh/h	9	1473	769	156	916	961	366	0	303	178	0	0
V/C Ratio(X)	0.54	0.29	0.30	0.81	0.89	0.89	0.55	0.00	0.42	0.15	0.00	0.00
Avail Cap(c_a), veh/h	79	1473	769	177	916	961	632	0	597	430	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	44.7	16.5	16.5	40.3	19.5	19.5	33.5	0.0	31.6	34.8	0.0	0.0
Incr Delay (d2), s/veh	16.9	0.5	1.0	18.5	12.8	12.4	0.7	0.0	0.5	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.6	3.9	3.9	21.2	22.1	4.7	0.0	2.8	0.6	0.0	0.0
LnGrp Delay(d),s/veh	61.6	17.0	17.5	58.7	32.2	31.9	34.2	0.0	32.1	35.0	0.0	0.0
LnGrp LOS	E	B	B	E	C	C	C		C	D		
Approach Vol, veh/h		668			1800			326			26	
Approach Delay, s/veh		17.5			33.9			33.4			35.0	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.3	50.0		27.7	4.9	57.5		27.7
Change Period (Y+Rc), s	4.4	* 11		* 9.9	4.4	* 11		* 9.9
Max Green Setting (Gmax), s	9.0	* 21		* 35	4.0	* 26		* 35
Max Q Clear Time (g_c+I1), s	8.3	9.6		14.2	2.3	39.3		13.2
Green Ext Time (p_c), s	0.0	2.8		0.1	0.0	0.0		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.0
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	435	50	0	150
Future Volume (veh/h)	0	0	435	50	0	150
Number			8	18	1	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.98	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1900	1863	1863
Adj Flow Rate, veh/h			458	53	0	158
Adj No. of Lanes			2	0	1	1
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1757	202	0	0
Arrive On Green			0.55	0.55	0.00	0.00
Sat Flow, veh/h			3285	368	0	
Grp Volume(v), veh/h			253	258	0.0	
Grp Sat Flow(s),veh/h/ln			1770	1790		
Q Serve(g_s), s			0.8	0.8		
Cycle Q Clear(g_c), s			0.8	0.8		
Prop In Lane				0.21		
Lane Grp Cap(c), veh/h			974	985		
V/C Ratio(X)			0.26	0.26		
Avail Cap(c_a), veh/h			2741	2772		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			1.2	1.2		
Incr Delay (d2), s/veh			0.1	0.1		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			0.4	0.4		
LnGrp Delay(d),s/veh			1.3	1.3		
LnGrp LOS			A	A		
Approach Vol, veh/h			511			
Approach Delay, s/veh			1.3			
Approach LOS			A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs								8
Phs Duration (G+Y+Rc), s								10.0
Change Period (Y+Rc), s								4.5
Max Green Setting (Gmax), s								15.5
Max Q Clear Time (g_c+I1), s								2.8
Green Ext Time (p_c), s								2.5

Intersection Summary	
HCM 2010 Ctrl Delay	1.3
HCM 2010 LOS	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	380	190	1	330
Future Volume (veh/h)	0	0	380	190	1	330
Number			2	12	7	14
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.92	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	1863	1863
Adj Flow Rate, veh/h			400	85	1	273
Adj No. of Lanes			2	1	1	2
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			621	256	0	0
Arrive On Green			0.18	0.18	0.00	0.00
Sat Flow, veh/h			3632	1460	0	
Grp Volume(v), veh/h			400	85	0.0	
Grp Sat Flow(s),veh/h/ln			1770	1460		
Q Serve(g_s), s			9.5	4.6		
Cycle Q Clear(g_c), s			9.5	4.6		
Prop In Lane				1.00		
Lane Grp Cap(c), veh/h			621	256		
V/C Ratio(X)			0.64	0.33		
Avail Cap(c_a), veh/h			1813	748		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			34.5	32.5		
Incr Delay (d2), s/veh			1.5	1.0		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			4.7	1.9		
LnGrp Delay(d),s/veh			36.0	33.5		
LnGrp LOS			D	C		
Approach Vol, veh/h			485			
Approach Delay, s/veh			35.6			
Approach LOS			D			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		25.7						
Change Period (Y+Rc), s		* 9.9						
Max Green Setting (Gmax), s		* 46						
Max Q Clear Time (g_c+I1), s		11.5						
Green Ext Time (p_c), s		4.3						

Intersection Summary	
HCM 2010 Ctrl Delay	35.6
HCM 2010 LOS	D

Notes



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	125	0	0	100	485
Future Volume (veh/h)	0	125	0	0	100	485
Number	7	4			5	12
Initial Q (Qb), veh	0	0			0	0
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00
Parking Bus, Adj	1.00	1.00			1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863			1863	1863
Adj Flow Rate, veh/h	0	132			105	511
Adj No. of Lanes	0	1			1	1
Peak Hour Factor	0.95	0.95			0.95	0.95
Percent Heavy Veh, %	0	2			2	2
Cap, veh/h	0	430			0	0
Arrive On Green	0.00	0.23			0.00	0.00
Sat Flow, veh/h	0	1863			0	
Grp Volume(v), veh/h	0	132			0.0	
Grp Sat Flow(s),veh/h/ln	0	1863				
Q Serve(g_s), s	0.0	0.3				
Cycle Q Clear(g_c), s	0.0	0.3				
Prop In Lane	0.00					
Lane Grp Cap(c), veh/h	0	430				
V/C Ratio(X)	0.00	0.31				
Avail Cap(c_a), veh/h	0	7481				
HCM Platoon Ratio	1.00	1.00				
Upstream Filter(I)	0.00	1.00				
Uniform Delay (d), s/veh	0.0	1.9				
Incr Delay (d2), s/veh	0.0	0.4				
Initial Q Delay(d3),s/veh	0.0	0.0				
%ile BackOfQ(50%),veh/ln	0.0	0.2				
LnGrp Delay(d),s/veh	0.0	2.3				
LnGrp LOS		A				
Approach Vol, veh/h		132				
Approach Delay, s/veh		2.3				
Approach LOS		A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				
Phs Duration (G+Y+Rc), s				5.9				
Change Period (Y+Rc), s				4.5				
Max Green Setting (Gmax), s				23.5				
Max Q Clear Time (g_c+I1), s				2.3				
Green Ext Time (p_c), s				0.6				

Intersection Summary	
HCM 2010 Ctrl Delay	2.3
HCM 2010 LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	155	775	0	0	0	740
Future Volume (veh/h)	155	775	0	0	0	740
Number	2	12			7	14
Initial Q (Qb), veh	0	0			0	0
Ped-Bike Adj(A_pbT)		0.98			1.00	1.00
Parking Bus, Adj	1.00	1.00			1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900			1863	1863
Adj Flow Rate, veh/h	163	763			0	654
Adj No. of Lanes	2	0			1	2
Peak Hour Factor	0.95	0.95			0.95	0.95
Percent Heavy Veh, %	2	2			2	2
Cap, veh/h	1067	939			0	0
Arrive On Green	0.60	0.60			0.00	0.00
Sat Flow, veh/h	1863	1557			0	
Grp Volume(v), veh/h	163	763			0.0	
Grp Sat Flow(s),veh/h/ln	1770	1557				
Q Serve(g_s), s	1.0	9.6				
Cycle Q Clear(g_c), s	1.0	9.6				
Prop In Lane		1.00				
Lane Grp Cap(c), veh/h	1067	939				
V/C Ratio(X)	0.15	0.81				
Avail Cap(c_a), veh/h	1223	1076				
HCM Platoon Ratio	1.00	1.00				
Upstream Filter(I)	1.00	1.00				
Uniform Delay (d), s/veh	2.2	3.9				
Incr Delay (d2), s/veh	0.1	4.6				
Initial Q Delay(d3),s/veh	0.0	0.0				
%ile BackOfQ(50%),veh/ln	0.5	5.0				
LnGrp Delay(d),s/veh	2.3	8.5				
LnGrp LOS	A	A				
Approach Vol, veh/h	926					
Approach Delay, s/veh	7.4					
Approach LOS	A					

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		25.2						
Change Period (Y+Rc), s		10.0						
Max Green Setting (Gmax), s		17.4						
Max Q Clear Time (g_c+I1), s		11.6						
Green Ext Time (p_c), s		3.6						

Intersection Summary	
HCM 2010 Ctrl Delay	7.4
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
74: Fashion Valley Road & Riverwalk Drive/Avenida Del Rio

01/15/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	350	90	70	150	90	180	370	150	80	200	70
Future Volume (veh/h)	90	350	90	70	150	90	180	370	150	80	200	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	95	368	74	74	158	53	189	389	74	84	211	11
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	407	82	116	354	119	220	1003	189	121	968	50
Arrive On Green	0.07	0.27	0.27	0.07	0.27	0.27	0.25	0.68	0.68	0.07	0.28	0.28
Sat Flow, veh/h	1774	1500	302	1774	1327	445	1774	2957	557	1774	3417	177
Grp Volume(v), veh/h	95	0	442	74	0	211	189	231	232	84	109	113
Grp Sat Flow(s),veh/h/ln	1774	0	1801	1774	0	1772	1774	1770	1745	1774	1770	1824
Q Serve(g_s), s	4.7	0.0	21.3	3.7	0.0	8.9	9.2	5.1	5.2	4.2	4.2	4.3
Cycle Q Clear(g_c), s	4.7	0.0	21.3	3.7	0.0	8.9	9.2	5.1	5.2	4.2	4.2	4.3
Prop In Lane	1.00		0.17	1.00		0.25	1.00		0.32	1.00		0.10
Lane Grp Cap(c), veh/h	125	0	489	116	0	472	220	600	592	121	501	517
V/C Ratio(X)	0.76	0.00	0.90	0.64	0.00	0.45	0.86	0.38	0.39	0.69	0.22	0.22
Avail Cap(c_a), veh/h	207	0	550	140	0	475	266	600	592	193	501	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	0.86	0.86	0.86
Uniform Delay (d), s/veh	41.1	0.0	31.7	41.0	0.0	27.5	33.1	10.4	10.4	41.0	24.6	24.6
Incr Delay (d2), s/veh	9.0	0.0	17.2	6.8	0.0	0.7	19.6	1.8	1.8	6.0	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	12.9	2.0	0.0	4.4	5.6	2.7	2.7	2.3	2.2	2.3
LnGrp Delay(d),s/veh	50.1	0.0	48.8	47.8	0.0	28.2	52.6	12.1	12.2	47.0	25.5	25.5
LnGrp LOS	D		D	D		C	D	B	B	D	C	C
Approach Vol, veh/h		537			285			652			306	
Approach Delay, s/veh		49.0			33.3			23.9			31.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	40.0	10.4	28.9	15.7	35.0	10.8	28.5
Change Period (Y+Rc), s	4.5	9.5	4.5	4.5	4.5	9.5	4.5	4.5
Max Green Setting (Gmax), s	9.8	22.6	7.1	27.5	13.5	18.9	10.5	24.1
Max Q Clear Time (g_c+I1), s	6.2	7.2	5.7	23.3	11.2	6.3	6.7	10.9
Green Ext Time (p_c), s	0.0	2.3	0.0	1.1	0.1	0.9	0.1	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Notes



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	440	75	380	190	80	545
Future Volume (veh/h)	440	75	380	190	80	545
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	463	-5	400	42	84	574
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	547	488	502	53	176	930
Arrive On Green	0.31	0.00	0.30	0.30	0.10	0.50
Sat Flow, veh/h	1774	1583	1652	173	1774	1863
Grp Volume(v), veh/h	463	-5	0	442	84	574
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1825	1774	1863
Q Serve(g_s), s	11.4	0.0	0.0	10.4	2.1	10.4
Cycle Q Clear(g_c), s	11.4	0.0	0.0	10.4	2.1	10.4
Prop In Lane	1.00	1.00		0.10	1.00	
Lane Grp Cap(c), veh/h	547	488	0	555	176	930
V/C Ratio(X)	0.85	-0.01	0.00	0.80	0.48	0.62
Avail Cap(c_a), veh/h	815	727	0	702	265	1174
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	0.0	0.0	15.0	19.9	8.5
Incr Delay (d2), s/veh	5.4	0.0	0.0	5.1	2.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	0.0	5.9	1.1	5.4
LnGrp Delay(d),s/veh	20.6	0.0	0.0	20.0	21.9	9.2
LnGrp LOS	C			C	C	A
Approach Vol, veh/h	458		442			658
Approach Delay, s/veh	20.8		20.0			10.8
Approach LOS	C		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.2	18.7				27.9		18.9
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	7.0	18.0				29.5		21.5
Max Q Clear Time (g_c+I1), s	4.1	12.4				12.4		13.4
Green Ext Time (p_c), s	0.0	1.3				3.4		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.4
HCM 2010 LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	130	110	395	735	105	245
Future Volume (veh/h)	130	110	395	735	105	245
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	137	0	416	774	111	16
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	173	155	448	2643	1379	195
Arrive On Green	0.10	0.00	0.25	0.75	0.44	0.44
Sat Flow, veh/h	1774	1583	1774	3632	3198	438
Grp Volume(v), veh/h	137	0	416	774	62	65
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1774
Q Serve(g_s), s	6.8	0.0	20.6	6.4	1.8	1.9
Cycle Q Clear(g_c), s	6.8	0.0	20.6	6.4	1.8	1.9
Prop In Lane	1.00	1.00	1.00			0.25
Lane Grp Cap(c), veh/h	173	155	448	2643	786	788
V/C Ratio(X)	0.79	0.00	0.93	0.29	0.08	0.08
Avail Cap(c_a), veh/h	463	413	463	2643	786	788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.00	0.89	0.89	1.00	1.00
Uniform Delay (d), s/veh	39.7	0.0	32.8	3.7	14.4	14.4
Incr Delay (d2), s/veh	7.6	0.0	22.7	0.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	12.9	3.1	0.9	1.0
LnGrp Delay(d),s/veh	47.3	0.0	55.5	3.9	14.6	14.6
LnGrp LOS	D		E	A	B	B
Approach Vol, veh/h	137			1190	127	
Approach Delay, s/veh	47.3			22.0	14.6	
Approach LOS	D			C	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		76.7		13.3	27.2	49.5		
Change Period (Y+Rc), s		9.5		4.5	4.5	9.5		
Max Green Setting (Gmax), s		52.5		23.5	23.5	24.5		
Max Q Clear Time (g_c+I1), s		8.4		8.8	22.6	3.9		
Green Ext Time (p_c), s		6.2		0.3	0.1	0.6		

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
78: Via Las Cumbres & Hotel Circle North

11/27/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	100	355	365	490	375	0	0	685	175
Future Volume (veh/h)	0	0	0	100	355	365	490	375	0	0	685	175
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				105	374	26	516	395	0	0	721	37
Adj No. of Lanes				0	2	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				131	497	267	540	2040	0	0	868	353
Arrive On Green				0.17	0.17	0.17	0.30	0.58	0.00	0.00	0.23	0.23
Sat Flow, veh/h				751	2843	1529	1774	3632	0	0	3725	1515
Grp Volume(v), veh/h				255	224	26	516	395	0	0	721	37
Grp Sat Flow(s),veh/h/ln				1825	1770	1529	1774	1770	0	0	1863	1515
Q Serve(g_s), s				15.4	13.7	1.6	32.8	6.1	0.0	0.0	21.2	2.2
Cycle Q Clear(g_c), s				15.4	13.7	1.6	32.8	6.1	0.0	0.0	21.2	2.2
Prop In Lane				0.41		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				319	309	267	540	2040	0	0	868	353
V/C Ratio(X)				0.80	0.72	0.10	0.96	0.19	0.00	0.00	0.83	0.10
Avail Cap(c_a), veh/h				429	415	359	551	2277	0	0	1095	445
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.33	0.33	0.00	0.00	0.83	0.83
Uniform Delay (d), s/veh				45.5	44.8	39.8	39.2	11.6	0.0	0.0	42.0	34.7
Incr Delay (d2), s/veh				7.6	4.1	0.2	13.0	0.0	0.0	0.0	7.7	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.5	7.1	0.7	18.0	3.0	0.0	0.0	11.8	1.0
LnGrp Delay(d),s/veh				53.1	48.9	40.0	52.3	11.6	0.0	0.0	49.7	35.2
LnGrp LOS				D	D	D	D	B			D	D
Approach Vol, veh/h					505			911			758	
Approach Delay, s/veh					50.5			34.6			49.0	
Approach LOS					D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		70.8			39.5	31.3		29.6
Change Period (Y+Rc), s		4.5			4.5	4.5		9.5
Max Green Setting (Gmax), s		74.0			35.7	33.8		27.0
Max Q Clear Time (g_c+I1), s		8.1			34.8	23.2		17.4
Green Ext Time (p_c), s		2.8			0.2	3.6		2.0

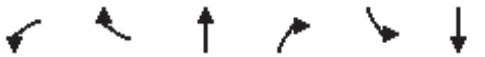
Intersection Summary	
HCM 2010 Ctrl Delay	43.3
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	375	660	30	0	0	0	0	120	60	1410	95	0
Future Volume (veh/h)	375	660	30	0	0	0	0	120	60	1410	95	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	395	695	21				0	126	52	1484	100	0
Adj No. of Lanes	1	2	0				0	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	420	829	25				0	197	81	1549	838	0
Arrive On Green	0.24	0.24	0.24				0.00	0.16	0.16	0.45	0.45	0.00
Sat Flow, veh/h	1774	3502	106				0	1238	511	3442	1863	0
Grp Volume(v), veh/h	395	351	365				0	0	178	1484	100	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1839				0	0	1749	1721	1863	0
Q Serve(g_s), s	26.2	22.7	22.7				0.0	0.0	11.4	50.0	3.7	0.0
Cycle Q Clear(g_c), s	26.2	22.7	22.7				0.0	0.0	11.4	50.0	3.7	0.0
Prop In Lane	1.00		0.06				0.00		0.29	1.00		0.00
Lane Grp Cap(c), veh/h	420	419	435				0	0	278	1549	838	0
V/C Ratio(X)	0.94	0.84	0.84				0.00	0.00	0.64	0.96	0.12	0.00
Avail Cap(c_a), veh/h	421	420	437				0	0	278	1577	854	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.00	1.00	0.68	0.68	0.00
Uniform Delay (d), s/veh	45.0	43.6	43.6				0.0	0.0	47.2	31.9	19.2	0.0
Incr Delay (d2), s/veh	29.3	13.9	13.5				0.0	0.0	4.9	11.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.3	12.7	13.2				0.0	0.0	5.9	26.1	2.0	0.0
LnGrp Delay(d),s/veh	74.3	57.5	57.1				0.0	0.0	52.1	43.1	19.4	0.0
LnGrp LOS	E	E	E						D	D	B	
Approach Vol, veh/h		1111						178			1584	
Approach Delay, s/veh		63.3						52.1			41.6	
Approach LOS		E						D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		23.6		37.9		58.5		
Change Period (Y+Rc), s		4.5		9.5		4.5		
Max Green Setting (Gmax), s		18.0		28.5		55.0		
Max Q Clear Time (g_c+I1), s		13.4		28.2		52.0		
Green Ext Time (p_c), s		0.4		0.2		2.0		

Intersection Summary	
HCM 2010 Ctrl Delay	50.7
HCM 2010 LOS	D



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	170	450	465	0	0
Future Volume (veh/h)	0	170	450	465	0	0
Number	7	14	2	12		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900		
Adj Flow Rate, veh/h	0	21	474	57		
Adj No. of Lanes	1	1	2	0		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	0	0	1403	168		
Arrive On Green	0.00	0.00	0.44	0.44		
Sat Flow, veh/h	0		3268	380		
Grp Volume(v), veh/h	0.0		263	268		
Grp Sat Flow(s),veh/h/ln			1770	1785		
Q Serve(g_s), s			1.7	1.7		
Cycle Q Clear(g_c), s			1.7	1.7		
Prop In Lane				0.21		
Lane Grp Cap(c), veh/h			782	789		
V/C Ratio(X)			0.34	0.34		
Avail Cap(c_a), veh/h			1872	1888		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			3.1	3.1		
Incr Delay (d2), s/veh			0.3	0.3		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			0.8	0.9		
LnGrp Delay(d),s/veh			3.4	3.4		
LnGrp LOS			A	A		
Approach Vol, veh/h			531			
Approach Delay, s/veh			3.4			
Approach LOS			A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		17.0						
Change Period (Y+Rc), s		9.5						
Max Green Setting (Gmax), s		18.0						
Max Q Clear Time (g_c+I1), s		3.7						
Green Ext Time (p_c), s		2.6						

Intersection Summary	
HCM 2010 Ctrl Delay	3.4
HCM 2010 LOS	A

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1145	95	90	600	255	85	330	135	100	350	115
Future Volume (veh/h)	190	1145	95	90	600	255	85	330	135	100	350	115
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	198	1193	57	94	625	204	89	344	79	104	365	68
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	229	1274	61	119	1093	473	112	467	387	129	396	74
Arrive On Green	0.13	0.37	0.37	0.07	0.31	0.31	0.06	0.25	0.25	0.07	0.26	0.26
Sat Flow, veh/h	1774	3434	164	1774	3539	1532	1774	1863	1545	1774	1521	283
Grp Volume(v), veh/h	198	614	636	94	625	204	89	344	79	104	0	433
Grp Sat Flow(s),veh/h/ln	1774	1770	1828	1774	1770	1532	1774	1863	1545	1774	0	1805
Q Serve(g_s), s	12.8	39.2	39.3	6.1	17.4	12.5	5.8	19.9	4.7	6.8	0.0	27.4
Cycle Q Clear(g_c), s	12.8	39.2	39.3	6.1	17.4	12.5	5.8	19.9	4.7	6.8	0.0	27.4
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	229	657	678	119	1093	473	112	467	387	129	0	469
V/C Ratio(X)	0.86	0.94	0.94	0.79	0.57	0.43	0.79	0.74	0.20	0.80	0.00	0.92
Avail Cap(c_a), veh/h	360	683	706	246	1134	491	186	592	491	201	0	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.1	35.6	35.6	53.9	34.0	32.3	54.2	40.4	34.7	53.6	0.0	42.3
Incr Delay (d2), s/veh	12.3	19.6	19.4	11.2	0.5	0.4	11.7	3.6	0.3	12.2	0.0	15.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	22.7	23.4	3.4	8.6	5.3	3.2	10.7	2.0	3.8	0.0	15.7
LnGrp Delay(d),s/veh	62.4	55.2	55.0	65.1	34.6	32.8	65.9	44.0	35.0	65.7	0.0	57.8
LnGrp LOS	E	E	E	E	C	C	E	D	C	E		E
Approach Vol, veh/h		1448			923			512			537	
Approach Delay, s/veh		56.1			37.3			46.4			59.3	
Approach LOS		E			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	54.4	13.1	36.2	20.8	47.1	14.3	35.1
Change Period (Y+Rc), s	5.7	* 11	5.7	* 5.7	5.7	* 11	5.7	5.7
Max Green Setting (Gmax), s	16.3	* 45	12.3	* 39	23.8	* 38	13.3	37.3
Max Q Clear Time (g_c+I1), s	8.1	41.3	7.8	29.4	14.8	19.4	8.8	21.9
Green Ext Time (p_c), s	0.1	2.2	0.1	0.5	0.3	3.3	0.1	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	50.1
HCM 2010 LOS	D

Notes

HCM 2010 Signalized Intersection Summary
11: Fashion Valley Road & Friar Roads

11/27/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1545	270	220	875	30	185	20	195	10	10	10
Future Volume (veh/h)	20	1545	270	220	875	30	185	20	195	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	21	1626	231	232	921	32	195	21	131	11	11	6
Adj No. of Lanes	1	3	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	1647	233	240	1848	64	258	23	450	44	40	14
Arrive On Green	0.02	0.37	0.37	0.14	0.53	0.53	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	4484	634	1774	3484	121	731	79	1551	37	136	47
Grp Volume(v), veh/h	21	1228	629	232	468	485	216	0	131	28	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1728	1774	1770	1835	810	0	1551	220	0	0
Q Serve(g_s), s	1.8	53.9	54.3	19.5	25.3	25.3	0.0	0.0	9.8	0.7	0.0	0.0
Cycle Q Clear(g_c), s	1.8	53.9	54.3	19.5	25.3	25.3	40.8	0.0	9.8	41.5	0.0	0.0
Prop In Lane	1.00		0.37	1.00		0.07	0.90		1.00	0.39		0.21
Lane Grp Cap(c), veh/h	28	1245	635	240	939	974	280	0	450	97	0	0
V/C Ratio(X)	0.76	0.99	0.99	0.97	0.50	0.50	0.77	0.00	0.29	0.29	0.00	0.00
Avail Cap(c_a), veh/h	71	1245	635	240	939	974	349	0	524	169	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	73.6	47.1	47.2	64.5	22.5	22.5	52.3	0.0	41.3	43.2	0.0	0.0
Incr Delay (d2), s/veh	14.7	22.4	33.7	48.1	1.9	1.8	6.6	0.0	0.2	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	29.1	31.8	12.8	12.8	13.3	9.3	0.0	4.2	0.9	0.0	0.0
LnGrp Delay(d),s/veh	88.2	69.4	80.9	112.6	24.4	24.3	58.9	0.0	41.5	44.1	0.0	0.0
LnGrp LOS	F	E	F	F	C	C	E		D	D		
Approach Vol, veh/h		1878			1185			347			28	
Approach Delay, s/veh		73.5			41.6			52.3			44.1	
Approach LOS		E			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	30.6	66.0		53.4	6.7	89.9		53.4
Change Period (Y+Rc), s	* 10	* 11		* 9.9	4.4	10.3		* 9.9
Max Green Setting (Gmax), s	* 19	* 55		* 51	6.0	68.7		* 51
Max Q Clear Time (g_c+I1), s	21.5	56.3		43.5	3.8	27.3		42.8
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	8.9		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	60.1
HCM 2010 LOS	E

Notes



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	195	95	0	90
Future Volume (veh/h)	0	0	195	95	0	90
Number			8	18	1	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.97	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1900	1863	1863
Adj Flow Rate, veh/h			205	100	0	95
Adj No. of Lanes			2	0	1	1
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			779	363	0	0
Arrive On Green			0.34	0.34	0.00	0.00
Sat Flow, veh/h			2414	1082	0	
Grp Volume(v), veh/h			154	151	0.0	
Grp Sat Flow(s),veh/h/ln			1770	1633		
Q Serve(g_s), s			0.9	1.0		
Cycle Q Clear(g_c), s			0.9	1.0		
Prop In Lane				0.66		
Lane Grp Cap(c), veh/h			594	548		
V/C Ratio(X)			0.26	0.28		
Avail Cap(c_a), veh/h			2041	1884		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			3.5	3.5		
Incr Delay (d2), s/veh			0.2	0.3		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			0.5	0.5		
LnGrp Delay(d),s/veh			3.7	3.7		
LnGrp LOS			A	A		
Approach Vol, veh/h			305			
Approach Delay, s/veh			3.7			
Approach LOS			A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs								8
Phs Duration (G+Y+Rc), s								14.3
Change Period (Y+Rc), s								9.5
Max Green Setting (Gmax), s								16.5
Max Q Clear Time (g_c+I1), s								3.0
Green Ext Time (p_c), s								1.5

Intersection Summary	
HCM 2010 Ctrl Delay	3.7
HCM 2010 LOS	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	530	420	1	630
Future Volume (veh/h)	0	0	530	420	1	630
Number			2	12	7	14
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.95	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	1863	1863
Adj Flow Rate, veh/h			558	337	1	558
Adj No. of Lanes			2	1	1	2
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1092	463	0	0
Arrive On Green			0.31	0.31	0.00	0.00
Sat Flow, veh/h			3632	1500	0	
Grp Volume(v), veh/h			558	337	0.0	
Grp Sat Flow(s),veh/h/ln			1770	1500		
Q Serve(g_s), s			11.6	18.0		
Cycle Q Clear(g_c), s			11.6	18.0		
Prop In Lane				1.00		
Lane Grp Cap(c), veh/h			1092	463		
V/C Ratio(X)			0.51	0.73		
Avail Cap(c_a), veh/h			1931	818		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			25.5	27.8		
Incr Delay (d2), s/veh			0.5	3.0		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			5.7	7.9		
LnGrp Delay(d),s/veh			26.1	30.8		
LnGrp LOS			C	C		
Approach Vol, veh/h			895			
Approach Delay, s/veh			27.8			
Approach LOS			C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		37.7						
Change Period (Y+Rc), s		* 9.9						
Max Green Setting (Gmax), s		* 49						
Max Q Clear Time (g_c+I1), s		20.0						
Green Ext Time (p_c), s		7.7						

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	180	0	0	95	185
Future Volume (veh/h)	0	180	0	0	95	185
Number	7	4			1	16
Initial Q (Qb), veh	0	0			0	0
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00
Parking Bus, Adj	1.00	1.00			1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863			1863	1863
Adj Flow Rate, veh/h	0	189			100	163
Adj No. of Lanes	0	1			1	1
Peak Hour Factor	0.95	0.95			0.95	0.95
Percent Heavy Veh, %	0	2			2	2
Cap, veh/h	0	580			0	0
Arrive On Green	0.00	0.31			0.00	0.00
Sat Flow, veh/h	0	1863			0	
Grp Volume(v), veh/h	0	189			0.0	
Grp Sat Flow(s),veh/h/ln	0	1863				
Q Serve(g_s), s	0.0	0.5				
Cycle Q Clear(g_c), s	0.0	0.5				
Prop In Lane	0.00					
Lane Grp Cap(c), veh/h	0	580				
V/C Ratio(X)	0.00	0.33				
Avail Cap(c_a), veh/h	0	6416				
HCM Platoon Ratio	1.00	1.00				
Upstream Filter(I)	0.00	1.00				
Uniform Delay (d), s/veh	0.0	1.7				
Incr Delay (d2), s/veh	0.0	0.3				
Initial Q Delay(d3),s/veh	0.0	0.0				
%ile BackOfQ(50%),veh/ln	0.0	0.3				
LnGrp Delay(d),s/veh	0.0	2.0				
LnGrp LOS		A				
Approach Vol, veh/h		189				
Approach Delay, s/veh		2.0				
Approach LOS		A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4				
Phs Duration (G+Y+Rc), s				6.5				
Change Period (Y+Rc), s				4.5				
Max Green Setting (Gmax), s				22.5				
Max Q Clear Time (g_c+I1), s				2.5				
Green Ext Time (p_c), s				0.9				

Intersection Summary	
HCM 2010 Ctrl Delay	2.0
HCM 2010 LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	310	980	0	0	0	900
Future Volume (veh/h)	310	980	0	0	0	900
Number	2	12			3	18
Initial Q (Qb), veh	0	0			0	0
Ped-Bike Adj(A_pbT)		0.99			1.00	1.00
Parking Bus, Adj	1.00	1.00			1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900			1863	1863
Adj Flow Rate, veh/h	326	937			0	852
Adj No. of Lanes	2	0			1	2
Peak Hour Factor	0.95	0.95			0.95	0.95
Percent Heavy Veh, %	2	2			2	2
Cap, veh/h	1197	1055			0	0
Arrive On Green	0.68	0.68			0.00	0.00
Sat Flow, veh/h	1863	1560			0	
Grp Volume(v), veh/h	326	937			0.0	
Grp Sat Flow(s),veh/h/ln	1770	1560				
Q Serve(g_s), s	2.3	15.0				
Cycle Q Clear(g_c), s	2.3	15.0				
Prop In Lane		1.00				
Lane Grp Cap(c), veh/h	1197	1055				
V/C Ratio(X)	0.27	0.89				
Avail Cap(c_a), veh/h	1259	1110				
HCM Platoon Ratio	1.00	1.00				
Upstream Filter(I)	1.00	1.00				
Uniform Delay (d), s/veh	2.0	4.0				
Incr Delay (d2), s/veh	0.2	8.9				
Initial Q Delay(d3),s/veh	0.0	0.0				
%ile BackOfQ(50%),veh/ln	1.1	8.6				
LnGrp Delay(d),s/veh	2.1	12.9				
LnGrp LOS	A	B				
Approach Vol, veh/h	1263					
Approach Delay, s/veh	10.2					
Approach LOS	B					

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		30.9						
Change Period (Y+Rc), s		10.0						
Max Green Setting (Gmax), s		22.0						
Max Q Clear Time (g_c+I1), s		17.0						
Green Ext Time (p_c), s		3.9						

Intersection Summary	
HCM 2010 Ctrl Delay	10.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	190	130	150	520	190	190	320	410	100	300	160
Future Volume (veh/h)	140	190	130	150	520	190	190	320	410	100	300	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	147	200	74	158	547	105	200	337	295	105	316	84
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	387	143	138	454	87	138	519	444	133	796	208
Arrive On Green	0.08	0.30	0.30	0.08	0.30	0.30	0.03	0.10	0.10	0.07	0.29	0.29
Sat Flow, veh/h	1774	1290	477	1774	1514	291	1774	1778	1522	1774	2756	719
Grp Volume(v), veh/h	147	0	274	158	0	652	200	335	297	105	201	199
Grp Sat Flow(s),veh/h/ln	1774	0	1767	1774	0	1804	1774	1770	1531	1774	1770	1706
Q Serve(g_s), s	7.0	0.0	11.6	7.0	0.0	27.0	7.0	16.4	16.8	5.2	8.2	8.5
Cycle Q Clear(g_c), s	7.0	0.0	11.6	7.0	0.0	27.0	7.0	16.4	16.8	5.2	8.2	8.5
Prop In Lane	1.00		0.27	1.00		0.16	1.00		0.99	1.00		0.42
Lane Grp Cap(c), veh/h	138	0	530	138	0	541	138	516	447	133	511	493
V/C Ratio(X)	1.07	0.00	0.52	1.15	0.00	1.20	1.45	0.65	0.66	0.79	0.39	0.40
Avail Cap(c_a), veh/h	138	0	530	138	0	541	138	516	447	171	511	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.92	0.92	0.92	0.27	0.27	0.27
Uniform Delay (d), s/veh	41.5	0.0	26.1	41.5	0.0	31.5	43.8	36.2	36.4	40.9	25.7	25.8
Incr Delay (d2), s/veh	95.1	0.0	0.9	120.9	0.0	108.6	235.4	5.7	7.0	5.1	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	5.8	8.0	0.0	29.7	12.5	8.9	8.0	2.8	4.1	4.1
LnGrp Delay(d),s/veh	136.7	0.0	27.0	162.4	0.0	140.1	279.3	42.0	43.4	46.1	26.3	26.4
LnGrp LOS	F		C	F		F	F	D	D	D	C	C
Approach Vol, veh/h		421			810			832			505	
Approach Delay, s/veh		65.3			144.4			99.5			30.5	
Approach LOS		E			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	35.8	11.5	31.5	11.5	35.5	11.5	31.5
Change Period (Y+Rc), s	4.5	9.5	4.5	4.5	4.5	9.5	4.5	4.5
Max Green Setting (Gmax), s	8.7	24.3	7.0	27.0	7.0	26.0	7.0	27.0
Max Q Clear Time (g_c+I1), s	7.2	18.8	9.0	13.6	9.0	10.5	9.0	29.0
Green Ext Time (p_c), s	0.0	1.9	0.0	1.4	0.0	2.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	94.5
HCM 2010 LOS	F

Notes



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	250	155	730	40	105	890
Future Volume (veh/h)	250	155	730	40	105	890
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	263	79	768	-116	111	937
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	359	320	780	0	208	1111
Arrive On Green	0.20	0.20	0.38	0.00	0.12	0.60
Sat Flow, veh/h	1774	1583	2265	-342	1774	1863
Grp Volume(v), veh/h	263	79	0	0	111	937
Grp Sat Flow(s),veh/h/ln	1774	1583	0	0	1774	1863
Q Serve(g_s), s	6.2	1.9	0.0	0.0	2.6	18.3
Cycle Q Clear(g_c), s	6.2	1.9	0.0	0.0	2.6	18.3
Prop In Lane	1.00	1.00		-0.18	1.00	
Lane Grp Cap(c), veh/h	359	320	0	0	208	1111
V/C Ratio(X)	0.73	0.25	0.00	0.00	0.53	0.84
Avail Cap(c_a), veh/h	996	889	0	0	290	1496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	15.0	0.0	0.0	18.6	7.3
Incr Delay (d2), s/veh	2.9	0.4	0.0	0.0	2.1	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.8	0.0	0.0	1.4	10.2
LnGrp Delay(d),s/veh	19.6	15.4	0.0	0.0	20.7	10.8
LnGrp LOS	B	B			C	B
Approach Vol, veh/h	342		0			1048
Approach Delay, s/veh	18.6		0.0			11.8
Approach LOS	B					B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.7	21.4				31.2		13.5
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	7.3	24.1				35.9		25.1
Max Q Clear Time (g_c+I1), s	4.6	0.0				20.3		8.2
Green Ext Time (p_c), s	0.1	0.0				6.4		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	130	110	400	905	320	245
Future Volume (veh/h)	130	110	400	905	320	245
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	137	84	421	953	337	195
Adj No. of Lanes	1	1	1	2	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	183	163	751	2624	455	257
Arrive On Green	0.10	0.10	0.42	0.74	0.21	0.21
Sat Flow, veh/h	1774	1583	1774	3632	2235	1207
Grp Volume(v), veh/h	137	84	421	953	277	255
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1580
Q Serve(g_s), s	6.8	4.5	16.2	8.6	13.1	13.7
Cycle Q Clear(g_c), s	6.8	4.5	16.2	8.6	13.1	13.7
Prop In Lane	1.00	1.00	1.00			0.76
Lane Grp Cap(c), veh/h	183	163	751	2624	376	336
V/C Ratio(X)	0.75	0.51	0.56	0.36	0.74	0.76
Avail Cap(c_a), veh/h	493	440	751	2624	472	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.73	0.73	1.00	1.00
Uniform Delay (d), s/veh	39.2	38.2	19.6	4.1	33.1	33.3
Incr Delay (d2), s/veh	5.5	2.3	0.7	0.3	12.1	14.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.1	8.0	4.2	7.7	7.3
LnGrp Delay(d),s/veh	44.7	40.5	20.3	4.4	45.2	48.2
LnGrp LOS	D	D	C	A	D	D
Approach Vol, veh/h	221			1374	532	
Approach Delay, s/veh	43.1			9.3	46.7	
Approach LOS	D			A	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		76.2		13.8	47.6	28.6		
Change Period (Y+Rc), s		9.5		4.5	9.5	* 9.5		
Max Green Setting (Gmax), s		51.0		25.0	22.5	* 24		
Max Q Clear Time (g_c+I1), s		10.6		8.8	18.2	15.7		
Green Ext Time (p_c), s		8.1		0.6	0.6	2.1		

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	260	945	675	100	360	0	0	685	305
Future Volume (veh/h)	0	0	0	260	945	675	100	360	0	0	685	305
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.98	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				274	995	511	105	379	0	0	721	174
Adj No. of Lanes				0	2	1	1	2	0	0	2	1
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				267	1037	565	138	1265	0	0	890	362
Arrive On Green				0.36	0.36	0.36	0.08	0.36	0.00	0.00	0.24	0.24
Sat Flow, veh/h				737	2858	1557	1774	3632	0	0	3725	1517
Grp Volume(v), veh/h				679	590	511	105	379	0	0	721	174
Grp Sat Flow(s),veh/h/ln				1826	1770	1557	1774	1770	0	0	1863	1517
Q Serve(g_s), s				39.9	35.1	34.2	6.4	8.5	0.0	0.0	20.1	10.8
Cycle Q Clear(g_c), s				39.9	35.1	34.2	6.4	8.5	0.0	0.0	20.1	10.8
Prop In Lane				0.40		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				662	642	565	138	1265	0	0	890	362
V/C Ratio(X)				1.02	0.92	0.90	0.76	0.30	0.00	0.00	0.81	0.48
Avail Cap(c_a), veh/h				662	642	565	290	1805	0	0	1138	463
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.64	0.64	0.00	0.00	0.86	0.86
Uniform Delay (d), s/veh				35.1	33.5	33.2	49.7	25.4	0.0	0.0	39.5	36.0
Incr Delay (d2), s/veh				41.4	18.6	18.1	5.5	0.1	0.0	0.0	6.8	3.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				27.7	20.4	17.5	3.3	4.2	0.0	0.0	11.2	4.9
LnGrp Delay(d),s/veh				76.4	52.1	51.3	55.3	25.5	0.0	0.0	46.3	39.9
LnGrp LOS				F	D	D	E	C			D	D
Approach Vol, veh/h					1780			484			895	
Approach Delay, s/veh					61.2			32.0			45.1	
Approach LOS					E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.8			13.0	30.8		49.4
Change Period (Y+Rc), s		4.5			4.5	4.5		9.5
Max Green Setting (Gmax), s		56.1			18.0	33.6		39.9
Max Q Clear Time (g_c+I1), s		10.5			8.4	22.1		41.9
Green Ext Time (p_c), s		2.7			0.1	4.2		0.0

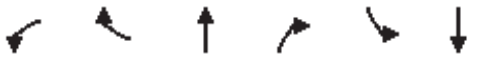
Intersection Summary	
HCM 2010 Ctrl Delay	52.1
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	340	40	0	0	0	0	20	40	1025	55	0
Future Volume (veh/h)	320	340	40	0	0	0	0	20	40	1025	55	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1900	1863	1863	0
Adj Flow Rate, veh/h	337	358	31				0	21	31	1079	58	0
Adj No. of Lanes	1	2	0				0	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	390	722	62				0	205	303	1146	620	0
Arrive On Green	0.22	0.22	0.22				0.00	0.30	0.30	0.33	0.33	0.00
Sat Flow, veh/h	1774	3284	282				0	672	992	3442	1863	0
Grp Volume(v), veh/h	337	192	197				0	0	52	1079	58	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1797				0	0	1664	1721	1863	0
Q Serve(g_s), s	23.8	12.3	12.5				0.0	0.0	2.9	39.6	2.8	0.0
Cycle Q Clear(g_c), s	23.8	12.3	12.5				0.0	0.0	2.9	39.6	2.8	0.0
Prop In Lane	1.00		0.16				0.00		0.60	1.00		0.00
Lane Grp Cap(c), veh/h	390	389	395				0	0	508	1146	620	0
V/C Ratio(X)	0.86	0.49	0.50				0.00	0.00	0.10	0.94	0.09	0.00
Avail Cap(c_a), veh/h	539	538	546				0	0	508	1191	645	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09				0.00	0.00	1.00	0.58	0.58	0.00
Uniform Delay (d), s/veh	48.8	44.4	44.4				0.0	0.0	32.4	42.1	29.9	0.0
Incr Delay (d2), s/veh	1.1	0.1	0.1				0.0	0.0	0.1	10.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	6.0	6.2				0.0	0.0	1.4	20.4	1.5	0.0
LnGrp Delay(d),s/veh	49.9	44.5	44.5				0.0	0.0	32.5	52.6	30.0	0.0
LnGrp LOS	D	D	D						C	D	C	
Approach Vol, veh/h		726						52			1137	
Approach Delay, s/veh		47.0						32.5			51.5	
Approach LOS		D						C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		44.1		38.1		47.8		
Change Period (Y+Rc), s		4.5		9.5		4.5		
Max Green Setting (Gmax), s		27.0		39.5		45.0		
Max Q Clear Time (g_c+I1), s		4.9		25.8		41.6		
Green Ext Time (p_c), s		0.2		2.8		1.7		

Intersection Summary	
HCM 2010 Ctrl Delay	49.3
HCM 2010 LOS	D



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	375	670	565	0	0
Future Volume (veh/h)	0	375	670	565	0	0
Number	3	18	2	12		
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98		
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900		
Adj Flow Rate, veh/h	0	237	705	163		
Adj No. of Lanes	1	1	2	0		
Peak Hour Factor	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	0	0	1492	345		
Arrive On Green	0.00	0.00	0.52	0.52		
Sat Flow, veh/h	0		2937	657		
Grp Volume(v), veh/h	0.0		439	429		
Grp Sat Flow(s),veh/h/ln			1770	1732		
Q Serve(g_s), s			3.1	3.1		
Cycle Q Clear(g_c), s			3.1	3.1		
Prop In Lane				0.38		
Lane Grp Cap(c), veh/h			928	909		
V/C Ratio(X)			0.47	0.47		
Avail Cap(c_a), veh/h			2028	1984		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			3.0	3.0		
Incr Delay (d2), s/veh			0.4	0.4		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			1.6	1.5		
LnGrp Delay(d),s/veh			3.4	3.4		
LnGrp LOS			A	A		
Approach Vol, veh/h			868			
Approach Delay, s/veh			3.4			
Approach LOS			A			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		20.0						
Change Period (Y+Rc), s		9.5						
Max Green Setting (Gmax), s		22.9						
Max Q Clear Time (g_c+I1), s		5.1						
Green Ext Time (p_c), s		5.2						

Intersection Summary	
HCM 2010 Ctrl Delay	3.4
HCM 2010 LOS	A

Midday Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1205	175	195	650	35	195	20	155	10	5	5
Future Volume (veh/h)	10	1205	175	195	650	35	195	20	155	10	5	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.98		0.97	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	10	1230	153	199	663	36	199	20	158	10	5	0
Adj No. of Lanes	1	3	0	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	1851	230	216	1763	96	330	26	340	112	45	0
Arrive On Green	0.01	0.41	0.41	0.12	0.52	0.52	0.22	0.22	0.22	0.22	0.22	0.00
Sat Flow, veh/h	1774	4566	568	1774	3406	185	1186	119	1540	236	202	0
Grp Volume(v), veh/h	10	913	470	199	344	355	219	0	158	15	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1743	1774	1770	1821	1306	0	1540	439	0	0
Q Serve(g_s), s	0.6	21.9	21.9	11.1	11.6	11.7	0.0	0.0	8.9	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.6	21.9	21.9	11.1	11.6	11.7	16.3	0.0	8.9	16.4	0.0	0.0
Prop In Lane	1.00		0.33	1.00		0.10	0.91		1.00	0.67		0.00
Lane Grp Cap(c), veh/h	17	1374	707	216	916	943	357	0	340	157	0	0
V/C Ratio(X)	0.58	0.66	0.66	0.92	0.38	0.38	0.61	0.00	0.47	0.10	0.00	0.00
Avail Cap(c_a), veh/h	71	1374	707	216	916	943	540	0	539	331	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	49.3	24.2	24.2	43.4	14.4	14.4	36.7	0.0	33.8	31.8	0.0	0.0
Incr Delay (d2), s/veh	11.0	2.6	4.9	39.0	1.2	1.1	0.9	0.0	0.5	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	10.8	11.5	7.8	5.9	6.1	5.8	0.0	3.8	0.3	0.0	0.0
LnGrp Delay(d),s/veh	60.3	26.7	29.1	82.4	15.6	15.6	37.6	0.0	34.4	31.9	0.0	0.0
LnGrp LOS	E	C	C	F	B	B	D		C	C		
Approach Vol, veh/h		1393			898			377			15	
Approach Delay, s/veh		27.8			30.4			36.3			31.9	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.6	51.4		32.0	5.4	62.7		32.0
Change Period (Y+Rc), s	4.4	* 11		* 9.9	4.4	* 11		* 9.9
Max Green Setting (Gmax), s	12.2	* 28		* 35	4.0	* 36		* 35
Max Q Clear Time (g_c+I1), s	13.1	23.9		18.4	2.6	13.7		18.3
Green Ext Time (p_c), s	0.0	2.5		0.0	0.0	5.1		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	29.9
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	390	430	0	670
Future Volume (veh/h)	0	0	390	430	0	670
Number			2	12	7	14
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)				0.95	1.00	1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	1863	1863
Adj Flow Rate, veh/h			411	337	0	610
Adj No. of Lanes			2	1	1	2
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			1064	450	0	0
Arrive On Green			0.30	0.30	0.00	0.00
Sat Flow, veh/h			3632	1498	0	
Grp Volume(v), veh/h			411	337	0.0	
Grp Sat Flow(s),veh/h/ln			1770	1498		
Q Serve(g_s), s			6.0	13.2		
Cycle Q Clear(g_c), s			6.0	13.2		
Prop In Lane				1.00		
Lane Grp Cap(c), veh/h			1064	450		
V/C Ratio(X)			0.39	0.75		
Avail Cap(c_a), veh/h			1530	648		
HCM Platoon Ratio			1.00	1.00		
Upstream Filter(I)			1.00	1.00		
Uniform Delay (d), s/veh			18.0	20.5		
Incr Delay (d2), s/veh			0.3	3.7		
Initial Q Delay(d3),s/veh			0.0	0.0		
%ile BackOfQ(50%),veh/ln			3.0	5.9		
LnGrp Delay(d),s/veh			18.3	24.3		
LnGrp LOS			B	C		
Approach Vol, veh/h			748			
Approach Delay, s/veh			21.0			
Approach LOS			C			

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						
Phs Duration (G+Y+Rc), s		29.4						
Change Period (Y+Rc), s		* 9.9						
Max Green Setting (Gmax), s		* 28						
Max Q Clear Time (g_c+I1), s		15.2						
Green Ext Time (p_c), s		4.3						

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C

Notes

Appendix M
HCS Analysis Worksheets
Two Lane Via Las Cumbres Alternative

AM Peak Hour

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Sunset Cliffs to Sports Arena*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*2641*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*58959*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*2641*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1397*	pc/h/ln
S	*69.5*	mph
D = v_p / S	*20.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Sports Arena Boulevard to I-5*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4201*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*95472*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*4201*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.28*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1481*	pc/h/ln
S	*69.1*	mph
D = v_p / S	*21.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-5 Interchange to Morena Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6113*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*134062*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6113*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2177*	pc/h/ln
S	*58.9*	mph
D = v_p / S	*36.9*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Morena Boulevard to Taylor St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7920*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*173695*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7920*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2115*	pc/h/ln
S	*60.3*	mph
D = v_p / S	*35.1*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Taylor Street to Hotel Circle*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7083*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*155334*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7083*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.76*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1892*	pc/h/ln
S	*64.4*	mph
D = v_p / S	*29.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7640*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*167544*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7640*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1633*	pc/h/ln
S	*64.2*	mph
D = v_p / S	*25.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*SR-163 to Mission Center Rd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6593*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*144575*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6593*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.88*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.8*	mph
FFS	*67.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1761*	pc/h/ln
S	*66.3*	mph
D = v_p / S	*26.5*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Mission Cntr Rd to Q Way/TX St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8501*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*186434*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8501*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.20*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.6*	mph
FFS	*66.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2271*	pc/h/ln
S	*54.2*	mph
D = v_p / S	*41.9*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Qualcomm Way/TX St to I-805*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6005*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*131680*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6005*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.94*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.0*	mph
FFS	*67.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1604*	pc/h/ln
S	*64.4*	mph
D = v_p / S	*24.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8991*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*197179*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8991*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1921*	pc/h/ln
S	*64.0*	mph
D = v_p / S	*30.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-15 to Fairmount Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7410*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*156989*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*7410*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.26*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1989*	pc/h/ln
S	*62.8*	mph
D = v_p / S	*31.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9353*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*216509*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*9353*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1999*	pc/h/ln
S	*62.6*	mph
D = v_p / S	*31.9*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*I-8 to Old Town Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10560*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*244441*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*10560*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2835*	pc/h/ln
S	*39.0*	mph
D = v_p / S	*72.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*Genesee Avenue to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10963*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*213700*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.09*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10963*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2354*	pc/h/ln
S	*54.6*	mph
D = v_p / S	*43.2*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7071*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*173308*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7071*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.71*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2531*	pc/h/ln
S	*49.4*	mph
D = v_p / S	*51.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*I-8 Interchange to 6th Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7579*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*185750*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7579*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.81*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2699*	pc/h/ln
S	*43.9*	mph
D = v_p / S	*61.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6290*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*154156*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6290*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.72*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.5*	mph
FFS	*67.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2240*	pc/h/ln
S	*57.5*	mph
D = v_p / S	*39.0*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Mesa Col Dr to Murray Ridge Rd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*13646*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*243675*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*13646*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2973*	pc/h/ln
S	*33.5*	mph
D = v_p / S	*88.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10411*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*231362*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*10411*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.07*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.9*	mph
FFS	*69.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2269*	pc/h/ln
S	*56.7*	mph
D = v_p / S	*40.0*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10251*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*227810*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*10251*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.10*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.0*	mph
FFS	*69.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2792*	pc/h/ln
S	*40.6*	mph
D = v_p / S	*68.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Adams Avenue to El Cajon Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8958*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*199071*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*8958*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.29*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.5*	mph
FFS	*68.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2440*	pc/h/ln
S	*52.2*	mph
D = v_p / S	*46.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11645*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*242605*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*11645*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.79*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3141*	pc/h/ln
S	*26.3*	mph
D = v_p / S	*119.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9876*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*242055*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9876*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2100*	pc/h/ln
S	*60.6*	mph
D = v_p / S	*34.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8762*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*214756*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8762*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2329*	pc/h/ln
S	*55.2*	mph
D = v_p / S	*42.2*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8362*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*204959*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8362*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2223*	pc/h/ln
S	*57.9*	mph
D = v_p / S	*38.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Sunset Cliffs to Sports Arena*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*2891*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*73742*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*2891*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.49*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.5*	mph
FFS	*70.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1529*	pc/h/ln
S	*68.7*	mph
D = v_p / S	*22.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Sports Arena Boulevard to I-5*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4449*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*115562*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*4449*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.96*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.7*	mph
FFS	*69.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1569*	pc/h/ln
S	*68.4*	mph
D = v_p / S	*22.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-5 Interchange to Morena Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7082*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*177493*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7082*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*1.64*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.9*	mph
FFS	*70.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1892*	pc/h/ln
S	*64.4*	mph
D = v_p / S	*29.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Morena Boulevard to Taylor St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9176*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*229965*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9176*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.51*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1961*	pc/h/ln
S	*63.3*	mph
D = v_p / S	*31.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Taylor Street to Hotel Circle*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8206*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*205656*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8206*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.76*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2192*	pc/h/ln
S	*58.6*	mph
D = v_p / S	*37.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8851*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*221821*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8851*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.93*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.9*	mph
FFS	*67.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1891*	pc/h/ln
S	*61.6*	mph
D = v_p / S	*30.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*SR-163 to Mission Center Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7637*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*191411*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7637*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.03*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2040*	pc/h/ln
S	*59.2*	mph
D = v_p / S	*34.5*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Mission Cntr Rd to Q Way/TX St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9849*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*246831*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9849*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.06*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2631*	pc/h/ln
S	*43.5*	mph
D = v_p / S	*60.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Qualcomm Way/TX St to I-805*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6956*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*174339*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6956*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1858*	pc/h/ln
S	*62.0*	mph
D = v_p / S	*30.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10416*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*261057*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10416*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2226*	pc/h/ln
S	*57.8*	mph
D = v_p / S	*38.5*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-15 to Fairmount Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9423*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228165*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*9423*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.41*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.7*	mph
FFS	*68.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2023*	pc/h/ln
S	*62.1*	mph
D = v_p / S	*32.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6972*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*184434*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*6972*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.37*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.6*	mph
FFS	*68.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1490*	pc/h/ln
S	*69.0*	mph
D = v_p / S	*21.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*I-8 to Old Town Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7871*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*208228*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*7871*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1690*	pc/h/ln
S	*67.2*	mph
D = v_p / S	*25.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Genesee Avenue to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7342*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*161015*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7342*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1971*	pc/h/ln
S	*63.1*	mph
D = v_p / S	*31.2*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7330*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*179661*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7330*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.56*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.1*	mph
FFS	*68.3*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1574*	pc/h/ln
S	*68.4*	mph
D = v_p / S	*23.0*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*I-8 Interchange to 6th Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7856*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*192560*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7856*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.48*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.9*	mph
FFS	*68.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2098*	pc/h/ln
S	*60.6*	mph
D = v_p / S	*34.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6520*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*159807*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6520*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*2.36*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.6*	mph
FFS	*68.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3483*	pc/h/ln
S	*9.5*	mph
D = v_p / S	*365.1*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*Mesa Col Dr to Murray Ridge Rd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5865*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*104731*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*5865*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1278*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4726*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*78775*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*4726*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.21*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.3*	mph
FFS	*69.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1030*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*14.7*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4654*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*77565*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*4654*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*6*	
Total Ramp Density, TRD	*2.25*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*845*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*12.1*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4067*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*67780*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*4067*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.44*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*886*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*12.7*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7609*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*158528*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*7609*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1642*	pc/h/ln
S	*67.7*	mph
D = v_p / S	*24.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10474*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*256719*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*10474*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.14*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.4*	mph
FFS	*67.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2227*	pc/h/ln
S	*55.3*	mph
D = v_p / S	*40.3*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9293*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*227766*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9293*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1976*	pc/h/ln
S	*63.0*	mph
D = v_p / S	*31.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8869*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*217376*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8869*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1886*	pc/h/ln
S	*64.5*	mph
D = v_p / S	*29.2*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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PM Peak Hour

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Sunset Cliffs to Sports Arena*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3304*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*73742*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*3304*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1748*	pc/h/ln
S	*66.5*	mph
D = v_p / S	*26.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Sports Arena Boulevard to I-5*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5085*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*115562*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*5085*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.28*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1793*	pc/h/ln
S	*65.9*	mph
D = v_p / S	*27.2*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-5 Interchange to Morena Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8094*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*177493*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8094*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2883*	pc/h/ln
S	*37.1*	mph
D = v_p / S	*77.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Morena Boulevard to Taylor St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10486*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*229965*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10486*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2801*	pc/h/ln
S	*40.3*	mph
D = v_p / S	*69.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Taylor Street to Hotel Circle*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9378*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*205656*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9378*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.67*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.3*	mph
FFS	*68.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2505*	pc/h/ln
S	*50.2*	mph
D = v_p / S	*49.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10115*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*221821*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10115*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2161*	pc/h/ln
S	*56.8*	mph
D = v_p / S	*38.1*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*SR-163 to Mission Center Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8728*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*191411*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8728*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.88*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.8*	mph
FFS	*67.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2331*	pc/h/ln
S	*55.2*	mph
D = v_p / S	*42.3*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Mission Cntr Rd to Q Way/TX St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11255*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*246831*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*11255*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.20*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.6*	mph
FFS	*66.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3006*	pc/h/ln
S	*28.4*	mph
D = v_p / S	*105.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Qualcomm Way/Texas St to I-805*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7950*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*174339*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7950*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.94*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.0*	mph
FFS	*67.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2123*	pc/h/ln
S	*57.6*	mph
D = v_p / S	*36.9*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11904*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*261057*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*11904*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2544*	pc/h/ln
S	*49.0*	mph
D = v_p / S	*51.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-15 to Fairmount Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10769*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228165*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*10769*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.26*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2891*	pc/h/ln
S	*36.8*	mph
D = v_p / S	*78.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7968*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*184434*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*7968*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1703*	pc/h/ln
S	*67.1*	mph
D = v_p / S	*25.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*I-8 to Old Town Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8995*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*208228*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*8995*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2414*	pc/h/ln
S	*52.9*	mph
D = v_p / S	*45.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*Genesee Avenue to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8260*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*161015*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.09*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8260*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1774*	pc/h/ln
S	*66.2*	mph
D = v_p / S	*26.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7330*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*179661*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7330*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.71*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2623*	pc/h/ln
S	*46.5*	mph
D = v_p / S	*56.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*I-8 Interchange to 6th Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7856*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*192560*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7856*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.60*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2798*	pc/h/ln
S	*40.4*	mph
D = v_p / S	*69.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6520*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*159807*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6520*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.40*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.7*	mph
FFS	*68.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2322*	pc/h/ln
S	*55.4*	mph
D = v_p / S	*41.9*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Mesa Col Dr/Murray Ridge Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5865*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*104731*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*5865*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1278*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3545*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*78775*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*3545*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.07*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.9*	mph
FFS	*69.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*772*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*11.0*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3490*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*77565*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*3490*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.10*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.0*	mph
FFS	*69.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*951*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*13.6*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3050*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*67780*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*3050*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.29*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.5*	mph
FFS	*68.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*831*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*11.9*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7609*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*158528*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*7609*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.79*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2052*	pc/h/ln
S	*61.6*	mph
D = v_p / S	*33.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10474*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*256719*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*10474*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2227*	pc/h/ln
S	*57.8*	mph
D = v_p / S	*38.6*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9293*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*227766*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9293*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2470*	pc/h/ln
S	*51.3*	mph
D = v_p / S	*48.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
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LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8869*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*217376*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8869*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2357*	pc/h/ln
S	*54.5*	mph
D = v_p / S	*43.3*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
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LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Sunset Cliffs to Sports Arena*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*2311*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*58959*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*2311*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.49*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.5*	mph
FFS	*70.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1222*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*17.5*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
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LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Sports Arena Boulevard to I-5*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3676*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*95472*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*3676*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.96*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.7*	mph
FFS	*69.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1296*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.5*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-5 Interchange to Morena Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5349*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*134062*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*5349*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*1.64*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.9*	mph
FFS	*70.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1429*	pc/h/ln
S	*69.4*	mph
D = v_p / S	*20.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Morena Boulevard to Taylor St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6930*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*173695*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6930*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.51*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1481*	pc/h/ln
S	*69.1*	mph
D = v_p / S	*21.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Taylor Street to Hotel Circle*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6198*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*155334*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6198*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.67*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.3*	mph
FFS	*68.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1656*	pc/h/ln
S	*67.6*	mph
D = v_p / S	*24.5*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6685*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*167544*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6685*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.93*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.9*	mph
FFS	*67.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1428*	pc/h/ln
S	*65.0*	mph
D = v_p / S	*22.0*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*SR-163 to Mission Center Road*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5769*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*144575*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*5769*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.03*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1541*	pc/h/ln
S	*64.7*	mph
D = v_p / S	*23.8*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Mission Cntr Rd to Q Way/TX St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7439*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*186434*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7439*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.06*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1987*	pc/h/ln
S	*60.1*	mph
D = v_p / S	*33.1*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Qualcomm Way/Texas St to I-805*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5254*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*131680*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*5254*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1403*	pc/h/ln
S	*65.0*	mph
D = v_p / S	*21.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
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LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7867*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*197179*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7867*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1681*	pc/h/ln
S	*67.3*	mph
D = v_p / S	*25.0*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-15 to Fairmount Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6484*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*156989*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*6484*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.41*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.7*	mph
FFS	*68.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1392*	pc/h/ln
S	*69.6*	mph
D = v_p / S	*20.0*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8184*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*216509*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*8184*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.37*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.6*	mph
FFS	*68.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1749*	pc/h/ln
S	*66.5*	mph
D = v_p / S	*26.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*I-8 to Old Town Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9240*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*244441*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*9240*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1984*	pc/h/ln
S	*62.9*	mph
D = v_p / S	*31.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Genesee Avenue to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9745*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*213700*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9745*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2616*	pc/h/ln
S	*46.7*	mph
D = v_p / S	*56.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7071*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*173308*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7071*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.56*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.1*	mph
FFS	*68.3*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1518*	pc/h/ln
S	*68.8*	mph
D = v_p / S	*22.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*I-8 Interchange to 6th Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7579*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*185750*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7579*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.29*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.5*	mph
FFS	*68.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2024*	pc/h/ln
S	*62.1*	mph
D = v_p / S	*32.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6290*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*154156*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6290*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*2.06*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.9*	mph
FFS	*69.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3360*	pc/h/ln
S	*15.9*	mph
D = v_p / S	*211.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Mesa Col Dr/Murray Ridge Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*13646*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*243675*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*13646*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2973*	pc/h/ln
S	*33.5*	mph
D = v_p / S	*88.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*13882*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*231362*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*13882*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.21*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.3*	mph
FFS	*69.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3025*	pc/h/ln
S	*31.4*	mph
D = v_p / S	*96.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*13669*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*227810*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*13669*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*6*	
Total Ramp Density, TRD	*2.25*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2482*	pc/h/ln
S	*50.9*	mph
D = v_p / S	*48.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11944*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*199071*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*11944*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.44*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2603*	pc/h/ln
S	*47.2*	mph
D = v_p / S	*55.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11645*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*242605*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*11645*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2513*	pc/h/ln
S	*50.0*	mph
D = v_p / S	*50.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9876*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*242055*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9876*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.14*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.4*	mph
FFS	*67.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2100*	pc/h/ln
S	*58.1*	mph
D = v_p / S	*36.2*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8762*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*214756*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8762*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1863*	pc/h/ln
S	*64.9*	mph
D = v_p / S	*28.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 6*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8362*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*204959*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8362*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1778*	pc/h/ln
S	*66.1*	mph
D = v_p / S	*26.9*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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Appendix N
Peak Hour Intersection Worksheets
Mitigated Two Lane Via Las Cumbres Alternative

PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1545	270	220	875	30	185	20	195	10	10	10
Future Volume (veh/h)	20	1545	270	220	875	30	185	20	195	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	21	1626	231	232	921	32	195	21	131	11	11	6
Adj No. of Lanes	1	3	1	1	2	0	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	1789	540	268	1848	64	258	23	450	44	40	14
Arrive On Green	0.02	0.35	0.35	0.15	0.53	0.53	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1774	5085	1535	1774	3484	121	731	79	1551	37	136	47
Grp Volume(v), veh/h	21	1626	231	232	468	485	216	0	131	28	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1535	1774	1770	1835	810	0	1551	220	0	0
Q Serve(g_s), s	1.8	45.7	17.2	19.2	25.3	25.3	0.0	0.0	9.8	0.7	0.0	0.0
Cycle Q Clear(g_c), s	1.8	45.7	17.2	19.2	25.3	25.3	40.8	0.0	9.8	41.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.07	0.90		1.00	0.39		0.21
Lane Grp Cap(c), veh/h	28	1789	540	268	939	974	280	0	450	97	0	0
V/C Ratio(X)	0.76	0.91	0.43	0.87	0.50	0.50	0.77	0.00	0.29	0.29	0.00	0.00
Avail Cap(c_a), veh/h	71	1868	564	268	939	974	349	0	524	169	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	73.6	46.3	37.1	62.2	22.5	22.5	52.3	0.0	41.3	43.2	0.0	0.0
Incr Delay (d2), s/veh	14.7	8.3	2.5	23.6	1.9	1.8	6.6	0.0	0.2	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	22.8	7.7	11.2	12.8	13.3	9.3	0.0	4.2	0.9	0.0	0.0
LnGrp Delay(d),s/veh	88.2	54.7	39.6	85.8	24.4	24.3	58.9	0.0	41.5	44.1	0.0	0.0
LnGrp LOS	F	D	D	F	C	C	E		D	D		
Approach Vol, veh/h		1878			1185			347			28	
Approach Delay, s/veh		53.2			36.4			52.3			44.1	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	32.9	63.7		53.4	6.7	89.9		53.4
Change Period (Y+Rc), s	* 10	* 11		* 9.9	4.4	10.3		* 9.9
Max Green Setting (Gmax), s	* 19	* 55		* 51	6.0	68.7		* 51
Max Q Clear Time (g_c+I1), s	21.2	47.7		43.5	3.8	27.3		42.8
Green Ext Time (p_c), s	0.0	5.1		0.0	0.0	8.9		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	47.2
HCM 2010 LOS	D

Notes

Appendix O
HCS Analysis Worksheets
No-Connection Alternative

AM Peak Hour

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Sunset Cliffs to Sports Arena*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*2640*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*58938*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*2640*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1396*	pc/h/ln
S	*69.6*	mph
D = v_p / S	*20.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Sports Arena Boulevard to I-5*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4190*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*95230*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*4190*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.28*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1478*	pc/h/ln
S	*69.1*	mph
D = v_p / S	*21.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-5 Interchange to Morena Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6153*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*134929*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6153*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2191*	pc/h/ln
S	*58.6*	mph
D = v_p / S	*37.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Morena Boulevard to Taylor St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7922*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*173725*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7922*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2116*	pc/h/ln
S	*60.3*	mph
D = v_p / S	*35.1*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Taylor Street to Hotel Circle*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7117*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*156074*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7117*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.76*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1901*	pc/h/ln
S	*64.3*	mph
D = v_p / S	*29.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7448*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*163330*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7448*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1592*	pc/h/ln
S	*64.5*	mph
D = v_p / S	*24.7*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*SR-163 to Mission Center Rd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6501*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*142573*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6501*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.88*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.8*	mph
FFS	*67.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1736*	pc/h/ln
S	*66.7*	mph
D = v_p / S	*26.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Mission Cntr Rd to Q Way/TX St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8471*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*185778*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8471*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.20*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.6*	mph
FFS	*66.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2263*	pc/h/ln
S	*54.4*	mph
D = v_p / S	*41.6*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Qualcomm Way/TX St to I-805*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6018*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*131976*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6018*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.94*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.0*	mph
FFS	*67.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1607*	pc/h/ln
S	*64.4*	mph
D = v_p / S	*25.0*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9021*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*197822*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9021*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1928*	pc/h/ln
S	*63.9*	mph
D = v_p / S	*30.2*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-15 to Fairmount Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7422*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*157239*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*7422*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.26*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1992*	pc/h/ln
S	*62.7*	mph
D = v_p / S	*31.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-5 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Seaworld Dr/Tecolote Rd to I-8*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9356*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*216579*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*9356*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1999*	pc/h/ln
S	*62.6*	mph
D = v_p / S	*31.9*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*I-8 to Old Town Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10610*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*245597*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*10610*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2848*	pc/h/ln
S	*38.5*	mph
D = v_p / S	*74.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Genesee Avenue to Friars Road*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8264*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*161093*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.09*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8264*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1775*	pc/h/ln
S	*66.2*	mph
D = v_p / S	*26.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Friars Road to I-8 Interchange*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7378*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*180823*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7378*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.71*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2641*	pc/h/ln
S	*45.9*	mph
D = v_p / S	*57.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*I-8 Interchange to 6th Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7924*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*194225*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7924*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.81*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2822*	pc/h/ln
S	*39.5*	mph
D = v_p / S	*71.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6586*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*161422*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6586*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.72*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.5*	mph
FFS	*67.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2346*	pc/h/ln
S	*54.8*	mph
D = v_p / S	*42.8*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Mesa Col Dr to Murray Ridge Rd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*13684*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*244364*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*13684*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2982*	pc/h/ln
S	*33.2*	mph
D = v_p / S	*89.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10440*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*232007*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*10440*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.07*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.9*	mph
FFS	*69.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2275*	pc/h/ln
S	*56.6*	mph
D = v_p / S	*40.2*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to Adams Ave*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10277*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228372*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*10277*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.10*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.0*	mph
FFS	*69.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2799*	pc/h/ln
S	*40.3*	mph
D = v_p / S	*69.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Adams Avenue to El Cajon Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8980*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*199548*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*8980*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.29*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.5*	mph
FFS	*68.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2446*	pc/h/ln
S	*52.0*	mph
D = v_p / S	*47.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11660*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*242927*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*11660*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.79*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3145*	pc/h/ln
S	*26.1*	mph
D = v_p / S	*120.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9983*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*244689*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9983*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2123*	pc/h/ln
S	*60.1*	mph
D = v_p / S	*35.3*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8787*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*215366*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8787*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2335*	pc/h/ln
S	*55.1*	mph
D = v_p / S	*42.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-15 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Adams Avenue to El Cajon Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8378*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*205345*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8378*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2227*	pc/h/ln
S	*57.8*	mph
D = v_p / S	*38.6*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Sunset Cliffs to Sports Arena*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*2890*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*73715*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*2890*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.49*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.5*	mph
FFS	*70.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1529*	pc/h/ln
S	*68.7*	mph
D = v_p / S	*22.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Sports Arena Boulevard to I-5*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4438*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*115270*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*4438*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.96*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.7*	mph
FFS	*69.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1565*	pc/h/ln
S	*68.5*	mph
D = v_p / S	*22.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-5 Interchange to Morena Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7128*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*178641*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7128*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*1.64*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.9*	mph
FFS	*70.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1904*	pc/h/ln
S	*64.3*	mph
D = v_p / S	*29.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Morena Boulevard to Taylor St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9177*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*230005*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9177*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.51*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1961*	pc/h/ln
S	*63.3*	mph
D = v_p / S	*31.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Taylor Street to Hotel Circle*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8245*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*206636*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8245*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.76*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2202*	pc/h/ln
S	*58.4*	mph
D = v_p / S	*37.7*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8628*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*216243*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8628*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.93*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.9*	mph
FFS	*67.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1844*	pc/h/ln
S	*62.2*	mph
D = v_p / S	*29.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*SR-163 to Mission Center Rd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7532*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*188761*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7532*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.03*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2012*	pc/h/ln
S	*59.7*	mph
D = v_p / S	*33.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Mission Cntr Rd to Q Way/TX St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9814*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*245962*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9814*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.06*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2621*	pc/h/ln
S	*43.9*	mph
D = v_p / S	*59.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 WB*
Agency or Company	*Chen Ryan Associates*	From/To	*Qualcomm Way/TX St to I-805*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6972*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*174731*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6972*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1862*	pc/h/ln
S	*62.0*	mph
D = v_p / S	*30.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10450*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*261908*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10450*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2233*	pc/h/ln
S	*57.6*	mph
D = v_p / S	*38.8*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-15 to Fairmount Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9438*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228529*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*9438*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.41*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.7*	mph
FFS	*68.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2027*	pc/h/ln
S	*62.1*	mph
D = v_p / S	*32.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6974*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*184493*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*6974*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.37*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.6*	mph
FFS	*68.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1490*	pc/h/ln
S	*69.0*	mph
D = v_p / S	*21.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*I-8 to Old Town Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7908*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*209212*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*7908*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1698*	pc/h/ln
S	*67.1*	mph
D = v_p / S	*25.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*Genesee Avenue to Friars Road*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9749*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*213804*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9749*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2617*	pc/h/ln
S	*46.7*	mph
D = v_p / S	*56.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*Friars Road to I-8 Interchange*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7117*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*174428*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7117*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.56*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.1*	mph
FFS	*68.3*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1528*	pc/h/ln
S	*68.8*	mph
D = v_p / S	*22.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to 6th Avenue*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7644*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*187357*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7644*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.48*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.9*	mph
FFS	*68.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2042*	pc/h/ln
S	*61.8*	mph
D = v_p / S	*33.1*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6353*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*155714*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6353*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*2.36*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.6*	mph
FFS	*68.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3394*	pc/h/ln
S	*14.2*	mph
D = v_p / S	*239.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*Mesa Col Dr to Murray Ridge Rd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5882*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*105027*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*5882*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1282*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4740*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*78994*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*4740*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.21*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.3*	mph
FFS	*69.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1033*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*14.8*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to Adams Ave*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4665*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*77757*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*4665*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*6*	
Total Ramp Density, TRD	*2.25*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*847*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*12.1*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*4077*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*67943*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*4077*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.44*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*888*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*12.7*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7619*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*158738*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*7619*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1644*	pc/h/ln
S	*67.7*	mph
D = v_p / S	*24.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-15 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*Friars Road to I-8 Interchange*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*AM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10588*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*259512*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*10588*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.14*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.4*	mph
FFS	*67.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2251*	pc/h/ln
S	*54.7*	mph
D = v_p / S	*41.1*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9319*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228413*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9319*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1982*	pc/h/ln
S	*62.9*	mph
D = v_p / S	*31.5*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8886*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*217785*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8886*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1889*	pc/h/ln
S	*64.5*	mph
D = v_p / S	*29.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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PM Peak Hour

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Sunset Cliffs to Sports Arena*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3302*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*73715*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*3302*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1747*	pc/h/ln
S	*66.5*	mph
D = v_p / S	*26.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Sports Arena Boulevard to I-5*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5072*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*115270*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*5072*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.28*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1789*	pc/h/ln
S	*66.0*	mph
D = v_p / S	*27.1*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-5 Interchange to Morena Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8146*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*178641*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8146*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.75*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.2*	mph
FFS	*70.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2901*	pc/h/ln
S	*36.4*	mph
D = v_p / S	*79.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Morena Boulevard to Taylor St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10488*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*230005*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10488*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2801*	pc/h/ln
S	*40.3*	mph
D = v_p / S	*69.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Taylor Street to Hotel Circle*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9423*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*206636*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9423*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.67*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.3*	mph
FFS	*68.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2517*	pc/h/ln
S	*49.9*	mph
D = v_p / S	*50.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9861*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*216243*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*9861*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2107*	pc/h/ln
S	*57.9*	mph
D = v_p / S	*36.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*SR-163 to Mission Center Road*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8608*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*188761*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*8608*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.88*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.8*	mph
FFS	*67.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2299*	pc/h/ln
S	*56.0*	mph
D = v_p / S	*41.1*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Mission Cntr Rd to Q Way/TX St*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11216*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*245962*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*11216*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.20*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.6*	mph
FFS	*66.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2996*	pc/h/ln
S	*28.9*	mph
D = v_p / S	*103.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-8 EB*
Agency or Company	*Chen Ryan Associates*	From/To	*Qualcomm Way/Texas St to I-805*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7968*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*174731*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7968*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.94*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.0*	mph
FFS	*67.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2128*	pc/h/ln
S	*57.5*	mph
D = v_p / S	*37.0*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11943*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*261908*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*11943*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2552*	pc/h/ln
S	*48.8*	mph
D = v_p / S	*52.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 EB*
From/To	*I-15 to Fairmount Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10787*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228529*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*10787*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.26*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2895*	pc/h/ln
S	*36.7*	mph
D = v_p / S	*78.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7970*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*184493*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*7970*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1703*	pc/h/ln
S	*67.1*	mph
D = v_p / S	*25.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 NB*
From/To	*I-8 to Old Town Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9038*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*209212*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*9038*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2426*	pc/h/ln
S	*52.6*	mph
D = v_p / S	*46.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*Genesee Avenue to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10968*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*213804*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.09*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*10968*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2355*	pc/h/ln
S	*54.5*	mph
D = v_p / S	*43.2*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7117*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*174428*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7117*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.71*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2547*	pc/h/ln
S	*49.0*	mph
D = v_p / S	*52.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*I-8 Interchange to 6th Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7644*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*187357*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7644*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.60*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2722*	pc/h/ln
S	*43.1*	mph
D = v_p / S	*63.1*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 NB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6353*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*155714*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6353*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*2.40*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.7*	mph
FFS	*68.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2263*	pc/h/ln
S	*56.9*	mph
D = v_p / S	*39.8*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Mesa Col Dr/Murray Ridge Rd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5882*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*105027*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*5882*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1282*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.3*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 NB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3555*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*78994*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*3555*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.07*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.9*	mph
FFS	*69.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*775*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*11.1*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to Adams Ave*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3499*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*77757*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*3499*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.10*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.0*	mph
FFS	*69.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*953*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*13.6*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 NB*
Agency or Company	*Chen Ryan Associates*	From/To	*Adams Avenue to El Cajon Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3057*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*67943*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.06*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*3057*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.29*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.5*	mph
FFS	*68.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*833*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*11.9*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7619*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*158738*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*7619*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.79*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.6*	mph
FFS	*67.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2055*	pc/h/ln
S	*61.5*	mph
D = v_p / S	*33.4*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*10588*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*259512*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*10588*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2251*	pc/h/ln
S	*57.2*	mph
D = v_p / S	*39.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9319*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228413*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9319*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2477*	pc/h/ln
S	*51.1*	mph
D = v_p / S	*48.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 NB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8886*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*217785*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8886*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2362*	pc/h/ln
S	*54.3*	mph
D = v_p / S	*43.5*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Sunset Cliffs to Sports Arena*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*2310*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*58938*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*56*		General Terrain:	*Level*
DDHV = AADT x K x D	*2310*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*1.49*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.5*	mph
FFS	*70.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1222*	pc/h/ln
S	*70.0*	mph
D = v_p / S	*17.5*	pc/mi/ln
LOS	*B*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Sports Arena Boulevard to I-5*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*3666*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*95230*	veh/day	%Trucks and Buses, P_T	*1*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*55*		General Terrain:	*Level*
DDHV = AADT x K x D	*3666*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.995*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD	*1.96*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.7*	mph
FFS	*69.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1293*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.5*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-5 Interchange to Morena Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5384*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*134929*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*5384*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*1.64*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*4.9*	mph
FFS	*70.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1438*	pc/h/ln
S	*69.3*	mph
D = v_p / S	*20.7*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Morena Boulevard to Taylor St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6932*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*173725*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6932*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.51*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1481*	pc/h/ln
S	*69.1*	mph
D = v_p / S	*21.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Taylor Street to Hotel Circle*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6227*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*156074*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6227*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.67*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.3*	mph
FFS	*68.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1663*	pc/h/ln
S	*67.5*	mph
D = v_p / S	*24.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Hotel Circle to SR-163*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6517*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*163330*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*6517*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.93*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.9*	mph
FFS	*67.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1393*	pc/h/ln
S	*65.0*	mph
D = v_p / S	*21.4*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*SR-163 to Mission Center Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5689*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*142573*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*5689*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.03*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1520*	pc/h/ln
S	*64.8*	mph
D = v_p / S	*23.5*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Mission Cntr Rd to Q Way/TX St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7413*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*185778*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7413*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.06*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.2*	mph
FFS	*67.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1980*	pc/h/ln
S	*60.2*	mph
D = v_p / S	*32.9*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*Qualcomm Way/Texas St to I-805*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5266*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*131976*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*5266*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*3.09*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.3*	mph
FFS	*67.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1407*	pc/h/ln
S	*65.0*	mph
D = v_p / S	*21.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-805 to I-15*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7893*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*197822*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7893*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.62*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1687*	pc/h/ln
S	*67.2*	mph
D = v_p / S	*25.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-8 WB*
From/To	*I-15 to Fairmount Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6494*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*157239*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*59*		General Terrain:	*Level*
DDHV = AADT x K x D	*6494*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.41*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.7*	mph
FFS	*68.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1395*	pc/h/ln
S	*69.6*	mph
D = v_p / S	*20.1*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*Seaworld Dr/Tecolote Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8187*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*216579*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*8187*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.37*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.6*	mph
FFS	*68.8*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1749*	pc/h/ln
S	*66.5*	mph
D = v_p / S	*26.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-5 SB*
From/To	*I-8 to Old Town Avenue*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9284*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*245597*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*54*		General Terrain:	*Level*
DDHV = AADT x K x D	*9284*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.84*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.7*	mph
FFS	*67.7*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1994*	pc/h/ln
S	*62.7*	mph
D = v_p / S	*31.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Genesee Avenue to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7346*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*161093*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*57*		General Terrain:	*Level*
DDHV = AADT x K x D	*7346*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.69*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.4*	mph
FFS	*68.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1972*	pc/h/ln
S	*63.1*	mph
D = v_p / S	*31.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7378*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*180823*	veh/day	%Trucks and Buses, P_T	*4*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7378*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.980*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.56*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.1*	mph
FFS	*68.3*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1584*	pc/h/ln
S	*68.3*	mph
D = v_p / S	*23.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*SR-163 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*I-8 Interchange to 6th Avenue*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7924*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*194225*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*7924*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD	*2.29*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.5*	mph
FFS	*68.9*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2117*	pc/h/ln
S	*60.2*	mph
D = v_p / S	*35.1*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*SR-163 SB*
From/To	*6th Avenue to Washington St*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6586*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*161422*	veh/day	%Trucks and Buses, P_T	*3*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*6586*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.985*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*2*	
Total Ramp Density, TRD	*2.06*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*5.9*	mph
FFS	*69.5*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3518*	pc/h/ln
S	*7.7*	mph
D = v_p / S	*458.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Mesa Col Dr/Murray Ridge Rd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*13684*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*244364*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*70*		General Terrain:	*Level*
DDHV = AADT x K x D	*13684*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.45*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2982*	pc/h/ln
S	*33.2*	mph
D = v_p / S	*89.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*Murray Ridge Rd to I-8*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*13920*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*232007*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*13920*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.21*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.3*	mph
FFS	*69.1*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3033*	pc/h/ln
S	*31.0*	mph
D = v_p / S	*97.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-805 SB*
From/To	*I-8 Interchange to Adams Ave*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*13702*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*228372*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*13702*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*6*	
Total Ramp Density, TRD	*2.25*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.4*	mph
FFS	*69.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2488*	pc/h/ln
S	*50.8*	mph
D = v_p / S	*49.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*Chen Ryan Associates*	Highway/Direction of Travel	*I-805 SB*
Agency or Company	*Chen Ryan Associates*	From/To	*Adams Avenue to El Cajon Blvd*
Date Performed	*2018*	Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*	Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11973*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*199548*	veh/day	%Trucks and Buses, P_T	*7*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*75*		General Terrain:	*Level*
DDHV = AADT x K x D	*11973*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.966*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.44*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*6.8*	mph
FFS	*68.6*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2609*	pc/h/ln
S	*47.0*	mph
D = v_p / S	*55.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Aero Drive to Friars Road*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*11660*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*242927*	veh/day	%Trucks and Buses, P_T	*5*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*60*		General Terrain:	*Level*
DDHV = AADT x K x D	*11660*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.976*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.52*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2516*	pc/h/ln
S	*49.9*	mph
D = v_p / S	*50.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Friars Road to I-8 Interchange*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*9983*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*244689*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*9983*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*3.14*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*8.4*	mph
FFS	*67.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2123*	pc/h/ln
S	*57.6*	mph
D = v_p / S	*36.9*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information			Site Information	
Analyst	*Chen Ryan Associates*		Highway/Direction of Travel	*I-15 SB*
Agency or Company	*Chen Ryan Associates*		From/To	*I-8 Interchange to Adams Ave*
Date Performed	*2018*		Jurisdiction	*City of San Diego*
Analysis Time Period	*PM*		Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8787*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*215366*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8787*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.53*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.0*	mph
FFS	*68.4*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1868*	pc/h/ln
S	*64.8*	mph
D = v_p / S	*28.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Chen Ryan Associates*
Agency or Company	*Chen Ryan Associates*
Date Performed	*2018*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-15 SB*
From/To	*Adams Avenue to El Cajon Blvd*
Jurisdiction	*City of San Diego*
Analysis Year	*2050*

Project Description *Alternative 4*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*8378*	veh/h	Peak-Hour Factor, PHF	*0.95*
AADT	*205345*	veh/day	%Trucks and Buses, P_T	*2*
Peak-Hr Prop. of AADT, K	*0.08*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*51*		General Terrain:	*Level*
DDHV = AADT x K x D	*8378*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.990*

Speed Inputs

Lane Width	*12.0*	ft
Rt-Side Lat. Clearance	*6.0*	ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD	*2.59*	ramps/mi
FFS (measured)		mph
Base free-flow Speed, BFFS	*75.4*	mph

Calc Speed Adj and FFS

f_{LW}	*0.0*	mph
f_{LC}	*0.0*	mph
TRD Adjustment	*7.2*	mph
FFS	*68.2*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1781*	pc/h/ln
S	*66.1*	mph
D = v_p / S	*27.0*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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