Appendix A - Existing Conditions Report

MIRA MESA COMMUNITY PLAN UPDATE

Existing Mobility Conditions

The City of SAN DIEGO

DRAFT

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Contents

Figures

Tables

Appendices

Appendix A	Collision Data
Appendix B	Pedestrian Environmental Quality Evaluation (PEQE) Analysis Data
Appendix C	Bicycle Level of Traffic Stress (BLTS) Analysis Data
Appendix D	Bus Routes and Ridership
Appendix E	Traffic Count Sheets
Appendix F	Synchro Peak-Hour Intersection Analysis Sheets
Appendix G	Travel Time Data (Traction and SimTraffic)
Appendix H	Caltrans Freeway Traffic Volumes and Ramp Meter Rates
Appendix I	Parking Utilization Data
Appendix J	Related Projects

1 INTRODUCTION

The following section introduces the Existing Mobility Conditions of the Mira Mesa Community Plan Update.

Report Purpose and Applicability

The current Mira Mesa Community Plan was originally approved in 1992 and has seen several amendments since then. The Plan identifies several key issues, goals, and implementation actions for Mira Mesa, including improvements to the transportation system. This comes in the form of relating development intensity to capacity of the network and encouraging development of facilities and services that fulfill the daily needs of local residents, commuters, and visitors.

The Mira Mesa Community Plan Update was initiated in 2018 to provide direction and guidance for future community growth and development. The Mobility Element is one component of the community plan, and directly correlates with the Land Use Element. This relationship supports the ability to plan and provide for a balanced, multimodal transportation network that can meet future community travel demands. The Mobility Element provides guidance on the transportation network, including pedestrian, bicycle, transit, and vehicle modes of travel.

The purpose of this Existing Mobility Conditions report is to summarize the existing conditions within the community for all modes of transportation, and identify potential deficiencies, conflicts, and needs that could be addressed through future improvements to the transportation network. The Existing Mobility Conditions is a critical building block in the preparation of the land use plan and future transportation system. Key features of this document include:

- Describing the analysis methods and techniques used to evaluate a mobility network,
- Evaluating existing mobility conditions for all modes,
- Identifying opportunities for potential transportation network enhancements,
- Informing land use planning by providing adjacent transportation network conditions,
- Establishing a baseline condition for the environmental documents, and
- Educating the stakeholders and plan preparers of current conditions.

Regional Location and Planning Boundaries

The Mira Mesa community is located in the north central portion of the City of San Diego, 16 miles north of downtown San Diego. Mira Mesa is located between Interstate 805 (I-805) and Interstate 15 (I-15), with Marine Corps Air Station Miramar to the south and Los Peñasquitos Canyon Preserve to the north. Mira Mesa is bounded on the north by the communities of Torrey Hills, Carmel Valley, and Rancho Peñasquitos; on the east by Miramar Ranch North and Scripps Miramar Ranch; on the south by Marine Corps Air Station Miramar; and on the west by the University and Torrey Pines communities. **Figure 1-1** depicts the location of the Mira Mesa community in a regional context.

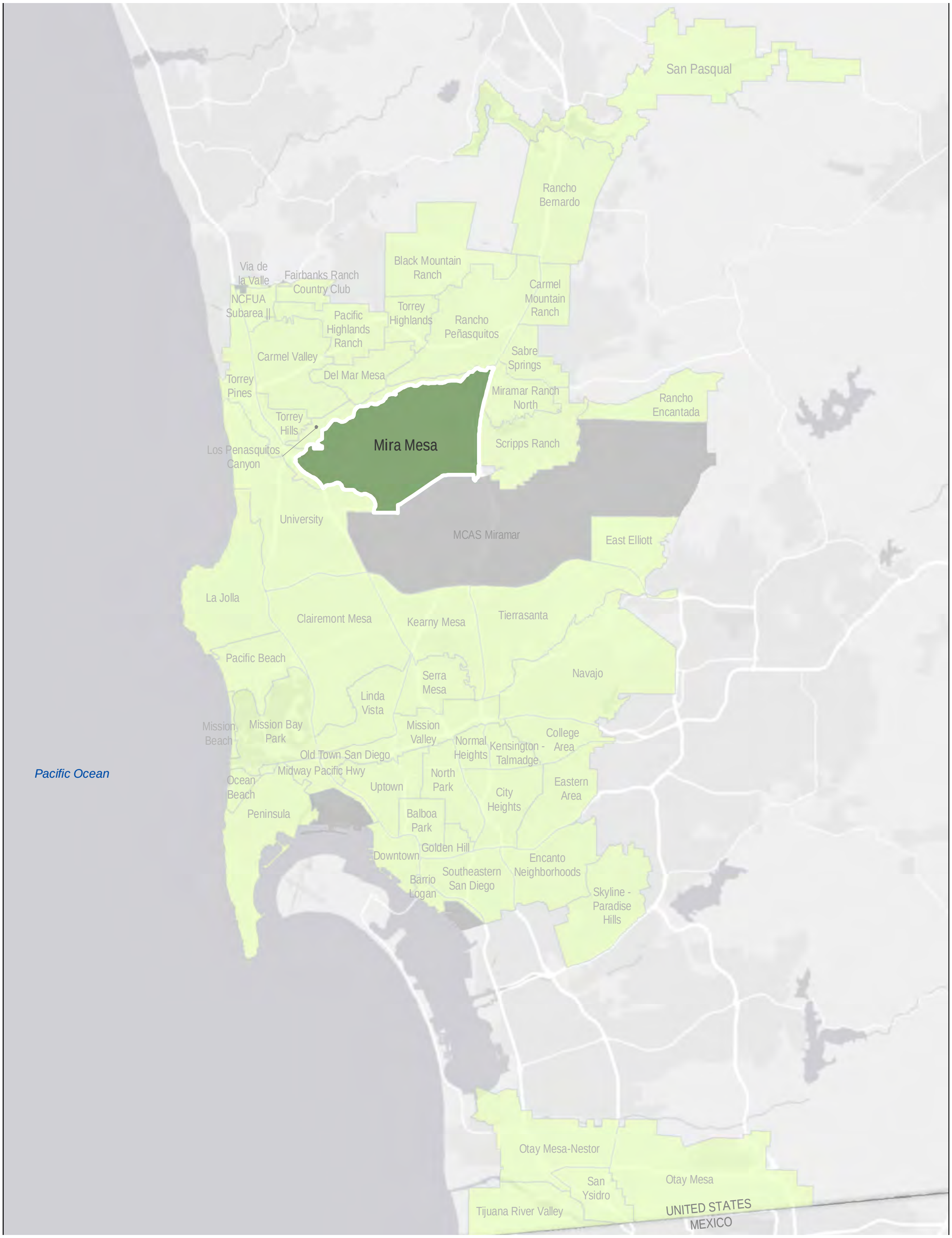
The Mira Mesa community is approximately 10,500 acres in area, with a population of over 70,000. The western and southern portions of the community are primarily employment and industrial areas, while the northeastern portion of the community is primarily residential. Miramar College is located on the east side of the community with the Miramar College Transit Station serving multiple local and regional bus routes. **Figure 1-2** shows the community boundary in a localized context.

Supporting Information

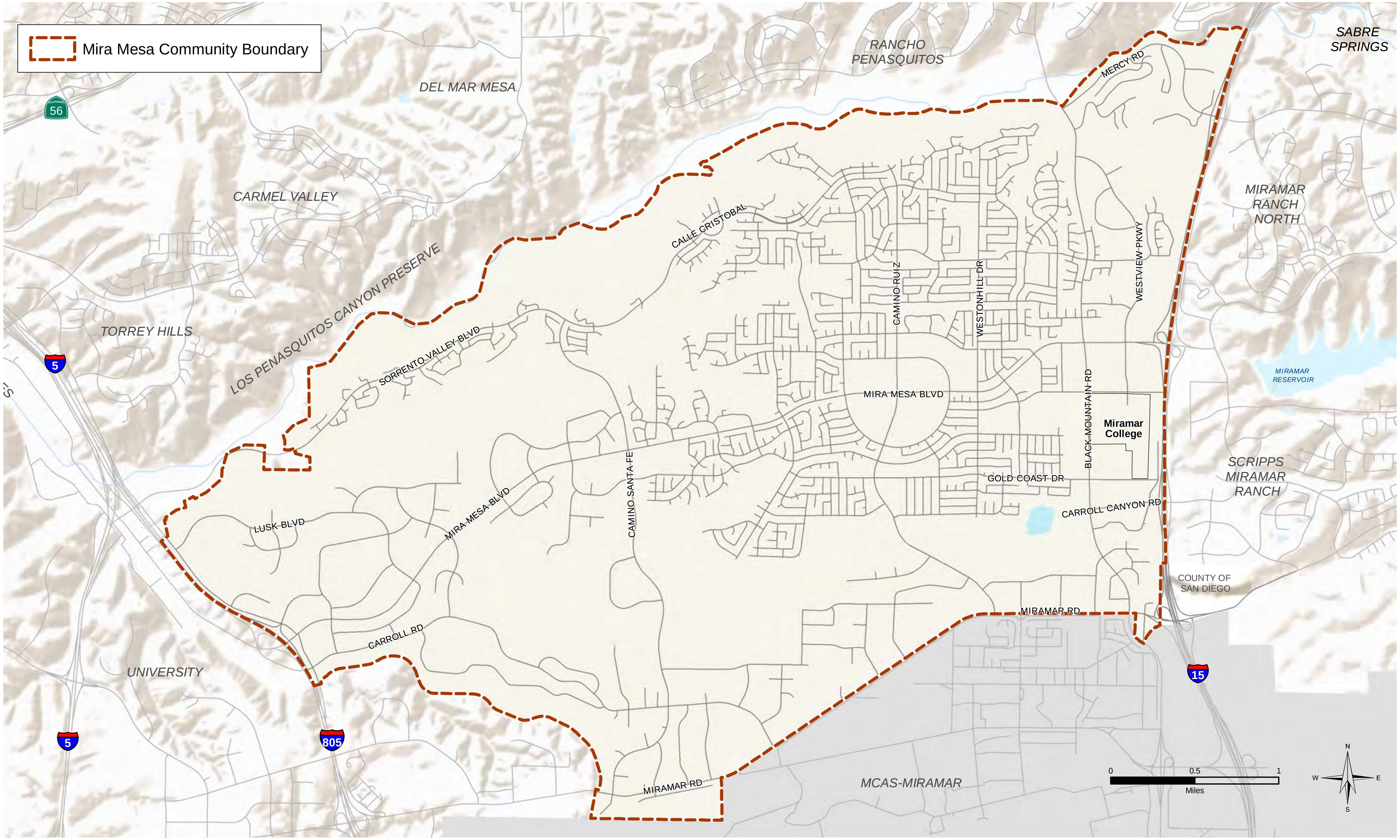
Several previously-published planning documents will also be used to guide the development of proposed improvements to the mobility network in Mira Mesa. The following planning documents were referenced for consistency throughout the planning process:

- *City of San Diego General Plan (2008)*
- *City of San Diego Climate Action Plan (2015)*
- *Adopted Mira Mesa Community Plan (1992)*
- *City of San Diego Bicycle Master Plan (2013)*
- *City of San Diego Pedestrian Master Plan (2006)*
- *San Diego Forward: The Regional Plan (2015)*
- *San Diego Regional Bike Plan (2010)*

Other planning efforts and documents are also relevant to understanding the existing mobility conditions in Mira Mesa. A more complete synopsis of these documents and their relationship to the Mira Mesa community are provided in Chapter 3. Additionally, the proposed improvements included in the Mira Mesa Community Plan Update will be incorporated into future local and regional planning efforts.



Regional Vicinity Map



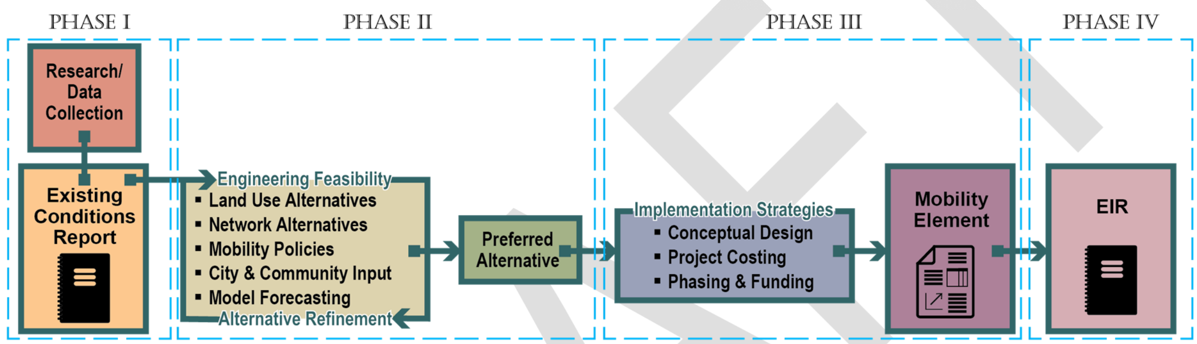
Community Boundary

Community Plan Update Process

A four-phased planning process is being undertaken to develop the Mira Mesa Mobility Element. As depicted in **Figure 1-3**, the four phases include:

- Phase I: Existing Conditions Assessment
- Phase II: Developing Recommendations
- Phase III: Plan Development and Implementation Strategies
- Phase IV: Environmental Analysis

Figure 1-3 Community Plan Update Process



Existing Conditions Assessment (Phase I): This initial phase documents current pedestrian, cycling, transit and vehicular systems and associated travel behaviors in the community. Travel demands, deficiencies, opportunities and constraints are extensively analyzed and documented for each mode.

Developing Recommendations (Phase II): This phase is focused on identifying and crafting a vision for overall mobility in the community, and then developing policy language and mobility network recommendations to help achieve the vision. This phase is supported by the involvement of the significant community, City staff, and other key stakeholders.

Plan Development and Implementation Strategies (Phase III): Following the development of a preferred network, the Mobility Element is initiated. The Mobility Element summarizes existing conditions and issues for each travel mode, supporting policies, and plan proposals. Implementation strategies are developed at this stage, including conceptual designs, project cost estimating, project phasing and the identification of potential funding sources.

Environmental Analysis (Phase IV): An Environmental Impact Report (EIR) is anticipated for the Community Plan Update. The Transportation Section of the EIR will be based on mobility information developed during Phases I through III and will analyze and disclose potentially significant traffic impacts, as well as mitigation measures to lessen the impacts. The EIR is circulated for a public review period to receive comments. The project team provides responses to the comments and identifies and discloses any modifications to the Community Plan Update or its EIR, if applicable, before seeking approval from Planning Commission and City Council.

Organization of the Report

Following this introductory chapter, the report is organized as follows:

- **Chapter 2** describes the methodologies used to analyze conditions of the existing transportation system;

- **Chapter 3** summarizes planning documents relevant to the Mira Mesa Community Plan Update Mobility Element

- **Chapter 4** describes existing conditions and analysis methodologies for the pedestrian, bicycle, transit, roadway, and freeway networks. This chapter also includes discussions on parking utilization, Intelligent Transportation Systems (ITS), and Transportation Demand Management (TDM) strategies, as well as airport, passenger rail, and goods movement within the community.

- **Chapter 5** concludes with a summary of key mobility needs to be considered as the planning process moves forward.

2 METHODOLOGY

The following section describes the methodology used to determine the study area and evaluate existing conditions of the mobility network within the Mira Mesa community. The existing conditions evaluation process includes the following analyses:

Pedestrian	Demand	• Using existing peak period pedestrian counts • Based upon the Pedestrian Priority Model (PPM) • Based upon census-based mode share data • Using route typology definition
	Safety	• Using pedestrian-related collision data for the past five years
	Quality	• Using Pedestrian Environment Quality Evaluation (PEQE) analysis
	Connectivity	• Using pedestrian network and sidewalk inventory data • Using a walkshed ratio evaluation
Bicycle	Demand	• Using existing peak period bicycle counts • Based upon the Bicycle Demand Model (BDM) • Based upon census-based mode share data
	Safety	• Using bicycle-related collision data for the past five years
	Quality	• Using Level of Traffic Stress (BLTS) analysis
	Connectivity	• Using a bikeshed ratio evaluation • (Low-stress) Using combination of BLTS and bikeshed evaluations
Transit	Demand	• Using existing transit ridership information • Based upon census-based mode share data • (Potential) based upon census-based population density data • (Potential) based upon LODES employment density data
	Safety	• Using pedestrian- and bicycle-related collision data for the past five years
	Quality	• Using inventory of transit stop amenities • Using roadway speed simulation analysis
	Connectivity	• Using walkshed and bikeshed ratios near major transit stations
Vehicle	Demand	• Using existing peak period turning movement and daily volume counts
	Safety	• Using vehicle collision data for the past five years
	Quality	• Using roadway level of service based on volume-to-capacity ratio • Using roadway travel time level of service based on speed • Using intersection level of service based on delay • Using freeway level of service based on density • Using freeway ramp capacity based on volumes and queues
	Connectivity	• Using vehicle miles travelled

2.1 PEDESTRIAN

Pedestrian Study Area

The pedestrian study area was identified in coordination with City staff, and includes areas which meet one or more of the following criteria:

- **Existing Pedestrian Demand:** The Pedestrian Priority Model (PPM) was used to document relative pedestrian demands across the Mira Mesa community. The model consists of three submodels – trip attractors, generators, and detractors – reflecting high pedestrian propensity along with potential barriers or safety concerns. Thresholds for high demand were established relative to the community itself and not relative to the City as a whole. Areas with a score that is above the community average and along circulation element roadways were selected
- **Pedestrian Safety:** locations with two or more pedestrian collisions over the analyzed five-year period
- **Proximity to Transit:** areas within a half-mile of a major transit stop

In addition to the criteria above, the pedestrian study area was expanded in coordination with City staff to include major and collector roadways, as well as corridors that satisfied pedestrian network gaps or connections to schools and parks. The pedestrian study area is identified in **Figure 2-1**.

Pedestrian Demand

Pedestrian demand was evaluated using four different sources and methodologies:

1. Pedestrian Count Data
2. City of San Diego's PPM
3. US Census Survey Information
4. Pedestrian Route Typology

PEDESTRIAN COUNT DATA

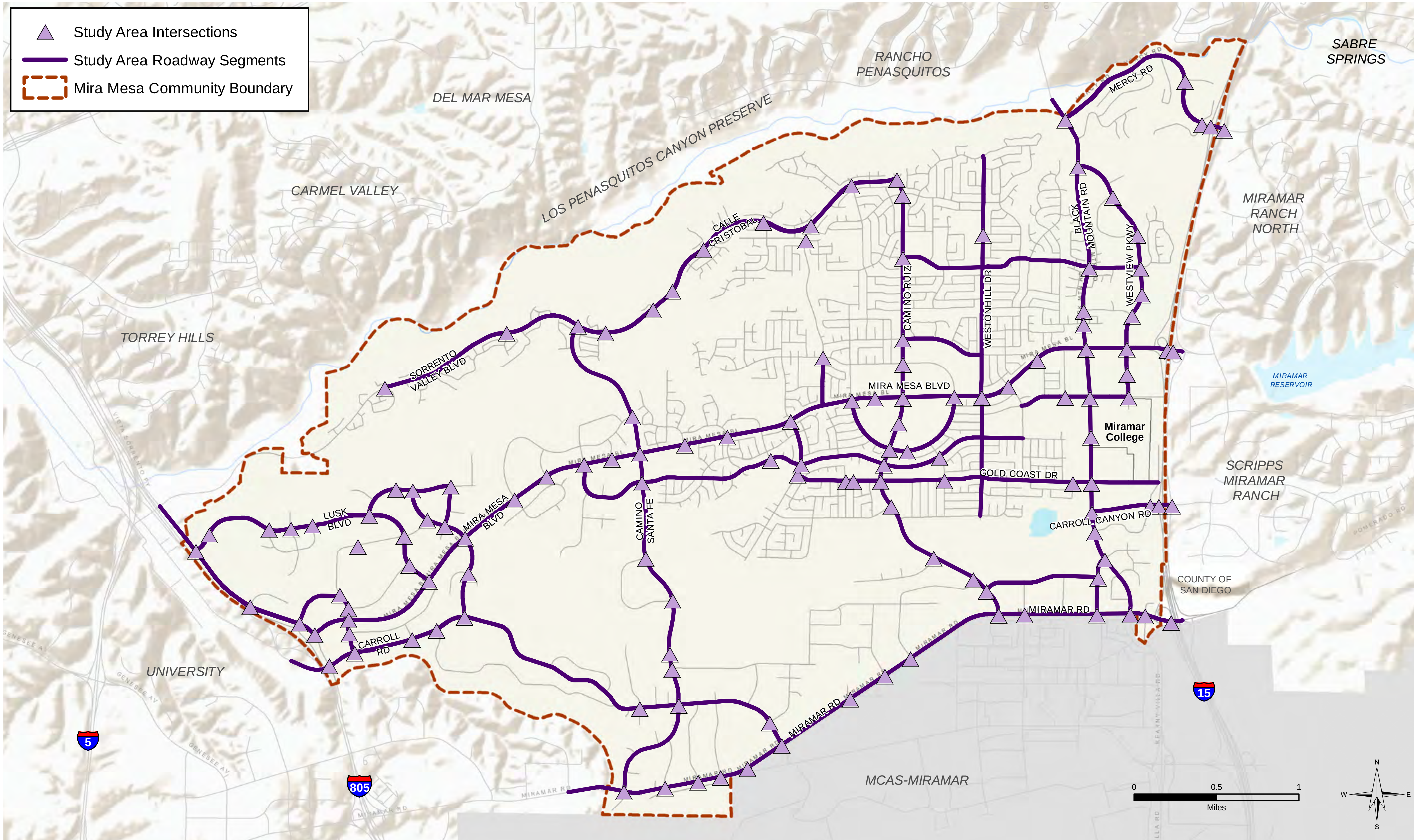
Existing pedestrian demand was determined using turning movement counts conducted for the vehicular analysis portion of this project. Vehicles, pedestrians, and bicycles were counted at 92 intersections during the AM and PM peak periods. A summary of peak hour volumes is provided in **Section 4.1.1**.

CITY OF SAN DIEGO PPM

The City of San Diego's City PPM was used to evaluate the relative pedestrian demand within the Mira Mesa community. The PPM evaluates pedestrian demand based on existing land use and other characteristics within the built environment. The PPM determines demand based on three types of amenities: pedestrian trip attractors, trip generators, and trip detractors. A summary of land uses and other amenities in each category is shown below in **Table 2-1**. Using the factors in the table, the PPM identifies pedestrian propensity land uses and population concentrations. The PPM also considers factors indicating potential pedestrian barriers or safety issues.

The PPM was used in determining the pedestrian study area. Using the PPM in GIS format, the data was filtered to show areas with values above the average score of the community's dataset. The average score for the community identified as just under 18, and high pedestrian demand areas were identified as scoring 18 or higher. These high demand areas were also used in the pedestrian quality and connectivity assessments. This is described in more detail in **Section 4.1.1**.

FIGURE 2-1



Pedestrian Analysis Study Area

Table 2-1 Pedestrian Demand Factors

Category	Pedestrian Demand Factors
Attractors	Schools, Universities, Neighborhood Civic Facilities, Neighborhood and Community Retail, Parks and Recreation Facilities, Proximity to and Ridership at Transit Stops/Stations
Generators	Population and Employment Density, Age, Income, Disability Density, Mixed Land Use Density
Detractors	Collisions, Traffic Volumes, Traffic Speeds, Lack of Street Lighting, Barriers

Source: Active Travel Assessments, Integrating Bicycle, Pedestrian and Transit Evaluation in Long Range Planning (City of San Diego, 2017)

US CENSUS SURVEY DATA

In addition to the PPM assessment of pedestrian demand, the American Community Survey[1] (ACS) 5-year estimates commuting data (2012-2016) was utilized to understand the existing commute mode share by walking for the community. The ACS commuting data provides information about the means of transportation to work by employees 16 years and older for each census block group[2]. The means of transportation to work represents the commute mode within the community.

The ACS commuting data was filtered to the census block groups within the Mira Mesa community boundary. The "pedestrian commute mode share" was then calculated as a percent of the total mode share. This was accomplished by taking the number of employees in Mira Mesa who walk to work, divided by the total number of employees for each block group in the community, and multiplying it by 100 to develop a percent as shown below:

$$Pedestrian\ Commute\ Mode\ Share = \left(\frac{Total\ number\ of\ employees\ who\ walk\ to\ work}{Total\ number\ of\ employees\ within\ each\ block\ group}\right) \times 100$$

The "pedestrian commute mode share" was compared to City and County of San Diego average pedestrian mode share percentages.

[1] The American Community Survey (ACS) is conducted by the US Census Bureau and provides estimates of the characteristics of the population over a specific time period at various geography levels. ACS data is available via Tiger/Line at various geographic levels.

[2] US Census block groups are statistical divisions of census tracts. A block group consists of clusters of blocks within the same census tracts. Block groups are generally defined to contain between 600 and 3,000 people.

PEDESTRIAN ROUTE TYPOLOGY

The Pedestrian Master Plan includes a comprehensive analysis of existing conditions and needs within a community. The pedestrian route typology methodology was established in Appendix B[3] of the City's Pedestrian Master Plan effort and is presented in **Table 2-2**. This methodology establishes criteria for defining pedestrian route types and ultimately developing priority pedestrian improvements.

Pedestrian route type criteria and data sources used in determining the appropriate typology for each facility within the Mira Mesa community are identified in **Table 2-2**. To determine typology within the community, the data sources shown in Table 2-2 were overlaid on each other. The circulation element routes within the community were then given an assumed typology based on guidance provided in Figure 2-1**.**

Table 2-2 Pedestrian Route Type Criteria

Phase I Pedestrian Route Type Criteria	Phase 2 & 3 Operationalization of Route Type Criteria	Data Sources
Street Design Manual Classification	Circulation Element Roadway Classification	ROADS_ALL.shp (SANDAG, 2018)
Land Uses	Pedestrian Priority Attractor Model and existing adjacent land uses and intensities	PPM (City of San Diego 2015) and LANDUSE_CURRENT.shp (SANDAG, 2018)

Source: City of San Diego Pedestrian Master Plan Volume 1, Appendix B (2015)

[3] https://www.sandiego.gov/sites/default/files/legacy/planning/programs/transportation/mobility/pdf/sdpmp_volume_1_appendix_b.pdf

Figure 2-2 City of San Diego Pedestrian Route Typologies

ROUTE TYPE:	1. District Sidewalks	2. Corridor Sidewalks	3. Connector Sidewalks	4. Neighborhood Sidewalks	5. Ancillary Pedestrian Facilities	6. Path	7. Trail (Included for Reference Only, not a Focus of this Plan)
Purpose	Sidewalks Along Roads that Support Heavy Pedestrian Levels in Mixed-use Concentrated Urban Areas	Sidewalks Along Roads that Support Moderate Density Business & Shopping Districts with Moderate Pedestrian Levels	Sidewalks Along Roads that Support Institutional, Industrial or Business Complexes with Limited Lateral Access & Low Pedestrian Levels	Sidewalks Along Roads that Support Low to Moderate Density Housing with Low to Moderate Pedestrian Levels	Facilities Away or Crossing Over Streets such as Plazas, Paseos, Promenades, Courtyards or Pedestrian Bridges & Stairways	Walkways and Paved Paths that are not Adjacent to Roads that Support Recreational and Transportation Purposes	Unpaved Walk Not Adjacent to Roads Used for Recreational Purposes
Typical Adjacent "Street Design Manual" Classifications	All types of adjacent streets are possible	Commercial, Urban Collector, Urban Major & Arterial	Commercial, Industrial, Urban Major, Rural Collector & Arterial	Rural, Low Volume Residential, Residential Local & Sub-collector	Not associated with a street	Not associated with a street	Not associated with a street
Cross Reference to Related "Strategic Framework Plan" Definitions	Existing: Regional Centers, Urban Villages & Neighborhood Villages	Existing: Sub-regional Districts and Transit Corridors	Existing: Sub-regional Districts, Transit Corridors, & Suburban Residential along Major Arterials	All other Residential Areas not Classified under the Strategic Framework Plan	Most common in Regional Centers, Urban or Neighborhood Villages but can be in any area	Can occur in any area, but most often found in Recreation, Tourist or Open Space Areas	Can occur in any area, but most often found in Recreation or Open Space Areas
Typical Adjacent Land Uses	Mixed-use Housing, Commercial, Office & Entertainment with Urban Densities	Multiple Land Uses but may be Separated. Often Strip Commercial or Office Complex.	Open Space, Industrial Uses, Institutional Uses or other Pedestrian Restricted Uses	Single-family and Moderate Density Multi-Family with Limited Supporting Neighborhood Commercial	Adjacent Land Uses Vary	Adjacent Uses Vary, Often Recreational or Open Space or Housing	Open Space, Parks and Natural Areas

Source: City of San Diego Pedestrian Master Plan – City-Wide Implementation Framework Report (2006), Table 26

A summary of the existing typology in the Project Study Area is included in **Section 4.1.1**.

Pedestrian Safety

To understand existing pedestrian safety issues, a safety assessment was performed using collision data obtained from the San Diego Police Department's Crossroads software (SDPD) for the period from October 2012 through September 2017. Collisions from SDPD were geocoded and mapped to display the locations of collisions within the Mira Mesa community.

The location and concentration of pedestrian-involved collisions was taken into consideration when developing the pedestrian study area, as locations with two or more collisions between 2012 and 2017 were included in the pedestrian quality and connectivity assessments.

Several tables were also created to further understand safety issues and trends within the community, including

1. Most frequent pedestrian collision locations,
2. Primary cause of collisions
3. Pedestrian collisions by party at fault, and
4. Pedestrian collisions by location types.

The collision location types were identified as intersection, midblock, or approaching/departing intersection.

- Collisions that occurred within 100 feet of the center of the intersection were identified as intersection collisions to account for vehicles that are queued at the intersection.
- Collisions that occurred between 100 feet and 350 feet from the center of the intersection were identified as approaching/departing collisions. This net 250 feet is reflective of the stopping sight distance of a vehicle travelling at 35 mph.
- Collisions that occurred at a distance over 350 feet away from the center of the intersection were identified as mid-block collisions.

A map showing the spatial distribution of pedestrian-involved collisions in the Project Study Area and results of the pedestrian safety analysis are summarized in **Section 4.1.2**. For presentation purposes, the intersection and approaching/departing intersection collisions were grouped together. Any collision within 350 feet of the center of the intersection were considered intersection-related. Mid-block locations were then evaluated on a case-by-case basis and bundled if they occurred within close proximity of each other, with similar roadway characteristics, and collision trends. Locations that were grouped together were reviewed and approved by the City.

Pedestrian Facility Quality

The quality of all existing pedestrian facilities (roadway segments, intersection crossings, and mid-block crossings) within the pedestrian study area were evaluated using the Pedestrian Environment Quality Evaluation (PEQE) tool criteria described in **Table 2-3.** The PEQE methodology used by the City was derived from the Pedestrian Environmental Quality Index (PEQI) assessment developed by the San Francisco Department of Public Health[4]. The evaluation yields High-, Medium-, or Low-Quality designations for each facility based upon the following scoring system:

Low-Quality:	< 4 points
Medium-Quality:	= 4 – 6 points
High-Quality:	> 6 points

The results of the existing PEQE analysis for facilities within the pedestrian study area are included in **Section 4.1.3**. A detailed table summarizing the PEQE inputs is included in **Appendix B**.

[4] *Pedestrian Environmental Quality Index, San Francisco Department of Public Health (2012)*

Table 2-3 PEQE Scoring Criteria

Facility Type	Measure	Description/Feature	Scoring
Segment between two intersections	Horizontal Buffer	Between the edge of auto travel way and the clear pedestrian zone	0 point: < 6 feet 1 point: 6 - 14 feet 2 points: > 14 feet
	Lighting	Standard requirement = 150-300'	0 point: below standard/requirement 1 point: meet standard/requirement 2 points: exceed standard/requirement
	Clear Pedestrian Zone	5' minimum	0 point: has obstructions 2 points: no obstruction
	Posted Speed Limit		0 point: > 40 mph 1 point: 30 - 40 mph 2 points: < 30 mph
Maximum			**8 points**
Intersection – Individual Crossing	Physical Feature	Enhanced/High Visibility Crosswalk Raised Crosswalk/Speed Table Advanced Stop Bar Bulb out/Curb Extension	0 point: < 1 feature per ped crossing 1 point: 1 – 2 features per ped crossing 2 points: > 2 features per ped crossing
	Operational Feature	Pedestrian Countdown Signal Pedestrian Lead Interval No-Turn On Red Sign/Signal Additional Pedestrian Signage	0 point: < 1 feature per ped crossing 1 point: 1 – 2 features per ped crossing 2 points: > 2 features per ped crossing
	ADA Curb Ramp		0 point: no existing curb ramp 1 point: existing curb ramp is below standard/requirement 2 points: curb ramp meets standard/requirement
	Traffic Control		0 point: No control 1 point: Stop sign controlled 2 points: Signal/ Roundabout/Traffic Circle
Maximum			**8 points**
Mid-block Crossing	Visibility		0 point: w/o high visibility crosswalk 2 points: with high visibility crosswalk
	Crossing Distance		0 point: no treatment 2 points: with bulb out or median pedestrian refuge
	ADA		0 point: no existing curb ramp 1 point: existing curb ramp is below standard/requirement 2 points: curb ramp meets standard/requirement
	Traffic Control		0 point: No control 1 point: Pedestrian Activated Warning Device (In-pavement, Pedestrian Activated Flashing Beacons etc.) 2 points: Signal/Pedestrian Hybrid Beacon (HAWK)
Maximum			**8 points**

Source: DRAFT Active Travel Assessments: Integrating Bicycle, Pedestrian and Transit Evaluation in Long Range Planning White Paper (City of San Diego, 2017)

Pedestrian Network Connectivity

PEDESTRIAN NETWORK INVENTORY

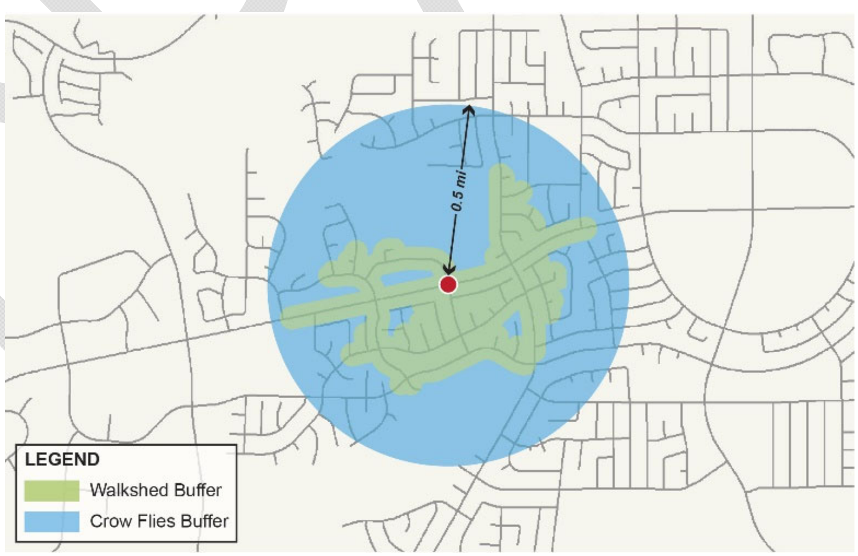
A 2015 existing sidewalk inventory of the study area was provided by City staff in Geographic Information System (GIS) format for review and analysis in the ArcGIS software. This data was used for review and analysis in the ArcGIS software to provide an overview of where pedestrian connections are currently provided, areas that have missing pedestrian facilities, and barriers that may impede pedestrian connectivity. Missing sidewalks were identified to show existing gaps. Asphalt sidewalks were also identified through field or aerial imagery review to identify where sidewalks exist but may not be to City standard.

As a separate effort, pedestrian barriers were identified to understand community-specific environments. Barriers are intended to identify locations where connections may be feasible but will be limited. These include freeways, rail tracks, canyons, mountains/hills, water bodies, and other unique features. The current inventory with missing facilities within the pedestrian study area are included in **Section 4.1.3**.

WALKSHED ANALYSIS

Pedestrian network connectivity was evaluated utilizing a walkshed ratio for study intersections within the pedestrian study area. The Walkshed Ratio was calculated by comparing the land area accessible within a ½-mile pedestrian network buffer to the land areas accessible within a ½-mile "as-the-crow-flies" buffer. A higher Walkshed Ratio represents better overall connectivity at a particular intersection[5]. The Walkshed Ratio utilizes the following formula:

$$\frac{\text{Land Area Accessible within a 0.5 mile walkshed (acres)}}{\text{Land Area Accessible within a 0.5 mile "crow flies" buffer (acres)}}$$



[5] *65% is typically the highest Walkshed Ratio that can be achieved in even the most ideal communities (i.e. urban downtown settings with tight grid networks). Therefore, any community with a connectivity ratio over 50% may be considered ideal from a pedestrian network standpoint..*

The only private roads included as part of the network for this analysis were Miramar College sidewalks. The ArcGIS Network Analyst tool was used to calculate the walkshed ratio, relying on the network inventory provided by the City with modifications made for asphalt sidewalks or private connections where applicable. The quality of the pedestrian facility was also not considered, as that is addressed in the PEQE evaluation. An overview of the existing Walkshed Ratio analysis for the Mira Mesa community is provided in **Section 4.1.4**.

2.2 BICYCLE

Bicycle Study Area

The Bicycle Study Area is equivalent to the pedestrian study area. Locations identified by the City of San Diego's Bicycle Demand Model (BDM) and where multiple bicycle-related collisions occurred from 2012-2017 required additional focus. However, the entire project study area was evaluated for at least one of the four performance measures: demand, safety, quality, connectivity.

Bicycle Demand

Bicycle demand was evaluated using three different sources and methodologies:

1. Bicycle Count Data
2. City of San Diego's Bicycle Demand Model
3. US Census Survey Information

BICYCLE COUNT DATA

Existing bicycle demand was determined using intersection turning movement counts conducted for the vehicular analysis portion of this project. Vehicles, pedestrians, and bicycles were counted at 92 intersections during the AM and PM peak periods. A summary of bicycle peak hour volumes is provided in **Section 4.2.1**.

CITY OF SAN DIEGO BICYCLE DEMAND MODEL (BDM)

The City of San Diego's BDM was used to evaluate facilities with high cycling demand or locations warranting relatively higher considerations for bicycle infrastructure improvements within the Mira Mesa community.

The BDM analyzes two components of demand: intra-community travel and inter-community travel. The intra-community demand submodel is based on population characteristics combined with bicycle trip attractors and generators within the community. The inter-community demand submodel focuses on higher intensity areas and their proximity to land uses typically associated with higher rates of cycling activity. A summary of land uses and other amenities in each category is shown below in **Table 2-4**.

Table 2-4 Bicycle Demand Factors

Category	Bicycle Demand Factors
Attractors	Schools, Universities, Neighborhood Civic Facilities, Neighborhood and Community Retail, Parks and Recreation Facilities, Proximity to and Ridership at Transit Stops/Stations
Generators	Population and Employment Density, Age, Income, Disability Density, Mixed Land Density

Source: City of San Diego (2017)

Using the BDM, high bicycling demand roadway segments were identified and are described in more detail in **Section 4.2.1**. This provides information on where bicycling is attractive based on land uses and helps facilitate where future investments in bicycle facilities may be most desirable.

US CENSUS SURVEY DATA

In addition to the BDM assessment of bicycle demand, the American Community Survey[1] (ACS) 5-year estimates commuting data (2012-2016) was utilized to understand the existing commute mode share by bike for the community. The ACS commuting data provides information about the means of transportation to work by employees 16 years and older for each census block group[2]. The means of transportation to work represents the commute mode within the community.

The ACS commuting data was filtered to the census block groups within the Mira Mesa community boundary. The "bicycle commute mode share" was then calculated as a percent of the total mode share. This was accomplished by taking the number of employees in Mira Mesa who bike to work, divided by the total number of employees for each block group in the community, and multiplying it by 100 to develop a percent as shown below:

$$\text{Bicycle Commute Mode Share} = \left(\frac{\text{Total number of employees who bike to work}}{\text{Total number of employees within each block group}}\right) \times 100$$

The "bicycle commute mode share" was compared to City and County of San Diego average bicycle mode share percentages.

Bicycle Safety

To understand existing bicycle safety issues, a safety assessment was performed using collision data from October 2012 to September 2017 obtained from the San Diego Police Department's Crossroads software (SDPD) provided by City staff. Collisions from SDPD were geocoded and mapped to display the locations of bicycle-related collisions within the Mira Mesa community.

Several tables were created to further understand safety issues and trends within the community, including:

1. Most frequent bicycle collision locations,
2. Primary bicycle collision causes,
3. Bicycle collisions by party at fault, and
4. Bicycle collisions by location types.

Similar to the evaluation for pedestrians, bicycle-related collision location types are identified as intersection, midblock, or approaching/departing intersection.

- Collisions that occurred within 100 feet of the center of the intersection were identified as intersection collisions to account for vehicles that are queued at the intersection.
- Collisions that occurred between 100 feet and 350 feet from the center of the intersection were identified as approaching/departing collisions. This net 250 feet is reflective of the stopping sight distance of a vehicle travelling at 35 mph.
- Collisions that occurred at a distance over 350 feet away from the center of the intersection were identified as mid-block collisions.

A map showing the spatial distribution of bicycle-involved collisions was created. For presentation purposes, the intersection and approaching/departing intersection collisions were grouped together. Any collision with 350 feet of the center of the intersection were considered intersection-related. Mid-block locations were then evaluated on a case-by-case basis, and bundled if they occurred within close proximity of each other with similar roadway characteristics and collision trends. Locations that were grouped together were reviewed and approved by the City. The results of the bicycle safety analysis are summarized in **Section 4.2.2**.

Bicycle Facility Quality

The Mineta Transportation Institute published a Low-Stress Bicycling and Network Connectivity analysis [6], which establishes a methodology for evaluating the level of traffic stress for bicyclists riding on a designated bicycle facility based on specific factors for roadway segments and intersection approaches. The Mineta Transportation Institute document used the City of San Jose as a test case for applying this methodology. This methodology designates a level of traffic stress (LTS) for roadways and intersections on a scale of LTS 1 (lowest stress) to LTS 4 (highest stress):

- **LTS 1** facilities present little traffic stress and demand little attention from cyclists. They are suitable for almost all cyclists and attractive enough for a relaxing bike ride.
- **LTS 2** facilities are suitable to most adult cyclists but demand more attention than might be expected from children.
- **LTS 3** starts to introduce a stress level that not all adult cyclists feel comfortable with.
- **LTS 4** is the highest level of stress and may be used by experienced bicyclists or not used at all.

[6] *"Low Stress Bicycling and Network Connectivity", Mineta Transportation Institute, p. 18*

The following criteria are used to establish the LTS ranking:

- Roadway Classifications
- Roadway Speeds (posted, or prevailing if available)
- Bicycle Facility Type
- Bike Lane and Buffer Widths
- Intersection Control
- Bike Lane configuration at Intersections
- Parking Lane width
- Existing Transit Routes

Per the methodology guidance, both directions of a roadway segment are independently assigned a score between LTS 1 and LTS 4 based on several criteria shown in **Table 2-5** through **Table 2-7** , while an intersection approach can be assigned a separate score based on criteria shown in **Table 2-8** through **Table 2-11**. Where a table cell shows a result of "(no effect)", the resulting LTS for that situation is equal to the lower adjacent LTS. The level of traffic stress assigned to a location reflects the worst score of applicable criteria. For example, if a segment street width matches criteria for LTS>1, its prevailing speed matches LTS>2, and its bike lane blockage matches LTS 3, then the segment as whole has LTS 3.

Data on roadway classifications, speeds, bicycle facility type, and intersection control were compiled using field observations of roadway segments and intersections for classified roadways in the Mira Mesa community. This information was supplemented with measurement estimates and documentation of bike lane configurations at intersections taken from aerial imagery and was field-verified.

The results of the existing BLTS score analysis are included in **Section 4.2.3**. A more detailed table summarizing the BLTS inputs for each segment and intersection are included in **Appendix C**.

Table 2-5 Criteria for Bike Lanes Alongside a Parking Lane

	LTS ≥ 1	LTS ≥ 2	LTS ≥ 3	LTS ≥ 4
Street Width** (through lanes per direction)	1	(no effect)	2 or more	(no effect)
Sum of bike lane and parking lane width	15 ft. or more	14 or 14.5 ft.*	13.5 ft or less	(no effect)
Speed Limit or prevailing speed	25 mph or less	30 mph	35 mph	40 mph
Bike Lane Blockage	Rare	(no effect)	Frequent	(no effect)

Note: (no effect) =factor does not trigger an increase to this level of traffic stress.
* If speed limit < 25 mph or Class= residential, then any width is acceptable for LTS 2.

Table 2-6 Criteria for Bike Lanes Not Alongside a Parking Lane

	LTS ≥ 1	**LTS ≥ 2**	**LTS ≥ 3**	**LTS ≥ 4**
Street Width (through lanes per direction)	1	2, if separated by a raised median	More than 2 or 2 without a separating median	(no effect)
Bike Lane width (includes marked buffer and paved gutter)	6 ft. or more	5.5 ft or less	(no effect)	(no effect)
Speed Limit or prevailing speed	30 mph or less	(no effect)	35 mph	40 mph or more
Bike Lane Blockage	Rare	(no effect)	Frequent	(no effect)

Note: (no effect) =factor does not trigger an increase to this level of traffic stress.

Table 2-7 Criteria for Level of Traffic Stress in Mixed Traffic

Speed Limits	**Street Width**		
	2-3 Lanes	**4-5 Lanes**	**6+ Lanes**
Up to 25 mph	LTS 1* or 2*	LTS 3	LTS 4
30 mph	LTS 2* or 3*	LTS 4	LTS 4
35+ mph	LTS 4	LTS 4	LTS 4

Note: *Use lower value for streets without marked centerlines or classified as residential and with fewer than 3 lanes; use higher values otherwise.

Table 2-8 Level of Traffic Stress Criteria for Pocket Bike Lanes

Configuration	**Level of Traffic Stress**
Single right-turn lane up to 150 ft. long, starting abruptly while the bike lane continues straight, and having intersection angle and curb radius such that turning speed ≤ 15 mph.	LTS ≥ 2
Single right-turn lane up to 150 ft. long, starting abruptly while the bike lane continues straight, and having intersection angle and curb radius such that turning speed ≤ 20 mph.	LTS ≥ 3
Single right-turn lane in which the bike lane shifts to the left but the intersection angle and curb radius are such that turning speed is ≤ 15 mph.	LTS ≥ 3
Single right-turn lane with any other configuration; dual right-turn lanes; or right-turn lane along with an option (through-right) lane.	LTS ≥ 4

Table 2-9 Level of Traffic Stress Criteria for Mixed Traffic in the Presence of a Right-turn Lane

Configuration	Level of Traffic Stress
Single right-turn lane with length ≤ 75 ft. and intersection angle and curb radius limit turning speed to 15 mph.	(No effect on LTS)
Single right-turn lane with length between 75 ft. and 150 ft., and intersection angle and curb radius limit turning speed to 15 mph.	LTS ≥ 3
Otherwise	LTS = 4

Table 2-10 Level of Traffic Stress Criteria for Unsignalized Crossings Without a Median Refuge

Speed Limit of Street Being Crossed	Width of Street Being Crossed		
	Up to 3 lanes	4-5 lanes	6+ lanes
Up to 25 mph	LTS 1	LTS 2	LTS 4
30 mph	LTS 1	LTS 2	LTS 4
35 mph	LTS 2	LTS 3	LTS 4
40 mph	LTS 3	LTS 4	LTS 4

Table 2-11 Level of Traffic Stress Criteria for Unsignalized Crossings with a Median Refuge Six Feet Wide

Speed Limit of Street Being Crossed	Width of Street Being Crossed		
	Up to 3 lanes	4-5 lanes	6+ lanes
Up to 25 mph	LTS 1	LTS 1	LTS 2
30 mph	LTS 1	LTS 2	LTS 3
35 mph	LTS 2	LTS 3	LTS 4
40 mph	LTS 3	LTS 4	LTS 4

Bicycle Network Connectivity

A bicycle connectivity analysis is used to measure the accessibility of a bicycle network to the community. Bicycle connectivity is measured in two ways, both using the ArcGIS Network Analyst tool:

1) Bikeshed Ratio, and
2) Low-Stress Bicycle Facility Connectivity

BIKESHED RATIO

The Bikeshed Ratio measures overall bicycle connectivity from any given point, by comparing the area accessible via the bicycle network within a given travel distance (the "bikeshed") to the area of an "as-the-crow-flies" radius covering the same travel distance:

$$\frac{\text{Area accessible via the bicycle network by traveling distance X}}{\text{Area accessible via "crow flies" traveling distance X}}$$

A higher Bikeshed Ratio at a given point indicates that the network provides better overall bicycle connectivity from that location.[7]

This analysis examined 135 points at study area intersections to create a comprehensive picture of the community bicycle connectivity. The analysis focused specifically on the area reachable between 0.25 miles and 1.0 mile from each point. The inner area within 0.25 miles from each point was removed from the assessment, as it is assumed to be utilized by pedestrian trips.

The ArcGIS Network Analyst tool conducted the core analysis using the Service Area function, by generating a doughnut-shaped (0.25-1.0 mile) "service area" for each point that is reachable via the bicycle network. Dividing that land area by the land area of a 0.25-1.0 "as-the-crow-flies" doughnut (1,884.95 acres) yields the Bikeshed Ratio for each point.

An overview of the existing Bikeshed Ratio analysis is provided in **Section 4.2.4**.

LOW-STRESS BICYCLE CONNECTIVITY

The Low-Stress Bicycle Connectivity analysis evaluates each Traffic Analysis Zone's (TAZ's) connectivity to the rest of the community via low-stress routes, characterized as LTS 1 or 2. The analysis assigns each TAZ a connectivity score based on the following ratio:

$$\frac{\text{Number of TAZs accessible via low-stress routes (LTS 1 or 2 only)}}{\text{Number of TAZs accessible via all routes}}$$

[7] *Due to the presence of natural features and other constraints, 65% is typically the highest Bikeshed Ratio that can be achieved in even the most ideal communities. In general, any score over 50% is considered ideal from a bicycle standpoint.*

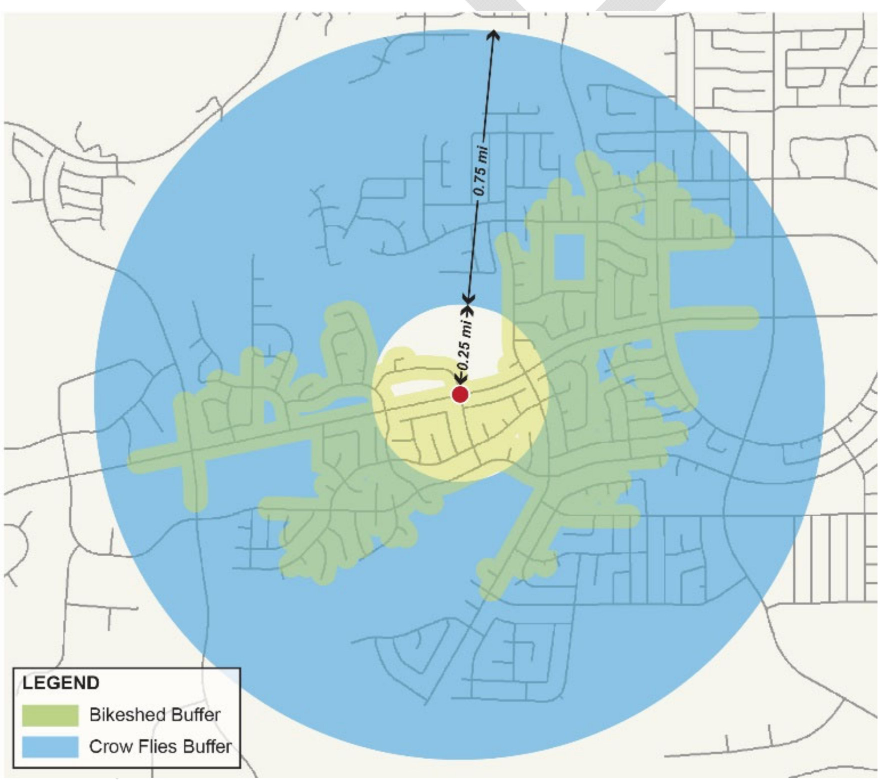
The ratio is developed using the following steps:

1. Assess the number of TAZs accessible via a bicycle network of low-stress routes only (classified as LTS 1 or 2), with LTS 3 and 4 routes removed as potential pathways and acting as barriers to crossing. The resulting number of TAZs represents the numerator of the above ratio.

2. Use the Closest Facility function of the ArcGIS Network Analyst tool to develop an unconstrained network of shortest paths to/from the centroids of all TAZs. Paths less than ¼ mile removed since they would likely be made by foot.

3. Assess the number of TAZs accessible by the entire unconstrained bicycle network with potential routes developed in the previous step. The resulting number of TAZs represents the denominator of the above ratio.

The ratio is calculated for each TAZ and reflects the percent of all other TAZs that are reachable along LTS 1 or 2 paths. The analysis results in each TAZ being assigned a percentage reflecting its level of connectivity to other TAZs in the community.



2.3 TRANSIT

Transit Demand

Transit demand is affected by both current ridership and potential ridership, as one of the primary factors that determines transit ridership is the proximity of stations to population and employment. Existing and potential transit demand was evaluated using three different sources and methodologies:

1. MTS Route Ridership Data (Existing Demand)
2. US Census Survey Commute Mode Share Data (Existing Demand)
3. US Census Survey Population Density Data (Potential Demand)
4. LODES Employment Density Data (Potential Demand)

MTS ROUTE RIDERSHIP DATA

Current transit demand was evaluated by obtaining boarding (riders getting on) and alighting (riders getting off) ridership information for all stations/stops within Mira Mesa from MTS (Spring 2017 data). The information was used to determine the following:

- Number of boardings and alightings by stop
- Ridership by route
- Locations with the highest boardings
- Locations with the highest alightings

US CENSUS SURVEY COMMUTE MODE SHARE DATA

The American Community Survey (ACS)[1] 5-year estimates commuting data (2012-2016) was utilized to understand the existing commute mode share by public transportation for the community. The ACS commuting data provides information about the means of transportation to work by employees 16 years and older for each census block group[2.] The means of transportation to work represents the commute mode within the community.

The ACS commuting data was filtered to the census block groups within the Mira Mesa community boundary. The "transit commute mode share" was then calculated as a percent of the total mode share. This was accomplished by taking the number of employees who take transit to work (B08301e10), divided by the total number of employees (B08301e1) for each block group, and multiplying it by 100 to develop a percent as shown below:

$$\text{Transit Commute Mode Share} = \left(\frac{\text{Total number of employees who take transit to work}}{\text{Total number of employees within each block group}}\right) \times 100$$

The "transit commute mode share" was compared to City and County of San Diego average pedestrian mode share percentages.

A summary of existing transit demand is provided in **Section 4.3.1**.

US CENSUS SURVEY POPULATION DENSITY DATA

The American Community Survey (ACS) 5-year estimate population data (2012-2016) was utilized to represent where people live. ACS provides population and demographic information for each census block group[3]. The ACS population data represents people living within census block group. The ACS population data was filtered to the census block groups within the Mira Mesa community boundary. Then, the population for each census block in Mira Mesa was divided by the area of the census block group in square miles to develop a population density.

To determine the relative level of potential transit ridership within the community, a set of pedestrian walksheds of 0.25-mile was generated from all transit stops. Each walkshed was then overlaid on top of the population data to determine the number of dwelling units that exist within walking distance from each transit stop.

A summary of population within walking distance of each transit stop is included in **Section 4.3.1**.

LODES EMPLOYMENT DENSITY DATA

Origin-Destination Employment Statistics (LODES)[8] data was utilized to represent where people work. within a census block level[9]. The data was filtered to the census blocks within the Mira Mesa community boundary. Then, the number of people working in each census block in Mira Mesa was divided by the area of the census block in square miles to develop an employment density.

A set of pedestrian walksheds of 0.25-mile was generated from all transit stops to determine the relative level of potential transit ridership within the community. Each walkshed was then overlaid on top of the employment data to determine the number of jobs that exist within walking distance from each transit stop.

A summary of employment within walking distance of each transit stop is included in **Section 4.3.1**.

Safety Near Transit Stop/Station

To understand existing pedestrian and bicycle safety issues near transit stations/stops, a safety assessment was performed using collision data obtained from the San Diego Police Department's Crossroads software (SDPD) for the period from October 2012 through September 2017. Collisions from SDPD were geocoded and mapped to display the locations of collisions within the Mira Mesa community.

A 500-foot buffer around transit stations within the community was applied to select the relevant bicycle- and pedestrian-involved collisions. A map showing the spatial distribution of combined pedestrian- and bicycle-involved collisions near a transit stop or station is also included in **Section 4.3.2**.

[8] LODES data is provided by Longitudinal Employer-Household Dynamics (LEHD). LEHD leverages existing data such as censuses, surveys, and administrative records to create new data products. The data files are state-based and organized into three types: Origin-Destination (OD), Residence Area Characteristics (RAC), and Workplace Area Chatacteristics (WAC), all at census block geographic level.

[9] A census block is the smallest geographic unit used by the US Census Bureau. Census blocks are grouped into block groups, which are grouped into census tracts.

Transit Quality

The quality of the transit system in Mira Mesa was evaluated based on the transit stations and stops throughout the community, as well as the speed of the corridors on which the transit facilities are located.

TRANSIT STATION/STOP QUALITY

Transit stations and stops were reviewed to identify the presence or absence of the following amenities:

- Shelters
- Benches
- Trash Receptacles
- Station Signs
- Maps/Wayfinding
- Lighting
- ADA compliance

The San Diego MTS designates minimum amenity standards for transit stops based on the average number of daily boardings that occur at each stop per the *MTS Design for Transit* manual.

Table 2-12 outlines the standard amenities that should be provided at transit stations/stops based on the daily passenger boardings (across all routes), according to MTS bus stop features guidelines[10].

Table 2-12 Transit Amenity Standards by Ridership Levels

Amenity	Daily Passenger Boardings by Station/Stop				
	< 50	50 -100	101 -200	201 – 500	> 500
Sign and Pole	X	X	X	X	
Built-in Sign					X
Expanded Sidewalk			X	X	X
Bench		X	X	X	X
Shelter			X	X	X
Route Designations	X	X	X	X	X
Time Table				X	X
Route Map			X	X	X
System Map					X
Trash Receptacle				X	X
Lighting			X	X	X
ADA Compliant	X	X	X	X	X

Source: Designing for Transit, MTS (1993)

A summary of ridership and amenities for all stations/stops in the Mira Mesa study area are reported in **Section 4.3.3**.

[10] *Designing for Transit: A Manual for Integrating Public Transportation and Land Development in the San Diego Metropolitan Area*. San Diego Metropolitan Transit Development Board (MTDB). 1993.

TRANSIT CORRIDOR QUALITY

On-time bus performance can be directly affected by vehicular traffic congestion along roadways serving bus routes. Travel times along certain corridors in the community were calculated using methodologies described in the vehicle section of this chapter. Any routes that utilize the corridors included in the evaluation are discussed for quality of service as it relates to speed. Further information on the travel time and speed is provided in the vehicle section of this chapter.

This information is presented in **Section 4.3.3**.

Transit Network Connectivity

The latent demand evaluation described under "Transit Demand" indicates the number of potential transit users (residents and employees) within the vicinity of each major transit stop in the community, using a 0.25-mile pedestrian network walkshed and a 0.75-mile bicycle network bikeshed.

The quality connections assessment draws from the quality walking analysis and quality bicycling analysis results (using only "high and medium" quality networks based on the bicycle and pedestrian analysis) to identify quality 0.25-mile pedestrian and 0.75-mile bicycle networks surrounding major transit stations/stops. These distances were defined and based upon information in the San Diego Forward: The Regional Plan, Appendix U4 – SANDAG Regional Transit Oriented Development Strategy, and represent a five-minute travel distance for pedestrians and cyclists.

A Quality Walk Ratio and a Quality Bicycle Ratio were then developed for each major transit station/stop and presented on a map using the following equations:

$$\text{Quality Walk Ratio from Transit} = \frac{\text{Quality Walking Distance from Transit}}{\text{Crow Flies Buffer from Transit}}$$

$$\text{Quality Bike Ratio from Transit} = \frac{\text{Quality Bike Distance from Transit}}{\text{Crow Flies Buffer from Transit}}$$

The resulting Quality Walk Ratio from Transit and Quality Bicycle Ratio from Transit are presented in **Section 4.3.4**.

2.4 VEHICLE

Vehicular Study Area

The vehicular study area encompasses the Mira Mesa Community Planning Area and one segment and intersection beyond the community boundary, in order to capture potential transportation impacts to the adjacent communities associated with the Mira Mesa Community Plan Update. **Figure 2-2** displays the vehicle study area and location of study intersections.

ROADWAY SEGMENTS AND CORRIDORS

Roadway segments were selected based on the following factors:

- Existing Circulation Element roadways functioning or classified as a collector or higher
- Anticipated Circulation Element roadways functioning or classified as a collector or higher
- Roadways providing access to/from freeways

All above roadways with the Mira Mesa community boundary, and approximately one segment beyond the community planning area were evaluated for a total of 195 roadway segments.

INTERSECTIONS

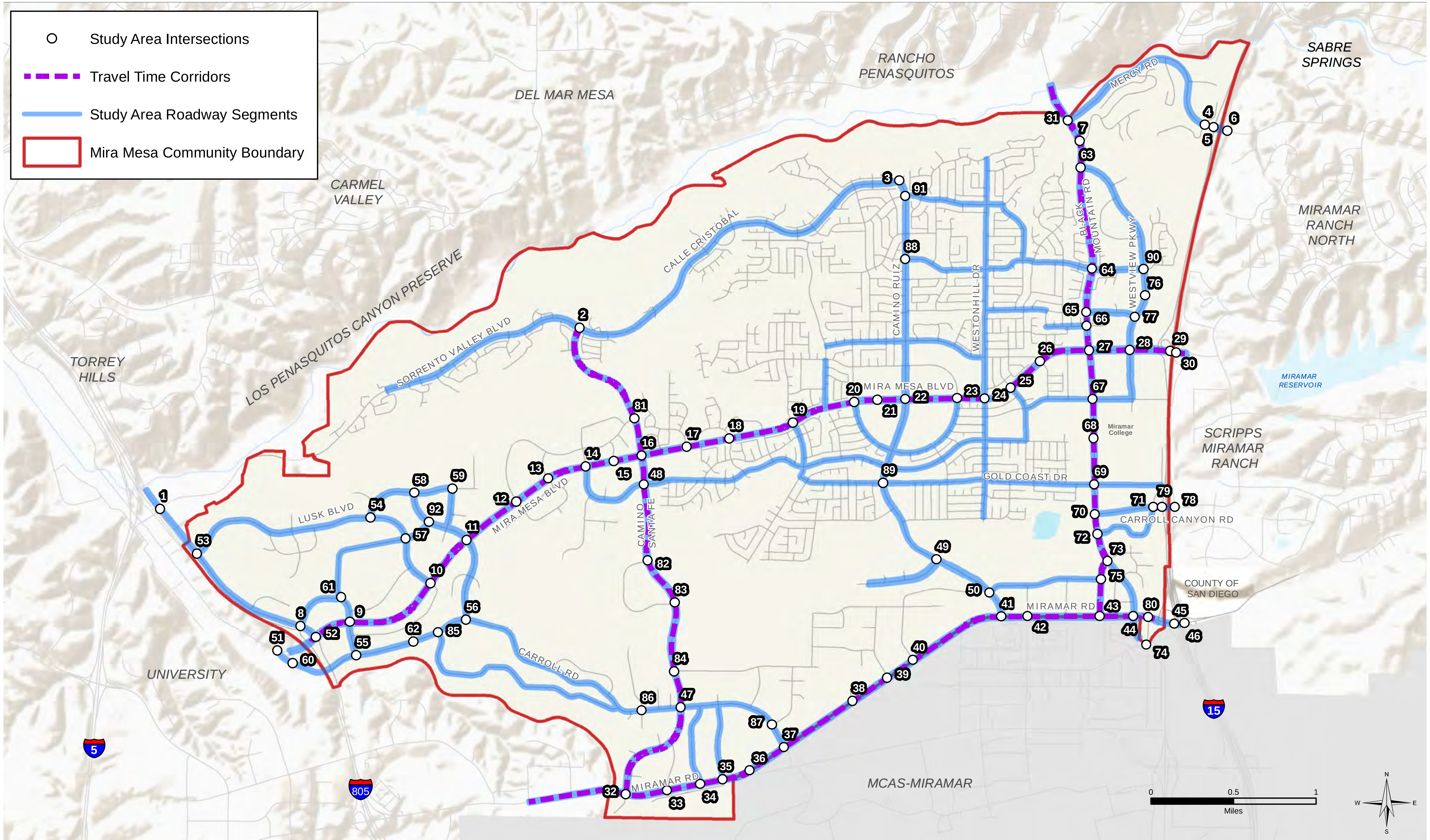
Intersections were selected based on the following factors:

- Existing and anticipated Circulation Element roadways intersecting with other existing and/or anticipated Circulation Element roadways where both roadways function or are classified as a collector or higher, where both intersecting streets meet one of the following conditions:
    - Four or more lanes;
    - 3-lane roadways carrying more than 15,000 ADT; or
    - 2-lane roadways carrying more than 10,000 ADT.
- Intersections that provide access to/from freeways located within the community
- Signalized intersections along corridors where travel time analysis is performed

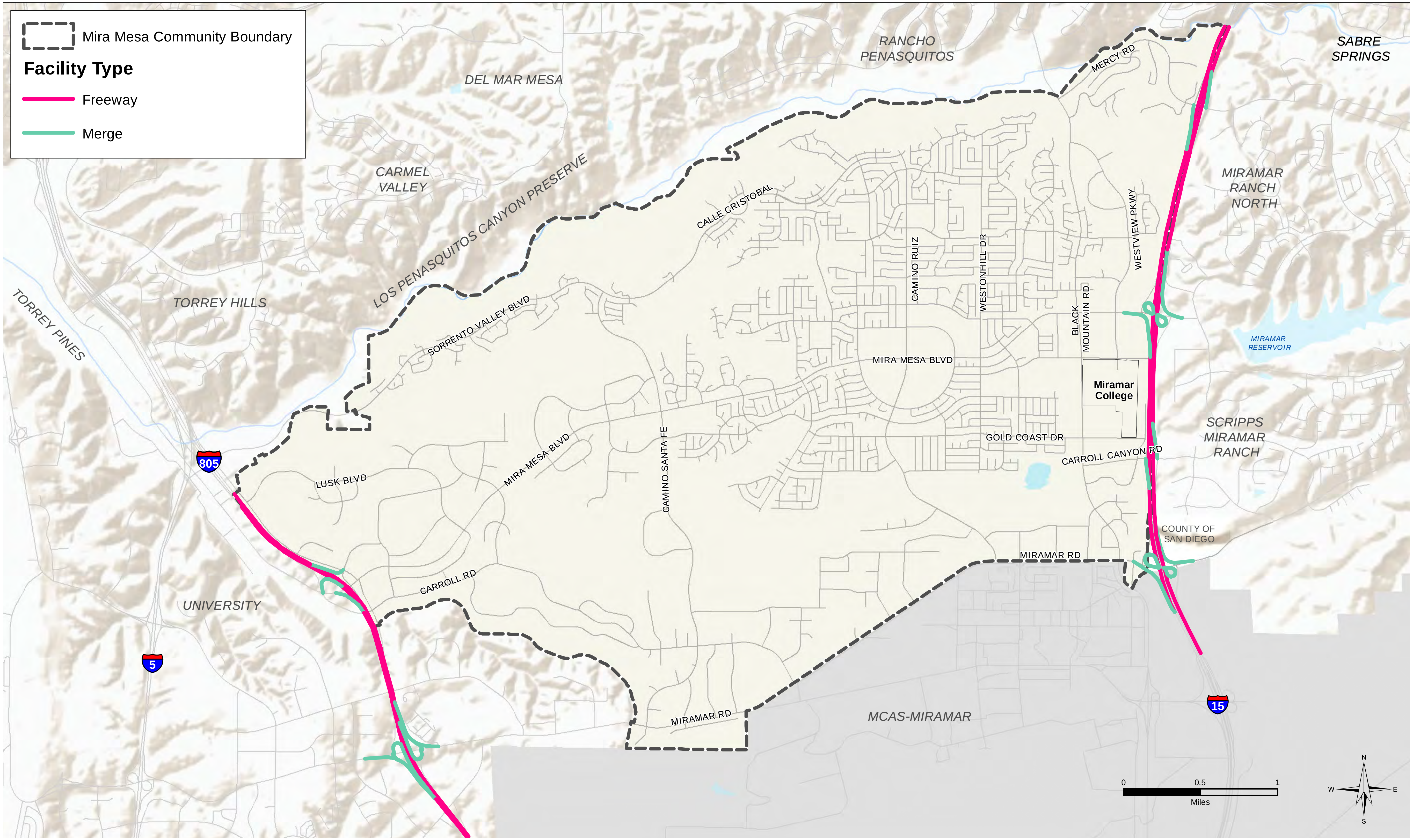
Using these criteria, a total of 92 intersections were included.

FREEWAY SEGMENTS AND RAMPS

Freeway segments adjacent to the community and freeway entrance ramps that are controlled by ramp meters are included in the study area. Figure 2-4 graphically displays the location of each of the freeway segments and entrance ramps included in the analysis study area. This includes facilities along I-15 on the east side of the community, and I-805 on the west side of the community.



Vehicular Analysis Study Area



Freeway Analysis Study Area

Vehicular Demand

Existing demand was determined using a combination of data obtained, including:

- Intersection turning movement counts at study intersections during peak hours,
- Daily roadway volumes on study roadways
- Caltrans-published peak-hour and daily volumes for study area freeway facilities.

Vehicular Safety

To further understand existing safety issues, a safety assessment was performed using collision data from October 2012 to September 2017 obtained from the San Diego Police Department's Crossroads software (SDPD). All collisions from SDPD were geocoded and mapped to display the locations of collisions within the Mira Mesa community.

Several tables were created to further understand safety issues and trends within the community, including:

1. High-frequency collision locations,
2. Fatal collision locations,
3. Collision Types, and
4. Primary Cause.

Similar to the evaluation for pedestrians and bicycles, collision location types were identified as intersection, midblock, or approaching/departing intersection.

- Collisions that occurred within 100 feet of the center of the intersection were identified as intersection collisions to account for vehicles that are queued at the intersection.
- Collisions that occurred between 100 feet and 350 feet from the center of the intersection were identified as approaching/departing collisions. This net 250 feet is reflective of the stopping sight distance of a vehicle travelling at 35 mph.
- Collisions that occurred at a distance over 350 feet away from the center of the intersection were identified as mid-block collisions.

Maps showing the spatial distribution and concentration of vehicle-involved collisions was created. The results of the vehicular safety analysis are summarized in **Section 4.4.2**.

Vehicular Quality

Analysis of the vehicular systems – roadways, intersections and freeways – were prepared for this study in accordance with City and SANTEC/ITE Traffic Impact Study Guidelines. The vehicular analysis provides an evaluation of vehicular operations at intersections and along roadway and freeway segments. A description of the methodologies employed to evaluate vehicular travel is outlined throughout this section.

Level of Service (LOS) is a quantitative measure representing the quality of service from the driver's perspective. LOS A represents optimal conditions for the driver, while LOS F represents the worst. **Table 2-13** describes generalized definitions of auto LOS A through F.

Table 2-13 Vehicular Level of Service Definitions

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

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

CORRIDOR SPEED ANALYSIS

Corridors within the community were selected for analysis of travel time during the peak hours in addition to the estimated daily capacity. The corridor analysis consisted of three procedures:

- travel time runs performed under actual conditions,
- crowd-sourced data collection, and
- simulated travel time using traffic analysis software.

Field-Collected Travel Time Data

Travel time runs were performed using the floating car method. This method simulates average travel speed along a corridor by maintaining a similar position within vehicle progression bands. This provides a real point in time to compare with the crowd-sourced data and calibrate travel time expectations. The field-collected travel time data was obtained via the Traction application developed by Kimley-Horn and was compared with the crowd-sourced data to validate the information reflects a typical experience.

Crowd-Sourced Travel Time Data

Traction software was utilized to capture crowd-sourced travel times for a one-month period along the corridors. Data was collected at 10-minute intervals between 5:00 AM and 9:00 PM. This data provides information to show fluctuations in travel times at different times of days and on different days of the week. Further, it gives the ability to validate the field-collected travel time data.

Simulated Travel Time Data

A computerized estimate of arterial speed analysis was performed utilizing the Synchro 10 traffic analysis software (by Trafficware, 2011) and 6th Edition HCM methodology. The software provides a computation of LOS using average vehicle travel speed. This average speed is computed by adding the running time between signalized intersections assuming free flow speed along the corridor combined with the control delay associated with each signalized intersection.

Average speed is strongly influenced by the number of signals per mile and the average intersection delay. On a given facility, factors such as inappropriate signal timing, poor progression, and increasing traffic flow can substantially degrade the arterial LOS. **Table 2-14** presents the arterial LOS criteria based on the urban street class and average travel speed.

Table 2-14 Urban Street LOS Criteria

LOS	Travel Speed Threshold by Base Free-Flow Speed (mi/h)							Volume-to-Capacity Ratio*
	55	50	45	40	35	30	25	
A	> 44	>40	>36	>32	>28	>24	>20	≤1.0
B	>37	>34	>30	>27	>23	>20	>17	
C	>28	>25	>23	>20	>18	>15	>13	
D	>22	>20	>18	>16	>14	>12	>10	
E	>17	>15	>14	>12	>11	>9	>8	
F	≤17	≤15	≤14	≤12	≤11	≤9	≤8	
F	Any							>1.0

Source: Highway Capacity Manual 6th Edition, Chapter 18, Page 18-7, Exhibit 18-1
Note: * Volume-to-capacity ratio of through movement at downstream boundary intersection.

ROADWAY SEGMENT ANALYSIS

The analysis of roadway segment is LOS based on the functional classification of the roadway, the maximum capacity, roadway geometrics, and existing or forecast Average Daily Traffic (ADT) volumes. **Table 2-15** presents the roadway segment capacity and LOS standards utilized to analyze roadways evaluated in this report.

These standards are generally used as long-range planning guidelines to determine the functional classification of roadways. The actual capacity of a roadway facility varies according to its physical and operational attributes. LOS D is considered acceptable for Mobility Element roadway segments in the City of San Diego. Often, a roadway segment that is analyzed to be LOS E or F based on theoretical capacity is found to operate acceptably in practice. In such cases, HCM arterial analysis may be conducted and utilized (or intersection analysis, if arterial analysis is not applicable) to provide a more accurate indication of LOS.

Table 2-15 City of San Diego Roadway Segment Capacity and LOS Summary

Road Class	Lanes	A	B	C	D	E
Freeway	8	60,000	84,000	120,000	140,000	150,000
Freeway	6	45,000	63,000	90,000	110,000	120,000
Freeway	4	30,000	42,000	60,000	70,000	80,000
Expressway	6	30,000	42,000	60,000	70,000	80,000
Prime Arterial*	8	35,000	50,000	70,000	75,000	80,000
Prime Arterial*	7	30,000	42,500	60,000	65,000	70,000
Prime Arterial	6	25,000	35,000	50,000	55,000	60,000
Major Arterial*	7	22,500	31,500	45,000	50,000	55,000
Major Arterial	6	20,000	28,000	40,000	45,000	50,000
Major Arterial*	5	17,500	24,500	35,000	40,000	45,000
Major Arterial	4	15,000	21,000	30,000	35,000	40,000
Major Arterial*	2	7,500	10,500	15,000	17,500	20,000
Collector (w/ two-way left-turn lane)	4	10,000	14,000	20,000	25,000	30,000
Collector (w/o two-way left-turn lane) Collector (w/ two-way left-turn lane)	4 2	5,000	7,000	10,000	13,000	15,000
Collector (No fronting property)	2	4,000	5,500	7,500	9,000	10,000
Collector (w/o two-way left-turn lane)	2	2,500	3,500	5,00	6,500	8,000
Sub-Collector (single-family)	2	---	---	2,200	---	---

Notes:

The volumes and the average daily level of service listed above are only intended as a general planning guideline.

Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

[1]Cross Section: Curb to Curb width (feet)/Right-of-way width (feet)

Sources:

City of San Diego Traffic Impact Study Manual, Table 2, Page 8, July 1998.

*City of San Diego Planning Department Mobility Staff Input

PEAK HOUR ARTERIAL ANALYSIS

Average arterial travel speed is strongly influenced by the number of signals per mile and the average intersection delay. On a given facility, factors such as inappropriate signal timing, poor progression, and increasing traffic flow can substantially degrade the arterial efficiency.

Typically, Synchro arterial analysis is used to determine the arterial speeds and resulting levels of service. However, this method was not producing results that agreed with the travel time data or the crowd-sourced data that was collected.

Synchro is a macroscopic analysis tool that has limitations by nature. Therefore, Synchro's microscopic counterpart SimTraffic was used to determine the arterial speeds for the study corridors. SimTraffic utilizes the data input into Synchro to build a model that measures the full impact of intersection queuing and blocking. SimTraffic was run three times for the AM and PM peak models to obtain average corridor speeds for the study segments. The SimTraffic arterial reports are provided in **Appendix G**.

PEAK HOUR INTERSECTION ANALYSIS

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

- **Volumes**: Collected turning movement counts and selected the single hour in the morning and afternoon that has the highest total intersection volume, independently evaluated for each individual intersection.
- **Peak Hour Factor**: Obtained from the turning movement count data for the highest total intersection volume, independently evaluated for each individual intersection. Peak Hour Factors were calculated and evaluated by intersection approach (eastbound, westbound, northbound, and southbound).
- **Pedestrian Calls per Hour**: Collected existing pedestrian counts during peak hours.
- **Heavy Vehicle Factor**: Heavy vehicles are defined as vehicles with three or more axles. Two percent is the standard, default heavy vehicle factor provided in HCM and Synchro 10 software.
    - At select locations where heavy vehicles are anticipated, vehicle classification data was included in the daily traffic volume data collection. Heavy vehicle factors along these corridors were assigned for the through movements at those respective intersection approaches along that corridor.
    - Where information was not collected, a heavy vehicle factor of two percent was assumed.
- **Signal Timing**: Obtained from existing signal timing plans.
- **Lane Geometry and Control**: Documented at the time counts were collected. Defacto right-turn lanes for signalized intersections were assessed based on criteria developed in coordination with the City.

Table 2-16 summarizes the LOS criteria for unsignalized intersections. Consistent with City policy, LOS D will be used in this study as the goal LOS to achieve for peak hour intersection operations.

Table 2-16. LOS Criteria for Intersections

LOS	Control Delay (sec/veh)		Description
	Signalized Intersections (a)	Unsignalized Intersections (b)	
A	≤10.0	≤10.0	Operations with very low delay and most vehicles do not stop.
B	>10.0 and ≤20.0	>10.0 and ≤15.0	Operations with good progression but with some restricted movement.
C	>20.0 and ≤35.0	>15.0 and ≤25.0	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35.0 and ≤55.0	>25.0 and ≤35.0	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines
E	>55.0 and ≤80.0	>35.0 and ≤50.0	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80.0	>50.0	Operations that is unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

Notes:

(a) Highway Capacity Manual 6th Edition, Chapter 19, Page 16, Exhibit 19-16
(b) Highway Capacity Manual 6th Edition, Chapter 20, Page 6, Exhibit 20-2

Signalized Intersections Analysis

The signalized intersection analysis utilized in this study conforms to the operational analysis methodology outlined in 6th Edition Highway Capacity Manual (HCM6). This method defines LOS in terms of delay, or more specifically, average control delay per vehicle (seconds/vehicle).

The HCM6 methodology sets 1,900 passenger-cars per hour per lane (pcphpl) as the ideal saturation flow rate at signalized intersections based upon the minimum headway that can be sustained between departing vehicles at a signalized intersection. The service saturation flow rate, which reflects the saturation flow rate specific to the study facility, is determined by adjusting the ideal saturation flow rate for lane width, on-street parking, bus stops, pedestrian volume, traffic composition (or percentage of heavy vehicles), and shared lane movements (e.g. through and right-turn movements sharing the same lane). The LOS criteria used for this technique are described in Table 2-16. The computerized analysis of intersection operations will be performed utilizing the Synchro 10 (HCM6 methodology) traffic analysis software (by Trafficware).

LOS for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and loss of travel time. Specifically, LOS criteria are stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay.

Synchro 10 (Trafficware) software was used to analyze signalized intersections in the study area. Synchro provides the option to report methodologies for both 6th Edition and 2000 Editions of the HCM. The 6th Edition version of the HCM focused more on specific controller set ups, and due to these changes, there are several limitations within Synchro that do not allow results to be produced for an intersection. Some of these limitations include:

- Exclusive pedestrian phases
- Exclusive U-turn phases
- Right turn overlaps with through movements
- Permissive left turns yielding to pedestrians at a T-intersection
- Split phasing

For the intersections within the community that were not be able to produce results using the 6th Edition HCM methodology using existing signal timing settings, adjustments to the signal timing parameters, phasings, and/or geometries were made to represent similar operations but allow the Synchro software to publish 6th edition HCM results. Intersections were evaluated on a case-by-case basis to ensure the adjustments were producing similar results between the 6th Edition and 2000 Edition outputs. **Appendix F** summarizes the modifications that were made to each intersection in order to produce HCM 6th Edition results.

Unsignalized Intersections Analysis

Unsignalized intersections, including two-way and all-way stop controlled intersections were analyzed using the 6th Edition HCM unsignalized intersection analysis methodology. The Synchro 10 software supports this methodology and will be utilized to produce LOS results. LOS for unsignalized intersections is determined by the computed or measured control delay and is defined for each movement. At an all-way stop control intersection, the delay reported is the average control delay of all movements at the intersection. At a one-way or two-way stop control intersection, the delay reported represents the worst movement, which is typically the left-turn from the minor street approach.

Intersection Queue Analysis

Queuing analysis was performed for all exclusive turn lanes with storage length for all 92 study intersections. Storage lengths were measured based on the length of the lane in which a vehicle could queue rather than the length of the solid white line. Queue lengths were obtained from Synchro software.

FREEWAY SEGMENT ANALYSIS

Freeway segments were analyzed during the AM and PM peak hours based on the methodologies outlined in the 2000 HCM. The free-flow speed of each freeway segment was calculated based on a base free-flow speed of 65 mph, which is consistent with Caltrans' requirements for analyzing freeway segments. Factors affecting the free-flow speed of each segment include the lane width, lateral clearance, number of lanes, interchange density, and geometric design. Based on each segment's free-flow speed, the density was calculated, which is the primary factor for determining the segment's LOS. **Table 2-17** presents the freeway segment criteria based on density.

Table 2-17 Freeway Segment LOS Criteria

LOS	Density Range (pc/mi/ln)*
A	≤ 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	> 45 or any component segment v/c ratio > 1.00

Source: HCM 6th Edition, Chapter 12, Page 12-19, Exhibit 12-15

* passenger car per mile per lane

FREEWAY RAMP METER ANALYSIS

Ramp metering is a means of controlling the volume of traffic entering the freeway with the goal of improving the safety, traffic operations, and flow on the freeway main lanes. Freeway ramp meter analysis estimates the peak hour queues and delays at freeway ramps by comparing existing volumes to the meter rate at the given location. The fixed rate and uniform 15-minute maximum delay approaches are two approaches that are currently accepted by the City. The fixed rate approach is based solely on the specific time intervals that ramp meters are programmed to release traffic. The uniform 15-minute approach is based on the assumption that any demand exceeding 15-minutes will seek an alternate route or will choose to use the ramp during other time periods when the traffic demand is lower. The fixed rate approach was utilized in this study to analyze freeway ramp meters.

The excess demand at a freeway ramp forms the basis for calculating the maximum queues and maximum delays anticipated at each location. Substantial queues and delays can form where demand significantly exceeds the meter rate. This approach assumes a static rate throughout the course of the peak hour; however, Caltrans has indicated that the meter rates operate in a traffic responsive mode and based on the level of traffic using the on ramp. To the extent possible, the meter rate in the field is set such that the queue length does not exceed the available storage, smooth flows on the freeway mainline are maintained, and there is no interference to arterial traffic.

Meter rates were provided by Caltrans and include a range between the least and most restrictive rates. Since many of the freeways currently operate at or above its capacity during the peak hours, the most restrictive rate was used for the analysis. Some rates were adjusted within the range of rates provided to better reflect queue lengths consistent with field observations. The field observations were completed at each ramp meter location.

The following list contains the assumptions used for the existing conditions ramp meter analyses based on field observations:

- Storage length measured from recent aerials of the area
- 20% High Occupancy Vehicle (HOV)
- 80% Single Occupancy Vehicle (SOV) and evenly distributed between the SOV lanes
- 25-foot vehicle length

Vehicular Network Connectivity

Senate Bill 743 (SB 743) was signed into law in September 2013, modifying the existing California Environmental Quality Act (CEQA) by removing auto delay, level of service (LOS), parking and other vehicular capacity measures as metrics of transportation system impacts for mixed-use, infill or transit oriented development projects. Vehicle miles travelled (VMT) is considered the new analysis metric used to measure transportation impacts. VMT is a reflection of the land use type, intensity and location in relation to the capacity and roadway connectivity of the transportation network. It is also influenced by the availability and quality of multimodal facilities, and system operations.

VMT changes between existing and future land uses will be evaluated in the future mobility analyses when traffic models are prepared. This report did not rely on traffic models for its information and did not complete a community-wide VMT.

3 REVIEW OF RELEVANT PLANNING DOCUMENTS

This section provides information on other planning documents that include Mira Mesa community.

3.1 CITY OF SAN DIEGO PLANS, PROGRAMS, AND PROJECTS

CITY OF SAN DIEGO GENERAL PLAN – MOBILITY ELEMENT

Adopted in 2008 and amended in 2015, the City of San Diego's General Plan Mobility Element identifies the proposed transportation network and strategies that have been designed to meet the future transportation needs generated by planned land uses in the General Plan. The purpose of the Mobility Element is to improve mobility through development of a balanced, multi-modal transportation network. The Mobility Element includes several programs, including but not limited:

- Walkable Communities
- Transit
- Street and Freeway System
- Intelligent Transportation Systems
- Transportation Demand Management
- Bicycling
- Parking management
- Goods Movement/Freight
- Regional Coordination/Financing
- Passenger Rail

Within each of the above programs is series of policies designed to help achieve the goals of the program itself.

CURRENT MIRA MESA COMMUNITY PLAN

Adopted in 1992, the Mira Mesa Community Plan includes a series of goals and recommendations that guided development in the community for the subsequent 27 years. The Mira Mesa Community Plan contains a series of goals and objectives established with input by the residents, property owners, and business owners of the Mira Mesa community, and were also consistent with citywide policies and the time of its adoption. The objectives for transportation include:

- an efficient and environmentally sensitive transportation system;
- a transportation system that provides convenient linkages to the community's activity centers and to the rest of the metropolitan region;
- a transportation system that maximizes the opportunities for transit use; and
- a system of bikeways and pedestrian facilities that will encourage bicycling and walking as means of transportation

Using these goals and the analysis performed at the time of its creation, the adopted Mira Mesa Community Plan includes recommended changes to street classifications, intersection improvements, public transit service, pedestrian facilities, bikeway system, and trail systems within the Mira Mesa community. These recommendations will be reviewed and updated as part of the analysis conducted for the Mira Mesa Community Plan Update.

The adopted Mira Mesa Community Plan also evaluated with and without a Camino Ruiz bridge crossing over the Los Peñasquitos Canyon Preserve. The Plan proposes that Camino Ruiz terminate just north of Calle Cristobal and not provide the bridge connection.

CITY OF SAN DIEGO CAPITAL IMPROVEMENTS PROGRAM (CIP)

The City's Capital Improvements Program (CIP) is the five-year plan for all individual capital improvement projects and funding sources. CIP projects are unique construction projects that provide improvements or additions such as land, buildings, and infrastructure.

The CIP helps enhance the overall quality of life in the City by improving the physical structures, systems, and facilities that provide services to the community. CIP projects are generally large and expensive, and the assets they install, replace, or rehabilitate will likely be required for decades of public use.

Table 3-1 summarizes the transportation projects within Mira Mesa that are identified in the CIP as being within the preliminary engineering, design, bid and award, or construction phase:

Table 3-1 Capital Improvement Program Projects

Project Number	Project Name	Phase	Funding Status
B17188	Street reconstruction of Gold Coast Drive from Thanksgiving Lane to Camino Ruiz and Parkdale Avenue from Northrup to Mira Mesa Boulevard	*Preliminary engineering*	*Partially funded*
S00914	Sorrento Valley Road & Interstate 5 Interchange Improvements	*Design*	*Partially funded*
B14012 **B15012** **B16007** **B16008** **B17050** **B17051**	Install street lights in various locations	*Design; Bid/Award; Construction*	*Partially funded*
B14048 **B00902**	Upgrade curb ramps and remove signal poles off medians, install pedestrian countdown times, upgrade vehicle heads and install EVPE	*Construction*	*Fully funded*

CITY OF SAN DIEGO CLIMATE ACTION PLAN

Adopted in December 2015 and amended in July 2016, the City of San Diego's Climate Action Plan (CAP) aims to reduce greenhouse gas (GHG) emissions to specific targets in the year 2020 and 2035. The CAP aims to reduce emissions in part through a variety of improvements to existing vehicular, pedestrian, bicycling, and transit networks. It includes goals to create walkable and pedestrian-friendly neighborhoods and to promote active transportation and rapid transit systems.

Several of the targets included in the CAP are related to performance within transit priority areas. Per California Senate Bill 743 (SB 743), "Transit priority area" means "an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." A Major Transit Stop, as defined in the California Public Resources Code (CPRC) Section 21064.3, means: a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes each having a frequency of service of 15 minutes or less during the morning and afternoon peak commute periods.

Among others, the CAP specifically identifies the following actions as targets which would reduce overall GHG emissions:

- Achieve mass transit mode share of 12% by 2020 and 25% by 2035 in Transit Priority Areas.
- Achieve walking commuter mode share of 4% by 2020 and 7% by 2035 in Transit Priority Areas.
- Achieve 6% bicycle commuter mode share by 2020 and 18% mode share by 2035 in Transit Priority Areas.
- Retime 200 traffic signals by 2020.
- Install roundabouts at 15 intersections by 2020 and an additional 20 intersections by 2035.
- Reduce average vehicle commute distance by two miles through implementation of the General Plan City of Villages Strategy by 2035.

The CAP also identifies the following supporting measures for walking, biking, and transit:

- Implement bicycle improvements concurrent with street re-surfacing projects, including lane diets, green bike lanes, sharrows, and buffered bike lanes.
- Implement a bicycle sharing program with DecoBikes. Reduce the "1 mile" barrier gap by ensuring that further expansion of the bike share program is designed and implemented to reduce the distance needed to travel between transit stops and destinations.
- Identify and address gaps in the City's pedestrian network and opportunities for improved pedestrian crossings, using the City's Pedestrian Master Plan and the City's sidewalk assessment.
- Adopt City portions of SANDAG's forthcoming first mile/last mile initiative and incorporate Safe Routes to Transit strategies in Transit Priority Areas.
- Coordinate pedestrian counting programs with SANDAG and SDSU Active Transportation Research Programs.
- Develop a Parking Plan to include measures such as "unbundled parking" for nonresidential and residential sectors in urban areas.
- Prepare a Commuter Report with measures to increase commuting by transit for City employees.

- Achieve better walkability and transit-supportive densities by locating a majority of all new residential development within Transit Priority Areas.
- Develop a new priority ranking for capital improvement projects in Transit Priority Areas that will be integrated into Council Policy 800-14, Community Development Block Grant and other grant opportunities, and Public Facilities Financing Plans.
- In addition to commuting, implement infrastructure improvements including “complete streets” to facilitate alternative transportation modes for all travel trips.
- The most recent version of the California Office of Environmental Health Hazard Assessment (OEHHA) CalEnviroScreen tool will be used as one method to identify and help prioritize, when possible, underserved communities in census tracts ranking in the top 30% of CalEnviroScreen scores, which may be locally normalized, for transit-related infrastructure improvements and capital improvements.

CITY OF SAN DIEGO BICYCLE MASTER PLAN

Adopted in December 2013, the City Bicycle Master Plan (BMP) presents a vision for bicycle transportation, recreation and quality of life in San Diego. The vision is closely aligned with the 2008 General Plan’s mobility, sustainability, health, economic, and social goals. The bicycle network, projects, policies, and programs included in the Bicycle Master Plan provide the City with a strong framework for improving bicycling through 2030 and beyond.

The goals of the BMP are to create:

- A city where bicycling is a viable travel choice, particularly for trips of less than five miles
- A safe and comprehensive local and regional bikeway network
- Environmental quality, public health, recreation and mobility benefits through increased bicycling

The BMP proposes the following key bicycle facilities within the Mira Mesa community planning area:

- Mira Mesa Boulevard, Parkdale Road to Interstate 15: Class II (gap closures)

CITY OF SAN DIEGO PEDESTRIAN MASTER PLAN

Adopted in December 2006, the City Pedestrian Master Plan guides the way the City plans and implements new or enhanced pedestrian projects. The Pedestrian Master Plan helps the City enhance neighborhood quality and mobility options by facilitating pedestrian improvement projects. The Plan identifies and prioritizes pedestrian projects based on technical analysis and community input, and improves the City’s ability to receive grant funding for implementing these projects.

The Pedestrian Master Plan is intended to be a complementary document to the General Plan, the Transit Oriented Development Guidelines, the San Diego Association of Government’s (SANDAG) Planning and Designing for Pedestrians, the Street Design Manual and more specifically, the Mobility Element of the City’s General Plan.

The vision statement for the Pedestrian Master Plan is: “To create a safe, accessible, connected and walkable pedestrian environment that enhances neighborhood quality and promotes walking as a practical and attractive means of transportation in a cost-effective manner." The goals which both support the vision statement and serve as project prioritization criteria are:

- Safety: Create a safe pedestrian network free of barriers and tripping hazards that has sufficient street crossings, buffer pedestrians from vehicles and has facilities wide enough to accommodate peak pedestrian use.
- Accessibility: Make facilities accessible to pedestrians of all abilities and meet all local, state, and federal requirements.
- Connectivity: Develop a complete pedestrian network that provides direct and convenient connections for neighborhoods, employment centers, transit stations, public places and community destinations.
- Walkability: Create pedestrian facilities that offer amenities to encourage usage and to enhance the pedestrian experience.

The Pedestrian Master Plan concludes with "Phase Two Guidance" providing direction for community-level Pedestrian Master Plans (CPMP). The guidance aims to establish a level of consistency among the plans and analysis methodologies utilized.

CITY OF SAN DIEGO TRANSPORTATION UNFUNDED NEEDS LIST (TUNL) PROJECTS

As noted previously, the City's CIP identifies projects that help enhance the overall quality of life in the City by improving, among other things, transportation infrastructure. Projects included in the CIP are funded via a variety of sources, including bonds, development impact fees, and City general funds, among others.

Often times, sufficient funding does not exist for all mobility projects that are identified in the CIP. As such, projects without identified funding are included in the Transportation Unfunded Needs List (TUNL). The TUNL is maintained by the City to keep an inventory of projects which can be implemented should sufficient funding become available. Projects included in the TUNL may or may not be identified in other planning documents. **Table 3-2** provides a brief description, location, type, and status of current TUNL projects within the Mira Mesa Community Plan area.

Table 3-2 Transportation Unfunded Needs List (TUNL) Projects

ID	Location	Description
Roadway Segments/Intersections		
47	Black Mountain Rd - Gemini Ave to Mira Mesa Blvd	Widen the east side of Black Mountain Road from Gemini Avenue to Mira Mesa Boulevard for an additional northbound lane. Class II Bike Lanes are included.
48	Black Mountain Rd - Galvin Ave to Gemini Ave	Widen to a 6-Lane Prime Arterial with Class II Bike Lanes.
36	Carroll Canyon Rd - Camino Santa Fe to Camino Ruiz	Construct 6-lane facility
56	Kearny Villa Rd - Black Mountain Rd to 600' s/o Miramar Rd	Widen to a 6-Lane Prime Arterial with Class II Bike Lanes
57	Carroll Canyon Rd - Scranton Rd to El Camino Memorial Park Western Entrance	Provide all necessary improvements to upgrade to standards for a 4-Lane Major Arterial and install traffic signals at Scranton Road and Nancy Ridge Road intersection.
53	Miramar Rd at Kearny Villa Rd	Widen both the east and west legs of Miramar Rd at the intersection by adding additional left hand and right-hand turn lanes.
55	Black Mountain Rd - Gold Coast Dr to Maya Linda Rd	Provide for the widening of a 6-Lane Prime Arterial with Class II Bike Lanes
51	Camino Santa Fe at Miramar Rd	Widen both the north leg of Camino Santa Fe and the east leg of Miramar Road by adding a SB to WB right turn lane and a WB to NB right turn lane.
39	Camino Ruiz - Gold Coast Dr to Jade Coast Dr and 400' north of Miralani Dr to Miramar Rd	Widen these segments of Camino Ruiz to a modified 6-Lane Major Arterial. Class II Bicycle Lanes will be installed from Mira Mesa Blvd to Gold Coast Dr and within the project limits.
42	Black Mountain Rd at Mira Mesa Blvd	Widen Black Mountain Road to provide a NB right turn lane with Class II Bike Lanes.
49	Black Mountain Rd - Hillery Dr to Gold Coast Dr	Widen to a 6-Lane Prime Arterial with Class II Bike Lanes.
54	Black Mountain Rd - Mira Mesa Blvd to Hillery Dr	Widen to a 6-Lane Prime Arterial with Class II Bike Lanes.
52	Black Mountain Rd at Mercy Rd	Widen Black Mountain Road to provide an additional NB through lane.
33	Mira Mesa Blvd - Black Mountain Rd to I-15	Widen to provide an 8-lane Prime Arterial with landscaped median and Class II Bike Lanes.

ID	Location	Description
35	Carroll Canyon Rd - Carroll Rd to Camino Ruiz	Construct a 4 and 6 Lane Major Arterial with Class II Bike Lanes. Section 5A is from the Western Fenton Property Boundary westerly to Carroll Road. Section 5B is from Camino Santa Fe westerly to Fenton Property Boundary. Section 5C is from Camino Ruiz westerly to Camino Santa Fe.
37	Carroll Canyon Rd - Camino Ruiz to Black Mountain Rd	Construct as a 6-Lane Major Arterial with Class II Bike Lanes from Camino Ruiz to Maya Linda Rd. Construct as a 4-Lane Major Arterial with Class II Bike Lanes from Maya Linda Rd to Black Mountain Rd. Include medians consistent with Community Plan.
38	Maya Linda Rd - Carroll Canyon Rd to Black Mountain Rd	Construct as a 4-Lane Collector with Class II Bicycle Lanes. Include median consistent with Community Plan.
40	Camino Ruiz - Jade Coast Dr to Maralani Dr	This project pertains to Camino Ruiz from the East Leg of Jade Coast Drive to Miralani Drive for the northbound side and, southbound side, from Jade Coast Drive to the northern most boundaries of the Miralani Business Park. Provides for the widening of Camino Ruiz to a 6-Lane Major Arterial with a 14-ft wide, landscaped, raised-center-median (with dual 10-ft left-turn lanes at Carroll Canyon Road), streetlights, and Class II Bike Lanes. Reconstruct existing curve to increase stop/sight distance.
50	Camino Santa Fe - Carroll Rd to 350' s/o Commerce Ave	Widen to a 6-Lane Major Arterial with Class II Bike Lanes.
Traffic Signals		
43	Aquarius Dr at Camino Ruiz	Install a new traffic signal. Is listed in the Mira Mesa FFP as project 15-40 (8), for construction in 2015 at an est cost of $250,000, FBA. Community group voted in favor of signal May 19th, 2014
1319	Carroll Rd at Nancy Ridge Dr	Install a new traffic signal
44	Carroll Canyon Rd at Carroll Rd	Install a traffic signal at the future intersection of Carroll Canyon Road (now Fenton Rd) & Carroll Road.
Street Enhancements		
2	Camino Ruiz at Capricorn Wy	Extend the existing raised median nose further north and prohibit left turning movements near the intersection.
Pedestrian		
	Missing Sidewalk Inventory	

ID	Location	Description
46	Black Mountain Rd - Mid-block between Gold Coast Dr & Hillery Dr	Provide a mid-block pedestrian bridge across Black Mountain Road.
Traffic Calming		
6858	Flanders Dr at Flanders Pl	Install two Pedestrian Activated Flashing Beacons at the intersection.
7057	Montongo St at Goleta Rd	Install Pedestrian Activated Flashing Beacon at the intersection.
721	Avenida Del Gato at Zapata Ave	Install a Type 1A Flashing Yellow Beacon with school warning sign facing NB traffic.
722	Avenida Del Gato at Los Sabalos	Install a Type 1A Flashing Yellow Beacon with school warning sign facing SB traffic.
7752	Mercy Rd - Chabola Rd to Alemania Rd	Install two V-calm signs.
7632	Calle Cristobal - Near Frames Port Pl	Install one V-calm sign facing WB traffic.
7055	Mesa Rim Road	Install two V-calm signs.
7056	Miramar Way	Install two V-calm signs.
8061	Camino Ruiz - Westmore Rd to Capricorn Wy	Install one V-calm sign facing NB traffic.
8062	Calle Cristobal - Camino Ruiz to Camino Santa Fe	Install two V-calm signs.
Bicycle		
444	Mira Mesa Blvd - Parkdale Rd to I-15 SB Ramps	Install Class II bike lanes through either removal of parking or narrowing of median.
4055	Mira Mesa Blvd - I-15 SB Ramps to I-15 NB Ramps	Spot treatment
22	I-805 - Carroll Canyon Rd to Eastgate Mall	Construct a Class I bike path to provide a connection between Mira Mesa and University Towne Center along I-805.

3.2 REGIONAL PLANS

SAN DIEGO FORWARD: THE REGIONAL PLAN

Adopted in October 2015 by SANDAG, the San Diego Forward: The Regional Plan (RTP) is an overarching blueprint for a more sustainable future. It combines a big-picture vision for how the region will grow over the next 35 years (through the year 2050) with an implementation program to help make that vision a reality. At its core, it relies on creating a transportation network that will provide more choices to people in the region, which in turn will protect the environment, create healthy communities, and stimulate economic growth.

The Regional Plan builds upon local planning efforts by emphasizing the link between land use planning and transportation planning. Closer integration of the two will result in more compact and sustainable communities, helping the region meet greenhouse gas (GHG) reduction targets. As it is implemented, the Plan will enhance the movement of both people and goods, as well as break new ground by incorporating components aimed at enhancing public health.

The vision statement for this long-range blueprint – which will carry the region through 2050 – is "to provide innovative mobility choices and planning to support a sustainable and healthy region, a vibrant economy, and an outstanding quality of life for all."

There are planned roadway and transit investments identified in the RTP to increase mobility connections for the Mira Mesa community. These include the following:

Transit Projects
- Extend existing Rapid 235 Bus service between Temecula and Downtown San Diego, running through Mira Mesa
- Double tracking for Coaster with peak frequencies of 20 minutes
- Rapid 30 Bus service from Old Town to Sorrento Mesa
- Rapid Route 688 bus service from San Ysidro to Sorrento Mesa via I-805/I-15/SR-52 during peak hours
- Rapid Route 690 bus service from Mid-City to Sorrento Mesa via I-805 corridor during peak hours
- High frequency bus route along Carroll Canyon Road
- Bus service frequency enhancements for routes 110, 237, and 921

Managed Lanes/Toll Lanes Projects
- Addition of 4 Managed Lanes to I-805 between Carroll Canyon Road and State Route 52

Operational Projects
- Addition of North to North and South to South Managed Lane connectors between I-5 and I-805

Active Transportation Projects
- Mira Mesa Bike Boulevard
- Mira Mesa Corridor – Reagan Rd to Parkdale Ave
- Mira Mesa Corridor – Scranton Road to I-805
- Mira Mesa Corridor – Sorrento Valley Road to Sorrento Valley Boulevard

SAN DIEGO REGIONAL BIKE PLAN: RIDING TO 2050

Adopted in April 2010 by SANDAG, Regional Bike Plan identifies a vision for a regional bicycle system of interconnected bicycle corridors, support facilities, and programs to make cycling more appealing to a broader range of the population. The document includes recommendations and goals that strive to increase bicycle ridership for all purposes. It also encourages the development of Complete Streets, to improve safety for bicyclists, and to increase public awareness and support for bicycling in the region. There is one "high priority" planned regional corridor alignments within the Mira Mesa community:

- Mira Mesa Boulevard, Parkdale Road to Interstate 15

3.3 LOCAL PRIVATE DEVELOPMENT PROJECTS

Private development projects in the community can also contribute towards network improvements depending on the size, location, and findings of transportation impact analyses performed as part of entitlement processes. **Table 3-3** summarizes development projects identified in the Mira Mesa community as of January 2019. As shown in the table, no specific mitigation measures have been identified for these local development projects at this time. These projects should be reviewed for updated status when developing the future network.

Table 3-3 Local Development Projects

Project Name	Approval Process Type	Mitigation
One Pacific Heights	Substantial Conformance Review	None Identified
Paws for Purple Hearts	Neighborhood Use Permit	None Identified
The Institute	Conditional Use Permit	None Identified
Stone Creek	Community Plan Amendment	Pending
Mira Sorrento Office	Community Plan Amendment	Pending
3 Roots	Community Plan Amendment	Pending
MPF 9225 Brown Deer Rd	Conditional Use Permit	Pending
Teak Warehouse	Neighborhood Use Permit	None Identified

4 EXISTING CONDITIONS

This chapter describes the activity patterns, performance and facility evaluations for all modes of transportation in Mira Mesa, including pedestrian, bicycle, transit, and vehicular. The chapter also summarizes community intelligent transportation systems (ITS) and travel demand management (TDM) strategies, and interaction with regional passenger rail, airports, and goods movement.

4.1 PEDESTRIAN MOBILITY

The following section summarizes the existing pedestrian environment in Mira Mesa using the following evaluations:

Demand	• Using existing turning movement count data • Based upon the Pedestrian Priority Model (PPM) • Based upon census-based mode share data • Using route typology definition
Safety	• Using collision data for a recent five-year period
Quality	• Using Pedestrian Environment Quality Evaluation (PEQE) analysis
Connectivity	• Using network and sidewalk inventory data • Using a walkshed ratio evaluation

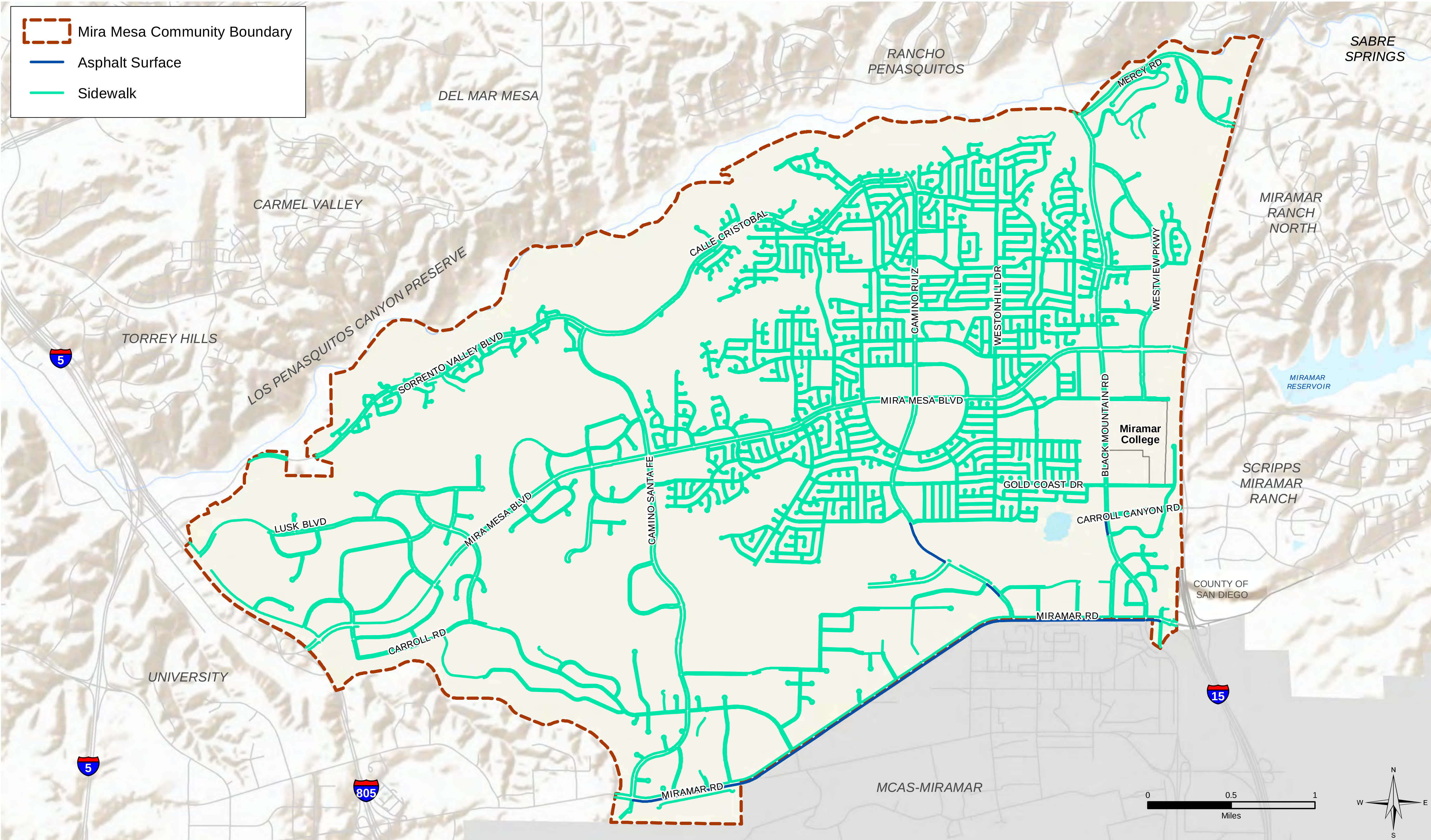
The City collects and maintains an inventory of the sidewalks within and adjacent to the Mira Mesa community. This information was used to create a baseline pedestrian network and to help determine existing pedestrian facilities, missing facilities and connections within the community. The data is not all-inclusive, but has the necessary information to determine the adequacy of pedestrian connections. **Figure 4-1** presents an overview of the sidewalk inventory within the community. It is important to note that the available sidewalk inventory does not include separated trails, such as those within the canyons of the community and includes existing raised sections of asphalt along roadways such as the south side of Miramar Road and the west side of Camino Ruiz between Jade Coast Drive and Carroll Canyon Road.

4.1.1 PEDESTRIAN DEMAND

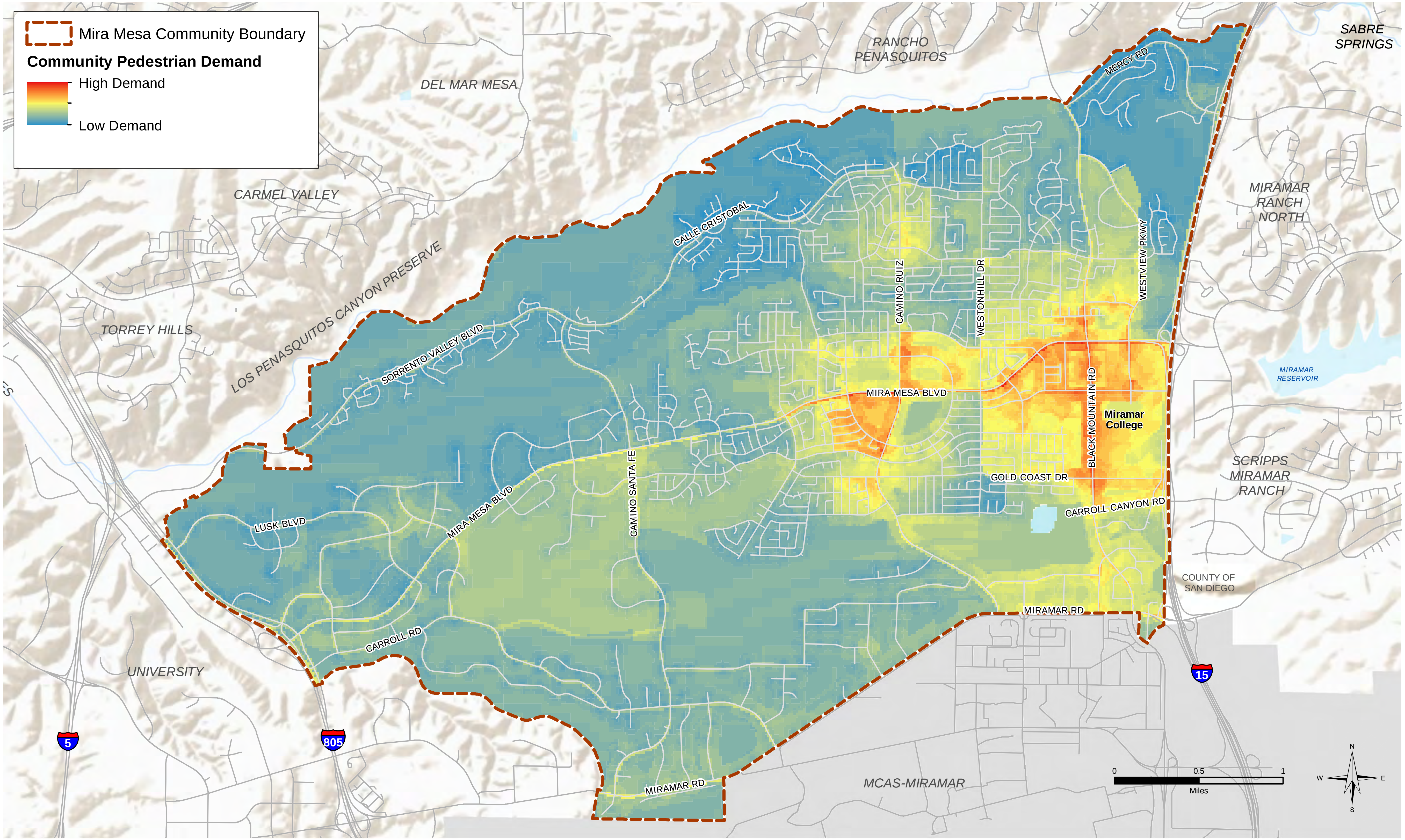
City of San Diego Pedestrian Priority Model (PPM)

Pedestrian demand was evaluated using the City's PPM. The PPM was created to identify areas within the City where there is relatively high demand or propensity for walking. This is combined with an analysis of trip detractors or deficiencies to assess where both existing and latent demand for walking may exist. **Figure 4-2** presents the pedestrian demand in the Mira Mesa community based on the results of the PPM.

As seen in the figure, pedestrian demand is highest near Miramar College and the retail adjacent to it, as well as in the area along Mira Mesa Boulevard between Reagan Road and Camino Ruiz. Demand is closely correlated with the retail areas of the community, as well as the community college and high school. The college has approximately 21,000 students and generates interaction with the adjacent street network for



Existing Pedestrian Network



Pedestrian Demand

walking to and from transit or nearby retail and recreation areas. These areas of highest pedestrian demand are also roadways with high vehicle volumes. This creates a natural tension between pedestrians and vehicles in these areas.

Demand is predictably lower in the residential areas of the community. The large employment areas in the western area of the community and along Miramar Road also have low demand. These employment areas have little interaction between the individual employers as there are little to no retail or residential areas within walking distance.

The pedestrian study area, shown in Figure 2-1, was initially established using the above average demand areas for this community dataset. A separate exercise was performed in coordination with City staff to expand the pedestrian study area to include locations with 2 or more pedestrian collisions, locations within 0.5 miles of major transit stops, major and collector roadways, and corridors that satisfied pedestrian network gaps or connections to schools and parks.

Pedestrian Commute Mode Share

Pedestrian commute mode share is another measure of where demand exists for pedestrian infrastructure or where existing facilities are successfully serving some pedestrian commutes. American Community Survey data, 2017 5-year estimates, were used to determine how the commute mode share in the Mira Mesa community compares to both the City and the County of San Diego. **Table 4-1** presents the pedestrian commute mode share comparison. The Mira Mesa community has a mode share similar to the average of both the City and County of San Diego.

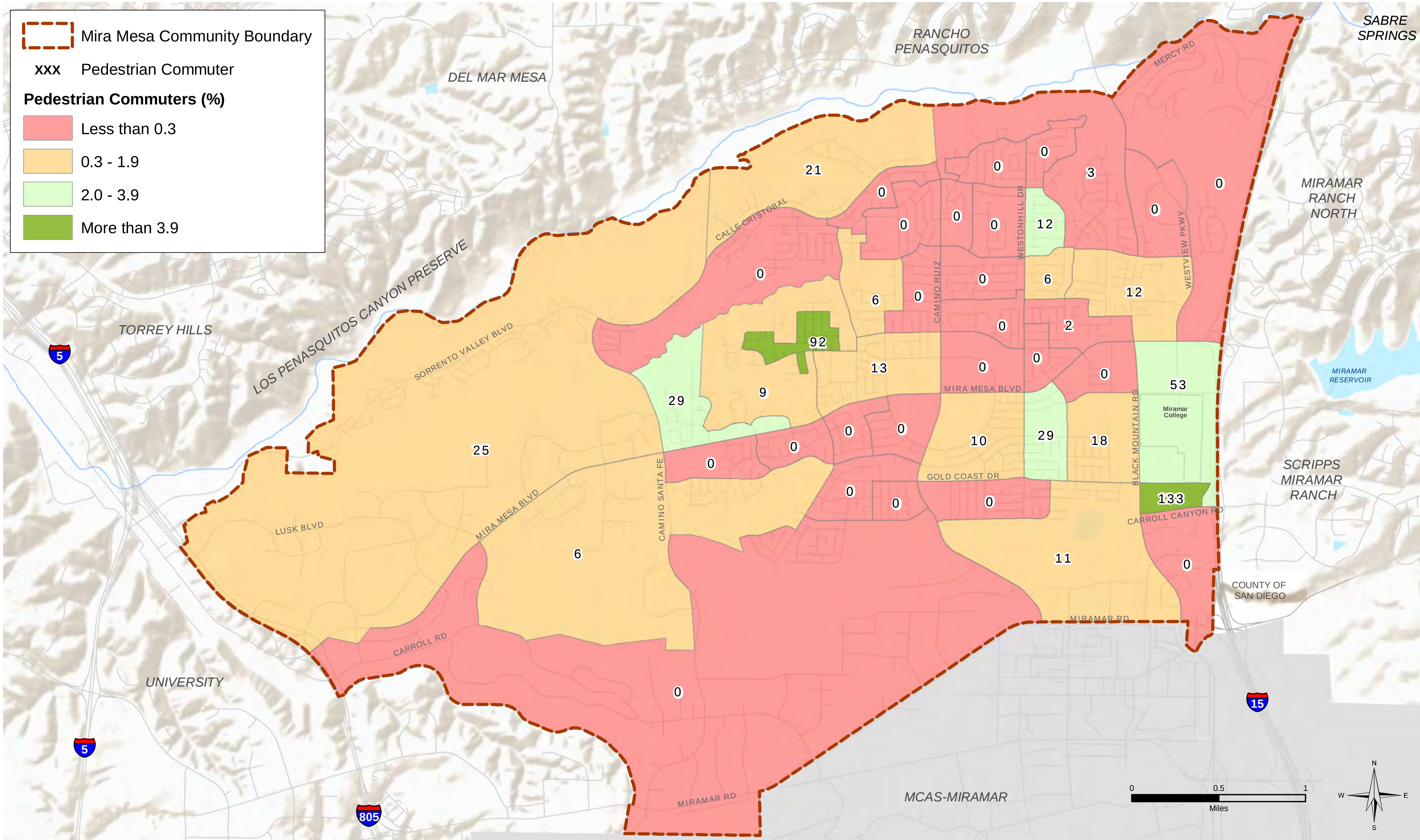
Table 4-1 Pedestrian Commute Mode Share Comparison

	Mira Mesa	**City of San Diego**	**San Diego County**
Total Pedestrian Commutes	1,597	22,188	45,600
Total Workers	58,910	762,993	1,549,529
Pedestrian Commute Mode Share	***2.7%***	***2.9%***	***2.9%***

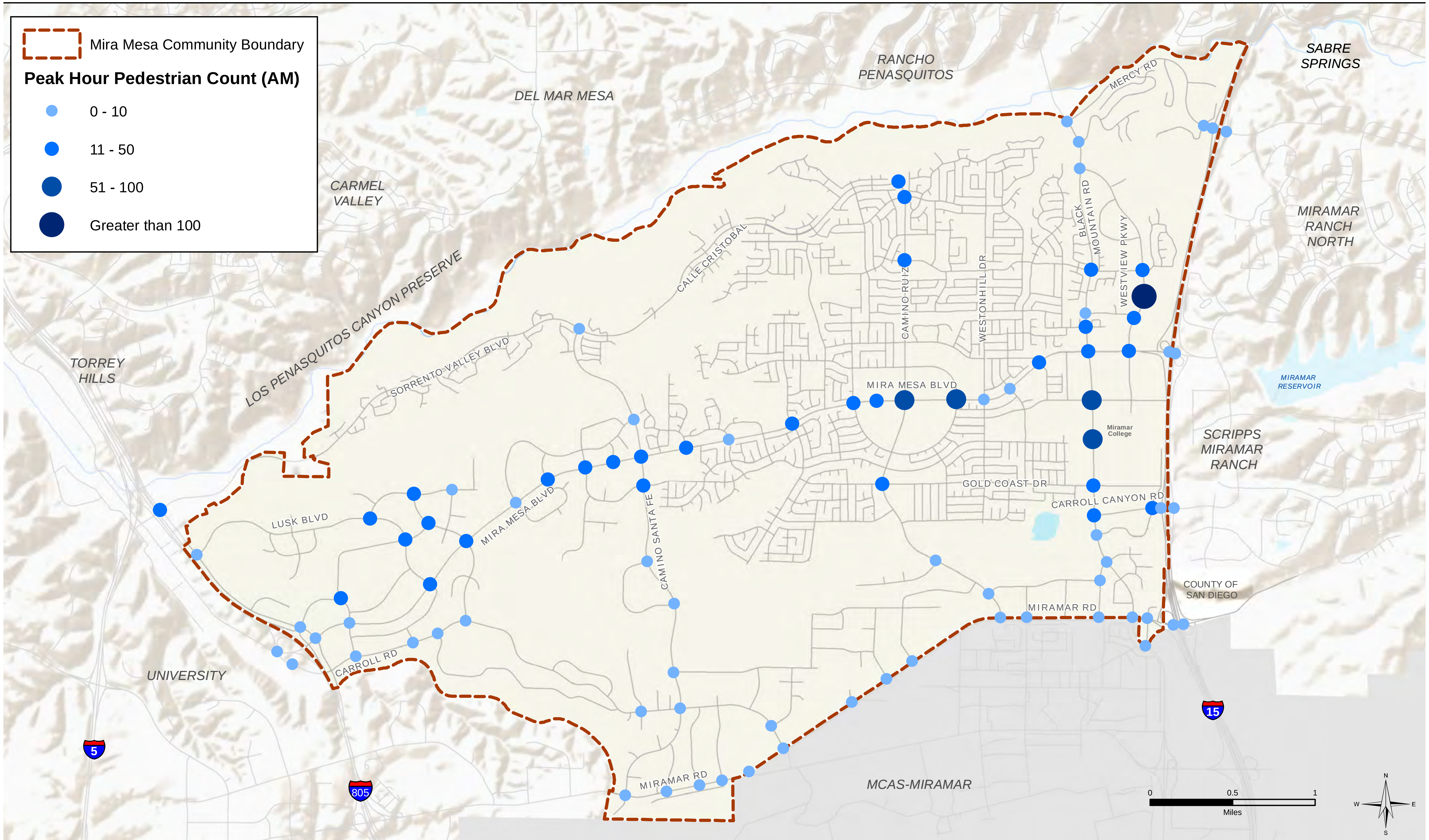
Figure 4-3 shows the pedestrian commute mode share by census block group. As shown in the figure, the areas closest to Miramar College and some residential areas near Mira Mesa Boulevard have high commute mode share. The southern, industrial portion of the community and most of the residential areas have no pedestrian commuters.

Pedestrian Count Data

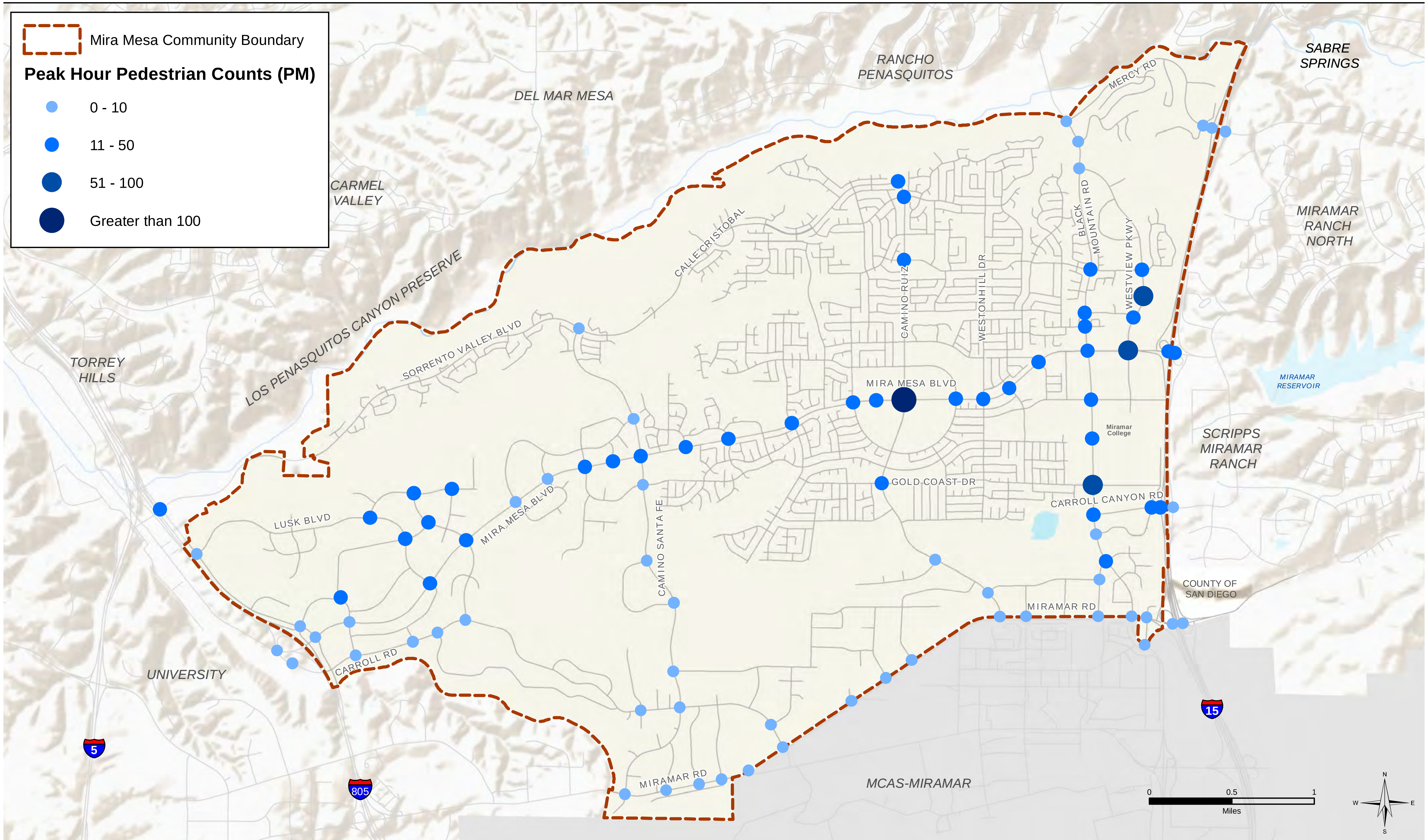
Figure 4-4 and **Figure 4-5** display the AM and PM peak hour pedestrian movements observed at the 92 study intersections. Individual intersection count sheets are provided in **Appendix E**. The pedestrian count data supports the pedestrian demand model output as well as the pedestrian commute mode share data. In general, pedestrian activity is slightly greater during the AM peak hour, and activity is greatest near key destinations in Mira Mesa such as Miramar College, retail areas, schools, and parks.



Pedestrian Commute Mode Share by Census Block Group



Pedestrian Peak Hour Volumes (AM Peak)



Pedestrian Peak Hour Volumes (PM Peak)

Pedestrian Route Typology

Route typology is a fourth way to look at pedestrian demand. As noted in the methodology section, route types are divided into seven categories ranging from District to Trail. These typologies work to define the function which a route serves and establishes a hierarchy for the development of priority pedestrian improvements. The results of the typology evaluation are presented in **Figure 4-6**Error! Not a valid bookmark self-reference.**.** With the current land use and building orientations, there are no district or corridor routes currently identified in the Mira Mesa community. This is mainly due to a lack of interaction of roadway-fronting buildings and attractions. All roadways are either connectors or neighborhood streets.

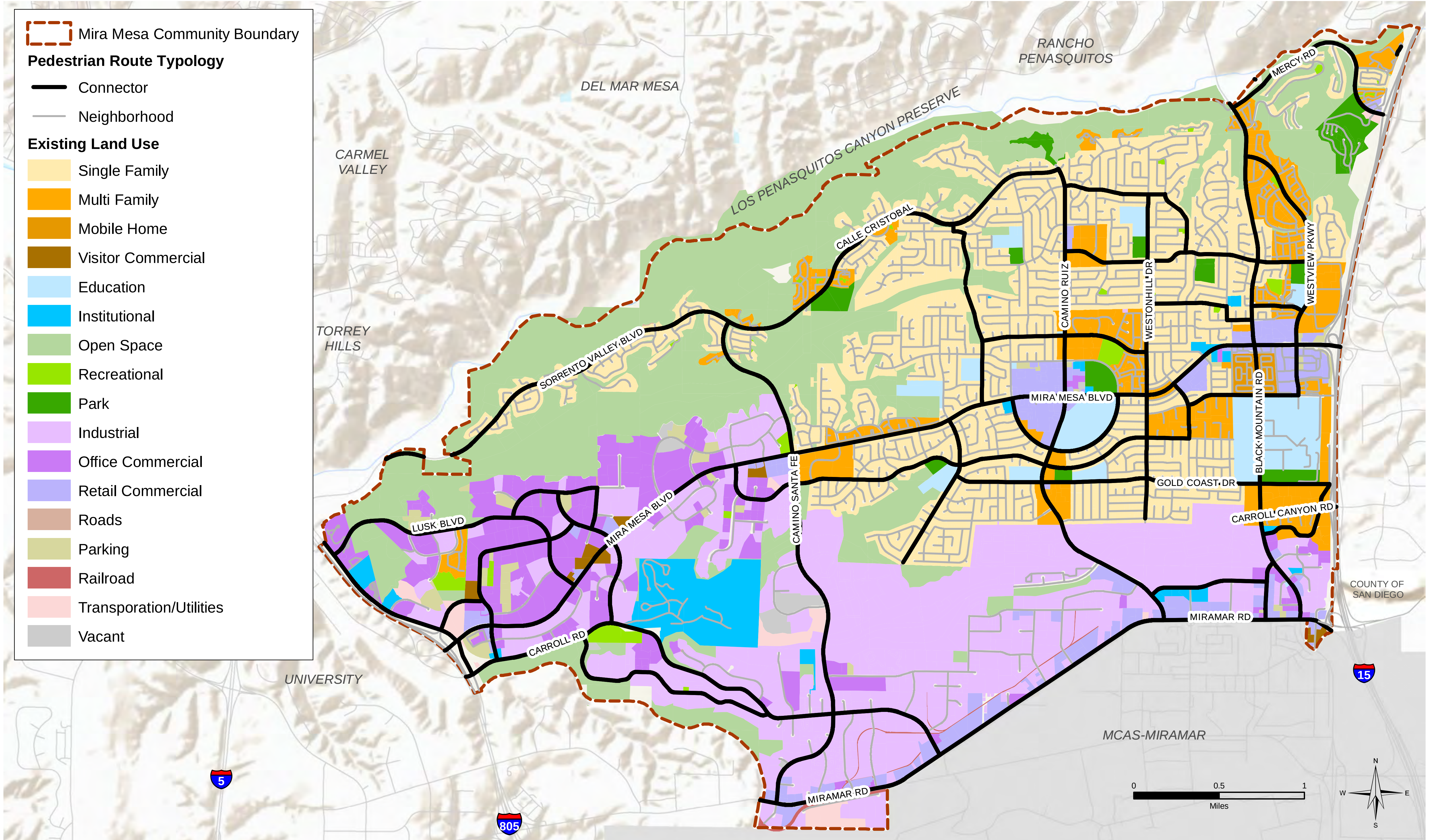
4.1.2 PEDESTRIAN SAFETY

Between October 2012 and September 2017, there were a total of 87 reported collisions involving pedestrians within the Mira Mesa community. In the State of California, collision reports must be generated for any collision where: property damage equals or exceeds 750 dollars, city property is involved, someone is injured, a fatality occurs, a pedestrian or cyclist is involved, is a hit-and-run collision, or a Driving Under the Influence (DUI) collision occurs. It is important to note some pedestrian incidents may go unreported and therefore, cannot be included in this analysis. Reported pedestrian-involved collision data within the vicinity of the community planning area are illustrated in **Figure 4-7**. Additional information on these collisions is provided in tables below and in **Appendix A**.

Most locations have isolated incidents, while a few locations have identified multiple collisions. Locations within 350 feet of an intersection were considered intersection-related, and bundled with the adjacent intersection. Mid-block locations were then evaluated on a case-by-case basis, and bundled if they occurred within close proximity of each other with similar roadway characteristics and collision trends. **Table 4-2** identifies those intersections with three or more collisions within the five-year period. A more in depth look at the causes of these collisions will help to identify improvements needed at these locations.

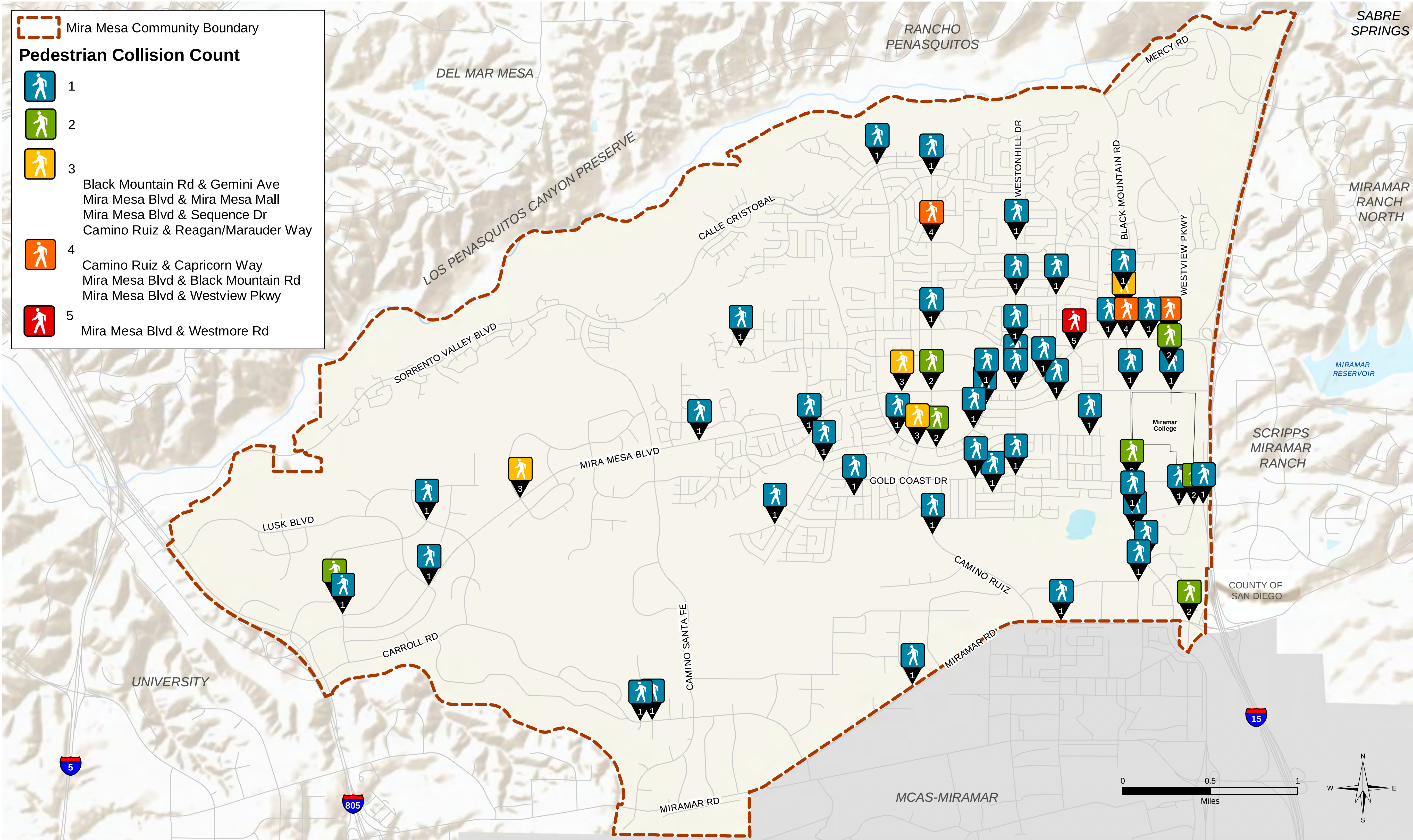
Table 4-2 Most Frequent Pedestrian Collision Locations

Intersection	Collisions
Mira Mesa Blvd & Westmore Rd/Marbury Ave	5
Mira Mesa Blvd & Westview Pkwy	4
Mira Mesa Blvd & Black Mountain Rd	4
Camino Ruiz & Capricorn Wy	4
Black Mountain Rd & Gemini Ave	3
Mira Mesa Blvd & Mira Mesa Mall	3
Mira Mesa Blvd & Sequence Dr	3
Camino Ruiz & Reagan Rd/Marauder Wy	3



Pedestrian Route Typology

FIGURE 4-7



Pedestrian Collision History (Oct 2012 – Sept 2017)

Table 4-3 summarizes the location types for pedestrian-involved collisions, differentiating between intersection, mid-block, and approaching/departing locations. The majority (85 percent) of pedestrian-involved collisions occurred at intersections.

Table 4-3 Pedestrian Collisions by Location Types

Collision Location Type	Collisions	Percent of Total
Approaching/Departing	10	12%
Intersection	74	85%
Mid-Block	3	3%
Total	***87***	***100%***

Table 4-4 identifies the party-at-fault for each reported pedestrian-involved collision. Drivers and pedestrians were each reported as at-fault for nearly one-third of all collisions. Nearly 30 percent of recorded collisions do not identify a party at-fault.

Table 4-4 Pedestrian Collisions by Party at Fault

Party at Fault	Collisions	Percent of Total
Driver	31	36%
Not Stated	24	27%
Parked Vehicle	1	1%
Pedestrian	31	36%
Total	**87**	**100%**

Table 4-5 identifies the primary collision cause for the reported pedestrian-involved collisions. The leading cause was attributed to pedestrian violations, which occurred in approximately 23 percent of the pedestrian-involved collisions. The second-most frequent cause of collision was "pedestrian right-of-way violation", and "other hazardous movement".

Table 4-5 Primary Pedestrian Collision Cause

Primary Collision Cause	Collisions	Percent of Total
Auto R/W Violation	8	9%
Improper Turning	5	5%
Not Stated	8	9%
Other	1	1%
Other Hazardous Movement	16	18%
Ped R/W Violation	16	18%
Pedestrian Violation	20	23%
Traffic Signals and Signs	3	3.5%
Unsafe Speed	7	8%
Unsafe Starting or Backing	3	3.5%
Total	***87***	***100%***

4.1.3 PEDESTRIAN ENVIRONMENT QUALITY EVALUATION (PEQE)

The Pedestrian Environment Quality Evaluation (PEQE) represents a data-driven methodology for assessing pedestrian facilities. An overview of the methodology used to calculate PEQE scores, including required inputs and scoring used, is provided in **Section 2.1**. Locations which are evaluated include roadway segments, intersections, and mid-block crossings within the pedestrian study area. **Appendix B** includes the existing inputs used for PEQE analysis.

PEQE Roadway Segments Analysis

The data inputs for PEQE roadway segments analysis include horizontal buffer, lighting, a clear pedestrian zone, and the posted speed limit. **Table 4-6** summarizes the PEQE analysis results for sidewalks along roadway segments within the pedestrian study area. As shown, about half of the pedestrian facilities currently score as “medium-quality” and more than half of the pedestrian facilities are “low quality”. No facilities were identified as “high-quality”.

Many of the roadway segments within the pedestrian study area are located along high-speed roadways without a buffer between the travel lanes and the sidewalk to achieve the horizontal clearance points. Providing landscaped buffers, buffered bike lanes, or parking could increase the PEQE scores of several pedestrian facilities. Additionally, many facilities did not receive clear zone points due to signs, light or utility poles, transit stop benches or mailboxes obstructing the 5-foot clear zone, resulting in 0 points. Relocating these obstructions outside of the 5-foot clear zone would improve the quality of these facilities. Lastly, only about one-third of the segments analyzed satisfied requirements for lighting. Installing additional street lights along these pedestrian facilities would also improve the quality of the environment for pedestrians.

Table 4-6 Summary of PEQE Analysis for Segments within Pedestrian Study Area

PEQE Score	Total Length (feet)	Percent of Study Area Facilities
High	0	0%
Medium	217,516	45.9%
Low	256,456	54.1%
Total	***473,972***	***100%***

PEQE Intersection Analysis

The PEQE intersection analysis evaluates physical features that serve as safety mechanisms, operational features, compliance with Americans with Disabilities Act (ADA) for curb ramps, and intersection traffic control, as they relate to the pedestrian environment.

Table 4-7 summarizes the PEQE analysis results for intersections within the pedestrian study area. The evaluation indicates that 59-percent of crossings in the community currently exhibit medium-quality conditions, 31-percent of crossings exhibit low-quality conditions, and 10-percent of the crossings are currently prohibited. There is one high-quality facility (<1-percent) at the pedestrian bridge over Black Mountain Road on the north side of Galvin Avenue.

Currently, the community of Mira Mesa does not provide any curb extensions, pedestrian lead intervals, or raised crosswalks. Very few of the intersections studied contain “No Turn on Red” signs, enhanced pedestrian signs, or pedestrian countdown timers. Approximately one third of the intersections provide high-visibility crosswalks and/or advanced limit lines, and less than half of the intersections have curb ramps that meet ADA requirements. Most crossings exhibiting low-quality conditions are located along residential areas such as Calle Cristobal/Sorrento Valley Boulevard and Gold Coast Drive. Some employment areas such as Miramar Road and Lusk Boulevard also exhibit low-quality conditions at crossings. Upgrading curb ramps to meet ADA standards, installing high-visibility crosswalks and advanced limit lines, or providing any of the pedestrian crossing enhancements discussed would improve the PEQE score at the pedestrian study area intersections.

Table 4-7 Summary of PEQE Analysis for Intersections within Pedestrian Study Area

PEQE Score	Number of Crossings	Percent of Study Area Facilities
High	1	<1%
Medium	283	59%
Low	146	31%
Prohibited	46	10%
Total	***476***	***100%***

PEQE Mid-Block Crossing Analysis

The PEQE mid-block crossing analysis is similar to the intersection analysis which evaluates physical features of the crossing such as high visibility crosswalks, bulb outs, median refuge for pedestrians, and ADA compliant curb ramps. The traffic control points vary from the intersection analysis, and awards one point for a pedestrian activated warning device such as in-pavement lighting or pedestrian activated flashing beacon, or two points for a signal or Pedestrian Hybrid Beacon (PHB).

The Mira Mesa community has one mid-block crossing in the pedestrian study area that was analyzed along Barnes Canyon Road near Scranton Road. This crossing is classified as a low-quality facility but could be improved to medium-quality by upgrading the north side ramp to be ADA compliant, constructing bulb outs, and/or providing a raised pedestrian refuge in the median. The only way to achieve a high-quality classification would be to upgrade the RRFB to a PHB.

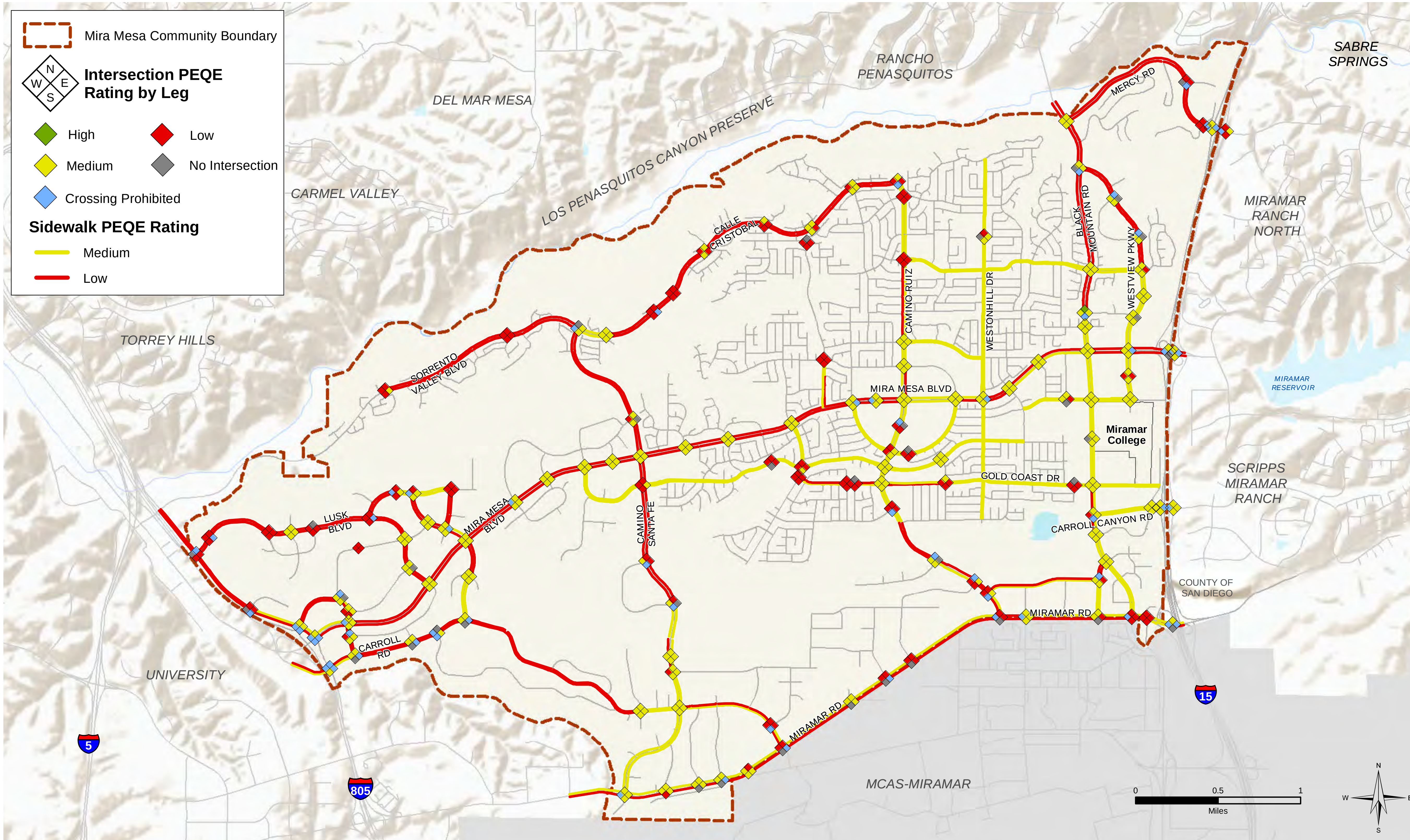
PEQE Analysis Results

The results of the PEQE analyses are presented in **Figure 4-8**. As shown, roadway segments exhibiting low-quality pedestrian conditions are generally shown along major arterial roadways that have little or no adjacent development. Roadways exhibiting medium-quality conditions are generally found along roadways with adjacent residential and commercial activity.

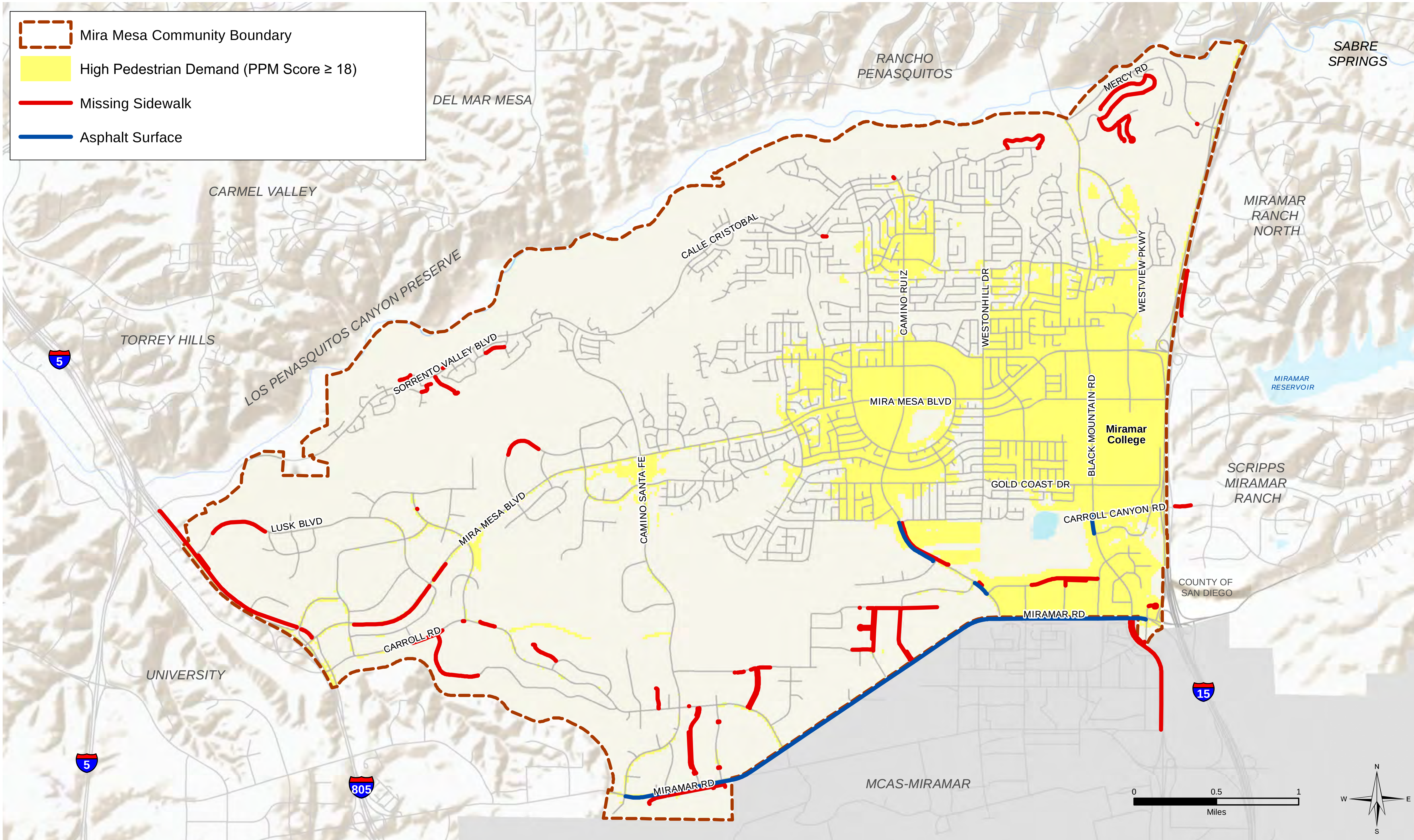
Another quantifiable pedestrian environment analysis is identifying the locations of missing sidewalks within the community. The identified locations that are missing sidewalks within Mira Mesa are shown in **Figure 4-9**. Missing sidewalk includes existing raised sections of asphalt along roadways such as the south side of Miramar Road, segments of the west side of Camino Ruiz between Jade Coast Drive and Miramar Road, and the west side of Black Mountain Road north of Maya Linda Road. The length (in feet) of the missing sidewalks along roadway segments within the pedestrian study area is summarized in **Table 4-8**.

Table 4-8 Summary of Missing Sidewalks within or Providing Access to the Pedestrian Study Area

Item	Length (feet)
Missing Sidewalk	61,715
Asphalt Sidewalk	20,838



Existing Pedestrian Environmental Quality Evaluation (PEQE) Rating (Pedestrian Study Area)



Locations with no Sidewalks

4.1.4 PEDESTRIAN NETWORK CONNECTIVITY

The level of connectivity at each pedestrian study intersection was assessed using a travelshed analysis. The methodology for calculating the Pedestrian Connectivity Ratio is described in detail in **Section 2.1**, and utilizes the formula shown below. Note that a higher ratio is associated with better overall connectivity at the intersection.

$$\frac{\text{Land Area Accessible within a 0.5 mile walkshed (acres)}}{\text{Land Area Accessible within a 0.5 mile crow flies buffer (acres)}}$$

The pedestrian connectivity ratio for each intersection within the pedestrian study area is shown in **Table 4-9** and illustrated in **Figure 4-10**. As shown, there are many locations in the community that have poor connectivity (<30%). This is a result of the canyons that run through the community, limiting options for linear connections for all modes of travel. The high connectivity areas are found in the residential areas of the community where there is more robust roadway connections that provide access to the houses.

Improving connectivity within the Mira Mesa community will be challenging. There will be some increased connectivity with the development of the Carroll Canyon Road extension. Other connections will require significant infrastructure – most likely raised bridges – and there will be limited places that can or should be realistically accommodated for, especially when it comes to funding and environmental sensitivity. New pathways bisecting larger developments in areas of change should be incorporated to avoid large superblocks and provide additional connectivity options.

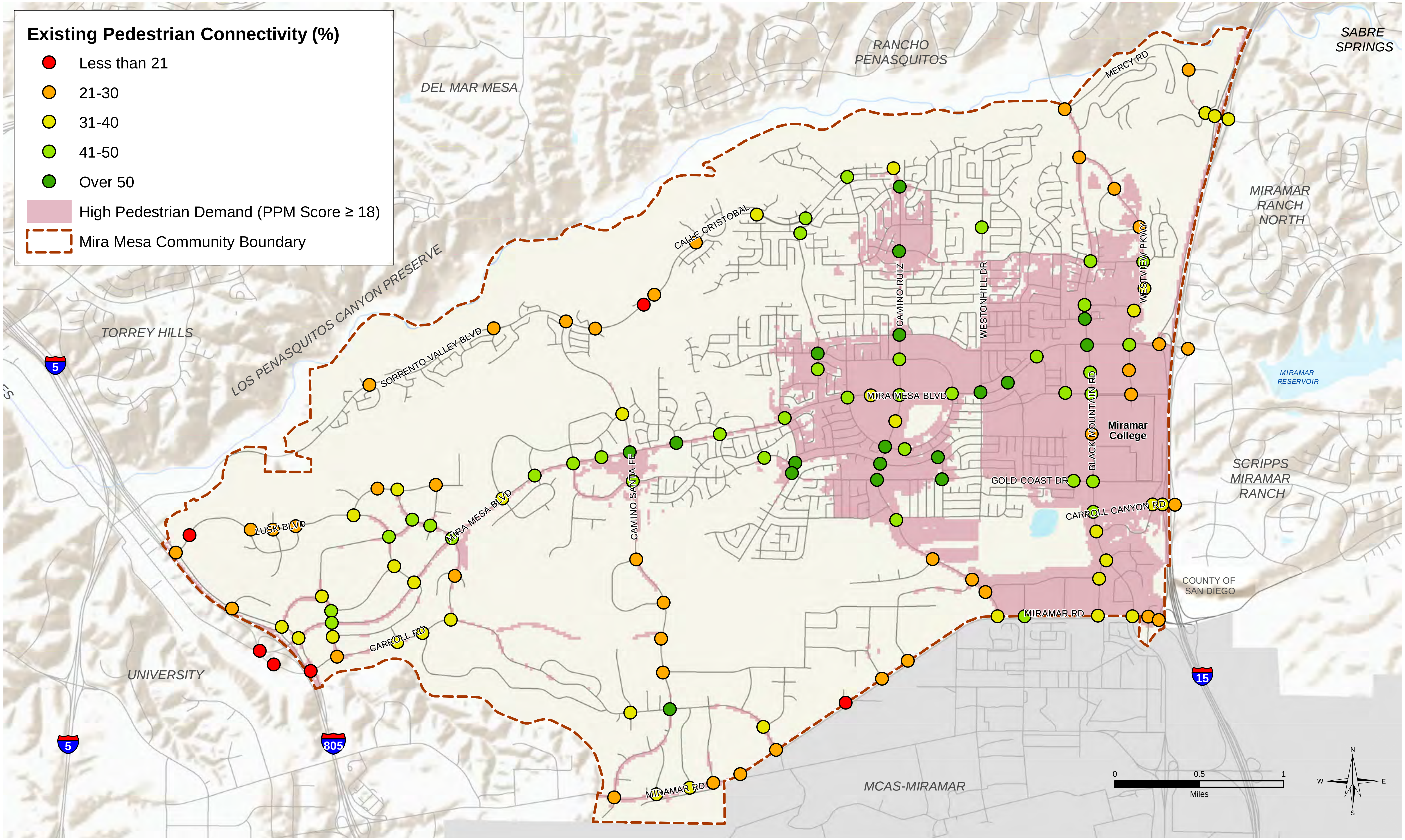
Table 4-9 Pedestrian Connectivity Ratio at Pedestrian Study Intersections

Intersection ID	Intersection Name	Pedestrian Connectivity Ratio
1	Ivory Coast Dr & Reagan Rd	45%
2	Vista Sorrento Pkwy & Lusk Blvd	23%
3	Vista Sorrento Pkwy & Directors Pl	21%
4	Vista Sorrento Pkwy & Mira Sorrento Pl	33%
5	Vista Sorrento Pkwy & Mira Mesa Blvd	39%
6	Sorrento Valley Rd & Carroll Canyon Rd/I-805 SB Ramps	20%
7	Juniper Park Ln & Sorrento Valley Blvd	26%
8	Sunny Mesa Rd & Sorrento Valley Blvd	22%
9	Camino Santa Fe & Sorrento Valley Blvd/Calle Cristobal	24%
11	Carroll Canyon Rd & I-805 DAR	17%
13	Office Driveways & Lusk Blvd	19%
14	W Wateridge Cir & Lusk Blvd	25%
15	Telesis Ct & Lusk Blvd	24%
16	E Wateridge Cir & Lusk Blvd	26%
17	Pacific Center Blvd & Lusk Blvd	31%
18	Lusk Blvd & Barnes Canyon Rd	46%
19	Lusk Blvd & Morehouse Dr	36%
20	Lusk Blvd & Mira Mesa Blvd	36%
21	Scranton Rd & Mira Sorrento Pl	36%
22	Scranton Rd & Morehouse Dr	41%
23	Scranton Rd & Mira Mesa Blvd	44%
24	Scranton Rd & Sorrento South Dwy/Oberlin Dr	39%
25	Scranton Rd & Carroll Canyon Rd	28%
26	Pacific Heights Blvd & Barnes Canyon Rd	44%
27	Wireless Wy & Pacific Center Blvd	28%
28	Pacific Heights Blvd & Pacific Center Blvd	34%
29	Pacific Mesa Blvd & Pacific Center Blvd	28%
30	Pacific Mesa Blvd & Pacific Heights Blvd	43%
31	Pacific Heights Blvd & Mira Mesa Blvd	43%
32	Pacific Heights Blvd & Cornerstone Ct	29%
33	Pacific Heights Blvd & Carroll Canyon Rd	34%
34	Lopez Point Dr & Calle Cristobal	21%
35	Camino Propico & Calle Cristobal	20%
36	Lopez Ridge Park Driveways & Calle Cristobal	23%
37	Camino Miranda & Calle Cristobal	25%
38	Windey Ridge Wy & Calle Cristobal	36%
39	Prairie Wood Dr & Calle Cristobal	44%
40	Avenida Del Gato & Calle Cristobal	41%
41	Camino Ruiz & Calle Cristobal	39%

Intersection ID	Intersection Name	Pedestrian Connectivity Ratio
42	Sequence Dr/Huennekens St & Mira Mesa Blvd	36%
43	Genetic Center/Steadman St & Mira Mesa Blvd	46%
44	Flanders Dr & Mira Mesa Blvd	48%
45	Viper Wy & Mira Mesa Blvd	44%
46	Camino Santa Fe & Mira Mesa Blvd	54%
47	Schilling Ave & Mira Mesa Blvd	51%
48	Aderman Ave & Mira Mesa Blvd	49%
49	Parkdale Ave & Mira Mesa Blvd	48%
50	Reagan Rd & Mira Mesa Blvd	49%
51	Mira Mesa Mall Driveways & Mira Mesa Blvd	33%
52	Camino Ruiz & Mira Mesa Blvd	45%
53	New Salem St/Marauder Wy& Mira Mesa Blvd	48%
54	Westonhill Dr & Mira Mesa Blvd	56%
55	Greenford Dr & Mira Mesa Blvd	56%
56	Westmore Rd/Marbury Ave & Mira Mesa Blvd	47%
57	Black Mountain Rd & Mira Mesa Blvd	54%
58	Westview Pkwy & Mira Mesa Blvd	43%
59	I-15 SB Ramps & Mira Mesa Blvd	24%
60	I-15 NB Ramps & Mira Mesa Blvd	23%
62	Business Access Road & Carroll Canyon Rd	17%
63	Youngstown Wy & Carroll Canyon Rd	31%
64	Nancy Ridge Dr & Carroll Canyon Rd	31%
65	Rehco Rd & Carroll Rd	36%
66	Camino Santa Fe & Carroll Rd	52%
67	Carroll Rd & Kenamar Dr	32%
68	Carroll Rd & Miramar Rd	26%
70	Camino Santa Fe & Miramar Rd	30%
72	Commerce Ave & Miramar Rd	37%
73	Production Ave & Miramar Rd	31%
74	Distribution Ave & Miramar Rd	30%
75	Miramar Wy & Miramar Rd	29%
76	AlesmithCt & Miramar Rd	11%
77	Dowdy Dr & Miramar Rd	26%
78	Chabot Dr & Miramar Rd	22%
79	Camino Ruiz & Miramar Rd	31%
80	Clayton Dr/Mitscher Wy & Miramar Rd	47%
81	Black Mountain Rd & Miramar Rd	33%
82	Kearny Villa Rd & Miramar Rd	34%
83	Kearny Mesa Rd & Miramar Rd	28%
84	I-15 SB Ramps & Miramar Rd	25%
86	Camino Santa Fe & Flanders Dr	46%

Intersection ID	Intersection Name	Pedestrian Connectivity Ratio
87	Dabney Dr & Flanders Dr	46%
88	Parkdale Ave & Flanders Dr	55%
89	Camino Ruiz & Flanders Dr	58%
90	San Ramon Dr & Flanders Dr	53%
91	Camino Santa Fe & Top Gun St	34%
92	Camino Santa Fe & Miratech Dr	25%
93	Camino Santa Fe & Summers Ridge Rd	26%
94	Camino Santa Fe & Unnamed Road	22%
95	Camino Santa Fe & Trade St	30%
96	Parkdale Ave & Gold Coast Dr	53%
97	Montongo St & Acama St	41%
98	Montongo St & New Salem St	54%
99	Montongo St & Goleta Rd	44%
100	Camino Ruiz & Aquarious Dr	53%
101	Camino Ruiz & Teresa Dr/Capricorn Wy	51%
102	Camino Ruiz & Westmore Rd	56%
103	Camino Ruiz & New Salem St	50%
104	Camino Ruiz & Driveway	39%
105	Camino Ruiz & Reagan Rd/Marauder Wy	55%
106	Camino Ruiz & Gold Coast Dr	59%
107	Camino Ruiz & Jade Coast Dr	42%
108	Camino Ruiz & Carroll Canyon Rd	29%
109	Camino Ruiz & Miralani Dr	30%
110	Camino Ruiz & Activity Rd	30%
113	San Ramon Dr & Gold Coast Dr	52%
114	Thanksgiving Ln & Gold Coast Dr	43%
115	Black Mountain Rd & Gold Coast Dr	44%
116	Westonhill Dr & Arctrus Wy	43%
117	Black Mountain Rd & Capricorn Wy	48%
118	Westview Pkwy & Capricorn Wy	42%
119	Black Mountain Rd & Mercy Rd	28%
120	Black Mountain Rd & Westview Pkwy	29%
121	Black Mountain Rd & Galvin Ave	49%
122	Black Mountain Rd & Gemini Ave	55%
123	Black Mountain Rd & Village Green/The Hills Driveways	41%
124	Black Mountain Rd & Hillery Dr	42%
125	Black Mountain Rd & Miramar College	25%
126	Black Mountain Rd & Carroll Canyon Rd	43%
127	Black Mountain Rd & Maya Linda Rd	40%
128	Black Mountain Rd/Kearny Villa Rd & Black Mountain Rd/Carroll Centre Rd	38%

Intersection ID	Intersection Name	Pedestrian Connectivity Ratio
129	Black Mountain Rd & Activity Rd	37%
130	Rickert Rd & Hillery Dr	42%
131	Westview Pkwy & Hillery Dr	29%
132	Mercy Rd & Kika Ct	21%
133	Alamenia Rd & Mercy Rd	34%
134	I-15 SB Ramps & Mercy Rd	36%
135	I-15 NB Ramps & Mercy Rd	38%
136	Westview Pkwy & Campus Point Dr N	23%
137	Westview Pkwy & Campus Point Dr S	30%
138	Westview Pkwy & Mira Lee Wy	36%
139	Westview Pkwy & Galvin Ave	36%
140	Westview Pkwy & Market Center Driveway	28%
141	Maya Linda Rd & Carroll Canyon Rd	31%
142	I-15 SB Ramps & Carroll Canyon Rd	31%
143	I-15 NB Ramps & Carroll Canyon Rd	30%



Existing Pedestrian Connectivity Ratio

PEDESTRIAN BARRIERS AND MISSING FACILITIES

As shown in Figure 4-1, sidewalks are provided along many of the roadways within the community. There are a few areas within the community that have missing facilities or barriers for pedestrian connectivity. **Figure 4-11** shows the pedestrian barriers identified in the community that are described below:

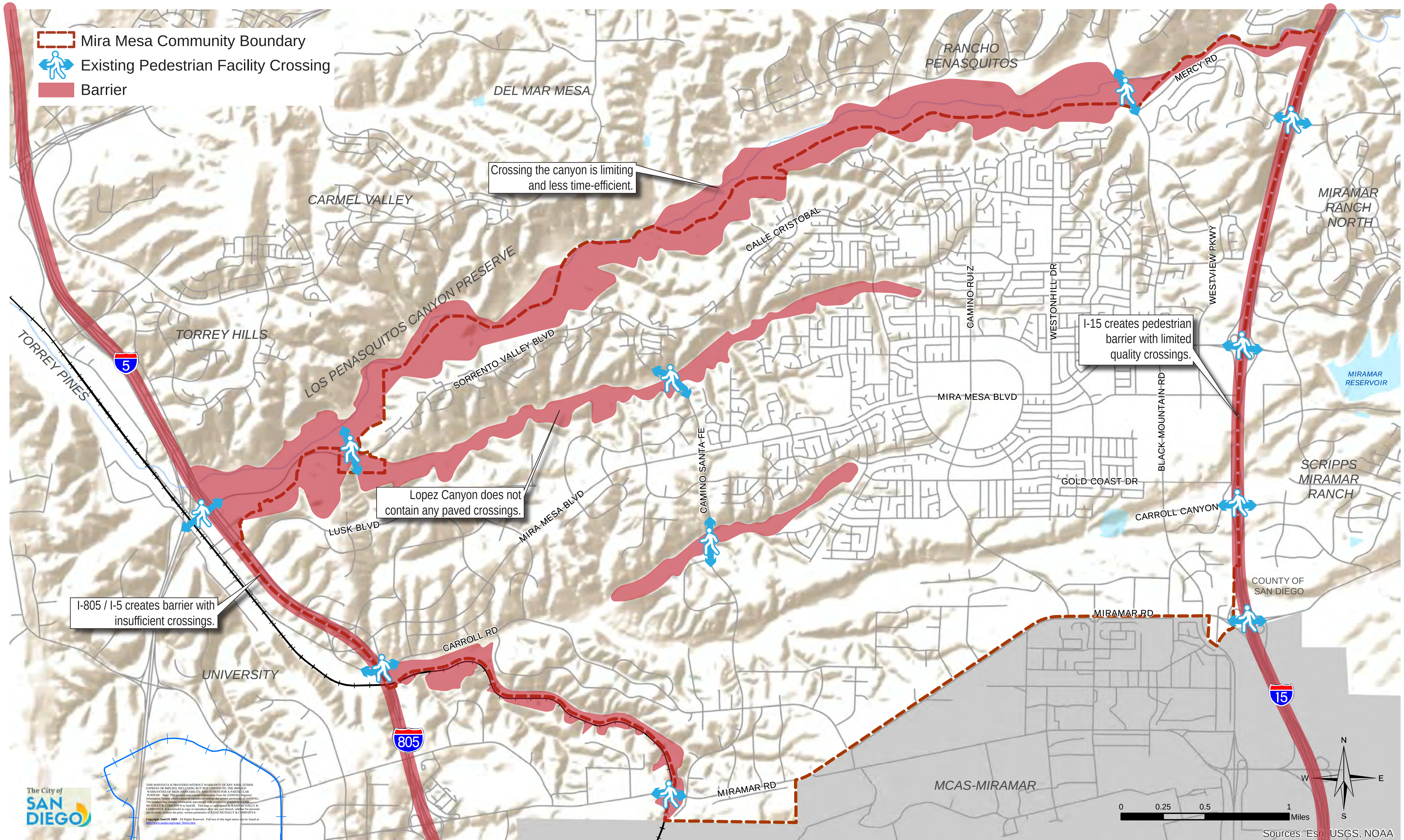
- *Los Peñasquitos Canyon Preserve*: There are several trails through Los Peñasquitos Canyon that pedestrians and bicyclists can use to travel east-west across the entire north side of the community or across the canyon. These trails are primarily used for recreational purposes. For a pedestrian on a non-recreation trip, the canyon can act as a barrier between Mira Mesa and communities to the north. Crossing the canyon requires traversing steep slopes that can be limiting to certain users and be less time-efficient than other modes of travel. The canyon connects to Black Mountain Road on the far east side of the community and Vista Sorrento Parkway on the far west side of the community; however, there are no crossings between Black Mountain Road and Vista Sorrento Parkway. The trail system crossing under Sorrento Valley Boulevard connects to the Lopez Canyon trail system approximately a half mile east of Vista Sorrento Parkway. Black Mountain Road currently provides the only paved crossing through the canyon, with sidewalks and Class II buffered bike lanes on both sides of the roadway.

- *Lopez Canyon*: There is also a trail through Lopez Canyon, which runs-east-west between Sorrento Valley Boulevard and Mira Mesa Boulevard on the west side of the community. This trail connects to the Los Peñasquitos trail under Sorrento Valley Boulevard, and to the intersection of Pacific Center Boulevard and Pacific Mesa Boulevard within the Sorrento Valley employment area. There are no paved crossings over Lopez Canyon creating a barrier from residences along Sorrento Valley Boulevard/Calle Cristobal and employment or schools south of the canyon near Mira Mesa Boulevard.

- *Interstate 805*: In general, the interstate acts as a barrier between land uses located east and west due to the limited crossing locations and undesirable crossings near high volumes of vehicles. This is typical with freeways as there are limited roadways that cross or intersect. The following roadways intersect with I-805; however, not all of these roadways provide a facility for pedestrians to cross, some provide sidewalks on only one side of the roadway:
    - Sorrento Valley Boulevard is the primary connection between the Sorrento Valley Station and the Mira Mesa community but provides facilities that are challenging for pedestrians and bicycles under I-805. The sidewalks are approximately 6 feet wide with various obstructions to the pedestrian clear zone, and little to no horizontal separation between high-speed vehicles and pedestrians. The bike lanes are 5 feet wide, including the gutter pan, start and stop abruptly, and do not provide guidance for navigating the Sorrento Valley Road intersection.
    - The I-5 ramps between Genesee Avenue and Sorrento Valley Road provide access to a separated bicycle facility in both directions along the west side of the I-5 freeway to connect the Sorrento Valley Station to the UCSD campus.
    - Mira Sorrento Place connects to Vista Sorrento Parkway at an intersection with I-805 northbound on and off ramps but does not cross I-805.
    - Mira Mesa Boulevard / Sorrento Valley Road crosses under I-805 as a secondary route connecting the Sorrento Valley Station and the community of Torrey Pines to Mira Mesa. The underpass provides pedestrian access on the north side only, with no horizontal separation from high-speed vehicle travel lanes, and no crossings across Mira Mesa Boulevard at Vista Sorrento Parkway.

- Carroll Canyon Road also crosses under I-805 with 8-foot sidewalk on the south side only, separated by 6-foot bike lanes. The HOV lane ramps for I-805 northbound and southbound intersect with Carroll Canyon Road.
- Miramar Road does not intersect with I-805 within the community boundary, however Miramar Road continues into La Jolla Village Drive within the University community and provides a 5-foot sidewalk along the north side.

- *Interstate 15*: While the number of locations where pedestrians can cross Interstate 15 is limited, there are pedestrian connections along each roadway crossing the freeway. The impact the freeway barrier has on pedestrians has been minimized by providing sidewalks on all four intersecting roadway crossings that provide connections between Mira Mesa and the adjacent communities to the east (Scripps Miramar Ranch, Miramar Ranch North, and Sabre Springs). However, the bicycle facilities crossing these roadways are all low-quality due to lack of separation from high speed and high volume of motorists.
  - Mercy Road / Scripps Poway Parkway crosses under I-15 with 5-foot sidewalks, and 5-foot bike lanes.
  - Mira Mesa Boulevard crosses under I-15 with 6-foot sidewalks, and no bicycle facilities
  - Carroll Canyon Road crosses over I-15 with 6-foot sidewalks and 8-foot shoulders that could be utilized by bicyclists, but striping is not provided. Bike lanes continue on the east side of I-15, but not on the west side within Mira Mesa.
  - Miramar Road crosses over I-15 with 5-foot sidewalks on both sides and 6 to 8-foot shoulders. West of Kearny Mesa Road there are 5 to 6 foot bike lanes as well as east of the I-15 at Pomerado Road in the eastbound direction.



Existing Pedestrian Barriers

4.2 BICYCLE MOBILITY

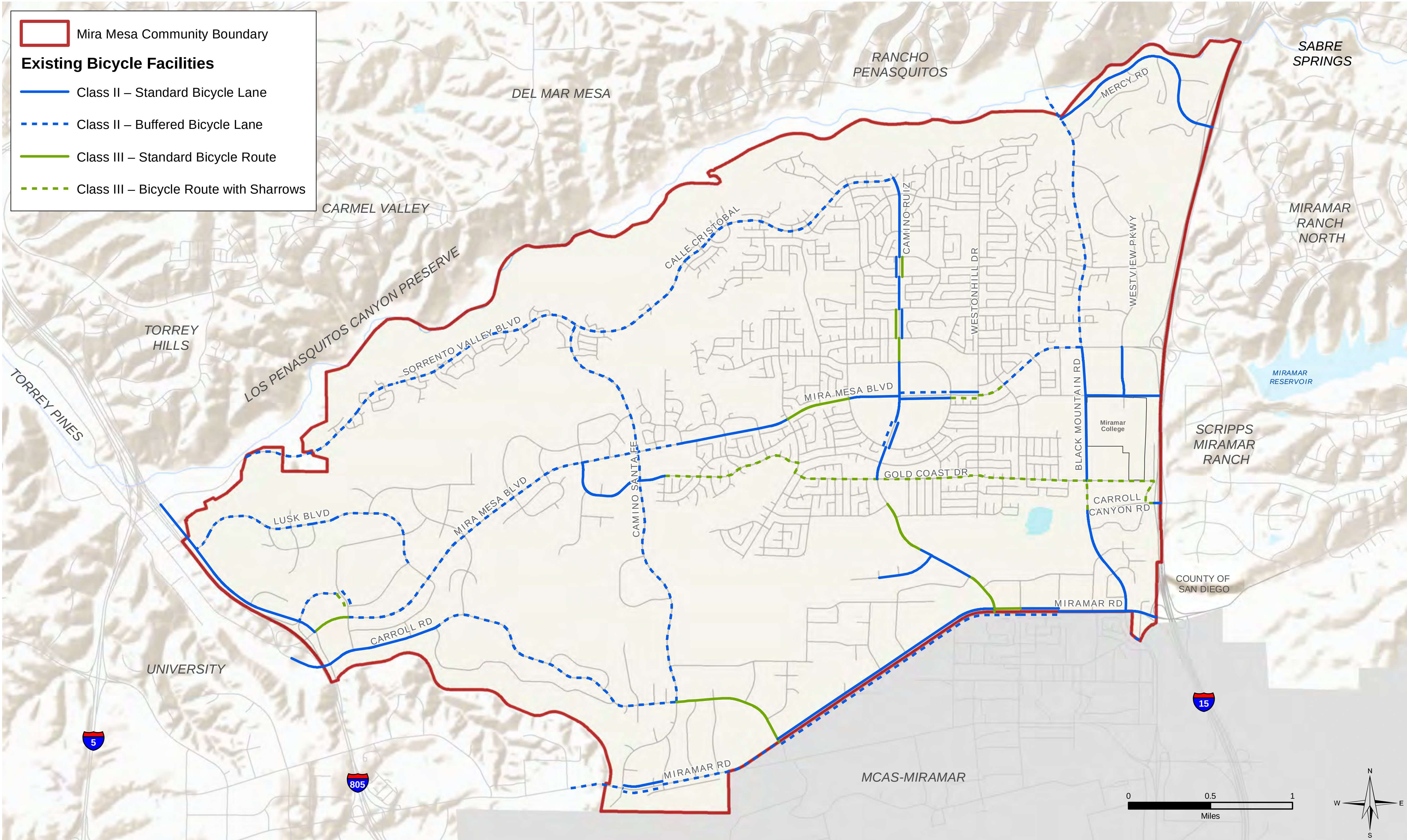
The City of San Diego has developed a network of designated Class I paths, Class II bike lanes, Class III bike routes as part of their Bicycle Master Plan efforts. A Class I facility is a bike path that provides for bicycles to travel on a paved right-of-way completely separated from any street or highway. A Class II facility is a bike lane that provides bicycles an exclusive lane of travel on a roadway separated by pavement markings. This facility can also include a painted buffer which may provide a separation from cyclists and vehicle travel lanes or parking lanes. A Class III facility is a bike route that provides shared use with motor vehicle traffic and is typically identified by signage and/or pavement markings. Class IV bikeways were introduced in 2014, which provide separated bicycle facilities within the roadway but protected from vehicle traffic by a vertical element of separation.

Figure 4-12 displays the location of the existing bvicycle facilities within the Mira Mesa community. The community has bike lanes along most of the major roadways in the community but does not provide many facilities beyond that. There are ways to get across the community using bike lanes, but this requires riding along busy roadways with high volumes and high speeds. Internal community facilities connecting residents to recreation or retail areas are minimal. Commute trip connections between transit stations and employment areas are provided on the primary roadways that vehicles would also use. This creates high levels of stress for most riders.

Bicycle connections are provided to adjacent communities to the west via the I-5 ramps and Miramar Road, to the north via Sorrento Valley Road and Black Mountain Road, to the south via Kearny Villa Road, and to the east via Mercy Road, Carroll Canyon Road, and Miramar Road.

The following section summarizes the existing bicycle environment in Mira Mesa using the following evaluations:

Demand	• Using existing turning movement count data • Based upon the Bicycle Demand Model (BDM) • Based upon census-based mode share data
Safety	• Using bicycle-related collision data for a recent five-year period
Quality	• Using Level of Traffic Stress (BLTS) analysis
Connectivity	• Using a bikeshed ratio evaluation • (Low-stress) Using combination of BLTS and bikeshed evaluations



Existing Bicycle Facilities

4.2.1 BICYCLE DEMAND

Bicycle demand was evaluated using the City of San Diego Bicycle Demand Model (BDM). The BDM has two demand components: intra-community and inter-community travel. Model inputs include population characteristics, bicycle trip attractors and generators, and proximity to land uses that are typically associated with higher rates of cycling activity. **Figure 4-13** displays the Bicycle Demand Model results for the Mira Mesa community with scoring relative to the scores within the community. The BDM process is described in more detail in **Section 2.2**.

The highest bicycle demand areas are concentrated near the Miramar College Transit Station, along Mira Mesa Boulevard and Miramar Road, and north-south connections between Mira Mesa Boulevard and Miramar Road. These roadways collect travel demand between attractors and generators in the community as there are few connections that traverse the community boundary. The area near Miramar College has high population and potential interaction between transit, employment, college, and recreation areas.

Bicycle demand is lowest in the large employment areas on the western half of the community. There are minimal interactions between the employers in this area, so travel is limited to commute traffic and it is not an easily accessible area with the current bicycle network.

The residential areas of the community experience relatively high demand, showing a need for investments in creating low-stress connections between residential areas and nearby recreation, retail, and schools.

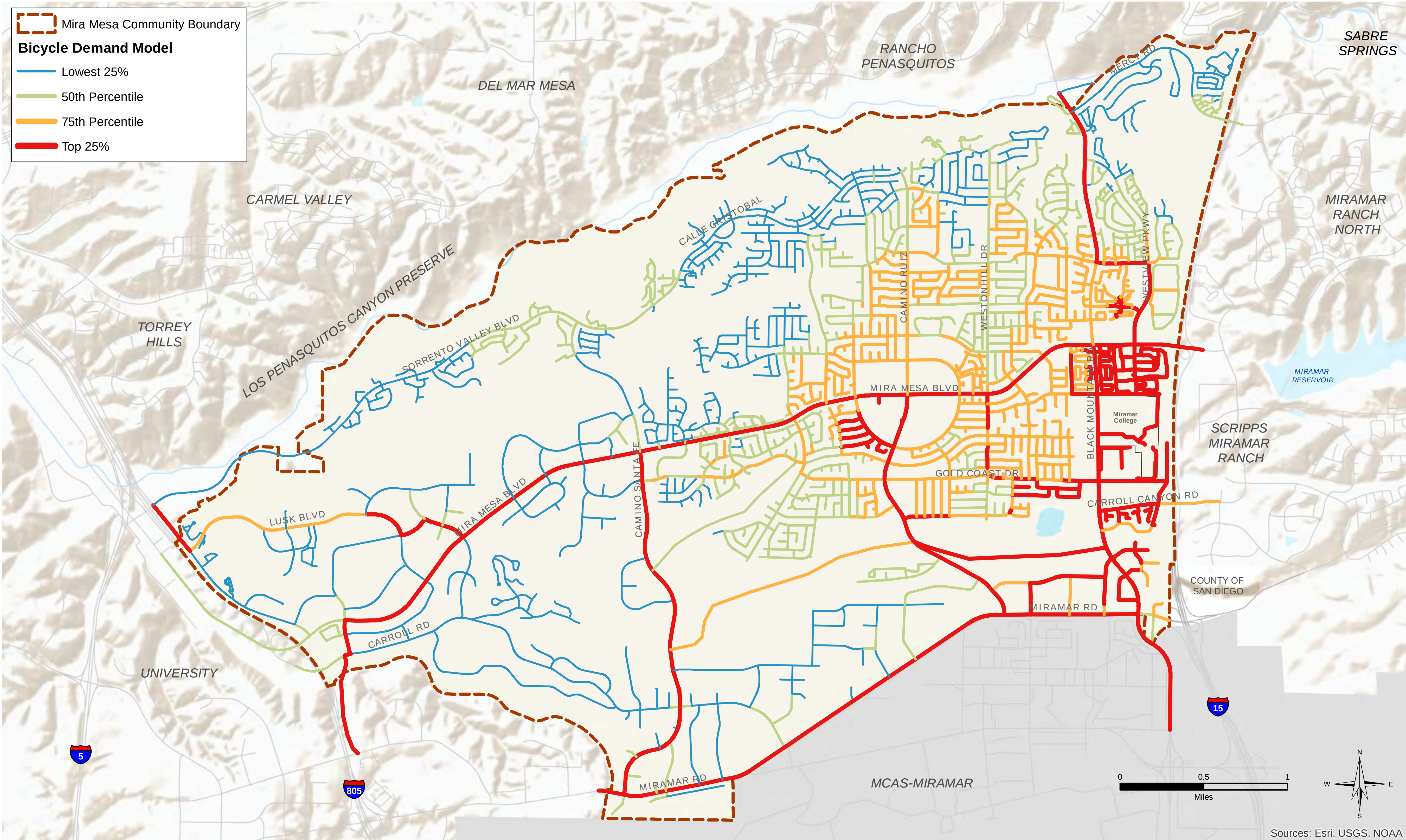
Bicycle commute mode share is another measure of where demand exists for bicycle infrastructure or where existing facilities are successfully accommodating some bicycle commutes. American Community Survey data, 2017 5-year estimates, were used to determine how the commute mode share in the Mira Mesa community compares to both the City of San Diego and the County of San Diego. **Table 4-10** presents the bicycle commute mode share comparison. The Mira Mesa community has an average bicycle mode share slightly higher than the City of San Diego and San Diego County.

Table 4-10 Bicycle Commute Mode Share Comparison

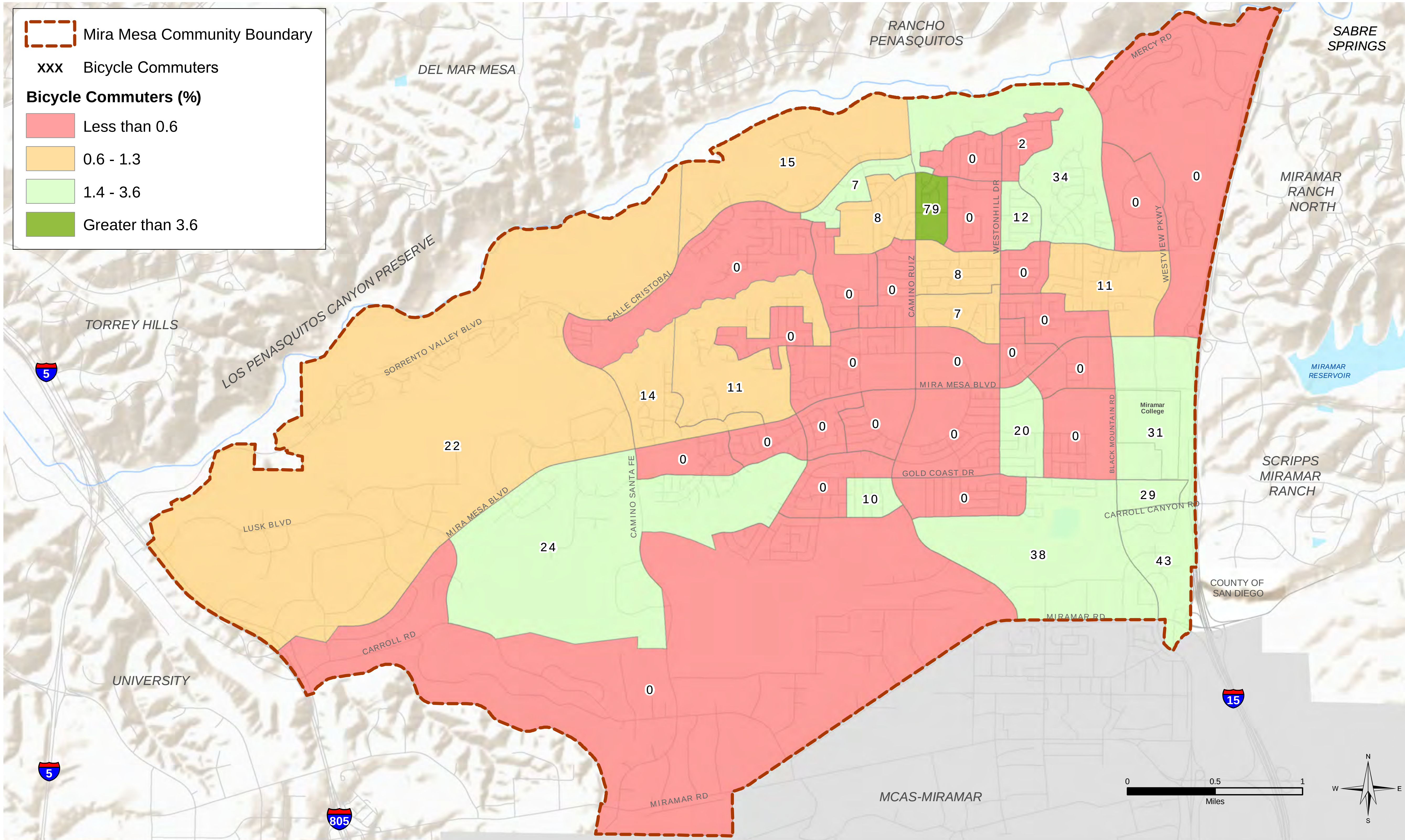
	Mira Mesa	City of San Diego	San Diego County
Total Bicycle Commutes	577	6,904	10,370
Total Workers	58,910	762,993	1,549,529
Bicycle Commute Mode Share	***1.0%***	***0.9%***	***0.7%***

Figure 4-14 displays bicycle commute rates and the total number of bicycle commuters by census block group throughout the Mira Mesa community. As shown, bicycle commute mode share is highest in the southeastern portion of the community and for the most part, tends to have higher mode shares as you go away from the center of the community. The highest commute mode share is shown near Camino Ruiz between Capricorn Way and Aquarius Drive where retail and multifamily residential developments are located.

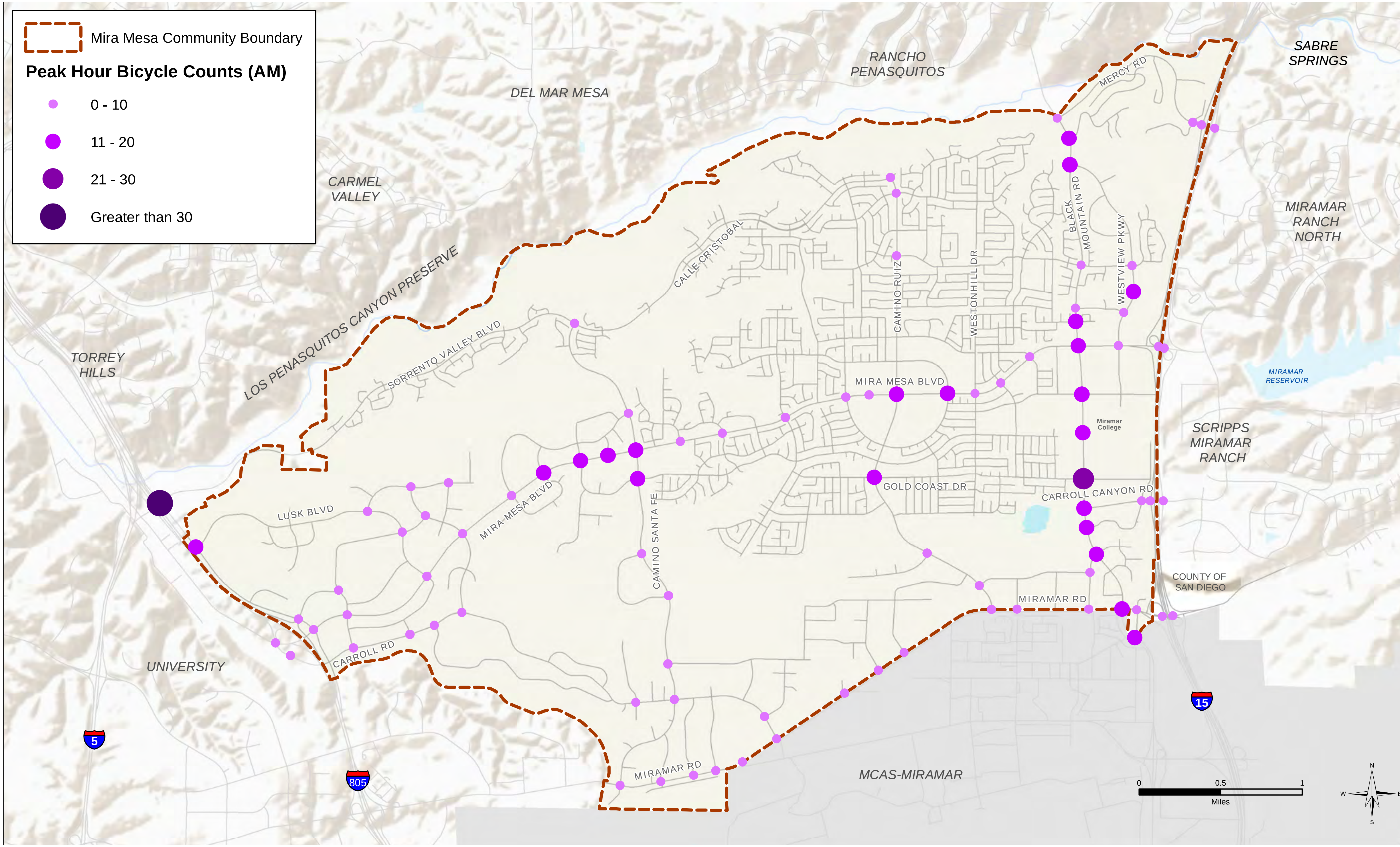
Figure 4-15 and **Figure 4-16** display the AM and PM peak hour bicycle movements observed at the 92 study intersections. Overall observed bicycle volumes were slightly greater during the PM peak hour. Higher bicycle volumes were observed near Miramar College, and along Mira Mesa Boulevard and Black Mountain Road.



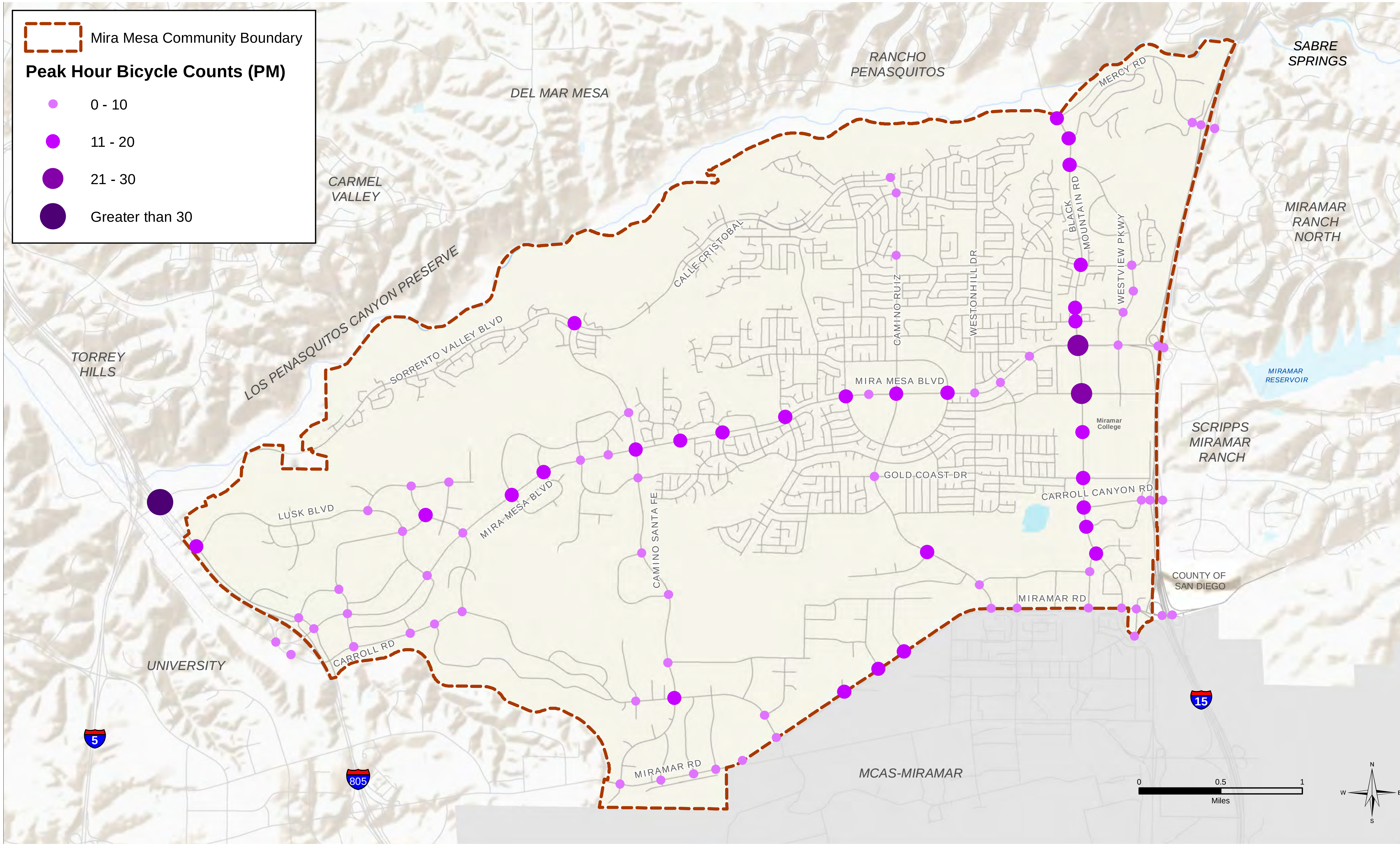
Bicycle Demand



Bicycle Commute Mode Share by Census Block Group



Bicycle Peak Hour Volumes (AM Peak)



Bicycle Peak Hour Volumes (PM Peak)

4.2.2 BICYCLE SAFETY

Between October 2012 and September 2017, there were a total of 94 reported collisions involving bicycles within the Mira Mesa community. In the State of California, collision reports must be generated for any collision where: property damage equals or exceeds 750 dollars, city property is involved, someone is injured, a fatality occurs, a pedestrian or cyclist is involved, or it is a hit-and-run or DUI collision. It is important to note some bicycle collisions may go unreported.

Reported bicycle-involved collision data within the vicinity of the community planning area are illustrated in **Figure 4-17**. Additional information on the collisions is provided in **Appendix A**.

Most locations have isolated collisions, while some intersections or mid-block locations have identified multiple collisions in the five-year period. Locations within 350 feet of an intersection were considered intersection-related, and bundled with the intersection crashes. Mid-block crash locations were evaluated on a case-by-case basis, and bundled if they occurred within close proximity of each other with similar roadway characteristics and crash trends. The locations with three or more collisions are identified in **Table 4-11.**

Table 4-11 Most Frequent Bicycle Collision Locations

Intersection	Collisions
Mira Mesa Blvd & Camino Ruiz	5
Mira Mesa Blvd & Westview Pkwy	4
Mira Mesa Blvd & Westmore Rd/Marbury Ave	3
Miramar Rd East of Commerce Ave / Milch Rd	3

The location types of the reported bicycle-involved collisions are summarized in **Table 4-12**. Types include intersection, mid-block, and approaching/departing locations. Similar to pedestrian-involved collisions, over two-thirds of all bicycle-involved collisions occurred at intersections.

Table 4-12 Bicycle Collisions by Location Types

Collision Location Type	Collisions	Percent of Total
Approaching/Departing	19	20%
Intersection	64	68%
Midblock	11	12%
Total	***94***	***100%***

Table 4-13 summarizes the collisions by the party at fault, as reported for the collision. Bicyclists were reported as "at-fault" in 30 percent of all collisions. Drivers were reported as "at-fault" in 28 percent of all collisions. All other collisions did not state the party at fault or were listed as "other."

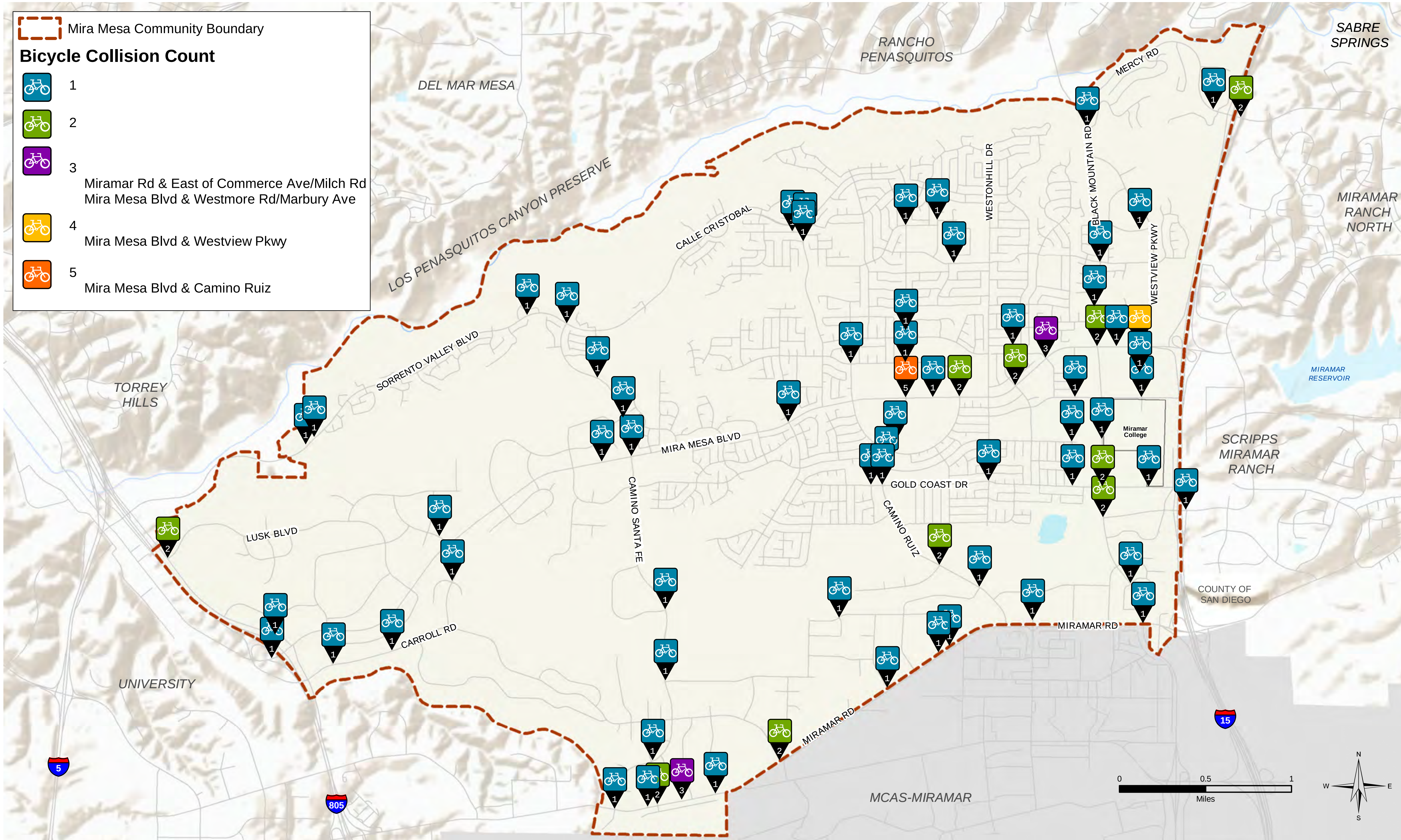
Table 4-13 Bicycle Collisions by Party at Fault

Party at Fault	Collisions	Percent of Total
Bicyclist	28	30%
Driver	26	28%
Not Stated	26	28%
Parked Vehicle	1	1%
Other	13	14%
Total	***94***	***100%***

Table 4-14 displays the primary causes for bicycle involved collisions. As shown in the table, the top cause for bicycle-involved collisions was unsafe speed, followed by auto right-of-way violation and improper turning.

Table 4-14 Primary Bicycle-Involved Collision Cause (2012-2017)

Primary Collision Cause	Number of Collisions	Percent of Total Bicycle Collisions
Auto R/W Violation	18	19%
Impeding Traffic	1	1%
Improper Passing	1	1%
Improper Turning	18	19%
Not Stated	7	5%
Other	2	2%
Other Hazardous Movement	4	4%
Other Than Driver	3	3%
Pedestrian Violation	2	2%
Traffic Signals and Signs	3	3%
Unknown	1	1%
Unsafe Lane Change	4	4%
Unsafe Speed	19	20%
Unsafe Starting or Backing	1	1%
Wrong Side of Road	10	11%
Total	***94***	***100%***



Bicycle Collisions (Oct 2012 to Sep 2017)

4.2.3 BICYCLE FACILITY QUALITY

Bicycle Level of Traffic Stress (BLTS) analysis was completed to summarize the quality of bicycle facilities in the community. BLTS evaluates the network of streets and bicycle paths according to the quality of the bicycling experience, based on an evaluation of surrounding roadway and traffic conditions. LTS is a widely accepted measure developed by the Mineta Transportation Institute at San Jose State University, and detailed in the 2012 report "Low Stress Bicycling and Network Connectivity."[11]

The report also draws from work done by the City of Portland, Oregon, to classify bicycle riders into four types based on their tolerance for traffic.[12] **Table 4-15** defines the four LTS levels in terms of suitable rider types and the cycling experience. A score of 1 represents the lowest level of stress/highest suitability, while a score of 4 represents the highest level of stress/least suitability.

Table 4-15: Levels of Traffic Stress

Level of Traffic Stress	Suitable Rider Type
LTS 1	**"Interested but Concerned" - Adults and Children**
LTS 2	**"Interested but Concerned" - Adults Only**
LTS 3	**"Enthused and Confident" - Adults Only**
LTS 4	**"Strong and Fearless" - Adults Only**

Source: "Low Stress Bicycling and Network Connectivity," Mineta Transportation Institute, p. 14.

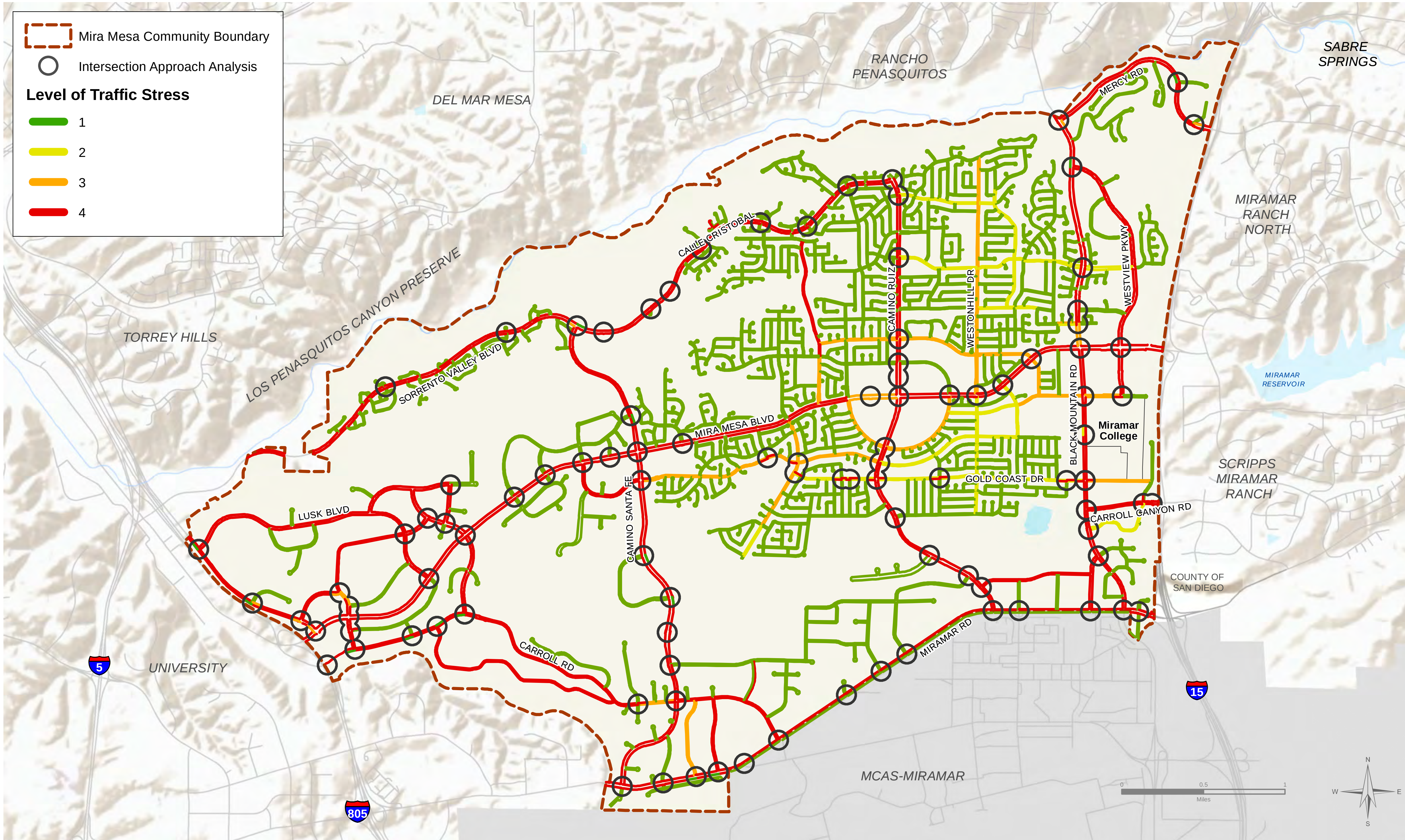
Figure 4-18 shows the LTS score for each direction of the roadways in Mira Mesa. **Appendix C** includes the detailed inputs used for BLTS analysis.

Increased number of travel lanes and higher speeds result in a more stressful experience and is shown in the BLTS scoring. As seen in the figure, the majority of the Mira Mesa community has pockets of low stress bicycle facilities that are isolated from the rest of the community due to high speed and high traffic roadways creating a stress barrier for cyclists. Miramar College and transit station are surrounded by high-stress facilities, while the demand is greatest in this area. The community does not have any east-west or north-south corridors that offer low-stress options for bicyclists to access destinations for recreation, leisure, or employment.

Mira Mesa Boulevard creates a high-stress barrier between the north and south portions of the community with only high-stress crossings. Similarly, Camino Santa Fe, Camino Ruiz, and Black Mountain Road are all high-stress routes that further separate areas of the community and prevent bicyclists from accessing destinations comfortably. In addition, all access points in and out of the community are identified as high-stress, and discourage regional travel by bike.

Segments of Gold Coast Drive, Hillery Drive, Capricorn Way, and Aquarius Drive are classified as LTS 2 and allow comfortable short-haul trips between residences, parks and schools. However, portions of these segments are broken up by high-stress intersection crossings that could be upgraded to create longer comfortable routes for bicyclists.

[11] http://transweb.sjsu.edu/project/1005.html
[12] https://www.portlandoregon.gov/transportation/44597?a=237507



Existing Bicycle Level of Traffic Stress

4.2.4 BICYCLE NETWORK CONNECTIVIY

Bicycle network connectivity can be measured by the Bikeshed Ratio. This is a metric which compares the area reachable via the bike network within a given distance, often known as the bikeshed, to the “as-the-crow-flies” area, which is a circular coverage area with a radius of the same given distance. This measure indicates how connected and accessible a given area is within the bicycle network. Constraints on connectivity include natural features, such as canyons or rivers, and street grid inefficiencies. Therefore, a score of 65 percent is considered a near maximum score, while a score over 50% is considered ideal.

The methodology for the Bikeshed Ratio is described in **Section 2.2**. The analysis focuses on the area between 0.25 miles and 1.0 mile from the point being assessed. The inner area between 0 miles and 0.25 miles from each point was removed, as it is assumed to be completed by pedestrian trips. This analysis examined 135 points at study area intersections to provide a comprehensive picture of community bicycle connectivity.

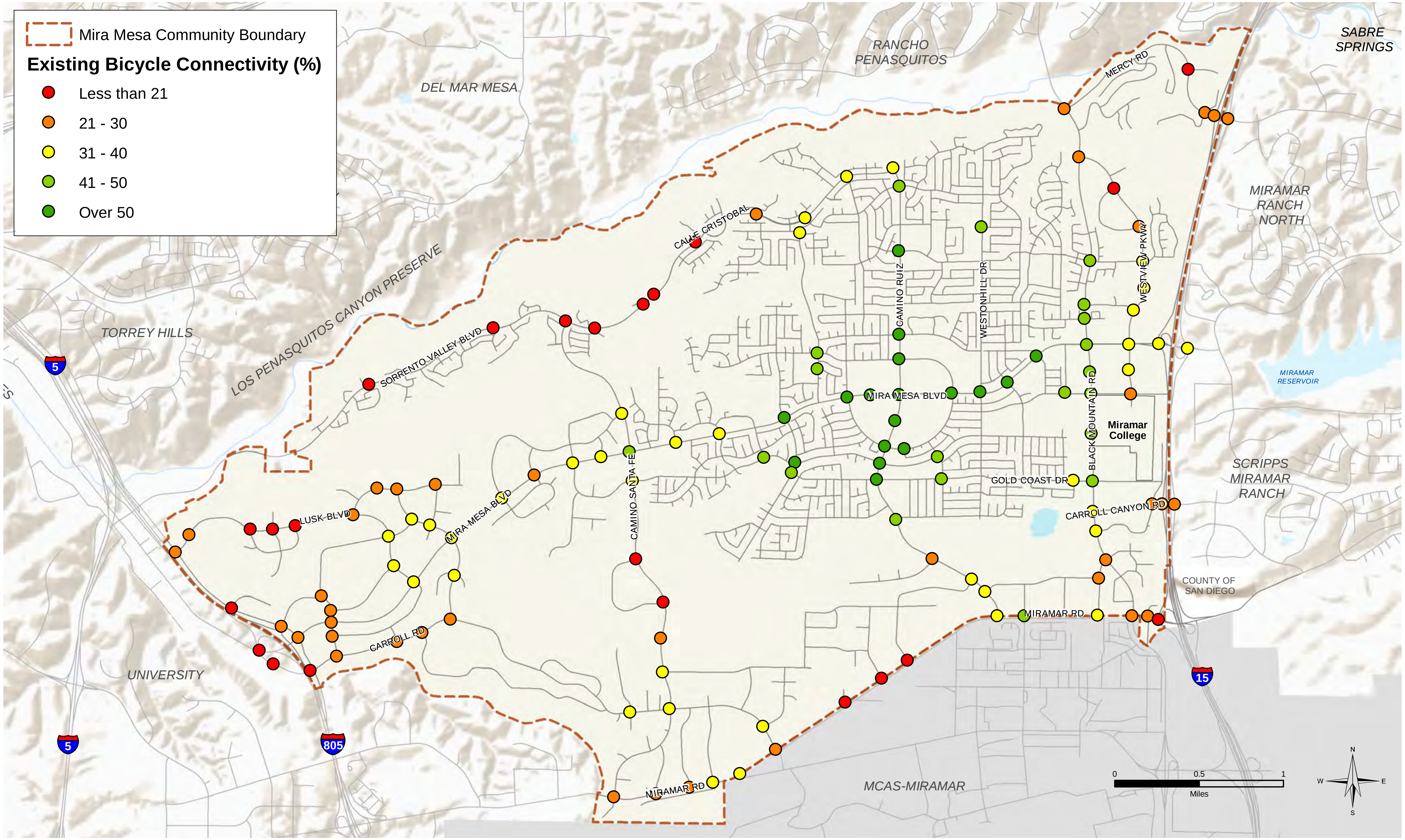
Results from the analysis are displayed in **Figure 4-19** with individual bicycle connectivity ratios for each intersection shown in **Table 4-16**. High connectivity is found in the center of the community near the intersection of Mira Mesa Boulevard and Camino Ruiz, where roadway connections are more abundant. Outside of the residential areas of the community, bicycle connectivity ratios become lower, as the roadway connections are limited by canyons. The future Carroll Canyon Road extension will provide some increased connectivity to the southern portion of the community.

Bicycle connectivity can also be assessed by the ability for connections to be made on low stress routes, which are those characterized as LTS 1 or LTS 2. The analysis determined how each traffic analysis zone (TAZ) in the community is connected via the low stress routes. The equation below represents the ratio’s calculation:

$$\frac{\text{Number of TAZs accessible via low-stress routes (LTS 1 and 2 only)}}{\text{Number of TAZs accessible via all routes}}$$

The results of the analysis are shown in **Figure 4-20**. As seen, there are a number of TAZs where there is no accessibility via low-stress bicycle facilities. These areas are completely isolated due to adjacency to canyons and high-stress facilities along Lusk, Mira Mesa Boulevard, Camino Santa Fe, and Miramar Road where there are no alternative route options. The residential areas of the community are pretty well connected with low-stress alternatives because of the availability of residential street, which have lower speeds and less vehicles. Key crossings will need to be identified to allow low-stress bicycle crossing of the major roadways in these areas.

Mira Mesa’s canyons limit some opportunities for increasing low-stress connections, as bikes will need to travel on high-speed, wide roadways for certain portions. Class IV facilities will be considered along these portions, but are not likely to be feasible at most locations because of limited right-of-way availability with the adjacent terrain. The barriers from high-stress facilities currently limit the interaction between different areas of the community. For example, getting to and from the industrial area on Miramar Road from adjacent communities or the residential area of Mira Mesa currently requires travel on a high-stress facility. Similarly, access to and from the western portion of the community (which is a major employment center for the community) has many high-stress bicycle facilities with no alternative options.



Existing Bicycle Network Connectivity (Bikeshed Ratio)

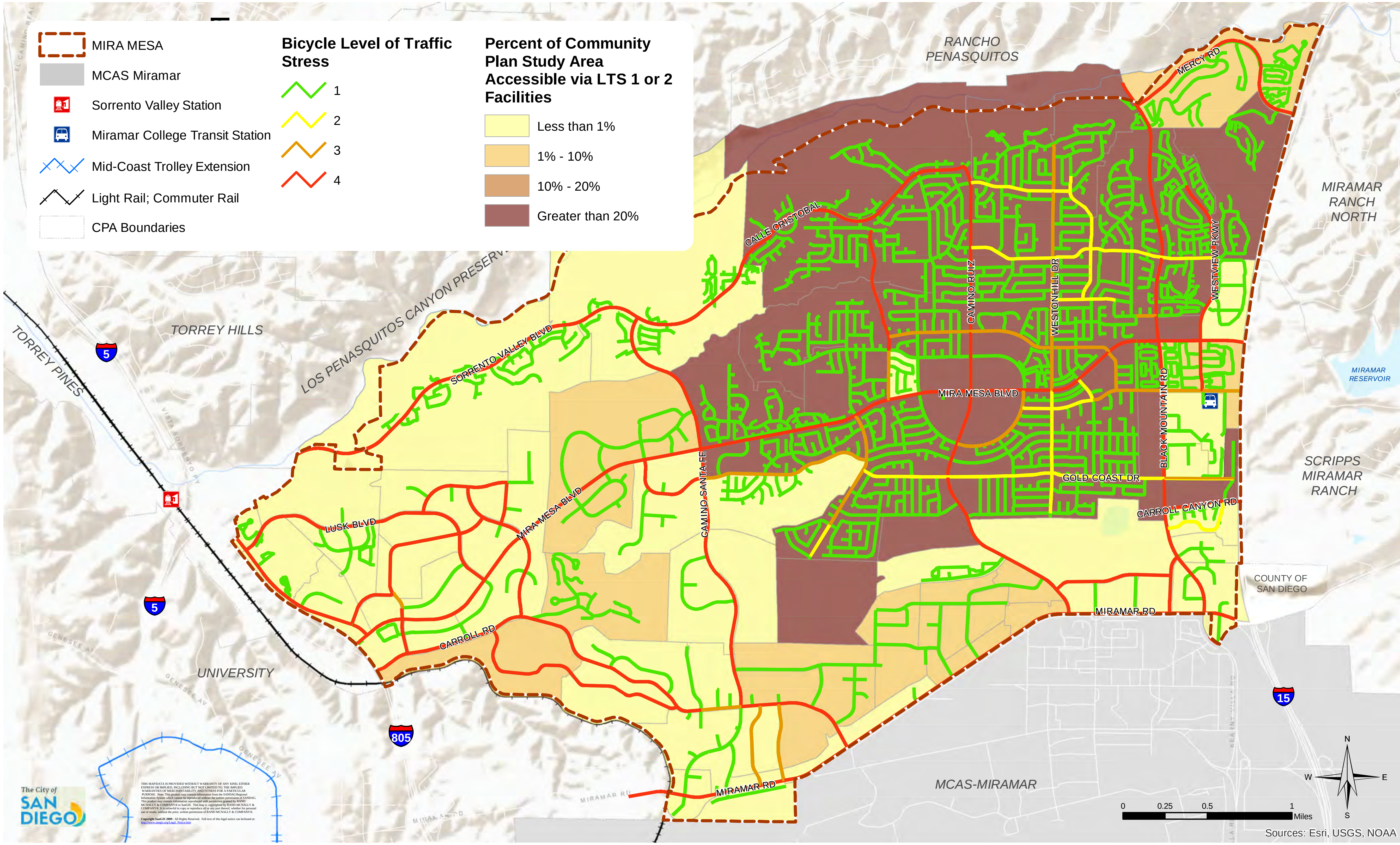
Table 4-16 Bicycle Connectivity Ratio at Pedestrian Study Intersections

Intersection ID	Intersection Name	Bicycle Connectivity Ratio
1	Ivory Coast Dr & Marauder Wy	54%
2	Vista Sorrento Pkwy & Lusk Blvd	26%
3	Vista Sorrento Pkwy & Directors Pl	19%
4	Vista Sorrento Pkwy & Mira Sorrento Pl	23%
5	Vista Sorrento Pkwy & Mira Mesa Blvd/I-805 NB Ramps	24%
6	Sorrento Valley Rd & Carroll Canyon Rd/I-805 SB Ramps	19%
7	Juniper Park Ln & Sorrento Valley Blvd	12%
8	Sunny Mesa Rd & Sorrento Valley Blvd	14%
9	Camino Santa Fe & Sorrento Valley Blvd/Calle Cristobal	16%
11	Carroll Canyon Rd & I-805 DAR	20%
13	Office Driveways & Lusk Blvd	22%
14	W Wateridge Cir & Lusk Blvd	13%
15	Telesis Ct & Lusk Blvd	15%
16	E Wateridge Cir & Lusk Blvd	16%
17	Pacific Center Blvd & Lusk Blvd	28%
18	Lusk Blvd & Barnes Canyon Rd	34%
19	Lusk Blvd & Morehouse Dr	34%
20	Lusk Blvd & Mira Mesa Blvd	37%
21	Scranton Rd & Mira Sorrento Pl	25%
22	Scranton Rd & Morehouse Dr	26%
23	Scranton Rd & Mira Mesa Blvd	27%
24	Scranton Rd & Sorrento South Dwy/Oberlin Dr	27%
25	Scranton Rd & Carroll Canyon Rd	24%
26	Pacific Heights Blvd & Barnes Canyon Rd	32%
27	Wireless Wy & Pacific Center Blvd	23%
28	Pacific Heights Blvd & Pacific Center Blvd	24%
29	Pacific Mesa Blvd & Pacific Center Blvd	23%
30	Pacific Mesa Blvd & Pacific Heights Blvd	32%
31	Pacific Heights Blvd & Mira Mesa Blvd	38%
32	Pacific Heights Blvd & Cornerstone Ct	33%
33	Pacific Heights Blvd & Carroll Canyon Rd	27%
34	Lopez Point Dr & Calle Cristobal	16%
35	Camino Propico & Calle Cristobal	14%
36	Lopez Ridge Park Driveways & Calle Cristobal	14%
37	Camino Miranda & Calle Cristobal	18%
38	Windey Ridge Wy & Calle Cristobal	28%
39	Prairie Wood Dr & Calle Cristobal	35%

Intersection ID	Intersection Name	Bicycle Connectivity Ratio
40	Avenida Del Gato & Calle Cristobal	36%
41	Camino Ruiz & Calle Cristobal	37%
42	Sequence Dr/ Huennekens St & Mira Mesa Blvd	31%
43	Genetic Center/Steadman St & Mira Mesa Blvd	28%
44	Flanders Dr & Mira Mesa Blvd	33%
45	Viper Wy & Mira Mesa Blvd	39%
46	Camino Santa Fe & Mira Mesa Blvd	42%
47	Schilling Ave & Mira Mesa Blvd	34%
48	Aderman Ave & Mira Mesa Blvd	39%
49	Parkdale Ave & Mira Mesa Blvd	58%
50	Reagan Rd & Mira Mesa Blvd	57%
51	Mira Mesa Mall Driveways & Mira Mesa Blvd	53%
52	Camino Ruiz & Mira Mesa Blvd	59%
53	New Salem St/Marauder Wy & Mira Mesa Blvd	56%
54	Westonhill Dr & Mira Mesa Blvd	61%
55	Greenford Dr & Mira Mesa Blvd	61%
56	Westmore Rd/Marbury Ave & Mira Mesa Blvd	54%
57	Black Mountain Rd & Mira Mesa Blvd	44%
58	Westview Pkwy & Mira Mesa Blvd	40%
59	I-15 SB Ramps & Mira Mesa Blvd	34%
60	I-15 NB Ramps & Mira Mesa Blvd	31%
62	Business Access Road & Carroll Canyon Rd	17%
63	Youngstown Wy & Carroll Canyon Rd	28%
64	Nancy Ridge Dr & Carroll Canyon Rd	27%
65	Rehco Rd & Carroll Rd	31%
66	Camino Santa Fe & Carroll Rd	38%
67	Carroll Rd & Kenamar Dr	31%
68	Carroll Rd & Miramar Rd	30%
70	Camino Santa Fe & Miramar Rd	25%
72	Commerce Ave & Miramar Rd	28%
73	Production Ave & Miramar Rd	29%
74	Distribution Ave & Miramar Rd	31%
75	Miramar Wy & Miramar Rd	32%
76	Empire St & Miramar Rd	18%
77	Dowdy Dr & Miramar Rd	18%
78	Chabot Dr & Miramar Rd	19%
79	Camino Ruiz & Miramar Rd	40%
80	Clayton Dr/Mitscher Wy & Miramar Rd	45%

Intersection ID	Intersection Name	Bicycle Connectivity Ratio
81	Black Mountain Rd & Miramar Rd	31%
82	Kearny Villa Rd & Miramar Rd	23%
83	Kearny Mesa Rd & Miramar Rd	21%
84	I-15 SB Ramps & Miramar Rd	18%
86	Camino Santa Fe & Flanders Dr	39%
87	Dabney Dr & Flanders Dr	49%
88	Parkdale Ave & Flanders Dr	52%
89	Camino Ruiz & Flanders Dr	55%
90	San Ramon Dr & Flanders Dr	49%
91	Camino Santa Fe & Top Gun St	35%
92	Camino Santa Fe & Miratech Dr	20%
93	Camino Santa Fe & Summers Ridge Rd	17%
94	Camino Santa Fe & Unnamed Road	25%
95	Camino Santa Fe & Trade St	35%
96	Parkdale Ave & Gold Coast Dr	48%
97	Montongo St & Acama St	38%
98	Montongo St & New Salem St	50%
99	Montongo St & Goleta Rd	47%
100	Camino Ruiz & Aquarious Dr	41%
101	Camino Ruiz & Teresa Dr/Capricorn Wy	51%
102	Camino Ruiz & Westmore Rd	58%
103	Camino Ruiz & New Salem St	58%
104	Camino Ruiz & Driveway	54%
105	Camino Ruiz & Reagan Rd/Marauder Wy	56%
106	Camino Ruiz & Gold Coast Dr	53%
107	Camino Ruiz & Jade Coast Dr	44%
108	Camino Ruiz & Carroll Canyon Rd	30%
109	Camino Ruiz & Miralani Dr	35%
110	Camino Ruiz & Activity Rd	36%
113	San Ramon Dr & Gold Coast Dr	46%
114	Thanksgiving Ln & Gold Coast Dr	40%
115	Black Mountain Rd & Gold Coast Dr	42%
116	Westonhill Dr & Arctrus Wy	48%
117	Black Mountain Rd & Capricorn Wy	48%
118	Westview Pkwy & Capricorn Wy	34%
119	Black Mountain Rd & Mercy Rd	25%
120	Black Mountain Rd & Westview Pkwy	26%
121	Black Mountain Rd & Galvin Ave	46%

Intersection ID	Intersection Name	Bicycle Connectivity Ratio
122	Black Mountain Rd & Gemini Ave	44%
123	Black Mountain Rd & Village Green/The Hills Driveways	44%
124	Black Mountain Rd & Hillery Dr	46%
125	Black Mountain Rd & Miramar College	41%
126	Black Mountain Rd & Carroll Canyon Rd	37%
127	Black Mountain Rd & Maya Linda Rd	34%
128	Black Mountain Rd/Kearny Villa Rd & Black Mountain Rd/Carroll Centre Rd	30%
129	Black Mountain Rd & Activity Rd	29%
130	Rickert Rd & Hillery Dr	45%
131	Westview Pkwy & Hillery Dr	29%
132	Mercy Rd & Kika Ct	19%
133	Alamenia Rd & Mercy Rd	23%
134	I-15 SB Ramps & Mercy Rd	24%
135	I-15 NB Ramps & Mercy Rd	25%
136	Westview Pkwy & Campus Point Dr N	20%
137	Westview Pkwy & Campus Point Dr S	25%
138	Westview Pkwy & Mira Lee Wy	34%
139	Westview Pkwy & Galvin Ave	36%
140	Westview Pkwy & Market Center Driveway	31%
141	Maya Linda Rd & Carroll Canyon Rd	29%
142	I-15 SB Ramps & Carroll Canyon Rd	29%
143	I-15 NB Ramps & Carroll Canyon Rd	30%



Existing Bicycle Network Connectivity (Low-Stress Connectivity)

4.3 TRANSIT

Public transportation (transit) service is provided throughout the San Diego region. The following section summarizes the existing transit environment in Mira Mesa using the following evaluations:

Demand	• Using ridership information • Based upon census-based mode share data • (Potential) based upon census-based population density data • (Potential) based upon LODES employment density data
Safety	• Using pedestrian- and bicycle-related collision data near transit stops for a recent five-year period
Quality	• Using inventory of transit stop amenities • Using roadway speed simulation analysis
Connectivity	• Using walkable area within 1/4-mile distance to major transit stations

Figure 4-21 shows an overview of the roadway facilities where transit is available within the Mira Mesa community. The Miramar College Transit Station is the only major transit station located within the community. The Sorrento Valley Station is located just outside of Mira Mesa, west of the community boundary, but is included in the discussion as it provides a major connection point for Mira Mesa's transit system and overall transportation network. Currently, buses are the primary form of transit provided in the community. Private shuttle services are also being utilized by some of the larger employers in the community and may not be reflected in Figure 4-21.

BUS ROUTES

There are nine Metropolitan Transit Service (MTS) routes that currently serve the Mira Mesa community. A description and map of each of the bus routes within the community is provided in **Appendix D**. Most of the bus routes serving the community are focused on connecting specific areas of the community to one of the two major transit stations for access to other bus routes, trolley lines and regional services. Mira Mesa Boulevard services three bus routes all of which terminate or travel through the Miramar Transit Station. Otherwise most roadways have only one route. Bus routes within the Mira Mesa community include;

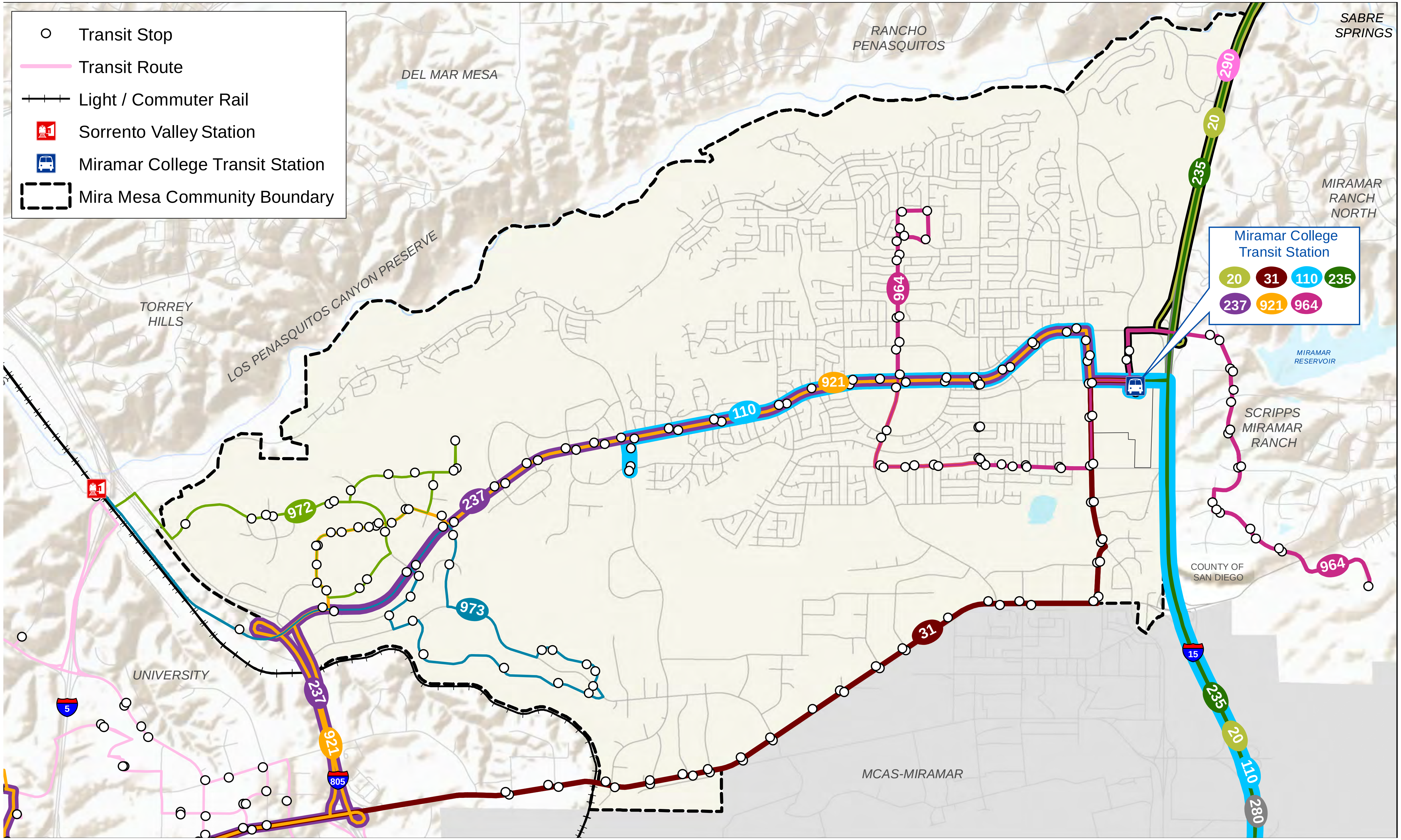
ROUTE 20 – 30-minute headway service between Downtown San Diego and Rancho Bernardo with a stop at Miramar College Transit Station

ROUTE 31 – 30-minute headway peak period service (5:55 – 8:28 AM and 2:27 – 6:33 PM) between University community and Mira Mesa via Miramar Rd

ROUTE 110 (EXPRESS) – Limited AM (6:00 – 7:00) and PM (4:00 – 5:30) service between Downtown and 2 stops in Mira Mesa: Miramar College Transit Station and Camino Santa Fe & Flanders Dr

ROUTE 235 – 15-minute headway service between Downtown San Diego and Escondido with a stop at Miramar College Transit Station

ROUTE 237 – peak hour 15-minute headways (6:22 – 9:50 AM and 4:19 – 5:40 PM) between University community and Mira Mesa community along Mira Mesa Blvd between I-805 and Miramar College Transit Station



Existing Transit Routes

ROUTE 921 - 30-minute headway service between UTC and Mira Mesa via Mira Mesa Blvd and Scranton Rd / Barnes Canyon Rd / Pacific Heights Blvd

ROUTE 964 – 30-minute headway service between Scripps Ranch and Mira Mesa via Black Mountain Rd / Gold Coast Dr / Camino Ruiz

ROUTE 972 – Limited AM (6:30 – 9:00) and PM (3:30 – 6:10) service between Sorrento Valley Station to Sorrento Mesa area (western portion of the community)

ROUTE 973 - Limited AM (6:30 – 9:00) and PM (3:30 – 6:10) service between Sorrento Valley Station to Carroll Canyon area

RAIL SERVICES

No rail lines traverse through the Mira Mesa Community; however, the Sorrento Valley Station serves the COASTER/AMTRAK and is located just west of the community with access available from multiple Mira Mesa roadways. The rail services provide connections north and south of the community and connect to other regional rail services.

Both the COASTER and the Pacific Surfliner services are part of the 351-mile Los Angeles-San Diego-San Luis Obispo Rail Corridor that travels through a six-county coastal region in Southern California.

NCTD COASTER

The COASTER is a commuter rail line operated by NCTD that runs north to south from Oceanside to downtown San Diego with a stop at the Sorrento Valley Station. The COASTER serves eight stations including Santa Fe Depot, Old Town, Sorrento Valley, Solana Beach, Encinitas, Carlsbad Poinsettia, Carlsbad Village, and Oceanside. It takes about an hour to travel the entire route from downtown San Diego (Santa Fe Depot) to the Oceanside Transit Center. The rail line provides 11 daily round-trip services Monday through Thursday, 13 round-trip services on Fridays, six round-trip services on Saturdays, and four round-trip services on Sundays and Holidays. The COASTER also provides expanded service in the spring and summer and additional trains scheduled for special events as needed (such as Padres games). The fare varies depending on the number of zones traveled.

AMTRAK Pacific Surfliner

The Pacific Surfliner is a passenger rail line operated by AMTRAK that runs north to south from San Luis Obispo to downtown San Diego with a stop at the Sorrento Valley Station. The Pacific Surfliner serves thirty stations including the eight COASTER stations stated above, as well as Anaheim, Santa Barbara, and Los Angeles. The rail line offers 12 daily round-trip services between San Diego and Los Angeles, and between Santa Barbara and San Diego. Commuters with COASTER passes can use AMTRAK trains that are not full.

SHUTTLE SERVICES

Several of the larger employers in the area provide their own shuttle service between the Sorrento Valley Station and their buildings. Currently the private shuttles are independently operated and are not shared resources between different employers.

4.3.1 TRANSIT DEMAND

Transit demand was assessed through a combination of stop-level ridership data, census commute mode share data, and evaluation of the population and employment density within Mira Mesa community.

A full list of stop-specific ridership information from Spring 2017 is presented in **Appendix D**. The data provides boardings (getting on the vehicle), alightings (getting off the vehicle), and total ridership for MTS routes serving the Mira Mesa community using ridership data provided by SANDAG/MTS. **Figure 4-22** displays the average number of weekday boardings at each stop and **Figure 4-23** displays the average number of weekday alightings at each stop.

Miramar College Transit Station, the only major transit stop in the community, has the highest boardings and alightings. Not including the Miramar College Transit Station, the ten bus stops with the highest daily boardings are provided in **Table 4-17**, and the ten stops with the highest daily alightings are provided in **Table 4-18**.

As shown in the tables, many of the high boardings and alightings stops are located along Mira Mesa Boulevard and Black Mountain Road. Within the community, boardings and alightings are generally higher near shopping centers. The employment area on the west side of the community has low to moderate ridership. Camino Ruiz where route 964 services the residential area north of Mira Mesa Boulevard also has moderate ridership. Miramar Road has low ridership.

Table 4-17 Mira Mesa Community Transit Stops with Most Passenger Boardings

Transit Stops with Most Passengers	Boardings
Mira Mesa Bl & Camino Ruiz (NW Corner)	148
Mira Mesa Bl & Camino Ruiz (SE Corner)	80
Black Mountain Rd & Gold Coast Dr (NW Corner)	77
Mira Mesa Bl & Black Mountain Rd (NW Corner)	73
Black Mountain Rd & Activity Rd (NW Corner)	53
Mira Mesa Bl & Pacific Heights Bl (SE Corner)	50
Barnes Canyon Rd & Pacific Heights Bl (SE Corner)	43
Gold Coast Dr & Camino Ruiz (SE Corner)	35
Mira Mesa Bl & Shilling Av (NW Corner)	33
Zapata Av & Kelowna Rd (SW Corner)	30

*FY2017 Spring Ridership
Source: SANDAG

Table 4-18 Mira Mesa Community Transit Stops with Most Passenger Alightings

Transit Stops with Most Passengers	Alightings
Mira Mesa Bl & Camino Ruiz (SE Corner)	132
Mira Mesa Bl & Camino Ruiz (NW Corner)	91
Black Mountain Rd & Mira Mesa Bl (SW Corner)	68
Camino Ruiz & Capricorn Wy (NE Corner)	68
Black Mountain Rd & Miramar Rd (NE Corner)	67
Black Mountain Rd & Gold Coast Rd (NE Corner)	53
Mira Mesa Bl & Pacific Heights Bl (NW Corner)	47
Barnes Canyon Rd & Pacific Heights Bl (SW Corner)	39
Camino Ruiz & Mira Mesa Bl (NW Corner)	38
Westview Pkwy & Mira Mesa MarketCenter (East side)	33

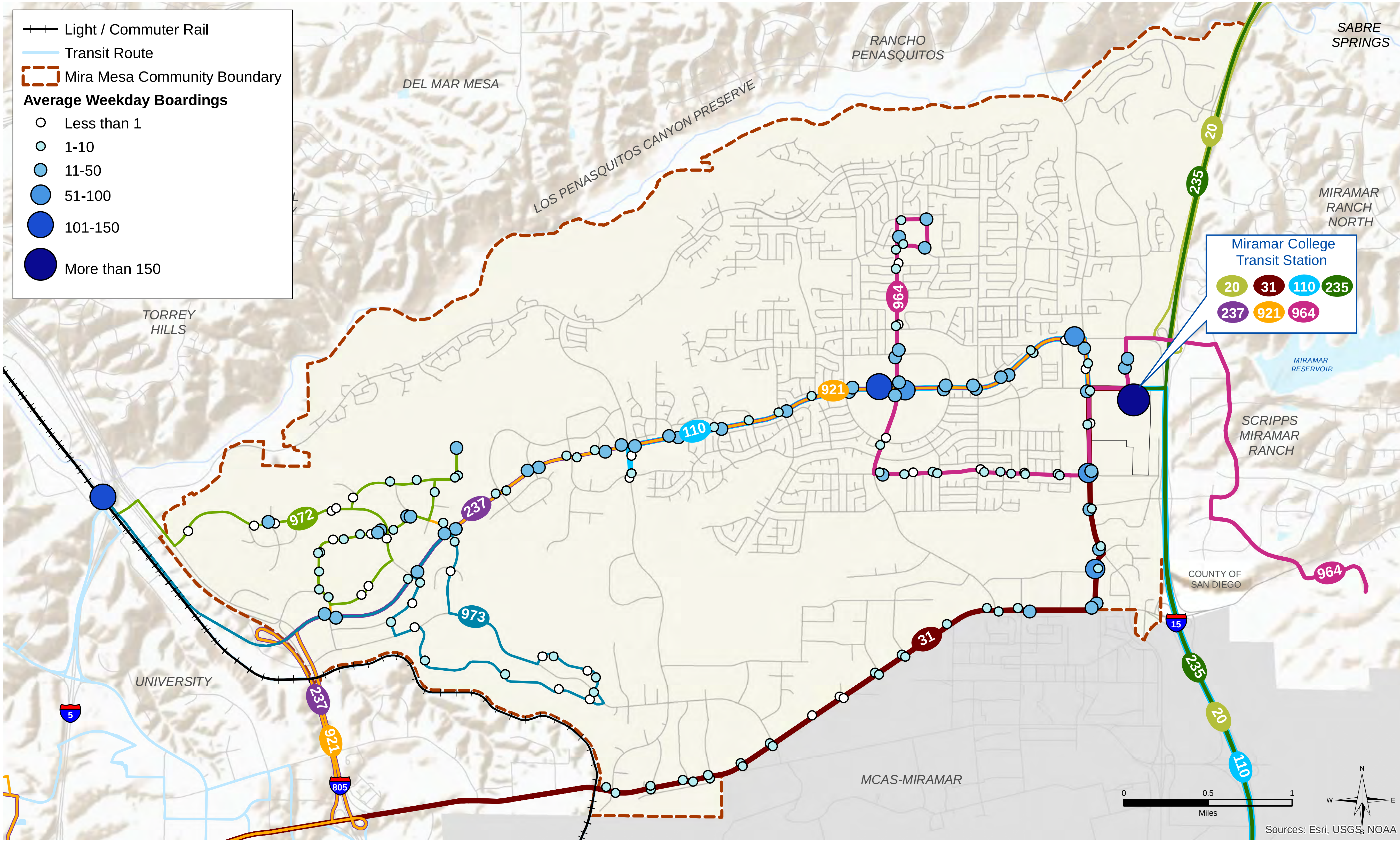
*FY2017 Spring Ridership
Source: SANDAG

Table 4-19 provides a summary of total ridership for each route within the community. Route 921 is the most heavily utilized bus route in the community, running east-west along Mira Mesa Boulevard between the University of California San Diego and the Miramar College Transit Station. This route services the employment area in Sorrento Valley during the weekdays only, and services the retail and recreational areas near Mesa Verde Park. Route 964 has the second highest ridership and connects Mira Mesa neighborhoods and destinations to Scripps Ranch neighborhoods and destinations. These two highest ridership bus routes show the desire for connections between Mira Mesa and the adjacent communities.

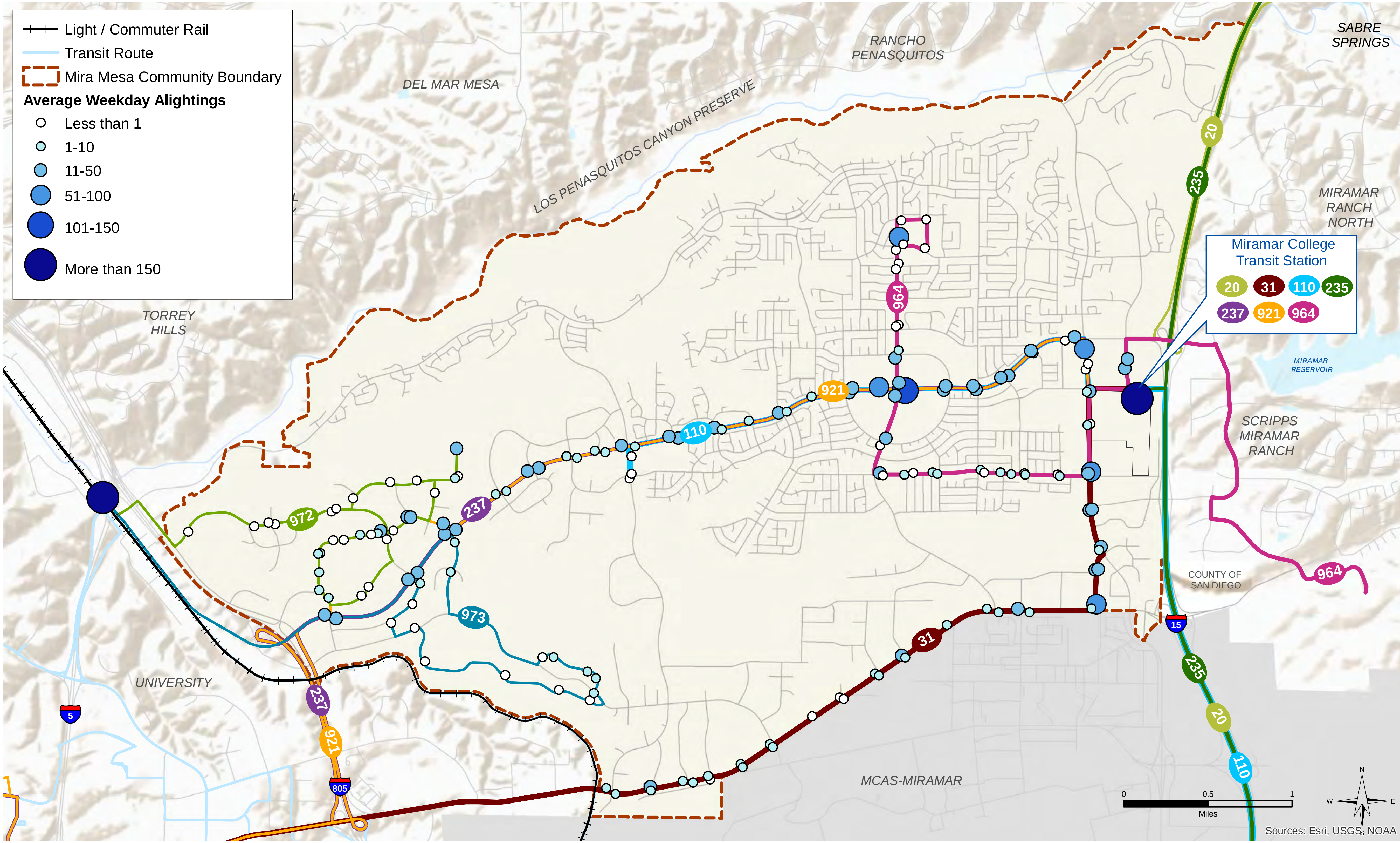
Table 4-19 Mira Mesa Community Ridership by Route

Route	Daily Ridership within Community
20	4242
31	3048
110	669
235	2512
237	4009
921	9802
964	4422
972	990
973	582
978	51
979	35

*FY2017 Spring Ridership
Source: SANDAG



Transit Boardings by Stop



Transit Alightings by Stop

Transit commute mode share is another measure of where demand exists and are successfully facilitating some transit commutes. American Community Survey data, 2017 5-year estimates, were used to determine how the commute mode share in the Mira Mesa community compares to both the City of San Diego and the County of San Diego. **Table 4-20** presents the transit commute mode share comparison. The Mira Mesa community has a mode share nearly half that of the City of San Diego and the County of San Diego. This indicates that transit is not a popular choice for people in this community. Transit is composed primarily of bus connections for this community, with the Sorrento Valley Station being the only stop for rail service.

Table 4-20 Transit Commute Mode Share Comparison

	Mira Mesa	City of San Diego	San Diego County
Total Transit Commutes	1,079	28,753	45,883
Total Workers	58,910	762,993	1,549,529
Transit Commute Mode Share	*1.8%*	*3.8%*	*3.0%*

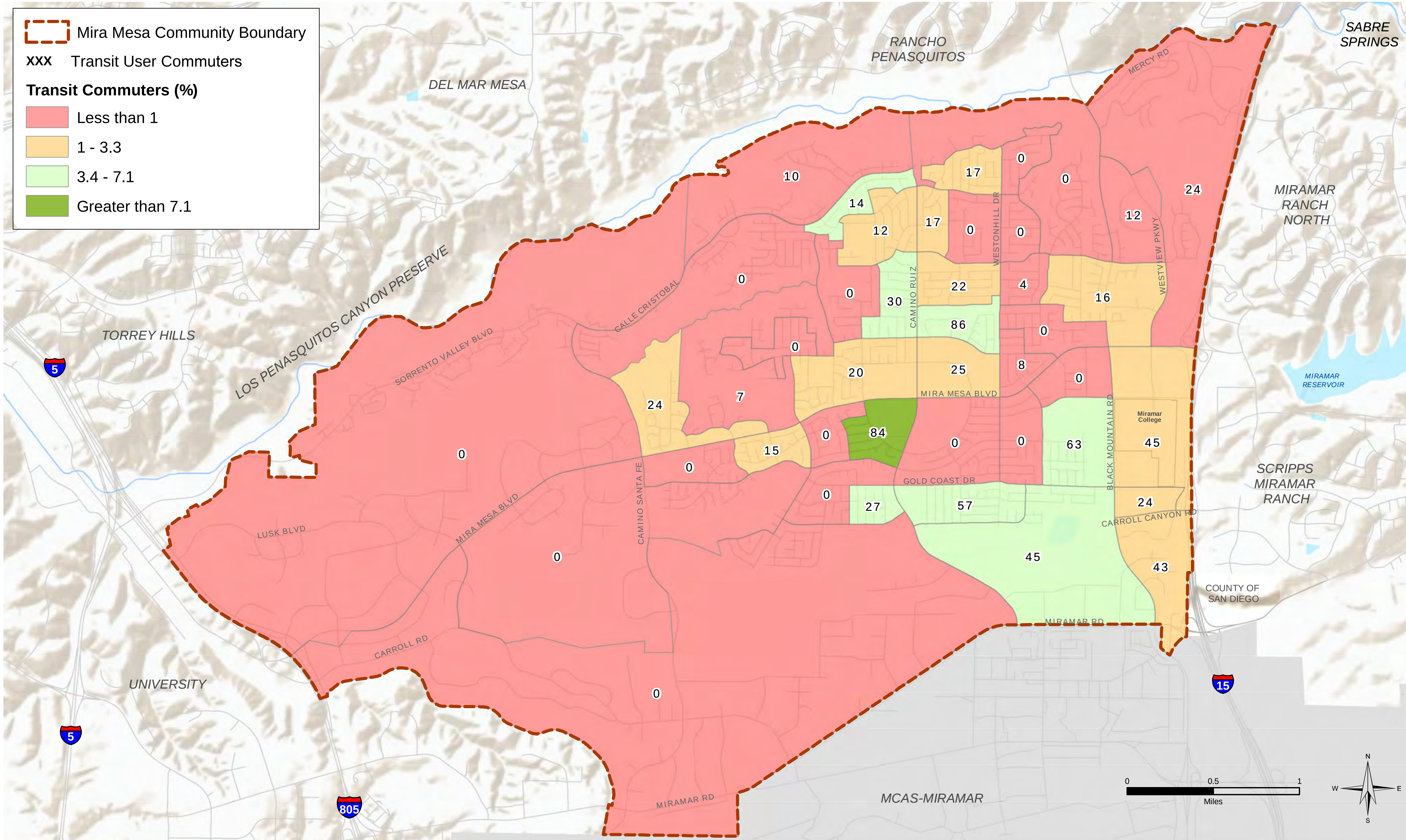
Figure 4-24 displays transit commute rates and the total number of transit commuters by census block group throughout the Mira Mesa community. As shown, transit commute mode share is higher for the areas along the eastern portion of the community, near the Miramar College Transit Station. Areas west and south have no commute mode share, but also have little to no residential uses.

An evaluation of the residential and employment density in the community was also performed to determine areas with the highest population for transit ridership potential. Residential and employment density are shown in **Figure 4-25** and **Figure 4-26**, respectively. Residential density is highest in the eastern portion of the community where large blocks of single-family homes and several multi-family developments are located. Employment density is largely focused on the western portion of the community. Thus, transit demand for work commuters may focus on providing access to the businesses in the western areas of the community, whereas resident-focused service may be in greater demand in the central and eastern portions of the community. The southern, industrial portion of the community has a mix of moderate residential and employment density.

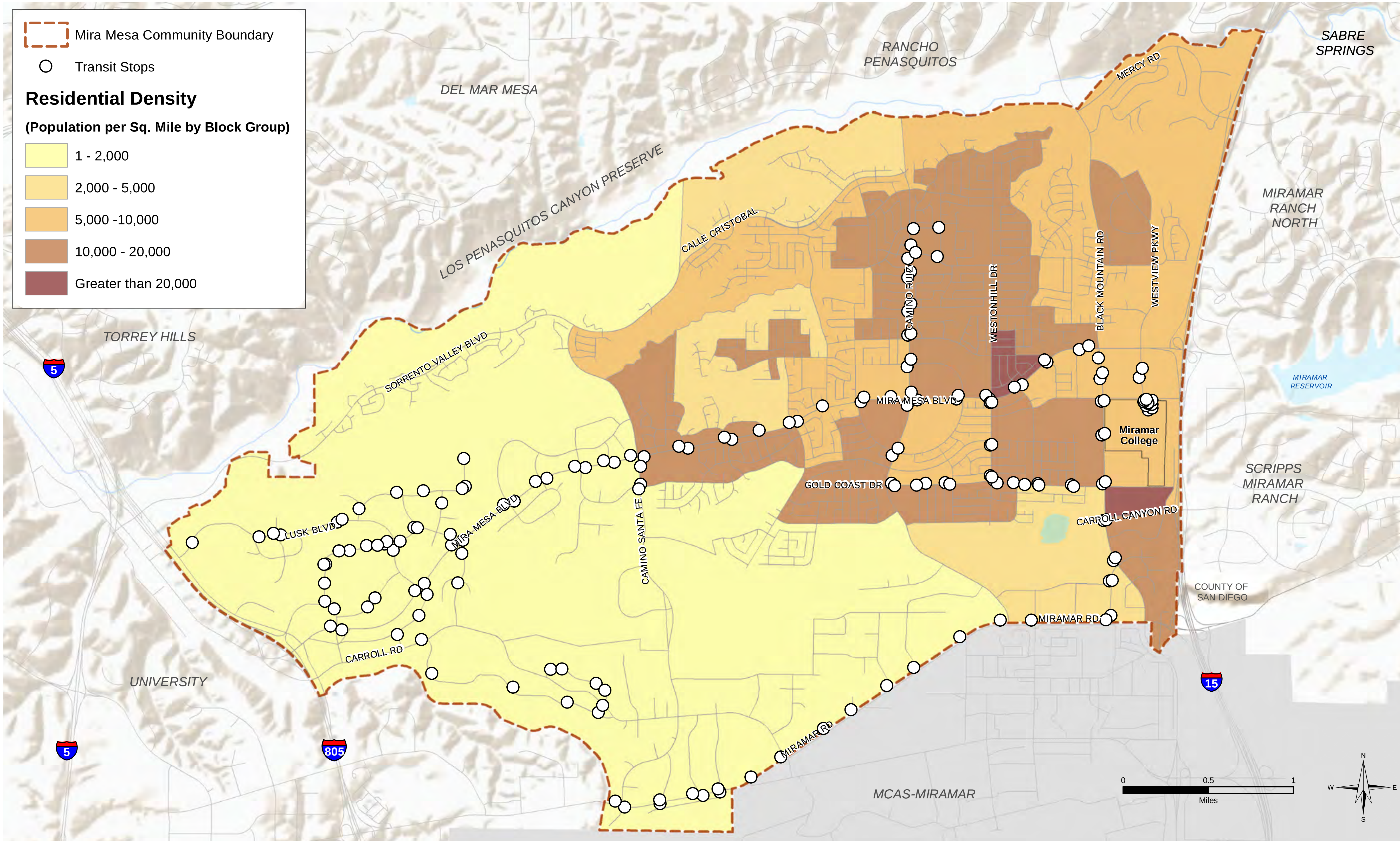
An evaluation of how much of the density is within 0.25-miles of a transit stop was performed. The results are summarized in **Table 4-21**. As shown, 57% of residents and 85% of jobs are within 0.25-miles of a transit stop.

Table 4-21 Residential and Employment Density Near Transit

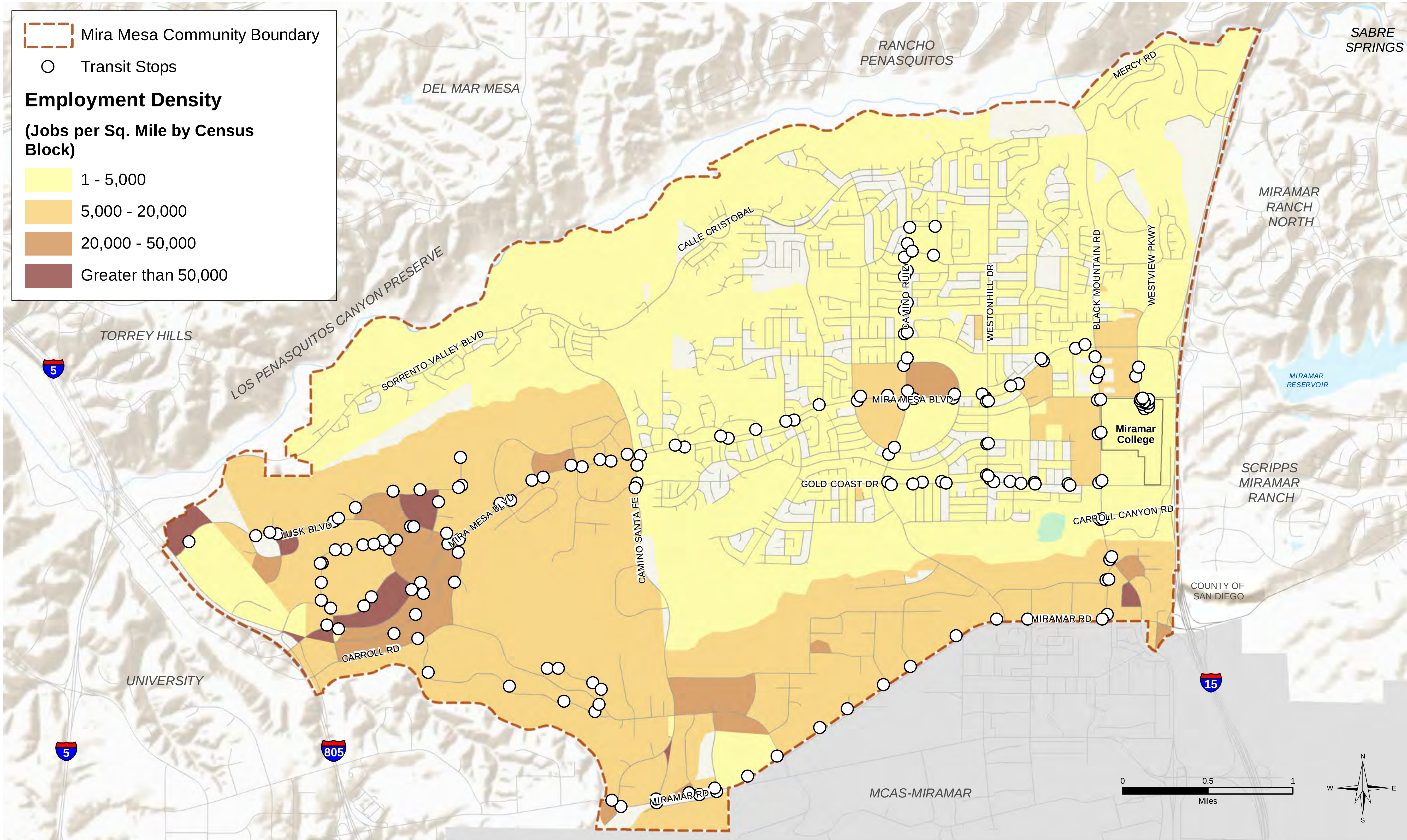
	Near Transit	Total in Mira Mesa Community
Residents	14,635	25,840
Jobs	*82,972*	*97,946*



Transit Commute Mode Share by Census Block Group



Residential Density Near Transit



Employment Density Near Transit

4.3.2 SAFETY NEAR TRANSIT STOPS

Between October 2012 and September 2017, there were a total of 110 reported pedestrian- and bicycle-involved collisions along corridors that serve transit in the Mira Mesa community. In the State of California, collision reports must be generated for any collision where property damage totals 750 dollars or more, someone is injured, or someone is killed. As a result, it is important to note some incidents may go unreported for failing to meet one of these criteria.

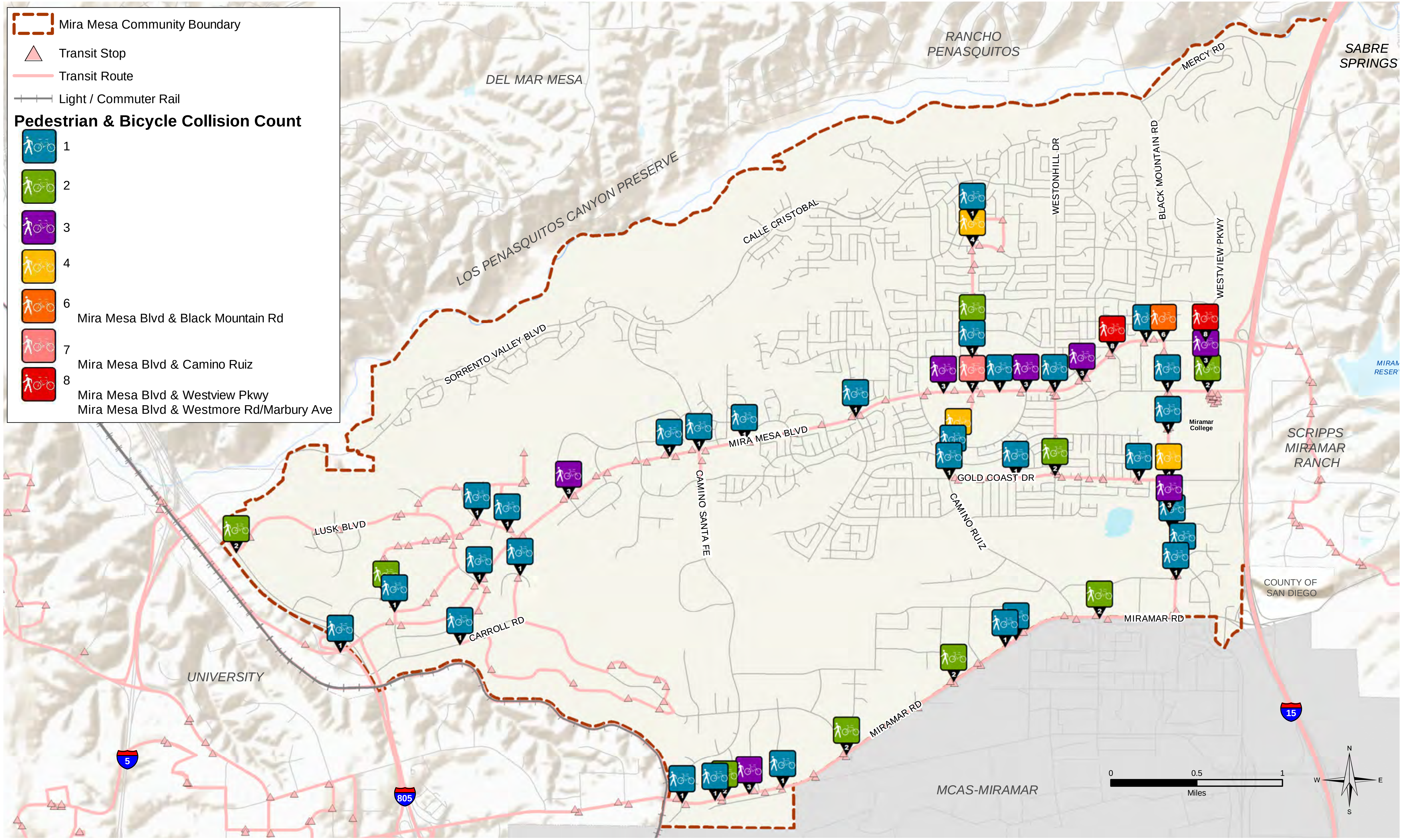
Figure 4-27 displays the reported pedestrian- and bicycle-involved collision locations across the community overlaid with the transit stops in the community. Additional information on the collisions is provided in **Appendix A**.

Locations with at least three combined pedestrian- or bicycle-involved collisions along a transit corridor are identified in **Table 4-22.**

Table 4-22 Most Frequent Collision Locations near Transit Stops

Intersections	Collisions
Mira Mesa Blvd & Westview Pkwy	8
Mira Mesa Blvd & Westmore Rd/Marbury Ave	8
Mira Mesa Blvd & Camino Ruiz	7
Mira Mesa Blvd & Black Mountain Rd	6
Camino Ruiz & Capricorn Wy	4
Camino Ruiz & Reagan Rd/Marauder Wy	4
Black Mountain Rd & Gold Coast Dr	4
Mira Mesa Blvd & Sequence Dr	3
Mira Mesa Blvd & Mira Mesa Mall	3
Mira Mesa Blvd & New Salem St	3
Mira Mesa Blvd & Greenford Dr	3
Miramar Rd East of Commerce Ave/Milch Rd	3
Westview Pkwy & Market Center Dwy	3
Black Mountain Rd & Carroll Canyon Rd	3

As shown in the data, areas near transit stops with higher ridership (commute mode share and boardings/alightings) have higher pedestrian- and bicycle-involved collisions. This indicates that the pedestrian and bicycle volumes are likely higher near the transit routes, and there is a need for improved facilities at major intersections and roadways near transit stops.



Bicycle- and Pedestrian-Involved Collisions Along Transit Corridors

4.3.3 TRANSIT QUALITY

Travel time runs were performed using the floating car method on Black Mountain Road, Mira Mesa Boulevard, Camino Ruiz, and Miramar Road, all of which service transit routes in the community. A discussion on the travel time results for these corridors is provided in **Section 4.4.4**.

MTS also publishes an annual Performance Monitoring Report for the productivity and service quality of each operating transit route. Based on the fiscal year 2017 report, provided in **Appendix D**, Route 964 which connects the Mira Mesa community to the Scripps Ranch community currently operates under the MTS on-time performance goal of 90%.

The rider amenities provided at each stop are presented in **Table 4-23**. For each stop, the amenities present are compared against the standard suite of amenities as identified in the MTS Designing for Transit Manual as described in **Section 2.3**. For stops serving multiple routes, minimum transit amenity requirements are based on total boardings from all routes that serve that stop.

Of particular interest are stations which do not provide sufficient station amenities based on ridership. Accessible stations must have sidewalks with sufficient width, a landing area for a bus ramp, and space for seating underneath a shelter (where present). Of the 168 stops assessed, 57 do not currently meet the station amenities standards.

The MTS stops listed below did not meet accessibility requirements; *italics* represent stops serving more than one route.

Route 20:

- 11700 – Black Mountain Rd/Miramar College Drwy
- 12841 – Black Mountain Rd/Activity Rd
- 12842 – Black Mountain Rd/Miramar Rd

Route 31:

- *11700 – Black Mountain Rd/Miramar College Drwy*
- 12489 – Black Mountain Rd/Carroll Canyon Rd
- *12841 – Black Mountain Rd/Activity Rd*
- *12842 – Black Mountain Rd/Miramar Rd*
- 99042 – Miramar Rd/Black Mountain Rd
- 99157 – Miramar Rd/Empire St

Route 110:

- 10870 – Mira Mesa Bl/Reagan Rd
- 11257 – Mira Mesa Bl/Montongo St
- 11272 – Mira Mesa Bl/Camino Ruiz

Route 237:

- *11272 – Mira Mesa Bl/Camino Ruiz*

Route 921:

- *10870 – Mira Mesa Bl/Reagan Rd*
- *11257 – Mira Mesa Bl/Montongo St*
- *11272 – Mira Mesa Bl/Camino Ruiz*
- 12837 – Black Mountain Rd/Village Greens MHP (10771)
- 13227 – Barnes Canyon Rd/10140
- 13228 – Barnes Canyon Rd/10030
- 99203 – Westonhill Dr/Mira Mesa Bl
- 99206 – Westonhill Dr/Hebrides Dr
- 99207 – Westonhill Dr/Gold Coast Dr
- 99208 – Westonhill Dr/Gold Coast Dr
- 99270 – Barnes Canyon Rd/Pacific Heights Bl

Route 964:

- *11700 – Black Mountain Rd/Miramar College Drwy*
- 60783 – Gold Coast Dr/Gold Coast Pl
- 60784 – Gold Coast Dr/Londonderry Av
- 60785 – Gold Coast Dr/Westchester Av
- 99267 – Camino Ruiz/Calle Morelos

Route 972:

- 98505 – Pacific Center Bl/Pacific Heights Bl
- 98512 – Morehouse Dr/5510 (Fs Morehouse Tech Ctr Drvwy)
- 98514 – Lusk Bl/6455 (@ Qualcomm Design Ctr)
- 98515 – Lusk Bl/Telesis Ct
- 99271 – Barnes Canyon Rd/Pacific Heights Bl

Route 973:

- 98556 – Nancy Ridge Dr/Carrol Rd (Carroll Ridge Bus Pk)
- 98557 – 5960 Nancy Ridge Dr (Sorrento Vista Indu)

The MTS stops listed below did not meet sign and pole; and route designation requirements; *italics* represent stops serving more than one route or also accessibility deficient.

Route 31:

- *99157 – Miramar Rd/Empire St*

Route 921:

- 99061 – Pacific Heights Blvd/Mira Mesa Blvd

Route 972:

- 13200 – Lusk Blvd/Barnes Canyon Rd
- 98500 – Barnes Canyon Rd/Lusk Blvd
- 98502 – Pacific Mesa Blvd/Sorrento View Business Park
- 98503 – Pacific Center Ct/Pacific Center Blvd
- 98504 – Pacific Center Ct/10450 (In Front of Time Warner)

- *98505 – Pacific Center Blvd/Pacific Heights Blvd*
- 98506 – Pacific Center Blvd/McKellar Ct
- 98507 – Lusk Blvd/Vista Sorrento Pkwy
- 98508 – Lusk Blvd/Wateridge Cir
- 98509 – Lusk Blvd/Telesis Ct
- 98510 – Lusk Blvd/Pacific Center Blvd
- 98511 – Morehouse Dr/5590 (Pro-Sat & Comm Drwy)
- *98512 – Morehouse Dr/5510 (Morehouse Tech Center Drwy)*
- 98513 – Barnes Canyon Rd/10225 (@ Mailboxes)
- *98514 – Lusk Blvd/6455 (@ Qualcomm Design Center)*
- *98515 – Lusk Blvd/Telesis Ct*

Route 973:

- 98517 – Pacific Heights Blvd/Mira Mesa Blvd
- 98522 – Oberlin Dr/5871 (@ Mailboxes)
- 98525 – 6310 Nancy Ridge Dr (Nancy Ridge Tech Pk/6349)
- 98526 – 6650 Nancy Ridge Dr/6767 (@ Fire Hydrant After Drwy)
- 98527 – Phage Biotechnology
- 98549 – 5910 Pacific Center Blvd
- 98550 – 5788 Pacific Center Blvd
- 98551 – Pacific Heights Blvd/Cornerstone Ct
- 98552 – Brown Deer Rd/Ferris Sq
- 98553 – 9215 Brown Deer Rd
- 98554 – 9339 Carroll Park Dr
- 98555 – 9449 Carroll Park Dr
- *98556 – Nancy Ridge Dr/Carrol Rd (Carroll Ridge Business Pk)*
- 98557 – 5960 Nancy Ridge Dr (Sorrento Vista Industrial Pk)
- 98558 – 5280 Carroll Canyon Rd
- 98559 – Youngstown Wy/Oberlin Dr
- 98560 – 5807 Oberlin Dr

Table 4-23 Transit Stop Amenities

Stop ID	Route Number	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	Accesible	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
10085	31	Yes	Miramar Rd/Milch Rd	8	X	X	X	X					X
10095	31	Yes	Miramar Rd/Distribution Av	1	X	X	X	X	X				X
10107	31	Yes	Miramar Rd/Carroll Rd	8	X	X	X	X	X				X
10124	31	Yes	Miramar Rd/Dowdy Dr	4	X	X	X	X	X				X
10132	31	Yes	Miramar Rd/Cabot Dr	4	X	X	X	X	X				X
10142	110, 921	Yes	Mira Mesa Bl/Reagan Rd (E)	13	X	X	X	X	X				X
10149	110, 921	Yes	Mira Mesa Bl/Westonhill Dr	11	X	X	X	X	X	X		X	X
10168	110, 921	Yes	Mira Mesa Bl/Marbury Av	7	X	X	X	X	X			X	
10422	237, 973	Yes	Mira Mesa Bl/Scranton Rd	19	X	X	X	X	X	X	X	X	X
10450	31	Yes	Miramar Rd/Frost Mar Pl	4	X	X	X	X					X
10464	31	Yes	Miramar Rd/Production Av	1	X	X	X	X	X				X
10484	110, 921	Yes	Mira Mesa Bl/Parkdale Av	17	X	X	X	X					X
10498	110, 921	Yes	Mira Mesa Bl/Reagan Rd (W)	18	X	X	X	X	X				X
10511	110, 237, 921	Yes	Mira Mesa Bl/Camino Ruiz	81	X	X	X	X	X				X
10542	110, 921	Yes	Mira Mesa Bl/Greenford Dr	19	X	X	X	X	X				X
10553	921	Yes	Mira Mesa Bl/Rickert Rd	1	X	X	X	X	X				X
10859	110, 921	Yes	Mira Mesa Bl/Parkdale Av	5	X	X	X	X	X				X
10870	110, 921	No	Mira Mesa Bl/Reagan Rd	12	X	X		X	X				
11223	31	Yes	Miramar Rd/Camino Santa Fe	6	X	X	X	X	X				X
11227	31	Yes	Miramar Rd/Commerce Av	5	X	X	X	X					X
11233	31	Yes	Miramar Rd/Production Av	3	X	X	X		X				X

Stop ID	Route Number	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	Accesible	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
11241	31	Yes	Miramar Rd/Distribution Av	2	X	X	X	X	X	X		X	X
11251	31	Yes	Miramar Rd/Carroll Rd	4	X	X	X	X					X
11257	110, 921	No	Mira Mesa Bl/Montongo St	1	X	X		X	X				
11261	31	Yes	Miramar Rd/Empire St	1	X	X	X	X	X				X
11265	31	Yes	Miramar Rd/Dowdy Dr	2	X	X	X	X					X
11272	110, 237, 921	No	Mira Mesa Bl/Camino Ruiz	148	X	X		X	X	X	X	X	
11274	31	Yes	Miramar Rd/Cabot Dr	2	X	X	X	X					X
11282	110, 921	Yes	Mira Mesa Bl/New Salem St	13	X	X	X						X
11289	110, 921	Yes	Mira Mesa Bl/Westonhill Dr	11	X	X	X	X	X				X
11292	31	Yes	Miramar Rd/Camino Ruiz	2	X	X	X	X	X	X	X	X	X
11294	110, 921	Yes	Mira Mesa Bl/Greenford Dr	21	X	X	X	X					X
11302	110, 921	Yes	Mira Mesa Bl/Westmore Rd	5	X	X	X	X	X				X
11320	237, 110, 921	Yes	Mira Mesa Bl/Black Mountain Rd	73	X	X	X	X	X	X	X	X	
11699	31, 964	Yes	Black Mountain Rd/Gold Coast Dr	38	X	X	X	X	X	X	X	X	X
11700	31, 964	No	Black Mountain Rd/Miramar College Drwy	4	X	X		X				X	
11701	31	Yes	Black Mountain Rd/Activity Rd	1	X	X	X	X					
11703	31	Yes	Black Mountain Rd/Carroll Center Rd	2	X	X	X	X	X				
12071	964	Yes	Camino Ruiz/Reagan Rd	8	X	X	X	X		X	X	X	
12073	964	Yes	Camino Ruiz/Mira Mesa Bl	20	X	X	X	X	X	X	X	X	
12108	110, 237, 921	Yes	Black Mountain Rd/Mira Mesa Bl	14	X	X	X	X	X	X	X	X	
12109	921	Yes	Black Mountain Rd/10770 The Woods MHP	0	X	X	X						

Stop ID	Route Number	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	Accesible	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
12111	31, 964	Yes	Black Mountain Rd/Hillery Dr	9	X	X	X	X	X	X	X	X	X
12112	31	Yes	Black Mountain Rd/Carroll Canyon Rd	3	X	X	X	X					X
12402	110	Yes	Camino Santa Fe/Flanders Dr	3	X	X	X						X
12489	31	No	Black Mountain Rd/Carroll Canyon Rd	2	X	X		X				X	X
12807	964	Yes	Camino Ruiz/Reagan Rd	1	X	X	X	X					X
12837	921	No	Black Mountain Rd/Village Greens MHP (10771)	3	X	X							X
12838	31, 964	Yes	Black Mountain Rd/Hillery Dr	0	X	X	X	X					
12839	31, 964	Yes	Black Mountain Rd/Gold Coast Dr	8	X	X	X	X	X	X	X	X	X
12840	31, 964	Yes	Black Mountain Rd/Miramar College Way	0	X	X	X	X			X		X
12841	31	No	Black Mountain Rd/Activity Rd	1	X	X							X
12842	31	No	Black Mountain Rd/Miramar Rd	3	X	X							
12844	31	Yes	Black Mountain Rd/Carroll Center Rd	1	X	X	X	X	X			X	X
13003	31	Yes	Miramar Rd/Miramar Way	3	X	X	X	X					X
13070	31	Yes	Miramar Rd/7636	1	X	X	X	X	X				
13101	31	Yes	Miramar Rd/Miramar Way	3	X	X	X	X					X
13104	31	Yes	Miramar Rd/Northgate Plaza	2	X	X	X	X					X
13195	921, 972	Yes	Scranton Rd/Morehouse Dr	8	X	X	X	X					
13196	921, 972	Yes	Scranton Rd/9605	4	X	X	X	X	X		X		
13197	921, 972	Yes	Scranton Rd/SD Tech Center (9805)	8	X	X	X	X					X
13198	921	Yes	Barnes Canyon Rd/10055	4	X	X	X	X					X
13199	921, 972	Yes	Barnes Canyon Rd/Lusk Bl	19	X	X	X	X			X		

Stop ID	Route Number	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	Accesible	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
13200	972	No	Lusk Bl/Barnes Canyon Rd	0			X						
13202	973	Yes	Mira Mesa Bl/Oberlin Dr	30	X	X	X	X	X	X	X	X	
13203	237, 921	Yes	Mira Mesa Bl/Pacific Heights Bl	50	X	X	X	X	X	X	X	X	X
13204	921	Yes	Mira Mesa Bl/Huennekens St	4	X	X	X	X			X	X	
13205	237, 921	Yes	Mira Mesa Bl/Steadman St	27	X	X	X	X	X	X	X	X	
13206	921	Yes	Mira Mesa Bl/Flanders Dr	6	X	X	X				X		
13207	921	Yes	Mira Mesa Bl/Viper Wy	10	X	X	X	X	X			X	X
13208	110, 921	Yes	Mira Mesa Bl/Camino Santa Fe	16	X	X	X	X			X		X
13209	110, 921	Yes	Mira Mesa Bl/Caminito Alvarez	19	X	X	X	X					X
13210	110, 921	Yes	Mira Mesa Bl/Aderman Av	14	X	X	X	X					
13215	110, 921	Yes	Mira Mesa Bl/Dabney Dr	2	X	X	X	X	X				X
13216	110, 921	Yes	Mira Mesa Bl/Aderman Av	8	X	X	X	X	X				X
13217	110, 921	Yes	Mira Mesa Bl/Shilling Av	33	X	X	X	X	X				
13218	921	Yes	Mira Mesa Bl/Camino Santa Fe	14	X	X	X	X	X				X
13219	921	Yes	Mira Mesa Bl/Viper Wy	4	X	X	X	X	X				
13220	921	Yes	Mira Mesa Bl/Flanders Dr	4	X	X	X	X	X		X		X
13221	237, 921	Yes	Mira Mesa Bl/Genetic Center Dr	15	X	X	X	X	X	X	X	X	
13222	921	Yes	Mira Mesa Bl/Sequence Dr	2	X		X	X	X				
13223	237	Yes	Mira Mesa Bl/Pacific Heights Bl	13	X	X	X	X	X	X	X	X	
13226	921	Yes	Barnes Canyon Rd/Lusk Bl	15	X	X	X	X			X		
13227	921	No	Barnes Canyon Rd/10140	1	X	X							
13228	921	No	Barnes Canyon Rd/10030	1	X	X					X		
13229	921	Yes	Scranton Rd/9808	5	X	X	X	X			X		X
13230	921	Yes	Scranton Rd/Mira Sorrento Pl	3	X	X	X						

Stop ID	Route Number	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	Accesible	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
13231	237, 921	Yes	Mira Mesa Bl/Scranton Rd	27	X	X	X	X	X		X		X
13321	31	Yes	Miramar Rd/Mitchner Way	11	X	X	X	X	X				X
60684	964	Yes	Zapata Av/Kelowna Rd	30	X	X	X	X	X				
60685	964	Yes	Kelowna Rd/Capricorn Wy	19	X	X	X	X	X				
60686	964	Yes	Camino Ruiz/Teresa Dr	9	X	X	X	X	X				
60687	964	Yes	Camino Ruiz/Hydra Ln	4	X	X	X						
60688	964	Yes	Camino Ruiz/Westmore Rd	5	X	X	X	X					
60689	964	Yes	Camino Ruiz/New Salem St	20	X	X	X	X					
60691	964	Yes	Gold Coast Dr/Westchester Av	2	X	X	X						
60693	964	Yes	Gold Coast Dr/Londonderry Av	1	X	X	X						
60694	964	Yes	Gold Coast Dr/Lipscomb Dr	2	X	X	X						
60695	964	Yes	Gold Coast Dr/Westonhill Dr	1	X	X	X						
60696	964	Yes	Gold Coast Dr/San Ramon Dr	4	X	X	X		X				X
60697	964	Yes	Gold Coast Dr/Drumcliff Av	0	X	X	X		X				
60700	964	Yes	Camino Ruiz/Hydra Ln	0	X	X	X		X				X
60702	964	Yes	Camino Ruiz/Westmore Rd	0	X	X	X	X					
60703	964	Yes	Camino Ruiz/New Salem St	16	X	X	X	X					X
60704	964	Yes	Camino Ruiz/Mira Mesa Bl	22	X	X	X	X	X				X
60705	964	Yes	Gold Coast Dr/Camino Ruiz	2	X	X	X	X			X		
60779	964	Yes	Gold Coast Dr/Camino Ruiz	35	X	X	X	X			X		
60780	964	Yes	Gold Coast Dr/Saluda Av	4	X	X	X		X				
60781	964	Yes	Gold Coast Dr/San Ramon Dr	4	X	X	X		X				X
60782	964	Yes	Gold Coast Dr/Gold Coast Wy	8	X	X	X						X
60783	964	No	Gold Coast Dr/Gold Coast Pl	6	X	X							X

Stop ID	Route Number	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	Accesible	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
60784	964	No	Gold Coast Dr/Londonderry Av	3	X	X							
60785	964	No	Gold Coast Dr/Westchester Av	2	X	X							
60786	964	Yes	Camino Ruiz/Capricorn Wy	13	X	X	X	X	X		X		
60844	964	Yes	Capricorn Way/Camino Ruiz	8	X	X	X		X				
90051	20	Yes	Mira Mesa Marketcenter	30	X	X	X	X	X		X		
98500	972	No	Barnes Canyon Rd/Lusk Blvd (After Turn Before Dr	3			X						
98502	972	No	Pacific Mesa Bl/Sorrento View Business Park (@ F	3			X						
98503	972	No	Pacific Center Ct/Pacific Center Bl (10309 @ Ele	2			X						X
98504	972	No	Pacific Center Ct/10450 (In Front Of Time Warner	11			X						
98505	972	No	Pacific Center Bl/Pacific Heights Bl	6									
98506	972	No	Pacific Center Bl/Mckellar Ct	1			X						
98507	972	No	Lusk Bl/Vista Sorrento Pkwy (@10525 Before Dvwy)	0			X						
98508	972	No	Lusk Bl/Wateridge Cir (After Intersection)	0			X						
98509	972	No	Lusk Bl/Telesis Ct (After Intersection)	0			X						
98510	972	No	Lusk Bl/Pacific Ctr Bl (@ Fire Hydrant Across Fr	0			X						
98511	972	No	Morehouse Dr/5590 (Pro-Sat & Comm Driveway)	0			X						
98512	972	No	Morehouse Dr/5510 (Fs Morehouse Tech Ctr Drvwy)	0									
98513	972	No	Barnes Canyon Rd/10225 (@ Mailboxes)	1			X						

Stop ID	Route Number	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	Accesible	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
98514	972	No	Lusk Bl/6455 (@ Qualcomm Design Ctr)	1									X
98515	972	No	Lusk Bl/Telesis Ct	13									
98517	973	No	Pacific Heights Bl/Mira Mesa Bl	9			X	X					X
98522	973	No	Oberlin Dr/5871 (@ Mailboxes)	10			X						
98525	973	No	6310 Nancy Ridge Dr (Nancy Ridge Tech Pk/6349)	5			X						
98526	973	No	6650 Nancy Ridge Dr/6767 (@ Fire Hydrant After D	0			X						
98527	973	No	Phage Biotechnology	0			X						
98549	972	No	5910 Pacific Center Bl	2			X						
98550	972	No	5788 Pacific Center Bl	4			X						
98551	973	No	Pacific Heights Bl/Cornerstone Ct	1			X						
98552	973	No	Brown Deer Rd/Ferris Sq	1			X						
98553	973	No	9215 Brown Deer Rd	3			X						
98554	973	No	9339 Carroll Park Dr	1			X						
98555	973	No	9449 Carroll Park Dr	5			X						
98556	973	No	Nancy Ridge Dr/Carrol Rd (Carroll Ridge Bus Pk)	5									
98557	973	No	5960 Nancy Ridge Dr (Sorrento Vista Indu	5									
98558	973	No	5280 Carroll Canyon Rd	0			X						
98559	973	No	Youngstown Wy/Oberlin Dr	3			X						
98560	973	No	5807 Oberlin Dr	1			X						
99036	110	Yes	Camino Santa Fe/Flanders Dr	0	X	X	X	X					X
99041	31	Yes	Miramar Rd/Camino Ruiz	5	X	X	X	X	X				X

Stop ID	Route Number	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	Accesible	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
99042	31	No	Miramar Rd/Black Mountain Rd	24	X	X							
99061	921	No	Pacific Heights Bl/Mira Mesa Bl	4			X						
99156	31	Yes	Miramar Rd/Clayton Dr	3	X	X	X						
99157	31	No	Miramar Rd/Empire St	1									
99202	237	Yes	Mira Mesa Bl/Lusk Bl	8	X	X	X	X	X		X		
99266	964	Yes	Camino Ruiz/Calle Morelos	0	X	X	X						
99267	964	No	Camino Ruiz/Calle Morelos	5	X	X							
99268	964	Yes	Zapata Av/Camino Ruiz	7	X	X	X						X
99270	921	No	Barnes Canyon Rd/Pacific Heights Bl	25	X	X		X					
99271	921, 972	No	Barnes Canyon Rd/Pacific Heights Bl	43	X	X		X					
99382	110	Yes	Camino Santa Fe/Mira Mesa Bl	1	X	X	X						
99394	20, 964	Yes	Westview Pkwy/Mira Mesa MarketCenter	25	X	X	X	X	X				

Legend:

X	Meets minimum standard
	Does not meet minimum standard
X	Amenity exceed minimum standard
	Amenity not required per minimum standard

4.3.4 QUALITY CONNECTIONS TO TRANSIT

To access the transit system, passengers in the community must walk or bike to a transit stop. High-stress and missing connections in the bicycle and pedestrian networks limit the areas accessible by transit and depresses ridership. First-mile and last-mile connections in the community were assessed by considering the connectivity of bicycle and pedestrian facilities in the areas around major transit stops.

The quality connections assessment draws from the quality walking analysis and quality bicycle analysis results from **Section 4.1.4** and **Section 4.2.3** to identify quality ¼-mile pedestrian and ¾-mile bicycle networks surrounding major transit stations. These travelshed distances were obtained from *San Diego Forward: The Regional Plan, Appendix U4 – SANDAG Regional Transit Oriented Development Strategy*, and represent a five-minute travel distance for pedestrians and cyclists.

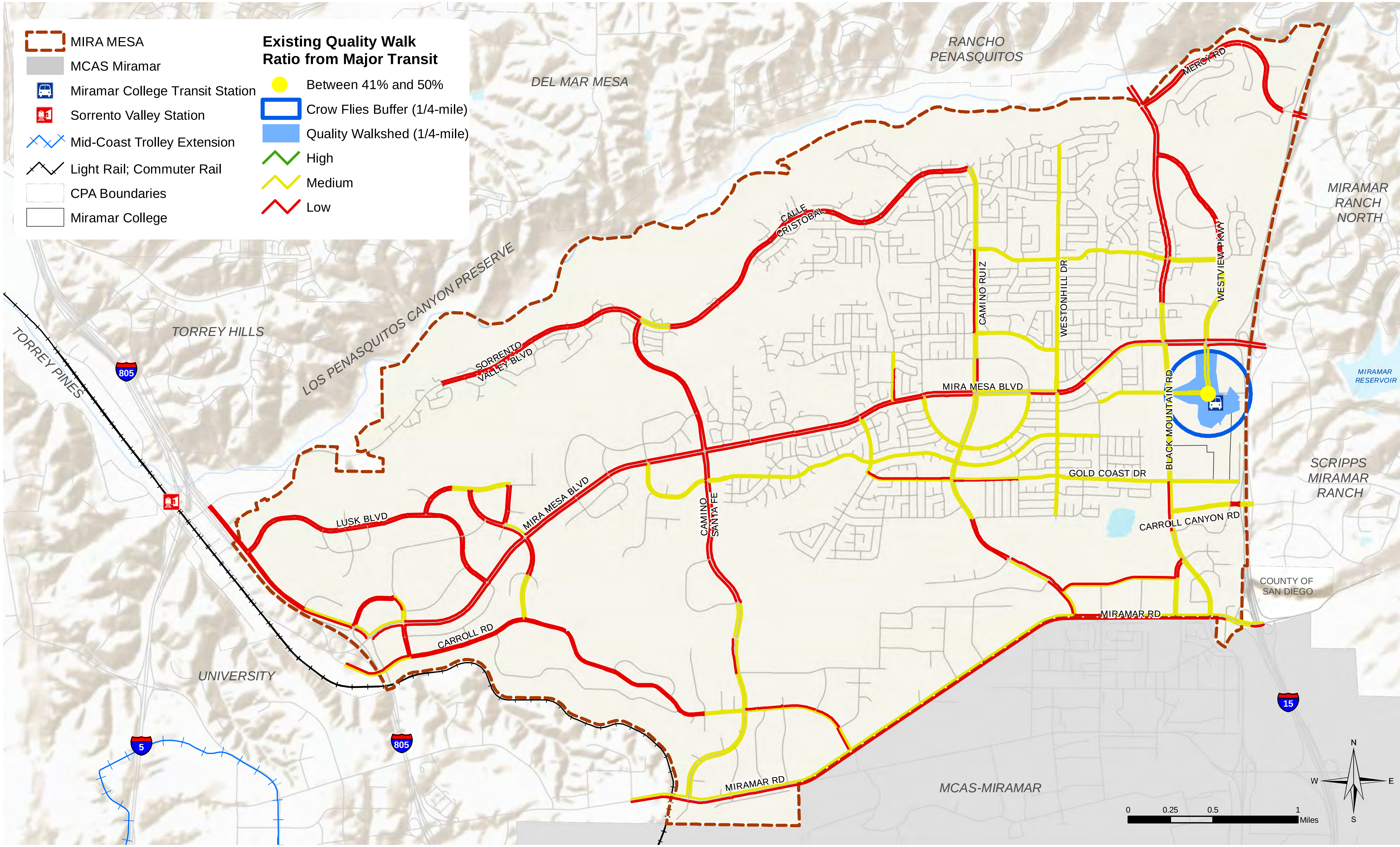
A major transit station is defined in part as "the intersection of two or more major bus routes each having a frequency of service of 15 minutes or less during the morning and afternoon peak commute periods." The Mira Mesa community has one location that meets this criteria at the Miramar College Transit Station. The existing Quality Walk and Bicycle Ratios are presented in **Table 4-24** and illustrated in **Figure 4-28** and **Figure 4-29**. The total acres represents the acres within the crow flies buffer for walk and bicycle. The quality acres represents the total acres within the quality walkshed and quality bikeshed.

The Miramar College Transit Station has quality connections from the adjacent Miramar College and medium-quality environment on the adjacent public roads. Overall, it is considered well connected with an existing Quality Walk Ratio of 44 percent. The existing Quality Bicycle Ratio is zero percent. This is due to the fact that the existing LTS along all four legs of the intersection of Hillery Drive and Westview Parkway have high levels of stress for bicyclists of LTS 3 or 4. The high stress is primarily due to vehicle speeds and width of these roadways.

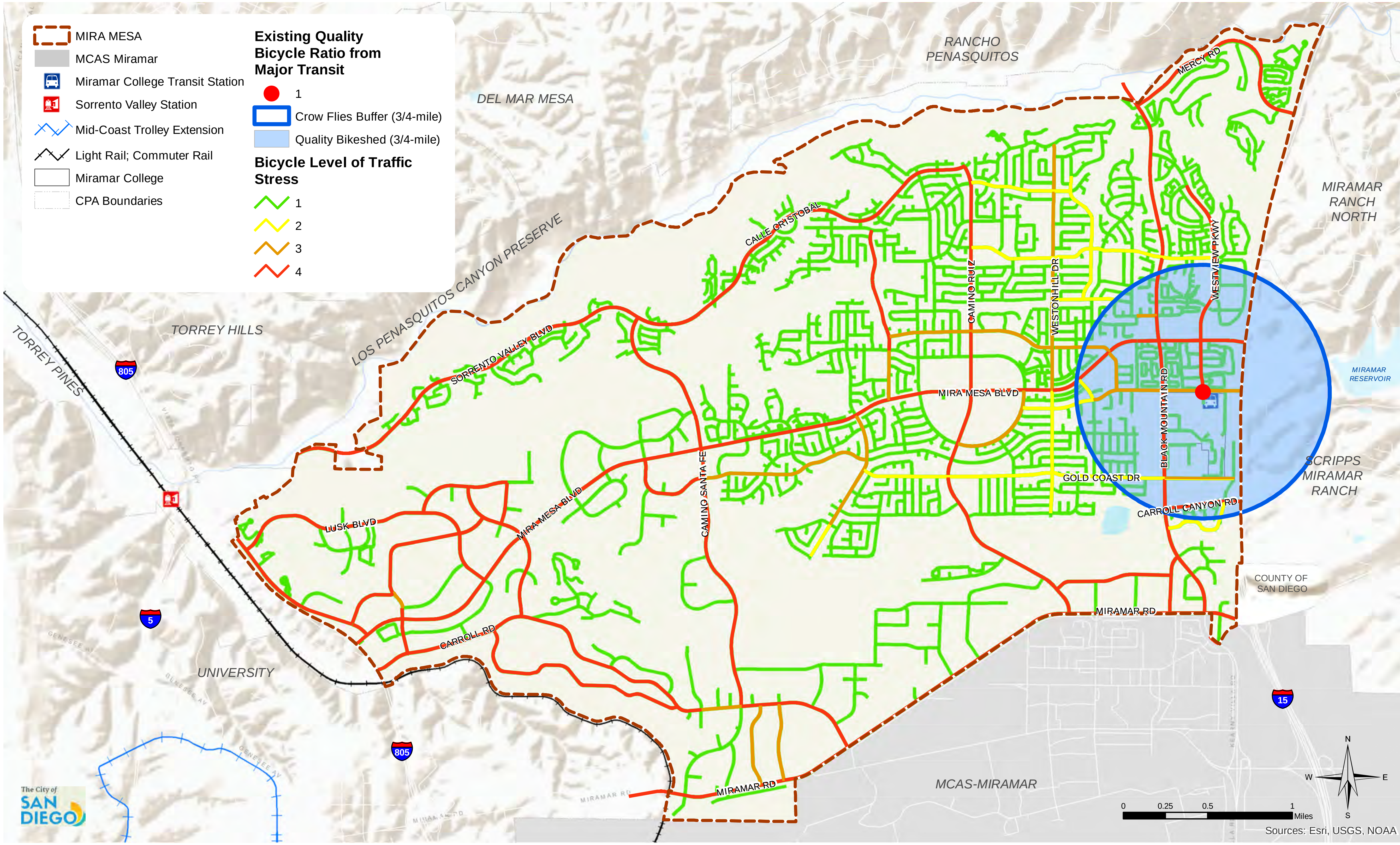
For the Sorrento Valley Station, the Quality Walk Ratio and Quality Bicycle Ratio were not calculated because the station as well as connections to the station are outside of the community boundary. However, the facilities surrounding the station are low pedestrian quality facilities and high stress bike facilities making connectivity to the Sorrento Valley Station from the Mira Mesa community poor.

Table 4-24 Summary of Quality Travel Ratios from Major Transit Stop

Major Transit Stop	Mode of Access	Quality Acres	Total Acres	Quality Ratio
Miramar College	Walk	55.5	125.6	44%
	Bicycle	0	1,884	0%



Existing Quality Walk Ratio from Major Transit Stations



Existing Quality Bicycle Ratio from Major Transit Stations

4.4 VEHICULAR SYSTEM

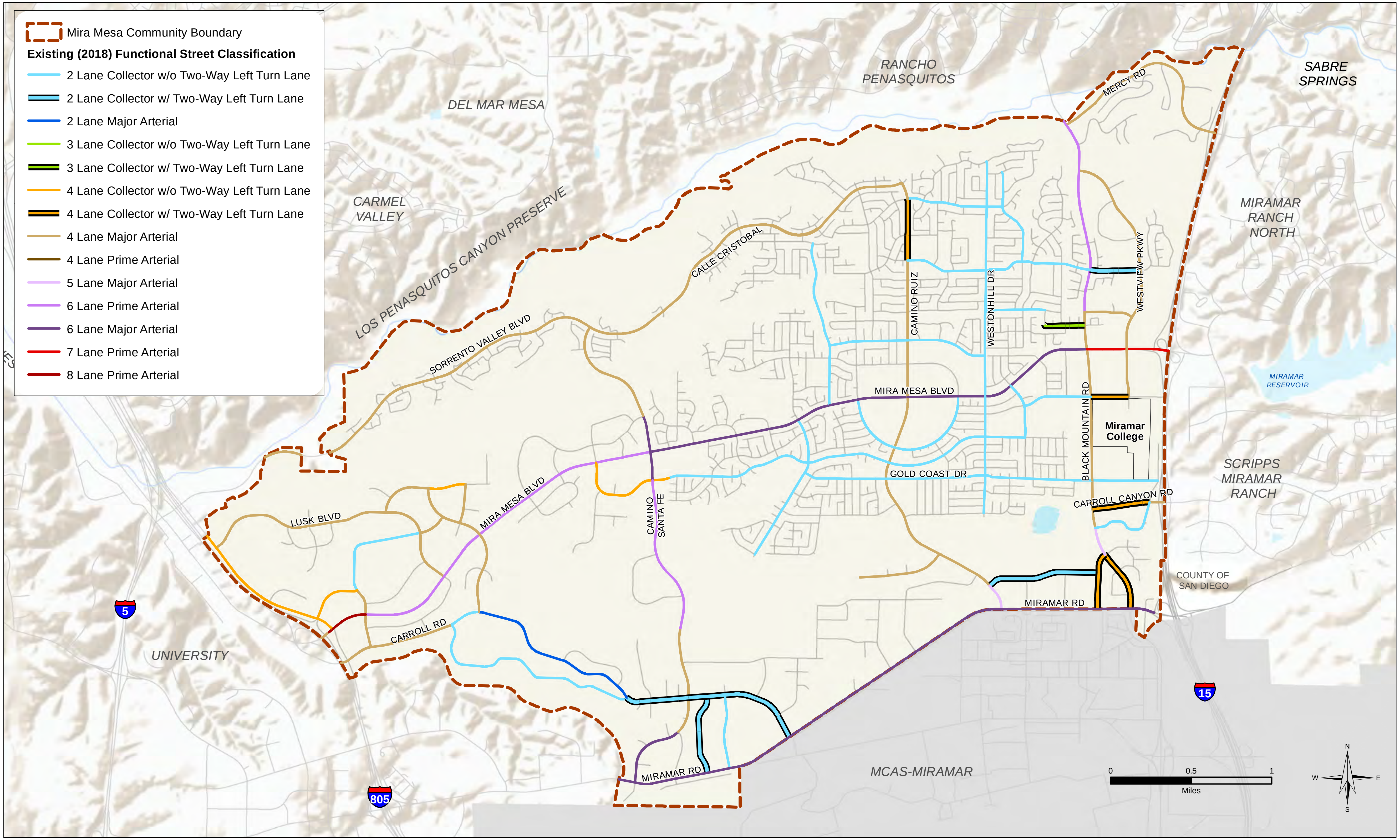
Maintaining efficient vehicular operations is vital to the economy. Local roadways and the regional freeway system provide an interconnected network used to move people and goods throughout the region.

Mira Mesa is readily accessible by freeway as it is bounded by I-15 and I-805 on the east and west of the community. Major roadways provide direct access to neighboring communities. However, Penasquitos Canyon on the north limits access between Mira Mesa and Rancho Penasquitos community, and MCAS Miramar, located on the southern border of the community limits access to southern communities.

This section describes the existing roadway network within the Mira Mesa community using the following evaluations:

Demand	• Using existing peak hour intersection information and daily roadway volume information
Safety	• Using vehicle collision data for the past five years
Quality	• Using roadway level of service based on volume-to-capacity ratio • Using roadway travel time level of service based on speed • Using intersection level of service based on delay • Using freeway level of service based on density • Using freeway ramp capacity based on volumes and queues
Connectivity	• Using vehicle miles travelled

It also describes the layout and operations of the roadway system, including the results of existing conditions analyses at the study area intersections, roadway segments, corridors and freeways. **Figure 4-30** presents a summary of the existing roadway classifications for the study area roadways within the Mira Mesa community, and **Table 4-25** provides a description of the existing roadway characteristics within the community.



Existing Roadway Segment Classifications

Table 4-25 Existing Roadway Segment Characteristics

Road Segment	General Direction	From	To	Width (ft)	# of Lanes	Barrier Type	Shoulders?	Bike Lanes /Routes?	Parking?
Vista Sorrento Parkway	NB/SB	Sorrento Valley Blvd (N. Community Limit)	Lusk Blvd	55-65	4	Undivided	N	Y	N
	NB/SB	Lusk Blvd	Mira Sorrento Pl	55-75	3	Divided	N	Y	N
	NB/SB	Mira Sorrento Pl	Mira Mesa Blvd	95	4	Divided	N	Y	N
Sorrento Valley Blvd	NB/SB	West of Western Community Limit	I-805	68	4	Undivided	N	Y	N
	EB/WB	I-805	Camino Santa Fe	67-87	4	Divided	N	Y	N
Lusk Blvd	EB/WB	Vista Sorrento Pkwy	Pacific Center Blvd	78	4	Divided	N	Y	N
	EB/WB NB/SB	Pacific Center Blvd	Barnes Canyon Rd	63	4	Divided	N	Y	N
	NB/SB	Barnes Canyon Rd	Mira Mesa Blvd	68-78	4	Divided	N	Y	N
Mira Sorrento Pl	EB/WB	Vista Sorrento Pkwy	Scranton Rd	71	4	Divided	N	Y	N
Scranton Rd	NB/SB	Barnes Canyon Rd	Mira Sorrento Pl	44	2	Undivided	N	N	Y
	NB/SB	Mira Sorrento Pl	Mira Mesa Blvd	55-80	3-5	Divided	N	Y	N
	NB/SB	Mira Mesa Blvd	Carroll Canyon Rd	78	4	Divided	N	N	N
Barnes Canyon Rd	EB/WB	Scranton Rd	Lusk Blvd	43	2	Undivided	Y	N	Y
	EB/WB	Lusk Blvd	Pacific Heights Blvd	84	4	Divided	N	N	Y
Pacific Center Blvd	NB/SB EB/WB	Lusk Blvd	Pacific Heights Blvd	77-82	4	Divided	N	N	Y
	EB/WB	Pacific Heights Blvd	Pacific Mesa Blvd	77-80	4	Divided	N	N	Y
Pacific Heights Blvd	NB/SB	Pacific Center Blvd	Barnes Canyon Rd	77-87	4	Divided	N	N	Y
	NB/SB	Barnes Canyon Rd	Mira Mesa Blvd	87-109	4	Divided	N	N	Y
	NB/SB	Mira Mesa Blvd	Carroll Canyon Rd	73-87	4	Divided	N	N	Y
Pacific Mesa Blvd	NB/SB	Pacific Heights Blvd	Pacific Center Blvd	77-80	4	Divided	N	N	Y
Calle Cristobal	EB/WB	Camino Santa Fe	Acama Ct	77-86	4	Divided	N	Y	N
	EB/WB	Acama Ct	Camino Ruiz	77	4	Divided	N	Y	N
Mira Mesa Blvd	EB/WB	I-805	Scranton Rd	93-140	7	Divided	N	Y	N
	EB/WB	Scranton Rd	Lusk Blvd	102	6	Divided	N	Y	N

Road Segment	General Direction	From	To	Width (ft)	# of Lanes	Barrier Type	Shoulders?	Bike Lanes /Routes?	Parking?
	EB/WB	Lusk Blvd	Pacific Heights Blvd	102	6	Divided	N	Y	N
	EB/WB	Pacific Heights Blvd	Flanders Dr	102	6	Divided	N	Y	N
	EB/WB	Flanders Dr	Camino Santa Fe	101	6	Divided	N	Y	N
	EB/WB	Camino Santa Fe	Parkdale Ave	82-101	6	Divided	N	Y	N
	EB/WB	Parkdale Ave	Reagan Rd	82	6	Divided	N	Y	N
	EB/WB	Reagan Rd	Camino Ruiz	105	6	Divided	N	Y	N
	EB/WB	Camino Ruiz	New Salem St/Marauder Wy	106	6	Divided	N	Y	N
	EB/WB	New Salem St/Marauder Wy	Westonhill Dr	94	6	Divided	N	Y	N
	EB/WB	Westonhill Dr	Greenford Dr	82	6	Divided	N	Y	N
	EB/WB	Greenford Dr	Black Mountain Rd	93-105	6	Divided	N	Y	N
	EB/WB	Black Mountain Rd	Westview Pkwy	108-152	6	Divided	N	N	N
	EB/WB	Westview Pkwy	I-15	110-152	7	Divided	Y	N	N
	EB/WB	I-15	East of Eastern Community Limit	105	6	Divided	N	N	N
Carroll Canyon Rd	EB/WB	Sorrento Valley Rd/Mira Mesa Blvd	Scranton Rd	73-85	4	Divided/ Undivided	N	Y	N
	EB/WB	Scranton Rd	Nancy Ridge Dr (W)	63	4	Divided	N	Y	N
	EB/WB	Nancy Ridge Dr (W)	Pacific Heights Blvd	63	2	Divided	N	Y	N
	-	Pacific Heights Blvd	Camino Santa Fe	Does Not Exist					
	-	Camino Santa Fe	Juniper Creek Ln	Does Not Exist					
	EB/WB	Juniper Creek Ln	Camino Ruiz	101-115	4	Divided	N	Y	N
	-	Camino Ruiz	Black Mountain Rd	Does Not Exist					
	EB/WB	Black Mountain Rd	Maya Linda Rd	67	4	Divided	N	N	Y
	EB/WB	Maya Linda Rd	I-15	67-84	4	Divided	N	Y	N
	EB/WB	I-15	East of Eastern Community Limit	67	4	Divided	N	Y	N
Carroll Rd	EB/WB	Pacific Heights Blvd	Nancy Ridge Dr (E)	50-65	2-3	Divided	N	Y	N
	EB/WB	Nancy Ridge Dr (E)	Camino Santa Fe	50	2	Divided	N	Y	N
	EB/WB	Camino Santa Fe	Miramar Rd	50-63	2-3	Undivided / Divided	N	Y	N

Road Segment	General Direction	From	To	Width (ft)	# of Lanes	Barrier Type	Shoulders?	Bike Lanes /Routes?	Parking?
Nancy Ridge Dr	NB/SB EB/WB	Carroll Canyon Rd	Carroll Rd	43	2	Undivided	N	N	Y
Miramar Rd	EB/WB	West of Western Community Limit		105	6	Divided	N	Y	N
	EB/WB	Western Community Limit	Camino Santa Fe	102	6	Divided	N	Y	N
	EB/WB	Camino Santa Fe	Production Ave	102-108	6	Divided	N	Y	N
	EB/WB	Production Ave	Distribution Ave	102	6	Divided	N	Y	N
	EB/WB	Distribution Ave	Carroll Rd	102	6	Divided	N	Y	N
	EB/WB	Carroll Rd	Camino Ruiz	102	6	Divided	N	Y	N
	EB/WB	Camino Ruiz	Black Mountain Rd	102	6	Divided	N	Y	N
	EB/WB	Black Mountain Rd	Kearny Villa Rd	102	6	Divided	N	Y	N
	EB/WB	Kearny Villa Rd	I-15	95-110	5-6	Divided	Y	Y	N
	EB/WB	I-15	East of Eastern Community Limit	53-78	4	Undivided / Divided	N	Y	N
Flanders Dr	EB/WB	Mira Mesa Blvd	Camino Santa Fe	63	4	Undivided	N	Y	N
	EB/WB	Camino Santa Fe	Caminito Alvarez	67	4	Divided	N	Y	N
	EB/WB	Caminito Alvarez	Parkdale Ave	40-50	2	Undivided	N	Y	Y
	EB/WB	Parkdale Ave	Camino Ruiz	40	2	Undivided	N	N	Y
	EB/WB	Camino Ruiz	Westonhill Dr	40	2	Undivided	N	N	Y
	EB/WB	Westonhill Dr	Greenford Dr	40	2	Undivided	N	N	Y
Camino Santa Fe	NB/SB	Sorrento Valley Blvd/Calle Cristobal	Top Gun St	77	4	Divided	N	Y	N
	NB/SB	Top Gun St	Mira Mesa Blvd	77-101	4	Divided	N	Y	N
	NB/SB	Mira Mesa Blvd	Flanders Dr	101	6	Divided	N	Y	N
	NB/SB	Flanders Dr	Carroll Canyon Rd	101-112	6	Divided	N	Y	N
	NB/SB	Carroll Canyon Rd	Carroll Rd	82-106	4	Divided	N	Y	N
	NB/SB	Carroll Rd	Spectrum Ln	81	4	Divided	N	N	Y
	NB/SB	Spectrum Ln	Miramar Rd	101	6	Divided	N	N	Y
Parkdale Ave	NB/SB	Mira Mesa Blvd	Flanders Dr	40-62	2	Undivided	N	N	Y
	NB/SB	Flanders Dr	Osgood Wy	39	2	Undivided	N	N	Y
Production Ave	NB/SB	Carroll Rd	Miramar Rd	49	2	Divided	N	N	Y

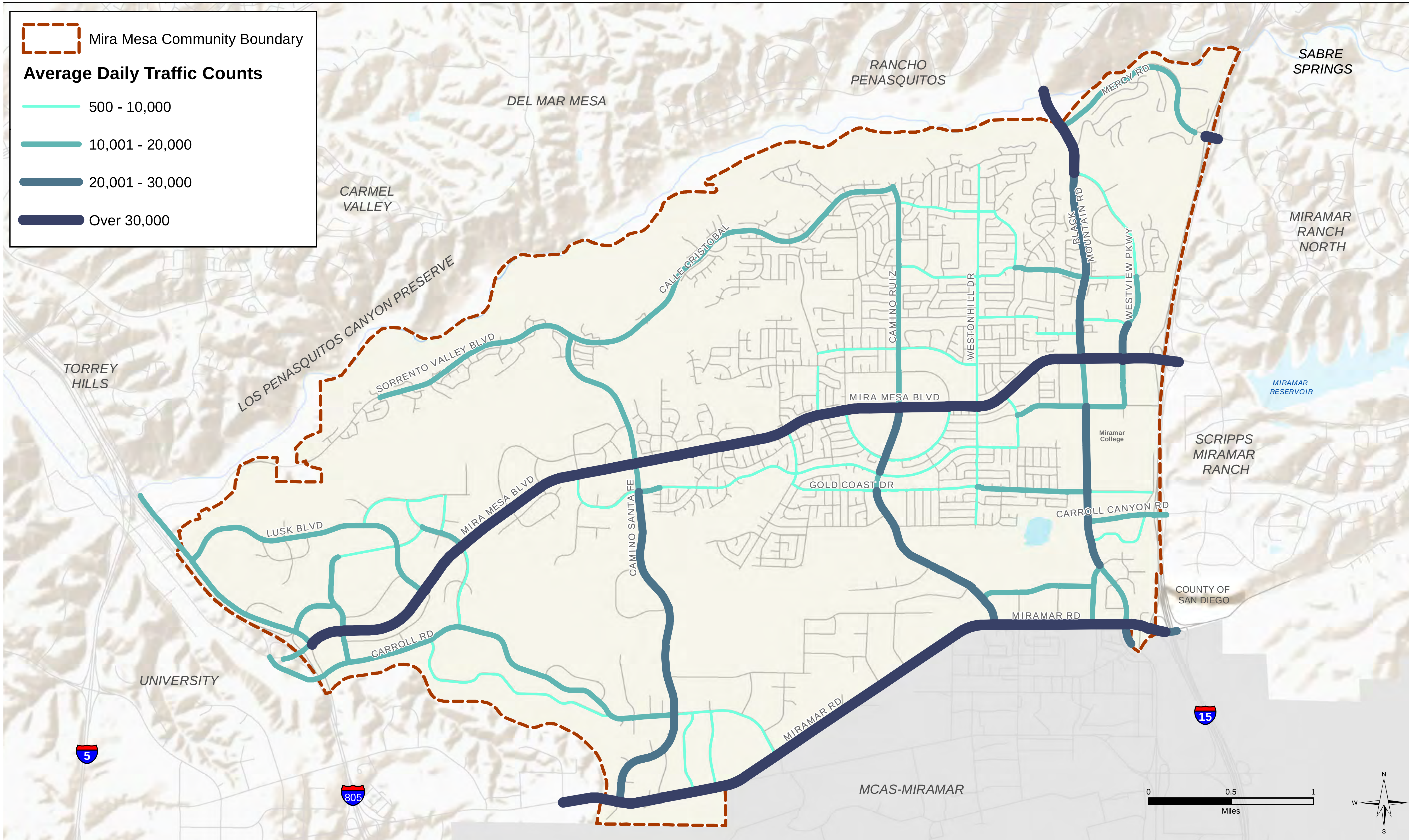
Road Segment	General Direction	From	To	Width (ft)	# of Lanes	Barrier Type	Shoulders?	Bike Lanes /Routes?	Parking?
Distribution Ave	NB/SB	Carroll Rd	Miramar Rd	49	2	Undivided	N	N	Y
Montongo St	NB/SB	Acama St	Westmore Rd	39	2	Undivided	N	N	Y
	NB/SB	Westmore Rd	Mira Mesa Blvd	39-63	2	Undivided	N	N	Y
Camino Ruiz	NB/SB	Calle Cristobal	Aquarius Dr	82-106	4	Divided	N	Y	N
	NB/SB	Aquarius Dr	Teresa Dr/Capricorn Wy	81	4	Divided	N	Y	Y (SB Only)
	NB/SB	Teresa Dr/Capricorn Wy	Westmore Rd	81	4	Divided	N	Y	Y
	NB/SB	Westmore Rd	Mira Mesa Blvd	82-106	4-5	Divided	N	Y	Y
	NB/SB	Mira Mesa Blvd	Reagan/Marauder Wy	93	4	Divided	N	Y	Y (SB Only)
	NB/SB	Reagan Rd/Marauder Wy	Flanders Dr	81	4	Divided	N	Y	N
	NB/SB	Flanders Dr	Gold Coast Dr	81	4	Divided	N	Y	N
	NB/SB	Gold Coast Dr	Carroll Canyon Rd	53-82	4	Divided	N	Y	Y
	NB/SB	Carroll Canyon Rd	Activity Rd	78-110	4	Divided	Y	Y	Y
	NB/SB	Activity Rd	Miramar Rd	78	5	Divided	N	Y	Y
Westmore Rd	EB/WB	Montongo St	Camino Ruiz	39-63	2	Undivided	N	N	Y
	EB/WB	Camino Ruiz	Westonhill Dr	39-63	2	Undivided	N	N	Y
Reagan Rd	NB/SB EB/WB	Mira Mesa Blvd	Camino Ruiz	39-63	2	Undivided	N	N	Y
Marauder Wy	NB/SB EB/WB	Camino Ruiz	Mira Mesa Blvd	39-63	2	Undivided	N	N	Y
Gold Coast Dr	EB/WB	Parkdale Ave	Camino Ruiz	39-63	2	Undivided	N	Y	Y
	EB/WB	Camino Ruiz	Westonhill Dr	39-63	2	Undivided	N	Y	Y
	EB/WB	Westonhill Dr	Black Mountain Rd	39-44	2	Undivided	N	Y	Y
	EB/WB	Black Mountain Rd	Maya Linda Rd	39-44	2	Undivided	N	Y	Y
Westonhill Dr	NB/SB	Menkar Rd	Aquarius Dr	39	2	Undivided	N	N	Y
	NB/SB	Aquarius Dr	Capricorn Wy	39	2	Undivided	N	N	Y
	NB/SB	Capricorn Wy	Libra Dr	39	2	Undivided	N	N	Y
	NB/SB	Libra Dr	Westmore Rd	39	2	Undivided	N	N	Y
	NB/SB	Westmore Rd	Mira Mesa Blvd	51-71	2-3	Undivided	N	N	Y
	NB/SB	Mira Mesa Blvd	Flanders Dr	39	2	Undivided	N	N	Y

Road Segment	General Direction	From	To	Width (ft)	# of Lanes	Barrier Type	Shoulders?	Bike Lanes /Routes?	Parking?
	NB/SB	Flanders Dr	Gold Coast Dr	39	2	Undivided	N	N	Y
	NB/SB	Gold Coast Dr	Jade Coast Dr	39	2	Undivided	N	N	Y
Aquarius Dr	EB/WB	Camino Ruiz	Westonhill Dr	39	2	Undivided	N	N	Y
	EB/WB	Westonhill Dr	Bootes Dt	39	2	Undivided	N	N	Y
Capricorn Wy	EB/WB	Camino Ruiz	Westonhill Dr	39-63	2	Undivided	N	N	Y
	EB/WB	Westonhill Dr	Bootes St	39	2	Undivided	N	N	Y
	EB/WB	Bootes St	Black Mountain Rd	36-71	2	Undivided	N	N	Y
	EB/WB	Black Mountain Rd	Westview Pkwy	71	2	Divided	N	N	Y
Bootes St	NB/SB	Aquarius Dr	Capricorn Wy	39	2	Undivided	N	N	Y
Libra Dr	EB/WB	Westonhill Dr	Hyades Wy	39	2	Undivided	N	N	Y
Greenford Dr	NB/SB	Mira Mesa Blvd	Hillery Dr	39	2	Undivided	N	N	Y
	NB/SB	Hillery Dr	Flanders Dr	39	2	Undivided	N	N	Y
Black Mountain Rd	NB/SB	North of Northern Community Limit		84	4	Divided	N	Y	N
	NB/SB	Northern Community Limit	Westview Pkwy	102	6	Divided	N	Y	N
	NB/SB	Westview Pkwy	Capricorn Wy	102	6	Divided	N	Y	N
	NB/SB	Capricorn Wy	Galvin Ave	102	6	Divided	N	Y	N
	NB/SB	Galvin Ave	Gemini Ave	81	4	Divided	N	Y	N
	NB/SB	Gemini Ave	Mira Mesa Blvd	88	4	Divided	N	Y	N
	NB/SB	Mira Mesa Blvd	Hillery Dr	81	4	Divided	N	Y	N
	NB/SB	Hillery Dr	Gold Coast Dr	78	4	Divided	N	Y	Y (SB Only)
	NB/SB	Gold Coast Dr	Carroll Canyon Rd	77	4	Divided	N	Y	Y (NB Only)
	NB/SB	Carroll Canyon Rd	Maya Linda Rd	78	4	Divided	N	Y	Y
	NB/SB	Maya Linda Rd	Black Mountain Rd/Carroll Centre Rd	88	5	Divided	N	Y	N
	EB/WB NB/SB	Black Mountain Rd/Kearny Villa Rd	Activity Rd	77	4	Divided	N	N	Y (SB Only)
	NB/SB	Activity Rd	Miramar Rd	77	4	Divided	N	N	Y
Kearny Villa Rd	NB/SB	Black Mountain Rd/Carroll Centre Rd	Miramar Rd	77	4	Divided	N	Y	Y (NB Only)

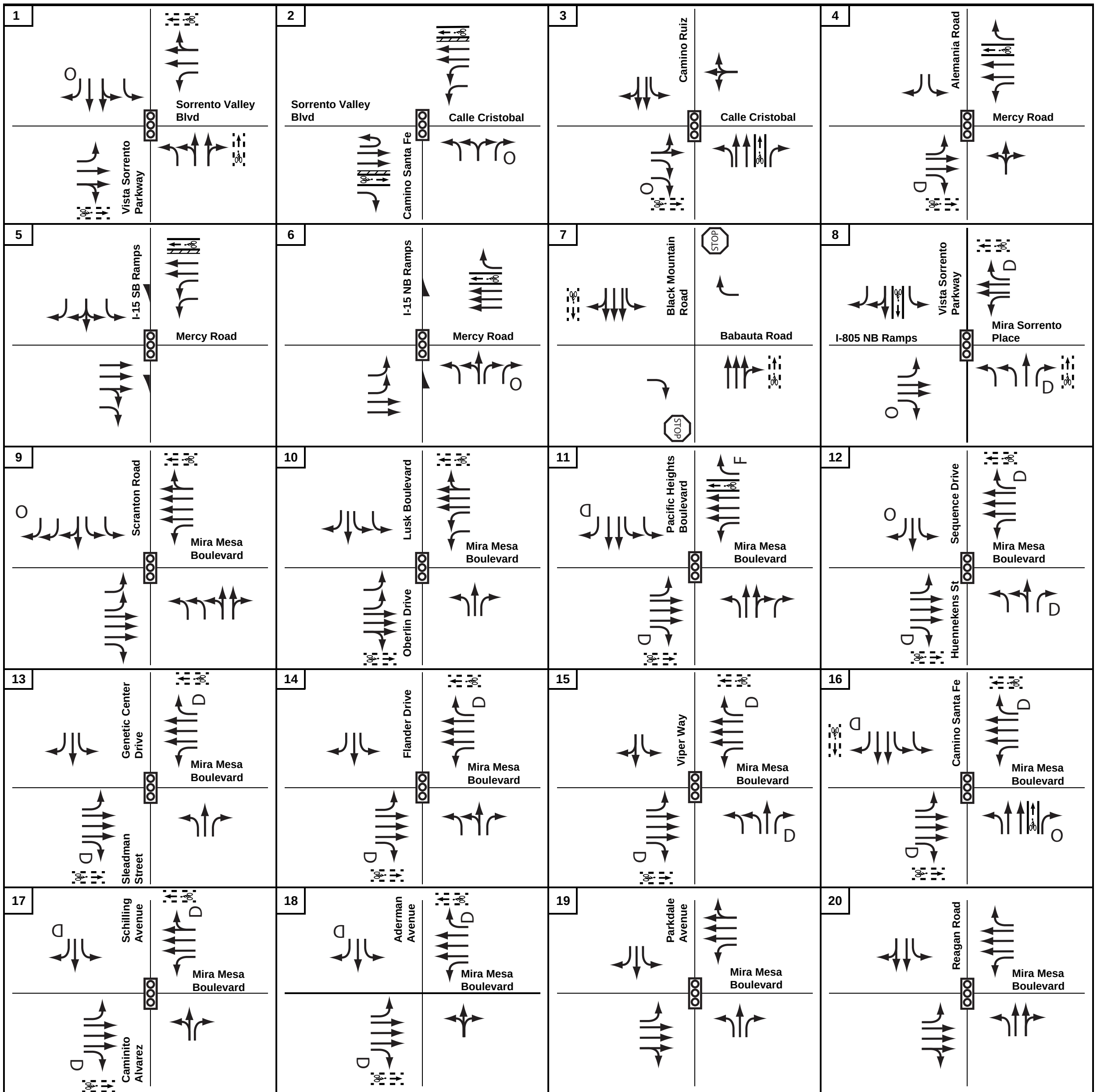
Road Segment	General Direction	From	To	Width (ft)	# of Lanes	Barrier Type	Shoulders?	Bike Lanes /Routes?	Parking?
	NB/SB	Miramar Rd	South of Southern Community Limit	81	4	Divided	N	Y	N
Gemini Ave	EB/WB	Hyades Wy	Black Mountain Rd	39-63	3	Divided	N	N	Y
Hillery Dr	EB/WB	Greenford Dr	Black Mountain Rd	39	2	Undivided	N	N	Y
	EB/WB	Black Mountain Rd	Westview Pkwy	71	3-4	Divided	N	Y	N
Activity Rd	EB/WB	Camino Ruiz	Black Mountain Rd	43-49	2	Divided	N	N	Y
Mercy Rd	EB/WB	Black Mountain Rd	I-15	77-109	4	Divided	N	Y	N
	EB/WB	I-15	East of Eastern Community Limit	102	4	Divided	N	Y	N
Westview Pkwy	EB/WB NB/SB	Black Mountain Rd	Capricorn Wy	71	4	Divided	N	N	Y
	NB/SB	Capricorn Wy	Galvin Ave	71	4	Divided	N	N	Y
	NB/SB	Galvin Ave	Mira Mesa Blvd	83	4	Divided	N	N	Y
	NB/SB	Mira Mesa Blvd	Hillery Dr	77-85	4	Divided	N	Y	N
Galvin Ave	EB/WB	Black Mountain Rd	Westview Pkwy	63-71	4	Divided	N	N	Y (WB Only)
Maya Linda Rd	NB/SB EB/WB	Carroll Canyon Rd	Black Mountain Rd	39	2	Undivided	N	N	Y

4.4.1 VEHICLE DEMAND

Average daily traffic counts along roadway segments, and AM and PM peak hour turning movement counts were collected in October and November 2018. All counts were taken on a Tuesday through Thursday on non-holiday weeks. These counts reflect typical weekday conditions when schools were in session. **Figure 4-31** presents the daily roadway segment volumes. **Figure 4-32** presents the existing intersection lane configuration for all study intersections that were used in the intersection analysis. **Figure 4-33** presents the AM and PM peak-hour traffic volumes, while **Figure 4-34** and **Figure 4-35** show the peak hour times that were identified for each intersection during the AM and PM peak periods, respectively. The existing traffic volume data is contained in **Appendix E**.



Existing Daily Roadway Segment Volumes



LEGEND

Intersection Control

- Signalized Intersection
- Yield Controlled Movement
- F Free Right-Turn
- O Right-Turn Overlap
- D Defacto Right-Turn Lane

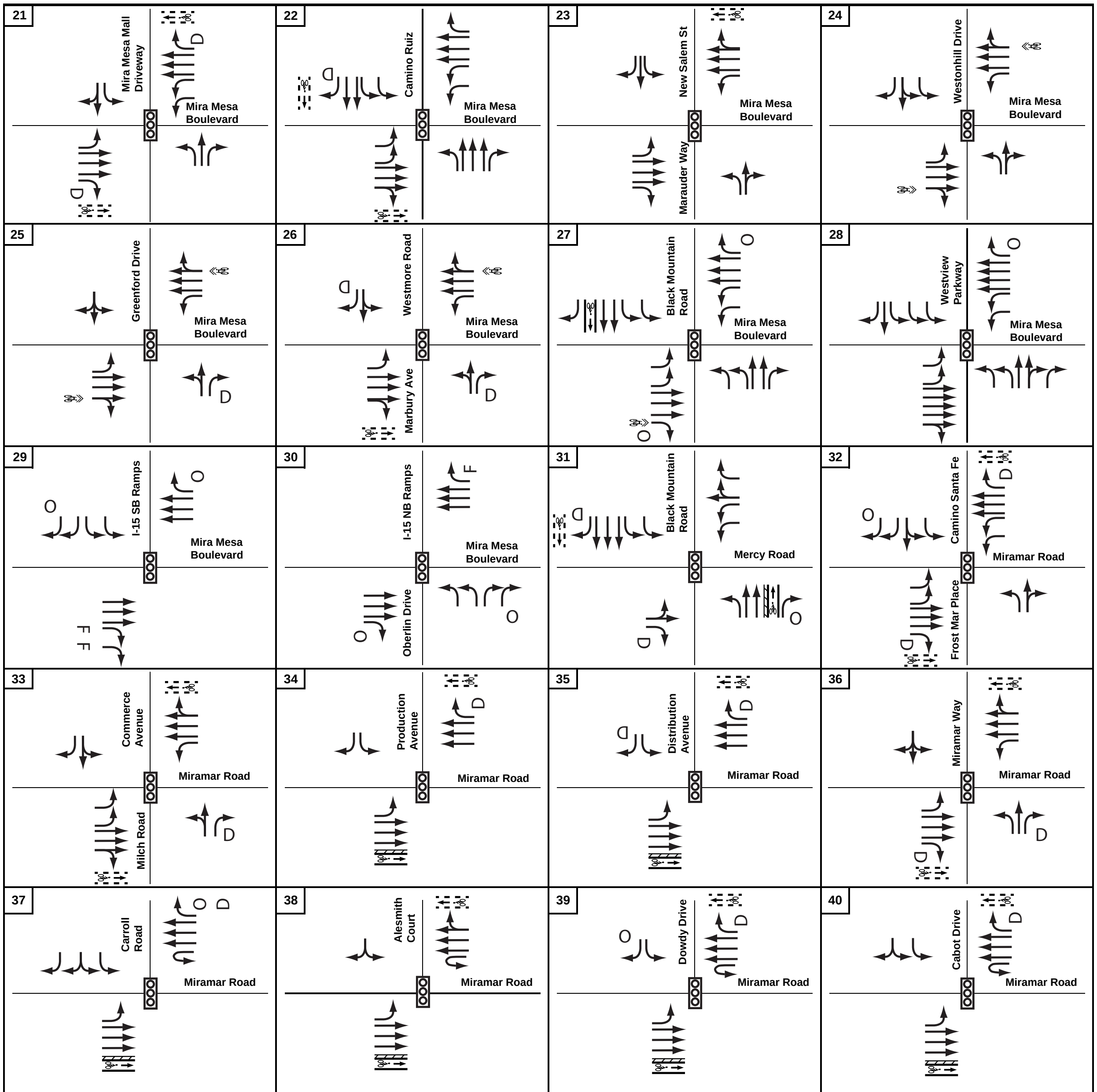
Bicycle Facilities

- Through Buffered Bicycle Lane ('Bicycle Pocket')
- Through Bicycle Lane ('Bicycle Pocket')
- Striped Bicycle Lane Merge
- Shared Lane Marking ('Sharrow')

Transit Facilities

- B Bus Only Movement

Existing Intersection Lane Configurations



LEGEND

Intersection Control

- Signalized Intersection
- Yield Controlled Movement
- F Free Right-Turn
- O Right-Turn Overlap
- D Defacto Right-Turn Lane

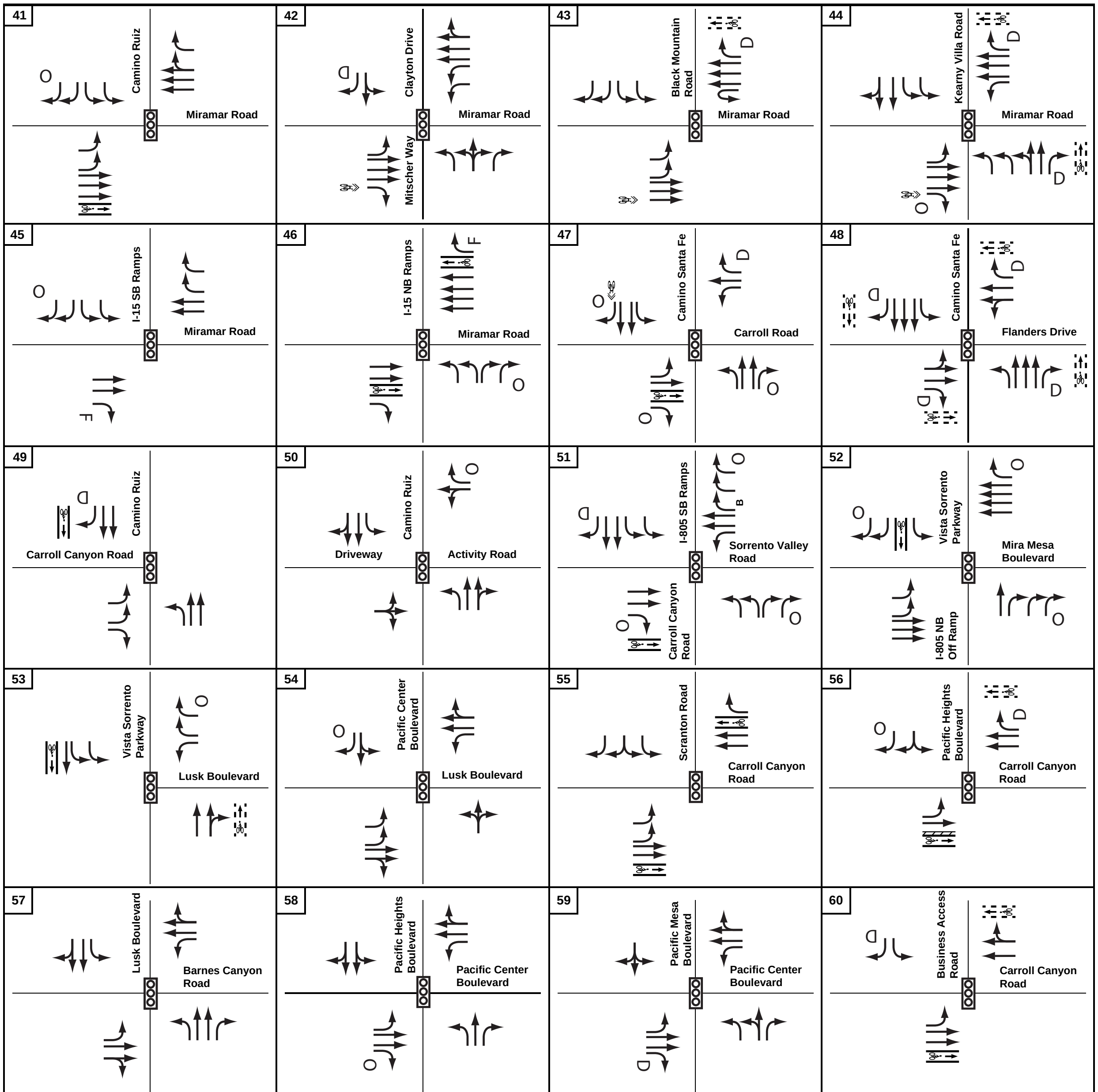
Bicycle Facilities

- Through Buffered Bicycle Lane ('Bicycle Pocket')
- Through Bicycle Lane ('Bicycle Pocket')
- Striped Bicycle Lane Merge
- Shared Lane Marking ('Sharrow')

Transit Facilities

- B Bus Only Movement

Existing Intersection Lane Configurations



LEGEND

Intersection Control

- Signalized Intersection
- Yield Controlled Movement
- F Free Right-Turn
- O Right-Turn Overlap
- D Defacto Right-Turn Lane

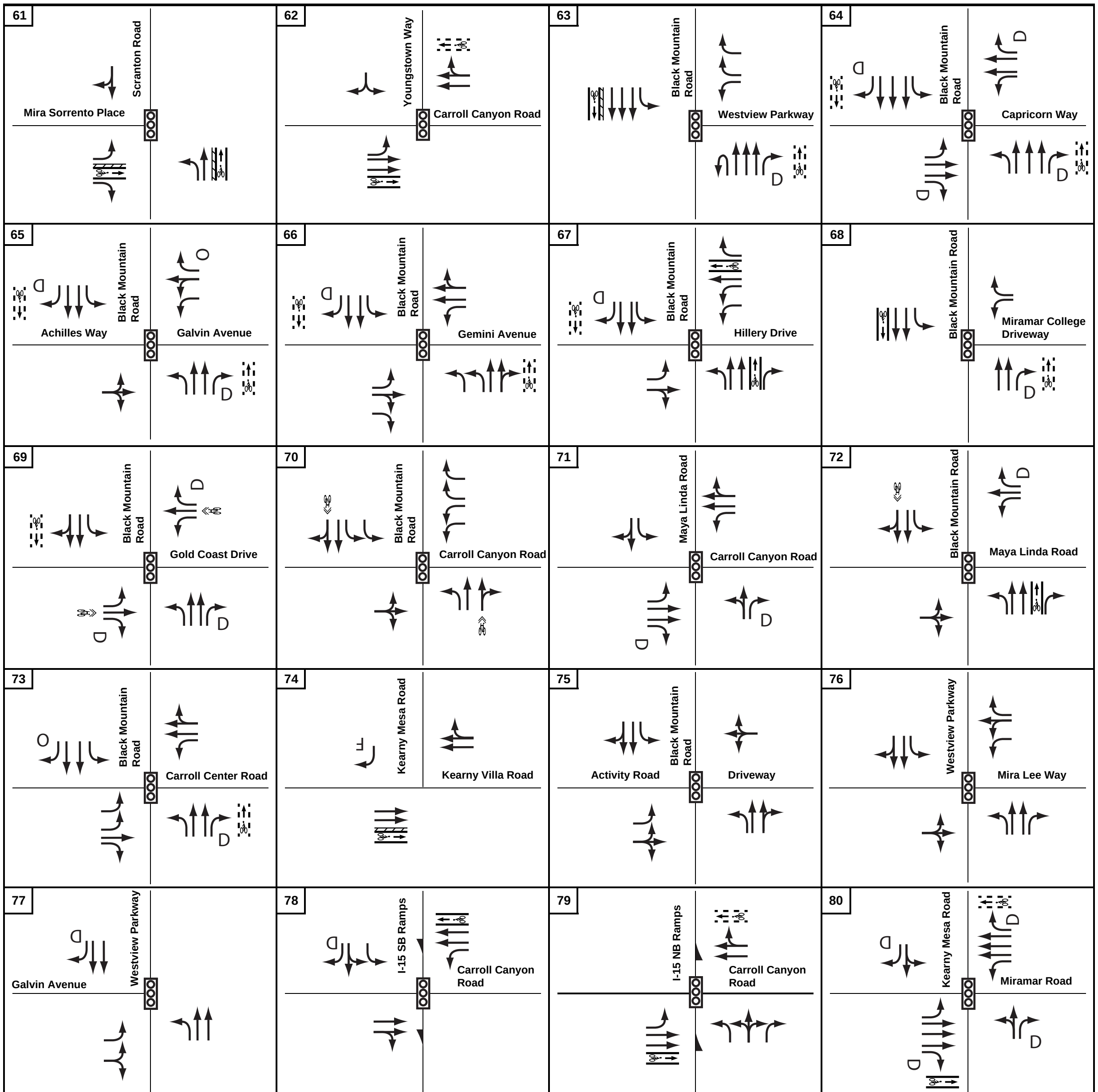
Bicycle Facilities

- Through Buffered Bicycle Lane (‘Bicycle Pocket’)
- Through Bicycle Lane (‘Bicycle Pocket’)
- Striped Bicycle Lane Merge
- Shared Lane Marking (‘Sharrow’)

Transit Facilities

- B Bus Only Movement

Existing Intersection Lane Configurations



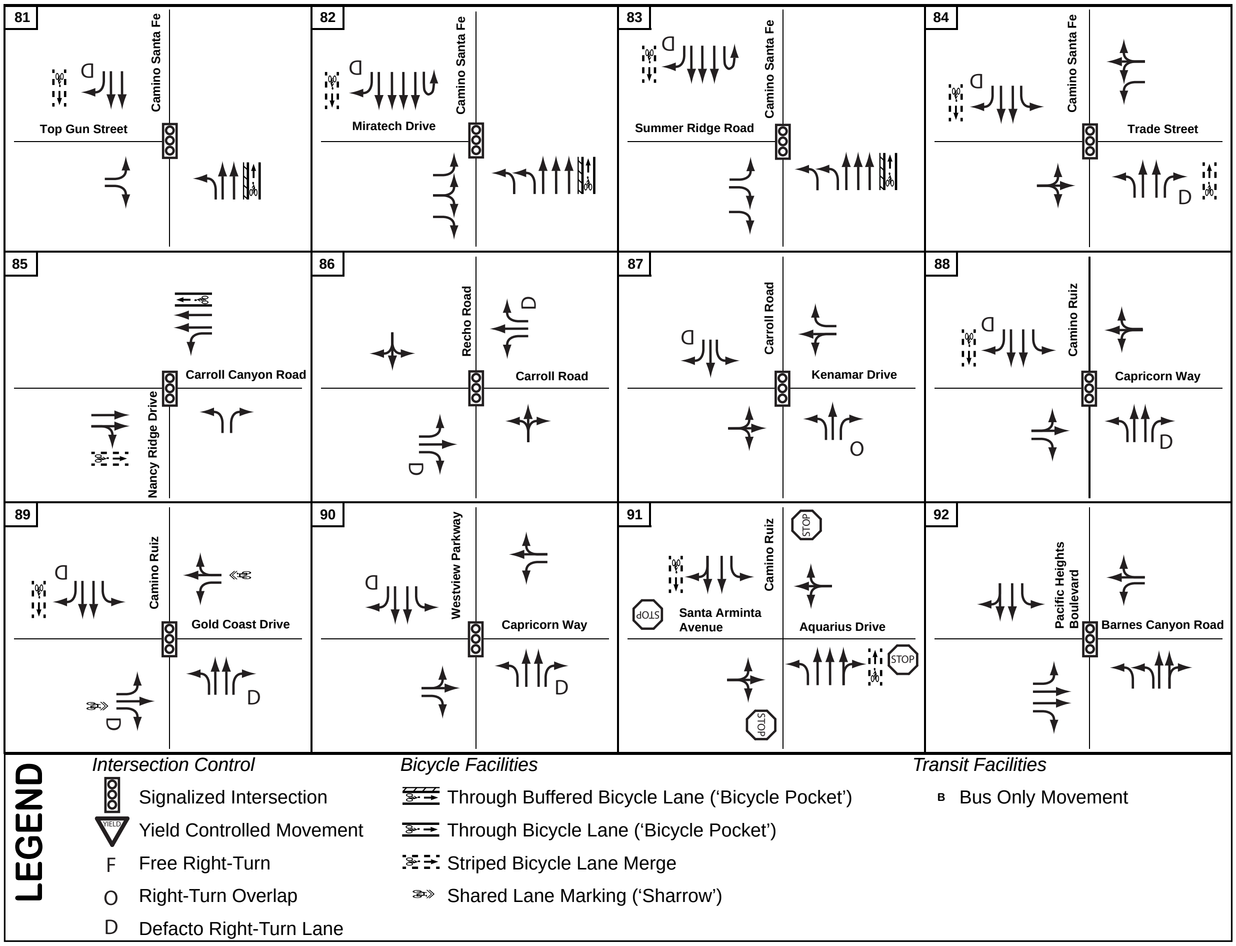
LEGEND

Intersection Control
- Signalized Intersection
- Yield Controlled Movement
- F Free Right-Turn
- O Right-Turn Overlap
- D Defacto Right-Turn Lane

Bicycle Facilities
- Through Buffered Bicycle Lane ('Bicycle Pocket')
- Through Bicycle Lane ('Bicycle Pocket')
- Striped Bicycle Lane Merge
- Shared Lane Marking ('Sharrow')

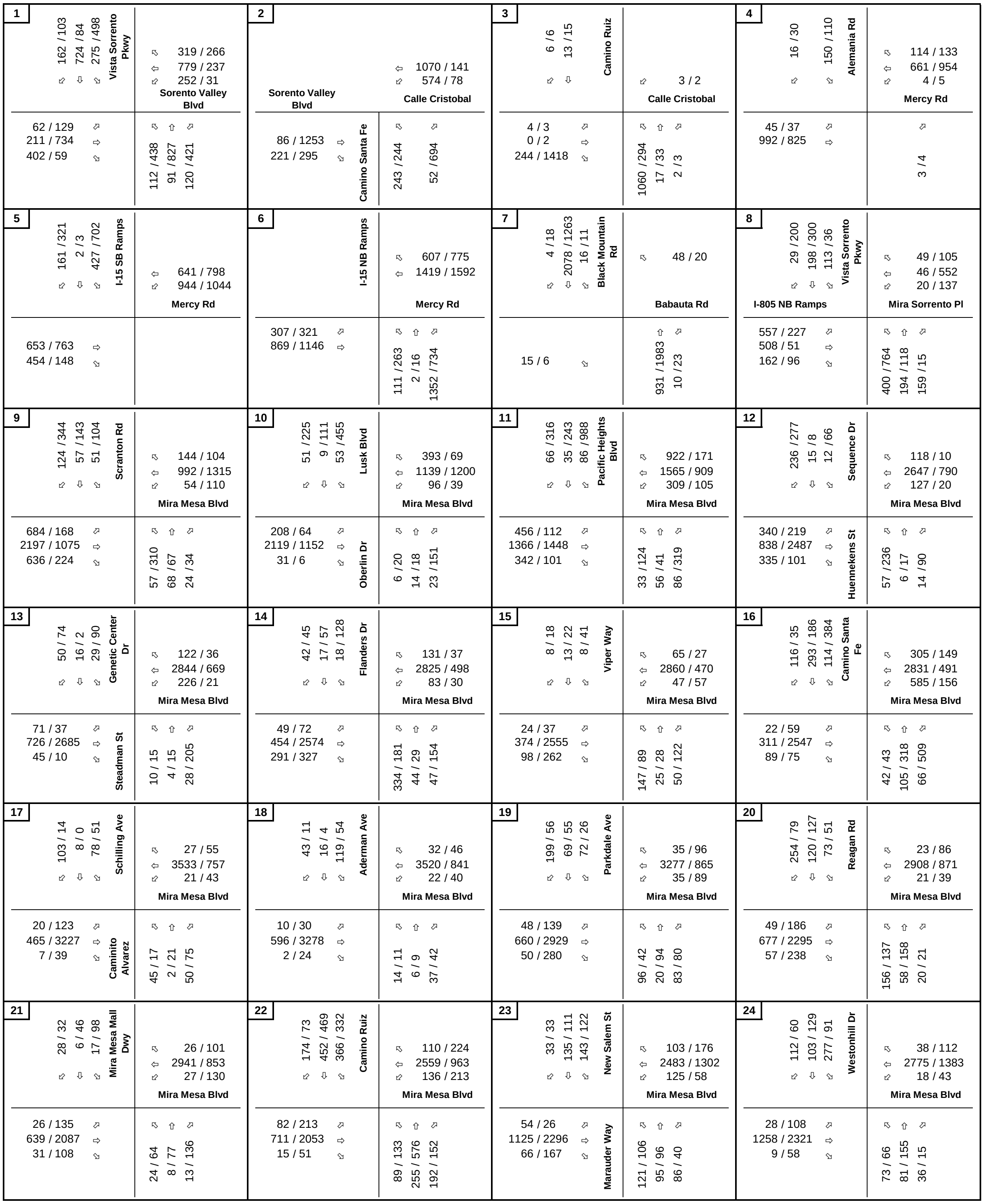
Transit Facilities
- B Bus Only Movement

Existing Intersection Lane Configurations



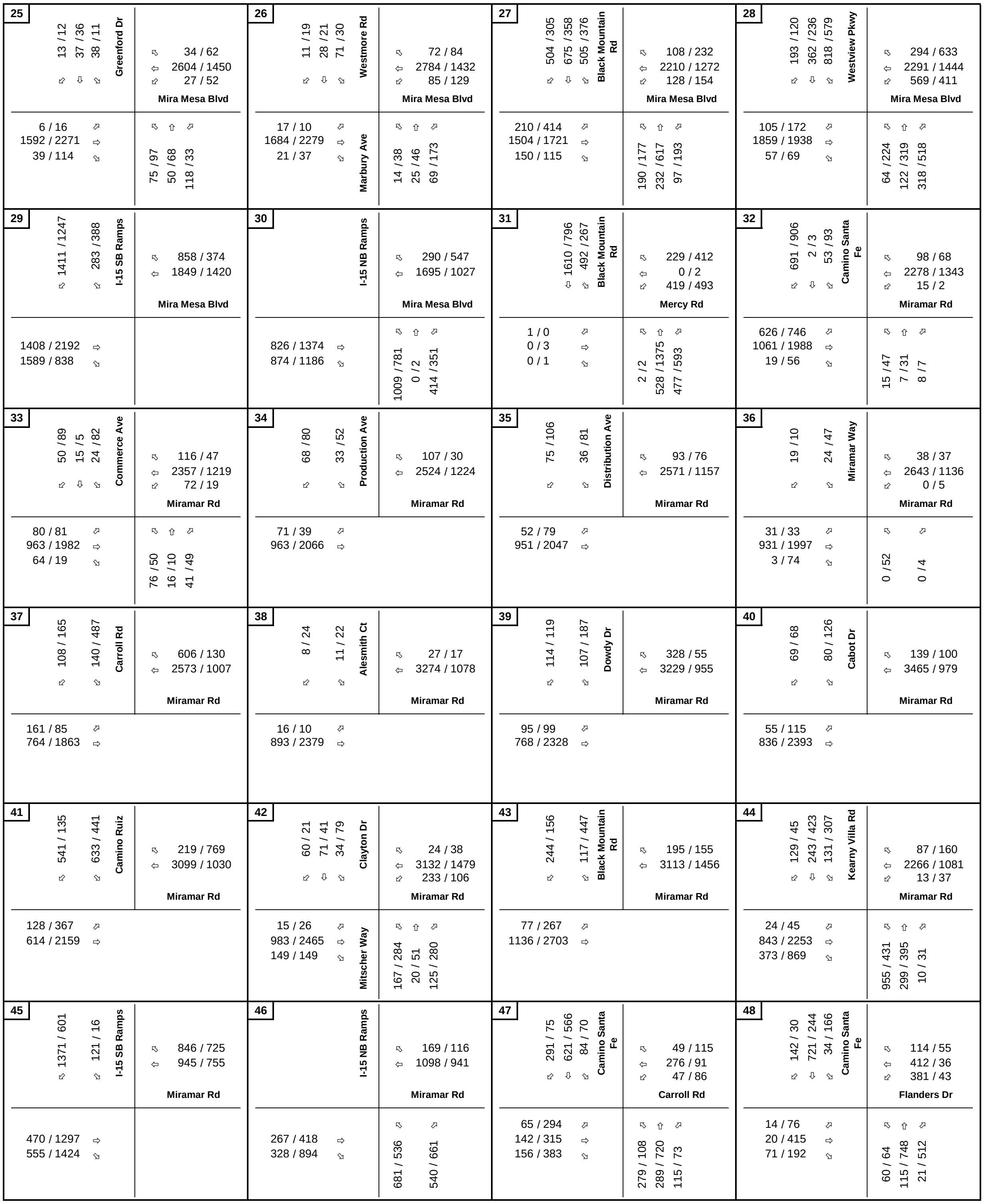
Existing Intersection Lane Configurations

FIGURE 4-33 A

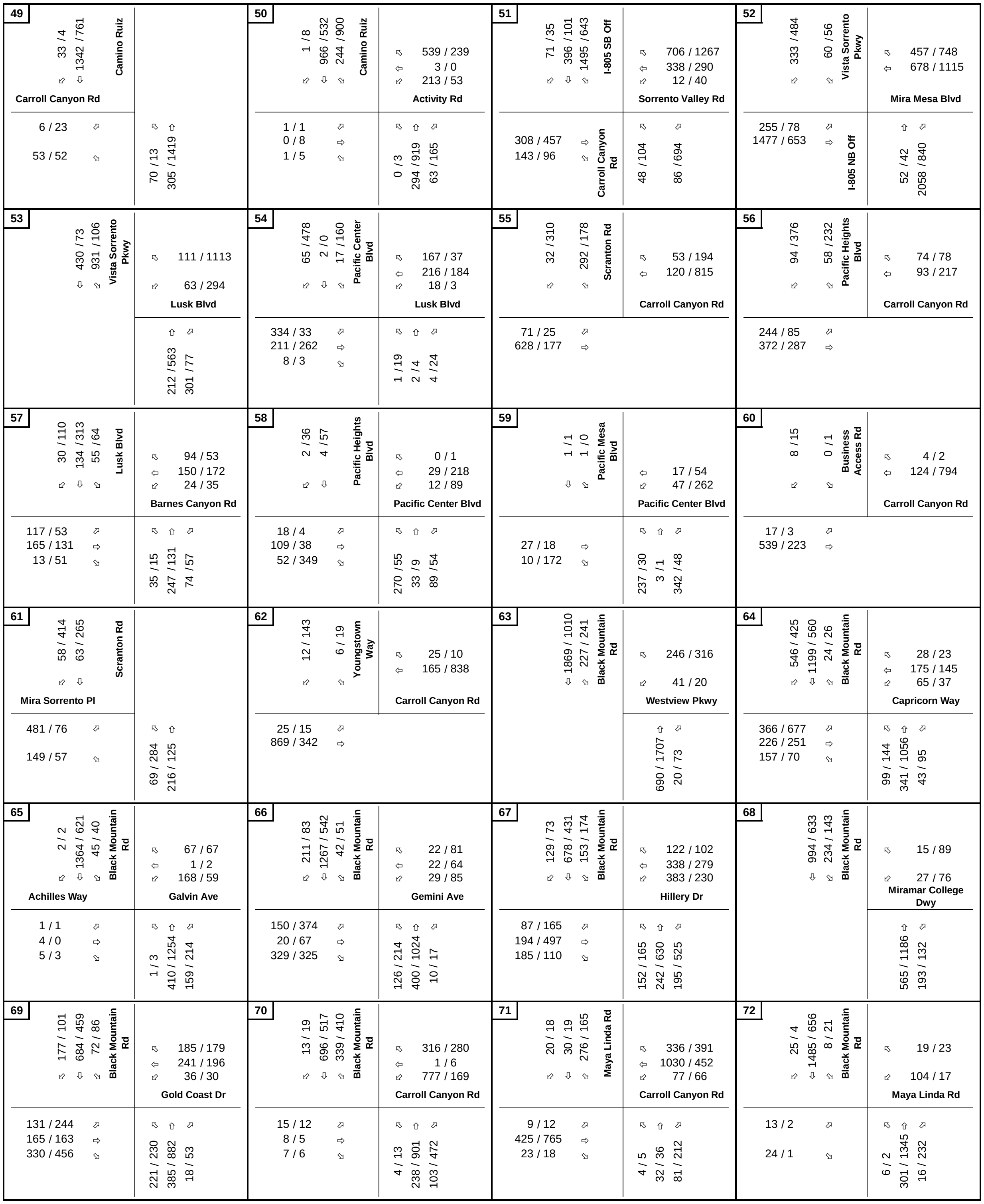


Existing Peak Hour Intersection Volumes

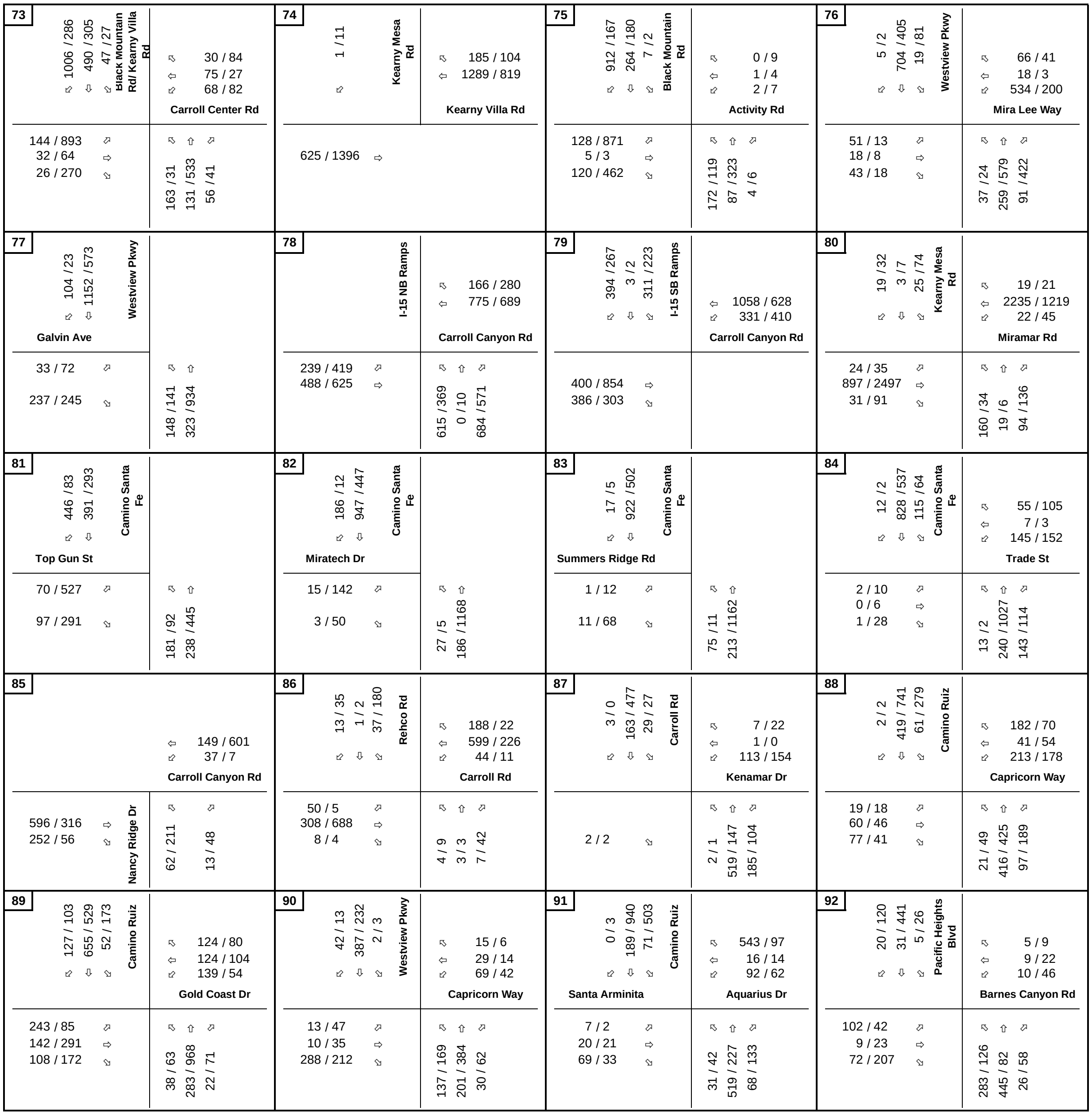
FIGURE 4-33 B



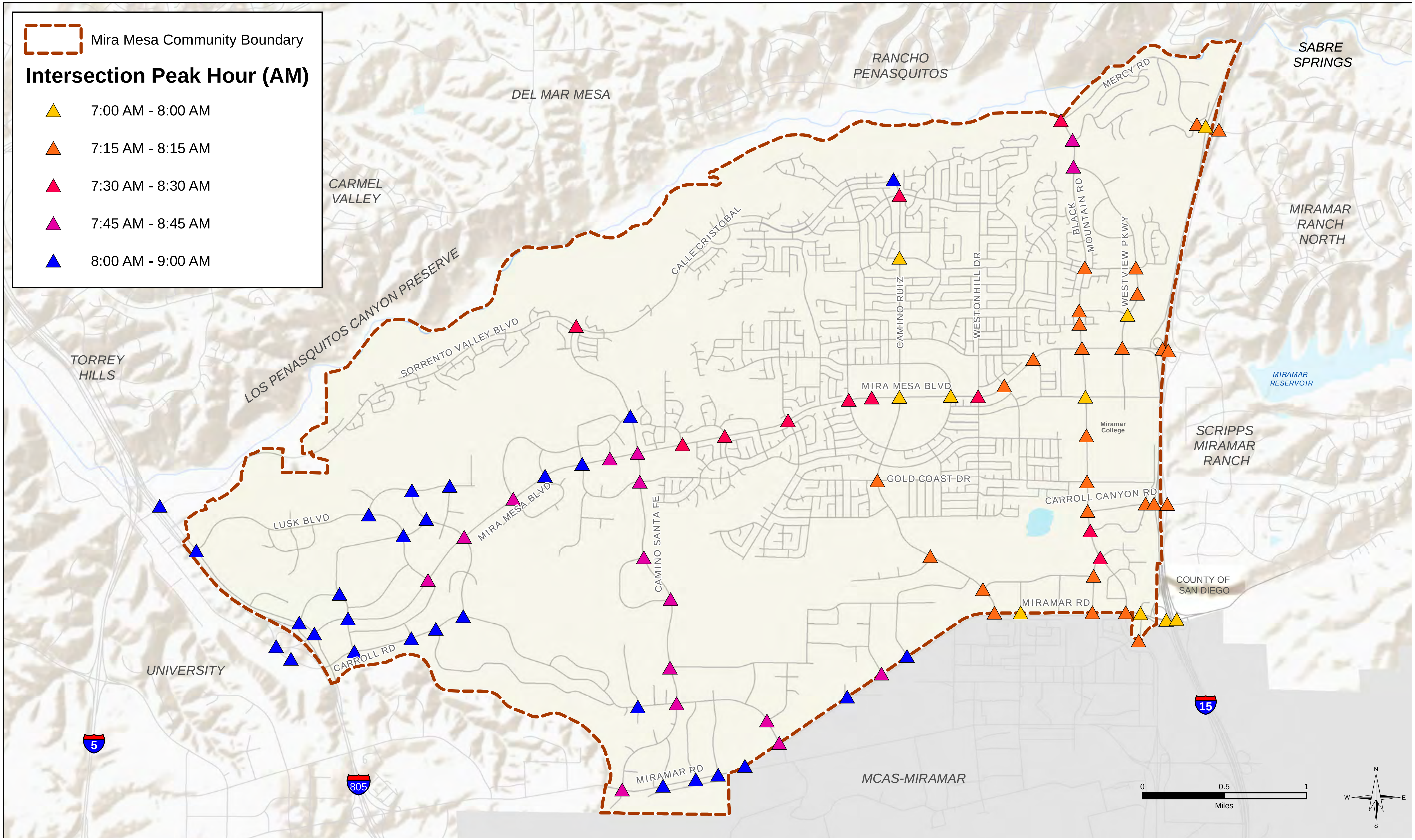
Existing Peak Hour Intersection Volumes



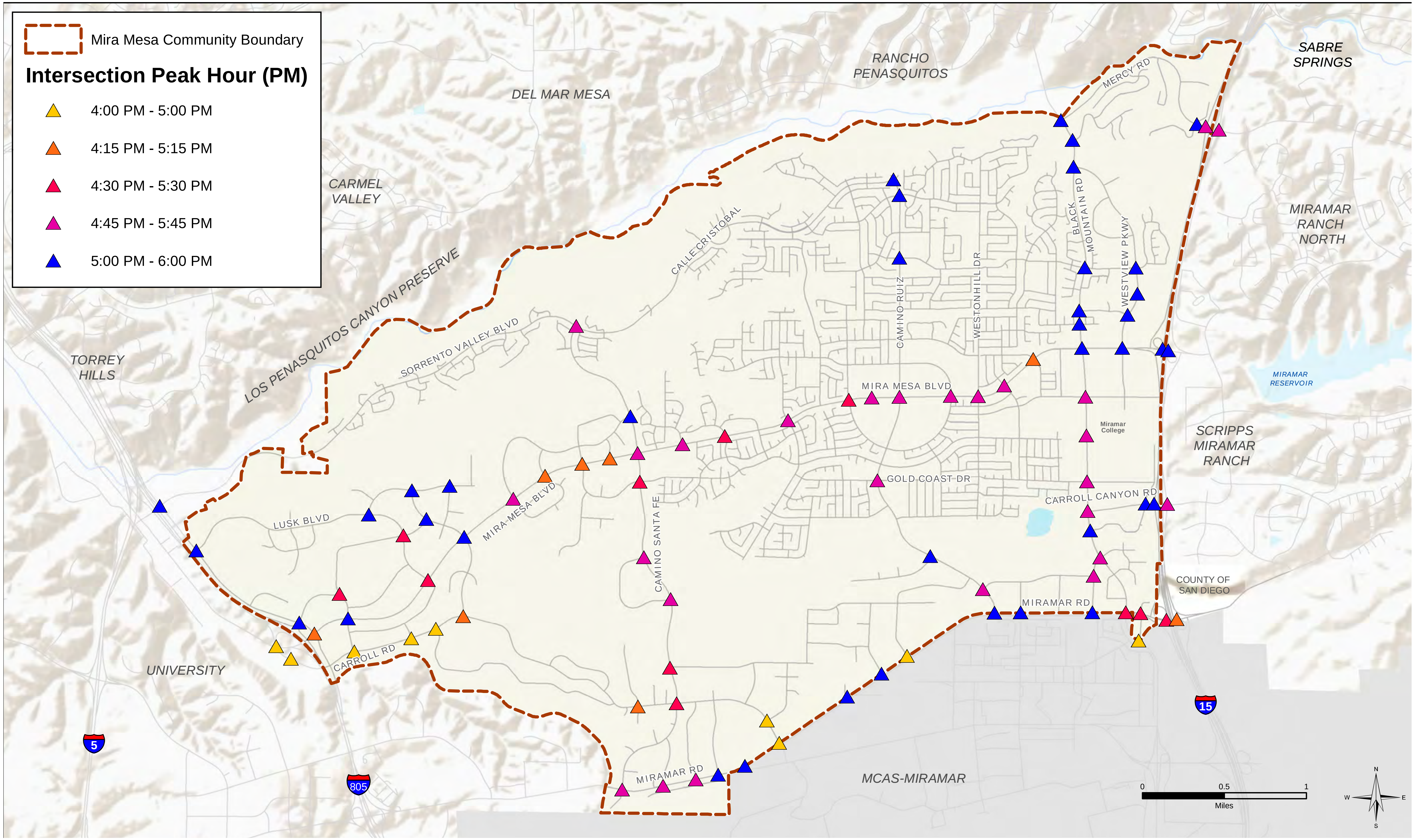
Existing Peak Hour Intersection Volumes



Existing Peak Hour Intersection Volumes



Existing Peak Hour Time Periods (AM Peak)



Existing Peak Hour Time Periods (PM Peak)

4.4.2 VEHICLE SAFETY

Between October 2012 and September 2017, there were a total of 2,029 reported vehicular collisions, excluding pedestrian- and bicycle-involved collisions, within the Mira Mesa community. In the State of California, collision reports must be generated for any collision where property damage totals 750 dollars or more, someone is injured, or someone is killed. As a result, it is important to note some incidents may go unreported for failing to meet one of these criteria.

Figure 4-36 displays the collisions across the community, symbolized by the number of crashes within 350 feet of the given location.

Many locations experienced multiple collisions in the five-year period. A collision within 350 feet of the intersection was considered for this ranking. The ten most frequent collision locations are identified in **Table 4-26**. As shown, the three intersections with the highest number of collisions all occur on Mira Mesa Boulevard. Mira Mesa Boulevard and Miramar Road are corridors that have a high number of intersection-related collisions.

Table 4-26 Most Frequent Vehicular Collision Locations

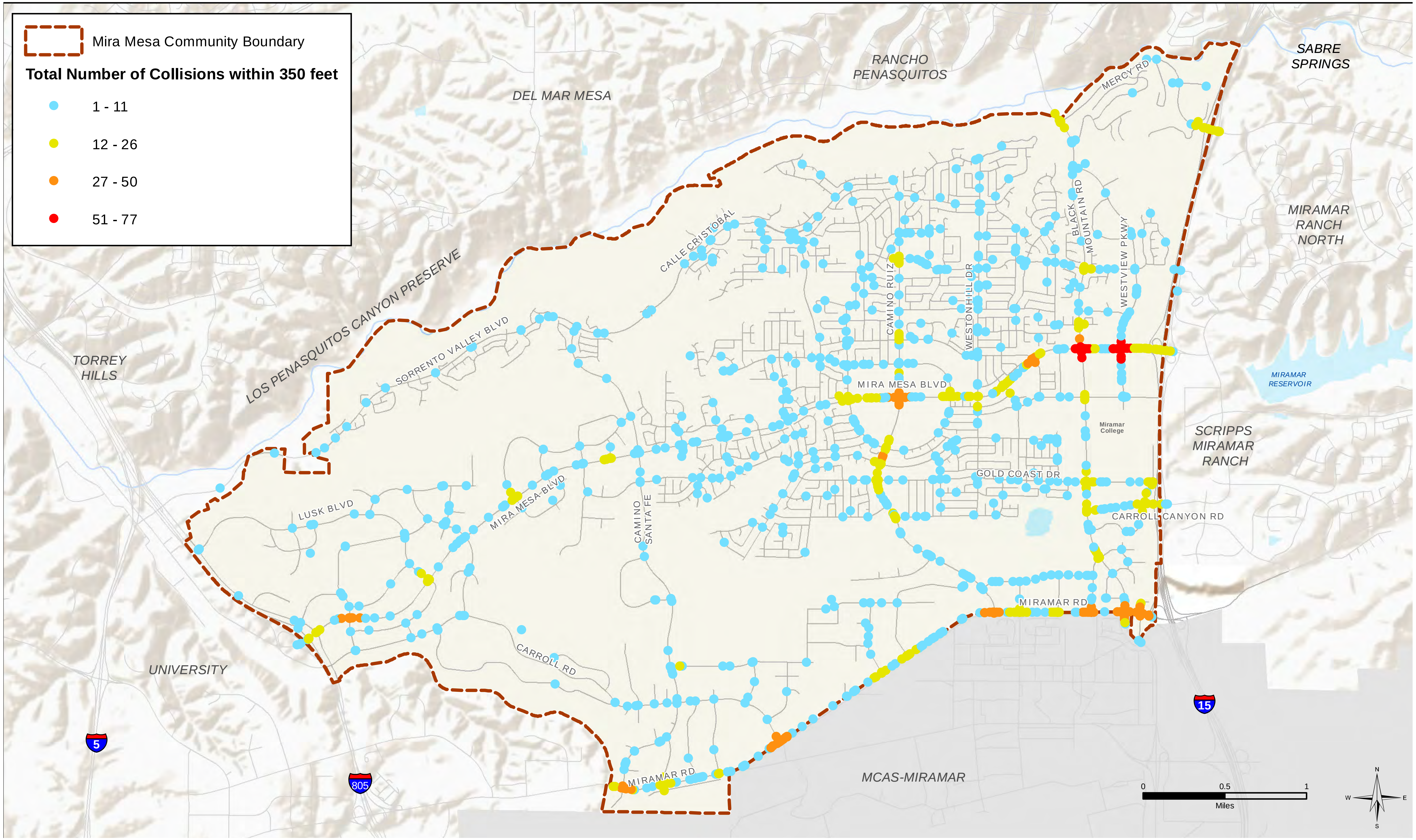
Rank	Intersections	Collisions*
1	Mira Mesa Blvd & Westview Pkwy	74
2	Mira Mesa Blvd & Black Mountain Rd	64
3	Mira Mesa Blvd & Camino Ruiz	42
4	Miramar Rd & Camino Ruiz	37
5	Miramar Rd & Carroll Rd	35
6	Miramar Rd & Black Mountain Rd	34
7	Mira Mesa Blvd & Scranton Rd	30
8	Miramar Rd & Kearny Villa Rd	29
9	Mira Mesa Blvd & Marbury Ave/Westmore Rd	29
10	Miramar Rd & Camino Santa Fe/Frost-Mar Pl	28

*Represents the number of collisions within 350 feet of the intersection

The reported collisions based on location types are summarized in **Table 4-27**. Location types include intersection, mid-block, and approaching/departing locations. Nearly three-quarters of all collisions occurred at intersections.

Table 4-27 Most Frequent Vehicular Collision Locations

Collision Location Type	Collisions	Percent of Total
Intersection	1,463	72%
Approaching/Departing	367	18%
Mid-Block	199	10%
Total	***2,029***	***100%***



Vehicle Collision Summary

A summary of the reported collisions categorized by party at fault is shown in **Table 4-28.**

Table 4-28 Collisions by Party at Fault

Party at Fault	Collisions	Percent of Total
Driver	1,069	53%
Bicyclist	25	1%
Parked Vehicle	169	8%
Pedestrian	31	2%
Other/Not Stated	735	36%
Total	***2,029***	***100%***

Table 4-29 displays the primary causes for vehicle involved collisions. As shown in the table, the top causes of collisions were improper turning, followed by unsafe speeds, and auto right-of-way violation.

Table 4-29 Primary Collision Cause

Primary Collision Cause	Number of Collisions	Percent of Total
Improper Turning	432	21%
Unsafe Speed	421	21%
Auto R/W Violation	343	17%
Not Stated	159	8%
Following Too Closely	107	5%
Traffic Signals and Signs	103	5%
Unsafe Lane Change	91	4%
Unsafe Starting or Backing	87	4.%
Unknown	53	3%
Other Hazardous Movement	49	2%
Other	43	2%
Driving Under Influence	31	2%
Pedestrian Violation	23	1%
Other Improper Driving	21	1%
Wrong Side of Road	19	<1%
Ped R/W Violation	16	<1%
Improper Passing	15	<1%
Other Than Driver	6	<1%
Impeding Traffic	4	<1%
Other Equipment	4	<1%
Fell Asleep	2	<1%
Total	***2029***	***100%***

Note: Collision data with causes labeled "Other" and those that were blank are combined.
"Other" = 24 Blank = 19

4.4.3 VEHICLE SYSTEM OPERATIONS (QUALITY)

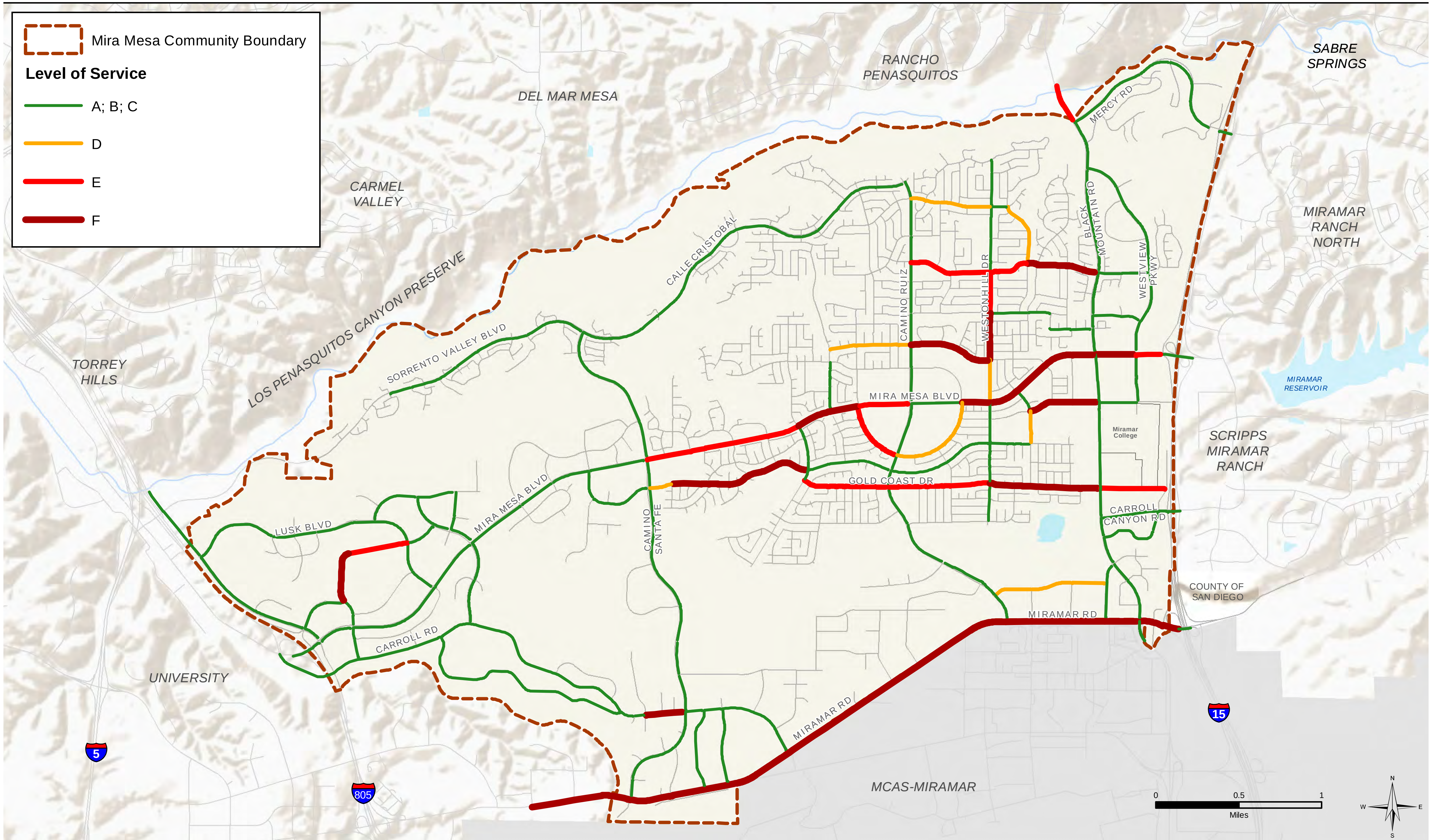
Each roadway segment in the study area was evaluated by comparing the daily traffic volume (ADT) with the roadway's theoretical capacity based on its classification. The capacity represents the maximum daily volume before the roadway is expected to begin to operate at a LOS E based on the number of lanes, speed, access points, and other physical features of the roadway. This volume-to-capacity comparison (v/c ratio) is a planning tool used to determine the general traffic demand on a segment and its sensitivity to delays. The v/c ratios are reported in terms of level of service (LOS), a quantitative measure representing the quality of service from the driver's perspective.

Table 4-30 presents the functional classification and other characteristics for each roadway segment, and the results of the roadway segment analysis for a typical weekday. As shown in the table, it is estimated that all roadway segments function at an acceptable LOS D or better in the study area, except for the following segments:

- Scranton Road – between Barnes Canyon Road to Mira Sorrento Place
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS F)
- Barnes Canyon Road – Scranton Road to Lusk Boulevard
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS E)
- Mira Mesa Boulevard – Camino Santa Fe to Parkdale Avenue
    - 6 Lane Major Arterial – (LOS E)
- Mira Mesa Boulevard – Parkdale Avenue to Reagan Road
    - 6 Lane Major Arterial – (LOS F)
- Mira Mesa Boulevard – Reagan Road to Camino Ruiz
    - 6 Lane Major Arterial – (LOS E)
- Mira Mesa Boulevard – New Salem Street/Marauder Way to Westview Parkway
    - 6 Lane Major Arterial – (LOS F)
- Mira Mesa Boulevard – Westonhill Dr to Greenford Dr
    - 6 Lane Major Arterial – (LOS F)
- Mira Mesa Boulevard – Greenford Dr to Black Mountain Road
    - 6 Lane Major Arterial – (LOS F)
- Mira Mesa Boulevard –Black Mountain Road to Westview Parkway
    - 6 Lane Major Arterial – (LOS F)
- Mira Mesa Boulevard – Westview Parkway to I-15 Ramps
    - 7 Lane Prime Arterial – (LOS E)
- Carroll Road – Nancy Ridge Drive (E) to Camino Santa Fe
    - 2 Lane Collector (w/ two-way left-turn lane) – (LOS F)
- Miramar Road – West of Western Community Limit
    - 6 Lane Major Arterial (LOS F)
- Miramar Road –Western Community Limit to Camino Santa Fe
    - 6 Lane Major Arterial (LOS F)
- Miramar Road – Camino Santa Fe to Production Avenue
    - 6 Lane Major Arterial (LOS F)
- Miramar Road – Production Avenue to Distribution Avenue
    - 6 Lane Major Arterial (LOS F)
- Miramar Road – Distribution Avenue to Carroll Road
    - 6 Lane Major Arterial (LOS F)

- Miramar Road – Carroll Road to Camino Ruiz
    - 6 Lane Major Arterial (LOS F)
- Miramar Road – Camino Ruiz to Black Mountain Road
    - 6 Lane Major Arterial (LOS F)
- Miramar Road – Black Mountain Road to Kearny Villa Road
    - 6 Lane Major Arterial (LOS F)
- Miramar Road – Kearny Villa Road to I-15
    - 6 Lane Major Arterial (LOS F)
- Flanders Drive – Caminito Alvarez to Parkdale Avenue
    - 2 Lane Collector (w/o two-way left-turn-lane) (LOS F)
- Westmore Road – Camino Ruiz to Westonhill Drive
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS F)
- Reagan Road – Mira Mesa Boulevard to Camino Ruiz
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS E)
- Gold Coast Drive – Parkdale Avenue to Camino Ruiz
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS E)
- Gold Coast Drive –Camino Ruiz to Westonhill Dr
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS E)
- Gold Coast Drive – Westonhill Drive to Black Mountain Road
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS F)
- Gold Coast Drive – Black Mountain Road to Maya Linda Road
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS E)
- Westonhill Drive – Capricorn Way to Libra Drive
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS E)
- Westonhill Drive – Libra Drive to Westmore Road
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS F)
- Capricorn Way – Camino Ruiz to Westonhill Drive
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS E)
- Capricorn Way –Westonhill Drive to Bootes Street
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS E)
- Capricorn Way – Bootes Street to Black Mountain Road
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS F)
- Black Mountain Road – North of Northern Community Limit
    - 4 Lane Major Arterial (LOS E)
- Hillery Drive – Greenford Drive to Black Mountain Road
    - 2 Lane Collector (w/o two-way left-turn lane) (LOS F)

Figure 4-37 illustrates the existing LOS results for each of the roadway segments in the study area based on the volume-to-capacity analysis methodology. The segments with LOS E or F have volumes above their theoretical capacity, typically resulting in periods of congestion.



Existing Roadway Segment Level of Service

Table 4-30 Existing Roadway Segment Analysis

Roadway Segment	Functional Class	LOS E Capacity	ADT	V/C Ratio	LOS
Vista Sorrento Parkway					
North of Sorrento Valley Blvd.	4 Lane Major Arterial	40,000	15,635	0.391	B
Sorrento Valley Blvd (N. Community Limit) to Lusk Blvd	4 Lane Major Arterial	40,000	14,927	0.373	A
Lusk Blvd to Mira Sorrento Pl	3 Lane Collector (w/ TWLTL)	22,500	13,504	0.600	C
Mira Sorrento Pl to Mira Mesa Blvd	4 Lane Major Arterial	40,000	17,009	0.425	B
Sorrento Valley Blvd					
West of Western Community Limit to I-805 Ramps	4 Lane Collector (w/ TWLTL)	30,000	12,887	0.430	B
I-805 Ramps to Camino Santa Fe	4 Lane Major Arterial	40,000	15,764	0.394	B
Lusk Blvd					
Vista Sorrento Pkwy to Pacific Center Blvd	4 Lane Major Arterial	40,000	11,324	0.283	A
Pacific Center Blvd to Barnes Canyon Rd	4 Lane Major Arterial	40,000	10,630	0.266	A
Barnes Canyon Rd to Mira Mesa Blvd	4 Lane Major Arterial	40,000	11,068	0.277	A
Mira Sorrento Pl					
Vista Sorrento Pkwy to Scranton Rd	4 Lane Collector (w/ TWLTL)	30,000	10,145	0.338	B
Scranton Rd					
Barnes Canyon Rd to Mira Sorrento Pl	2 Lane Collector (w/o TWLTL)	8,000	10,870	1.359	**F**
Mira Sorrento Pl to Mira Mesa Blvd	5 Lane Major Arterial	45,000	18,296	0.407	B
Mira Mesa Blvd to Carroll Canyon Rd	4 Lane Major Arterial	40,000	10,303	0.258	A
Barnes Canyon Rd					
Scranton Rd to Lusk Blvd	2 Lane Collector (w/o TWLTL)	8,000	7,335	0.917	**E**
Lusk Blvd to Pacific Heights Blvd	4 Lane Major Arterial	40,000	6,924	0.173	A
Pacific Center Blvd					
Lusk Blvd to Pacific Heights Blvd	4 Lane Major Arterial	40,000	7,565	0.189	A
Pacific Heights Blvd to Pacific Mesa Blvd	4 Lane Collector (w/o TWLTL)	15,000	3,293	0.220	A
Pacific Heights Blvd					
Pacific Center Blvd to Barnes Canyon Rd	4 Lane Major Arterial	40,000	7,245	0.181	A
Barnes Canyon Rd to Mira Mesa Blvd	4 Lane Major Arterial	40,000	16,772	0.419	B
Mira Mesa Blvd to Carroll Canyon Rd	4 Lane Major Arterial	40,000	8,045	0.201	A
Pacific Mesa Blvd					
Pacific Heights Blvd to Pacific Center Blvd	4 Lane Major Arterial	40,000	9,398	0.235	A
Calle Cristobal					
Camino Santa Fe to Acama Ct	4 Lane Major Arterial	40,000	14,812	0.370	A
Acama Ct to Camino Ruiz	4 Lane Major Arterial	40,000	12,239	0.306	A
Mira Mesa Blvd					
I-805 Ramps to Scranton Rd	7 Lane Prime Arterial	87,000[d]	60,870	0.761	C
Scranton Rd to Lusk Blvd	6 Lane Prime Arterial	60,000	47,868	0.798	C
Lusk Blvd to Pacific Heights Blvd	6 Lane Prime Arterial	60,000	45,646	0.761	C
Pacific Heights Blvd to Flanders Dr	6 Lane Prime Arterial	60,000	41,338	0.689	C
Flanders Dr to Camino Santa Fe	6 Lane Prime Arterial	60,000	41,679	0.695	C
Camino Santa Fe to Parkdale Ave	6 Lane Major Arterial	50,000	47,281	0.946	**E**
Parkdale Ave to Reagan Rd	6 Lane Major Arterial	50,000	51,329	1.027	**F**
Reagan Rd to Camino Ruiz	6 Lane Major Arterial	50,000	45,330	0.907	**E**

Roadway Segment	Functional Class	LOS E Capacity	ADT	V/C Ratio	LOS
Camino Ruiz to New Salem St/Marauder Wy	6 Lane Major Arterial	50,000	31,552	0.631	C
New Salem St/Marauder Wy to Westonhill Dr	6 Lane Major Arterial	50,000	57,445	1.149	**F**
Westonhill Dr to Greenford Dr	6 Lane Major Arterial	50,000	57,200	1.144	**F**
Greenford Dr to Black Mountain Rd	6 Lane Major Arterial	50,000	60,335	1.207	**F**
Black Mountain Rd to Westview Pkwy	6 Lane Major Arterial	64,167[d]	70,632	1.101	**F**
Westview Pkwy to I-15 Ramps	7 Lane Prime Arterial	87,000[d]	78,516	0.902	**E**
I-15 Ramps to East of Eastern Community Limit	6 Lane Major Arterial	50,000	32,450	0.649	C
Carroll Canyon Rd					
Sorrento Valley Rd/Mira Mesa Blvd to Scranton Rd	4 Lane Major Arterial	40,000	12,130	0.303	A
Scranton Rd to Nancy Ridge Dr (W)	4 Lane Collector (w/ TWLTL)	30,000	13,164	0.439	B
Nancy Ridge Dr (W) to Pacific Heights Blvd	2 Lane Major Arterial	20,000	13,164	0.658	C
Pacific Heights Blvd to Black Mountain Rd	Future Connection				
Black Mountain Rd to Maya Linda Rd	4 Lane Collector (w/ TWLTL)	30,000	18,896	0.630	C
Maya Linda Rd to I-15 Ramps	4 Lane Collector (w/ TWLTL)	30,000	19,862	0.662	C
I-15 Ramps to East of Eastern Community Limit	4 Lane Collector (w/ TWLTL)	30,000	13,806	0.460	B
Carroll Rd					
Pacific Heights Blvd to Nancy Ridge Dr (E)	2 Lane Major Arterial	20,000	11,833	0.592	C
Nancy Ridge Dr (E) to Camino Santa Fe	2 Lane Collector (w/ TWLTL)	15,000	15,941	1.063	**F**
Camino Santa Fe to Miramar Rd	2 Lane Collector (w/ TWLTL)	15,000	9,755	0.650	C
Nancy Ridge Dr					
Carroll Canyon Rd to Carroll Rd	2 Lane Collector (w/o TWLTL)	8,000	3,039	0.380	B
Miramar Rd					
West of Western Community Limit	6 Lane Major Arterial	50,000	62,983	1.260	**F**
Western Community Limit to Camino Santa Fe	6 Lane Major Arterial	50,000	66,374	1.327	**F**
Camino Santa Fe to Production Ave	6 Lane Major Arterial	50,000	58,884	1.178	**F**
Production Ave to Distribution Ave	6 Lane Major Arterial	50,000	54,165	1.083	**F**
Distribution Ave to Carroll Rd	6 Lane Major Arterial	50,000	51,816	1.036	**F**
Carroll Rd to Camino Ruiz	6 Lane Major Arterial	50,000	50,944	1.019	**F**
Camino Ruiz to Black Mountain Rd	6 Lane Major Arterial	50,000	64,376	1.288	**F**
Black Mountain Rd to Kearny Villa Rd	6 Lane Major Arterial	50,000	64,382	1.288	**F**
Kearny Villa Rd to I-15 Ramps	6 Lane Major Arterial	50,000	52,857	1.057	**F**
I-15 Ramps to East of Eastern Community Limit	4 Lane Prime Arterial	64,125[d]	28,064	0.438	B
Flanders Dr					
Mira Mesa Blvd to Camino Santa Fe	4 Lane Collector (w/o TWLTL)	15,000	7,549	0.503	C
Camino Santa Fe to Caminito Alvarez	4 Lane Collector (w/o TWLTL)	15,000	10,385	0.692	D
Caminito Alvarez to Parkdale Ave	2 Lane Collector (w/o TWLTL)	8,000	8,279	1.035	**F**
Parkdale Ave to Camino Ruiz	2 Lane Collector (w/o TWLTL)	8,000	4,129	0.516	C
Camino Ruiz to Westonhill Dr	2 Lane Collector (w/o TWLTL)	8,000	3,745	0.468	C
Westonhill Dr to Greenford Dr	2 Lane Collector (w/o TWLTL)	8,000	4,487	0.561	C
Camino Santa Fe					
Sorrento Valley Blvd/Calle Cristobal to Top Gun St	4 Lane Major Arterial	40,000	10,792	0.270	A

Roadway Segment	Functional Class	LOS E Capacity	ADT	V/C Ratio	LOS
Top Gun St to Mira Mesa Blvd	4 Lane Major Arterial	40,000	16,903	0.423	B
Mira Mesa Blvd to Flanders Dr	6 Lane Major Arterial	50,000	18,925	0.379	A
Flanders Dr to Carroll Canyon Rd	6 Lane Prime Arterial	60,000	20,126	0.335	A
Carroll Canyon Rd to Carroll Rd	4 Lane Prime Arterial	45,000	20,126	0.447	B
Carroll Rd to Spectrum Ln	4 Lane Major Arterial	40,000	21,494	0.537	C
Spectrum Ln to Miramar Rd	6 Lane Major Arterial	50,000	21,494	0.430	B
Parkdale Ave					
Mira Mesa Blvd to Flanders Dr	2 Lane Collector (w/o TWLTL)	8,000	4,862	0.608	C
Flanders Dr to Osgood Wy	2 Lane Collector (w/o TWLTL)	8,000	536	0.067	A
Production Ave					
Carroll Rd to Miramar Rd	2 Lane Collector (w/ TWLTL)	15,000	2,353	0.157	A
Distribution Ave					
Carroll Rd to Miramar Rd	2 Lane Collector (w/o TWLTL)	8,000	2,931	0.366	B
Montongo St					
Acama St to Westmore Rd	2 Lane Collector (w/o TWLTL)	8,000	4,555	0.569	C
Westmore Rd to Mira Mesa Blvd	2 Lane Collector (w/o TWLTL)	8,000	3,992	0.499	C
Camino Ruiz					
Calle Cristobal to Aquarius Dr	4 Lane Major Arterial	40,000	18,446	0.461	B
Aquarius Dr to Teresa Dr/Capricorn Wy	4 Lane Collector (w/ TWLTL)	30,000	17,787	0.593	C
Teresa Dr/Capricorn Wy to Westmore Rd	4 Lane Major Arterial	40,000	17,509	0.438	B
Westmore Rd to Mira Mesa Blvd	4 Lane Major Arterial	40,000	19,562	0.489	B
Mira Mesa Blvd to Reagan/Marauder Wy	4 Lane Major Arterial	40,000	22,819	0.570	C
Reagan Rd/Marauder Wy to Flanders Dr	4 Lane Major Arterial	40,000	20,311	0.508	B
Flanders Dr to Gold Coast Dr	4 Lane Major Arterial	40,000	19,060	0.477	B
Gold Coast Dr to Carroll Canyon Rd	4 Lane Major Arterial	40,000	27,094	0.677	C
Carroll Canyon Rd to Activity Rd	4 Lane Major Arterial	40,000	28,213	0.705	C
Activity Rd to Miramar Rd	5 Lane Major Arterial	45,000	27,016	0.600	C
Westmore Rd					
Montongo St to Camino Ruiz	2 Lane Collector (w/o TWLTL)	8,000	5,152	0.644	D
Camino Ruiz to Westonhill Dr	2 Lane Collector (w/o TWLTL)	8,000	9,951	1.244	**F**
Reagan Rd					
Mira Mesa Blvd to Camino Ruiz	2 Lane Collector (w/o TWLTL)	8,000	6,849	0.856	**E**
Marauder Wy					
Camino Ruiz to Mira Mesa Blvd	2 Lane Collector (w/o TWLTL)	8,000	6,086	0.761	D
Gold Coast Dr					
Parkdale Ave to Camino Ruiz	2 Lane Collector (w/o TWLTL)	8,000	7,243	0.905	**E**
Camino Ruiz to Westonhill Dr	2 Lane Collector (w/o TWLTL)	8,000	7,066	0.883	**E**
Westonhill Dr to Black Mountain Rd	2 Lane Collector (w/o TWLTL)	8,000	10,120	1.265	**F**
Black Mountain Rd to Maya Linda Rd	2 Lane Collector (w/o TWLTL)	8,000	7,710	0.964	**E**
Westonhill Dr					
Menkar Rd to Aquarius Dr	2 Lane Collector (w/o TWLTL)	8,000	1,492	0.187	A
Aquarius Dr to Capricorn Wy	2 Lane Collector (w/o TWLTL)	8,000	4,297	0.537	C
Capricorn Wy to Libra Dr	2 Lane Collector (w/o TWLTL)	8,000	6,636	0.830	**E**
Libra Dr to Westmore Rd	2 Lane Collector (w/o TWLTL)	8,000	9,389	1.174	**F**
Westmore Rd to Mira Mesa Blvd	2 Lane Collector (w/o TWLTL)	11,400[d]	8,896	0.780	D
Mira Mesa Blvd to Flanders Dr	2 Lane Collector (w/o TWLTL)	8,000	4,480	0.560	C

Roadway Segment	Functional Class	LOS E Capacity	ADT	V/C Ratio	LOS
Flanders Dr to Gold Coast Dr	2 Lane Collector (w/o TWLTL)	8,000	4,684	0.586	C
Gold Coast Dr to Jade Coast Dr	2 Lane Collector (w/o TWLTL)	8,000	1,762	0.220	A
Aquarius Dr					
Camino Ruiz to Westonhill Dr	2 Lane Collector (w/o TWLTL)	8,000	5,135	0.642	D
Westonhill Dr to Bootes Dt	2 Lane Collector (w/o TWLTL)	8,000	3,197	0.400	B
Capricorn Wy					
Camino Ruiz to Westonhill Dr	2 Lane Collector (w/o TWLTL)	8,000	7,886	0.986	**E**
Westonhill Dr to Bootes St	2 Lane Collector (w/o TWLTL)	8,000	7,167	0.896	**E**
Bootes St to Black Mountain Rd	2 Lane Collector (w/o TWLTL)	8,000	12,481	1.560	**F**
Black Mountain Rd to Westview Pkwy	2 Lane Collector (w/ TWLTL)	15,000	6,438	0.429	B
Bootes St					
Aquarius Dr to Capricorn Wy	2 Lane Collector (w/o TWLTL)	8,000	6,244	0.781	D
Libra Dr					
Westonhill Dr to Hyades Wy	2 Lane Collector (w/o TWLTL)	8,000	4,467	0.558	C
Greenford Dr					
Mira Mesa Blvd to Hillery Dr	2 Lane Collector (w/o TWLTL)	8,000	4,198	0.525	C
Hillery Dr to Flanders Dr	2 Lane Collector (w/o TWLTL)	8,000	5,159	0.645	D
Black Mountain Rd					
North of Northern Community Limit	4 Lane Major Arterial	40,000	36,605	0.915	**E**
Northern Comminuty Limit to Westview Pkwy	6 Lane Prime Arterial	60,000	35,556	0.593	C
Westview Pkwy to Capricorn Wy	6 Lane Prime Arterial	60,000	25,815	0.430	B
Capricorn Wy to Galvin Ave	6 Lane Prime Arterial	60,000	24,454	0.408	A
Galvin Ave to Gemini Ave	4 Lane Major Arterial	40,000	24,797	0.620	C
Gemini Ave to Mira Mesa Blvd	4 Lane Major Arterial	40,000	27,659	0.691	C
Mira Mesa Blvd to Hillery Dr	4 Lane Major Arterial	40,000	18,301	0.458	B
Hillery Dr to Gold Coast Dr	4 Lane Major Arterial	40,000	23,507	0.588	C
Gold Coast Dr to Carroll Canyon Rd	4 Lane Major Arterial	40,000	24,794	0.620	C
Carroll Canyon Rd to Maya Linda Rd	4 Lane Major Arterial	40,000	23,944	0.599	C
Maya Linda Rd to Black Mountain Rd/Carroll Centre Rd	5 Lane Major Arterial	45,000	24,188	0.538	B
Black Mountain Rd/Kearny Villa Rd to Activity Rd	4 Lane Collector (w/ TWLTL)	30,000	16,795	0.560	C
Activity Rd to Miramar Rd	4 Lane Collector (w/ TWLTL)	30,000	11,575	0.386	B
Kearny Villa Rd					
Black Mountain Rd/Carroll Centre Rd to Miramar Rd	4 Lane Collector (w/ TWLTL)	30,000	12,079	0.403	B
Miramar Rd to South of Southern Community Limit	4 Lane Major Arterial	40,000	26,246	0.656	C
Gemini Ave					
Hyades Wy to Black Mountain Rd	3 Lane Collector (w/ TWLTL)	22,500	9,839	0.437	B
Hillery Dr					
Greenford Dr to Black Mountain Rd	2 Lane Collector (w/o TWLTL)	8,000	12,224	1.528	**F**
Black Mountain Rd to Westview Pkwy	4 Lane Collector (w/ TWLTL)	30,000	15,473	0.516	C
Activity Rd					
Camino Ruiz to Black Mountain Rd	2 Lane Collector (w/ TWLTL)	15,000	11,844	0.790	D
Mercy Rd					

Roadway Segment	Functional Class	LOS E Capacity	ADT	V/C Ratio	LOS
Black Mountain Rd to I-15 Ramps	4 Lane Major Arterial	40,000	17,747	0.444	B
I-15 Ramps to East of Eastern Community Limit	6 Lane Prime Arterial	60,000	36,813	0.614	C
Westview Pkwy					
Black Mountain Rd to Capricorn Wy	4 Lane Collector (w/ TWLTL)	30,000	7,819	0.261	A
Capricorn Wy to Galvin Ave	4 Lane Major Arterial	40,000	19,810	0.495	B
Galvin Ave to Mira Mesa Blvd	4 Lane Major Arterial	40,000	22,495	0.562	C
Mira Mesa Blvd to Hillery Dr	4 Lane Major Arterial	40,000	12,544	0.314	A
Galvin Ave					
Black Mountain Rd to Westview Pkwy	4 Lane Major Arterial	40,000	4,548	0.114	A
Maya Linda Rd					
Carroll Canyon Rd to Black Mountain Rd	2 Lane Collector (w/o TWLTL)	8,000	1,970	0.246	A

Notes:

Bold values indicate roadway segments operating at LOS E or F.

(a) Existing road classifications are based on field work conducted December 2017.

(b) Average Daily Traffic (ADT) volumes for the roadway segments were provided by NDS and Field Data Services of Arizona/Veracity Traffic Group and measured in October and November 2018.

(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

(d) Capacity accounts for auxiliary lanes for this segment.

4.4.4 **VEHICULAR QUALITY – TRAVEL SPEED SURVEY**

Travel speeds were recorded along four major corridors in the Mira Mesa community during periods of high demand to estimate real-world vehicular travel speeds when traffic is likely to be heaviest, as well as to identify locations of delay along key roadway facilities. The roadways analyzed were Mira Mesa Boulevard, Miramar Road, Camino Santa Fe, and Black Mountain Road. Travel speed data was collected between January 23rd and January 29th, 2019 on Tuesday, Wednesday, and Thursday between 7:00-9:00 AM and 4:00-6:00 PM. The data was collected using the floating car method via the Traction application developed by Kimley-Horn. A detailed summary of travel speed data is included in **Appendix G**.

Crowd-source data was also obtained from the Traction software for a one-month period along the four travel time corridors, as well as an additional seven corridors in the study area: Camino Ruiz, Carroll Canyon Road, Lusk Boulevard, Pacific Heights Boulevard, Sorrento Valley Boulevard / Calle Cristobal, Vista Sorrento Parkway, and Westview Parkway. Data was collected at 10-minute intervals between 5:00 AM and 9:00 PM. This data provides information to show fluctuations in travel times at different times of days and on different days of the week. It was compared to the field travel time data for the four study corridors for validation of data.

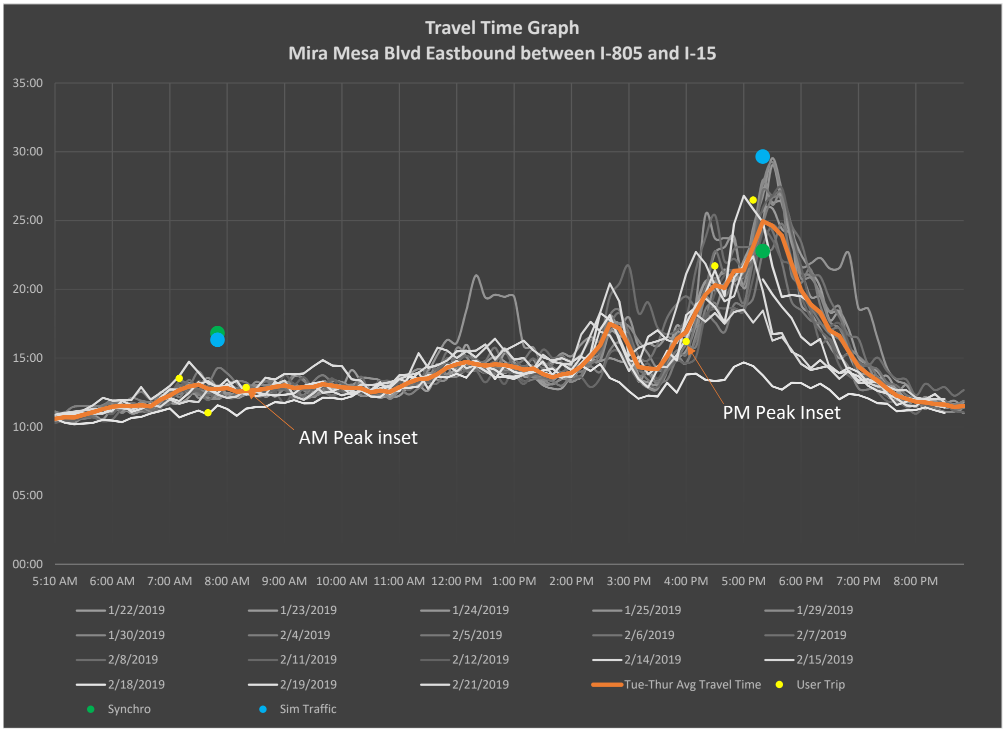
Figure 4-38 through **Figure 4-45** show the travel time data results comparing crowd-sourced data, travel time data, Synchro arterial outputs, and SimTraffic arterial outputs for each of the four travel time corridors in each direction. The figures also show the congestion areas for each direction of travel during the peak periods, to highlight areas where significant delays and/or queueing was experienced during the field runs.

Mira Mesa Boulevard and Miramar Road are congested westbound in the morning between 7 – 10 AM and eastbound in the afternoon between 2:30 – 7:30 PM.

Camino Santa Fe has fairly consistent travel times throughout the day with increased northbound and southbound times from 4 – 6 PM.

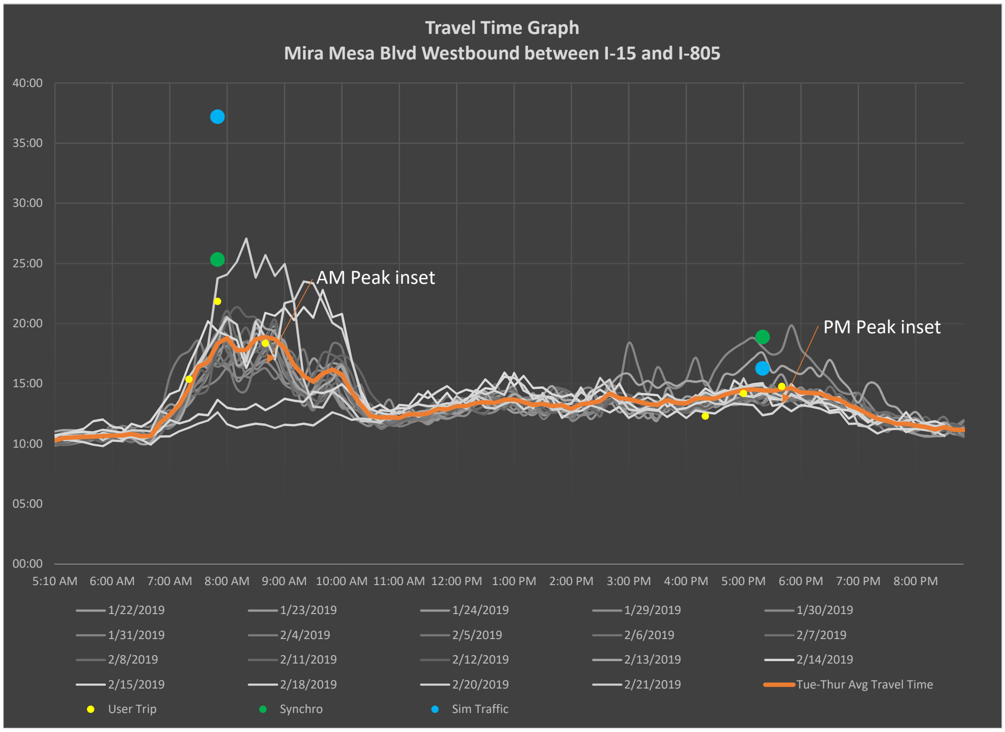
Black Mountain Road has significant congestion in the southbound direction from 7 – 10 AM and moderate congestion northbound and southbound from 4 – 7 PM.

Figure 4-46 and **Figure 4-47** summarize the most congested segments and intersections for the vehicular study area during the AM and PM peak periods. Roadway segment congestion is based on SimTraffic speed data, highlighting segments where vehicles currently travel at 20 MPH or less during the peak periods. Intersection congestion is depicted by intersections currently operating at LOS E or LOS F based on the intersection analysis discussed in **Section 4.4.5**.

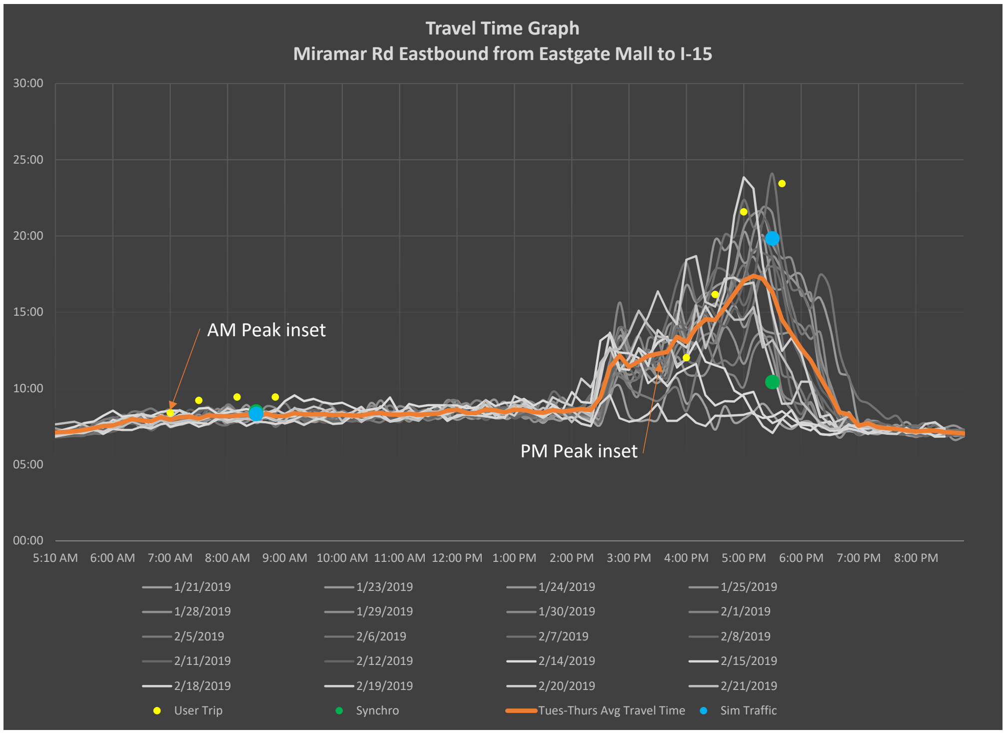


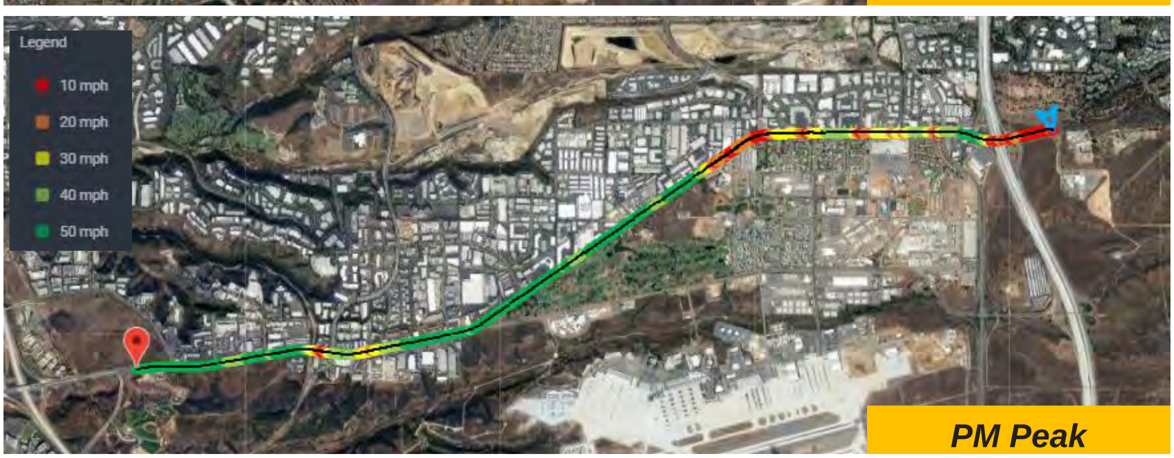
Mira Mesa Blvd Travel Time - Eastbound Direction

FIGURE 4-39

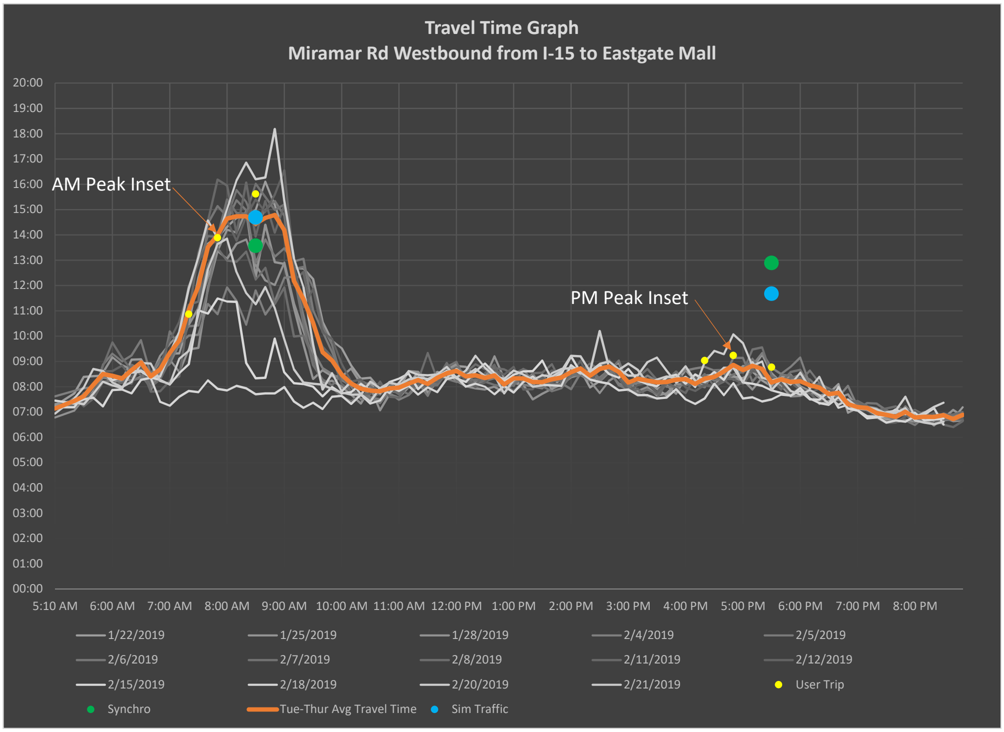


Mira Mesa Blvd Travel Time - Westbound Direction



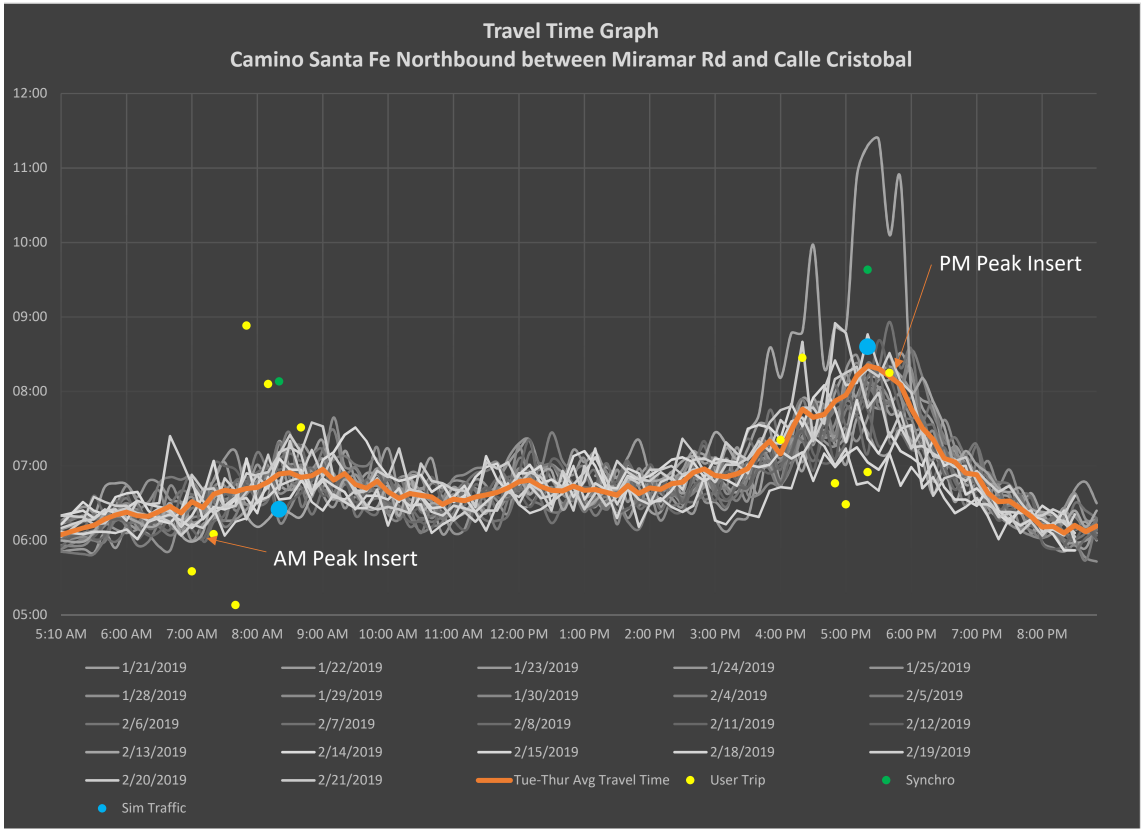


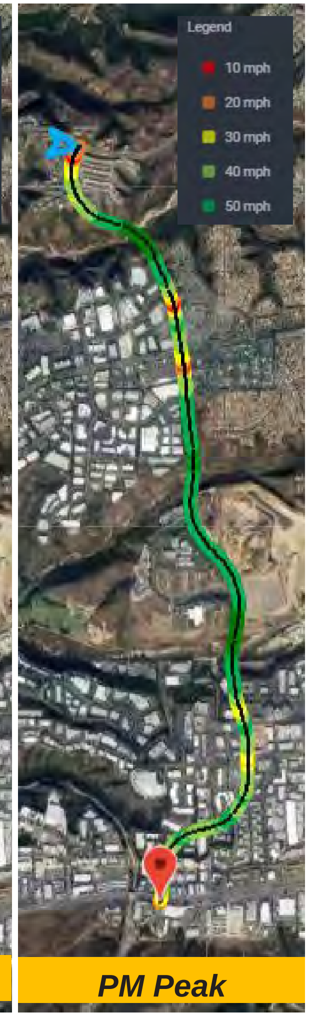
Miramar Rd Travel Time - Eastbound Direction



Miramar Rd Travel Time - Westbound Direction

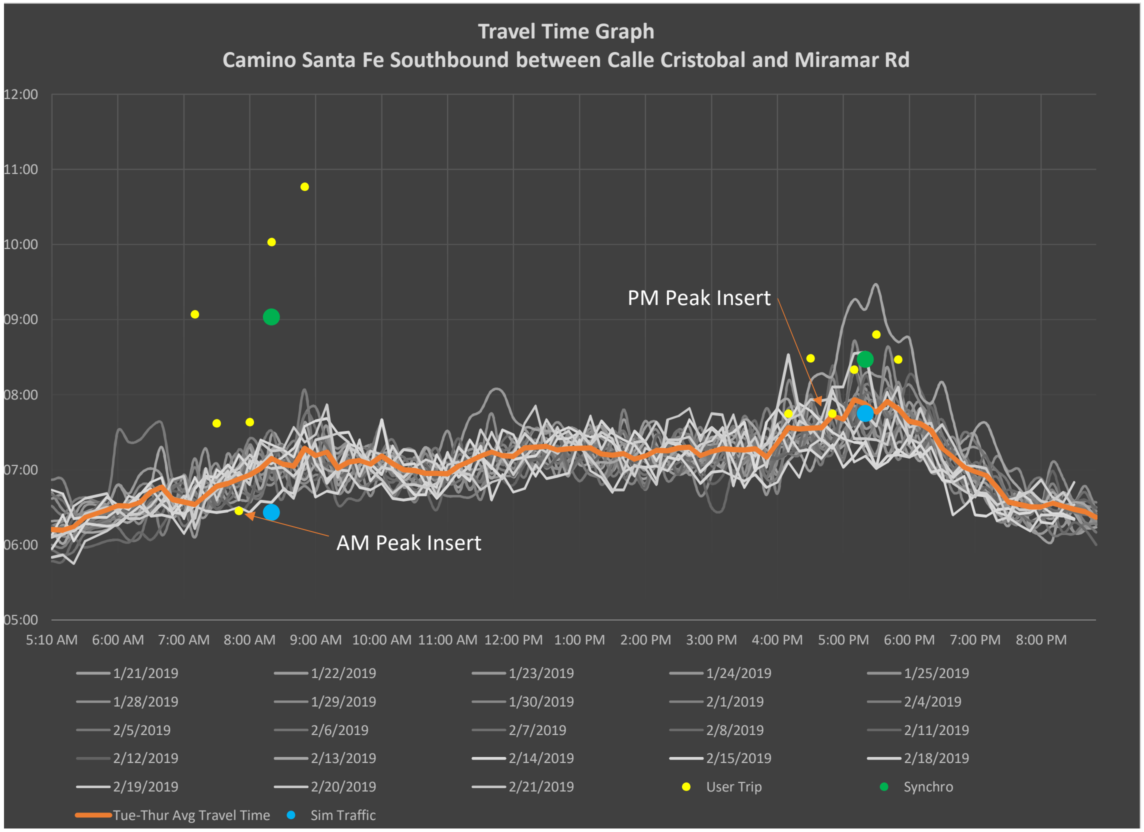
FIGURE 4-42





Camino Santa Fe Travel Time - Northbound Direction

FIGURE 4-43

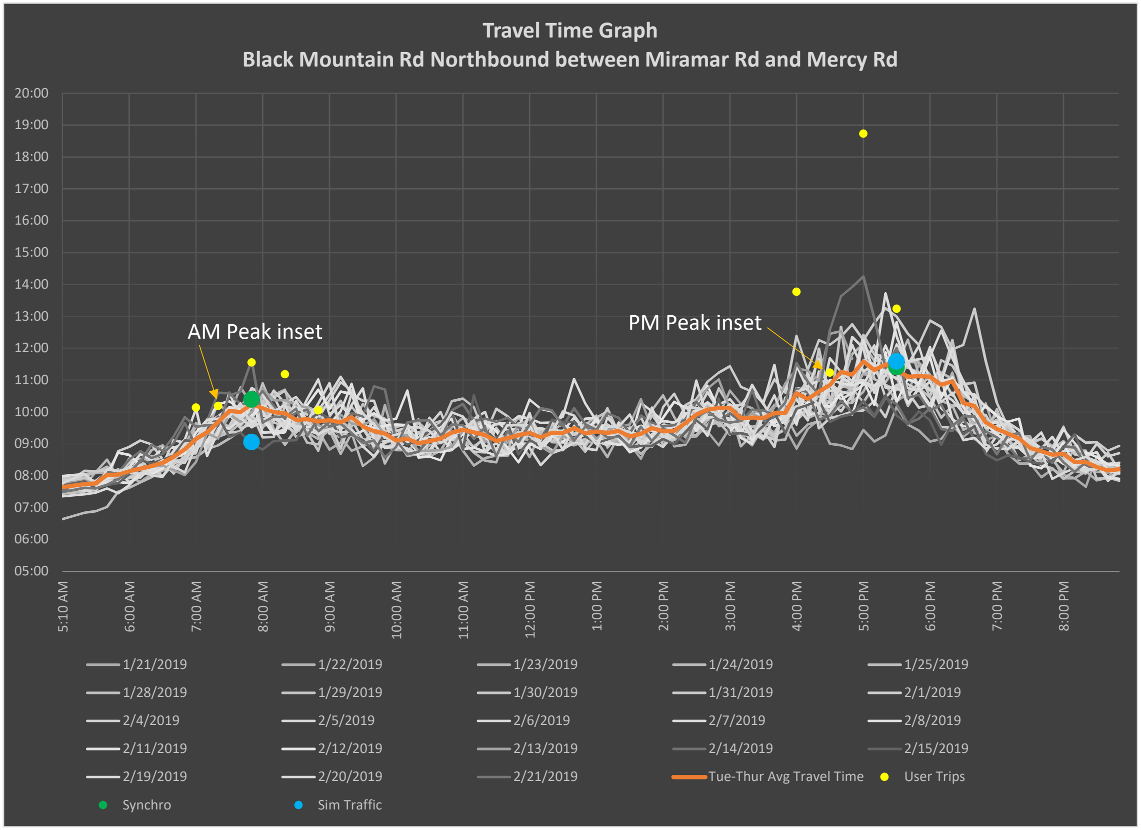


AM Peak

PM Peak

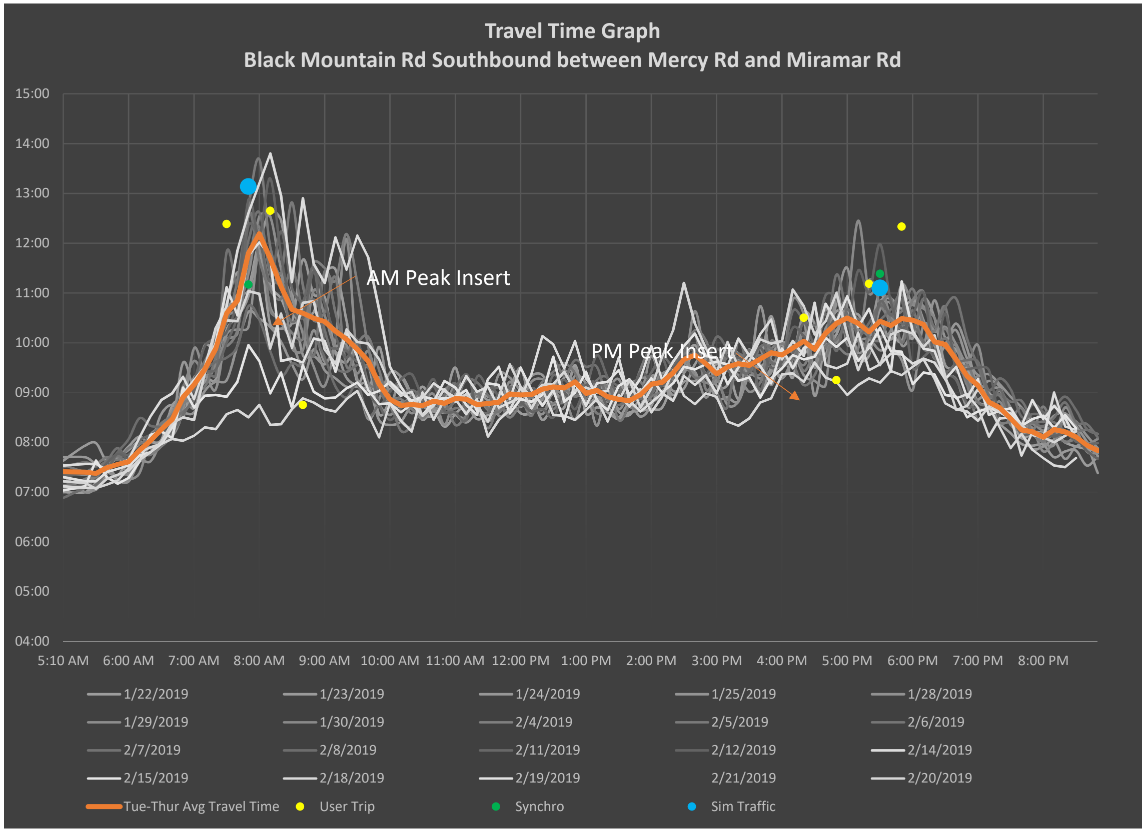
Camino Santa Fe Travel Time - Southbound Direction

FIGURE 4-44

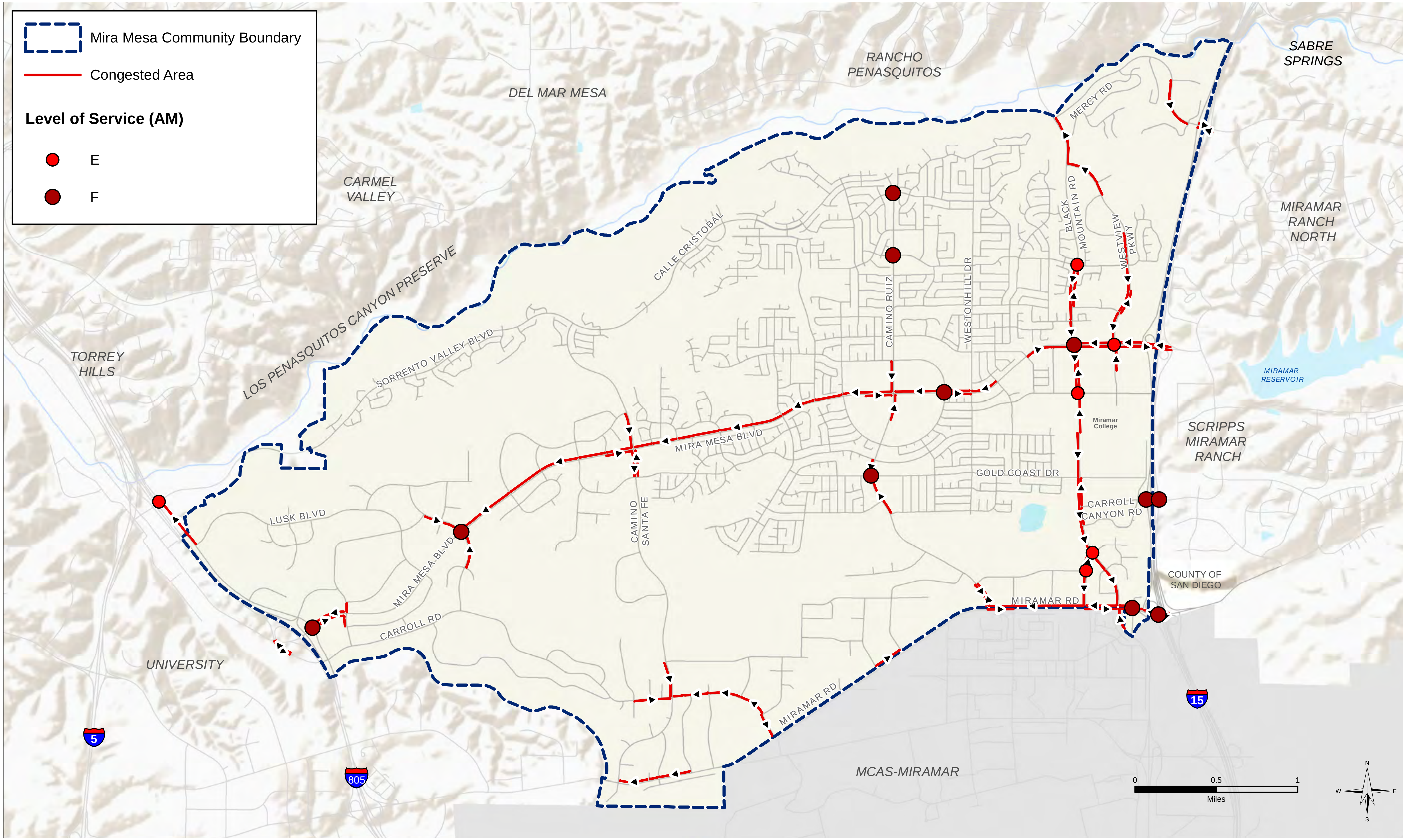


Black Mountain Road Travel Time - Northbound Direction

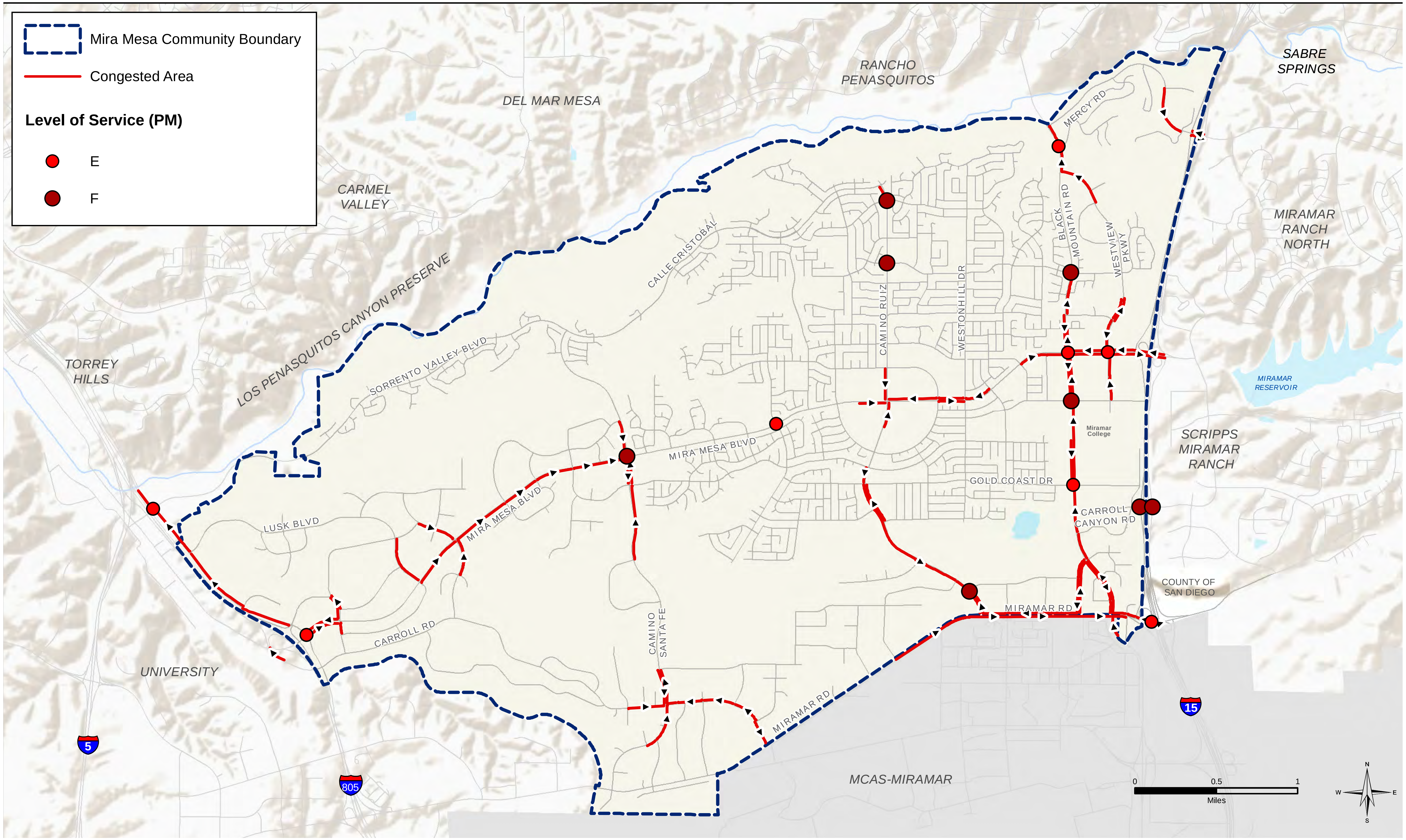
FIGURE 4-45



Black Mountain Road Travel Time - Southbound Direction



Vehicle Congestion Areas - AM Peak



Vehicle Congestion Areas - PM Peak

4.4.5 VEHICULAR QUALITY – INTERSECTION ANALYSIS

Peak-hour LOS analyses were performed for the AM and PM peak hour at each of the intersections within the study area as described in **Section 2.4**. The analyses represent the one-hour timeframe that experiences the highest total intersection volume at each individual location.

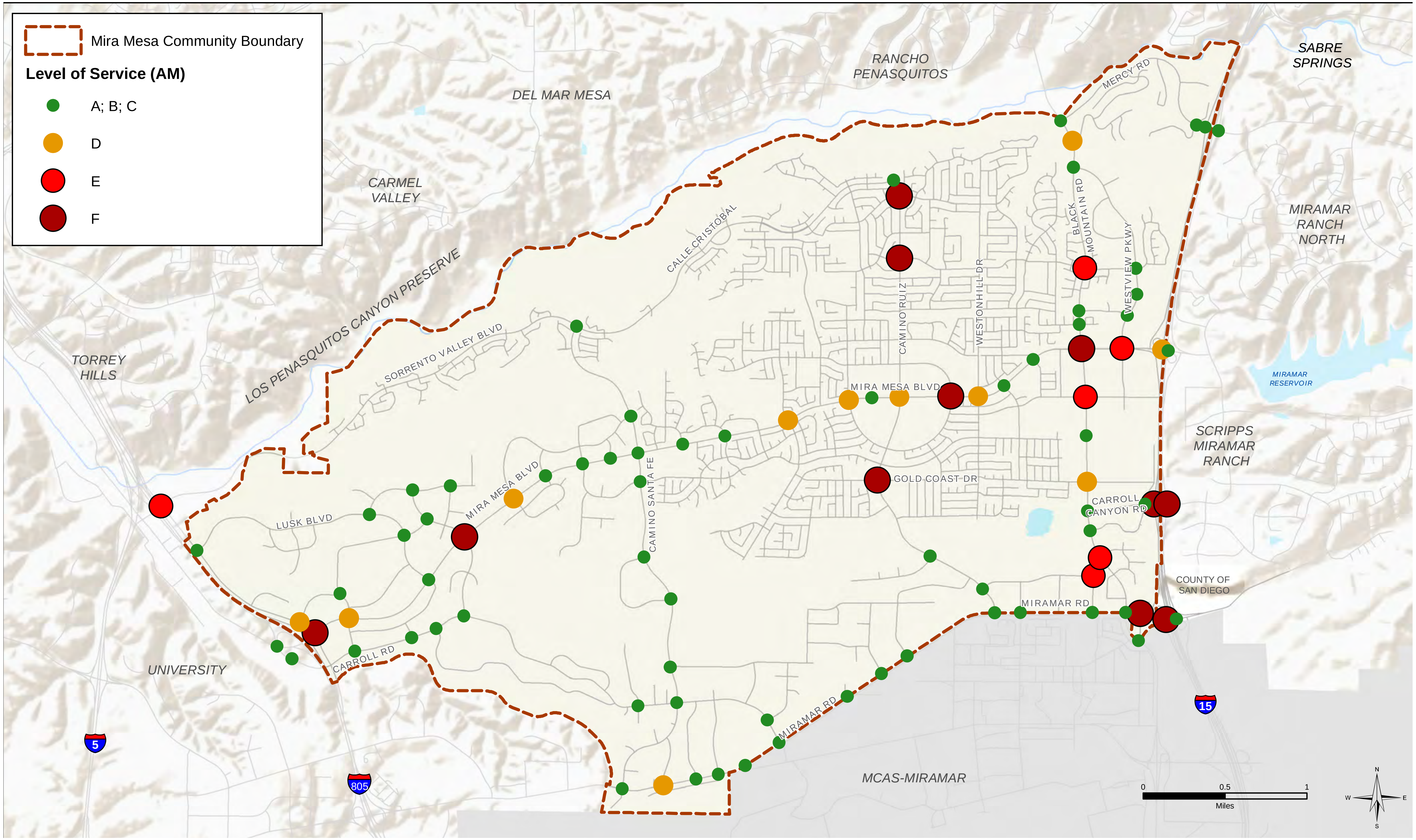
The following locations have coordinated signal timing plans for the listed time of day:

- Mira Mesa Boulevard – Mira Mesa Mall Driveway to Westview Parkway, I-15 NB Ramps (AM, PM)
- Miramar Road – Camino Santa Fe to I-15 SB Ramps, Kearny Mesa (AM, PM)
- Mercy Road – I-15 SB Ramps, I-15 NB Ramps (AM)
- Carroll Canyon Rd – I-15 SB Ramps, I-15 NB Ramps (AM, PM)
- Camino Ruiz – Gold Coast Drive, Activity Road (AM, PM)
- Black Mountain Road – Capricorn Way to Miramar College Driveway (AM, PM)
- Black Mountain Road – Gold Coast Drive, Mercy Boulevard (PM)
- Black Mountain Road – Carroll Canyon Road, Maya Linda Rd (AM, PM)

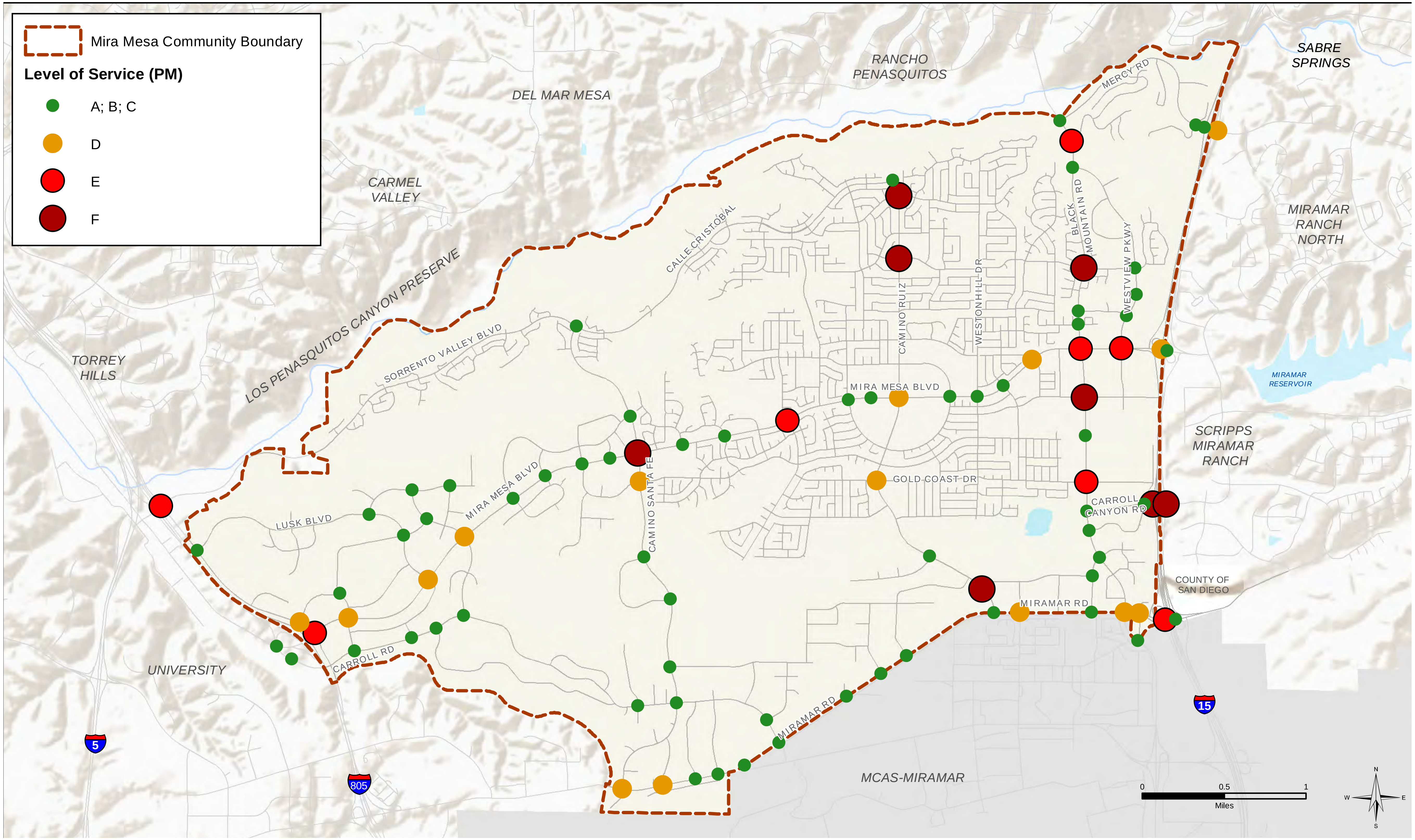
The intersection analysis results are presented in **Figure 4-48** and **Figure 4-49** for all 92 study intersections, during the AM and PM peak hours. **Table 4-31** identifies the traffic control type for each intersection, and the corresponding AM and PM peak hour delay and LOS. Detailed intersection LOS calculation worksheets are provided in **Appendix F**.

As shown in the results:

- Twenty-two of the ninety-two intersections evaluated experienced LOS E or F conditions during one or more of the peak periods
  - 7 of the 22 intersections are located along Mira Mesa Boulevard, with failing operations during both the AM and PM peak hours.
  - 7 of the 22 intersections are located along Black Mountain Road, with failing operations during both the AM and PM peak hours.
  - 4 of the 22 intersections are located along Camino Ruiz, with failing operations during both the AM and PM peak hours.
  - 2 of the 22 intersections are located along Miramar Road, with failing operations during both the AM and PM peak hours.
  - 2 of the 22 intersections is located along Vista Sorrento Parkway, with failing operations during both the AM and PM peak hours.
  - The I-15 on and off ramp intersections at Carroll Canyon Road operate with failing operations during both the AM and PM peak hours



Existing Intersection Level of Service (AM Peak)



Existing Intersection Level of Service (PM Peak)

Table 4-31 Intersection Peak Hour Delay and LOS Analysis

ID	Intersection	Control	Peak Hour	Existing	
				Delay (a)	LOS (b)
1	Vista Sorrento Pkwy & Sorrento Valley Blvd	Signal	AM	**58.5**	**E**
			PM	**64.3**	**E**
2	Camino Santa Fe & Sorrento Valley Blvd	Signal	AM	12.1	B
			PM	23.4	C
3	Camino Ruiz & Calle Cristobal	Signal	AM	9.7	A
			PM	13.1	B
4	Alemenia Rd & Mercy Rd	Signal	AM	9.5	A
			PM	8.3	A
5	I-15 SB Ramps & Mercy Rd	Signal	AM	28.8	C
			PM	31.5	C
6	I-15 NB Ramps & Mercy Rd	Signal	AM	27.9	C
			PM	37.1	D
7	Black Mountain Rd & Babauta Rd	SSSC	AM	15.2	C
			PM	**43.6**	**E**
8	Vista Sorrento Pkwy & Mira Sorrento Pl	Signal	AM	40.7	D
			PM	52.6	D
9	Scranton Rd & Mira Mesa Blvd	Signal	AM	35.6	D
			PM	51.9	D
10	Lusk Blvd & Mira Mesa Blvd	Signal	AM	23.6	C
			PM	43.0	D
11	Pacific Heights Blvd & Mira Mesa Blvd	Signal	AM	**102.6**	**F**
			PM	51.8	D
12	Sequence Dr/Huennekens St & Mira Mesa Blvd	Signal	AM	43.7	D
			PM	27.9	C
13	Genetic Center/Steadman St & Mira Mesa Blvd	Signal	AM	29.3	C
			PM	14.2	B
14	Flanders Dr & Mira Mesa Blvd	Signal	AM	27.4	C
			PM	17.1	B
15	Viper Wy & Mira Mesa Blvd	Signal	AM	10.2	B
			PM	13.7	B
16	Camino Santa Fe & Mira Mesa Blvd	Signal	AM	22.1	C
			PM	**102.8**	**F**
17	Schilling Ave & Mira Mesa Blvd	Signal	AM	10.1	B
			PM	7.8	A
18	Aderman Ave & Mira Mesa Blvd	Signal	AM	6.5	A
			PM	6.3	A
19	Parkdale Ave & Mira Mesa Blvd	Signal	AM	40.8	D
			PM	**57.7**	**E**
20	Reagan Rd & Mira Mesa Blvd	Signal	AM	52.8	D
			PM	34.5	C

ID	Intersection	Control	Peak Hour	Existing	
				Delay (a)	LOS (b)
21	Mira Mesa Mall Driveways & Mira Mesa Blvd	Signal	AM	4.2	A
			PM	18.7	B
22	Camino Ruiz & Mira Mesa Blvd	Signal	AM	49.0	D
			PM	45.2	D
23	New Salem St/Marauder Wy & Mira Mesa Blvd	Signal	AM	**111.6**	**F**
			PM	18.5	B
24	Westonhill Dr & Mira Mesa Blvd	Signal	AM	37.1	D
			PM	17.0	B
25	Greenford Dr & Mira Mesa Blvd	Signal	AM	8.5	A
			PM	14.1	B
26	Westmore Rd/Marbury Ave & Mira Mesa Blvd	Signal	AM	21.3	C
			PM	38.3	D
27	Black Mountain Rd & Mira Mesa Blvd	Signal	AM	**122.4**	**F**
			PM	**71.3**	**E**
28	Westview Pkwy & Mira Mesa Blvd	Signal	AM	**76.7**	**E**
			PM	**65.9**	**E**
29	I-15 SB Ramps & Mira Mesa Blvd	Signal	AM	46.8	D
			PM	46.6	D
30	I-15 NB Ramps & Mira Mesa Blvd	Signal	AM	26.2	C
			PM	22.0	C
31	Black Mountain Rd & Mercy Rd	Signal	AM	18.7	B
			PM	34.9	C
32	Camino Santa Fe & Miramar Rd	Signal	AM	30.8	C
			PM	48.1	D
33	Commerce Ave & Miramar Rd	Signal	AM	45.6	D
			PM	47.9	D
34	Production Ave & Miramar Rd	Signal	AM	4.5	A
			PM	5.0	A
35	Distribution Ave & Miramar Rd	Signal	AM	5.3	A
			PM	20.2	C
36	Miramar Wy & Miramar Rd	Signal	AM	2.5	A
			PM	5.3	A
37	Carroll Canyon Rd & Miramar Rd	Signal	AM	8.4	A
			PM	22.8	C
38	Alesmith Ct / Empire St & Miramar Rd	Signal	AM	1.1	A
			PM	1.9	A
39	Dowdy Dr & Miramar Rd	Signal	AM	6.3	A
			PM	28.0	C
40	Cabot Dr & Miramar Rd	Signal	AM	13.6	B
			PM	11.4	B
41	Camino Ruiz & Miramar Rd	Signal	AM	18.3	B
			PM	22.5	C
42	Clayton Dr/Mitscher Wy & Miramar Rd	Signal	AM	14.2	B
			PM	40.9	D
43	Black Mountain Rd & Miramar Rd	Signal	AM	7.1	A

ID	Intersection	Control	Peak Hour	Existing	
				Delay (a)	LOS (b)
			PM	12.6	B
44	Kearny Villa Rd & Miramar Rd	Signal	AM	32.5	C
			PM	35.5	D
45	I-15 SB Ramps & Miramar Rd	Signal	AM	**549.9**	**F**
			PM	**68.4**	**E**
46	I-15 NB Ramps & Miramar Rd	Signal	AM	13.5	B
			PM	13.4	B
47	Camino Santa Fe & Carroll Rd	Signal	AM	32.1	C
			PM	33.7	C
48	Camino Santa Fe & Flanders Dr	Signal	AM	28.3	C
			PM	52.9	D
49	Camino Ruiz & Carroll Canyon Rd	Signal	AM	9.9	A
			PM	7.0	A
50	Camino Ruiz & Activity Rd	Signal	AM	23.5	C
			PM	**80.8**	**F**
51	I-805 SB Off-Ramp/Carroll Canyon Rd & Sorrento Valley Rd	Signal	AM	20.8	C
			PM	18.0	B
52	Vista Sorrento Pkwy & Mira Mesa Blvd	Signal	AM	**191.3**	**F**
			PM	**69.1**	**E**
53	Vista Sorrento Pkwy & Lusk Blvd	Signal	AM	13.8	B
			PM	17.3	B
54	Pacific Center Blvd & Lusk Blvd	Signal	AM	11.4	B
			PM	12.6	B
55	Scranton Rd & Carroll Canyon Rd	Signal	AM	7.9	A
			PM	11.4	B
56	Pacific Heights Blvd & Carroll Canyon Rd	Signal	AM	10.7	B
			PM	13.2	B
57	Lusk Blvd & Barnes Canyon Rd	Signal	AM	16.7	B
			PM	15.3	B
58	Pacific Heights Blvd & Pacific Center Blvd	Signal	AM	14.4	B
			PM	16.9	B
59	Pacific Mesa Blvd & Pacific Center Blvd	Signal	AM	15.9	B
			PM	20.5	C
60	Business Access Rd & Carroll Canyon Rd	Signal	AM	3.8	A
			PM	5.7	A
61	Scranton Rd & Mira Sorrento Pl	Signal	AM	12.7	B
			PM	22.6	C
62	Youngstown Wy & Carroll Canyon Rd	Signal	AM	4.5	A
			PM	9.7	A
63	Black Mountain Rd & Westview Pkwy	Signal	AM	13.6	B
			PM	20.2	C
64	Black Mountain Rd & Capricorn Wy	Signal	AM	**57.6**	**E**
			PM	**141.1**	**F**
65	Black Mountain Rd & Galvin Ave	Signal	AM	12.0	B
			PM	6.0	A

ID	Intersection	Control	Peak Hour	Existing	
				Delay (a)	LOS (b)
66	Black Mountain Rd & Gemini Ave	Signal	AM	12.9	B
			PM	32.8	C
67	Black Mountain Rd & Hillery Dr	Signal	AM	**79.9**	**E**
			PM	**82.9**	**F**
68	Black Mountain Rd & Miramar College	Signal	AM	10.8	B
			PM	29.0	C
69	Black Mountain Rd & Gold Coast Dr	Signal	AM	42.7	D
			PM	**59.7**	**E**
70	Black Mountain Rd & Carroll Canyon Rd	Signal	AM	25.6	C
			PM	12.3	B
71	Maya Linda Rd & Carroll Canyon Rd	Signal	AM	20.6	C
			PM	12.2	B
72	Black Mountain Rd & Maya Linda Rd	Signal	AM	6.9	A
			PM	5.1	A
73	Black Mountain Rd/Kearny Villa Rd & Black Mountain Rd/Carroll Centre Rd	Signal	AM	**69.2**	**E**
			PM	25.6	C
74	Kearny Mesa Rd & Kearny Villa Rd	SSSC	AM	16.1	C
			PM	12.2	B
75	Black Mountain Rd & Activity Rd	Signal	AM	**61.5**	**E**
			PM	33.9	C
76	Westview Pkwy & Mira Lee Wy	Signal	AM	34.3	C
			PM	20.6	C
77	Westview Pkwy & Galvin Ave	Signal	AM	21.8	C
			PM	12.7	B
78	I-15 NB Ramps & Carroll Canyon Rd	Signal	AM	**295.8**	**F**
			PM	**171.7**	**F**
79	I-15 SB Ramps & Carroll Canyon Rd	Signal	AM	**668.2**	**F**
			PM	**432.4**	**F**
80	Kearny Mesa Rd & Miramar Rd	Signal	AM	**129.9**	**F**
			PM	36.9	D
81	Camino Santa Fe & Top Gun St	Signal	AM	12.9	B
			PM	14.1	B
82	Camino Santa Fe & Miratech Dr	Signal	AM	6.0	A
			PM	8.5	A
83	Camino Santa Fe & Summers Ridge Rd	Signal	AM	6.8	A
			PM	6.2	A
84	Camino Santa Fe & Trade St	Signal	AM	14.3	B
			PM	18.2	B
85	Nancy Ridge Dr & Carroll Canyon Rd	Signal	AM	8.2	A
			PM	8.8	A
86	Rehco Rd & Carroll Rd	Signal	AM	5.1	A
			PM	11.5	B
87	Carroll Rd & Kenamar Dr	Signal	AM	10.3	B
			PM	11.8	B
88	Camino Ruiz & Teresa Dr/Capricorn Wy	Signal	AM	**217.8**	**F**

ID	Intersection	Control	Peak Hour	Existing	
				Delay (a)	**LOS (b)**
			PM	**148.6**	**F**
89	Camino Ruiz & Gold Coast Dr	Signal	AM	**111.3**	**F**
			PM	36.8	D
90	Westview Pkwy & Capricorn Wy	Signal	AM	13.8	B
			PM	10.7	B
91	Camino Ruiz & Aquarius Dr	AWSC	AM	**195.0**	**F**
			PM	**159.6**	**F**
92	Pacific Heights Blvd & Barnes Canyon Rd	Signal	AM	14.2	B
			PM	14.9	B

Notes:

Bold values indicate intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 6th *Edition Highway Capacity Manual* and performed using Synchro 10.

4.4.6 VEHICULAR QUALITY – INTERSECTION QUEUING ANALYSIS

Queuing analysis was performed to understand where queue volumes may cause overflows into adjacent lanes. This can reduce the efficiency of the intersection control and can have a detrimental effect on vehicular flow through intersections both upstream and downstream of the affected intersection. Overflows were determined to occur where the 95th percentile of queue lengths in either the AM or PM peak periods exceeds the storage length for that movement. **Table 4-32** identifies the intersection control, pocket length, 95th percentile queue lengths, and any excess queueing for each movement that exceeds the storage length. The results of this analysis show that nearly two-thirds of the 92 study intersections have insufficient storage lengths for at least one turning movement.

Table 4-32 Intersection Storage Lengths and Queue Analysis

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
1. Vista Sorrento Pkwy & Sorrento Valley Blvd	EBL	315	135	249	-	-
	WBL	275	539	83	264	-
	NBL	275	221	816	-	541
	SBL	150	404	461	254	311
	SBR	125	138	56	13	-
2. Camino Santa Fe & Sorrento Valley Blvd	EBL	250	0	6	-	-
	EBR	250	54	89	-	-
	WBL	270	191	55	-	-
	NBL	365	84	234	-	-
3. Camino Ruiz & Calle Cristobal	EBT/L	340	17	15	-	-
	NBL	240	531	140	291	-
	NBR	145	0	0	-	-
	SBL	80	0	0	-	-
4. Alemenia Rd & Mercy Rd	EBL	170	71	56	-	-
	WBL	100	19	23	-	-
	WBR	150	42	55	-	-
	SBR	35	2	12	-	-
5. I-15 SB Ramps & Mercy Rd	EBR	120	384	105	264	-
	SBL	705	256	404	-	-
6. I-15 NB Ramps & Mercy Rd	EBL	150	175	203	25	53
	WBR	165	387	726	222	561
	NBL	330	61	175	-	-
	NBR	330	812	387	482	57
7. Black Mountain Rd & Babauta Rd	SBL	210	5	10	-	-
8. Vista Sorrento Pkwy & Mira Sorrento Pl	EBL	170	824	353	654	183
	EBR	160	20	17	-	-
	WBL	210	46	217	-	7
	SBL	245	177	79	-	-
9. Scranton Rd & Mira Mesa Blvd	EBL	385	491	157	106	-
	WBL	365	142	191	-	-

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
	SBL	120	60	93	-	-
10. Lusk Blvd & Mira Mesa Blvd	EBL	245	191	67	-	-
	WBL	255	79	57	-	-
	NBL	105	26	61	-	-
	NBR	105	0	133	-	28
	SBL	210	66	423	-	213
11. Pacific Heights Blvd & Mira Mesa Blvd	EBL	290	742	272	452	-
	WBL	275	369	267	94	-
	WBR	320	982	32	662	-
	NBL	90	90	241	-	151
	NBR	95	0	202	-	107
	SBL	540	93	827	-	287
12. Sequence Dr/Huennekens St & Mira Mesa Blvd	EBL	230	641	408	411	178
	WBL	250	212	69	-	-
	SBL	250	44	146	-	-
	SBR	250	96	338	-	88
13. Genetic Center/Steadman St & Mira Mesa Blvd	EBL	265	237	68	-	-
	WBL	255	481	72	226	-
	NBL	140	38	49	-	-
	NBR	85	0	213	-	128
	SBL	160	82	190	-	30
	SBR	160	7	43	-	-
14. Flanders Dr & Mira Mesa Blvd	EBL	215	142	114	-	-
	WBL	245	139	92	-	-
	NBL	250	353	207	103	-
	NBR	160	0	85	-	-
	SBL	200	45	224	-	24
15. Viper Wy & Mira Mesa Blvd	EBL	260	69	61	-	-
	WBL	260	79	147	-	-
	SBL	110	29	130	-	20
16. Camino Santa Fe & Mira Mesa Blvd	EBL	250	76	121	-	-
	WBL	250	811	317	561	67
	NBL	280	183	204	-	-
	SBL	250	118	328	-	78
17. Schilling Ave & Mira Mesa Blvd	EBL	260	0	140	-	-
	WBL	195	33	119	-	-
	NBR	55	30	24	-	-
	SBL	95	160	106	65	11
18. Aderman Ave & Mira Mesa Blvd	EBL	145	41	48	-	-
	WBL	130	29	113	-	-
	SBL	100	226	108	126	8
	EBL	275	119	216	-	-

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
19. Parkdale Ave & Mira Mesa Blvd	WBL	255	50	211	-	-
	NBL	240	202	108	-	-
	NBR	100	45	39	-	-
	SBL	100	157	73	57	-
	SBR	100	173	0	73	-
20. Reagan Rd & Mira Mesa Blvd	EBL	235	139	218	-	-
	WBL	240	44	102	-	-
	WBR	80	0	13	-	-
	NBL	100	420	394	320	294
	NBT/R	250	71	192	-	-
	SBL	110	145	110	35	-
	SBT/R	290	285	145	-	-
21. Mira Mesa Mall Driveways & Mira Mesa Blvd	EBL	140	83	217	-	77
	WBL	135	25	140	-	5
	NBL	90	58	133	-	43
	NBR	105	0	138	-	33
	SBL	55	48	203	-	148
22. Camino Ruiz & Mira Mesa Blvd	EBL	190	117	189	-	-
	WBL	200	109	280	-	80
	WBR	620	0	202	-	-
	NBL	270	216	374	-	104
	NBR	100	201	159	101	59
	SBL	250	346	326	96	76
23. New Salem St/Marauder Wy & Mira Mesa Blvd	EBL	250	242	66	-	-
	EBR	125	25	15	-	-
	WBL	145	184	112	39	-
	NBL	100	244	321	144	221
	SBL	150	308	284	158	134
	SBR	150	3	0	-	-
24. Westonhill Dr & Mira Mesa Blvd	EBL	175	66	207	-	32
	WBL	265	35	125	-	-
	NBL	150	152	138	2	-
	SBL	225	358	166	133	-
25. Greenford Dr & Mira Mesa Blvd	EBL	250	18	32	-	-
	WBL	250	55	197	-	-
26. Westmore Rd/Marbury Ave & Mira Mesa Blvd	EBL	250	65	28	-	-
	WBL	250	138	430	-	180
27. Black Mountain Rd & Mira Mesa Blvd	EBL	250	241	338	-	88
	EBR	400	111	67	-	-
	WBL	250	152	204	-	-
	NBL	260	198	155	-	-
	NBR	275	53	140	-	-

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
	SBL	440	396	308	-	-
	SBR	380	351	119	-	-
28. Westview Pkwy & Mira Mesa Blvd	EBL	245	101	198	-	-
	WBL	375	495	475	120	100
	WBR	250	66	768	-	518
	NBL	245	76	196	-	-
	NBR	200	80	91	-	-
	SBL	260	425	319	165	59
	SBR	115	192	105	77	-
29. I-15 SB Ramps & Mira Mesa Blvd	SBL	570	138	219	-	-
	SBR	290	773	804	483	514
30. I-15 NB Ramps & Mira Mesa Blvd	WBR	60	0	0	-	-
	NBR	496	138	117	-	-
31. Black Mountain Rd & Mercy Rd	WBL	280	291	339	12	59
	WBR	240	0	77	-	-
	NBL	370	59	50	-	-
	SBL	430	390	242	-	-
32. Camino Santa Fe & Miramar Rd	EBL	550	400	561	-	11
	WBL	330	14	43	-	-
	NBL	75	33	82	-	7
	SBL	270	71	120	-	-
33. Commerce Ave & Miramar Rd	EBL	350	92	90	-	-
	WBL	465	106	77	-	-
	SBR	180	5	32	-	-
34. Production Ave & Miramar Rd	EBL	250	115	96	-	-
	SBR	65	26	20	-	-
35. Distribution Ave & Miramar Rd	EBL	75	104	145	29	70
36. Miramar Wy & Miramar Rd	EBL	190	79	68	-	-
	WBL	125	5	45	-	-
	NBL	45	0	94	-	49
37. Carroll Canyon Rd & Miramar Rd	EBL	150	258	163	108	13
	WBL	100	1	12	-	-
	WBR	315	0	27	-	-
	SBL	380	141	374	-	-
38. Alesmith Ct / Empire St & Miramar Rd	EBL	115	49	21	-	-
39. Dowdy Dr & Miramar Rd	EBL	190	208	183	18	-
	WBL	110	2	14	-	-
	SBL	250	157	270	-	20
40. Cabot Dr & Miramar Rd	EBL	130	98	187	-	57
	WBL	100	6	40	-	-

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
	SBL	170	121	173	-	3
41. Camino Ruiz & Miramar Rd	EBL	300	98	254	-	-
	WBR	310	0	8	-	-
	SBL	400	447	314	47	-
42. Clayton Dr/Mitscher Wy & Miramar Rd	EBL	200	31	57	-	-
	EBR	350	31	33	-	-
	WBL	375	111	103	-	-
	NBL	400	171	327	-	-
43. Black Mountain Rd & Miramar Rd	EBL	290	77	134	-	-
	WBL	50	0	21	-	-
	SBL	300	85	355	-	55
	SBR	300	26	36	-	-
44. Kearny Villa Rd & Miramar Rd	EBL	175	62	65	-	-
	EBR	410	89	199	-	-
	WBL	135	23	86	-	-
	NBL	190	562	325	372	135
	SBL	210	98	232	-	22
45. I-15 SB Ramps & Miramar Rd	SBL	500	101	23	-	-
46. I-15 NB Ramps & Miramar Rd	EBR	225	35	82	-	-
	WBR	250	27	21	-	-
	NBL	580	228	190	-	-
	NBR	580	59	151	-	-
47. Camino Santa Fe & Carroll Rd	EBL	175	132	416	-	241
	EBR	240	26	128	-	-
	WBL	85	97	139	12	54
	NBL	200	467	183	267	-
	NBR	100	16	32	-	-
	SBL	225	176	134	-	-
	SBR	310	157	24	-	-
48. Camino Santa Fe & Flanders Dr	WBT/R	280	456	76	176	-
	NBL	250	115	153	-	-
	SBL	225	94	463	-	238
49. Camino Ruiz & Carroll Canyon Rd	EBL	245	11	10	-	-
	NBL	370	86	26	-	-
50. Camino Ruiz & Activity Rd	WBT/L	140	153	88	13	-
	NBL	130	10	28	-	-
	SBL	170	228	1232	58	1062
51. I-805 SB Off-Ramp/Carroll Canyon Rd & Sorrento Valley Rd	EBR	180	31	19	-	-
	WBL	350	30	52	-	-
	NBL	245	37	59	-	-
	NBR	315	27	217	-	-

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
52. Vista Sorrento Pkwy & Mira Mesa Blvd	EBL	350	155	52	-	-
53. Vista Sorrento Pkwy & Lusk Blvd	WBL	310	60	231	-	-
	SBL	200	234	50	34	-
54. Pacific Center Blvd & Lusk Blvd	EBL	250	148	22	-	-
	WBL	130	35	10	-	-
55. Scranton Rd & Carroll Canyon Rd	EBL	170	21	14	-	-
	WBR	130	17	53	-	-
	SBL	90	57	59	-	-
56. Pacific Heights Blvd & Carroll Canyon Rd	EBL	125	238	96	113	-
57. Lusk Blvd & Barnes Canyon Rd	EBL	155	140	79	-	-
	EBT/R	155	73	72	-	-
	WBL	150	46	57	-	-
	NBL	120	56	33	-	-
	NBR	245	22	26	-	-
	SBL	145	81	85	-	-
58. Pacific Heights Blvd & Pacific Center Blvd	EBL	190	39	31	-	-
	EBR	270	3	15	-	-
	WBL	220	23	106	-	-
	NBL	90	222	60	132	-
59. Pacific Mesa Blvd & Pacific Center Blvd	EBL	150	11	23	-	-
	WBL	150	76	313	-	163
	NBL	175	198	40	23	-
60. Business Access Rd & Carroll Canyon Rd	EBL	175	18	7	-	-
61. Scranton Rd & Mira Sorrento Pl	NBL	110	83	332	-	222
62. Youngstown Wy & Carroll Canyon Rd	EBL	230	19	21	-	-
63. Black Mountain Rd & Westview Pkwy	WBL	165	45	41	-	-
	NBL	265	6	7	-	-
	SBL	250	214	324	-	74
64. Black Mountain Rd & Capricorn Wy	EBL	200	819	1319	619	1119
	WBL	125	145	76	20	-
	NBL	260	216	240	-	-
	SBL	270	91	79	-	-
65. Black Mountain Rd & Galvin Ave	WBL	195	98	48	-	-
	NBL	145	3	3	-	-
	SBL	250	76	56	-	-

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
66. Black Mountain Rd & Gemini Ave	EBL	160	131	465	-	305
	EBR	85	33	50	-	-
	WBL	75	36	79	-	4
	WBT/R	75	17	30	-	-
	NBL	150	103	158	-	8
	SBL	130	51	79	-	-
67. Black Mountain Rd & Hillery Dr	EBL	90	121	235	31	145
	WBL	285	197	153	-	-
	WBR	340	42	34	-	-
	NBL	210	355	310	145	100
	NBR	135	152	370	17	235
	SBL	210	292	411	82	201
68. Black Mountain Rd & Miramar College	WBL	170	42	116	-	-
	SBL	160	271	297	111	137
69. Black Mountain Rd & Gold Coast Dr	EBL	145	234	316	89	171
	WBL	145	88	64	-	-
	NBL	310	422	218	112	-
	SBL	210	287	229	77	19
70. Black Mountain Rd & Carroll Canyon Rd	WBL	400	345	109	-	-
	WBR	135	151	198	16	63
	NBL	185	23	30	-	-
	SBL	310	203	244	-	-
71. Maya Linda Rd & Carroll Canyon Rd	EBL	145	26	23	-	-
	WBL	60	116	72	56	12
	SBL	55	310	126	255	71
72. Black Mountain Rd & Maya Linda Rd	WBL	105	119	35	14	-
	NBL	275	23	14	-	-
	SBL	175	16	60	-	-
73. Black Mountain Rd/Kearny Villa Rd & Black Mountain Rd/Carroll Centre Rd	EBL	220	95	550	-	330
	WBL	70	118	129	48	59
	NBL	180	247	65	67	-
	SBL	220	94	58	-	-
	SBR	250	1160	37	910	-
74. Kearny Mesa Rd & Kearny Villa Rd	-	-			-	-
75. Black Mountain Rd & Activity Rd	EBL	120	167	884	47	764
	NBL	155	235	154	80	-
	SBL	120	25	9	-	-

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
76. Westview Pkwy & Mira Lee Wy	WBR	205	46	17	-	-
	NBL	305	83	47	-	-
	NBR	325	41	83	-	-
	SBL	165	51	114	-	-
77. Westview Pkwy & Galvin Ave	NBL	165	185	130	20	-
78. I-15 SB Ramps & Carroll Canyon Rd	WBL	115	98	139	-	24
79. I-15 NB Ramps & Carroll Canyon Rd	EBL	125	107	380	-	255
	NBL	365	330	218	-	-
	NBR	165	117	94	-	-
80. Kearny Mesa Rd & Miramar Rd	EBL	160	63	47	-	-
	WBL	170	23	91	-	-
81. Camino Santa Fe & Top Gun St	EBL	265	73	402	-	137
	NBL	270	177	106	-	-
82. Camino Santa Fe & Miratech Dr	EBL	280	17	111	-	-
	EBR	375	0	18	-	-
	NBL	270	24	10	-	-
83. Camino Santa Fe & Summers Ridge Rd	EBL	270	3	13	-	-
	EBR	230	0	5	-	-
	NBL	245	41	11	-	-
84. Camino Santa Fe & Trade St	WBL	290	146	217	-	-
	NBL	185	36	17	-	-
	SBL	200	155	114	-	-
85. Nancy Ridge Dr & Carroll Canyon Rd	WBL	75	12	6	-	-
	NBL	80	46	110	-	30
86. Rehco Rd & Carroll Rd	EBL	110	27	7	-	-
	WBL	150	23	12	-	-
87. Carroll Rd & Kenamar Dr	WBR	100	0	3	-	-
	NBL	275	8	5	-	-
	SBL	130	42	43	-	-
88. Camino Ruiz & Teresa Dr/Capricorn Wy	EBR	70	26	20	-	-
	WBR	130	54	37	-	-
	NBL	140	39	73	-	-
	SBL	140	77	302	-	162
89. Camino Ruiz & Gold Coast Dr	EBL	115	340	139	225	24
	WBL	215	235	113	20	-
	NBL	130	99	109	-	-
	SBL	100	96	281	-	181
90. Westview Pkwy & Capricorn Wy	EBR	130	34	41	-	-
	WBL	100	58	40	-	-
	NBL	270	142	167	-	-
	SBL	140	8	11	-	-

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
91. Camino Ruiz & Aquarius Dr	NBL	275	8	10	-	-
	SBL	180	18	450	-	270
92. Pacific Heights Blvd & Barnes Canyon Rd	EBL	185	137	55	-	-
	NBL	230	140	71	-	-
	SBL	150	16	42	-	-

4.4.7 VEHICULAR QUALITY – FREEWAY LEVEL OF SERVICE

I-805 and I-15 border to the Mira Mesa community on the west and east sides, respectively, providing local and regional mobility. A description of each freeway is provided within the Mira Mesa study area context, followed by an operational V/C analysis of freeway segments.

Interstate 805

Interstate 805 (I-805) is a north-south facility that splits from Interstate 5 (I-5) in Sorrento Valley and runs parallel to I-5 to just north of the US-Mexico International Border, where the freeways merge back together. Within the Mira Mesa community study area, a majority of the I-805 segments carry four mainline lanes in each direction with on- and off-ramps for local access at Miramar Road and Mira Mesa Boulevard/Sorrento Valley Road. The I-805 gives access to State Route 56 (SR-56) to the north and State Route 163 (SR-163) to the south on the community.

Interstate 15

Interstate 15 (I-15) is a north-south facility that runs along the eastern border of the Mira Mesa study area. I-15 extends north from San Diego County through Riverside County then reaching the US-Canada International Border in Montana, passing through the states of Nevada Utah and Idaho. The majority of I-15 has six mainline lanes in each direction as well as two dynamic High-Occupancy Vehicle (HOV) lanes in each direction. I-15 provides access to SR-56 to the north, SR-163 and SR-52 in the south. Within the vicinity of the study area, there are four interchanges at Mercy Road, Mira Mesa Boulevard, Carroll Canyon Road, and Miramar Road.

Table 4-33 presents freeway characteristics and the level of service analysis results for mainline segments within the vicinity of the Mira Mesa community. V/C, density, and LOS values were calculated along the mainline freeway segments, excluding weave, diverge and merge movements. Volume data was obtained from Caltrans Traffic Volumes on California State Highways (2017). Peak Hour volume freeway information can be found in **Appendix H**. Auxiliary lanes and HOV lanes were not included in the number of lanes on a basic freeway segment. Instead the auxiliary lanes were included in the weave analysis.

In general, each of the freeway segments are operating under unsatisfactory conditions with a LOS E or F in either or both of the AM or PM peak hours in at least one direction. Based on the analysis, northbound I-805 and southbound I-15 are more heavily utilized during the AM peak, while southbound I-805 and both direction of I-15 are more heavily utilized during the PM peak. The worst congestion occurs on the southbound portion of I-805 between Sorrento Valley Boulevard and Mira Mesa Boulevard, where there are only three general purpose travel lanes.

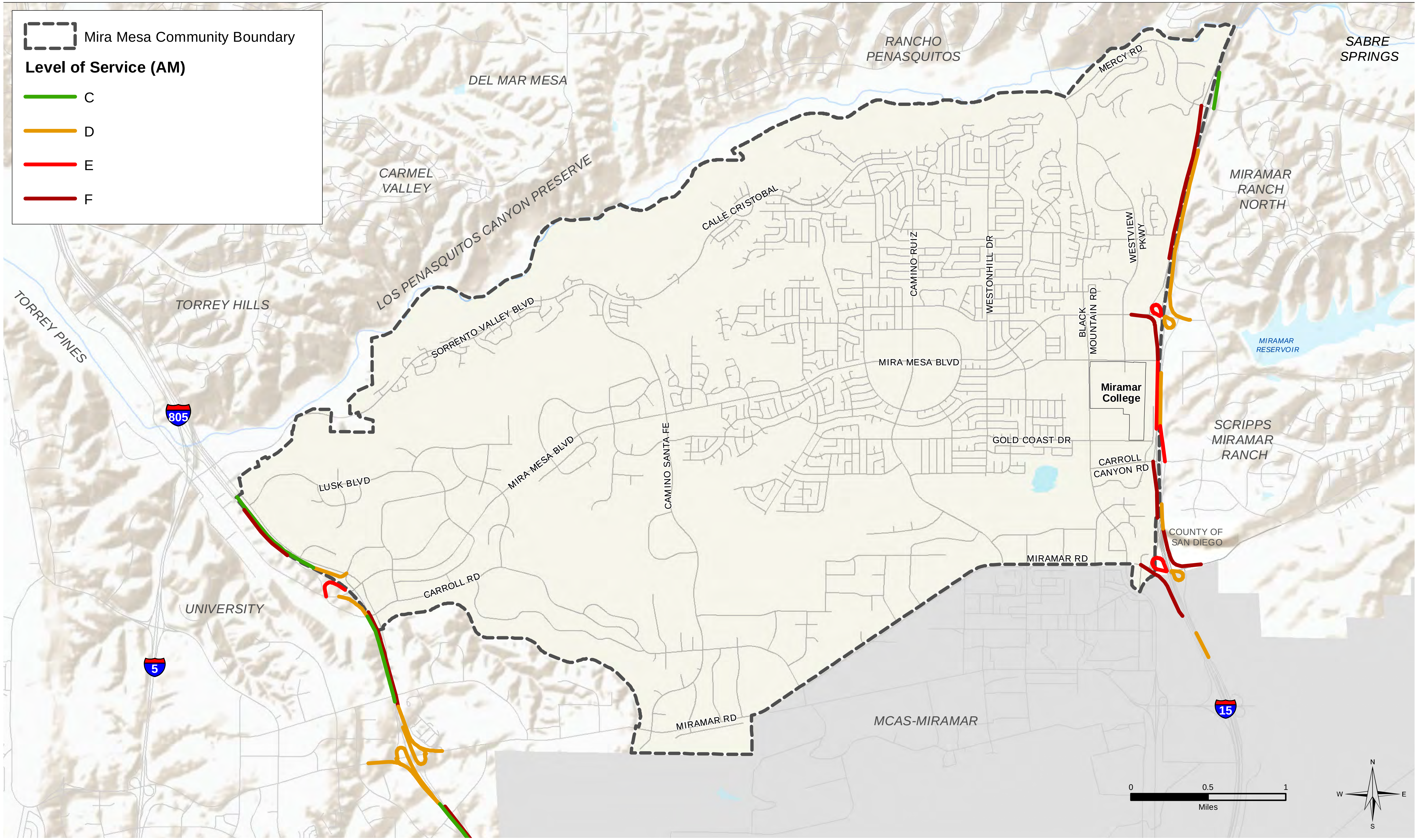
Figure 4-50 and **Figure 4-51** present the freeway LOS results for the mainline, diverge, merge and weave segments during the AM and PM peak periods, respectively.

Table 4-33 Existing Freeway Mainline Operations Analysis

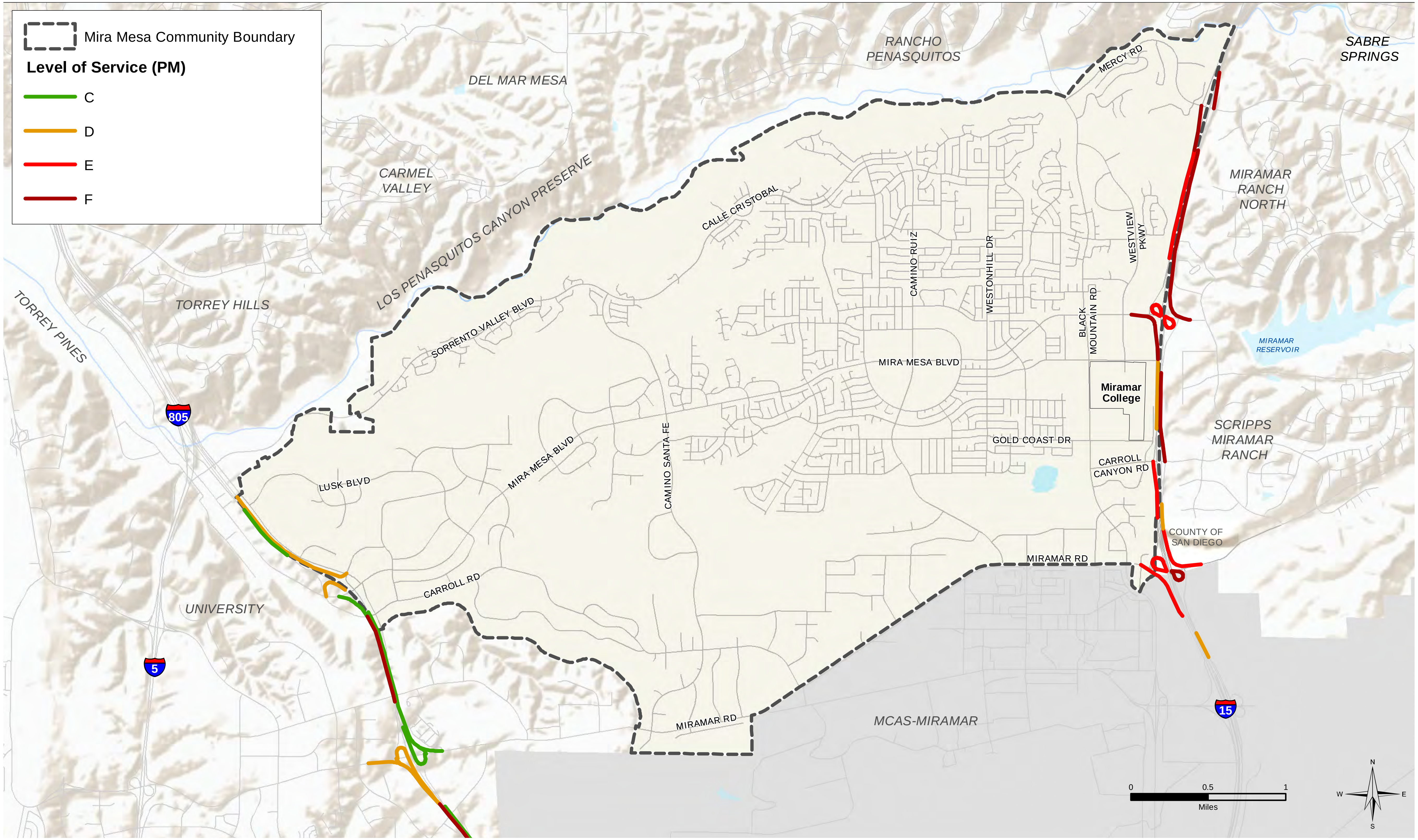
Freeway	Direction	Segment	ADT[(a)]	# of Lanes	Capacity[(b)]	D[(c)]	K[(d)]	HV[(e)]	Volume	V/C	Density	LOS
AM Peak Hour												
I-15	NB	Between Miramar Way and Miramar Road	304,000	6	14,400	57.1%	7.9%	4%	10,241	0.71	30.8	D
		Between Miramar Road and Carroll Canyon Road	287,000	6	14,400	57.1%	7.7%	4%	12,890	0.90	48.5	F
		Between Carroll Canyon Road to Mira Mesa Boulevard	277,000	5	12,000	57.6%	7.9%	4%	12,584	1.05	79.7	F
		Between Mira Mesa Boulevard and Mercy Road	268,000	6	12,000	57.6%	7.9%	4%	12,175	1.01	70.1	F
	SB	Between Mercy Road and Mira Mesa	268,000	6	12,000	57.6%	7.9%	4%	8,970	0.75	33.8	D
		Between Mira Mesa Boulevard and Carroll Canyon Road	277,000	6	14,400	57.6%	7.9%	4%	9,271	0.64	27.0	D
		Between Carroll Canyon Road and Miramar Road	287,000	6	14,400	57.1%	7.9%	4%	9,668	0.67	28.6	D
		Between Miramar Road and Miramar Way	304,000	7	16,800	57.1%	7.9%	4%	13,653	0.81	38.7	E
I-805	NB	Between Nobel Drive and Miramar Road	186,000	4	9,600	65.5%	7.0%	6%	8,497	0.89	49.3	F
		Between Miramar Road and Mira Mesa Boulevard	185,000	4	9,600	65.5%	7.0%	6%	8,452	0.88	48.6	F
		Between Mira Mesa Boulevard and Sorrento Valley Road	164,000	4	9,600	61.6%	7.3%	6%	4,451	0.46	23.7	C

	SB	Between Sorrento Valley Road and Mira Mesa Boulevard	164,000	3	7,200	61.6%	7.3%	6%	7,346	1.02	82.8	F
		Between Mira Mesa Boulevard and Miramar Road	185,000	4	9,600	65.5%	7.0%	6%	4,461	0.46	23.7	C
		Between Miramar Road and Nobel Drive	186,000	4	9,600	65.5%	7.0%	6%	4,486	0.47	23.7	C
PM Peak Hour												
I-15	NB	Between Miramar Way and Miramar Road	304,000	6	14,400	57.1%	7.9%	4%	12,186	0.85	42.0	E
		Between Miramar Road and Carroll Canyon Road	287,000	6	14,400	57.1%	7.7%	4%	10,480	0.73	32.3	D
		Between Carroll Canyon Road to Mira Mesa Boulevard	277,000	5	12,000	57.6%	7.9%	4%	10,238	0.85	43.4	E
		Between Mira Mesa Boulevard and Mercy Road	268,000	6	12,000	57.6%	7.9%	4%	9,906	0.83	40.5	E
	SB	Between Mercy Road and Mira Mesa	268,000	6	12,000	57.6%	7.9%	4%	10,918	0.91	50.5	F
		Between Mira Mesa Boulevard and Carroll Canyon Road	277,000	6	14,400	57.6%	7.9%	4%	11,284	0.78	36.7	E
		Between Carroll Canyon Road and Miramar Road	287,000	6	14,400	57.1%	7.9%	4%	11,504	0.80	38.0	E
		Between Miramar Road and Miramar Way	304,000	7	16,800	57.1%	7.9%	4%	11,101	0.66	27.7	D
I-805	NB	Between Nobel Drive and Miramar Road	186,000	4	9,600	65.5%	7.0%	6%	5,600	0.58	24.3	C

		Between Miramar Road and Mira Mesa Boulevard	185,000	4	9,600	65.5%	7.0%	6%	5,570	0.58	24.1	C
		Between Mira Mesa Boulevard and Sorrento Valley Road	164,000	4	9,600	61.6%	7.3%	6%	4,451	0.46	23.7	C
	SB	Between Sorrento Valley Road and Mira Mesa Boulevard	164,000	3	7,200	61.6%	7.3%	6%	6,930	0.96	66.2	F
		Between Mira Mesa Boulevard and Miramar Road	185,000	4	9,600	65.5%	7.0%	6%	8,767	0.91	53.4	F
		Between Miramar Road and Nobel Drive	186,000	4	9,600	65.5%	7.0%	6%	8,815	0.92	54.2	F



Existing Freeway Level of Service (AM Peak)



Existing Freeway Level of Service (PM Peak)

4.4.8 VEHICULAR QUALITY – FREEWAY RAMP METERING ANALYSIS

Ramp meter analysis was conducted at all freeway ramp locations where metering is in place for either the AM or PM peak hours. Ramp meter rates were obtained from Caltrans District 11 and are provided in **Appendix H**. **Table 4-34** presents the ramp metering analysis results for these ramp meter locations. As shown in the table, no ramp shows a delay beyond 15 minutes. Most ramps are able to use the most restrictive ramp meter; only five locations were modified from the most restrictive rate to minimize queues at the ramp:

- Mira Mesa Boulevard westbound to I-15 Southbound (AM Peak)
- Mira Mesa Boulevard eastbound to I-15 Southbound (AM Peak)
- Miramar Road eastbound to I-805 Northbound (AM and PM Peaks)
- Mercy Road to I-15 Southbound
- Mercy Road to I-15 Northbound

Table 4-34 Existing Ramp Meter Analysis

Location			Lane Type	Total Ramp Volume	Meter Rate Seconds/Cycle	Total Vehicles Serviced per hour/lane	Existing Conditions		
Freeway	Segment	Direction					Excess Demand (veh/hr)	Delay (min)	Queue (ft)
AM Peak Hour									
I-15	Mercy Road	SB	2 GP	1400	560*	366	0	0	0
			1 HOV			183	1	1	1
	Mira Mesa Boulevard	WB to SB	1 GP	858	686*	686	0	0	10
			1 HOV			172	3	3	3
		EB to SB	2 GP	1589	636*	636	0	0	0
			1 HOV			318	1	1	1
	Carroll Canyon Road	SB	2 GP	720	542	360	0	0	10
			0 HOV			0	0	0	0
	Miramar Road	WB to SB	2 GP	846	727	423	0	0	0
			0 HOV			0	1	1	1
		EB to SB	2 GP	555	523	222	0	0	0
			1 HOV			111	0	0	0
I-805	Miramar Road	EB to NB	1 GP	802	744*	642	0	0	0
			1 HOV			160	0	0	0
PM Peak Hour									
I-15	Mercy Road	NB	2 GP	1112	460*	445	0	0	0
			1 HOV			222	0	0	0
		SB	2 GP	1195	480*	478	0	0	0
			1 HOV			239	0	0	0
	Mira Mesa Boulevard	EB to NB	2 GP	1186	726	593	0	0	0
			0 HOV			0	0	0	0
		WB to NB	1 GP	549	576	439	0	0	0
			1 HOV			110	2	2	2
		WB to SB	1 GP	374	526	299	0	0	0
			1 HOV			75	0	0	0
		EB to SB	2 GP	838	442	335	0	0	0
			1 HOV			168	0	0	0
	Carroll Canyon Road	NB	1 GP	709	530	567	37	4	930
			1 HOV			142	1	1	1
		SB	2 GP	715	492	358	0	0	0
			0 HOV			0	1	1	1
	Miramar Road	EB to NB	2 GP	894	432	447	15	2	375
			0 HOV			0	2	0	0

		WB to NB	1 GP	116	271	116	0	0	0
			0 HOV			0	0	0	0
		WB to SB	2 GP	725	778	363	0	0	0
			0 HOV			0	0	0	0
		EB to SB	2 GP	1424	559	570	11	1	265
			1 HOV			285	1	1	1
I-805	Mira Sorrento Valley Place/Vista Sorrento Parkway	NB	2 GP	1516	756	606	0	0	0
		SB	1 HOV			303	0	0	0
	Sorrento Valley Road	WB to SB	3 GP	1267	900	422	0	0	0
			0 HOV			0	0	0	0
		EB to SB	2 GP	1063	752	425	0	0	0
			1 HOV			213	0	0	0
	Miramar Road	EB to NB	1 GP	1374	996*	1099	103	6	2580
			1 HOV			275	0	0	0
		WB to NB	1 GP	804	446	357	0	0	0
			1 HOV			89	0	0	0
		WB to SB	1 GP	640	704	512	0	0	0
			1 HOV			128	1	1	1
		EB to SB	2 GP	1016	593	406	0	0	0
			1 HOV			203	0	0	0

Notes:

(a) The ramp meter rate represents the most restrictive rate obtained from Caltrans unless marked with an *. These rates may not result in queue lengths that reflect field observations.

* Rate was adjusted from most restrictive to minimize queues at the ramp

(b) Volumes from I-805 @ Miramar Road interchange were taken from the University CPU existing conditions report turning movement volumes

(c) HOV lanes were assumed to have 20% of total traffic

(d) Delays exceeding 15-minutes are shown in **Bold**.

4.4.9 **VEHICLE CONNECTIVITY**

VMT changes between existing and proposed land uses will be evaluated in the future conditions evaluations.

4.5 PARKING

Parking within the Mira Mesa community consists of public on-street parking, private off-street parking for local businesses and residents, and public parking lots.

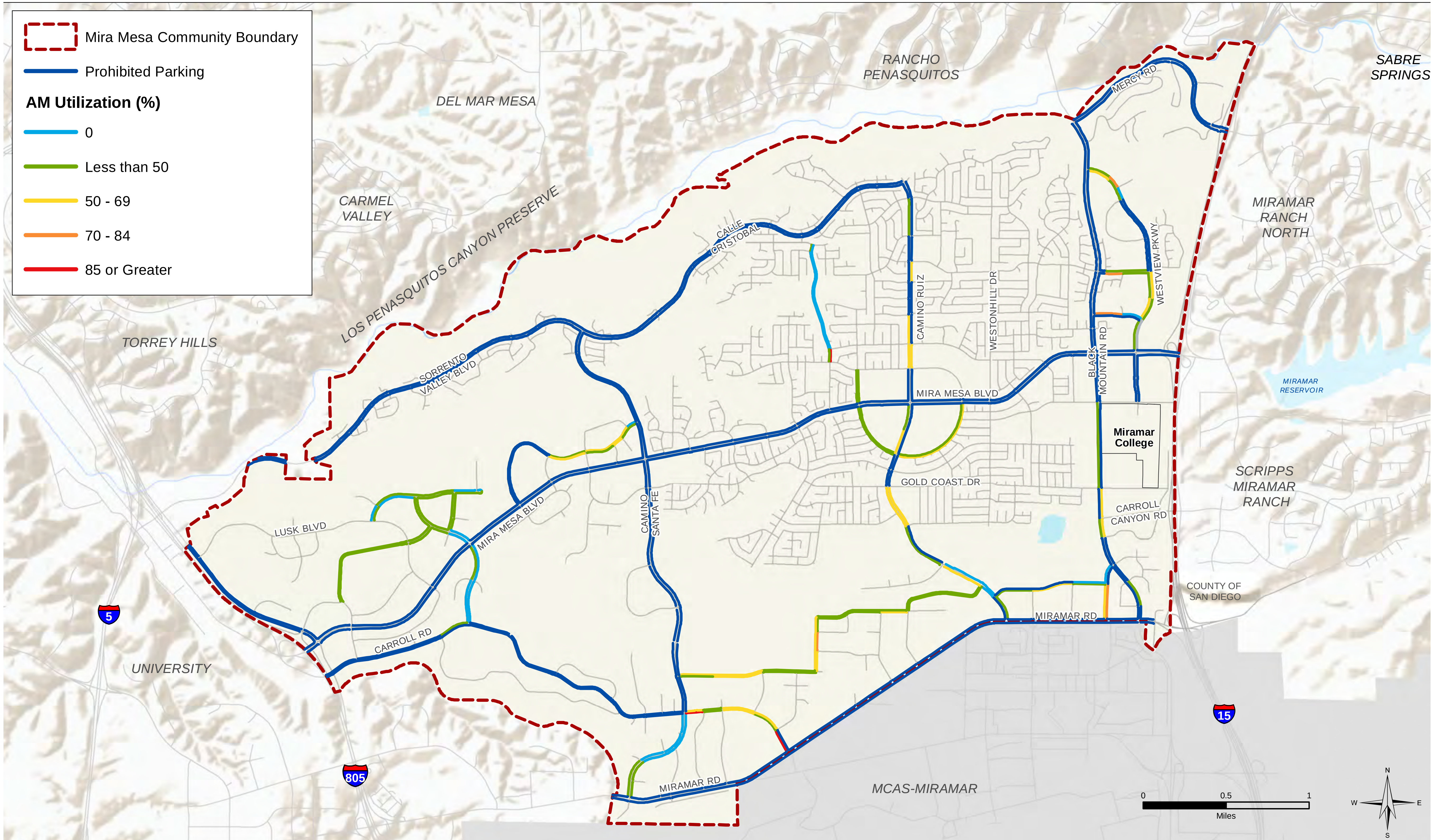
Public on-street parking is prohibited along all or sections of the following corridors:

- Mira Mesa Boulevard
- Black Mountain Road
- Sorrento Valley Boulevard
- Miramar Road
- Camino Santa Fe
- Vista Sorrento Parkway
- Carroll Road
- Camino Ruiz
- Mercy Road
- Westview Parkway

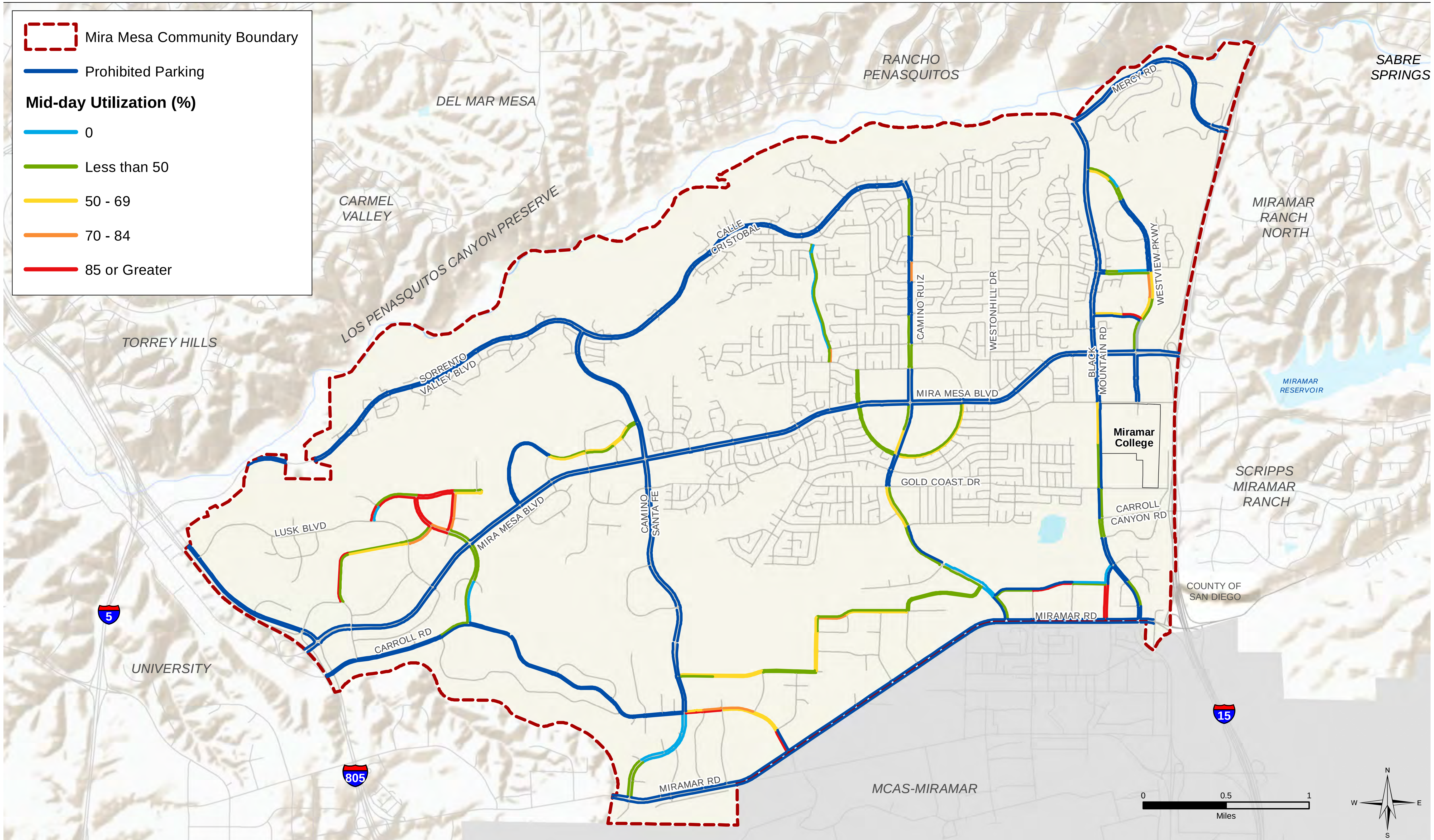
To determine relative parking utilization where on-street parking is permitted in the existing condition, a “drive-by windshield” parking occupancy survey was conducted over three time periods (AM, midday, and PM) along the primary study roadways. Figure 4-52, Figure 4-53, and Figure 4-54 display the parking occupancy survey results for the AM, mid-day, and PM peak hours, respectively.

Parking utilization was observed to be 85% or greater in the areas surrounding employment centers along Pacific Center Boulevard, Pacific Heights Boulevard, Pacific Mesa Boulevard, Scranton Road, Carroll Road, Activity Road and Black Mountain Road, especially in the mid-day peak hour. Other roadways with higher parking utilization include Maurader Way, Westview Parkway, and Galvin Avenue, as well as sections along Camino Ruiz. These roadway segments surround shopping centers, schools and parks, that may not have sufficient parking facilities leading to overflow on-street parking. In general, parking demand was greater during the mid-day and PM peak hours. A majority of the parking segments that front residential land uses, such as Montongo Street and Camino Ruiz, are generally less than 70% occupied during the three peak periods.

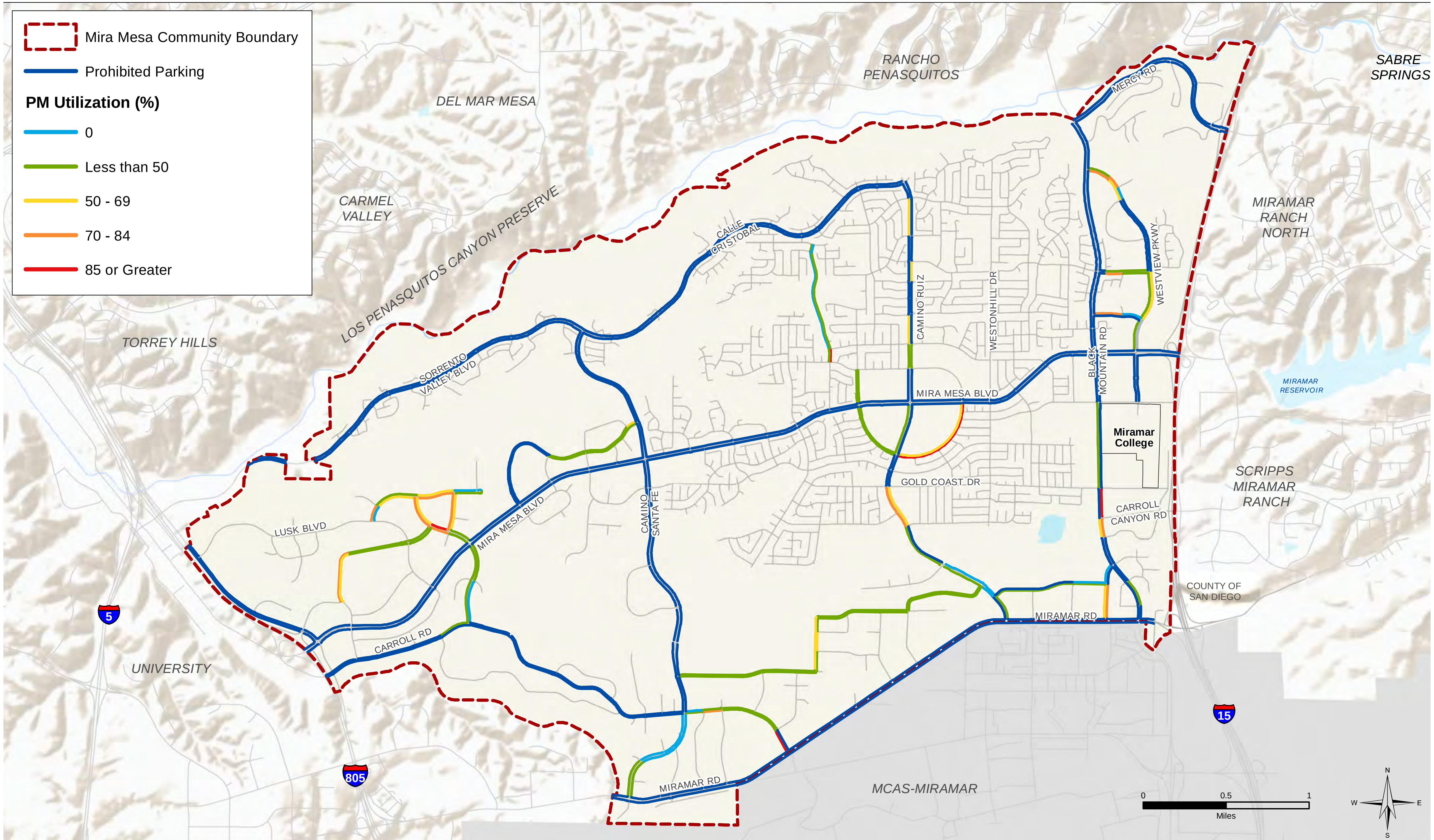
Detailed parking utilization data is summarized in **Appendix I**.



Parking Utilization (AM Peak)



Parking Utilization (Mid-Day Peak)



Parking Utilization (PM Peak)

4.6 INTELLIGENT TRANSPORTATION SYSTEMS

Use of Intelligent Transportation Systems (ITS) can provide many benefits to a mobility network, including improving travel time, providing transit bypass methods, helping relay valuable traffic-related information to vehicular and non-vehicular users, and providing guidance to key destinations.

The 2008 City of San Diego General Plan Mobility Element identifies the following goals for integrating ITS into the mobility network:

- A transportation system which operated efficiently, saves energy, and reduces negative environmental impacts.
- A safe transportation system.
- A transportation system that effectively uses appropriate technologies.

In 2014, the City of San Diego completed the Traffic Signal Communication Master Plan as a means to modernize the traffic signal system. The resulting improved coordination will increase public safety, shorten commutes, reduce greenhouse gas emissions, and increase mobility at intersections for all modes of travel. The Traffic Signal Communication Master Plan identified the following 5 intersections within Mira Mesa as having traffic signal communication gaps (signals without an existing communication line to connect with) that inhibit coordination:

- Miramar Road and Kearny Villa Road
- Miramar Road and Kearny Mesa Road
- Mercy Road and Alemania Road
- Mercy Road and Kika Court
- Carroll Road and Rehco Road

Adaptive Traffic Signal (ATS) Control technology adjusts the timing to accommodate varying traffic patterns. This technology improves travel time reliability by progressively moving vehicles through green lights, reduce congestion by creating smoother traffic flow along a corridor. The following corridors have adaptive traffic signal controllers:

- Lusk Boulevard – Vista Sorrento Parkway to Mira Mesa Boulevard
- Mira Mesa Boulevard – Scranton Road to Mira Mesa Mall Driveways

4.7 TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) are a collection of programs and strategies that reduce the need for vehicle trips. Proper use of TDM results in several benefits, including improved transportation network efficiencies, reduced greenhouse gas emissions, and more active lifestyles.

The 2008 City of San Diego General Plan Mobility Element identified the following TDM goals:

- Reduced single-occupant vehicle traffic on congested streets and freeways.
- Improved performance and efficiency of the street and freeway system by means other than roadway widening or construction.
- Expanded travel options and improved personal mobility.

The City of San Diego's TDM program specifically serves to improve mobility, reduce congestion and air pollution, and provide options for employees and residents to commute to and from work. Typical TDM strategies include promoting:

- Teleworking
- Alternative Work Schedules
- Walking
- Bicycling
- Carpooling
- Vanpooling
- Transit
- Car-Share
- Mixed-use Development
- Other Transportation Options

The City of San Diego collaborates with SANDAG to encourage participation in citywide and regional TDM measures due to the fact that commute trips often cross local jurisdictional boundaries. SANDAG administers the regional TDM program known as iCommute, which provides the following programs and services:

- Employer Services Program – Free assistance to local business to help them develop and implement employee commuter benefit programs that lower costs, increase productivity, and help the environment.
- Vanpool Program – SANDAG contracts with vanpool vendors that provide vehicles, maintenance, and insurance. SANDAG also provides up to a $400 monthly subsidy to qualified vanpools.
- Guaranteed Ride Home (GRH) – Serves as a safety net for commuters who carpool, vanpool, ride transit, walk, or bike to work three or more times per work. GRH provides a free Uber ride or 24-hour car rental up to three times per year in the event of a family emergency, unscheduled overtime, or being stranded from a carpool or vanpool.
- Bike Encouragement Program – Supports bike commuting by providing Bike Month and Bike to Work Day events, and the San Diego Regional Bike Map. iCommute manages more than 800 bike lockers at more than 60 transit stations and Park & Ride lots throughout San Diego County.

- Walk, Ride, and Roll to School – Education and outreach program to increase the number of students who walk, bike, skate, or ride a scooter to school.
- Carpool Match – iCommute provides access to a database of commuters looking for a carpool match.
- Park & Ride Map – Map identifying the location of approximately 90 Park & Ride lots in the San Diego Region and southern Riverside County.

The iCommute program markets its various offerings through a variety of promotional campaigns, such as Bike Month and Rideshare Month. The iCommute website (www.icommutesd.com) provides links to additional resources and information that encourage alternatives to single occupant vehicle commutes.

The City of San Diego's land development policies require new developments to provide sufficient bicycle parking, employee showers and lockers, carpool parking, pedestrian paths, and a display of alternative transportation information. The City's Mobility Management section also serves as a resource to assist employers and developers in identifying and pursuing opportunities to implement TDM measures.

As new development occurs in Mira Mesa, TDM strategies and policies provide an opportunity to change travel behavior and reduce reliance on the automobile. TDM should be used in context with the land use and be complimented with network changes to be most effective.

4.8 AIRPORTS, PASSENGER RAIL, AND GOODS MOVEMENT

In addition to the standard roadway network mobility, the San Diego region relies on airports, passenger rail service, and a network of maritime and surface transportation routes to facilitate the movement of people and goods. This section briefly touches on these types of mobility and how they relate to Mira Mesa.

Airports

The City of San Diego General Plan Mobility Element identifies the following goals for airports:

- An air transportation system that fosters economic growth.
- Adequate capacity to serve the forecasted passenger and cargo needs at existing airports.
- An air transportation system that is integrated with a multi-modal surface transportation system that efficiently moves people and goods.
- An international airport to serve the region's long-term air transportation and economic needs.

The San Diego International Airport at Lindbergh Field is about 18 miles from the Mira Mesa community. Trips to and from the airport are primarily done using personal vehicles as there are limited transit options and is too far to walk or bike. The San Diego International Airport is the one of the busiest single-runway commercial service airports in the nation. In 2018, the San Diego International Airport served a record 24 million passengers, a 10 percent increase over the previous year. The airport is operated by the San Diego County Regional Airport Authority (SDRAA) and continues to grow its passenger use. Major plans/projects prepared by SDRAA will influence future access to and from the airport, including Destination Lindberg and the San Diego International Airport Master Plan.

Destination Lindbergh is a long-range planning effort to guide the ultimate build-out of the San Diego International Airport. The plan proposes an expanded configuration of the facility that attempts to minimize airport-related traffic impacts to adjacent communities, and improve intermodal access to the airport. The plan recommends improvements to the local and regional roadway networks providing access to the airport, as well as a new transit route to serve the airport. The Intermodal Transit Center (ITC) is proposed as an intermodal hub to facilitate airport access without the need for driving single occupant vehicles. The plans also indicate that existing trolley lines, the Coaster, Amtrak, new express bus routes, local bus routes, and the planned California High Speed Rail system will all be served by the ITC.

The current San Diego International Airport Master Plan was adopted in 2008 to serve as the future blueprint for the airport's 661 acres. The Master Plan provides guidance for the airport to meet anticipated growth for passengers, cargo and operations. Additionally, it outlines local roadway improvements to expand vehicular capacity and enhance airport access. The SDRAA is currently in the process of updating the Airport Master Plan.

Marine Corps Air Station (MCAS) Miramar is adjacent to the south of the community along Miramar Road. The MCAS Miramar Airport Master Plan area encompasses 23,065 acres, with over 15,000 service members and their families serving this location. The Master Plan identifies nearly 11 million square feet of new facility development capacity using the infill development model on 672 acres of developable land, across 4 districts. The MCAS Miramar Airport Land Use Compatibility Plan (ALUCP) provides for the orderly growth of the airport and the area surrounding the airport and safeguards the general welfare of the inhabitants within the vicinity of the airport and the public in general. The ALUCP identifies airport land use compatibility policies and standards related to four airport-related factors: noise, safety, airspace protection and overflight.

Passenger Rail

The City of San Diego General Plan Mobility Element has identified "improving rail travel opportunities" as a goal. Any proposed enhancements to passenger rail service should help achieve this goal.

The COASTER is operated by the North County Transit District (NCTD), and runs in a north-south direction, providing service to eight stations between Santa Fe Depot and the Oceanside Transit Center. One of the stops is at the Sorrento Valley Station which is adjacent to the Mira Mesa community. The Southbound COASTER stops at the Sorrento Valley Station approximately every 30 minutes in the morning peak and approximately every 90 minutes in the afternoon peak with a break in the early afternoon. Conversely, the Northbound COASTER stops at the Sorrento Valley Station direction approximately every 90 minutes in the morning peak and approximately every 30 minutes in the afternoon with a break in the late morning.

This schedule reflects ridership trends of people primarily using it to travel to and from places north of Mira Mesa. The COASTER connects to four bus routes at the Sorrento Valley Station to help get to ultimate destinations. The Sorrento Valley Station is not within walkable or reasonable bicycle distance of many uses in Mira Mesa. Relocating the Sorrento Valley Station to provide more access options, such as pedestrian and bicycle first- and last-mile improvements has been recommended by SANDAG in the Regional Transportation Plan and will be considered in the Mira Mesa Community Plan Update.

The Pacific Surfliner is operated by Amtrak and runs in a north-south direction between downtown San Diego and San Luis Obispo via the greater Los Angeles area. The Pacific Surfliner stops at the Old Town Transit Center, Santa Fe Depot (downtown San Diego), and Solana Beach. The nearest Pacific Surfliner stop for access to Mira Mesa is at Solana Beach.

Goods Movement

Existing goods movement in San Diego is supported by infrastructure consisting of roadways, railways, maritime facilities and airports. The City of San Diego General Plan identifies the following policies related to goods movement:

- Support infrastructure improvements and use of emerging technologies that will facilitate the clearance, timely movement, and security of domestic and international trade, including facilities for the efficient intermodal transfer of goods between truck, rail, marine, and air transportation modes.
- Preserve property for planned roadway and railroad rights-of-way, marine and air terminals, and other needed transportation facilities.
- Support measures to alleviate on-street truck parking and staging and peak period truck usage on freeways. These measures may include, but are not limited to: designating off-street truck staging areas; shared use of park-and-ride lots; and shared use of other public and private parking lots where appropriate.

- Implement measures to minimize the impacts of truck traffic, deliveries, and staging in residential and mixed-use neighborhoods.
- Support alternatives to transporting hazardous materials by truck.

Truck Freight

The majority of goods in the San Diego region are transported by truck through the regional freeway network and local roadways. While the City of San Diego does not have a system of designated truck routes, regional truck access to Mira Mesa is provided via the adjacent I-5 and I-805 freeways. Truck access is necessary throughout the community due to the dispersal of commercial and industrial designated land uses. Industrial zoning in Mira Mesa exists primarily along the north side of Miramar Road and are currently buffered from residential and retail areas by Carroll Canyon. Miramar Road and Mira Mesa Boulevard are the primary east-west truck routes in the community. Camino Ruiz is the primary north-south truck route.

Table 4-35 presents the percent of trucks on local roadways within the study community.

Table 4-35 Existing Roadway Segment Analysis

Roadway Segment	Truck %
Sorrento Valley Blvd	
I-805 to Camino Santa Fe	3.6%
Calle Cristobal	
Camion Santa Fe to Camino Ruiz	4.4%
Mira Mesa Blvd	
I-805 to Pacific Heights Blvd	2.1%
Pacific Heights Blvd to Camino Santa Fe	4.0%
Camino Santa Fe to Parkdale Ave	5.8%
Camino Ruiz to Black Mountain Rd	8.3%
Black Mountain Rd to Westview Pkwy	2.2%
Westview Pkwy to I-15	2.9%
Carroll Canyon Rd	
Scranton Rd to Nancy Ridge Dr	1.1%
Miramar Rd	
Camino Santa Fe to Carroll Rd	6.3%
Carroll Rd to Black Mountain Rd	6.5%
Black Mountain Rd to I-15	6.7%
Camino Santa Fe	
Sorrento Valley Blvd to Carroll Rd	1.6%
Carroll Rd to Miramar Rd	1.9%
Camino Ruiz	
Calle Cristobal to Mira Mesa Blvd	6.1%
Mira Mesa Blvd to Miramar Rd	3.7%
Black Mountain Rd	
Westview Pkwy to Miramar Rd	3.0%

Rail Freight

Rail freight serves San Diego via the Los Angeles – San Diego – San Luis Obispo Rail Corridor (LOSSAN Corridor), which is one of the busiest rail corridors nationwide. The LOSSAN corridors follows the canyons along the western edge of the Mira Mesa community, with an at-grade crossing at Sorrento Valley Boulevard and grade separated crossings at I-805 and at Miramar Road near Camino Santa Fe.

Freight operations along the corridor are operated by the Burlington Northern Santa Fe Railway Company (BNSF). BNSF operates freight rail service along the same right-of-way as Amtrak and the Coaster passenger services. BNSF transports freight to points north and east of San Diego County, such as Los Angeles and Arizona. It also provides important rail connections to the south between the United States and Mexico.

Maritime Freight

The 10th Avenue Marine Terminal and the National City Marine Terminal, both located on the San Diego Bay, are the primary maritime ports serving San Diego and are far from the Mira Mesa community. Freight is then transported via truck, rail, and air throughout San Diego County and the rest of the United States.

Air Freight

Air freight transport companies such as FedEx, DHL Express and UPS operate out of the San Diego International Airport, which serves as the region’s primary airport for air freight. Air freight is then transported via truck, rail, and/or maritime modes.

5 MOBILITY NEEDS AND FUTURE DIRECTION

This chapter provides a summary of pedestrian, bicycle, transit, and street and freeway mobility needs determined through the existing conditions analyses.

5.1 PEDESTRIAN

Nearly all trips involve a pedestrian connection from walking to/from a parked car to a building or simply walking to transit, a store, school, or employment. The surrounding environment can encourage, discourage, or dictate the length of walk trips depending on many different factors such as: sidewalks, trees for shading, lighting, interesting buildings or scenery to look at, other people outside, neighborhood destinations and a feeling of safety. Pedestrian environments that are inviting and land uses that promote interaction between pedestrian activities can help to increase walking as a means of transportation and recreation. Land use and street design recommendations that benefit pedestrians also contribute to the overall quality, vitality, and sense of community within a neighborhood.

Future improvements to the pedestrian environment in Mira Mesa should focus on areas where need is the greatest. Pedestrian areas for improvement identified in Mira Mesa include locations with high pedestrian activity and collisions, sidewalk connectivity issues, anticipated increases in pedestrian activity based on future land use, and high pedestrian priority as identified by the City of San Diego's Pedestrian Priority Model (PPM). Pedestrian opportunity and constraint areas are identified in **Figure 5-1**.

Safety

Facilitating the safe movement of pedestrians is key to increasing the propensity of walking in an area. Locations with three or more collisions involving pedestrians over a 5-year period are concentrated at the intersections of one of the community's major east-west roadways, Mira Mesa Boulevard. The following intersections each have 3 or more collisions between October 2012 and September 2017:

- Mira Mesa Boulevard & Westmore Road/Marbury Avenue
- Mira Mesa Boulevard & Westview Parkway
- Mira Mesa Boulevard & Black Mountain Road
- Camino Ruiz & Capricorn Way
- Black Mountain Road & Gemini Avenue
- Mira Mesa Boulevard & Mira Mesa Mall
- Mira Mesa Boulevard & Sequence Drive
- Camino Ruiz and Reagan Road/Marauder Way

These intersections are in the denser, central part of the community, with high pedestrian activity due to adjacency to retail, office, residential, and schools. Many of the intersections identified above have long crossing distances (90' – 155') and are heavily travelled by pedestrians and vehicles experiencing delay, making both pedestrians and motorists more aggressive in their decision-making.

Connectivity

Connectivity within the pedestrian network is important to facilitate the safe and efficient movement of pedestrians in an area. Missing sidewalks discourage walking trips and may cause pedestrians to take longer routes to get to their destinations. The majority of the Mira Mesa community has a complete sidewalk network, including a pedestrian bridge at the north intersection leg of Galvin Avenue and Black Mountain Road.

Missing sidewalk on the south side of Mira Mesa Boulevard between Scranton Road and Lusk Boulevard stands out as one missing sidewalk link that would benefit the community by connecting the employment area and commercial / retail destinations within the Sorrento Valley employment area.

Camino Ruiz between Carroll Canyon Road and Jade Coast Drive is currently missing sidewalk on both sides of the roadway. The east side provides an asphalt raised area that is not classified as sidewalk. Although this segment of Camino Ruiz cuts through undeveloped land, the lack of sidewalk still prevents connectivity between the industrial and residential areas in the southern portion of Mira Mesa and the residential areas south of Mira Mesa Boulevard. The missing sidewalks should be completed with future developments along the east and west sides of Camino Ruiz.

The south side of Miramar Road between Commerce Avenue and Kearny Mesa Road provides an asphalt raised area that is not classified as sidewalk but is utilized by pedestrians at transit stops and could benefit from upgrading the raised area to concrete sidewalk.

There are also several roadways with missing sidewalks within the industrial area on the south side of the community including Production Avenue, Distribution Avenue, Carroll Way, Trade Street, Dowdy Drive, Silverton Avenue, Cabot Drive, Arjons Drive, and Activity Road. Providing continuous sidewalk in this area could encourage longer walking trips and improve first-mile / last-mile connections for those using Bus Route 31 to access these destinations. Many local breweries are also located in this area and could benefit from sidewalks to encourage activity between neighboring breweries.

Pedestrian Activity

Current pedestrian activity is highest near the Mira Mesa Mall and Miramar College. Intersections along Mira Mesa Boulevard and Black Mountain Road in these areas experience high pedestrian activity.

Demand

Pedestrian priority areas were determined using the City's PPM. The model evaluates community characteristics including demographic data, traffic volumes and speed, pedestrian collisions, presence of street lighting, location of transit stations, and land uses such as residential, office, commercial/retail, schools, and parks. The model uses these factors to identify areas where both pedestrian demand and detractors are high, thereby indicating a need to focus resources in these locations.

The PPM identifies the areas surrounding the Miramar College Transit Station, as well as the area around the Mira Mesa Boulevard and Camino Ruiz intersection as having the highest pedestrian priority. These areas encompass Miramar College, several other elementary, middle and high schools, five community parks, Mira Mesa Market Center, Mira Mesa Mall, and several high-density housing complexes.

Quality

Based on the segment PEQE analysis, there is one high-quality pedestrian facility in the Mira Mesa community, the pedestrian bridge over Black Mountain Road on the north side of Galvin Avenue. Facilities along major roadways do not have a buffer between the travel lanes and the sidewalk, have obstructions in the 5-foot clear zone, and do not satisfy lighting requirements. Enhancements such as providing landscaped buffers, buffered bike lanes, or parking to increase the separation between travel lanes and the pedestrian, relocating obstructions outside of the 5-foot clear zone, and installing additional street lights along pedestrian facilities would improve the quality of these facilities.

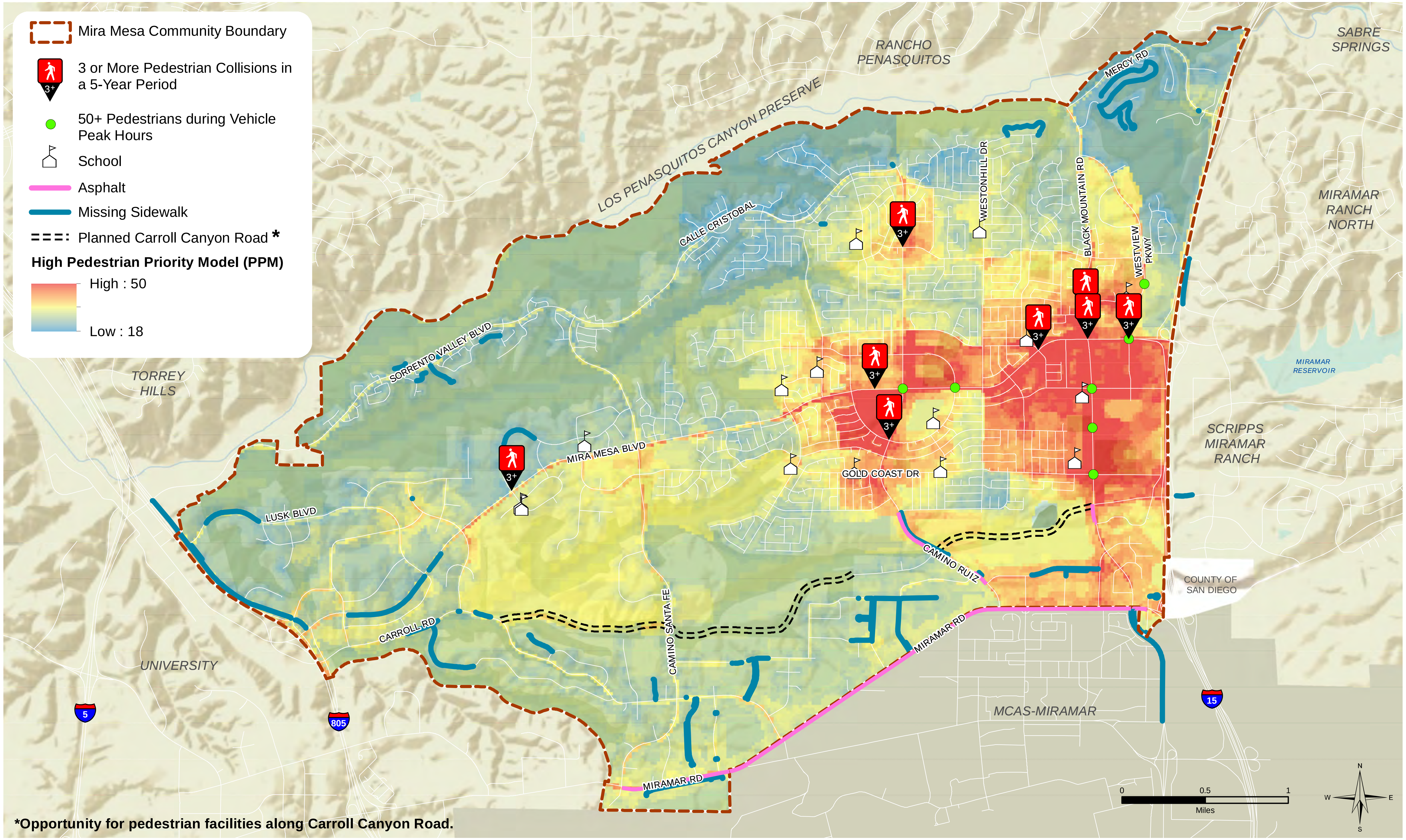
Regarding the intersection PEQE anaysis, the community of Mira Mesa does not provide any curb extensions, pedestrian lead intervals, or raised crosswalks. Very few of the intersections studied contain “No Turn on Red” signs, enhanced pedestrian signs, or pedestrian countdown timers. Approximately one third of the intersections provide high visibility crosswalks and/or advanced limit lines, and less than half of the intersections have curb ramps that meet ADA requirements. Upgrading curb ramps to meet ADA standards, installing high-visibility crosswalks and advanced limit lines, or providing any of the pedestrian crossing enhancements discussed would improve the quality of these intersections.

Planned Pedestrian Improvements

The City’s Pedestrian Master Plan – City-wide Implementation Framework Report (2006) established pedestrian route typologies to categorize sidewalks by function and environment. These typologies work to define the function which a route serves and establishes a hierarchy for the development of priority pedestrian improvements. The route type purpose, adjacent street classifications, and adjacent land uses are identified for each typology. The route typology assessment for the pedestrian study area identified only two pedestrian route types within the Mira Mesa community: connector and neighborhood streets.

Additionally, the Framework Report acknowledges there should be flexibility in the treatments and amenities for pedestrian facilities. **Figure 5-2** describes four treatment levels to consider for pedestrian facilities, including premium, enhanced, basic, and special use walkway improvements. Each feature is labeled as required, suggested, suggested if conditions or standards are met, or not applicable.

Districts, corridors, and connectors are the most typical pedestrian route types in communities; however, there are no district or corridor routes identified in the Mira Mesa community. The community has connectors, neighborhood, ancillary facilities (pedestrian bridge) and trails, which make this community unique and desirable for pedestrian travel.



*Opportunity for pedestrian facilities along Carroll Canyon Road.

Pedestrian Opportunity and Constraint Areas

Figure 5-2 Pedestrian Route Type Treatment Levels and Potential Improvements

TREATMENT LEVEL:	Treatment Level 1 "Premium" Walkway Improvements	Treatment Level 2 "Enhanced" Walkway Improvements	Treatment Level 3 "Basic" Walkway Improvements	Treatment Level 4 "Special Use" Walkway Improvements
Route Types Receiving These Treatment Levels (Unless Special Circumstances Exist*)	District Route Type / Special Pedestrian Zone	Corridor Route Type	Connector and Neighborhood Route Type	Path & Ancillary Route Types
*Special Circumstances that Warrant a Higher Treatment Level than Normal. Requirements in Each Column would Increase to the Column on its Left	Already Uses Highest Treatment Level	If within 1/4 mile of Transit/ School/ Ped. High Use/ Major Arterial	If within 1/4 mile of Transit/ School/ Maj. Commercial Facilities/ Maj. Arterials	Case-by-Case Basis
Provide Accessible Facilities Such As:				
1A) Curb ramps	!	!	!	?
2A) Audible/visual crosswalk signals	!	!	?	?
3A) Walkways & ramps free of damage or trip hazards	!	!	!	✔
4A) Pedestrian paths free of obstructions and barriers	!	!	!	✔
5A) Sidewalks with limited driveways and minimal cross-slope	!	✔	✔	✔
6A) Re-grade slope of walkway to meet ADA / Title 24 standards	?	?	?	?
7A) Repair, slice or patch lifts on walk surfaces or reset utility boxes to be flush	?	?	?	?
Provide Safety Features Such As:				
1S) Median refuges (a safe place to stand in the street)	!	✔	-	-
2S) Pedestrian popouts (curb / sidewalk extensions into street)	✔	✔	-	-
3S) High visibility crosswalk striping	!	✔	-	?
4S) Raised crosswalks or special paving materials to denote crosswalks	✔	✔	-	?
5S) Advance stop bars >10 feet from crosswalk	✔	✔	!	?
6S) Radar Speed Monitor & Display	?	?	?	?
7S) Reduced curb radii	✔	✔	✔	-
8S) Early pedestrian start at crossing signal (Lead Pedestrian Interval)	✔	?	-	?
9S) No Turn on Red at Intersection	?	?	?	?
10S) Mid-block crosswalks with ped. flashers but no traffic control	-	-	✔	-
11S) Automatic pedestrian detection & signal control	✔	-	-	?
12S) Mid-block crossing with signs, median or curb ext. & flashing lights in road	?	?	-	?
13S) Mid-block crosswalks with ped. actuated traffic control device	✔	?	-	-
14S) 1-Lane Mid-block with high contrast crossings, signs & center lane marker	?	?	✔	?
15S) Parkway planting for buffer between sidewalk and cars	!	!	!	?
16S) On-street parking for buffer between sidewalk and cars	!	✔	✔	-
17S) Adequate levels of pedestrian lighting	!	!	✔	✔
18S) Various traffic calming measures	✔	✔	✔	-
19S) Enforcement, education or encouragement solutions	?	?	?	?
20S) Missing sidewalks added or provide adeq. walk width clear of obstructions	?	?	?	?
Improve Walkability by Providing:				
1W) Above minimum walkway widths (> 5')	!	✔	?	?
2W) Trees that provide shade on walkways	!	!	✔	✔
3W) Street furnishings for comfort and enjoyment	!	✔	?	✔
4W) Countdown display crosswalk signals	✔	?	?	-
5W) Traffic control for crossings such as traffic signals or "All way stops"	!	✔	✔	✔
6W) Pedestrian scrambles (cross all directions of street)	?	-	-	?
Ensure Connectivity by Adding:				
1C) Missing sidewalk segments in areas where sidewalks mostly exist	!	!	✔	✔
2c) Missing sidewalks in areas where no sidewalks exist at all	!	✔	?	✔
3C) Connection pathways between streets	!	✔	✔	✔
4C) Narrow street widths or adding features to narrow for pedestrians	!	✔	✔	✔
5C) Destinations within walking distance of origins	!	✔	✔	✔
6C) Pedestrian bridges that avoid excessive ramp lengths	?	-	-	?
7C) Pedestrian crossing opportunities for all sides (legs) of an intersection	!	✔	✔	-
8C) Verify that pedestrian distances between land uses are reasonable & direct	?	?	?	?

LEGEND ("!"= required, "4" = suggested, "?"= suggested if conditions or standards met & "-" = not applicable)

Source: City of San Diego Pedestrian Master Plan – City-Wide Implementation Framework Report (2006)

City of San Diego Transportation Unfunded Needs List (TUNL)

The following pedestrian facility improvements are identified by the City's Transportation Unfunded Needs List (TUNL) as desirable enhancements to the pedestrian environment in the Mira Mesa community:

- Black Mountain Road between Gold Coast Drive and Hillery Dr – Construct mid-block pedestrian bridge across Black Mountain Road
- Flanders Drive at Flanders Place – Install new crosswalk with Pedestrian Activated Flashing Beacons and curb ramps
- Montongo Street at Goleta Road – Install Pedestrian Activated Flashing Beacon
- Avenida Del Gato at Zapata Ave – Install Type 1A Flashing Yellow Beacon with school warning sign facing northbound traffic
- Mercy Road from Chabola Road to Alemenia Road – Install two V-Calm signs
- Calle Cristobal near Frames Port Place – Install one V-Calm sign facing westbound traffic
- Mesa Rim Road – Install two V-Calm signs
- Miramar Way – Install two V-Calm signs
- Camino Ruiz from Westmore Road to Capricorn Way – Install one V-Calm sign facing northbound traffic
- Calle Cristobal from Camino Ruiz to Camino Santa Fe - Install two V-Calm signs

Opportunities

Pedestrian connections are an important part of this community to improve access to multiple key destinations. With the current transit use and upcoming expansion of transit services, connections between transit centers and nearby attractions are vital to transit ridership. First- and last-mile connections should provide quality facilities to encourage walking throughout the community.

Connections along the high-speed, wide roadways in the community should consider alternatives to standard at-grade crossings. Minimizing conflict points between pedestrians and vehicles reduces the risk of collisions and can improve the efficiency of the roadway system and pedestrian experience, encouraging pedestrian travel within the community.

A new pedestrian bridge at Mira Mesa Boulevard near Westview Parkway would benefit pedestrians as it would reduce pedestrian conflicts with high volume/speed vehicles and create a more pleasant crossing experience across Mira Mesa Boulevard, which is a wide and busy intersection. This could also provide an opportunity for creating a gateway to the Mira Mesa community. Other locations for pedestrian bridges may also be considered to support redevelopment or new transit connections. Intersection features such as protected intersections can also help to reduce pedestrian collisions by slowing right turning traffic, and reducing vehicle-pedestrian and vehicle-bicycle conflicts. This may also be explored in combination with bicycle facility intersection treatments.

Providing enhanced pedestrian connections near the large office areas in the western portion of the community could also encourage more walk trips, both commute and non-commute. Best efforts to improve the quality of the pedestrian facilities such as providing wider walkways, accessibility to transit, and buffer from vehicles will be considered in this update. The ideal environment would be a campus-like feel where walking is the preferred mode of transportation, and the roadway is designed for pedestrians by including reduced crossings distances and lower travel speeds.

Constraints

It is important to take into consideration existing freeway and topographic barriers within the Mira Mesa community, as previously mentioned in Chapter 4. The Mira Mesa community is bounded by Interstate 805 to the west, Interstate 15 to the east, the MCAS Miramar Airport to the south, and Los Peñasquitos Canyon to the north. The bordering canyons and freeways create barriers for access in and out of Mira Mesa to neighboring communities. Major corridors such as Mira Mesa Boulevard, Camino Santa Fe, Camino Ruiz, and Black Mountain Road are also responsible for internally dividing the community into sections, limiting the connectivity within the community.

Creating additional connections across freeways and canyons may be difficult to implement. However, the community plan update can focus on improving the existing connections at freeways and facilitating recreational walking within the canyons.

5.2 BICYCLE

Bicycle infrastructure should provide for the safety and comfort of its users, and the bicycle network should be well connected across a community. Safety and comfort are paramount considerations, given that active travelers are more exposed and vulnerable than those inside a vehicle. Residential roadways are generally inviting to bicyclists. The wider, high-speed roadways and intersections typically discourage bicycle trips. These areas are often where a community needs to focus its bicycle infrastructure efforts. Network connectivity is also important, as gaps in the bicycle network can also discourage bicycle travel within the community. The bicycle network should be made up of a combination of short-haul and long-haul facilities to encourage internal trips in the community as well as regional trips to adjacent communities.

The Mira Mesa community has several areas for improvement based on the analyses performed. They are identified by locations with a high number of bicycle collisions, the amount of stress likely to be experienced by a bicyclist, lack of existing bicycle facilities, and high cycling demand. Bicycle opportunity and constraint areas are identified in **Figure 5-3.**

Safety

The following locations in the community had three or more collisions involving a bicycle in the 5-year period analyzed:

- Mira Mesa Boulevard & Camino Ruiz
- Mira Mesa Boulevard & Westview Parkway
- Mira Mesa Boulevard & Westmore Road/Marbury Avenue
- Miramar Road East of Commerce Avenue/Milch Road

These intersections lack bicycle intersection treatments, with the majority occurring along the major east-west thoroughfare within the community, Mira Mesa Boulevard. For most of these intersection approaches, a bicycle facility is provided upstream of the intersection, but the intersection approach itself does not contain a bicycle intersection treatment such as a bike pocket, leaving the bicyclists vulnerable and requiring them to merge with vehicles at the intersection.

Quality

Bicycle Level of Traffic Stress (LTS) is high (LTS 3 or 4) on all major roadways in the Mira Mesa community. These roadways are nearly all higher speed, high volume arterials with little or no accommodations made for bicyclists. Due to the land use patterns and barriers in the community, traveling between areas of the community requires the use of these roadways. Thus, finding opportunities to introduce low-stress facilities along some major roadways to allow for safe bicycle travel within the community is necessary to improve the overall bicycle experience and encourage more cycling within the community. Not every roadway will be able to accommodate bicycle facilities, but an integrated east-west and north-south route near the residential, school, and retail areas should be determined.

Activity

Intersections near the Sorrento Valley Station and near Miramar College Transit Station experience high bicycle volumes. This is likely first-mile, last-mile connection trips to transit. Similarly, intersections along

Black Mountain Road also have high bicycle activity. One other location noted with high activity is the intersection of Mira Mesa Boulevard and Flanders Drive. This intersection likely has high bicycle activity as bicyclists use Flanders Drive as an alternative route to Mira Mesa Boulevard, with the decision on route choice being made at this intersection.

Demand

Bicycle demand was assessed using the City's Bicycle Demand Model (BDM). Demand is highest along the major roadways in the study area. Streets including Mira Mesa Boulevard, Camino Santa Fe (south of Mira Mesa Boulevard), Camino Ruiz (south of Mira Mesa boulevard), Black Mountain Road, and Miramar Road were found to be in the top 25 percent of bicycle demand in the Mira Mesa community. These streets are continuous across the community, and thus are highly desirable for making connections throughout the Mira Mesa community.

Connectivity

Connectivity will be improved with the construction of the remaining section of Carroll Canyon Road. This roadway will be constructed with future development and will provide a major east-west connection parallel to Mira Mesa Boulevard. Additional connectivity is limited due to the canyons dispersed throughout the community. Upgrades to existing bicycle facilities will improve the low-stress connectivity. Providing comfortable routes to traverse the entirety of the community will be a focus of the plan update.

Opportunities

To increase bicycle commute, it is important to create a low-stress bicycle network which can connect retail, office, residential and schools. Arterials and collectors connect these land uses in the Mira Mesa community, while the majority of low-stress bicycle facilities in the community are located on local and neighborhood roadways. The community needs more low-stress facilities to increase safe and comfortable bicycle connectivity and encourage more bicycle use within the community.

Due to various roadway elements including high vehicular speeds or constrained roadway widths, portions of the major east-west and north-south corridors may not be feasible options for low-stress bicycle routes. However, several parallel routes such as Flanders Drive, Gold Coast Drive, Westmore Road, Capricorn Way, Montongo Street, and Parkdale Avenue can provide low-stress facilities with lower cost enhancements such as traffic calming, bike lane buffers, and intersection treatments. These facilities should be evaluated for trade-offs such as lane narrowing, parking removal, and road diets to determine the most desirable corridors for low-stress bike facilities. Alternatively, if the roadway speeds cannot be reduced via traffic calming measures, adding vertical separation to provide a Class IV bikeway creates a lower traffic stress facility (LTS 1).

The future alignment of Carroll Canyon Road offers a great opportunity to construct the first Class IV facility in the community and provide a low-stress east-west across the community.

There are also roadways with intermittent bicycle facilities that could benefit from more continuity by reallocating the roadway to provide more space for bicycles. Specifically, Camino Ruiz, Mira Mesa Boulevard, and Carroll Road alternate between Class II and Class III bike facilities, and Black Mountain

Road alternates between buffered bike lanes and standard bike lanes, with a small portion of a Class III bike route.

Mira Mesa Boulevard has been identified as a regional bicycle facility that should have a Class II or better bicycle facility.

Constraints

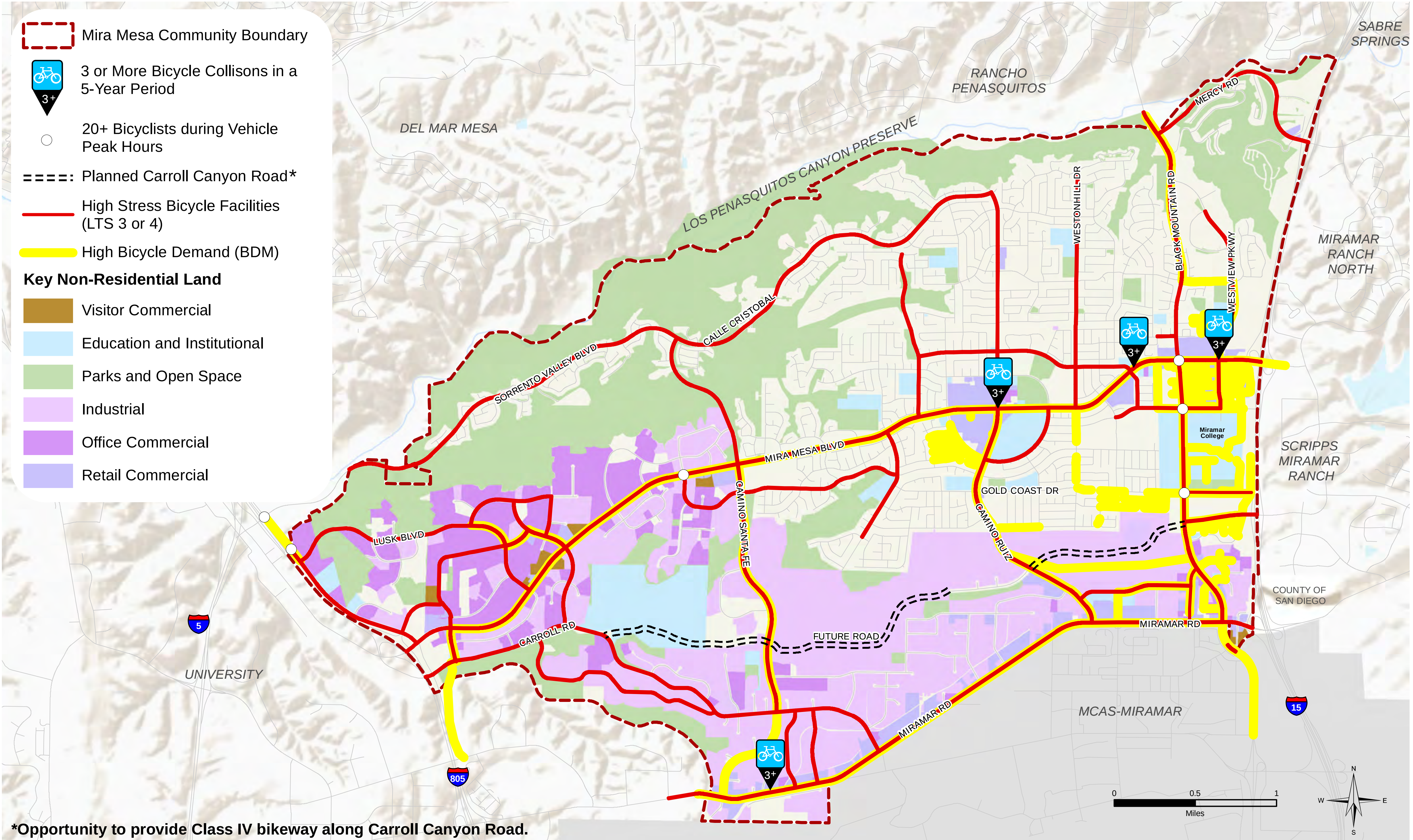
Freeways, canyons and missing facilities create barriers for cycling for members of the Mira Mesa community. Mira Mesa Boulevard runs east-west across Mira Mesa, through the heart of the community where pedestrian, bicycle and transit demand is highest. This is also the corridor with the highest pedestrian- and bicycle-involved collisions. The high traffic volumes, speeds, and number of lanes create a divide of the community into a northern and southern portion, with extremely long crossing distances. The Class II bike lanes on Mira Mesa Boulevard occasionally striped without a buffer next to travel lanes with vehicles traveling up to 55 mph provides a false sense of safety for bicyclists. Further the bike lanes occasionally abruptly transition into a Class III bike route leaving bicyclists stranded and vulnerable. The roadway width along a majority of Mira Mesa Road prevents the construction of a low-stress bicycle facility without removing travel lanes or reducing the median width. In certain constrained areas, considerations will need to be made for parallel facilities to balance the needs of all modes and identify key connections and facilities needed to encourage cycling within the community.

Due to the lack of parallel options into Mira Mesa, consideration should be given to enhancing the bike facilities on Black Mountain Road and Vista Sorrento Parkway to connect adjacent neighborhoods to low-stress routes within Mira Mesa.

Black Mountain Road and Vista Sorrento Parkway are the only major north-south connection into the community from adjacent communities north of Mira Mesa. Black Mountain Road, on the east side of Mira Mesa connects to Rancho Peñasquitos, and Vista Sorrento Parkway, on the west side of the community connects to Torrey Hills. Due to the lack of parallel options, consideration should be given to enhancing the bike facilities on Black Mountain Road and Vista Sorrento Parkway to connect adjacent neighborhoods to low-stress routes within Mira Mesa. Similarly, consideration should be given to enhancing any or all of the four connections to communities east of Mira Mesa across Interstate-15 (Mercy Road, Mira Mesa Boulevard, Carroll Canyon Road, and Miramar Road).

On the west side of the community, a major barrier is presented by Interstate-805, which separates Mira Mesa from the Sorrento Valley Station and further to the University community. Sorrento Valley Boulevard under I-805 does not have any additional roadway width to be reallocated to bicyclists to provide a low-stress connection from the station into the community. This roadway width is constrained by the I-805 overpass bridge abutments.

FIGURE 5-3



*Opportunity to provide Class IV bikeway along Carroll Canyon Road.

Bicycle Opportunity and Constraint Corridors

5.3 TRANSIT

The City of Villages strategy supports expansion of the transit system by encouraging multi-family housing, employment centers, and other higher-intensity uses to be located in areas that can be served by high quality transit services. This will allow more people to live and work within walking distance of transit, and will provide the opportunity for more people to use transit rather than single-occupancy vehicle trips. The Mira Mesa community is relatively well served by transit with a large portion of the community within a quarter-mile of a transit stop, and experiences high transit ridership along the more frequent routes. The highest public transit ridership levels in the community are along Bus Routes 921, 237, 964, and 20, all of which stop or end at the Miramar College Transit Station. With the exception of Bus Route 964, which serves as a local route, all routes within Mira Mesa provide access to major employment areas within the City of San Diego.

Transit opportunity and constraint areas are identified in **Figure 5-4**.

Safety

Since most transit trips begin and end on foot or by bike, it is crucial that users can safely access transit stops so that trips to and from the transit stops are comfortable and low-stress. High bicycle- and pedestrian-involved collisions near a transit stop may indicate safety concerns for transit users. Transit area safety was assessed by looking at the combined number of pedestrian- and bicycle-involved collisions. Locations with four or more collisions near a transit stop were all located along the Mira Mesa Boulevard, Black Mountain Road, or Camino Ruiz corridors. These locations include:

- Mira Mesa Boulevard & Westview Parkway
- Mira Mesa Boulevard & Westmore Road/Marbury Avenue
- Mira Mesa Boulevard & Camino Ruiz
- Mira Mesa Boulevard & Black Mountain Road
- Camino Ruiz & Capricorn Way
- Camino Ruiz & Reagan Road
- Black Mountain Road & Gold Coast Drive

Activity

Miramar College Transit Station, the only major transit stop in the community has the highest boardings and alightings. Not including the Miramar College Transit Station, the ten bus stops with the highest daily boardings and the ten stops with the highest daily alightings include stops near the following intersections:

- Mira Mesa Boulevard & Camino Ruiz
- Mira Mesa Boulevard & Black Mountain Road
- Mira Mesa Boulevard & Pacific Heights Boulevard
- Mira Mesa Boulevard & Shilling Avenue
- Black Mountain Road & Gold Coast Drive
- Black Mountain Road & Activity Road
- Black Mountain Road & Miramar Road
- Barnes Canyon Road & Pacific Heights Boulevard
- Gold Coast Drive & Camino Ruiz

- Zapata Avenue & Kelowna Road
- Camino Ruiz & Capricorn Way
- Westview Parkway & Mira Mesa Market Center

Many of the high boardings and alightings stops are located along Mira Mesa Boulevard and Black Mountain Road. The employment area on the west side of the community has low to moderate ridership. Camino Ruiz where route 964 services the residential area north of Mira Mesa Boulevard also has moderate ridership. Miramar Road has low ridership.

Route 921 is the most heavily utilized bus route in the community, running east-west along Mira Mesa Boulevard between the University of California San Diego and the Miramar College Transit Station. This route services the employment area in Sorrento Valley during the weekdays only, and services the retail and recreational areas near Mesa Verde Park.

Route 964 has the second highest ridership and connects Mira Mesa neighborhoods and destinations to Scripps Ranch neighborhoods and destinations.

These two bus routes with the highest ridership in the community show the desire for connections between Mira Mesa and the adjacent communities. In addition, more routes serving as community circulator routes may be ideal from higher concentrated residential areas within Mira Mesa to shopping centers and employment areas.

Quality

Transit quality was assessed based on amenities provided for the transit user at each stop. Stops that did not meet the minimum requirements identified in the MTS Designing for Transit Manual were generally due to lack of sign and pole, route designation or accessibility. Providing a sign and pole with route designations and relocating obstructions to provide the required clear zone for accessibility can improve the quality at these stops and the surrounding environment for future transit riders.

Connectivity

Transit access was assessed using the quality bike and quality pedestrian connectivity to major transit stops. The Miramar College Transit Station does not have any low-stress bicycle facilities which provide access to the station, due to its location along Hillery Drive and Westview Parkway, both of which experience high levels of traffic stress due to high speeds of vehicular traffic. The station, however has medium quality facilities for pedestrians to access the station.

Demand

Transit demand was assessed through a combination of existing ridership as well as U.S. Census data showing concentrations of housing and jobs. Housing density is highest on the east side of the community, east of Camino Santa Fe and north of the future Carroll Canyon Road alignment. Employment density is focused in the western and southern ends of the community, with jobs concentrated west of Camino Santa Fe, south of Lopez Canyon and south of future Carroll Canyon Road.

Opportunities

On-time performance is an important piece of improving and maintaining transit ridership. The reliability of services is directly affected by the amount of congestion and delay at intersections and along roadway segments. Buses caught in congestion may affect the reliability of a bus route and decrease ridership over time. Based on the 2017 MTS Performance Monitoring Report, Route 964 is currently performing under the MTS on-time performance goal of 90%. This is the one of the highest ridership routes in the community.

Improving reliability can be accomplished with technological improvements such as Transit Signal Priority (TSP) and adaptive traffic signals, and/or striping dedication such as transit only lanes or transit queue jump areas at intersections. These measures should be considered and implemented, where feasible. Also providing adequate bus stop amenities at appropriate locations can reduce delays. The following are operational improvements in the community that are identified by the San Diego Metropolitan Transit System (MTS):

- Bus-only lanes along Mira Mesa Boulevard for Rapid Bus Route 237 to circumvent congestion on the busy corridor and provide an opportunity for TSP on Mira Mesa Boulevard.
- Bus-only lanes along Miramar Road to enhance Bus Route 31 on this high-capacity corridor and better service the employment corridor.
- TSP on Miramar Road.
- TSP on Black Mountain Road between Miramar Road and Mira Mesa Boulevard to enhance transit along this key north-south corridor with dense residential developments and employment.
- TSP for westbound left turns from Hillery Drive (off Interstate-15 Direct Access Ramp (DAR)) onto southbound Westview Parkway to enhance Rapid Bus Route 235 travel time into Miramar College Transit Station.
- Widen and extend Direct Access Ramp (DAR) bridge over Interstate-15 at Hillery Drive to provide connectivity for pedestrians and bicyclists between Mira Mesa and communities to the east. Specifically, this connection can provide access for the Scripps Miramar Ranch community to rapid bus routes.

Additionally, SANDAG's 2015 RTP builds upon local planning efforts by emphasizing the link between land use planning and transportation planning. As it is implemented, the Plan will enhance the movement of both people and goods, as well as break new ground by incorporating components aimed at enhancing public health. The following are planned transit projects identified in the RTP to increase mobility connections for the Mira Mesa community:

- Extend existing Rapid 235 Bus service to Temecula from Downtown San Diego, running through Mira Mesa.
- Double tracking for Coaster with peak frequencies of 20 minutes.
- Rapid 30 Bus service from Old Town to Sorrento Mesa.
- Rapid Route 688 bus service from San Ysidro to Sorrento Mesa via I-805/I-15/SR-52 during peak hours.
- Rapid Route 690 bus service from Mid-City to Sorrento Mesa via I-805 corridor during peak hours.
- High frequency bus route along Carroll Canyon Road.
- Bus service frequency enhancements for routes 110, 237, and 921.

Future considerations will be made for improvements at key intersections and roadways that are experiencing congestion and delay to reduce delay for transit users and encourage more transit use. The construction of the Mid-Coast Trolley service provides great opportunity to connect University and Mira Mesa communities to the major employment center in Downtown San Diego as well as to the US-Mexico Border. To get from Mid-Coast stops to the Mira Mesa community, an aerial skyway is proposed to travel into the employment area in Sorrento Valley within the western portion of the community. This would provide reliable travel time close to many major employers.

Relocation of the Sorrento Valley Station has also been considered and recommended in previous planning efforts. The *Project Report for I-5/Sorrento Valley Road Interchange Improvements*[13] recommends relocating the Sorrento Valley Station south, close to the interchange of Mira Mesa Boulevard and I-805. This would modify the transit connections to the community and would need to be evaluated for connections by all modes. The relocation provides an opportunity to explore first- and last-mile pedestrian and bicycle improvements for access to the Sorrento Valley employment center.

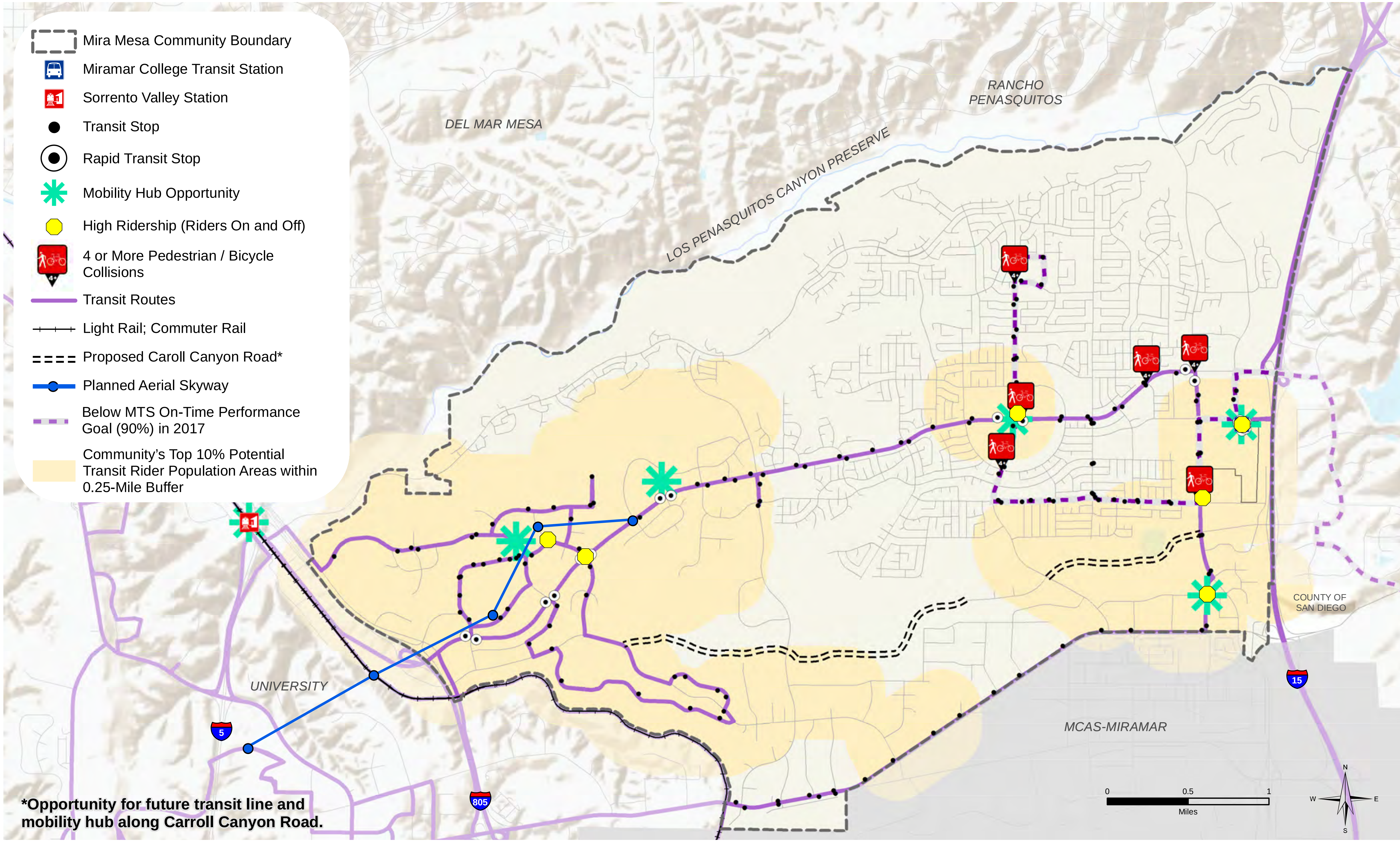
A rapid bus route will be considered for the future roadway alignment of Carroll Canyon Road to service the mixed-use developments planned for construction. Mobility hub locations will also be evaluated along Carroll Canyon Road and other areas within the community. Mobility hubs are places that help connect people to employment, housing, shopping, and recreation by walking, biking, transit, and shared mobility.

As land uses continue to change in Mira Mesa and neighboring communities, MTS will consider transit routes for service upgrades between residential, recreational, and employment areas.

Constraints

The cost of providing the infrastructure for and operations of transit services limit the areas in which transit can be provided. Topographic barriers and limited roadways across communities reduce the number of available options for transit to connect to neighboring communities. Although bordering freeways provide opportunities for transit riders to reach destinations further away, sharing facilities with single-occupant vehicles within the community and along the freeways increases travel time for transit riders discouraging transit use to distant destinations. Transit routes and connections follow areas of high ridership potential which is associated with high population areas or high employment demands. Transit is also only as good as its connections when on fixed routes. Consideration of internal community service and connections to external origin-destination pairs needs to be considered in transit planning.

[13] Project Report for I-5/Sorrento Valley Road Interchange Improvements, City of San Diego Public Works / AECOM, January 2015



Transit Opportunity and Constraint Areas

5.4 VEHICLE

Streets and freeways comprise the framework of our transportation system and play a major role in shaping the community and quality of life. A street system plagued by congestion can have major impacts on the community. Roadway opportunity and constraint areas are shown in **Figure 5-5**.

Arterials

Although Mira Mesa is readily accessible by freeway, travel to specific points within the community by means of arterial roadways can be difficult during the peak hours. In the morning and evening peak hours, congestion occurs on freeway-serving roadways as commuters travel into, out of and across the community for work, school, or other activities.

These high vehicular traffic volumes result in a number of roadway segments operating at substandard levels of service. In particular, east-west roadways such as Mira Mesa Boulevard, Miramar Road, Capricorn Way, Carroll Canyon Road, Flanders Drive, Gold Coast Drive, and Capricorn Way experience LOS E and F conditions or below. Black Mountain Road, north of Mira Mesa also experiences LOS E conditions and is the only access to the community from areas northeast of the Mira Mesa.

Freeways

The two freeways that serve Mira Mesa are I-15 and I-805. These freeways are utilized by residents, employees, and patrons of Mira Mesa, as well as significant regional pass-through trips. In general, a majority of the I-15 and I-805 roadway segments are operating under unsatisfactory conditions with a LOS E or F in either or both of the AM or PM peak hours.

Based on the analysis, northbound I-805 and southbound I-15 are more heavily utilized during the AM peak, while southbound I-805 and both directions of I-15 are more heavily utilized during the PM peak. The worst congestion occurs on the southbound portion of I-805 between Sorrento Valley Boulevard and Mira Mesa Boulevard, where there are only three general purpose travel lanes.

Intersections

Twenty-two (about one-quarter) of the 92 study area intersections currently operate at LOS E or LOS F during one or more of the peak commute hours. Mira Mesa Boulevard, Camino Ruiz, and Black Mountain Road experience some of the worst intersection congestion during both peak periods.

- 7 intersections along Mira Mesa Boulevard operate at unacceptable LOS during either or both the AM and PM peak hours
- 7 intersections along Black Mountain Road operate at unacceptable LOS during either or both the AM and PM peak hours
- 4 intersections along Camino Ruiz operate at unacceptable LOS during both the AM and PM peak hours
- 2 intersections along Miramar Road operate at unacceptable operations during either or both the AM and PM peak hours.
- 2 intersections along Vista Sorrento Parkway operate at unacceptable operations during both the AM and PM peak hours.

- The I-15 on and off ramp intersections at Carroll Canyon Road operate at unacceptable LOS during both the AM and PM peak hours

Safety

It is important to ensure roadways are safe for travel by all modes of transportation. In order concentrate on areas with the greatest need the ten intersections with the highest number of vehicular collisions are listed below:

- Mira Mesa Blvd & Westview Pkwy
- Mira Mesa Blvd & Black Mountain Rd
- Mira Mesa Blvd & Camino Ruiz
- Miramar Rd & Camino Ruiz
- Miramar Rd & Carroll Rd
- Miramar Rd & Black Mountain Rd
- Mira Mesa Blvd & Scranton Rd
- Miramar Rd & Kearny Villa Rd
- Mira Mesa Blvd & Marbury Ave / Westmore Rd
- Miramar Rd & Camino Santa Fe / Frost-Mar Pl

On January 11, 2019, Circulate San Diego, a non-profit organization, compiled an updated “Fatal Fifteen Intersections” list recommendation to Councilmembers to reflect Vision Zero goals of eliminating fatal crashes. Mira Mesa encompasses three of these intersections due to repeat collisions that could warrant safety enhancements:

1. Camino Ruiz & Reagan Rd
2. Mira Mesa Blvd & Marbury Ave / Westmore Rd
3. Scranton Rd & Morehouse Dr

Parking

Roadways in the Mira Mesa Community with high rates of observed on-street parking occupancy (over 85%) during one or more peak periods are generally located near employment centers. In particular, segments include Pacific Heights Boulevard, Pacific Center Boulevard, Pacific Mesa Boulevard, Scranton Road, Carroll Road, Activity Road and Black Mountain Road, especially in the mid-day peak hour. Other roadways with higher parking utilization include Marauder Way, Westview Parkway, and Galvin Avenue, as well as sections along Camino Ruiz. Additionally, large portions of the Mira Mesa community do not permit parking along major arterials such as Mira Mesa Boulevard and Miramar Road.

Greater management of parking spaces can help achieve mobility, environmental, and community development goals. Motorists are accustomed to “free” parking at many destinations, but no parking is without cost. The real cost of parking is paid by consumers to property owners through higher rents, lower salaries, higher costs of goods and services, or taxes – regardless of how many cars we own or how much we drive. This system of “bundling” parking costs with other goods and services lowers the out-of-pocket expenses of driving and makes other types of travel seem expensive by comparison. Research suggests that when the real costs of parking are passed on directly to drivers, the demand for parking typically drops, and alternative modes of transportation, where available (such as transit, carpooling, walking, and bicycling) become more attractive and viable for certain trips.

Planned Roadway Improvements

Carroll Canyon Road extension is a planned connection to be made within the Mira Mesa community, creating another, needed east-west corridor between I-805 and I-5. The roadway connection will be the shared responsibility of private development and City of San Diego. This new connection is anticipated to alleviate traffic on Mira Mesa Boulevard and Miramar Road, which may provide opportunities to enhance the pedestrian, transit and bicycle network within the community.

Planned improvements within the community, such as the Carroll Canyon Road extension and adaptive signal operations along Mira Mesa Boulevard corridor will help to provide more and new opportunities for motorists to travel more efficiently within the community. In addition, consideration should be given to enable safe, attractive and comfortable access for pedestrian, bicycle, and transit users in order to encourage residents, students and employees of Mira Mesa to travel throughout the community by alternative modes. These considerations may also alleviate congestion in areas currently experiencing excessive delays. New development throughout the community can provide additional first- and last-mile connections to give people options of getting to where they need to be and advances in technology can also help to improve capacity of the existing infrastructure.

Opportunities

The roadways in the Mira Mesa community are primarily built out and the primary mode of travel within the community is single occupancy vehicles. The planned Carroll Canyon Road extension will provide an additional east-west connection across the community and is anticipated to shift some of the vehicular traffic along Mira Mesa Boulevard and Miramar Road. However, planned developments within the community will help inform how this extension will influence roadway users.

Connectivity in the community may benefit from the conversion of on-street parking to exclusive transit or bicycle facilities. This can encourage some trips to be made by alternative modes to driving which can eliminate some vehicles along a roadway. Providing enough off-street parking to accommodate the adjacent land uses, and repurposing the roadways to accommodate other modes of travel may be needed to accommodate future growth. The effect of removing on-street parking will need to be considered on an individual project basis.

Circulate San Diego has recommended pedestrian safety improvements that could be implemented at the three Fatal Fifteen intersections within Mira Mesa This can help to facilitate connections for all modes of travel.

Considering the bicycle network recommendations to provide parallel low-stress options for bicycling, enhancements to Mira Mesa Boulevard can prioritize vehicles rather than creating space for all modes of transportation.

Some of the arterials that experience unacceptable operations based on ADTs are located in residential areas, which could be indicative of cut-through traffic avoiding congestion on other major arterials. These roadways include Westmore Road, Gold Coast Drive, and Capricorn Way. Traffic calming measures could be implemented to reduce traffic volumes in the residential areas, and create lower stress conditions for pedestrians and bicyclists accessing schools, parks and other key destinations from their home.

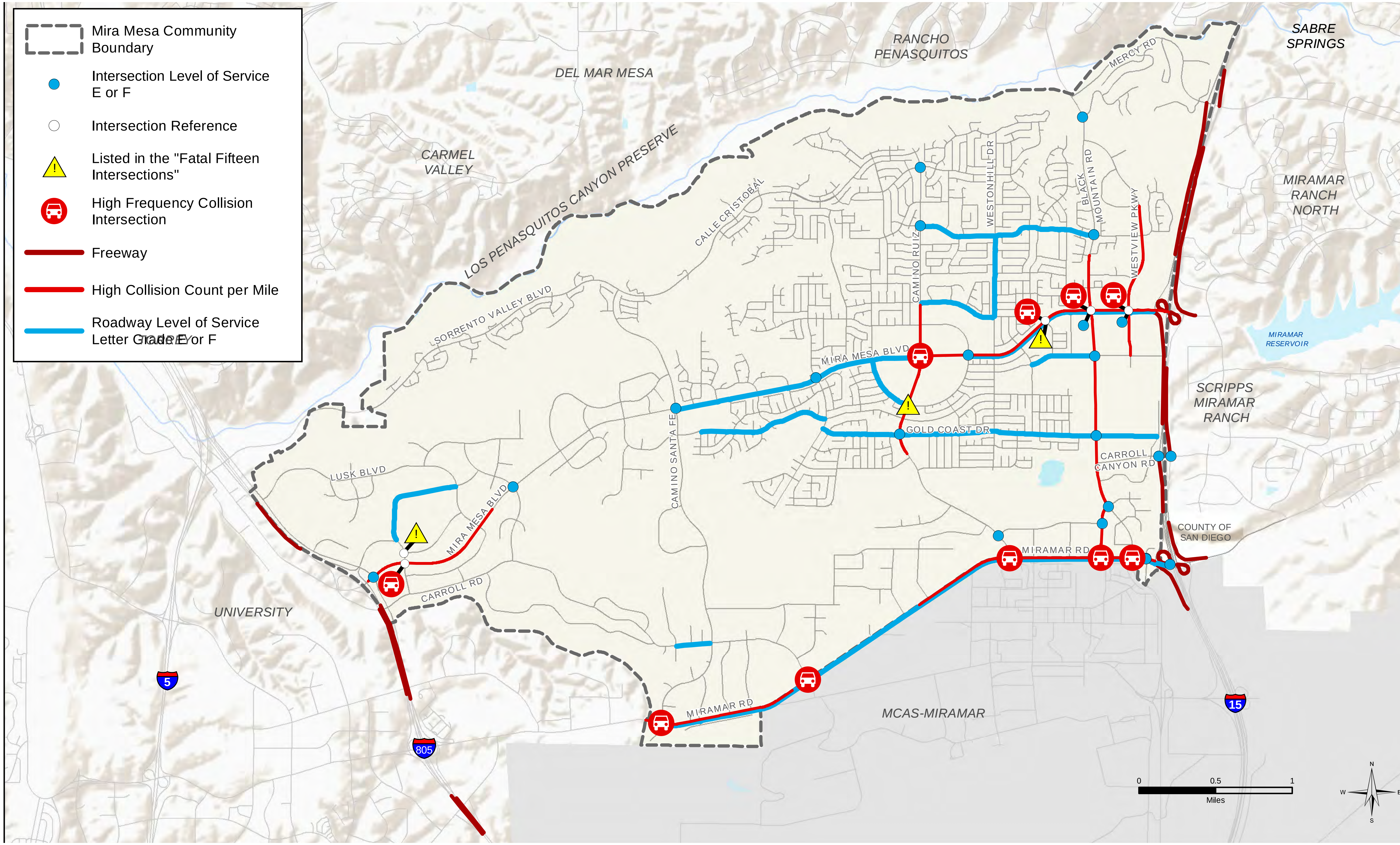
Constraints

The Mira Mesa community is bounded by freeways, canyons, and MCAS Miramar (Military facilities), limiting access and connections to adjacent neighborhoods on all sides of Mira Mesa. The canyons on the north side of the community present a unique barrier to the community. Black Mountain Road and Vista Sorrento Parkway are the only connections to the adjacent communities to the north of Mira Mesa, meaning all vehicles accessing Mira Mesa from the north utilize these two congested roadways. Providing another north-south connection to the north would require crossing canyons and lands dedicated to preserve habitat for animals.

Similarly, MCAS Miramar on the south side prevents another north-south connection to communities south of Mira Mesa as it is dedicated military land.

Additionally, many of the freeway underpasses and overpasses restrict the ability to increase capacity. For example, Sorrento Valley Boulevard under the I-805 overpass is at its full capacity due to right-of-way constraints under the bridge. This is a main connection between the Sorrento Valley Station west of I-805 and the major employment center east of I-805.

Lastly, many of the community's arterial roadways are built out with little opportunity to expand or widen. Mira Mesa Boulevard and Black Mountain Road are major east-west and north-south roadways within the community that provide access to freeways as well as neighboring communities; these roadways experience congestion, excessive delays at intersections, and a large number of collisions. The majority of these roadways have built out development along both sides of the roadway which limits the amount of space available.



Vehicle Opportunity and Constraint Corridors

Appendix B – Pedestrian Collision Evaluation

Mira Mesa Blvd & Westmore Rd/Marbury Ave

#	Cause	Location	Pedestrian Action	Vehicle Action	Other Notes
1	Auto R/W Violation	14 feet East of intersection	Crossing in Crosswalk	Proceeding Straight	Dark
2	Ped R/W Violation	250 West of intersection	Not stated	Making Right Turn	
3	Traffic Signals and Striping	Not Stated	Crossing not at Cross-walk	Proceeding Straight	
4	Ped R/W Violation	Not Stated	Crossing in Crosswalk	Making Left Turn	
5	Ped R/W Violation	Not Stated	Crossing in Crosswalk	Making Left Turn	

Countermeasures

- High visibility crosswalks
- Leading Pedestrian Intervals
- Pedestrian countdown timers
- Advanced stop bars

Camino Ruiz & Teresa Dr/Capricorn Way

#	Cause	Location	Pedestrian Action	Vehicle Action	Other Notes
1	Unsafe Speed	8 feet East of intersection	Crossing in Crosswalk	Proceeding Straight	
2	Auto R/W Violation	Not stated	Crossing in Crosswalk	Making Left Turn	
3	Ped R/W Violation	Not stated	Crossing in Crosswalk	Making Left Turn	Inattention
4	Ped R/W Violation	8 feet North of intersection	Crossing in Crosswalk	Making Left Turn	Inattention

Countermeasures

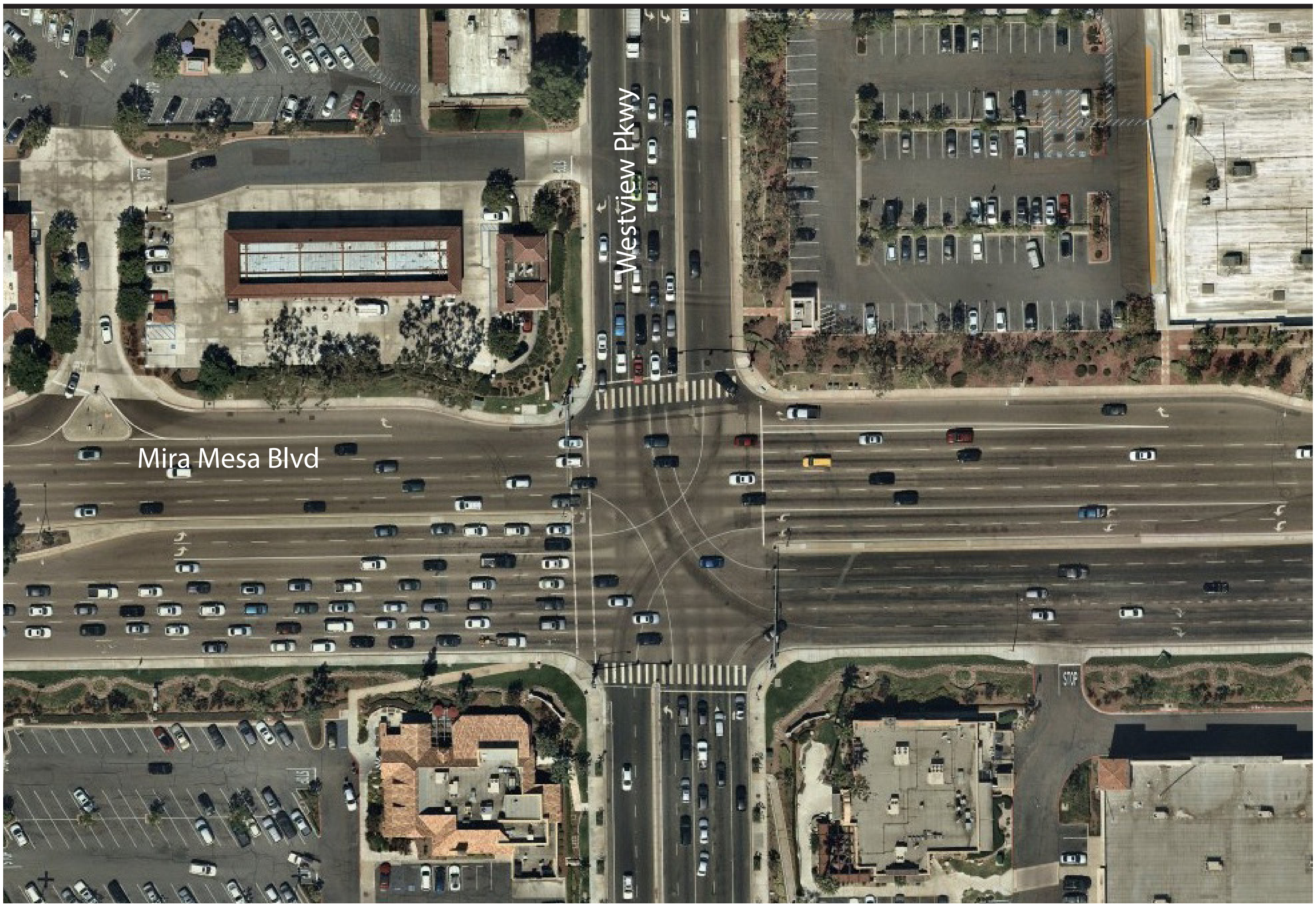
- Curb bulbouts (NE and SE corners)
- Protected left-turn movements (east-west)
- High visibility crosswalks
- Leading Pedestrian Intervals
- Pedestrian countdown timers
- Advanced stop bars

Mira Mesa Blvd & Black Mountain Rd

#	Cause	Location	Pedestrian Action	Vehicle Action	Other Notes
1	Pedestrian Violation	120 feet East of intersection	Crossing Not in Crosswalk	Proceeding Straight	Dark
2	Pedestrian Violation	54 feet North of intersection	Not stated	Proceeding Straight	
3	Pedestrian R/W Violation	Not stated	Crossing Not in Crosswalk	Making Right Turn	
4	Pedestrian Violation	Not stated	Not stated	Proceeding Straight	

Countermeasures

- High visibility crosswalks
- Leading Pedestrian Intervals
- Pedestrian countdown timers
- Advanced stop bars



#	Cause	Location	Pedestrian Action	Vehicle Action	Other Notes
1	Other Hazardous Movement	3 feet South of intersection	Not stated	Making Right Turn	
2	Improper Turning	Not stated	Stopped In Road	Parking Manuever	
3	Pedestrian R/W Violation	Not stated	Not stated	Making Right Turn	
4	Pedestrian R/W Violation	Not stated	Not stated	Making Right Turn	

Countermeasures

- Pedestrian Bridge
- High visibility crosswalk (west leg)
- Leading Pedestrian Intervals
- Pedestrian countdown timers
- Advanced stop bars

Black Mountain Rd & Gemini Ave

#	Cause	Location	Pedestrian Action	Vehicle Action	Other Notes
1	Other Hazardous Movement	9 feet West of intersection	Crossing at Crosswalk	Making Right Turn	
2	Unsafe Starting or Backing	Not stated	Not stated	Making Right Turn	
3	Pedestrian Violation	4 feet South of intersection	Crossing at Crosswalk	Making Left Turn	

Countermeasures

- Protected left turns (east-west)
- Leading Pedestrian Intervals
- Pedestrian countdown timers

Mira Mesa Blvd & Mira Mesa Mall

#	Cause	Location	Pedestrian Action	Vehicle Action	Other Notes
1	Unsafe Starting or Backing	250 feet East of intersection	Not in Road	Backing	Inattention
2	Other Hazardous Movement	Not stated	Crossing at Crosswalk	Making Left Turn	
3	Pedestrian Violation	5 feet North of intersection	Crossing at Crosswalk	Proceeding Straight	Violation

Countermeasures

- High visibility crosswalks
- Leading Pedestrian Intervals
- Pedestrian countdown timers

Mira Mesa Blvd & Sequence Dr/Huennekens St

#	Cause	Location	Pedestrian Action	Vehicle Action	Other Notes
1	Other Hazardous Movement	Not stated	Crossing Not at Crosswalk	Making Right Turn	Dark
2	Pedestrian R/W Violation	1 foot South of intersection	Crossing at Crosswalk	Stopped in Road	
3	Not stated	Not stated	Not stated	Not stated	

Countermeasures

- Corner bulb-outs / protected intersection
- High visibility crosswalks
- Leading Pedestrian Intervals
- Pedestrian countdown timers

Camino Ruiz & Reagan Rd

#	Cause	Location	Pedestrian Action	Vehicle Action	Other Notes
1	Automobile R/W Violation	Not stated	Not stated	Proceeding Straight	
2	Pedestrian R/W Violation	6 feet East of intersection	Proceeding Straight	Making Right Turn	
3	Pedestrian R/W Violation	Not stated	Not stated	Making Right Turn	

Countermeasures

- Corner bulb-outs / protected intersection
- High visibility crosswalks
- Leading Pedestrian Intervals
- Pedestrian countdown timers

Appendix C – Corridor Concept Planning Sheets and Cross-Sections

Camino Ruiz

Length
3 Miles

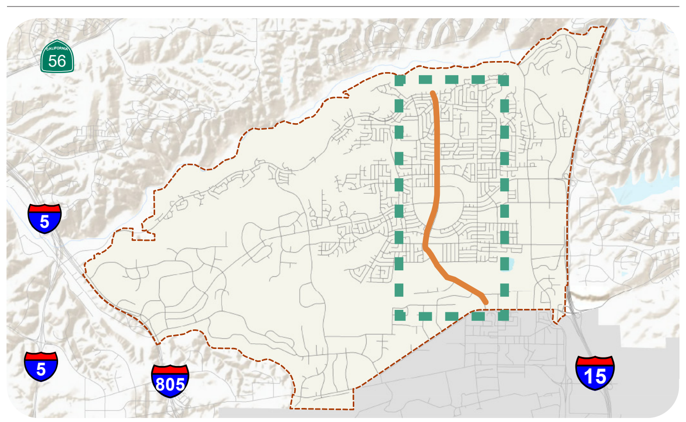
Functional Class
Existing: 4- to 5-Lane Major Arterial
Preferred: 4- to 6-Lane Major Arterial

Traffic Volumes
18,000-23,000 North of Gold Coast Dr
28,000 South of Gold Coast Dr

Crash Summary (2012-2017)

Total Crashes	236
Most Predominant Causes:	
Auto R/W Violation	23%
Improper Turning	22%
Unsafe Speed	18%
Percent of community crashes	12%

Corridor Location



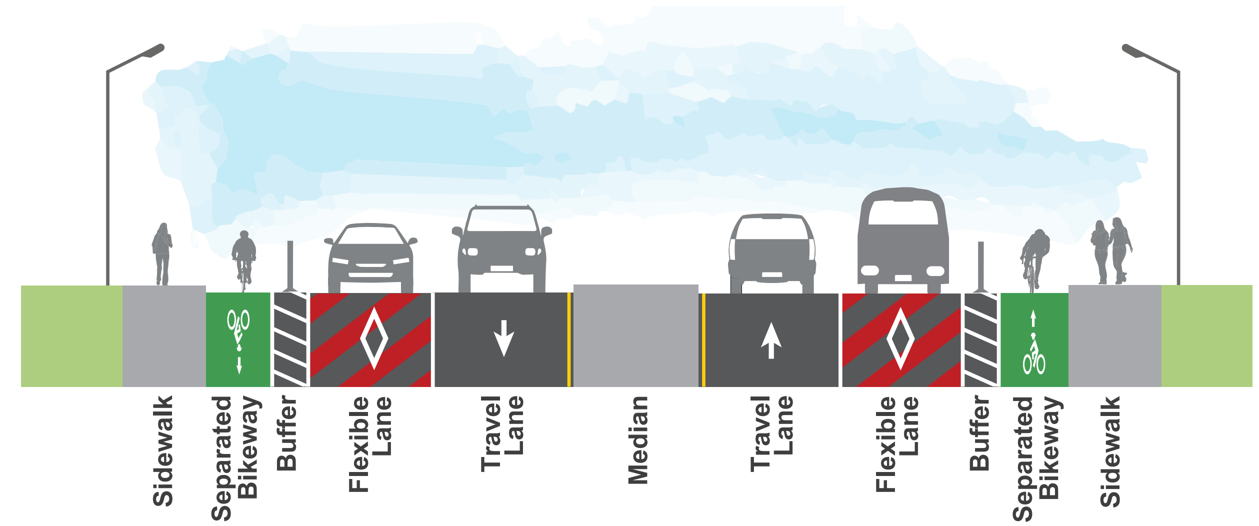
Potential Corridor-wide Improvements

- **Complete corridor:** Improve access to destinations and neighborhoods by providing quality facilities for all modes of travel
- **Flexible lanes:** (see below)
- **Separated bikeway:** Improves comfort by reducing traffic stress on cyclists, encourages cycling, and creates connections within the community and to the region

Potential Corridor-wide Feature

Flexible lanes: dedicated roadway space for any combination of non-single occupancy vehicles, such as transit, autonomous/connected vehicles, or other emerging mobility concepts

General Corridor Cross Section
Varies By Segment (see pages CR-2 & CR-3)



Legend

- Typical Section (see following sheets)
- Community Plan Implementation Overlay Zone (CPIOZ)

MOBILITY CORRIDOR CONCEPT PLANNING SHEET

The City of SAN DIEGO
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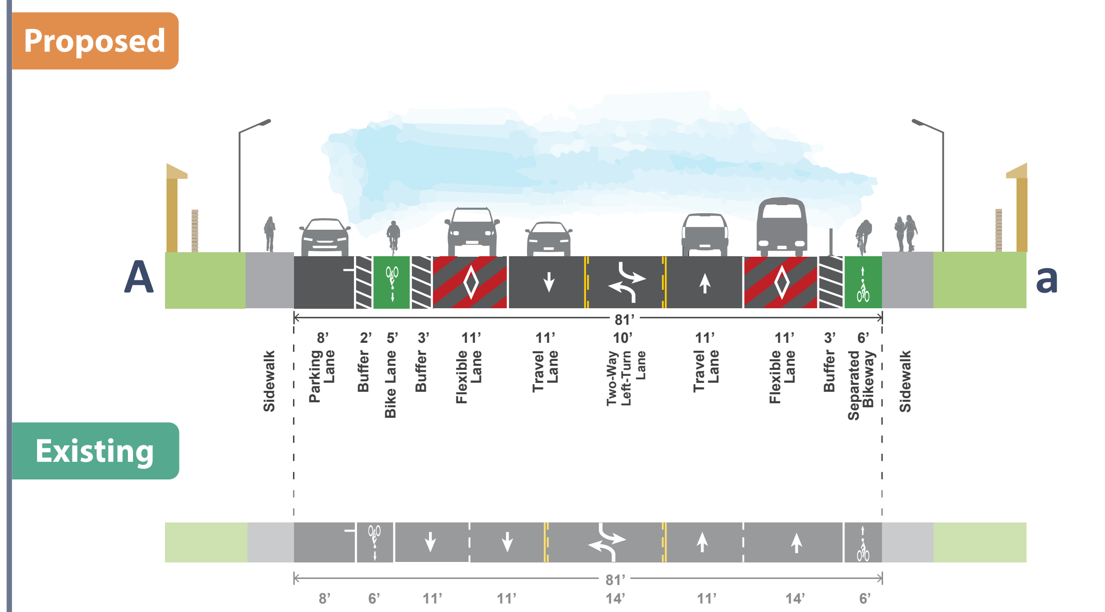
Camino Ruiz

Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to varyvv. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD). Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

Calle Cristobal to Zapata Ave



Reconfigure existing right-of-way to include:

- Parking lane on the west side
- One general purpose travel lane each way
- One flexible lane each way
- A center two-way left-turn lane
- Buffered bike lane southbound
- One-way separated bikeway northbound

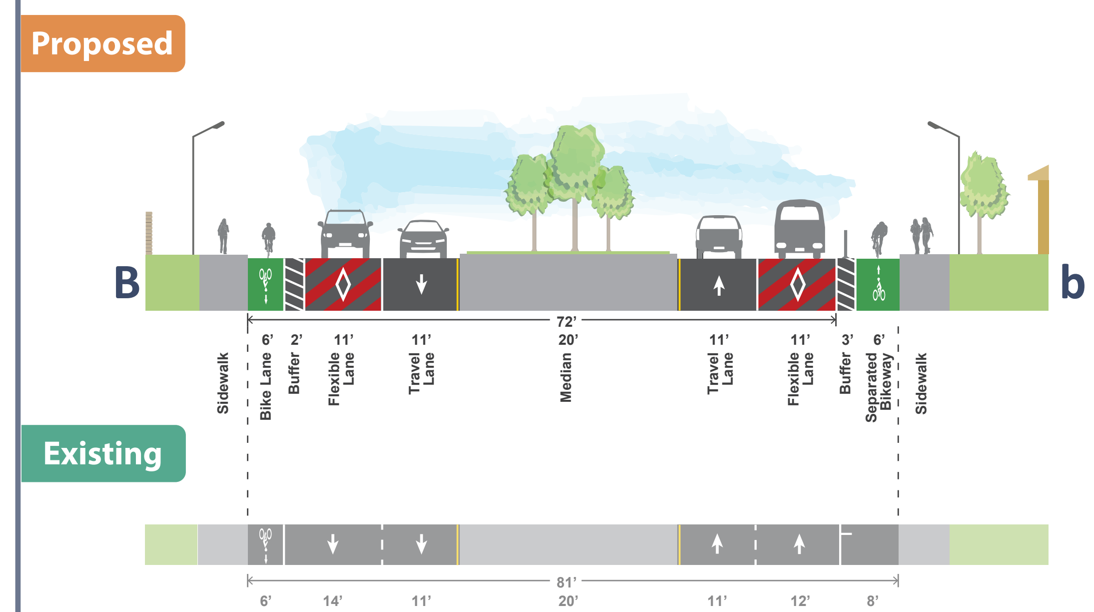
Right-of-way modifications:

- None

Future Redevelopments:

- None

Zapata Ave to New Salem St



Reconfigure existing right-of-way to include:

- One general purpose travel lane each way
- One flexible lane each way
- A center raised median
- Buffered bike lane southbound
- One-way separated bikeway northbound

Right-of-way modifications:

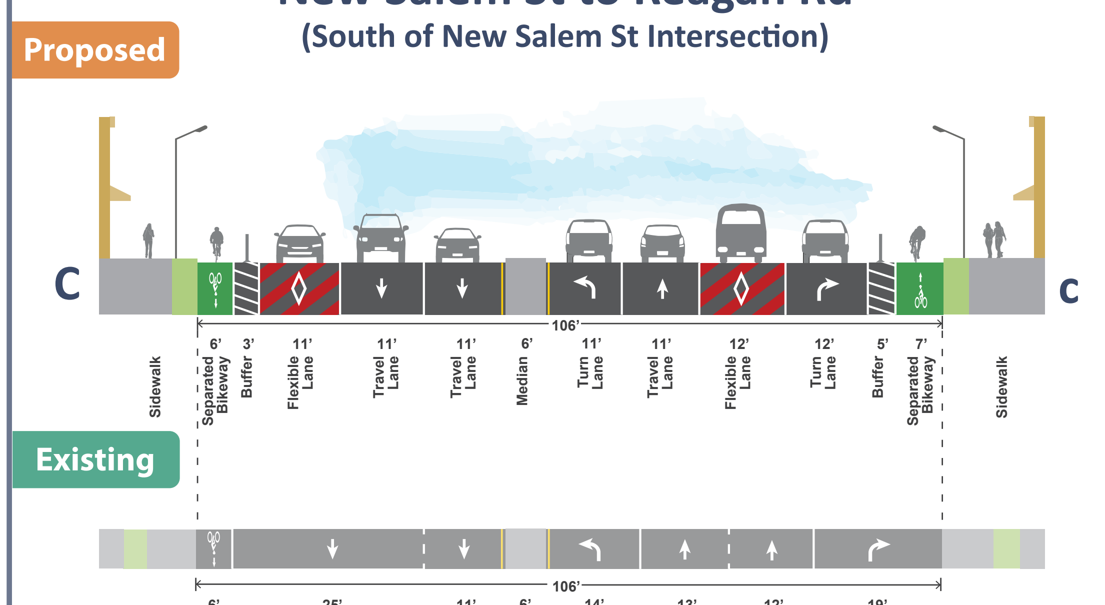
- None

Future Redevelopments:

- None

New Salem St to Reagan Rd

(South of New Salem St Intersection)



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes southbound
- One general purpose travel lane northbound
- One flexible lane each way
- A center raised median
- One-way separated bikeway each way

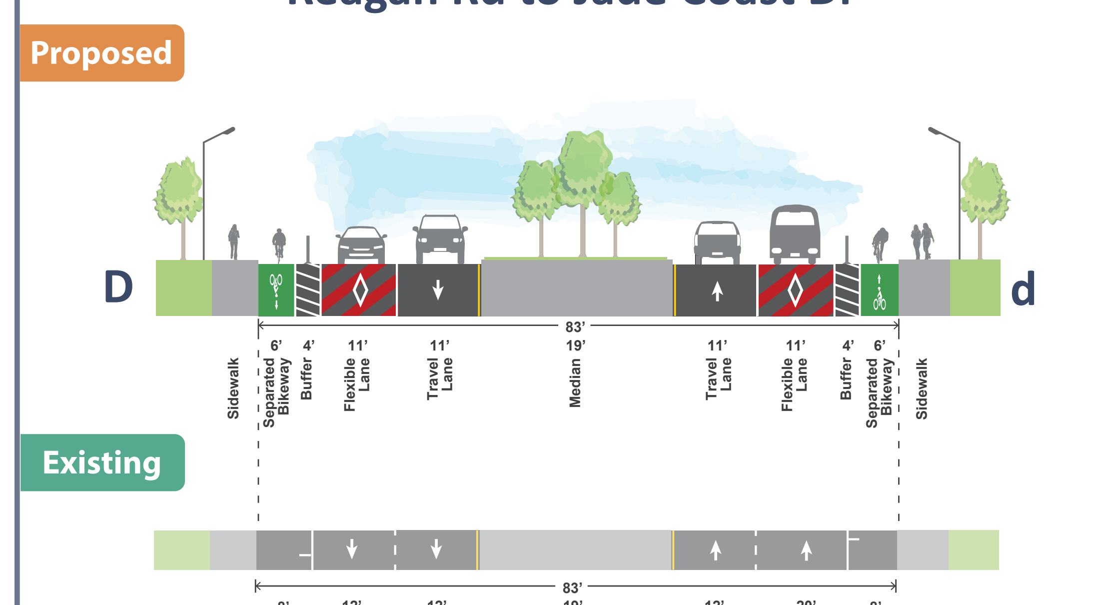
Right-of-way modifications:

- None

Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Mira Mesa Town Center and should comply with recommendations in the Urban Design Element

Reagan Rd to Jade Coast Dr



Reconfigure existing right-of-way to include:

- One general purpose travel lane each way
- One flexible lane each way
- A center raised median
- One-way separated bikeway each way

Right-of-way modifications:

- None

Future Redevelopments:

- None

MOBILITY CORRIDOR CONCEPT PLANNING SHEET

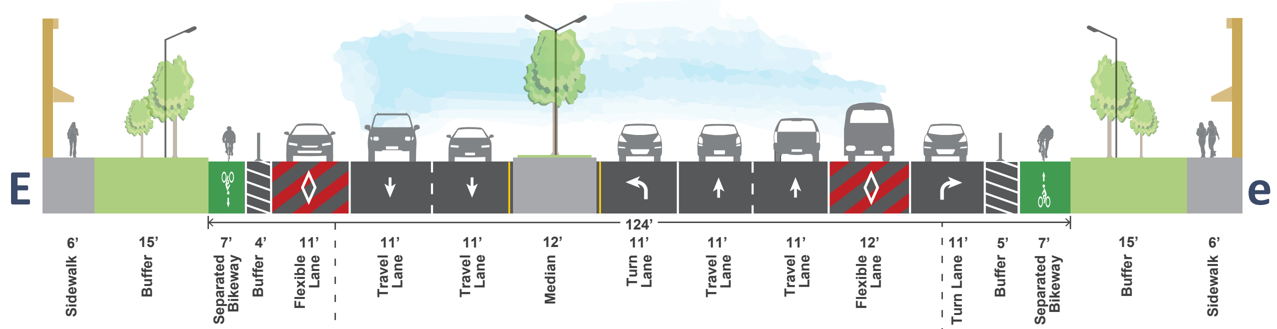
Camino Ruiz

Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD). Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

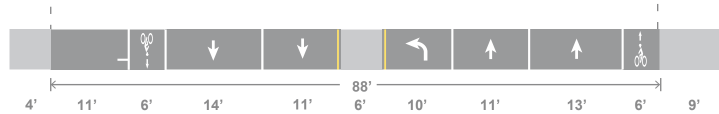
Jade Coast Dr to South of Carroll Canyon Rd

(South of Carroll Canyon Rd Intersection)

Planned*



Existing



* Planned as part of the most recent version of the Stone Creek Master Plan.

Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- One-way separated bikeway each way

Right-of-way modifications:

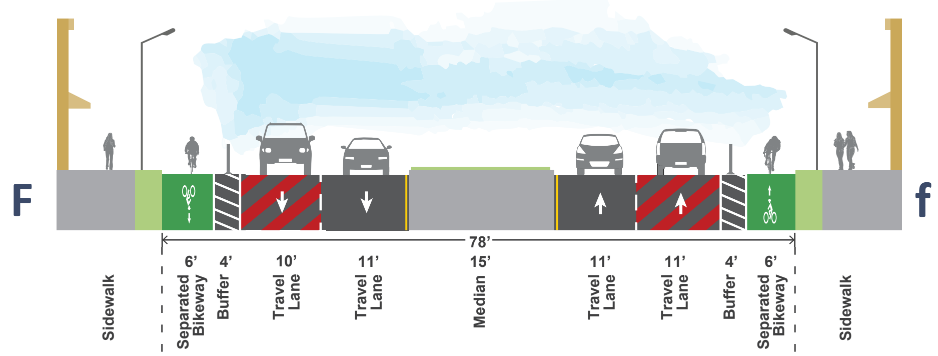
- Proposed reconfiguration would require widening to the east and west

Future Redevelopments:

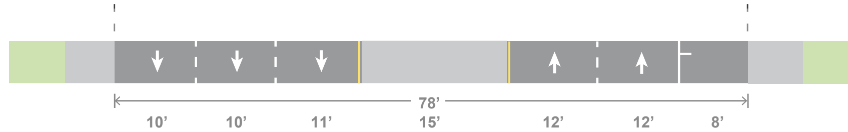
- Proposed reconfiguration fronts potential redevelopment of Stone Creek and Miramar Gateway and should comply with recommendations in the Urban Design Element

South of Carroll Canyon Rd to Miramar Rd

Proposed



Existing



Reconfigure existing right-of-way to include:

- One general purpose travel lane each way
- One flexible lane each way
- A center raised median
- One-way separated bikeway each way

Right-of-way modifications:

- None

Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Miramar Gateway and should comply with recommendations in the Urban Design Element

The City of SAN DIEGO Kimley»Horn

Camino Ruiz

Note: Intersection design is conceptual only. Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

Camino Ruiz & Mira Mesa Blvd
Proposed Intersection Concept

Westview Parkway

Length
1.5 Miles

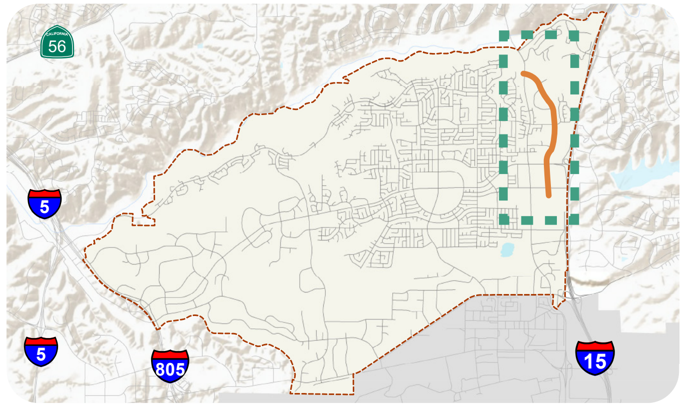
Functional Class
Existing: 4-Lane Major Arterial
Preferred: 4-Lane Collector

Traffic Volumes
8,000 North of Capricorn Rd
22,000 Capricorn Rd to Mira Mesa Blvd
12,500 Mira Mesa Blvd to Hillery Dr

Crash Summary (2012-2017)

Total Crashes	123
Most Predominant Causes:	
Unsafe Speed	25%
Improper Turning	18%
Auto R/W Violation	14%
Percent of community crashes	6%

Corridor Location



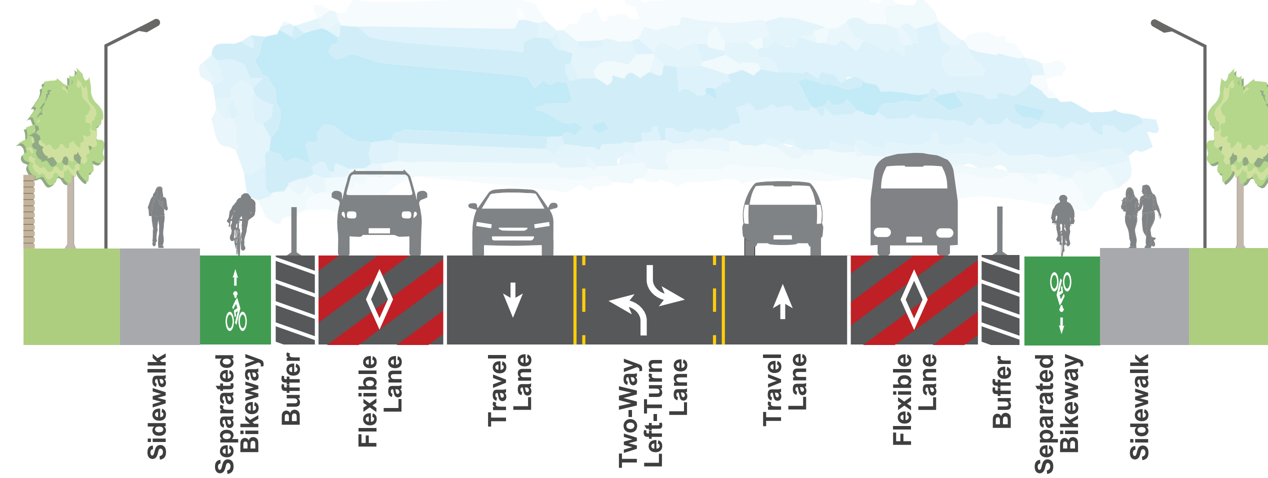
Potential Corridor Improvements

- **Complete corridor:** Improve access to destinations and neighborhoods by providing quality facilities for all modes of travel
- **Flexible lanes:** (see below)
- **Separated bikeway:** Improves comfort by reducing traffic stress on cyclists, encourages cycling, and creates connections with the community and to the region

Potential Corridor Feature

Flexible lanes: dedicated roadway space for any combination of non-single occupancy vehicles, such as transit, autonomous/connected vehicles, or other emerging mobility concepts

General Corridor Cross Section
Varies By Segment (see page WP-2)



Legend

- Typical Section (see following sheets)
- Community Plan Implementation Overlay Zone (CPIOZ)

The City of SAN DIEGO Kimley»Horn

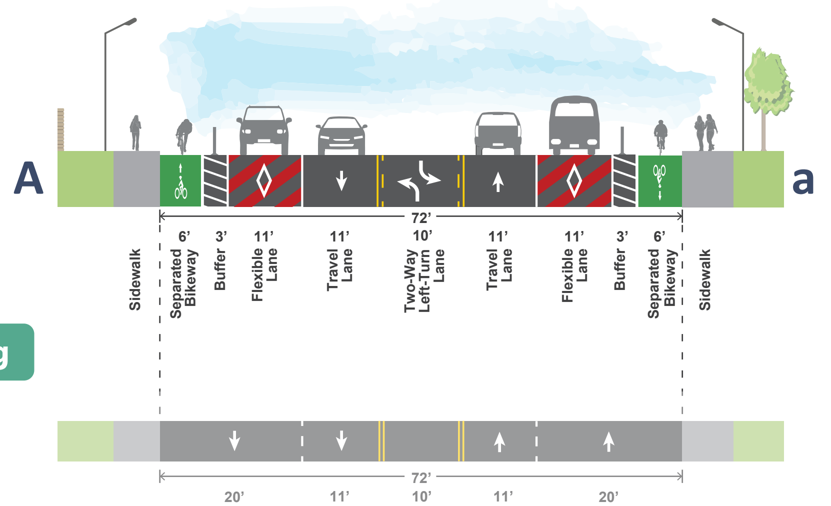
Westview Parkway

Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD). Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

Black Mountain Rd to Galvin Ave

Proposed

Existing



Reconfigure existing right-of-way to include:

- One general purpose travel lane each way
- One flexible lane each way
- A center two-way left-turn lane
- One-way separated bikeway each way

Right-of-way modifications:
- None

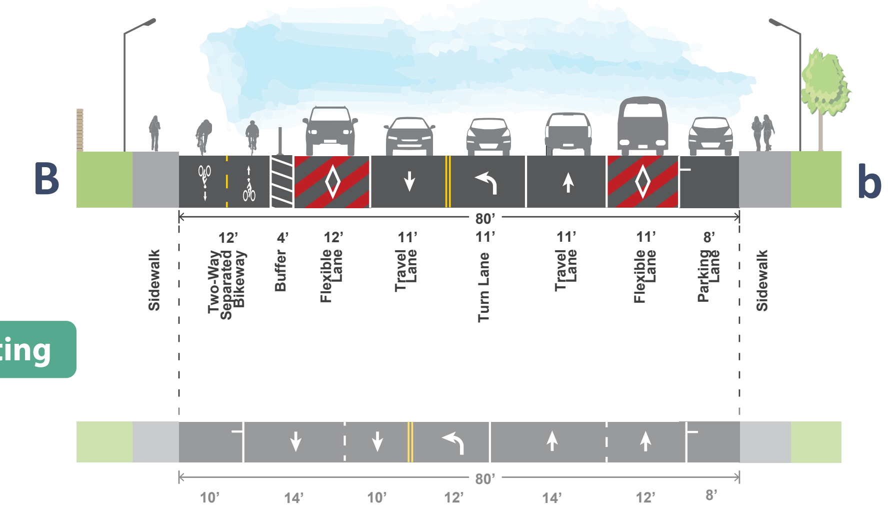
Future Redevelopments:
- None

Galvin Ave to Mira Mesa Blvd

(South of Galvin Ave Intersection)

Proposed

Existing



Reconfigure existing right-of-way to include:

- Parking lane on the east side
- One general purpose travel lane each way
- One flexible lane each way
- Two-way separated bikeway on the west side

Right-of-way modifications:
- None

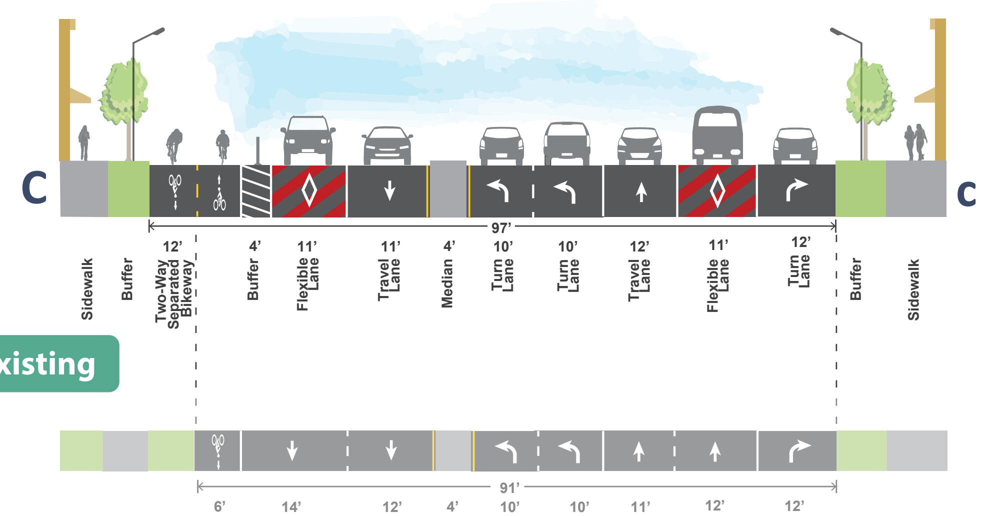
Future Redevelopments:
- Proposed reconfiguration fronts potential redevelopment of Mira Mesa Gateway and should comply with recommendations in the Urban Design Element

Mira Mesa Blvd to Hillery Dr

(South of Mira Mesa Blvd Intersection)

Proposed

Existing



Reconfigure existing right-of-way to include:

- One general purpose travel lane each way
- One flexible lane each way
- A center raised median
- Two-way separated bikeway on the west side

Right-of-way modifications:
- Proposed reconfiguration would require widening to the west

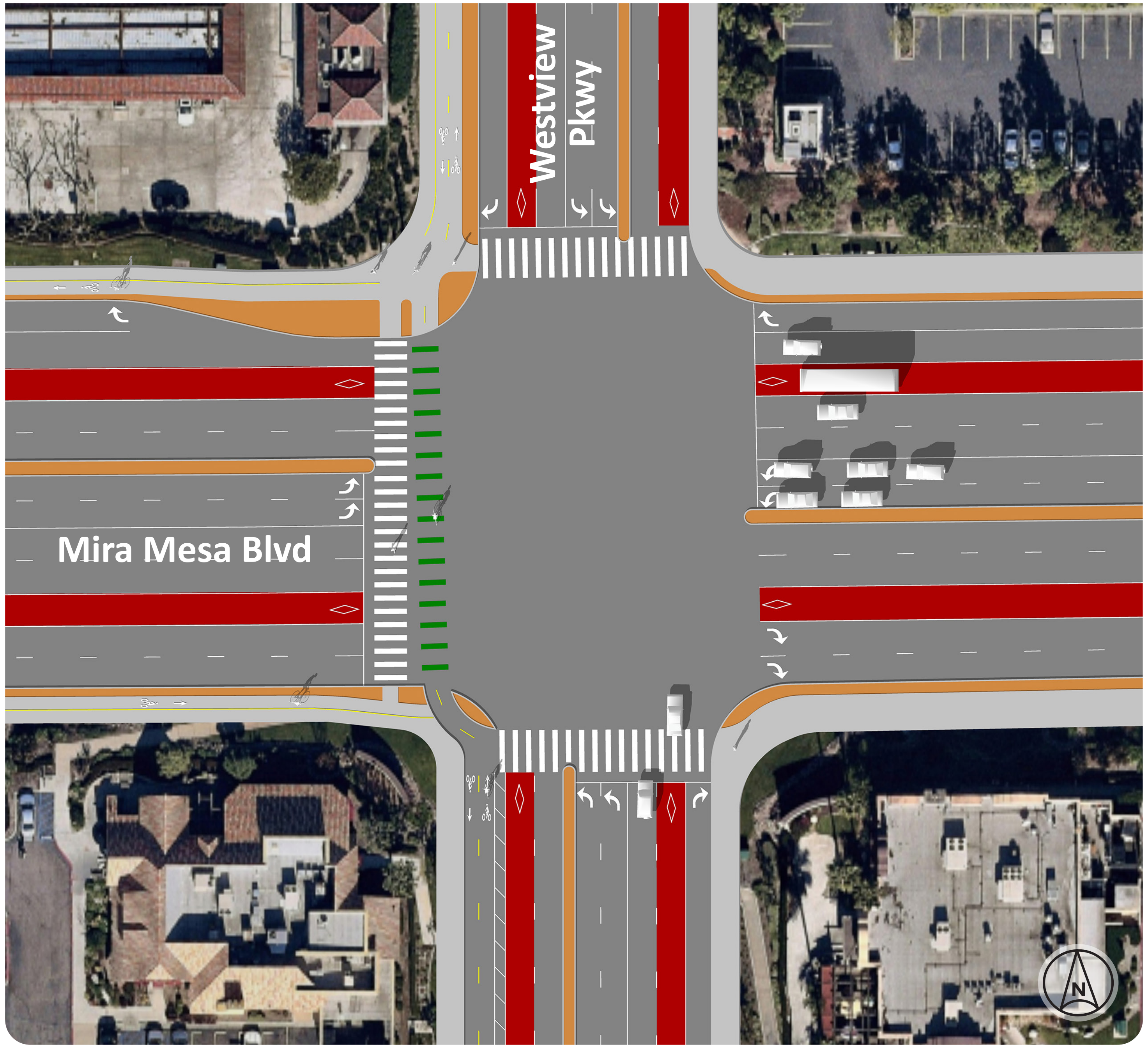
Future Redevelopments:
- Proposed reconfiguration fronts potential redevelopment of Mira Mesa Gateway and should comply with recommendations in the Urban Design Element

The City of SAN DIEGO Kimley»Horn

Westview Parkway

Note: Intersection design is conceptual only. Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

Westview Pkwy & Mira Mesa Blvd
Proposed Intersection Concept



MOBILITY CORRIDOR CONCEPT PLANNING SHEET

Mira Mesa Boulevard

Length
5.5 Miles

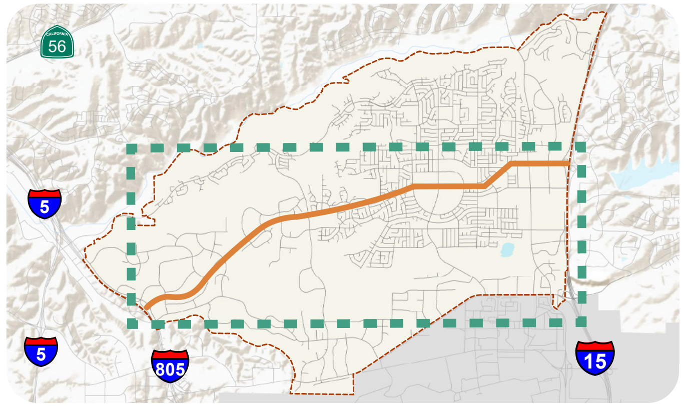
Functional Class
Existing: 6-Lane Major/Prime Arterial
Preferred: 6-Lane Prime Arterial

Traffic Volumes
61,000 West of Scranton Rd
41,000-52,000 Scranton Rd to Camino Ruiz
31,500 Camino Ruiz to New Salem St
56,000-59,500 New Salem St to Black Mountain Rd
70,600-78,500 Black Mountain Rd to I-15

Crash Summary (2012-2017)

Total Crashes	518
Most Predominant Causes:	
Unsafe Speed	26%
Auto R/W Turning Violation	15%
Improper Turning	14%
Percent of community crashes	25%

Corridor Location



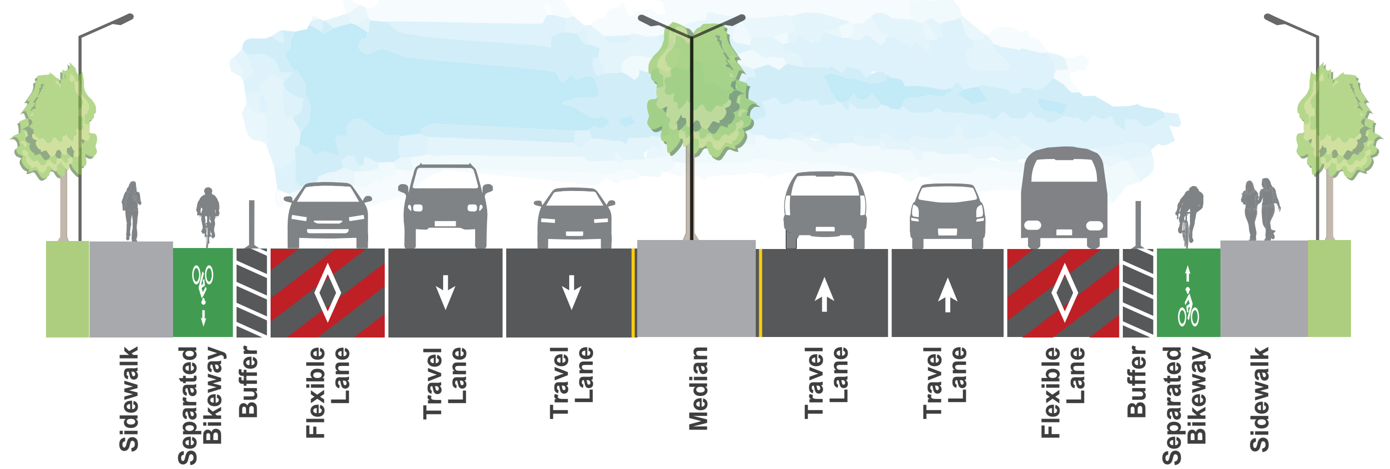
Potential Corridor-wide Improvements

- **Separated bikeways:** Improves comfort by reducing traffic stress on cyclists, encourages cycling, and creates connections within the community and to the region
- **Sustainable Mobility for Adaptable and Reliable Transportation (SMART) corridor:** (see below)

Potential Corridor-wide Feature

SMART corridor: SMART corridors can include flexible lanes dedicated for use by any combination of non-single occupancy vehicles, and utilizes emerging technology to increase person throughput.

General Corridor Cross Section
Varies By Segment (see pages MMB-2 — MMB-4)



Legend

Typical Section (see following sheets)
Community Plan Implementation Overlay Zone (CPIOZ)

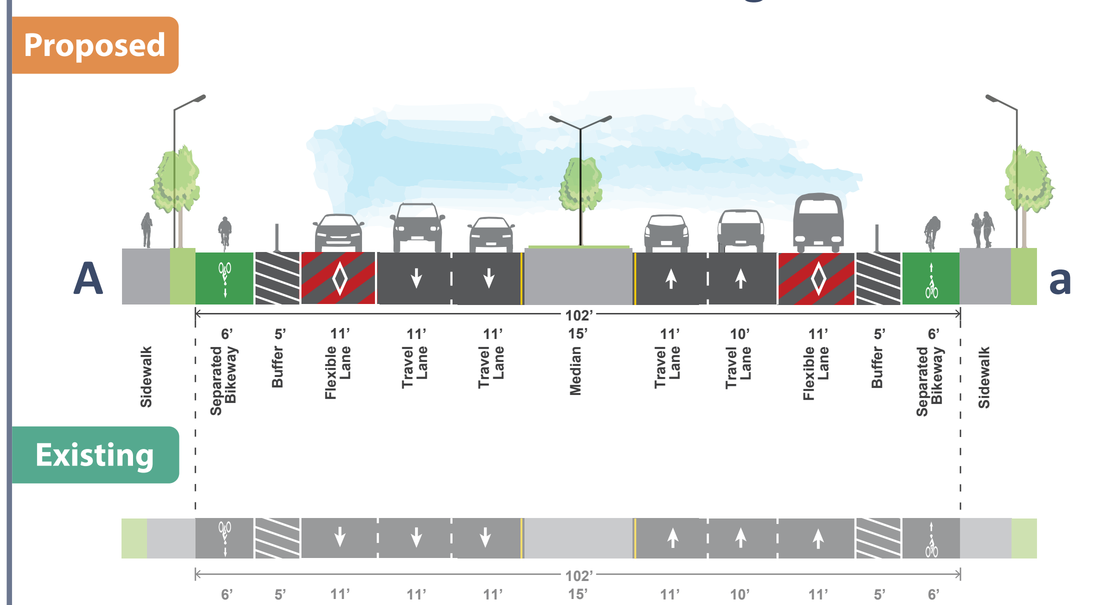
MOBILITY CORRIDOR CONCEPT PLANNING SHEET

The City of SAN DIEGO
Kimley»Horn

Mira Mesa Boulevard

Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD). Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

Scranton Rd to Schilling Ave



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- One-way separated bikeway each way

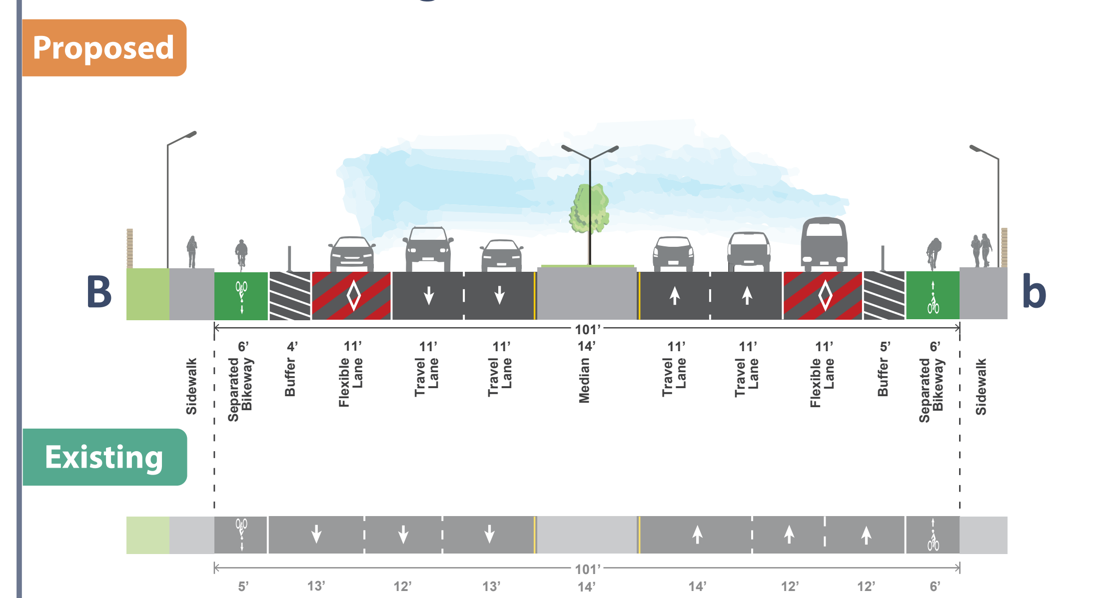
Right-of-way modifications:

- None

Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Sorrento Mesa and should comply with recommendations in the Urban Design Element

Schilling Ave to Aderman Ave



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- One-way separated bikeway on both sides

Right-of-way modifications:

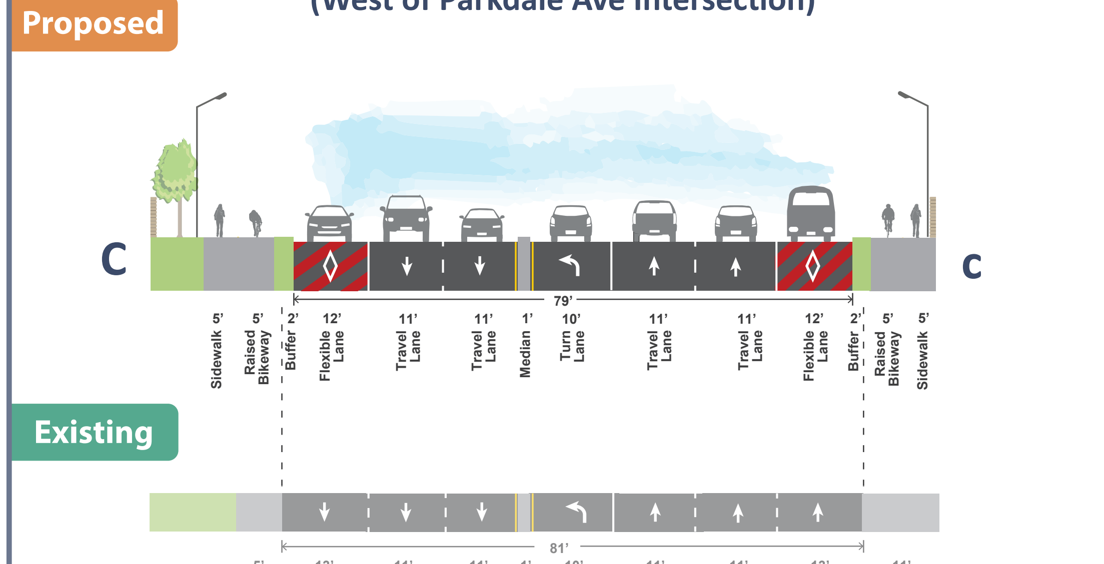
- None

Future Redevelopments:

- None

Aderman Ave to Dabney Drive

(West of Parkdale Ave Intersection)



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- One-way raised bikeway on both sides

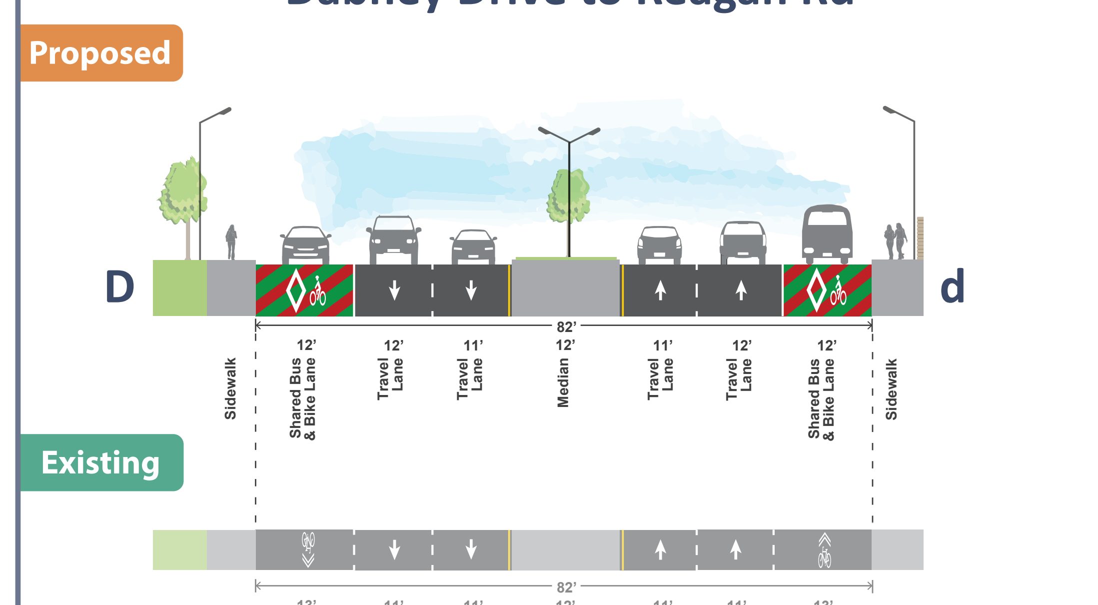
Right-of-way modifications:

- Proposed reconfiguration would require widening to the north

Future Redevelopments:

- None

Dabney Drive to Reagan Rd



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One shared bike and bus lane in each direction
- A center raised median

Right-of-way modifications:

- None

Future Redevelopments:

- None

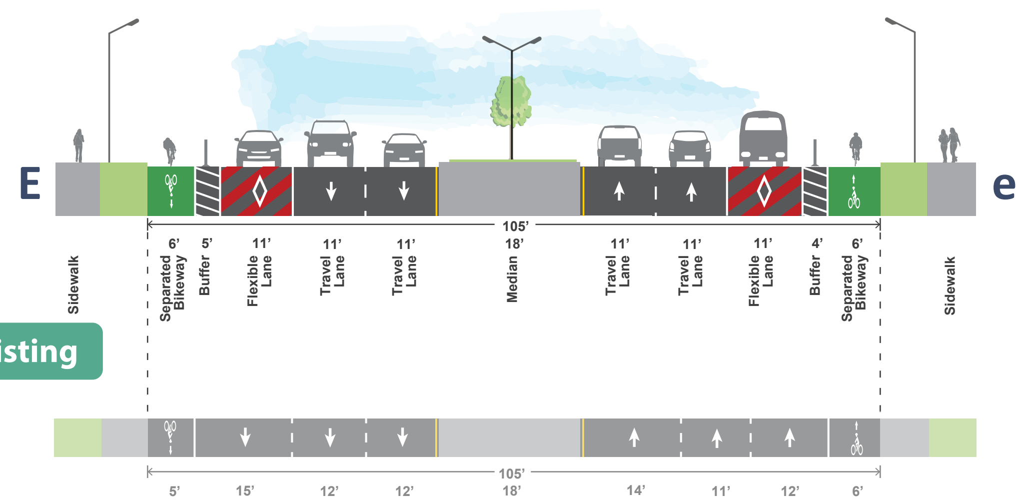
MOBILITY CORRIDOR CONCEPT PLANNING SHEET

Mira Mesa Boulevard

Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD). Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

Reagan Rd to New Salem St/Marauder Way

Proposed



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- One-way separated bikeway each way

Right-of-way modifications:

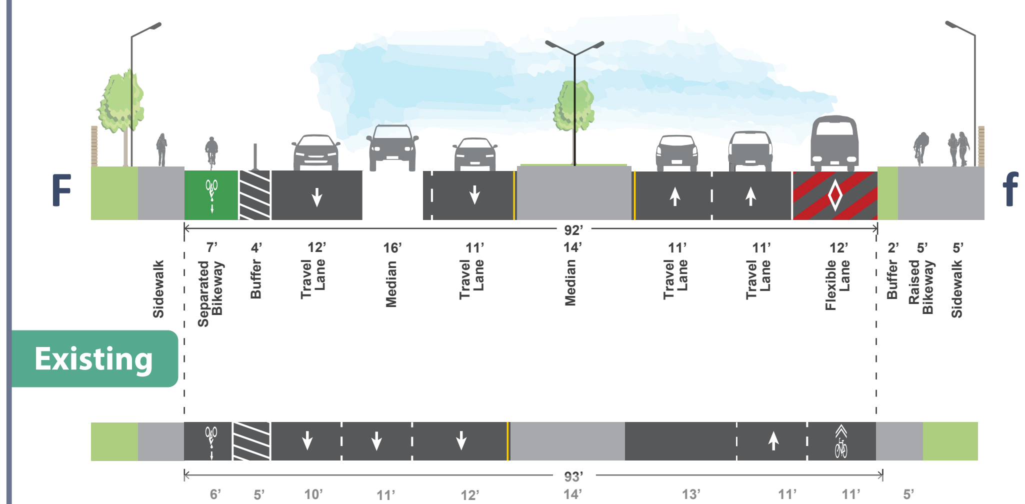
- None

Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Mira Mesa Town Center and should comply with recommendations in the Urban Design Element

New Salem St/Marauder Way to Westonhill Dr

Proposed



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- One-way separated bikeway westbound
- One-way raised bikeway on the south side

Right-of-way modifications:

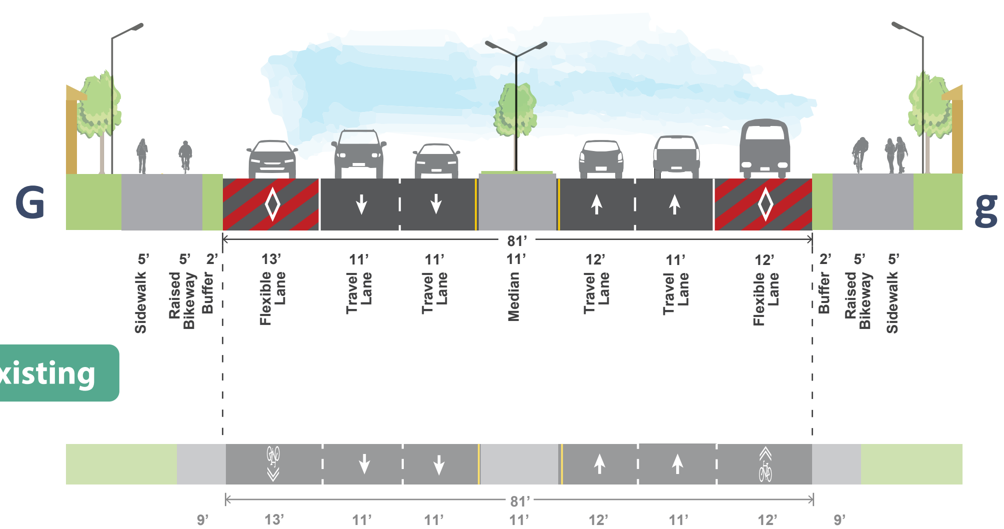
- Proposed reconfiguration would require widening to the south

Future Redevelopments:

- None

Westonhill Dr to Greenford Dr

Proposed



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- One-way raised bikeway on both sides

Right-of-way modifications:

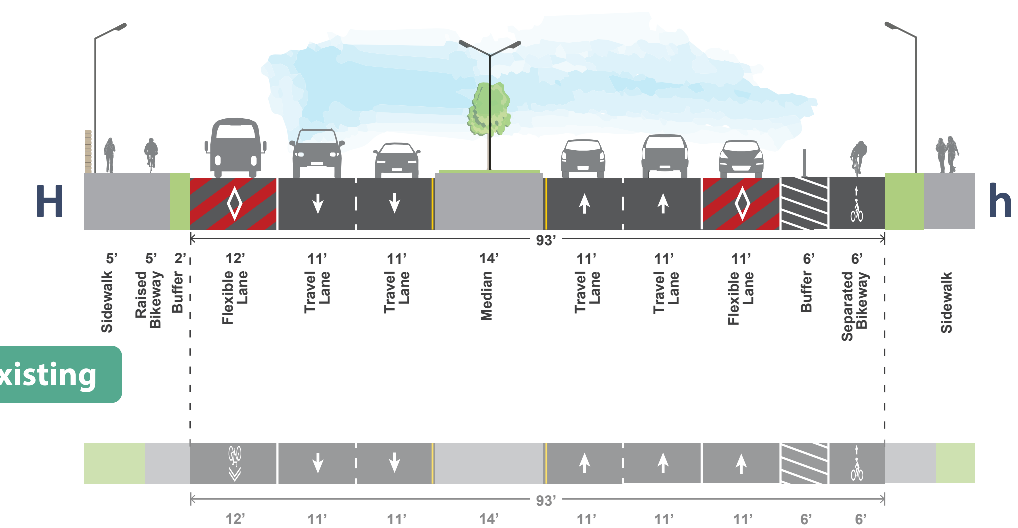
- Proposed reconfiguration would require widening to the north and south

Future Redevelopments:

- None

Greenford Dr to Black Mountain Rd

Proposed



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- One-way raised bikeway westbound
- One-way separated bikeway on the north side

Right-of-way modifications:

- Proposed reconfiguration would require widening to the north

Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Mira Mesa Gateway and should comply with recommendations in the Urban Design Element

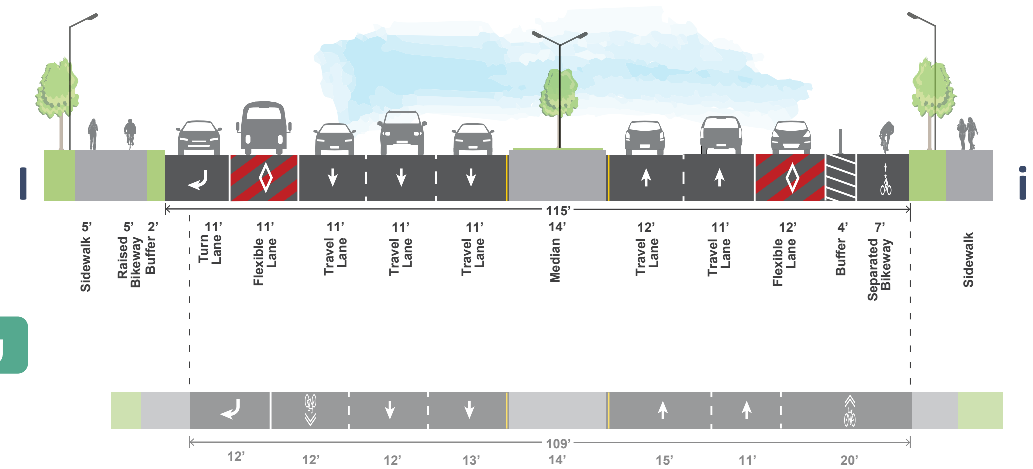
MOBILITY CORRIDOR CONCEPT PLANNING SHEET

Mira Mesa Boulevard

Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment Dristrict (MAD). Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

Black Mountain Rd to Westview Pkwy

Proposed



Existing

Reconfigure existing right-of-way to include:

- Two general purpose travel lanes westbound
- Three general purpose travel lanes eastbound
- One flexible lane each way
- A center raised median
- One-way raised bikeway westbound
- One-way separated bikeway on the south side

Right-of-way modifications:

- None

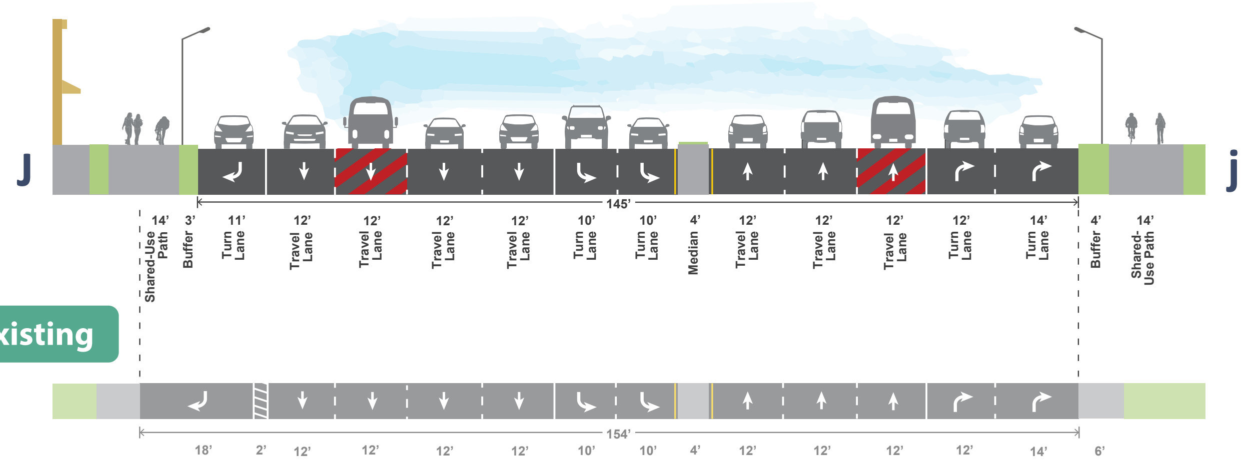
Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Mira Mesa Gateway and should comply with recommendations in the Urban Design Element

Westview Pkwy to I-15

(East of Westview Pkwy Intersection)

Proposed



Existing

Reconfigure existing right-of-way to include:

- Four general purpose lanes westbound
- Three general purpose lanes eastbound
- A center raised median
- Two-way shared use path on both sides

Right-of-way modifications:

- Proposed reconfiguration would require widening to the south

Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Mira Mesa Gateway and should comply with recommendations in the Urban Design Element

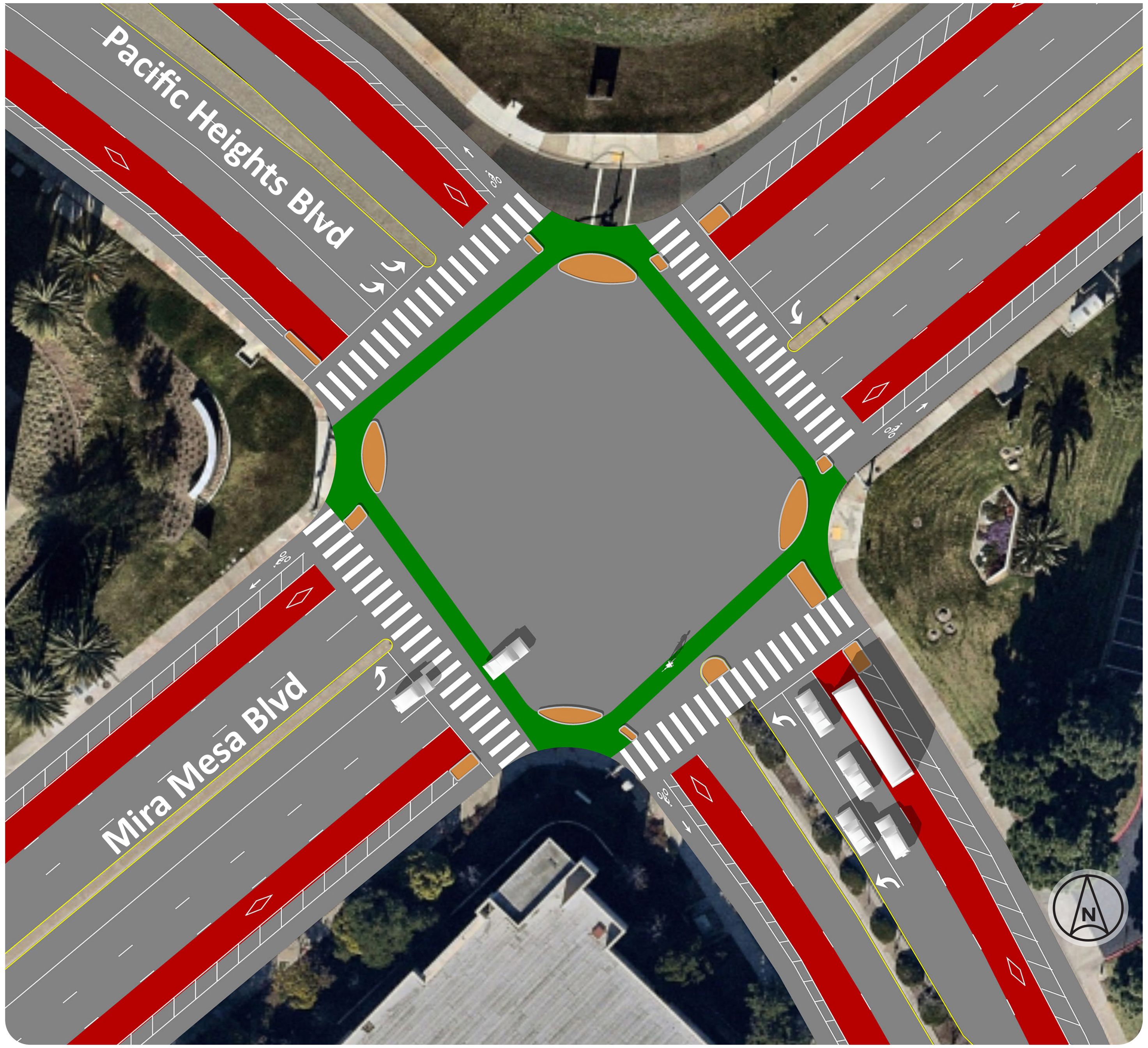
The City of SAN DIEGO   Kimley»Horn

MOBILITY CORRIDOR CONCEPT PLANNING SHEET

Mira Mesa Boulevard

Note: Intersection design is conceptual only. Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

Mira Mesa Blvd & Pacific Heights Blvd
Proposed Intersection Concept



Miramar Road

Length
5 Miles

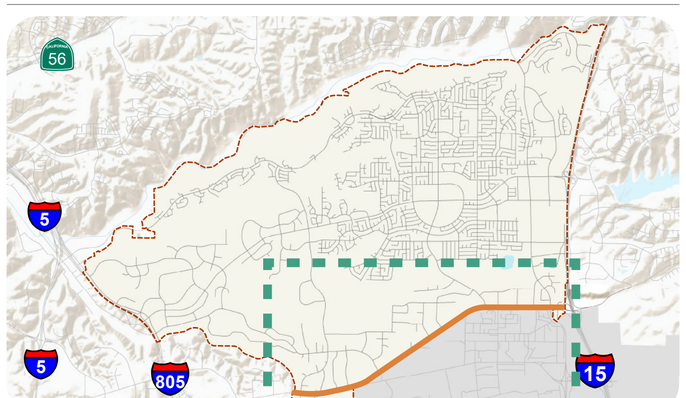
Functional Class
Existing: 6-Lane Major Arterial
Preferred: 6-Lane Major/Prime Arterial

Traffic Volumes
66,000 West of Camino Santa Fe
50,000-59,000 Camino Santa Fe to Camino Ruiz
63,000 East of Black Mountain Rd

Crash Summary (2012-2017)

Total Crashes	362
Most Predominant Causes:	
Unsafe Speed	26%
Auto R/W Turning	21%
Improper Turning	14%
Percent of community crashes	18%

Corridor Location



Potential Corridor Improvements

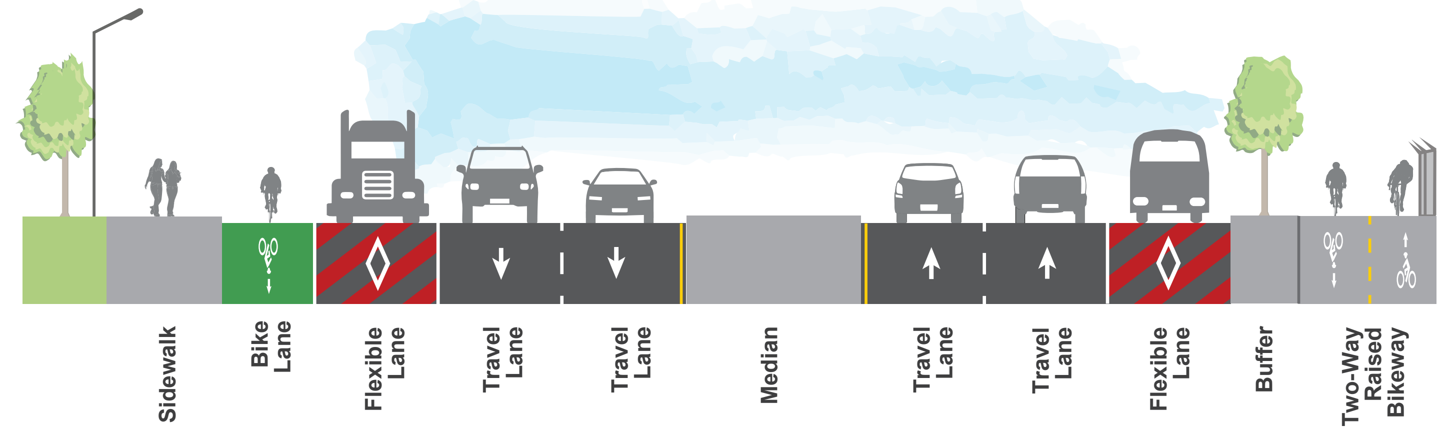
- **Regional bikeways:** Improve bicycle comfort and access to local and regional destinations in the Scripps Miramar Ranch and University communities
- **SMART corridor:** A major arterial roadway that provides access to or between a least two freeways, where roadway spaces is repurposed for transit and flexible lanes dedicated for use by any combination of non-single occupancy vehicles
- **Dynamic lane:** (see below)

Potential Corridor Feature

Dynamic lane: Adaptable turning movement designation to accommodate peak vehicle volume imbalances using real-time transportation management devices

General Corridor Cross Section

Varies By Segment (see pages MR-2 & MR-3)



Legend

Typical Section (see following sheets)
Community Plan Implementation Overlay Zone (CPIOZ)

MOBILITY CORRIDOR CONCEPT PLANNING SHEET

The City of SAN DIEGO
Kimley»Horn

Miramar Road

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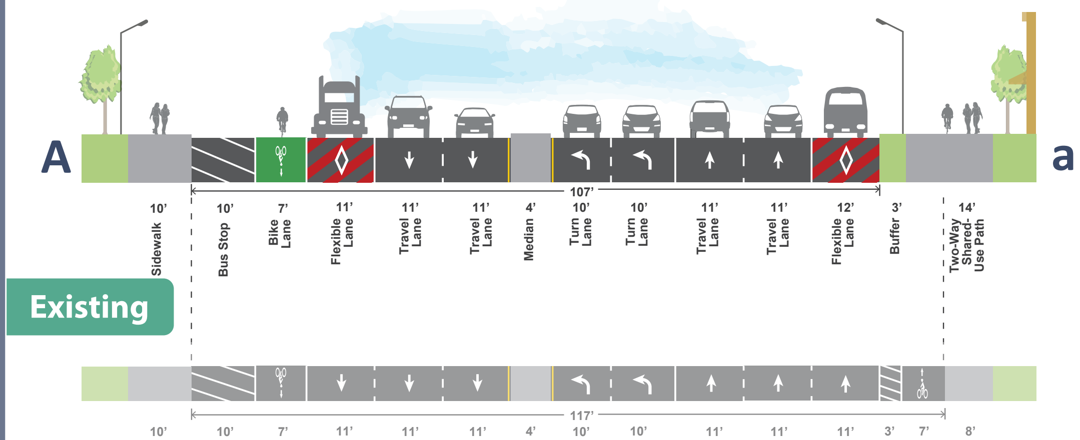
Western Community Limit to Camino Santa Fe

(West of Camino Santa Fe Intersection)

Proposed



Existing

Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- Two-way shared-use path with landscape buffer on the south side
- One-way bike lane westbound

Right-of-way modifications:

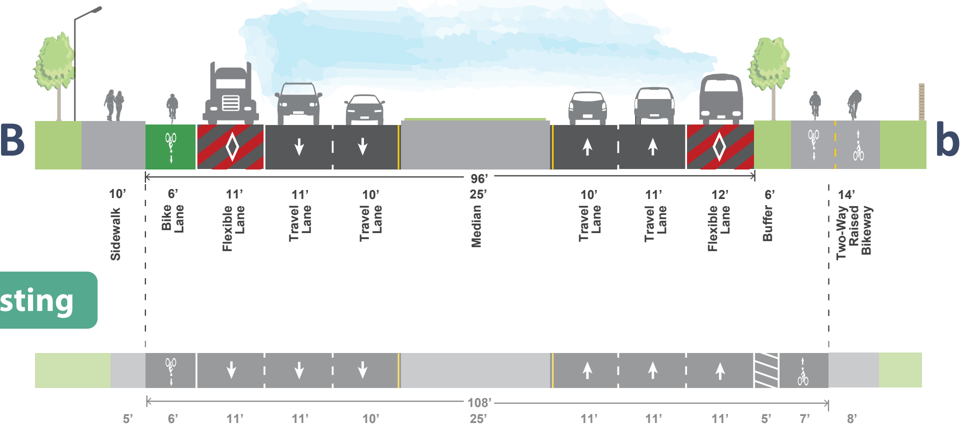
- None

Future Redevelopments:

- None

Camino Santa Fe to Commerce Ave

Proposed



Existing

Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- Two-way raised bikeway with landscape buffer on the south side
- One-way bike lane westbound

Right-of-way modifications:

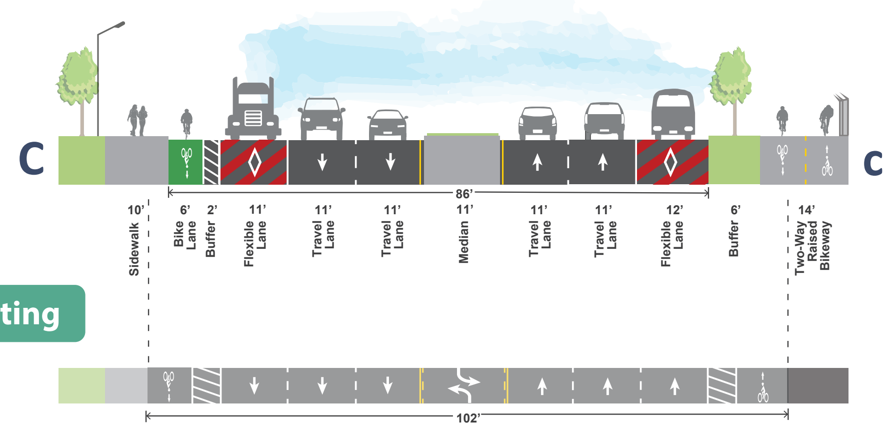
- None

Future Redevelopments:

- None

Commerce Ave to Carroll Rd

Proposed



Existing

Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- Two-way raised bikeway with landscape buffer on the south side
- One-way bike lane westbound

Right-of-way modifications:

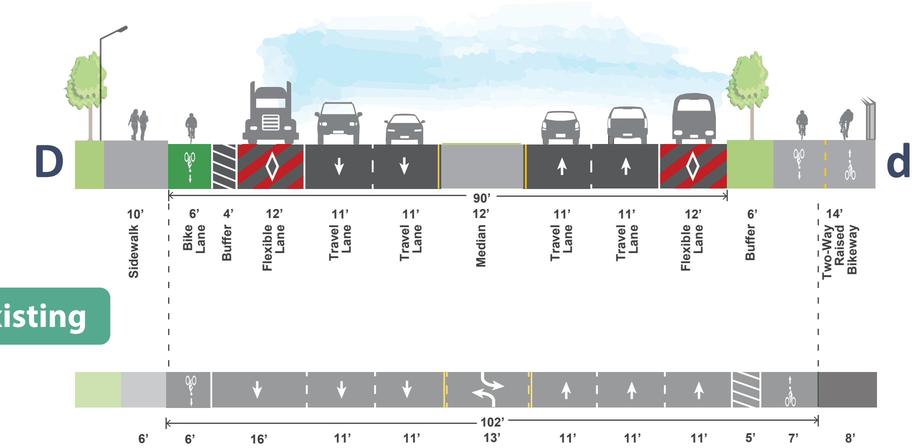
- None

Future Redevelopments:

- None

Carroll Rd to Camino Ruiz

Proposed



Existing

Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- Two-way raised bikeway with landscape buffer on the south side
- One-way bike lane westbound

Right-of-way modifications:

- None

Future Redevelopments:

- None

MOBILITY CORRIDOR CONCEPT PLANNING SHEET

The City of SAN DIEGO Kimley»Horn

Miramar Road

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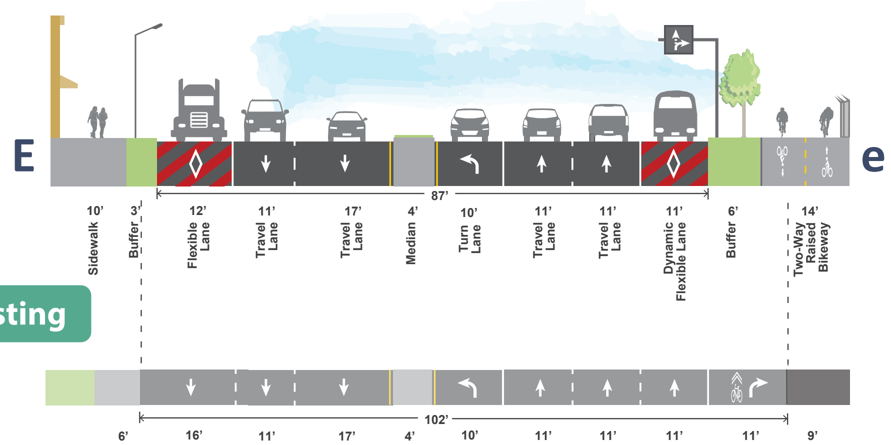
Camino Ruiz to Mitscher Way

(West of Mitscher Way Intersection)

Proposed

Existing



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane westbound
- One dynamic flexible lane eastbound
- Two-way raised bikeway with landscape buffer on the south side

Right-of-way modifications:

- None

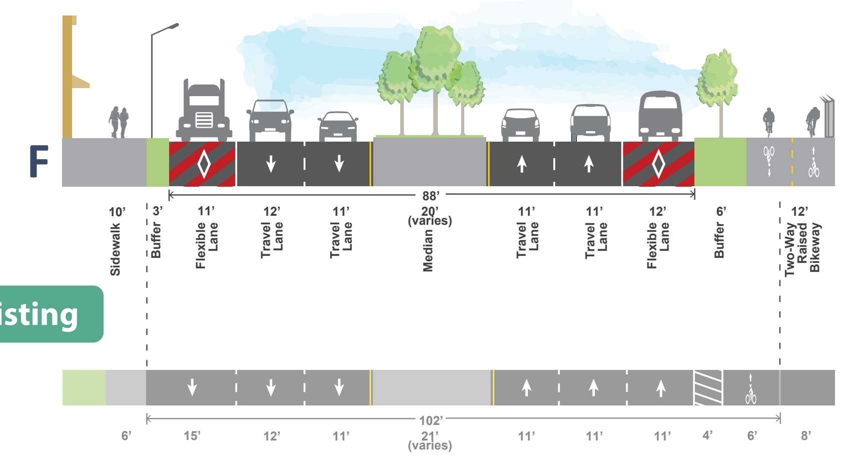
Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Miramar Gateway and should comply with recommendations in the Urban Design Element

Mitscher Way to Padgett St

Proposed

Existing



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- Two-way raised bikeway with landscape buffer on the south side

Right-of-way modifications:

- None

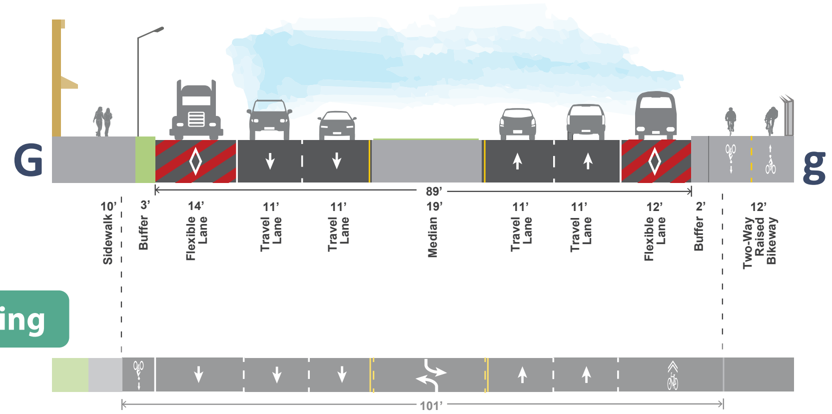
Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Miramar Gateway and should comply with recommendations in the Urban Design Element

Padgett St to Kearny Villa Rd

Proposed

Existing



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One flexible lane each way
- A center raised median
- Two-way raised bikeway with landscape buffer on the south side

Right-of-way modifications:

- None

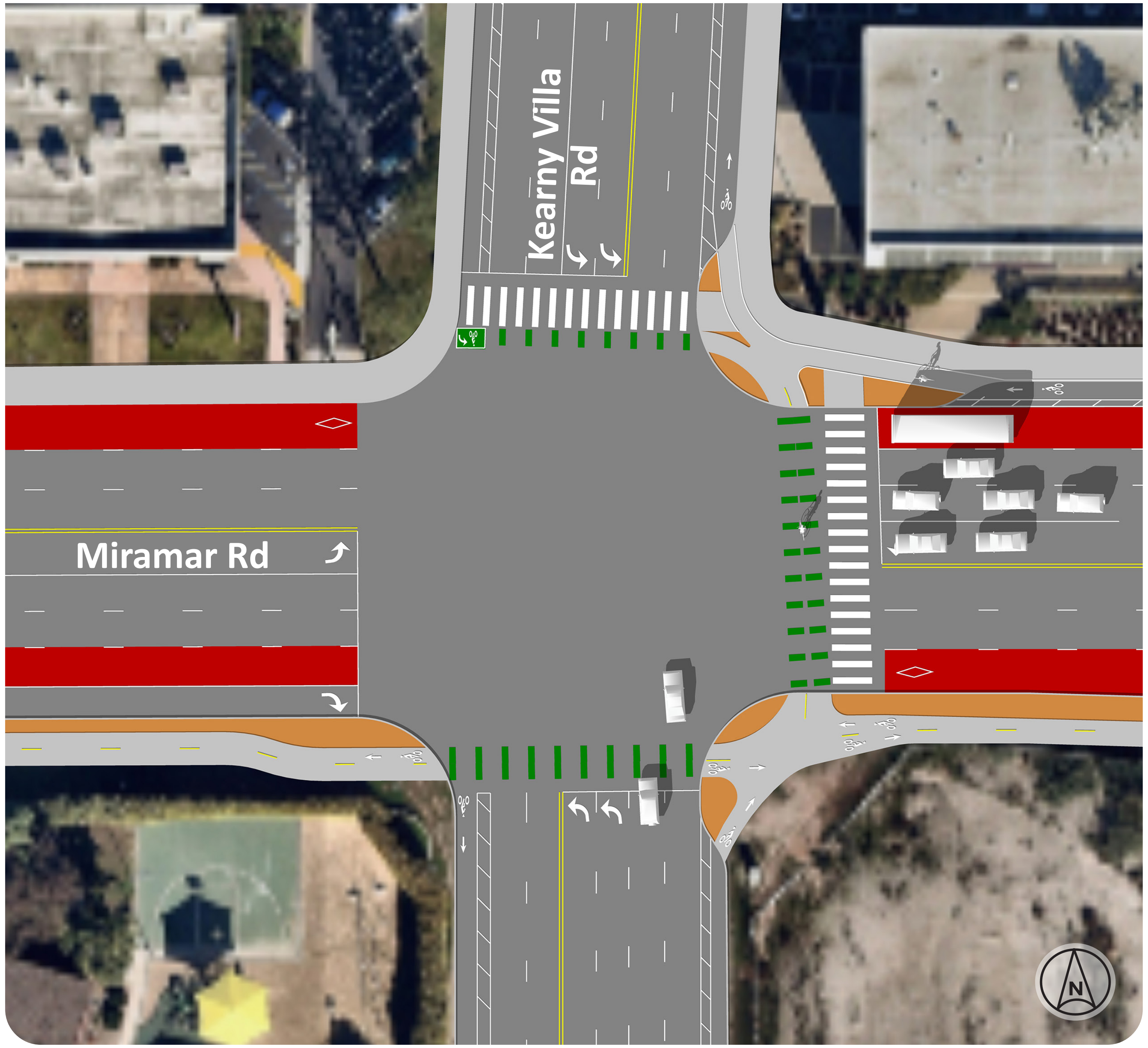
Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Miramar Gateway and should comply with recommendations in the Urban Design Element

Miramar Road

Note: Intersection design is conceptual only. Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

Miramar Rd & Kearny Villa Rd Proposed Intersection Concept



Black Mountain Road

Length
3 Miles

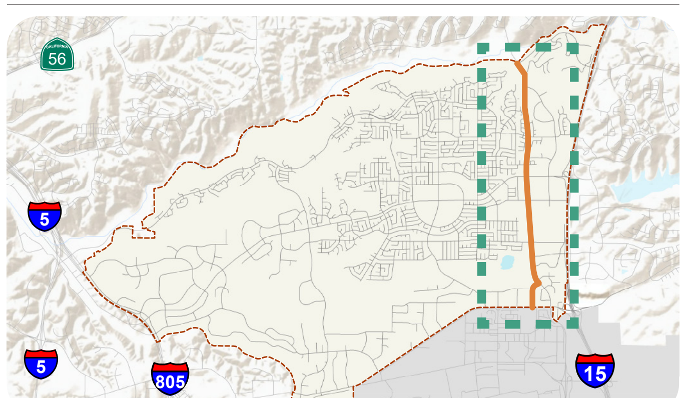
Functional Class
Existing: 4- to 6-Lane Major Arterial
Preferred: 6-Lane Major Arterial

Traffic Volumes
35,000 North of Westview Pkwy
17,500-27,500 Westview Pkwy to Carroll Centre Rd
17,000 South of Carroll Centre Rd

Crash Summary (2012-2017)

Total Crashes	276
Most Predominant Causes:	
Unsafe Speed	20%
Auto R/W Violation	18%
Improper Turning	13%
Percent of community crashes	14%

Corridor Location



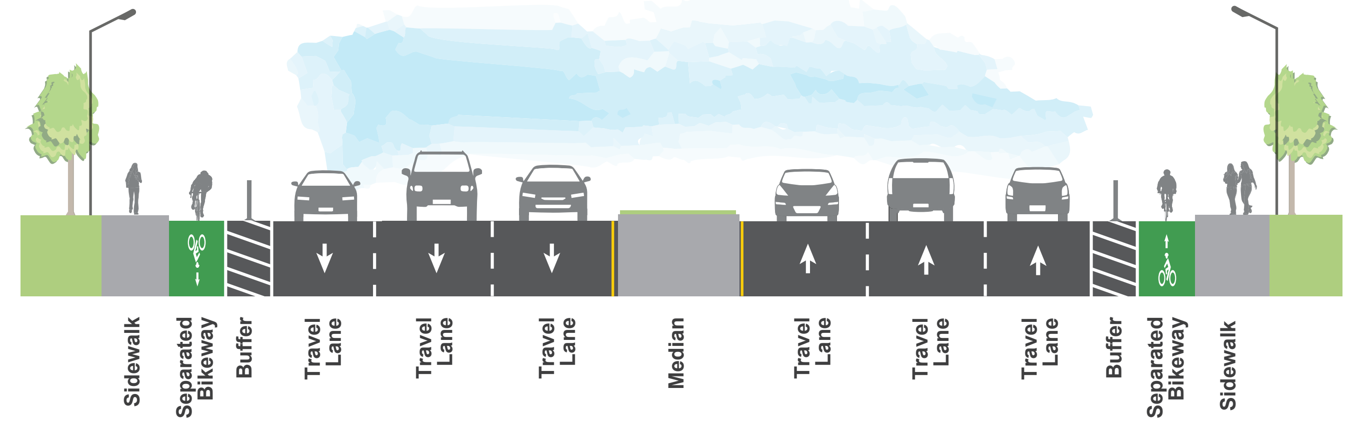
Potential Corridor-wide Improvements

- **Complete corridor:** Improve access to destinations and neighborhoods by providing quality facilities for all modes of travel
- **Separated bikeways:** (see below)

Potential Corridor-wide Feature

Separated bikeway: Improves comfort by reducing traffic stress on cyclists, encourages cycling, and creates connections within the community and to the region

General Corridor Cross Section
Varies By Segment (see pages BMR-2 & BMR-3)



Legend

- Typical Section (see following sheets)
- Community Plan Implementation Overlay Zone (CPIOZ)

MOBILITY CORRIDOR CONCEPT PLANNING SHEET

The City of SAN DIEGO Kimley»Horn

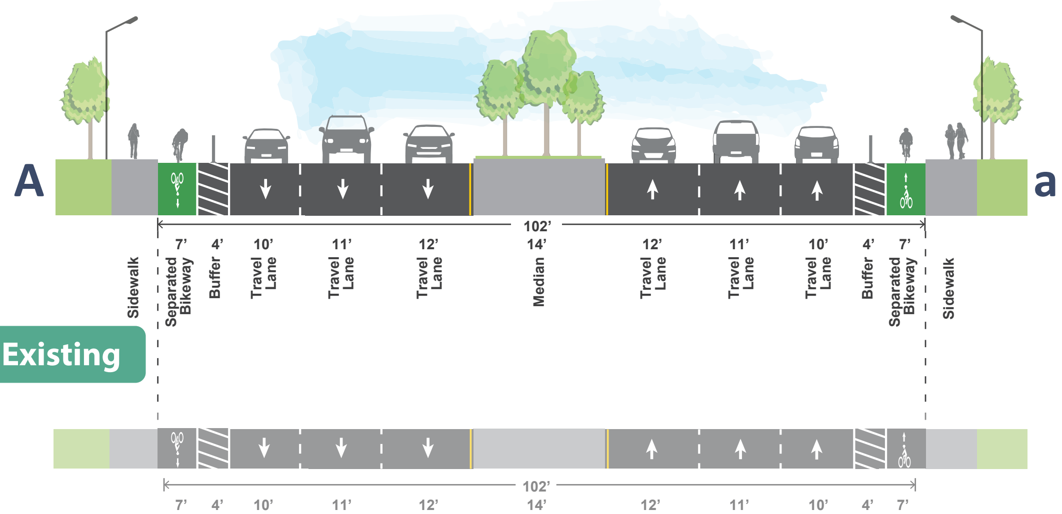
Black Mountain Road

Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD). Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

Northern Community Limit to Galvin Ave

Proposed

Existing



Reconfigure existing right-of-way to include:

- Three general purpose travel lanes each way
- A center raised median
- One-way separated bikeway each way

Right-of-way modifications:

- None

Future Redevelopments:

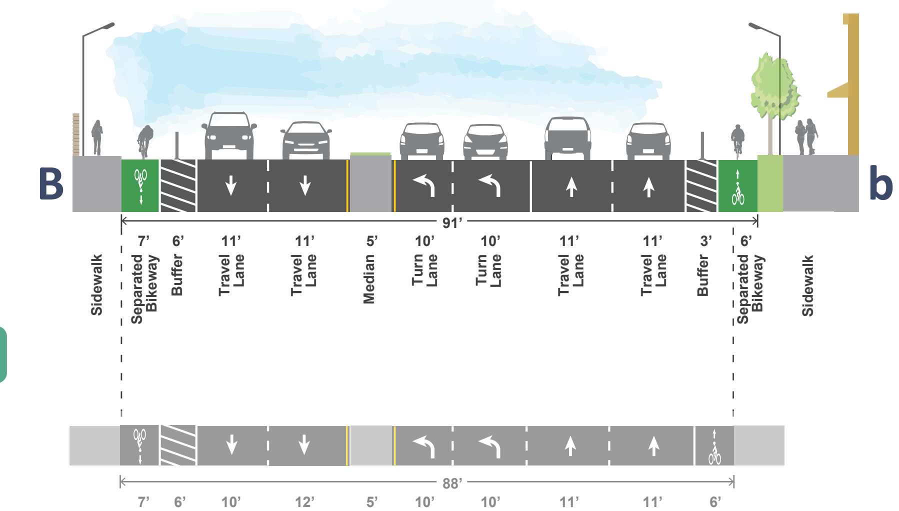
- None

Galvin Ave to Mira Mesa Blvd

(South of Gemini Ave Intersection)

Proposed

Existing



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- A center raised median
- One-way separated bikeway each way

Right-of-way modifications:

- Proposed reconfiguration would require widening to the east

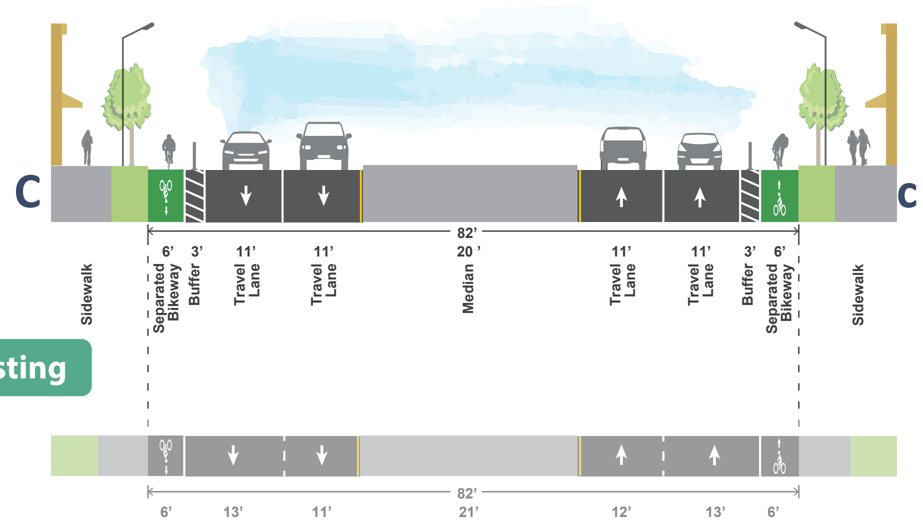
Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Mira Mesa Gateway and should comply with recommendations in the Urban Design Element

Mira Mesa Blvd to Hillery Dr

Proposed

Existing



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- A center raised median
- One-way separated bikeway each way

Right-of-way modifications:

- None

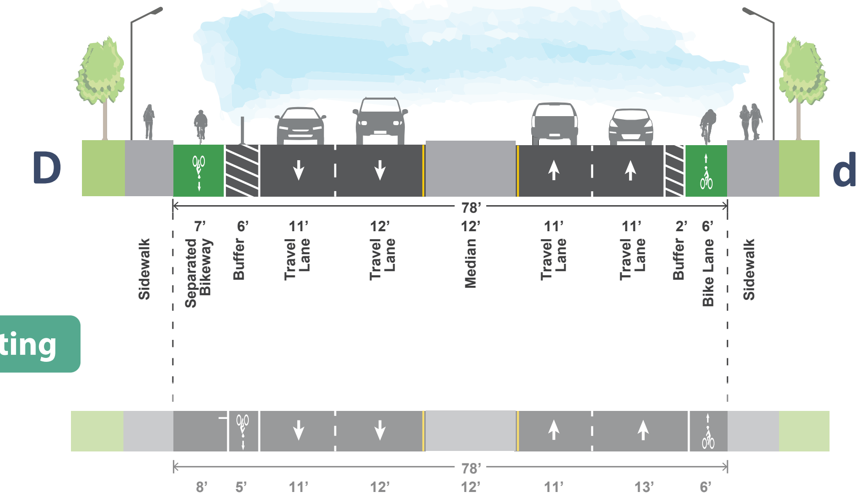
Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Mira Mesa Gateway and should comply with recommendations in the Urban Design Element

Hillery Dr to Kearny Villa Rd

Proposed

Existing



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- A center raised median
- One-way separated bikeway southbound
- Buffered bike lane norhbound

Right-of-way modifications:

- None

Future Redevelopments:

- None

Black Mountain Road

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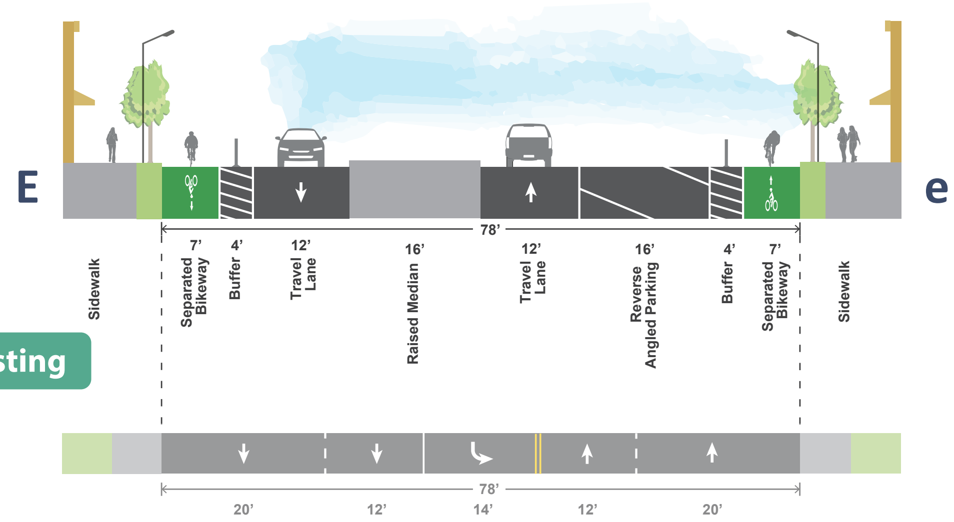
Kearny Villa Rd to Activity Rd
(North of Activity Rd Intersection)

Proposed



Existing

Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- One-way separated bikeway each way

Right-of-way modifications:

- None

Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Stone Creek and Miramar Gateway and should comply with recommendations in the Urban Design Element

MOBILITY CORRIDOR CONCEPT PLANNING SHEET

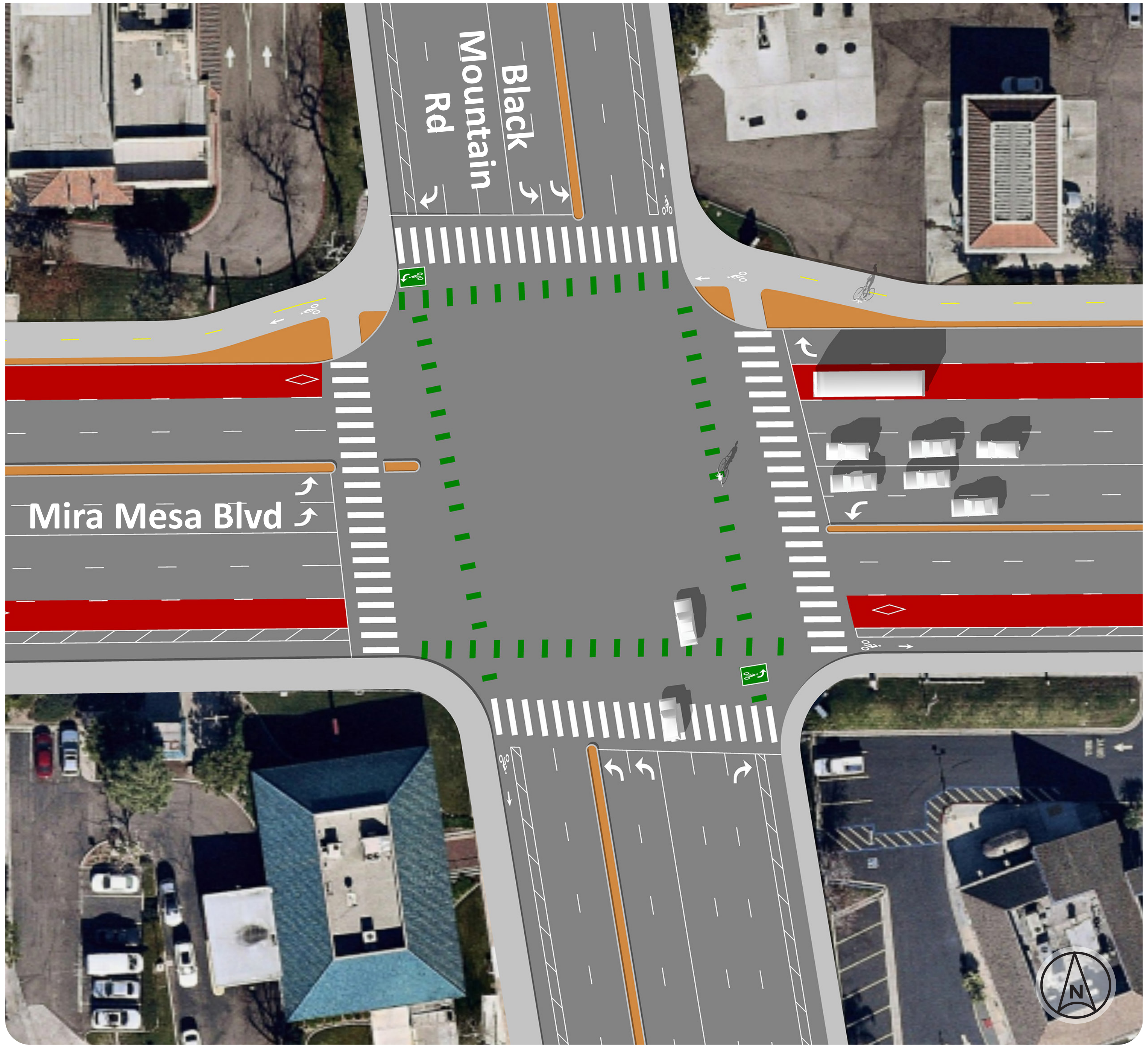
The City of SAN DIEGO

Kimley»Horn

Black Mountain Road

Note: Intersection design is conceptual only. Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

Black Mountain Rd & Mira Mesa Blvd
Proposed Intersection Concept



Camino Santa Fe

Length
3 Miles

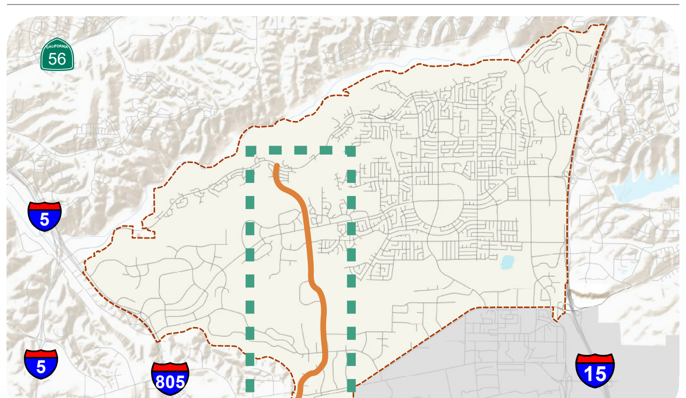
Functional Class
Existing: 4- to 6-Lane Major Arterial
Preferred: 6-Lane Major Arterial

Traffic Volumes
10,000-16,000 North of Mira Mesa Blvd
18,000-21,000 South of Mira Mesa Blvd

Crash Summary (2012-2017)

Total Crashes	85
Most Predominant Causes:	
Unsafe Speed	28%
Auto R/W Violation	25%
Improper Turning	13%
Percent of community crashes	4%

Corridor Location



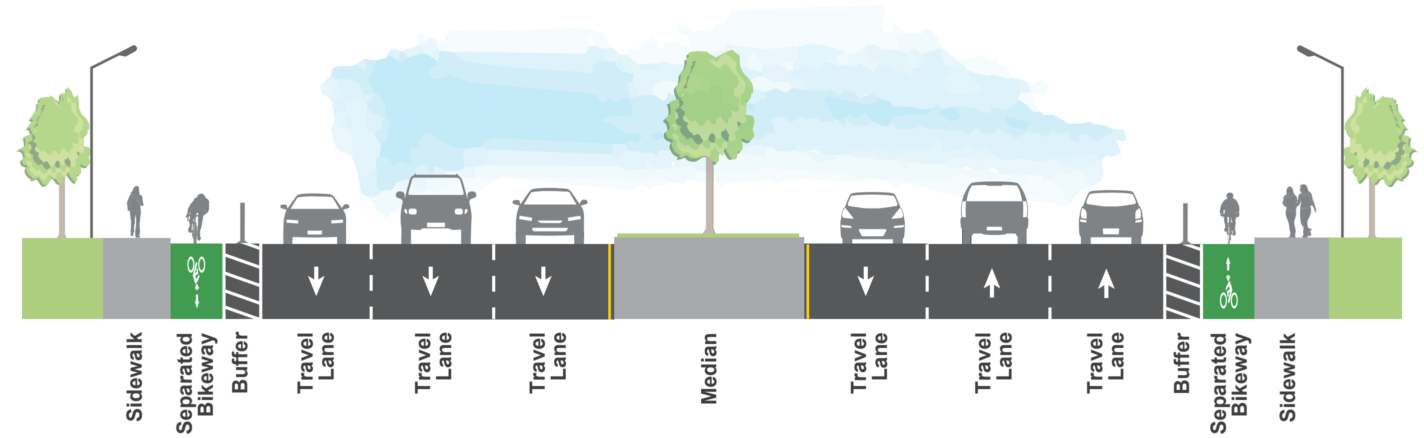
Potential Corridor-wide Improvements

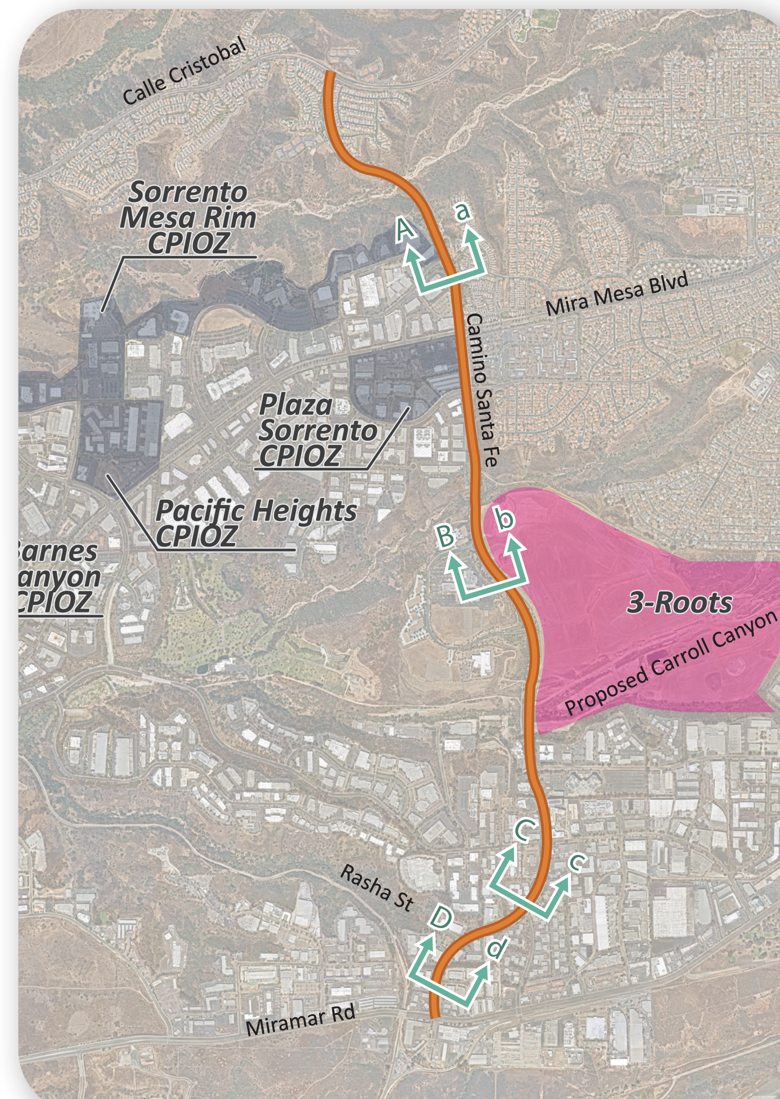
- **Separated bikeways:** (see below)

Potential Corridor-wide Feature

Separated bikeway: Improves comfort by reducing traffic stress on cyclists, encourages cycling, and creates connections within the community and to the region

General Corridor Cross Section
Varies By Segment (see page CSF-2)





Legend

- Typical Section (see following sheets)
- Community Plan Implementation Overlay Zone (CPIOZ)

MOBILITY CORRIDOR CONCEPT PLANNING SHEET

The City of SAN DIEGO   Kimley»Horn

Camino Santa Fe

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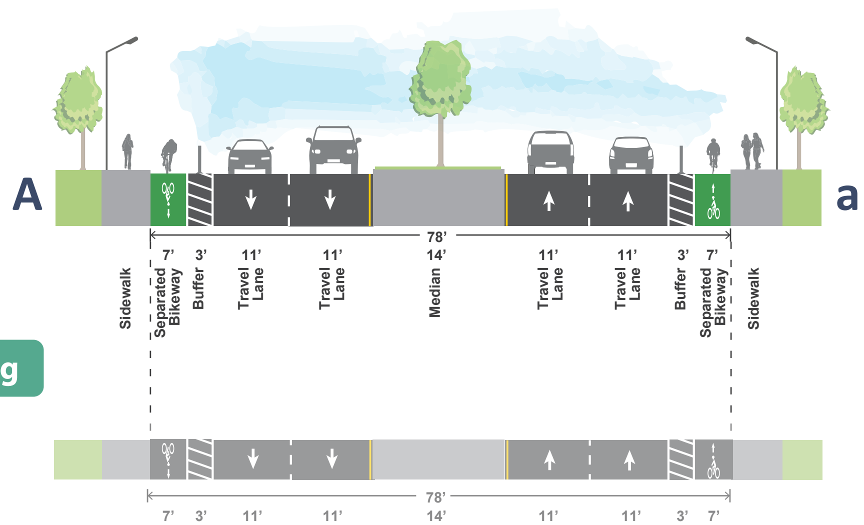
Calle Cristobal to Mira Mesa Blvd

Proposed



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- A center raised median
- One-way separated bikeway each way

Right-of-way modifications:

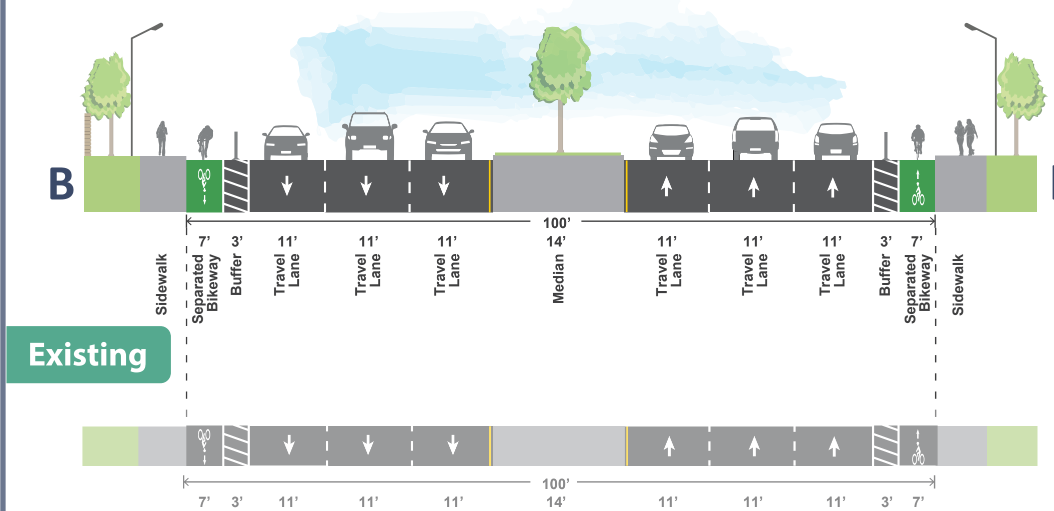
- None

Future Redevelopments:

- Proposed reconfiguration fronts potential redevelopment of Sorrento Mesa and should comply with recommendations in the Urban Design Element

Mira Mesa Blvd to Proposed Carroll Canyon Rd

Proposed



Reconfigure existing right-of-way to include:

- Three general purpose travel lanes each way
- A center raised median
- One-way separated bikeway each way

Right-of-way modifications:

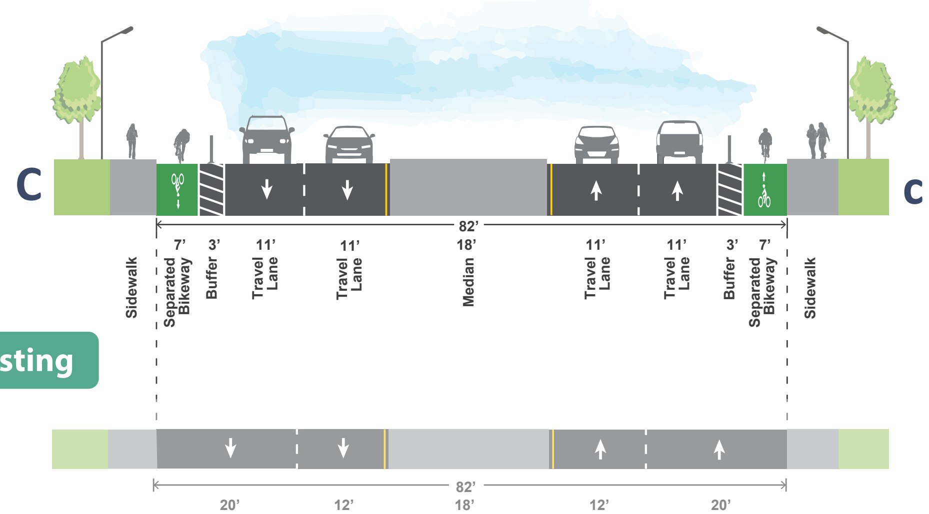
- None

Future Redevelopments:

- None

Proposed Carroll Canyon Rd to Rasha St

Proposed



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- A center raised median
- One-way separated bikeway each way

Right-of-way modifications:

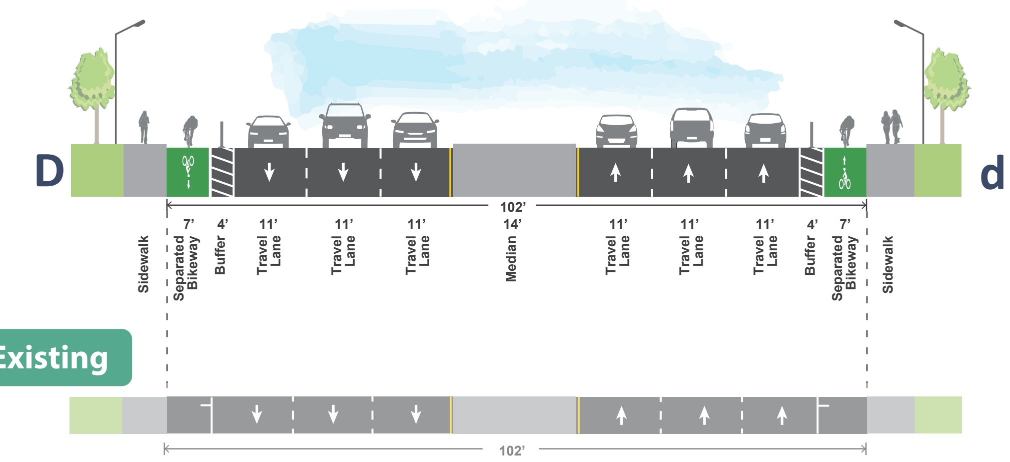
- None

Future Redevelopments:

- None

Rasha St to Miramar Rd

Proposed



Reconfigure existing right-of-way to include:

- Three general purpose travel lanes each way
- A center raised median
- One-way separated bikeway each way

Right-of-way modifications:

- None

Future Redevelopments:

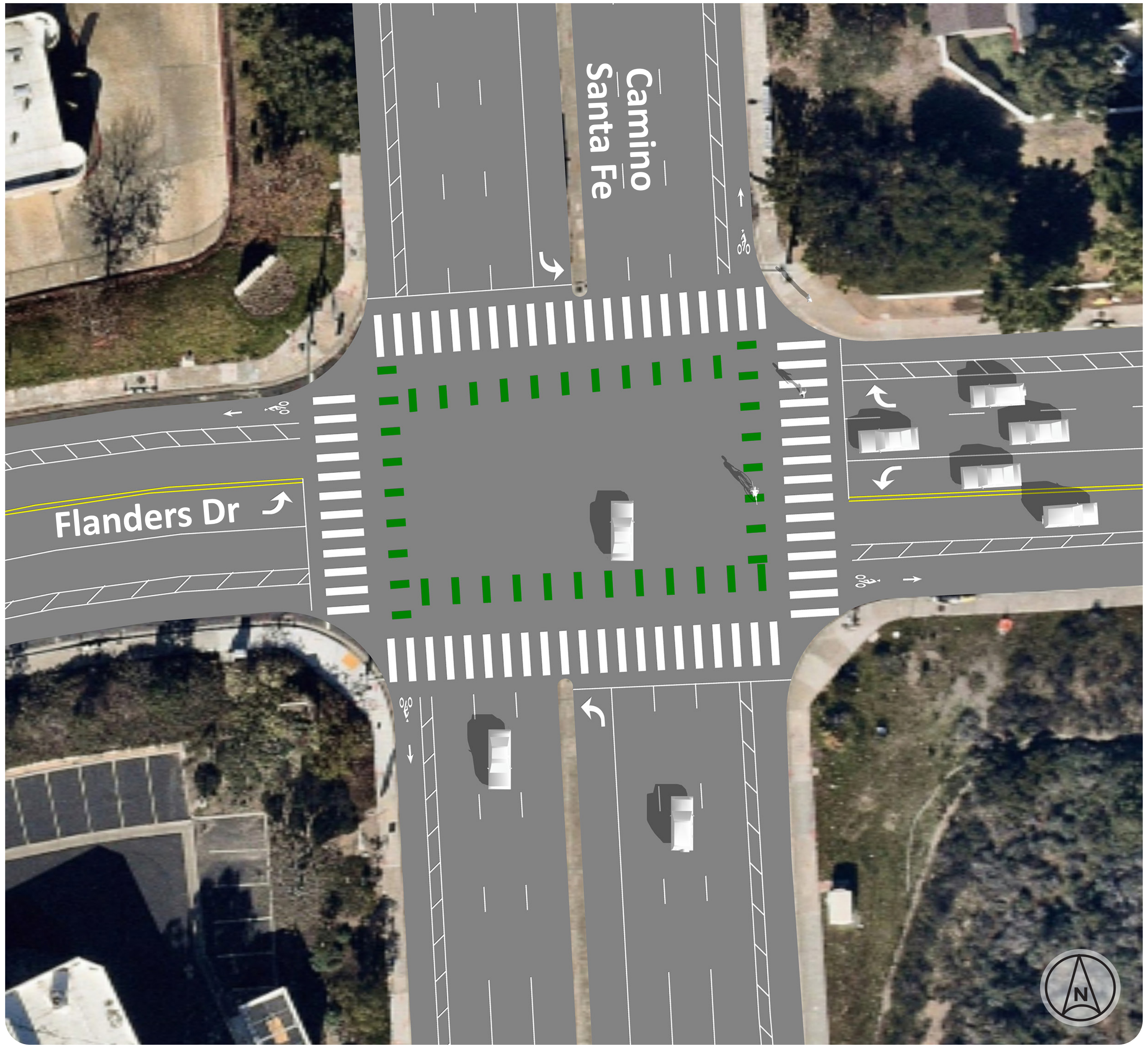
- None

MOBILITY CORRIDOR CONCEPT PLANNING SHEET

Camino Santa Fe

Note: Intersection design is conceptual only. Lane colors are for illustrative purposes only and do not necessarily indicate pavement marking color or pattern.

Camino Santa Fe & Flanders Dr
Proposed Intersection Concept



Carroll Canyon Road

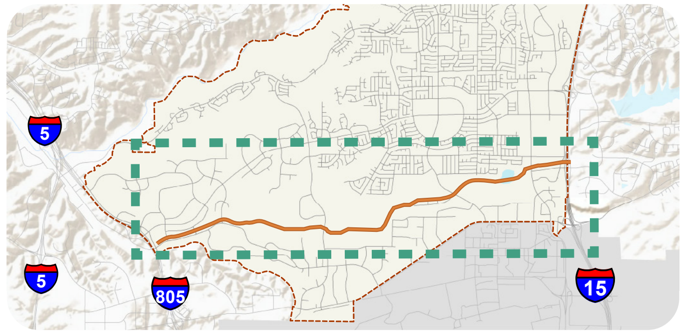
Length
Existing:
1 Mile I-805 to Carroll Rd (west end of community)
0.5 Mile Black Mountain Rd to I-15 (east end of community)

Future (Total): 5.5 Miles I-805 to I-15

Functional Class
Existing:
4-Lane Collector w/ TWLTL Black Mountain Rd to Maya Linda Rd
4-Lane Major Arterial Maya Linda Rd to I-15
2-Lane Collector Nancy Ridge to Pacific Heights Blvd
2-Lane Major Arterial Pacific Heights Blvd to Carroll Rd

Future:
4-Lane Major Arterial Scranton Rd to Camino Santa Fe
6-Lane Prime Arterial Camino Santa Fe to Camino Ruiz
6-Lane Major Arterial Camino Ruiz to Black Mountain Rd
4 Lane Collector I-805 to Scranton Rd

Traffic Volumes
13,000 I-805 to Pacific Heights Rd
20,000 Black Mountain Rd to I-15

Corridor Location


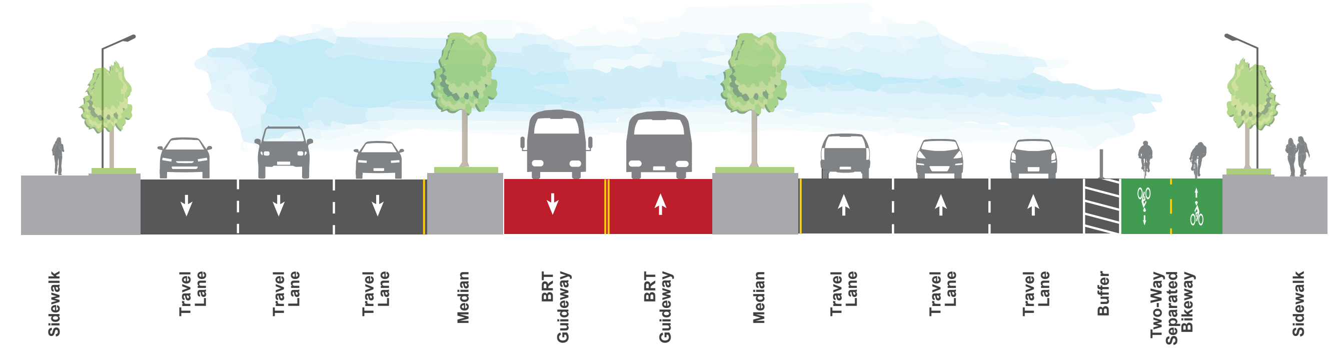
Potential Corridor-wide Improvements

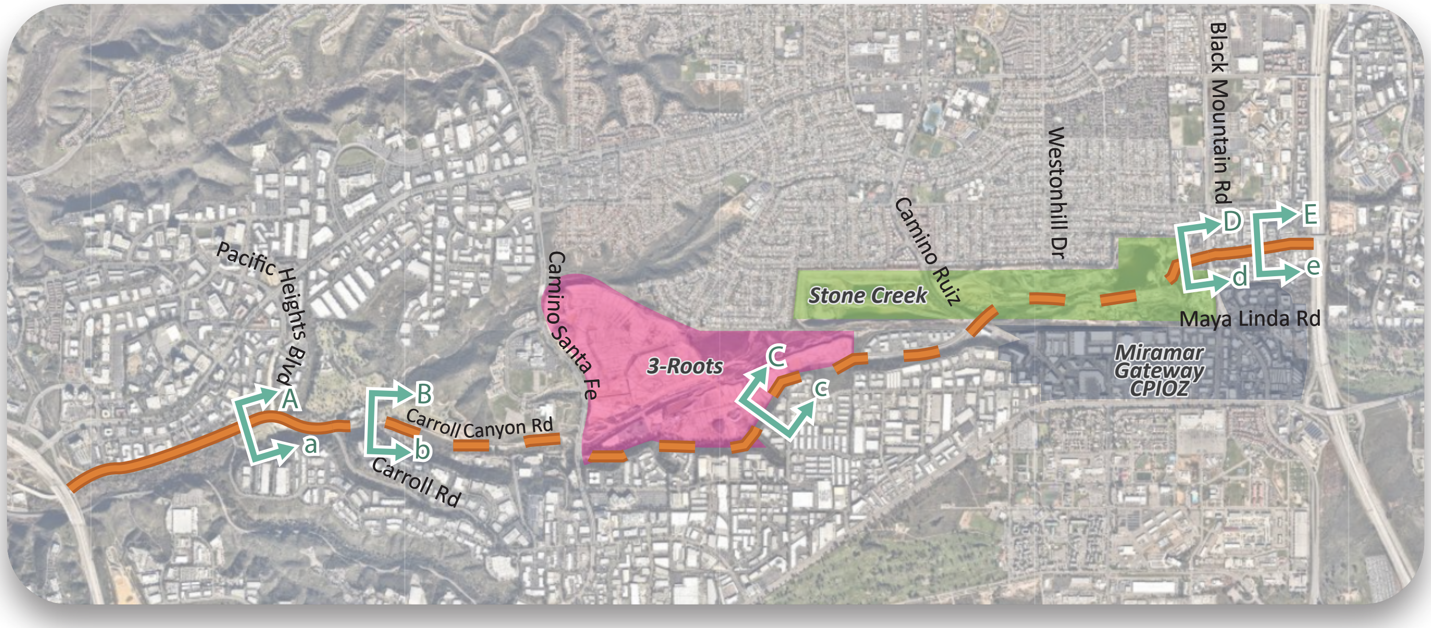
- **Separated bikeways:** Improves comfort by reducing traffic stress on cyclists, encourages cycling, and creates connections within the community and to the region
- **Bus Rapid Transit (BRT) corridor:** Rapid services that are high-frequency, limited-stop routes moving people to their destinations more quickly than traditional local bus service using dedicated lanes or guideways

Crash Summary (2012-2017)

Total Crashes	73
Most Predominant Causes:	
Improper Turning	22%
Auto R/W Turning Violation	15%
Unsafe Speed	16%
Percent of community crashes	4%

General Corridor Cross Section
Varies By Segment (see page CCR-2)





Legend
- Typical Section (see following sheet)
- Community Plan Implementation Overlay Zone (CPIOZ)
- Existing Roadway
- Future Roadway

MOBILITY CORRIDOR CONCEPT PLANNING SHEET

The City of SAN DIEGO
Kimley»Horn

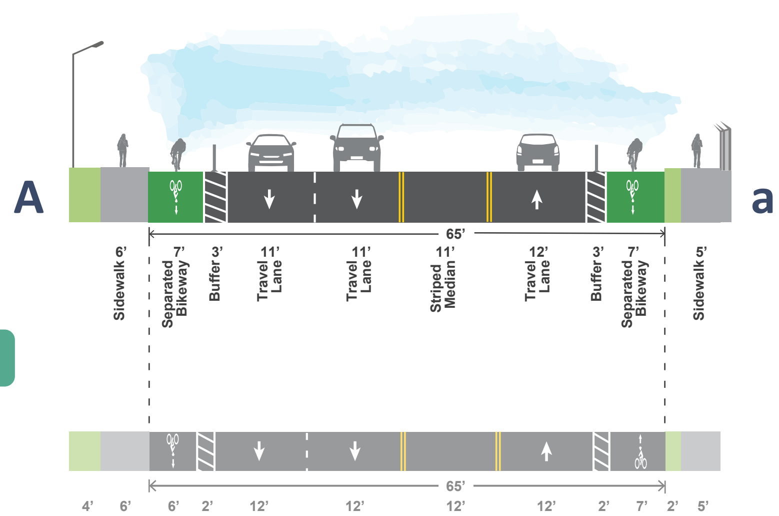
Carroll Canyon Road

Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment Dristrict (MAD).

Nancy Ridge Dr to Carroll Rd

Proposed

Existing



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes westbound
- One general pupose travel lane eastbound
- A striped center median
- One-way separated bikeway each way

Right-of-way modifications:

- None

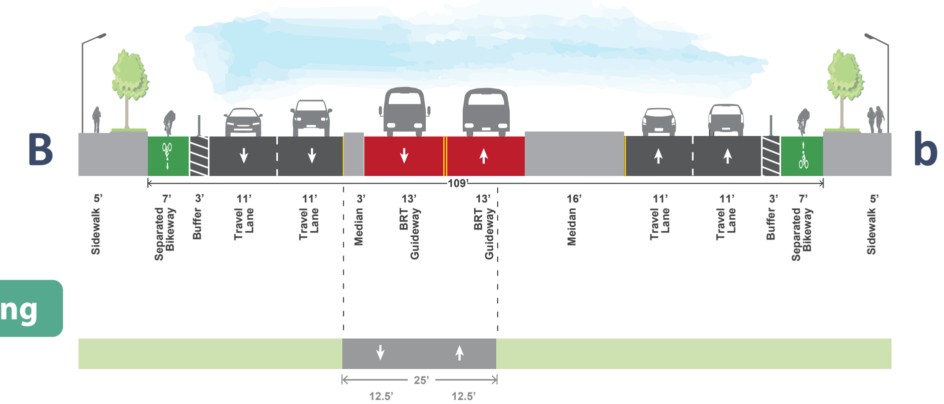
Future Redevelopments:

- None

Carroll Rd to Camino Santa Fe

Proposed

Existing



Reconfigure existing right-of-way to include:

- Two-lane BRT Guideway
- Raised medians along BRT guideway
- One-way separated bikeway each way
- Two general purpose travel lanes each way

Right-of-way modifications:

- Proposed reconfiguration would require widening on both sides

Future Redevelopments:

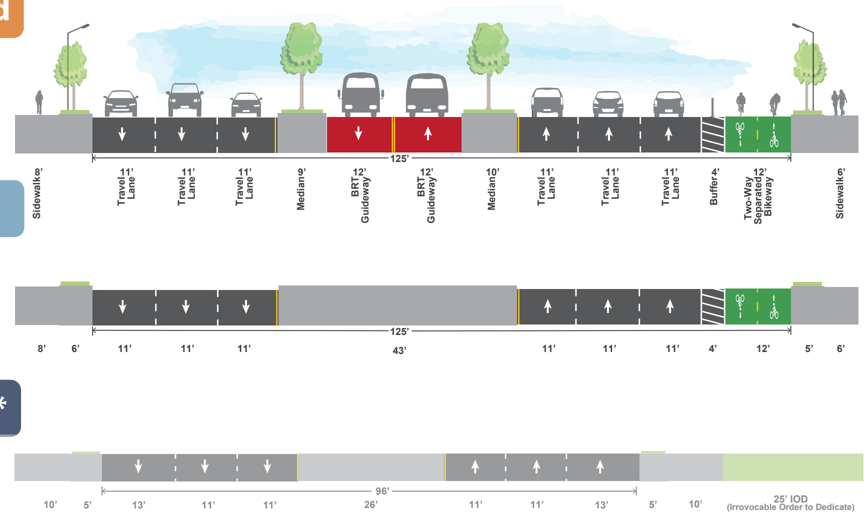
- Proposed reconfiguration fronts future 3 Roots redevelopment

Camino Sante Fe to Maya Linda Rd

Proposed

Interim

Planned*



* Planned roadway cross-section per Stone Creek Master Plan.

Note: Final cross-section will require coordination with MTS and SANDAG.

Reconfigure existing right-of-way to include:

- Two-lane BRT Guideway
- Raised medians along BRT guideway
- Two-way separated bikeway on south side
- Three general purpose travel lanes each way

Right-of-way modifications:

- N/A - Roadway segment does not currently exist

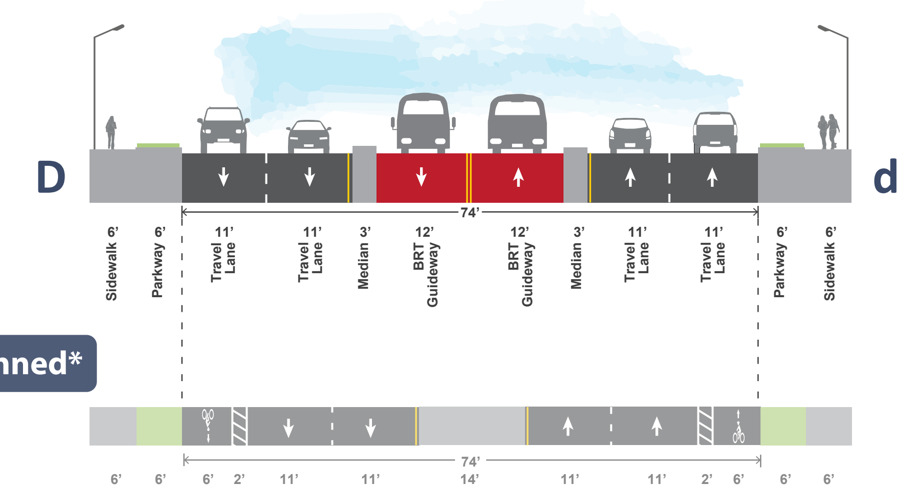
Future Redevelopments:

- Proposed reconfiguration fronts future Stone Creek redevelopment

Maya Linda Rd to Black Mountain Rd

Proposed

Planned*



* Planned roadway cross-section per Stone Creek Master Plan.

Note: Class IV Bikeways will be rerouted to Maya Linda Rd where available right of way is wider.

Reconfigure existing right-of-way to include:

- Two-lane BRT Guideway
- Two general purpose travel lanes each way

Right-of-way modifications:

- N/A - Roadway segment does not currently exist

Future Redevelopments:

- Proposed reconfiguration fronts future Stone Creek redevelopment

The City of SAN DIEGO Kimley»Horn

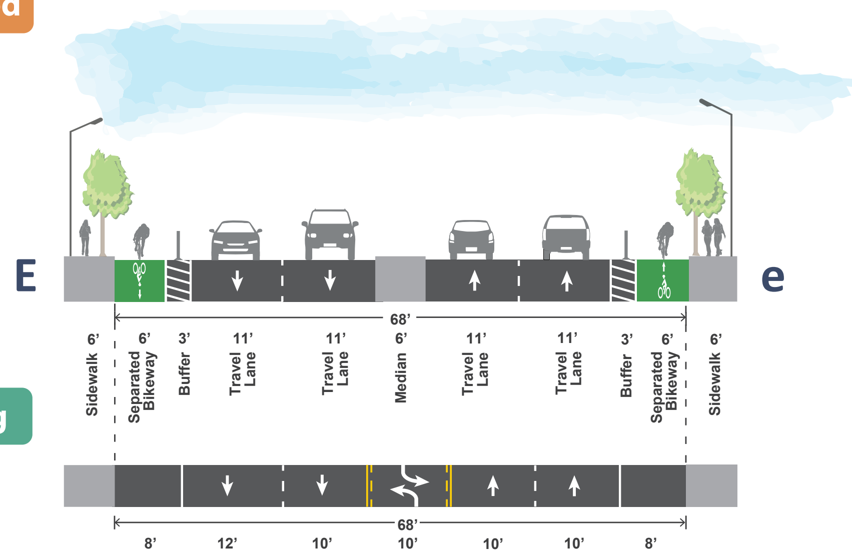
Carroll Canyon Road

Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD).

Black Mountain Rd to I-15

Proposed

Existing



Reconfigure existing right-of-way to include:

- Two general purpose travel lanes each way
- A raised center median
- One-way separated bikeway each way

Right-of-way modifications:

- None

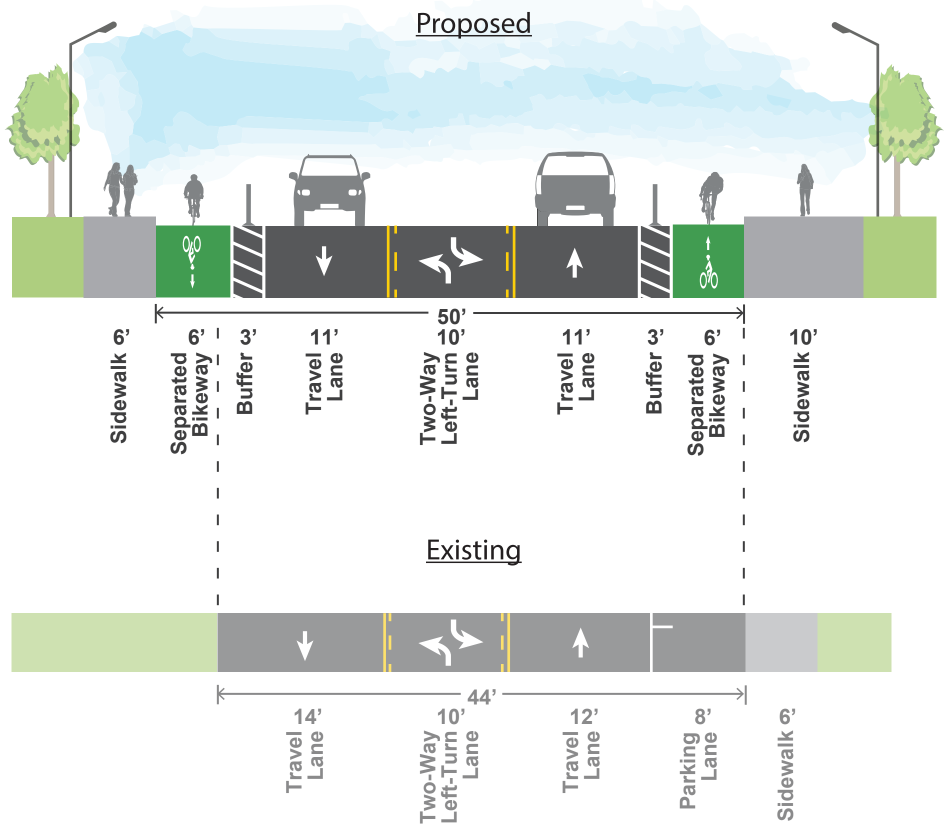
Future Redevelopments:

- None

MOBILITY CORRIDOR CONCEPT PLANNING SHEET

Activity Road

(Clayton Drive to Padgett Street - Looking East)



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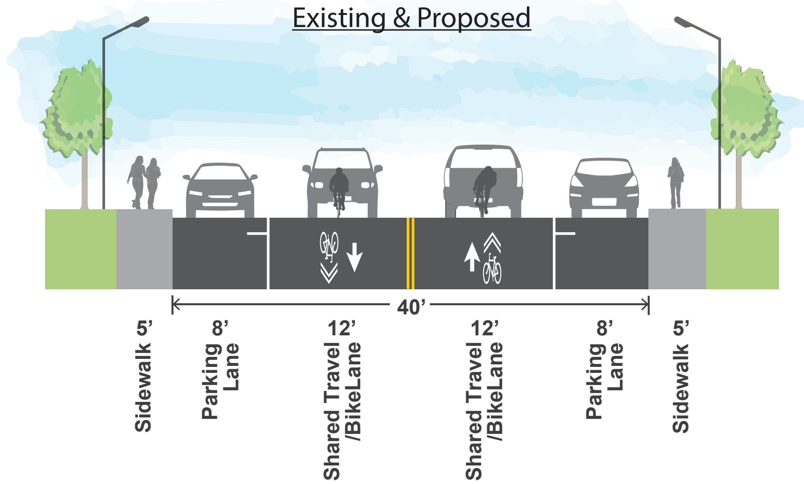
<u>Capricorn Way</u>

(Camino Ruiz to Black Mtn Road - Looking East)

<u>Existing & Proposed</u>



<u>Proposed Traffic Calming</u>

Traffic Diverter:

- Westonhill Drive

Neighborhood Traffic Circles:

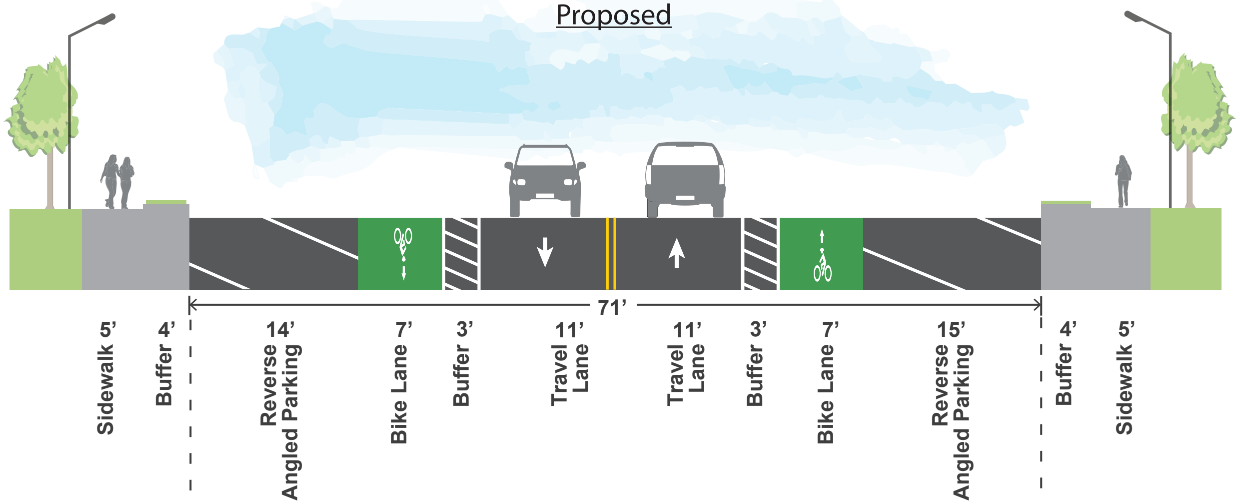
- Kelowna Road
- Bootes Street
- Pegasus Avenue

Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD).

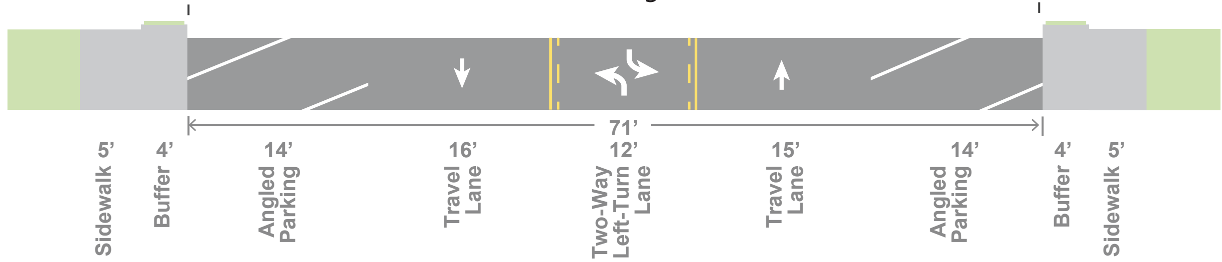
Capricorn Way

(Black Mtn Road to Westview Parkway - Looking East)

Proposed



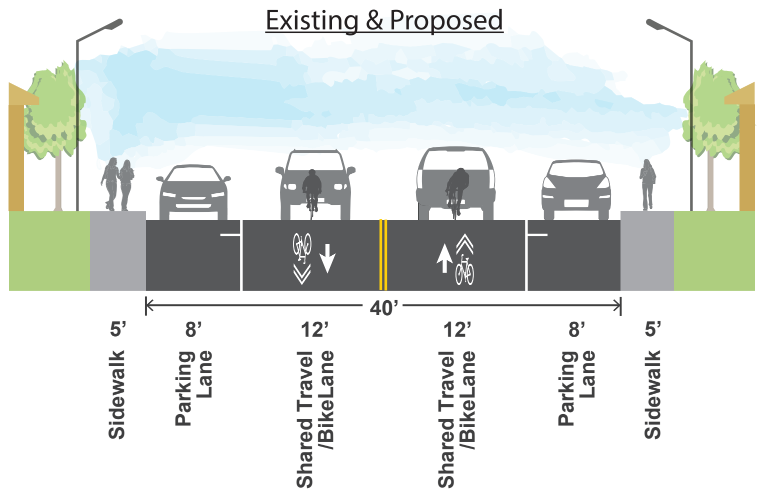
Existing



Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment Dristrict (MAD).

Flanders Drive

(East of Camino Santa Fe - Looking East)



Proposed Traffic Calming

Neighborhood Traffic Circles:

- Aderman Avenue
- Westonhill Drive
- Greenford Drive

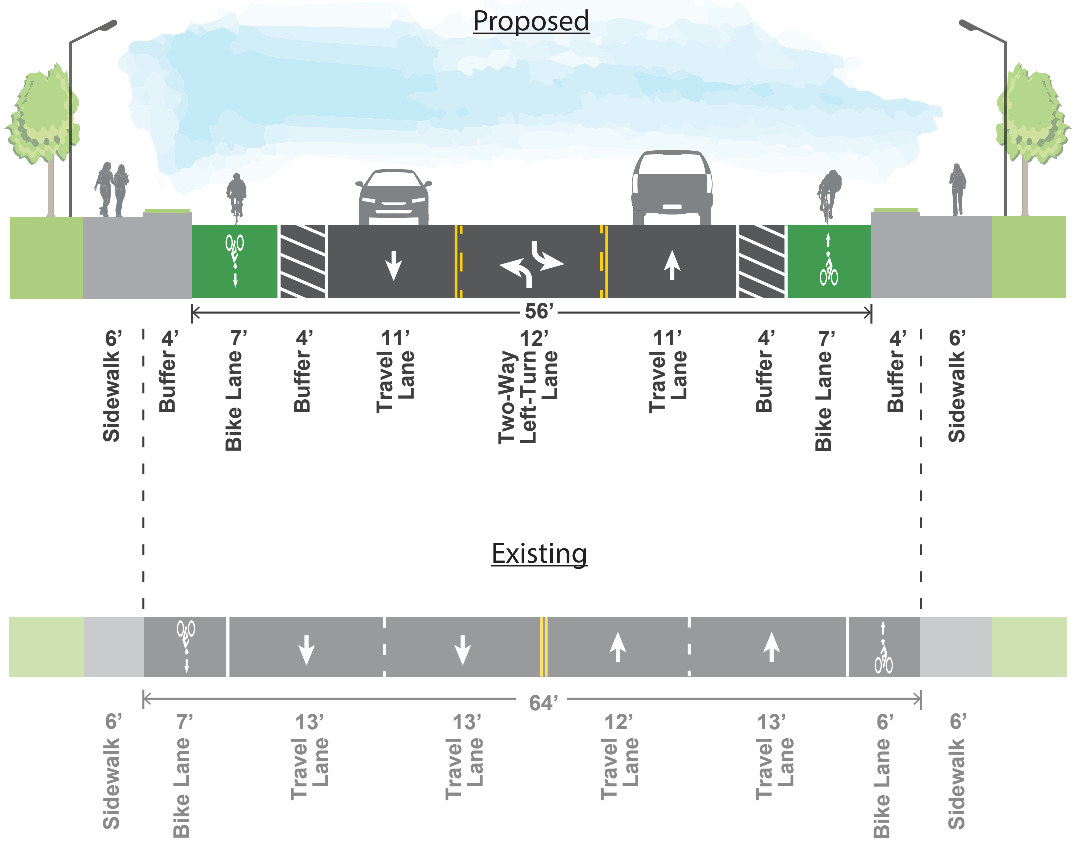
Speed Humps:

- Corridor-wide

Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment Dristrict (MAD).

Flanders Drive

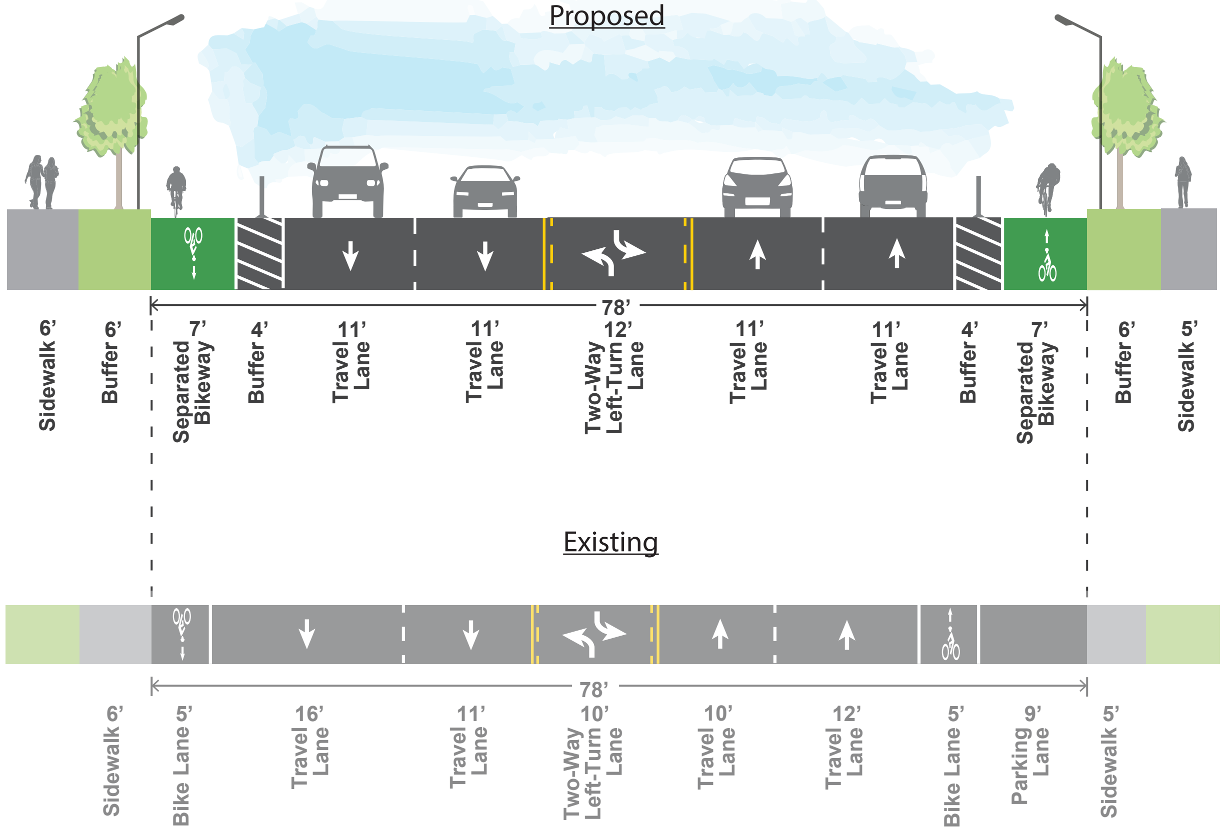
(West of Camino Santa Fe - Looking East)



Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD).

Kearny Villa Road

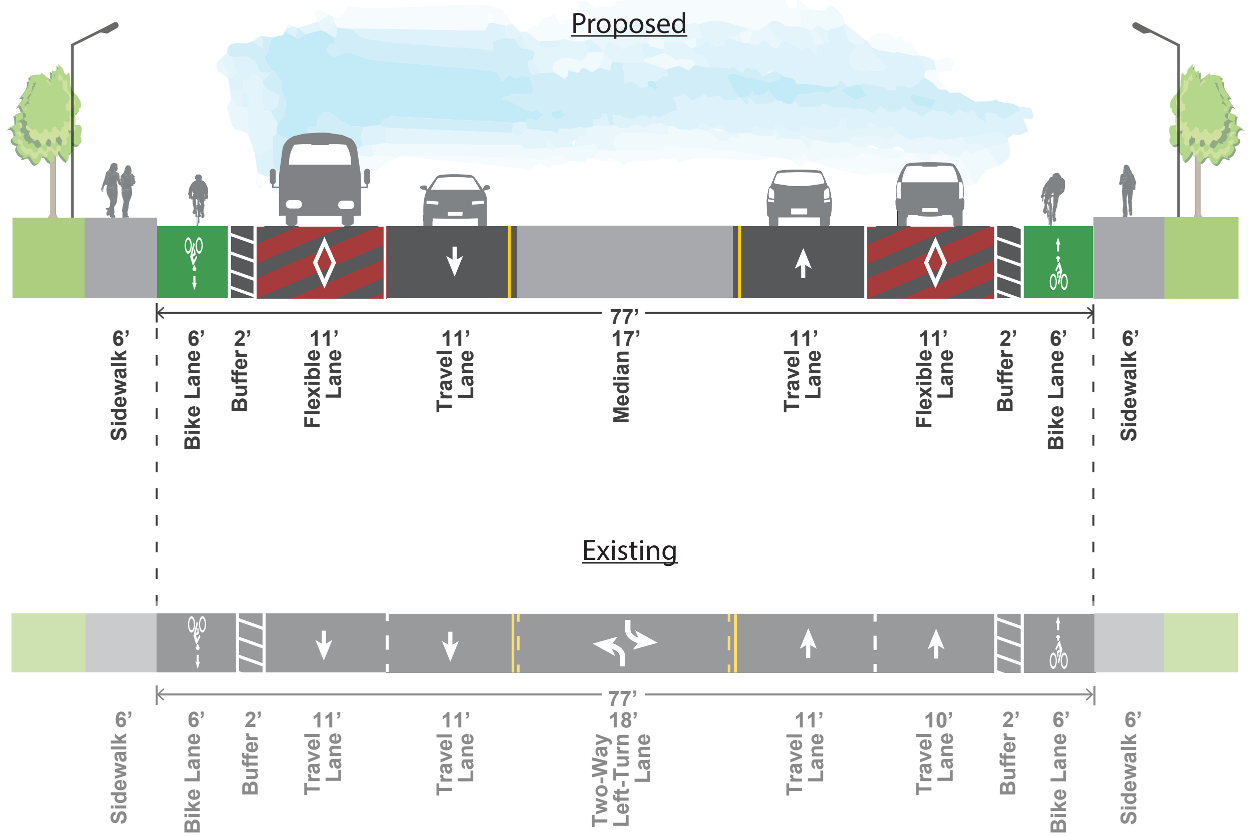
(Candida Street to Miramar Road - Looking North)



Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment Dristrict (MAD).

Lusk Boulevard

(Waterridge Circle to Pacific Center Blvd - Looking East)

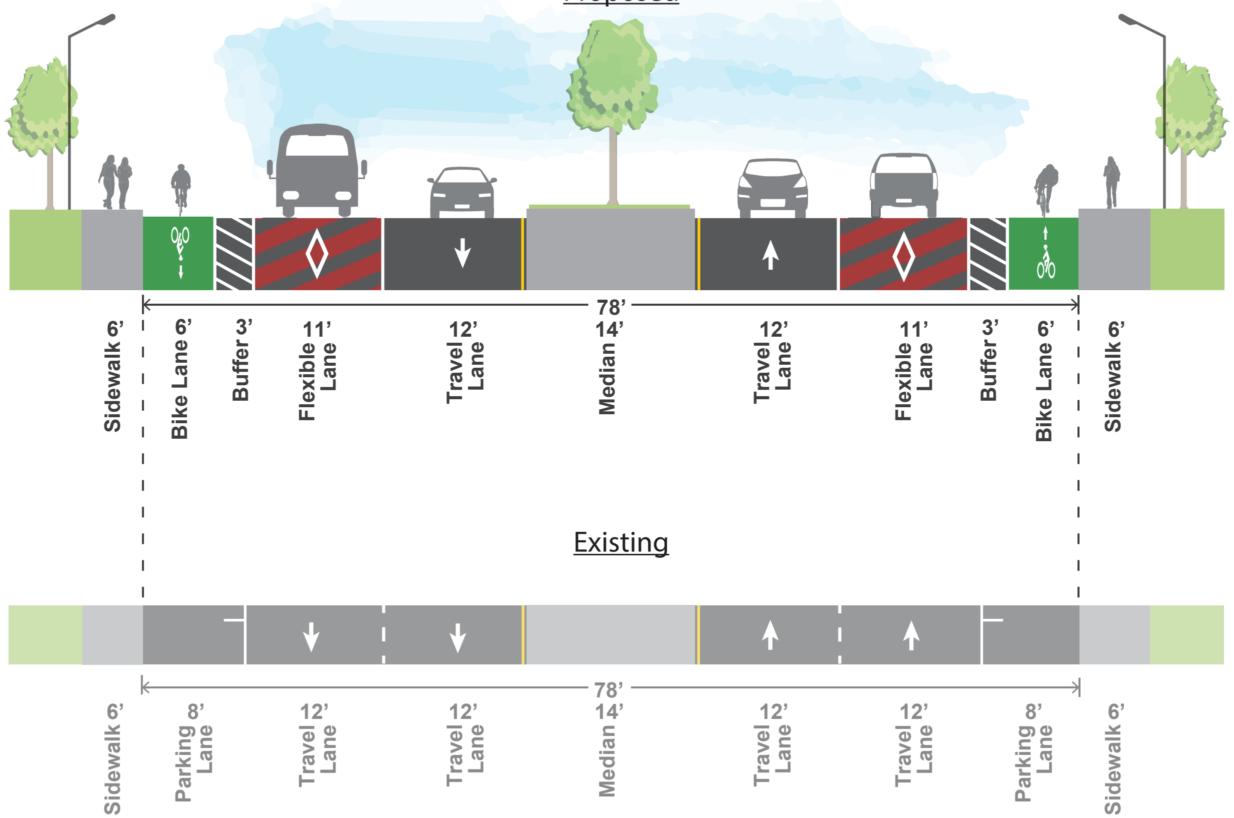


Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD).

Pacific Heights Boulevard

(Pacific Center Boulevard to Pacific Mesa Boulevard - Looking North)

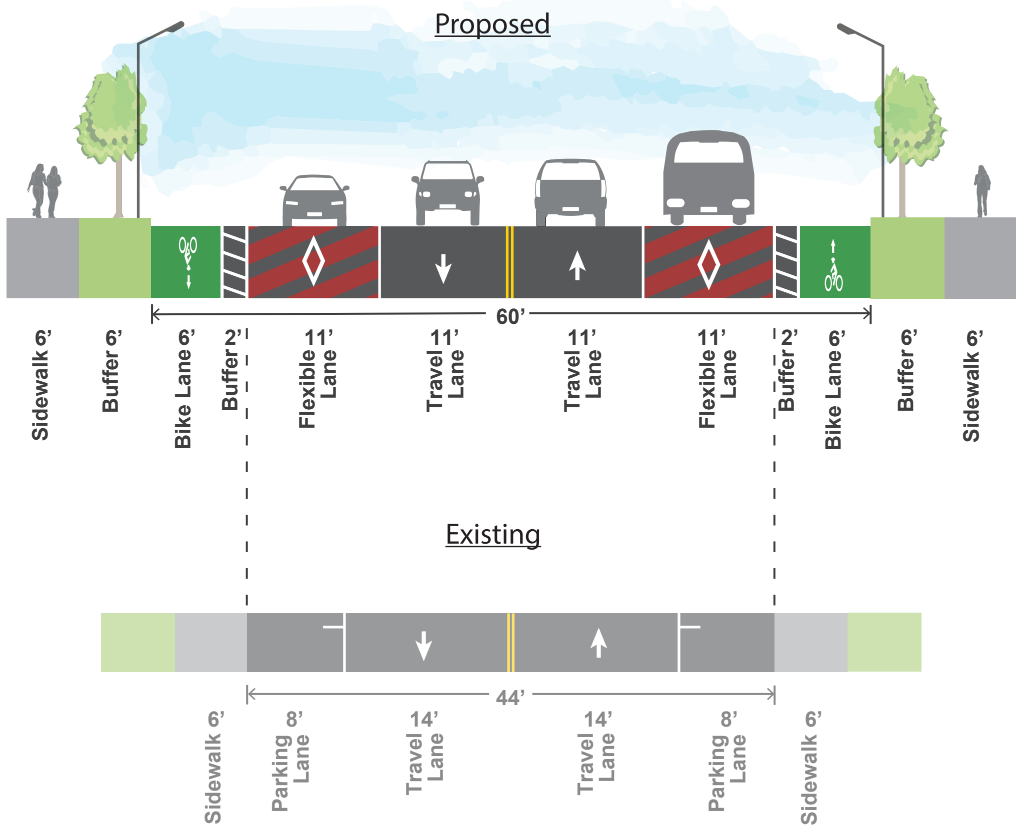
Proposed



Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD).

Barnes Canyon Road / Scranton Road

(Mira Sorrento Pl to Lusk Boulevard - Looking North/East)



Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD).

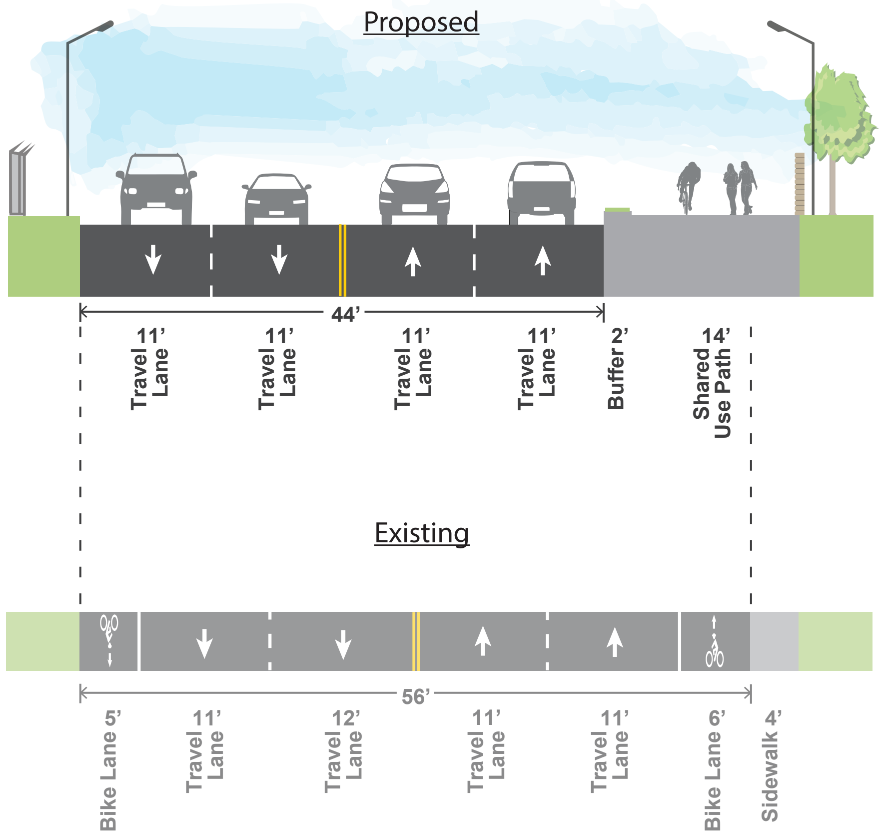
Scranton Road

(South of Mira Mesa Boulevard - Looking North)

Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD).

Vista Sorrento Parkway

(Sorrento Valley Boulevard to Lusk Boulevard - Looking North)

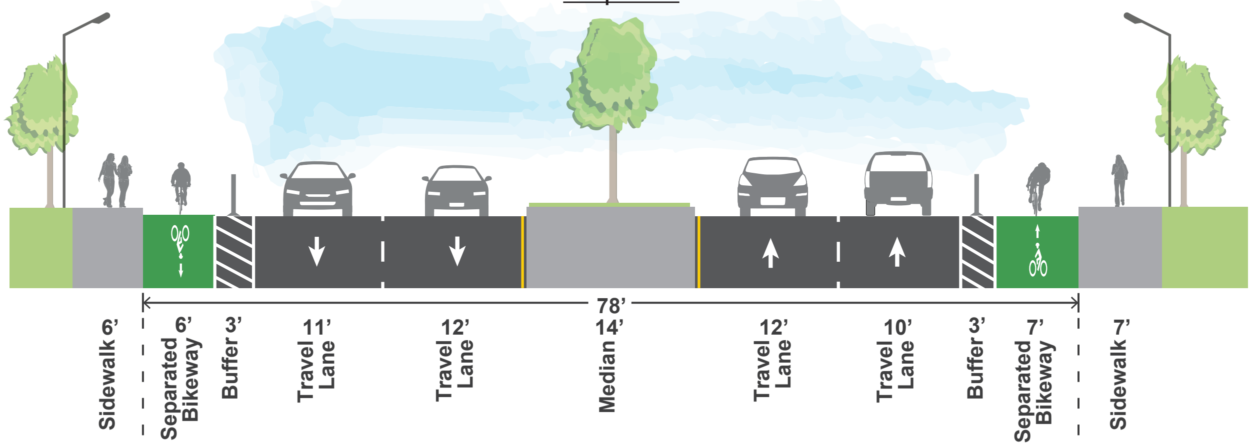


Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD).

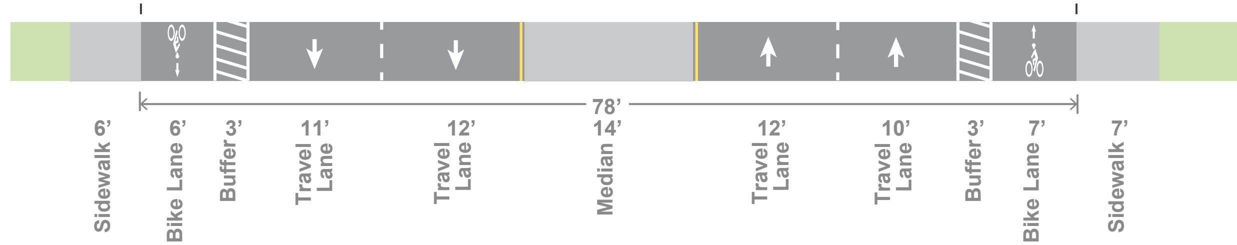
Sorrento Valley Boulevard / Calle Cristobal

(Pacific Haven Court to Seapoint Way - Looking East)

Proposed



Existing



Note: Cross-section shown is taken at most constrained or complex location within the segment limits. Cross-sections for remainder of segment are subject to vary. Dimensions shown are conceptual and used for feasibility assessment only. Landscaping depicted may require the formation of a Maintenance Assessment District (MAD).

Appendix D – Model Land Use Inputs

FID *	Shape *	scen_yr	abm_ver	hwy_link	hwycov_id	link_name	from_nm	to_nm	ID	NBSB	EBWB	ADT	Reduced
1	Polyline	2050	version_13_3_3	421	14293	CAMINO SANTA FE	MAYCREST LN	TOP GUN	9	Camino Santa Fe	Top Gun St	27051	25698
2	Polyline	2050	version_13_3_3	422	11425	SORRENTO VALLEY	CAMINO SANTA FE	UNKNOWN	8	Camino Santa Fe	Sorrento Valley Blvd	29255	27792
3	Polyline	2050	version_13_3_3	423	23123	CAMINO SANTA FE	CALLE CRISTOBAL	MAYCREST LN	8	Camino Santa Fe	Sorrento Valley Blvd	25595	24315
4	Polyline	2050	version_13_3_3	501	4486	MIRA MESA	GENETIC CENTER	FLANDERS	43	Genetic Center/Steadman St	Mira Mesa Blvd	35272	33508
5	Polyline	2050	version_13_3_3	1996	19715	VISTA SORRENTO	SORRENTO VALLEY	LUSK	1	Vista Sorrento Pkwy	Lusk Blvd	26737	25400
6	Polyline	2050	version_13_3_3	2000	20781	I-805 SB	I-5 SB	SORRENTO VALLEY	135	Vista Sorrento Pkwy	Sorrento Valley Blvd	88585	84156
7	Polyline	2050	version_13_3_3	2001	20762	I-805 NB	MIRA MESA	I-5 NB	1	Vista Sorrento Pkwy	Lusk Blvd	92506	87881
8	Polyline	2050	version_13_3_3	2007	29553	I-805 HOV NB	ramp I-805 HOV NB	ramp I-805 HOV NB	135	Vista Sorrento Pkwy	Sorrento Valley Blvd	10008	9508
9	Polyline	2050	version_13_3_3	2008	29551	I-805 HOV SB	CARMEL MOUNTAIN	MIRA MESA	135	Vista Sorrento Pkwy	Sorrento Valley Blvd	11107	10552
10	Polyline	2050	version_13_3_3	2012	14309	PACIFIC HEIGHTS	MIRA MESA	CORNERSTONE	31	Pacific Heights Blvd	Mira Mesa Blvd	22791	21651
11	Polyline	2050	version_13_3_3	2022	14308	LUSK	BARNES CANYON	MOREHOUSE	18	Lusk Blvd	Barnes Canyon Rd	18175	17266
12	Polyline	2050	version_13_3_3	2023	15490	LUSK	VISTA SORRENTO	DRIVEWAY	1	Vista Sorrento Pkwy	Lusk Blvd	27540	26163
13	Polyline	2050	version_13_3_3	2024	14305	MIRA MESA	unknown	PACIFIC HEIGHTS	31	Pacific Heights Blvd	Mira Mesa Blvd	41521	39445
14	Polyline	2050	version_13_3_3	3336	15489	SORRENTO VALLEY	zone connector	CARROLL CANYON	138	I-805 SB Off-Ramp/Carroll Canyon Rd	Sorrento Valley Rd	28299	26884
15	Polyline	2050	version_13_3_3	3337	19719	VISTA SORRENTO	UNKNOWN	MIRA SORRENTO	3	Vista Sorrento Pkwy	Mira Sorrento Pl	22465	21342
16	Polyline	2050	version_13_3_3	3808	19716	VISTA SORRENTO	LUSK	zone connector	1	Vista Sorrento Pkwy	Lusk Blvd	16167	15359
17	Polyline	2050	version_13_3_3	3809	1549	I-805 HOV NB	ramp I-805 HOV NB	ramp I-805 HOV NB	1	Vista Sorrento Pkwy	Lusk Blvd	10008	9508
18	Polyline	2050	version_13_3_3	3810	1580	I-805 HOV SB	ramp I-805 HOV SB	ramp	1	Vista Sorrento Pkwy	Lusk Blvd	11107	10552
19	Polyline	2050	version_13_3_3	3960	14324	CARROLL CANYON	YOUNGSTOWN	NANCY RIDGE	11	Youngstown Wy	Carroll Canyon Rd	32196	30587
20	Polyline	2050	version_13_3_3	3961	4475	MIRA MESA	SCRANTON	LUSK	23	Scranton Rd	Mira Mesa Blvd	35473	33699
21	Polyline	2050	version_13_3_3	4065	15496	MIRA MESA	VISTA SORRENTO	SCRANTON	4	Vista Sorrento Pkwy	Mira Mesa Blvd	65520	62244
22	Polyline	2050	version_13_3_3	4066	15494	RAMP	I-805 NB	ramp I-805 NB	3	Vista Sorrento Pkwy	Mira Sorrento Pl	21312	20246
23	Polyline	2050	version_13_3_3	4067	10151	MIRA MESA	SORRENTO VALLEY	ramp I-805 NB	4	Vista Sorrento Pkwy	Mira Mesa Blvd	54590	51860
24	Polyline	2050	version_13_3_3	4068	3241	RAMP	ramp	MIRA MESA	4	Vista Sorrento Pkwy	Mira Mesa Blvd	17074	16220
25	Polyline	2050	version_13_3_3	4073	31303	RAMP	ramp I-805 SB	SORRENTO VALLEY	138	I-805 SB Off-Ramp/Carroll Canyon Rd	Sorrento Valley Rd	16959	16111
26	Polyline	2050	version_13_3_3	4078	40254	RAMP	ramp	ramp I-805 SB	138	I-805 SB Off-Ramp/Carroll Canyon Rd	Sorrento Valley Rd	23462	22289
27	Polyline	2050	version_13_3_3	4080	33658	MIRA SORRENTO	zone connector	SCRANTON	21	Scranton Rd	Mira Sorrento Pl	28393	26973
28	Polyline	2050	version_13_3_3	4083	19206	CARROLL CANYON	CARROLL CYN DAR	SCRANTON	25	Scranton Rd	Carroll Canyon Rd	38242	36330
29	Polyline	2050	version_13_3_3	4084	352	CARROLL CANYON	SCRANTON	YOUNGSTOWN	25	Scranton Rd	Carroll Canyon Rd	28077	26673
30	Polyline	2050	version_13_3_3	4085	23151	SCRANTON	OBERLIN	unknown	25	Scranton Rd	Carroll Canyon Rd	20418	19397
31	Polyline	2050	version_13_3_3	4090	24682	CARROLL CANYON	RAMP	CARROLL CYN DAR	139	Business Access Rd	Carroll Canyon Rd	23677	22493
32	Polyline	2050	version_13_3_3	4092	10150	SORRENTO VALLEY	CARROLL CANYON	RAMP	138	I-805 SB Off-Ramp/Carroll Canyon Rd	Sorrento Valley Rd	68757	65319
33	Polyline	2050	version_13_3_3	4093	19205	CARROLL CANYON	RAMP	RAMP	138	I-805 SB Off-Ramp/Carroll Canyon Rd	Sorrento Valley Rd	27300	25935
34	Polyline	2050	version_13_3_3	4094	48478	zone connector	zone 2201	RAMP	139	Business Access Rd	Carroll Canyon Rd	10341	9824
35	Polyline	2050	version_13_3_3	4095	48477	RAMP	zone connector	CARROLL CANYON	139	Business Access Rd	Carroll Canyon Rd	10341	9824
36	Polyline	2050	version_13_3_3	4099	28955	RAMP	ramp I-805 NB	ramp I-805 NB	3	Vista Sorrento Pkwy	Mira Sorrento Pl	19784	18795
37	Polyline	2050	version_13_3_3	4110	15274	MIRA SORRENTO	VISTA SORRENTO	zone connector	3	Vista Sorrento Pkwy	Mira Sorrento Pl	31548	29970
38	Polyline	2050	version_13_3_3	4111	19721	VISTA SORRENTO	ramp	MIRA MESA	3	Vista Sorrento Pkwy	Mira Sorrento Pl	18033	17131
39	Polyline	2050	version_13_3_3	4112	33659	RAMP	ramp I-805 NB	VISTA SORRENTO	3	Vista Sorrento Pkwy	Mira Sorrento Pl	21312	20246
40	Polyline	2050	version_13_3_3	4113	19720	VISTA SORRENTO	MIRA SORRENTO	ramp	3	Vista Sorrento Pkwy	Mira Sorrento Pl	18033	17131
41	Polyline	2050	version_13_3_3	4114	10152	MIRA MESA	ramp I-805 NB	VISTA SORRENTO	4	Vista Sorrento Pkwy	Mira Mesa Blvd	54590	51860
42	Polyline	2050	version_13_3_3	4115	6006	SCRANTON	unknown	CARROLL CANYON	25	Scranton Rd	Carroll Canyon Rd	20418	19397
43	Polyline	2050	version_13_3_3	4122	14320	SCRANTON	COMPTER VISION	MIRA SORRENTO	21	Scranton Rd	Mira Sorrento Pl	25174	23915
44	Polyline	2050	version_13_3_3	4123	14318	SCRANTON	MOREHOUSE	MIRA MESA	23	Scranton Rd	Mira Mesa Blvd	33195	31535
45	Polyline	2050	version_13_3_3	4125	10153	SCRANTON	MIRA MESA	SORRENTO SOUTH DR	23	Scranton Rd	Mira Mesa Blvd	18525	17599
46	Polyline	2050	version_13_3_3	4127	14319	SCRANTON	zone connector	UNKNOWN	21	Scranton Rd	Mira Sorrento Pl	23727	22540
47	Polyline	2050	version_13_3_3	4129	14321	SCRANTON	MIRA SORRENTO	zone connector	21	Scranton Rd	Mira Sorrento Pl	18968	18020
48	Polyline	2050	version_13_3_3	4134	20418	YOUNGSTOWN	OBERLIN	CARROLL CANYON	11	Youngstown Wy	Carroll Canyon Rd	12586	11957
49	Polyline	2050	version_13_3_3	4148	3666	NANCY RIDGE	CARROLL CANYON	unknown	12	Nancy Ridge Dr	Carroll Canyon Rd	7053	6700
50	Polyline	2050	version_13_3_3	4154	14322	PACIFIC HEIGHTS	CORNERSTONE	CARROLL CANYON	33	Pacific Heights Blvd	Carroll Canyon Rd	23211	22050
51	Polyline	2050	version_13_3_3	4155	1630	OBERLIN	MIRA MESA	UNKNOWN	20	Lusk Blvd	Mira Mesa Blvd	20020	19019
52	Polyline	2050	version_13_3_3	4157	14323	CARROLL CANYON	NANCY RIDGE	PACIFIC HEIGHTS	12	Nancy Ridge Dr	Carroll Canyon Rd	27871	26478
53	Polyline	2050	version_13_3_3	4159	3665	MIRA MESA	LUSK	unknown	20	Lusk Blvd	Mira Mesa Blvd	41521	39445
54	Polyline	2050	version_13_3_3	4160	3917	LUSK	UNKNOWN	MIRA MESA	20	Lusk Blvd	Mira Mesa Blvd	31005	29455
55	Polyline	2050	version_13_3_3	4161	22004	CARROLL CANYON	PACIFIC HEIGHTS	UNKNOWN	33	Pacific Heights Blvd	Carroll Canyon Rd	33788	32098
56	Polyline	2050	version_13_3_3	4852	11421	SORRENTO VALLEY	UNKNOWN	VISTA SORRENTO	135	Vista Sorrento Pkwy	Sorrento Valley Blvd	36471	34647
57	Polyline	2050	version_13_3_3	4853	19714	VISTA SORRENTO	zone connector	SORRENTO VALLEY	135	Vista Sorrento Pkwy	Sorrento Valley Blvd	21150	20092
58	Polyline	2050	version_13_3_3	4879	9580	SORRENTO VALLEY	VISTA SORRENTO	SORRENTO VALLEY	135	Vista Sorrento Pkwy	Sorrento Valley Blvd	38245	36333
59	Polyline	2050	version_13_3_3	5164	17380	PACIFIC CENTER	PACIFIC HEIGHTS	UNKNOWN	28	Pacific Heights Blvd	Pacific Center Blvd	13215	12555

60	Polyline	2050	version_13_3_3	5172	21227	BARNES CANYON	UNKNOWN	LUSK	18	Lusk Blvd	Barnes Canyon Rd	13148	12491
61	Polyline	2050	version_13_3_3	5173	30873	PACIFIC HEIGHTS	PACIFIC CENTER	zone connector	28	Pacific Heights Blvd	Pacific Center Blvd	8648	8216
62	Polyline	2050	version_13_3_3	5174	14299	LUSK	WATERRIDGE	PACIFIC CENTER	17	Pacific Center Blvd	Lusk Blvd	18847	17905
63	Polyline	2050	version_13_3_3	5183	14300	PACIFIC CENTER	LUSK	MC KELLAR	17	Pacific Center Blvd	Lusk Blvd	18638	17706
64	Polyline	2050	version_13_3_3	5188	23155	LUSK	PACIFIC CENTER	zone connector	17	Pacific Center Blvd	Lusk Blvd	12884	12240
65	Polyline	2050	version_13_3_3	5190	48746	UNKNOWN	LUSK	UNKNOWN	17	Pacific Center Blvd	Lusk Blvd	2787	2648
66	Polyline	2050	version_13_3_3	5194	14313	LUSK	zone connector	BARNES CANYON	18	Lusk Blvd	Barnes Canyon Rd	16282	15468
67	Polyline	2050	version_13_3_3	5195	14314	BARNES CANYON	LUSK	10140/COMSTREA	18	Lusk Blvd	Barnes Canyon Rd	23107	21952
68	Polyline	2050	version_13_3_3	5196	14301	PACIFIC CENTER	UNKNOWN	PACIFIC HEIGHTS	28	Pacific Heights Blvd	Pacific Center Blvd	9222	8761
69	Polyline	2050	version_13_3_3	5201	48827	UNKNOWN	UNKNOWN	PACIFIC CENTER	28	Pacific Heights Blvd	Pacific Center Blvd	4141	3934
70	Polyline	2050	version_13_3_3	5223	48644	GENETIC CENTER	TOP GUN	MIRA MESA	43	Genetic Center/Steadman St	Mira Mesa Blvd	21013	19962
71	Polyline	2050	version_13_3_3	5224	10460	TOP GUN	GENETIC CENTER	MIRA MESA	42	Sequence Dr/ Huennekens St	Mira Mesa Blvd	0	0
72	Polyline	2050	version_13_3_3	5225	14306	MIRA MESA	PACIFIC HEIGHTS	Huennekens	31	Pacific Heights Blvd	Mira Mesa Blvd	59289	56324
73	Polyline	2050	version_13_3_3	5227	14311	PACIFIC MESA	PACIFIC CENTER	PACIFIC HEIGHTS	29	Pacific Mesa Blvd	Pacific Center Blvd	21935	20838
74	Polyline	2050	version_13_3_3	5228	14304	PACIFIC CENTER	PACIFIC MESA	zone connector	29	Pacific Mesa Blvd	Pacific Center Blvd	33999	32299
75	Polyline	2050	version_13_3_3	5229	14310	PACIFIC HEIGHTS	PACIFIC MESA	MIRA MESA	31	Pacific Heights Blvd	Mira Mesa Blvd	30530	29003
76	Polyline	2050	version_13_3_3	5231	14303	BARNES CANYON	PACIFIC HEIGHTS	UNKNOWN	26	Pacific Heights Blvd	Barnes Canyon Rd	11874	11281
77	Polyline	2050	version_13_3_3	5232	14307	PACIFIC HEIGHTS	BARNES CANYON	PACIFIC MESA	26	Pacific Heights Blvd	Barnes Canyon Rd	12034	11432
78	Polyline	2050	version_13_3_3	5236	14302	PACIFIC HEIGHTS	zone connector	BARNES CANYON	26	Pacific Heights Blvd	Barnes Canyon Rd	10510	9984
79	Polyline	2050	version_13_3_3	5237	48829	BARNES CANYON	zone connector	PACIFIC HEIGHTS	26	Pacific Heights Blvd	Barnes Canyon Rd	9763	9275
80	Polyline	2050	version_13_3_3	5239	48828	UNKNOWN	UNKNOWN	PACIFIC CENTER	29	Pacific Mesa Blvd	Pacific Center Blvd	658	625
81	Polyline	2050	version_13_3_3	5240	17381	PACIFIC CENTER	UNKNOWN	PACIFIC MESA	29	Pacific Mesa Blvd	Pacific Center Blvd	11673	11089
82	Polyline	2050	version_13_3_3	5242	48643	Huennekens	MIRA MESA	zone connector	42	Sequence Dr/ Huennekens St	Mira Mesa Blvd	15909	15113
83	Polyline	2050	version_13_3_3	5245	4485	MIRA MESA	TOP GUN	STEADMAN	42	Sequence Dr/ Huennekens St	Mira Mesa Blvd	43380	41211
84	Polyline	2050	version_13_3_3	5246	48645	STEADMAN	MIRA MESA	zone connector	43	Genetic Center/Steadman St	Mira Mesa Blvd	12905	12260
85	Polyline	2050	version_13_3_3	18476	48897	CAROLL CENTER	BLACK MOUNTAIN	UNKNOWN	99	Black Mountain Rd/Kearny Villa Rd	Black Mountain Rd/Carroll Centre Rd	16394	15575
86	Polyline	2050	version_13_3_3	18477	14404	BLACK MOUNTAIN	MAYA LINDA	CAROLL CENTER	98	Black Mountain Rd	Maya Linda Rd	30498	28973
87	Polyline	2050	version_13_3_3	18487	23142	I-15 HOV SB	MIRA MESA	POMERADO	85	I-15 SB Ramps	Miramar Rd	22772	21633
88	Polyline	2050	version_13_3_3	18488	23044	I-15 HOV NB	SR-163 NB	SR-163	69	I-15 SB Ramps	Carroll Canyon Rd	19821	18830
89	Polyline	2050	version_13_3_3	18489	31243	CAMINO SANTA FE	zone connector	SUMMERS RIDGE	116	Camino Santa Fe	Miratech Dr	37276	35412
90	Polyline	2050	version_13_3_3	18490	22039	CAMINO RUIZ	CARROLL CANYON	CARROLL CANYON	109	Camino Ruiz	Carroll Canyon Rd	35937	34141
91	Polyline	2050	version_13_3_3	18507	14679	RAMP	POMERADO	ramp I-15 NB	137	I-15 NB Ramps	Miramar Rd	1229	1168
92	Polyline	2050	version_13_3_3	18580	526	I-15 HOV NB	SR-163 NB	SR-163	85	I-15 SB Ramps	Miramar Rd	22861	21718
93	Polyline	2050	version_13_3_3	19843	8356	DOWDY	SILVERTON	MIRAMAR	78	Dowdy Dr	Miramar Rd	3759	3571
94	Polyline	2050	version_13_3_3	19847	1280	MIRAMAR	EMPIRE	DOWDY	78	Dowdy Dr	Miramar Rd	45683	43399
95	Polyline	2050	version_13_3_3	19928	3350	CAMINO SANTA FE	CARROLL	COMMERCE	87	Camino Santa Fe	Carroll Rd	39874	37880
96	Polyline	2050	version_13_3_3	19940	1628	MIRAMAR	DISTRIBUTION	MIRAMAR WAY	74	Distribution Ave	Miramar Rd	33499	31824
97	Polyline	2050	version_13_3_3	19943	22059	CARROLL	KENMAR	zone connector	88	Carroll Rd	Kenamar Dr	10296	9781
98	Polyline	2050	version_13_3_3	19945	10787	TRADE	CAMINO SANTA FE	UNKNOWN	119	Camino Santa Fe	Trade St	11432	10861
99	Polyline	2050	version_13_3_3	19948	17375	MIRAMAR	UNKNOWN	MILCH	72	Commerce Ave	Miramar Rd	37667	35783
100	Polyline	2050	version_13_3_3	19949	15078	CAMINO SANTA FE	CTE SANTA FE	MIRAMAR	71	Camino Santa Fe	Miramar Rd	40442	38420
101	Polyline	2050	version_13_3_3	19951	17374	MIRAMAR	CAMINO SANTA FE	UNKNOWN	71	Camino Santa Fe	Miramar Rd	36476	34653
102	Polyline	2050	version_13_3_3	19953	15077	MIRAMAR	UNKNOWN	CAMINO SANTA FE	71	Camino Santa Fe	Miramar Rd	78276	74362
103	Polyline	2050	version_13_3_3	19954	48680	FROST MAR PL	MIRAMAR	zone connector	71	Camino Santa Fe	Miramar Rd	1361	1293
104	Polyline	2050	version_13_3_3	19957	17377	MIRAMAR	UNKNOWN	PRODUCTION	73	Production Ave	Miramar Rd	34785	33046
105	Polyline	2050	version_13_3_3	19958	28866	COMMERCE	zone connector	MIRAMAR	72	Commerce Ave	Miramar Rd	3212	3051
106	Polyline	2050	version_13_3_3	19960	17376	MIRAMAR	COMMERCE	UNKNOWN	72	Commerce Ave	Miramar Rd	34785	33046
107	Polyline	2050	version_13_3_3	19961	48901	MILCH	MIRAMAR	unknown	72	Commerce Ave	Miramar Rd	6424	6103
108	Polyline	2050	version_13_3_3	19964	15154	MIRAMAR	PRODUCTION	DISTRIBUTION	73	Production Ave	Miramar Rd	34145	32438
109	Polyline	2050	version_13_3_3	19965	17373	PRODUCTION	zone connector	MIRAMAR	73	Production Ave	Miramar Rd	2681	2547
110	Polyline	2050	version_13_3_3	19967	14366	DISTRIBUTION	zone connector	MIRAMAR	74	Distribution Ave	Miramar Rd	2404	2284
111	Polyline	2050	version_13_3_3	19968	48653	SUMMERS RIDGE	UNKNOWN	CAMINO SANTA FE	117	Camino Santa Fe	Summers Ridge Rd	3746	3558
112	Polyline	2050	version_13_3_3	19971	5403	CARROLL	REHCO	CRESTMAR	86	Rehco Rd	Carroll Rd	14026	13325
113	Polyline	2050	version_13_3_3	19972	19284	CAMINO SANTA FE	SUMMERS RIDGE	unknown	116	Camino Santa Fe	Miratech Dr	35541	33764
114	Polyline	2050	version_13_3_3	19973	14334	CAMINO SANTA FE	CARROLL CANYON	UNKNOWN	119	Camino Santa Fe	Trade St	40845	38802
115	Polyline	2050	version_13_3_3	19978	48662	REHCO	CARROLL	zone connector	86	Rehco Rd	Carroll Rd	400	380
116	Polyline	2050	version_13_3_3	19981	48661	REHCO	zone connector	CARROLL	86	Rehco Rd	Carroll Rd	5235	4974
117	Polyline	2050	version_13_3_3	19982	15772	CARROLL	LIQUID	REHCO	86	Rehco Rd	Carroll Rd	9987	9488
118	Polyline	2050	version_13_3_3	19986	48652	SUMMERS RIDGE	zone connector	CAMINO SANTA FE	116	Camino Santa Fe	Miratech Dr	1734	1647
119	Polyline	2050	version_13_3_3	19988	8359	CAMINO SANTA FE	TRADE	CARROLL	119	Camino Santa Fe	Trade St	35455	33683
120	Polyline	2050	version_13_3_3	19990	8020	CARROLL	CAMINO SANTA FE	PRODUCTION	87	Camino Santa Fe	Carroll Rd	12260	11647

121	Polyline	2050 version_13_3_3	19991	5404	CARROLL	CRESTMAR	CAMINO SANTA FE	87	Camino Santa Fe	Carroll Rd	14873	14130
122	Polyline	2050 version_13_3_3	19992	48658	UNKNOWN	UNKNOWN	CAMINO SANTA FE	119	Camino Santa Fe	Trade St	2056	1954
123	Polyline	2050 version_13_3_3	19996	31244	CAMINO SANTA FE	unknown	SUMMERS RIDGE	117	Camino Santa Fe	Summers Ridge Rd	35541	33764
124	Polyline	2050 version_13_3_3	19998	19285	CAMINO SANTA FE	SUMMERS RIDGE	CARROLL CANYON	117	Camino Santa Fe	Summers Ridge Rd	39287	37323
125	Polyline	2050 version_13_3_3	20001	23137	MIRAMAR WAY	UNKNOWN	RAVEN	75	Miramar Wy	Miramar Rd	1918	1822
126	Polyline	2050 version_13_3_3	20002	48672	UNKNOWN	UNKNOWN	MIRAMAR	75	Miramar Wy	Miramar Rd	2989	2839
127	Polyline	2050 version_13_3_3	20007	14363	CARROLL	zone connector	MIRAMAR	76	Carroll Canyon Rd	Miramar Rd	8131	7724
128	Polyline	2050 version_13_3_3	20013	48669	UNKNOWN	UNKNOWN	CARROLL	88	Carroll Rd	Kenamar Dr	21	20
129	Polyline	2050 version_13_3_3	20014	5451	CARROLL	CARROLL WAY	UNKNOWN	88	Carroll Rd	Kenamar Dr	8761	8323
130	Polyline	2050 version_13_3_3	20024	23135	KENMAR	zone connector	CARROLL	88	Carroll Rd	Kenamar Dr	1535	1458
131	Polyline	2050 version_13_3_3	20027	48864	EMPIRE	zone connector	MIRAMAR	77	Alesmith Ct / Empire St	Miramar Rd	0	0
132	Polyline	2050 version_13_3_3	20028	6639	MIRAMAR	7590	EMPIRE	77	Alesmith Ct / Empire St	Miramar Rd	45683	43399
133	Polyline	2050 version_13_3_3	20192	1290	MIRAMAR	8606-NORTHGATE PLAZA	CAMINO RUIZ	80	Camino Ruiz	Miramar Rd	50959	48411
134	Polyline	2050 version_13_3_3	20193	15135	CAMINO RUIZ	CARROLL CANYON	MIRALANI	109	Camino Ruiz	Carroll Canyon Rd	35937	34141
135	Polyline	2050 version_13_3_3	20197	27459	CABOT	zone connector	MIRAMAR	79	Cabot Dr	Miramar Rd	6616	6285
136	Polyline	2050 version_13_3_3	20212	355	CAMINO RUIZ	ACTIVITY	MIRAMAR	111	Camino Ruiz	Activity Rd	25996	24696
137	Polyline	2050 version_13_3_3	20214	357	ACTIVITY	CAMINO RUIZ	CLAYTON	111	Camino Ruiz	Activity Rd	12630	11999
138	Polyline	2050 version_13_3_3	20216	48634	UNKNOWN	UNKNOWN	CAMINO RUIZ	111	Camino Ruiz	Activity Rd	2704	2569
139	Polyline	2050 version_13_3_3	20217	7076	CAMINO RUIZ	UNKNOWN	ACTIVITY	111	Camino Ruiz	Activity Rd	25091	23836
140	Polyline	2050 version_13_3_3	20219	23165	MITCHNER	MIRAMAR	zone connector	81	Clayton Dr/Mitscher Wy	Miramar Rd	14718	13982
141	Polyline	2050 version_13_3_3	20220	30803	CLAYTON	zone connector	MIRAMAR	81	Clayton Dr/Mitscher Wy	Miramar Rd	14807	14067
142	Polyline	2050 version_13_3_3	20236	14411	I-15 SB	MIRAMAR	MIRAMAR	85	I-15 SB Ramps	Miramar Rd	167402	159032
143	Polyline	2050 version_13_3_3	20237	14409	I-15 NB	POMERADO	POMERADO	137	I-15 NB Ramps	Miramar Rd	147281	139917
144	Polyline	2050 version_13_3_3	20241	4487	BLACK MOUNTAIN	ACTIVITY	MIRAMAR	82	Black Mountain Rd	Miramar Rd	21236	20174
145	Polyline	2050 version_13_3_3	20242	2288	ACTIVITY	PADGETT	BLACK MOUNTAIN	100	Black Mountain Rd	Activity Rd	18119	17213
146	Polyline	2050 version_13_3_3	20243	48899	UNKNOWN	BLACK MOUNTAIN	UNKNOWN	100	Black Mountain Rd	Activity Rd	4159	3951
147	Polyline	2050 version_13_3_3	20244	14405	BLACK MOUNTAIN	KEARNY VILLA	ACTIVITY	100	Black Mountain Rd	Activity Rd	14751	14013
148	Polyline	2050 version_13_3_3	20247	14406	KEARNY VILLA	BLACK MOUNTAIN	CANDIDA	99	Black Mountain Rd/Kearny Villa Rd	Black Mountain Rd/Carroll Centre Rd	19974	18975
149	Polyline	2050 version_13_3_3	20250	3878	KEARNY VILLA	TIERRA GRANDE	MIRAMAR	83	Kearny Villa Rd	Miramar Rd	24456	23233
150	Polyline	2050 version_13_3_3	20251	14680	RAMP	ramp I-15 SB	ramp I-15 SB	84	Kearny Mesa Rd	Miramar Rd	12065	11462
151	Polyline	2050 version_13_3_3	20256	45608	RAMP	ramp	RAMP	85	I-15 SB Ramps	Miramar Rd	10479	9955
152	Polyline	2050 version_13_3_3	20257	1302	MIRAMAR	RAMP	RAMP	85	I-15 SB Ramps	Miramar Rd	37275	35412
153	Polyline	2050 version_13_3_3	20258	1627	MIRAMAR	KEARNY VILLA	unknown	83	Kearny Villa Rd	Miramar Rd	51634	49052
154	Polyline	2050 version_13_3_3	20259	3869	KEARNY VILLA	MIRAMAR	KEARNY MESA	83	Kearny Villa Rd	Miramar Rd	36173	34364
155	Polyline	2050 version_13_3_3	20260	34440	KEARNY MESA	KEARNY VILLA	MIRAMAR	84	Kearny Mesa Rd	Miramar Rd	1994	1894
156	Polyline	2050 version_13_3_3	20261	10532	KEARNY MESA RD	MIRAMAR	UNKNOWN	84	Kearny Mesa Rd	Miramar Rd	4349	4132
157	Polyline	2050 version_13_3_3	20262	1294	MIRAMAR	RAMP	RAMP	84	Kearny Mesa Rd	Miramar Rd	45134	42878
158	Polyline	2050 version_13_3_3	20263	1293	MIRAMAR	unknown	KEARNY MESA	84	Kearny Mesa Rd	Miramar Rd	51634	49052
159	Polyline	2050 version_13_3_3	20264	7862	MIRAMAR	KEARNY MESA RD	RAMP	84	Kearny Mesa Rd	Miramar Rd	57200	54340
160	Polyline	2050 version_13_3_3	20268	45607	FREEWAY RAMP	ramp I-15 NB	I-15 NB	137	I-15 NB Ramps	Miramar Rd	9133	8676
161	Polyline	2050 version_13_3_3	20269	45606	FREEWAY RAMP	MIRAMAR	ramp I-15 NB	137	I-15 NB Ramps	Miramar Rd	9133	8676
162	Polyline	2050 version_13_3_3	20270	2258	MIRAMAR	FREEWAY RAMP	RAMP	85	I-15 SB Ramps	Miramar Rd	47755	45367
163	Polyline	2050 version_13_3_3	20271	2257	MIRAMAR	RAMP	FREEWAY RAMP	137	I-15 NB Ramps	Miramar Rd	38622	36691
164	Polyline	2050 version_13_3_3	20936	48524	ALEMANIA	UNKNOWN	MERCY	113	Alamenia Rd	Mercy Rd	2019	1918
165	Polyline	2050 version_13_3_3	20937	3926	MERCY	ALEMANIA	RAMP	113	Alamenia Rd	Mercy Rd	22384	21265
166	Polyline	2050 version_13_3_3	20960	5980	BLACK MOUNTAIN	WESTVIEW	ROCKFIELD	90	Black Mountain Rd	Westview Pkwy	37505	35630
167	Polyline	2050 version_13_3_3	20968	4531	GOLD COAST	CAMINO RUIZ	SALUDA	107	Camino Ruiz	Gold Coast Dr	2516	2390
168	Polyline	2050 version_13_3_3	20973	48591	CAMINO RUIZ	UNKNOWN	CALLE CRISTOBAL	41	Camino Ruiz	Calle Cristobal	1233	1172
169	Polyline	2050 version_13_3_3	20974	14370	CALLE CRISTOBAL	CAMINO RUIZ	AVENIDA DEL GATO	41	Camino Ruiz	Calle Cristobal	11511	10936
170	Polyline	2050 version_13_3_3	20975	14369	CAMINO RUIZ	CALLE CRISTOBAL	AQUARIUS	41	Camino Ruiz	Calle Cristobal	12745	12108
171	Polyline	2050 version_13_3_3	20979	48594	TERESA	UNKNOWN	CAMINO RUIZ	101	Camino Ruiz	Teresa Dr/Capricorn Wy	2494	2369
172	Polyline	2050 version_13_3_3	20984	364	CAMINO RUIZ	GOLD COAST	JADE COAST	107	Camino Ruiz	Gold Coast Dr	29951	28453
173	Polyline	2050 version_13_3_3	20995	20115	WESTVIEW	BLACK MOUNTAIN	COMPASS POINT	90	Black Mountain Rd	Westview Pkwy	10671	10137
174	Polyline	2050 version_13_3_3	20996	14353	MIRA MESA	UNKNOWN	CAMINO RUIZ	51	Mira Mesa Mall Driveways	Mira Mesa Blvd	24656	23423
175	Polyline	2050 version_13_3_3	21005	13731	ADERMAN	zone connector	MIRA MESA	48	Aderman Ave	Mira Mesa Blvd	929	883
176	Polyline	2050 version_13_3_3	21006	14798	MIRA MESA	ADERMAN	DABNEY	48	Aderman Ave	Mira Mesa Blvd	43644	41462
177	Polyline	2050 version_13_3_3	21007	3938	FLANDERS	TOP GUN	MIRA MESA	44	Flanders Dr	Mira Mesa Blvd	9165	8707
178	Polyline	2050 version_13_3_3	21008	48648	VIPER WAY	TOP GUN	MIRA MESA	45	Viper Wy	Mira Mesa Blvd	15386	14616
179	Polyline	2050 version_13_3_3	21010	14342	CAMINO SANTA FE	MIRA MESA	FLANDERS	46	Camino Santa Fe	Mira Mesa Blvd	17334	16467
180	Polyline	2050 version_13_3_3	21011	14339	FLANDERS	CAMINO SANTA FE	CAMTO ALVAREZ	10	Camino Santa Fe	Flanders Dr	7882	7488
181	Polyline	2050 version_13_3_3	21012	4450	MIRA MESA	VIPER WAY	CAMINO SANTA FE	45	Viper Wy	Mira Mesa Blvd	43751	41564

182	Polyline	2050 version_13_3_3	21013	14343	MIRA MESA	CAMINO SANTA FE	CAMINITO ALVAREZ	46	Camino Santa Fe	Mira Mesa Blvd	43692	41507
183	Polyline	2050 version_13_3_3	21016	14341	CAMINO SANTA FE	FLANDERS	zone connector	10	Camino Santa Fe	Flanders Dr	37276	35412
184	Polyline	2050 version_13_3_3	21018	4451	MIRA MESA	FLANDERS	UNKNOWN	44	Flanders Dr	Mira Mesa Blvd	27411	26040
185	Polyline	2050 version_13_3_3	21020	14335	FLANDERS	MIRA MESA	MESA RIM	44	Flanders Dr	Mira Mesa Blvd	13040	12388
186	Polyline	2050 version_13_3_3	21021	14338	FLANDERS	zone connector	CAMINO SANTA FE	10	Camino Santa Fe	Flanders Dr	21227	20166
187	Polyline	2050 version_13_3_3	21022	48649	UNKNOWN	MIRA MESA	UNKNOWN	45	Viper Wy	Mira Mesa Blvd	16615	15784
188	Polyline	2050 version_13_3_3	21023	23139	TOP GUN	CAMINO SANTA FE	VIPER WAY	9	Camino Santa Fe	Top Gun St	12685	12051
189	Polyline	2050 version_13_3_3	21025	14337	CAMINO SANTA FE	TOP GUN	MIRA MESA	9	Camino Santa Fe	Top Gun St	14560	13832
190	Polyline	2050 version_13_3_3	21031	14344	MIRA MESA	SCHILING	CARRINGTON	47	Schilling Ave	Mira Mesa Blvd	41541	39464
191	Polyline	2050 version_13_3_3	21032	48716	SCHILING	zone connector	MIRA MESA	47	Schilling Ave	Mira Mesa Blvd	3167	3009
192	Polyline	2050 version_13_3_3	21033	48717	CAMINITO ALVAREZ	MIRA MESA	zone connector	47	Schilling Ave	Mira Mesa Blvd	1892	1798
193	Polyline	2050 version_13_3_3	21035	48720	ADERMAN	zone connector	MIRA MESA	48	Aderman Ave	Mira Mesa Blvd	2919	2773
194	Polyline	2050 version_13_3_3	21037	14346	MIRA MESA	UNKNOWN	ADERMAN	48	Aderman Ave	Mira Mesa Blvd	41541	39464
195	Polyline	2050 version_13_3_3	21038	14292	CALLE CRISTOBAL	CAMINO PROPICO	CAMINO SANTA FE	8	Camino Santa Fe	Sorrento Valley Blvd	18429	17507
196	Polyline	2050 version_13_3_3	21065	4454	MIRA MESA	PARKDALE	MONTONGO	49	Parkdale Ave	Mira Mesa Blvd	36305	34490
197	Polyline	2050 version_13_3_3	21071	5420	PARKDALE	BENDIGO	MIRA MESA	49	Parkdale Ave	Mira Mesa Blvd	7078	6724
198	Polyline	2050 version_13_3_3	21074	14797	MIRA MESA	DABNEY	PARKDALE	49	Parkdale Ave	Mira Mesa Blvd	43644	41462
199	Polyline	2050 version_13_3_3	21076	3847	PARKDALE	MIRA MESA	DANCY	49	Parkdale Ave	Mira Mesa Blvd	8803	8363
200	Polyline	2050 version_13_3_3	21084	2929	GOLD COAST	BARONESS	CAMINO RUIZ	107	Camino Ruiz	Gold Coast Dr	7321	6955
201	Polyline	2050 version_13_3_3	21085	382	CAMINO RUIZ	FLANDERS	GOLD COAST	107	Camino Ruiz	Gold Coast Dr	26966	25618
202	Polyline	2050 version_13_3_3	21089	23134	REAGAN	MIRA MESA	BERWYN	50	Reagan Rd	Mira Mesa Blvd	5088	4834
203	Polyline	2050 version_13_3_3	21091	4452	MIRA MESA	MONTONGO	REAGAN	50	Reagan Rd	Mira Mesa Blvd	33719	32033
204	Polyline	2050 version_13_3_3	21097	14348	REAGAN	zone connector	MIRA MESA	50	Reagan Rd	Mira Mesa Blvd	1860	1767
205	Polyline	2050 version_13_3_3	21098	14350	MIRA MESA	REAGAN	UNKNOWN	50	Reagan Rd	Mira Mesa Blvd	29491	28016
206	Polyline	2050 version_13_3_3	21099	48608	UNKNOWN	MIRA MESA	UNKNOWN	51	Mira Mesa Mall Driveways	Mira Mesa Blvd	968	919
207	Polyline	2050 version_13_3_3	21100	48609	UNKNOWN	UNKNOWN	MIRA MESA	51	Mira Mesa Mall Driveways	Mira Mesa Blvd	5802	5512
208	Polyline	2050 version_13_3_3	21193	20110	WESTONHILL	WESTMORE	MIRA MESA	54	Westonhill Dr	Mira Mesa Blvd	9723	9237
209	Polyline	2050 version_13_3_3	21196	14391	I-15 SB	MIRA MESA	MIRA MESA	59	I-15 SB Ramps	Mira Mesa Blvd	147393	140023
210	Polyline	2050 version_13_3_3	21205	30720	WESTVIEW PKWY	UNKNOWN	MIRA MESA	58	Westview Pkwy	Mira Mesa Blvd	28603	27172
211	Polyline	2050 version_13_3_3	21211	528	I-15 HOV SB	I-15 SB	RANCHO PENASQUITOS	59	I-15 SB Ramps	Mira Mesa Blvd	23127	21970
212	Polyline	2050 version_13_3_3	21217	4449	MIRA MESA	UNKNOWN	WESTMORE	56	Westmore Rd/Marbury Ave	Mira Mesa Blvd	40877	38833
213	Polyline	2050 version_13_3_3	21218	4456	MIRA MESA	WESTMORE	RICKERT	56	Westmore Rd/Marbury Ave	Mira Mesa Blvd	43778	41589
214	Polyline	2050 version_13_3_3	21227	4453	MIRA MESA	REAGAN	WESTONHILL	53	New Salem St/Marauder Wy	Mira Mesa Blvd	49900	47405
215	Polyline	2050 version_13_3_3	21239	14356	REAGAN	BARON	MIRA MESA	53	New Salem St/Marauder Wy	Mira Mesa Blvd	2507	2382
216	Polyline	2050 version_13_3_3	21242	14354	CAMINO RUIZ	MIRA MESA	UNKNOWN	52	Camino Ruiz	Mira Mesa Blvd	17283	16418
217	Polyline	2050 version_13_3_3	21244	14357	MIRA MESA	CAMINO RUIZ	zone connector	52	Camino Ruiz	Mira Mesa Blvd	37213	35352
218	Polyline	2050 version_13_3_3	21247	14352	CAMINO RUIZ	zone connector	MIRA MESA	52	Camino Ruiz	Mira Mesa Blvd	26216	24906
219	Polyline	2050 version_13_3_3	21251	14360	NEW SALEM	zone connector	MIRA MESA	53	New Salem St/Marauder Wy	Mira Mesa Blvd	4283	4069
220	Polyline	2050 version_13_3_3	21254	14358	MIRA MESA	zone connector	REAGAN	53	New Salem St/Marauder Wy	Mira Mesa Blvd	46101	43795
221	Polyline	2050 version_13_3_3	21262	20111	WESTONHILL	MIRA MESA	HILLERY	54	Westonhill Dr	Mira Mesa Blvd	7284	6920
222	Polyline	2050 version_13_3_3	21266	48723	GREENFORD	zone connector	MIRA MESA	55	Greenford Dr	Mira Mesa Blvd	1224	1163
223	Polyline	2050 version_13_3_3	21267	4455	MIRA MESA	WESTONHILL	GREENFORD	54	Westonhill Dr	Mira Mesa Blvd	56548	53720
224	Polyline	2050 version_13_3_3	21270	2293	GREENFORD	MIRA MESA	HILLERY	55	Greenford Dr	Mira Mesa Blvd	5516	5240
225	Polyline	2050 version_13_3_3	21271	27873	MIRA MESA	GREENFORD	UNKNOWN	55	Greenford Dr	Mira Mesa Blvd	50781	48242
226	Polyline	2050 version_13_3_3	21275	2319	CAMINO RUIZ	CAPRICORN	HYDRA	101	Camino Ruiz	Teresa Dr/Capricorn Wy	12792	12152
227	Polyline	2050 version_13_3_3	21288	2966	CAPRICORN	CAMINO RUIZ	KELOWNA	101	Camino Ruiz	Teresa Dr/Capricorn Wy	8836	8394
228	Polyline	2050 version_13_3_3	21289	14368	AQUARIUS	CAMINO RUIZ	KELOWNA	132	Camino Ruiz	Aquarious Dr	9218	8758
229	Polyline	2050 version_13_3_3	21291	14367	CAMINO RUIZ	AQUARIUS	ZAPATA	132	Camino Ruiz	Aquarious Dr	8259	7846
230	Polyline	2050 version_13_3_3	21294	384	CAMINO RUIZ	ZAPATA	CAPRICORN	101	Camino Ruiz	Teresa Dr/Capricorn Wy	10527	10001
231	Polyline	2050 version_13_3_3	21307	20101	WESTMORE	VIA SAN BLAS	MIRA MESA	56	Westmore Rd/Marbury Ave	Mira Mesa Blvd	4003	3803
232	Polyline	2050 version_13_3_3	21309	48725	MARBURY	MIRA MESA	zone connector	56	Westmore Rd/Marbury Ave	Mira Mesa Blvd	748	711
233	Polyline	2050 version_13_3_3	21320	1221	GOLD COAST	BLACK MOUNTAIN	zone connector	96	Black Mountain Rd	Gold Coast Dr	6663	6329
234	Polyline	2050 version_13_3_3	21322	1203	MAYA LINDA	BLACK MOUNTAIN	unknown	98	Black Mountain Rd	Maya Linda Rd	8536	8109
235	Polyline	2050 version_13_3_3	21328	4513	BLACK MOUNTAIN	UNKNOWN	GOLD COAST	95	Black Mountain Rd	Miramar College	31647	30065
236	Polyline	2050 version_13_3_3	21332	4491	BLACK MOUNTAIN	zone connector	CARROLL CANYON	97	Black Mountain Rd	Carroll Canyon Rd	31259	29696
237	Polyline	2050 version_13_3_3	21333	2964	GOLD COAST	THANKSGIVING	BLACK MOUNTAIN	96	Black Mountain Rd	Gold Coast Dr	10772	10233
238	Polyline	2050 version_13_3_3	21334	19291	MAYA LINDA	UNKNOWN	BLACK MOUNTAIN	98	Black Mountain Rd	Maya Linda Rd	15074	14320
239	Polyline	2050 version_13_3_3	21338	4476	BLACK MOUNTAIN	CARROLL CANYON	MAYA LINDA	97	Black Mountain Rd	Carroll Canyon Rd	19348	18381
240	Polyline	2050 version_13_3_3	21339	6640	CARROLL CANYON	BLACK MOUNTAIN	CAMTO ZAR	97	Black Mountain Rd	Carroll Canyon Rd	31578	29999
241	Polyline	2050 version_13_3_3	21340	365	CARROLL CANYON	UNKNOWN	BLACK MOUNTAIN	97	Black Mountain Rd	Carroll Canyon Rd	37832	35940
242	Polyline	2050 version_13_3_3	21341	4490	BLACK MOUNTAIN	GOLD COAST	zone connector	96	Black Mountain Rd	Gold Coast Dr	32813	31172

243	Polyline	2050	version_13_3_3	21342	1220	HILLERY	UNKNOWN	BLACK MOUNTAIN	94	Black Mountain Rd	Hillery Dr	16868	16025
244	Polyline	2050	version_13_3_3	21345	4512	BLACK MOUNTAIN	HILLERY	UNKNOWN	94	Black Mountain Rd	Hillery Dr	29797	28307
245	Polyline	2050	version_13_3_3	21349	48855	UNKNOWN	BLACK MOUNTAIN	UNKNOWN	95	Black Mountain Rd	Miramar College	5277	5013
246	Polyline	2050	version_13_3_3	21351	14379	BLACK MOUNTAIN	zone connector	HILLERY	94	Black Mountain Rd	Hillery Dr	23657	22474
247	Polyline	2050	version_13_3_3	21352	23154	HILLERY	BLACK MOUNTAIN	UNKNOWN	94	Black Mountain Rd	Hillery Dr	13803	13113
248	Polyline	2050	version_13_3_3	21354	14677	RAMP	ramp I-15 SB	ramp I-15 SB	69	I-15 SB Ramps	Carroll Canyon Rd	14485	13761
249	Polyline	2050	version_13_3_3	21355	27304	RAMP	I-15 SB	CARROLL CANYON	69	I-15 SB Ramps	Carroll Canyon Rd	12951	12303
250	Polyline	2050	version_13_3_3	21356	1204	MAYA LINDA	MESA SPRINGS	CARROLL CANYON	68	Maya Linda Rd	Carroll Canyon Rd	7921	7525
251	Polyline	2050	version_13_3_3	21357	14400	I-15 SB	CARROLL CANYON	CARROLL CANYON	69	I-15 SB Ramps	Carroll Canyon Rd	152170	144561
252	Polyline	2050	version_13_3_3	21360	10857	CARROLL CANYON	RAMP	RAMP	69	I-15 SB Ramps	Carroll Canyon Rd	46247	43935
253	Polyline	2050	version_13_3_3	21364	1205	MAYA LINDA	CARROLL CANYON	GOLD COAST	68	Maya Linda Rd	Carroll Canyon Rd	15081	14327
254	Polyline	2050	version_13_3_3	21367	3428	CARROLL CANYON	CAMTO JOVIAL	MAYA LINDA	68	Maya Linda Rd	Carroll Canyon Rd	34837	33095
255	Polyline	2050	version_13_3_3	21369	1751	CARROLL CANYON	MAYA LINDA	RAMP	68	Maya Linda Rd	Carroll Canyon Rd	56284	53470
256	Polyline	2050	version_13_3_3	21373	10856	CARROLL CANYON	RAMP	UNKNOWN	70	I-15 NB Ramps	Carroll Canyon Rd	38994	37044
257	Polyline	2050	version_13_3_3	21389	5981	BLACK MOUNTAIN	CAPRICORN	LONGRIDGE	91	Black Mountain Rd	Capricorn Wy	26898	25553
258	Polyline	2050	version_13_3_3	21390	14378	GALVIN	ICE SKATE	WESTVIEW	65	Westview Pkwy	Galvin Ave	4007	3807
259	Polyline	2050	version_13_3_3	21396	14376	CAPRICORN	FEATHERHILL	WESTVIEW	63	Westview Pkwy	Capricorn Wy	4857	4615
260	Polyline	2050	version_13_3_3	21397	4525	MIRA MESA	zone connector	WESTVIEW PKWY	58	Westview Pkwy	Mira Mesa Blvd	59288	56323
261	Polyline	2050	version_13_3_3	21398	22488	WESTVIEW	CAPRICORN	UNKNOWN	63	Westview Pkwy	Capricorn Wy	15460	14687
262	Polyline	2050	version_13_3_3	21401	48844	Achilles	zone connector	BLACK MOUNTAIN	92	Black Mountain Rd	Galvin Ave	761	723
263	Polyline	2050	version_13_3_3	21402	4776	BLACK MOUNTAIN	GALVIN	GEMINI	92	Black Mountain Rd	Galvin Ave	25863	24570
264	Polyline	2050	version_13_3_3	21405	2287	GEMINI	JANICE	BLACK MOUNTAIN	93	Black Mountain Rd	Gemini Ave	14356	13639
265	Polyline	2050	version_13_3_3	21407	7075	MIRA MESA	UNKNOWN	BLACK MOUNTAIN	57	Black Mountain Rd	Mira Mesa Blvd	43778	41589
266	Polyline	2050	version_13_3_3	21408	22554	GEMINI	PEGASUS	JANICE	93	Black Mountain Rd	Gemini Ave	14104	13399
267	Polyline	2050	version_13_3_3	21409	30725	MIRA MESA	RICKERT	UNKNOWN	57	Black Mountain Rd	Mira Mesa Blvd	43778	41589
268	Polyline	2050	version_13_3_3	21412	4778	BLACK MOUNTAIN	unknown	MIRA MESA	57	Black Mountain Rd	Mira Mesa Blvd	31011	29460
269	Polyline	2050	version_13_3_3	21415	8109	MIRA MESA	BLACK MOUNTAIN	zone connector	57	Black Mountain Rd	Mira Mesa Blvd	59380	56411
270	Polyline	2050	version_13_3_3	21416	15101	BLACK MOUNTAIN	unknown	WOODS/VILLAGE GRN	57	Black Mountain Rd	Mira Mesa Blvd	37493	35618
271	Polyline	2050	version_13_3_3	21417	14380	BLACK MOUNTAIN	MIRA MESA	unknown	57	Black Mountain Rd	Mira Mesa Blvd	37493	35618
272	Polyline	2050	version_13_3_3	21418	4777	BLACK MOUNTAIN	GEMINI	unknown	93	Black Mountain Rd	Gemini Ave	31011	29460
273	Polyline	2050	version_13_3_3	21419	48847	GEMINI	BLACK MOUNTAIN	zone connector	93	Black Mountain Rd	Gemini Ave	2984	2835
274	Polyline	2050	version_13_3_3	21420	14377	GALVIN	BLACK MOUNTAIN	ICE SKATE	92	Black Mountain Rd	Galvin Ave	2602	2471
275	Polyline	2050	version_13_3_3	21421	4508	BLACK MOUNTAIN	LONGRIDGE	GALVIN	92	Black Mountain Rd	Galvin Ave	26503	25177
276	Polyline	2050	version_13_3_3	21423	1196	CAPRICORN	HAVERFIELD	BLACK MOUNTAIN	91	Black Mountain Rd	Capricorn Wy	17869	16976
277	Polyline	2050	version_13_3_3	21426	4507	BLACK MOUNTAIN	ROCKFIELD	CAPRICORN	91	Black Mountain Rd	Capricorn Wy	38572	36643
278	Polyline	2050	version_13_3_3	21428	14375	CAPRICORN	BLACK MOUNTAIN	FEATHERHILL	91	Black Mountain Rd	Capricorn Wy	2955	2807
279	Polyline	2050	version_13_3_3	21431	4509	MIRA MESA	RAMP	ramp I-15 SB	59	I-15 SB Ramps	Mira Mesa Blvd	75312	71546
280	Polyline	2050	version_13_3_3	21433	20118	WESTVIEW	GALVIN	zone connector	65	Westview Pkwy	Galvin Ave	16426	15604
281	Polyline	2050	version_13_3_3	21439	28809	I-15 SB	MIRA MESA	MIRA MESA	59	I-15 SB Ramps	Mira Mesa Blvd	138617	131686
282	Polyline	2050	version_13_3_3	21441	20119	WESTVIEW	zone connector	MIRA MESA	58	Westview Pkwy	Mira Mesa Blvd	24982	23733
283	Polyline	2050	version_13_3_3	21443	4993	MIRA MESA	WESTVIEW	RAMP	58	Westview Pkwy	Mira Mesa Blvd	92784	88145
284	Polyline	2050	version_13_3_3	21444	48852	MIRA LEE WAY	WESTVIEW	zone connector	64	Westview Pkwy	Mira Lee Wy	3042	2890
285	Polyline	2050	version_13_3_3	21446	20117	WESTVIEW	MIRA LEE WAY	GALVIN	65	Westview Pkwy	Galvin Ave	12827	12186
286	Polyline	2050	version_13_3_3	21447	48850	UNKNOWN	UNKNOWN	WESTVIEW	64	Westview Pkwy	Mira Lee Wy	0	0
287	Polyline	2050	version_13_3_3	21448	4511	MIRA MESA	FUTURE RAIL STATION	RAMP	59	I-15 SB Ramps	Mira Mesa Blvd	75236	71474
288	Polyline	2050	version_13_3_3	21451	14390	RAMP	ramp I-15 SB	I-15 SB	59	I-15 SB Ramps	Mira Mesa Blvd	8776	8337
289	Polyline	2050	version_13_3_3	21454	4510	MIRA MESA	ramp I-15 SB	FUTURE RAIL STATION	59	I-15 SB Ramps	Mira Mesa Blvd	75312	71546
290	Polyline	2050	version_13_3_3	21460	48996	CAPRICORN WAY	WESTVIEW	zone connector	63	Westview Pkwy	Capricorn Wy	1335	1269
291	Polyline	2050	version_13_3_3	21462	20116	WESTVIEW	COMPASS POINT	CAPRICORN	63	Westview Pkwy	Capricorn Wy	10671	10137
292	Polyline	2050	version_13_3_3	21479	48842	UNKNOWN	UNKNOWN	MERCY	89	Black Mountain Rd	Mercy Rd	1676	1592
293	Polyline	2050	version_13_3_3	21524	14387	MERCY	KIKA	ALEMANIA	113	Alamenia Rd	Mercy Rd	19671	18688
294	Polyline	2050	version_13_3_3	21525	14389	MERCY	BLACK MOUNTAIN	CHABOLA	89	Black Mountain Rd	Mercy Rd	19193	18233
295	Polyline	2050	version_13_3_3	21526	11440	BLACK MOUNTAIN	CANYONSIDE PARK DRIV	MERCY	89	Black Mountain Rd	Mercy Rd	44595	42365
296	Polyline	2050	version_13_3_3	21527	11442	BLACK MOUNTAIN	MERCY	BABAUTA	89	Black Mountain Rd	Mercy Rd	45645	43362
297	Polyline	2050	version_13_3_3	21528	11441	BLACK MOUNTAIN	BABAUTA	WESTVIEW	136	Black Mountain Rd	Babauta Rd	48176	45767
298	Polyline	2050	version_13_3_3	21529	48525	ALEMANIA	MERCY	zone connector	113	Alamenia Rd	Mercy Rd	743	706
299	Polyline	2050	version_13_3_3	21947	525	I-15 HOV SB	I-15 SB	RANCHO PENASQUITOS	114	I-15 SB Ramps	Mercy Rd	23464	22291
300	Polyline	2050	version_13_3_3	21949	2589	RAMP	I-15 SB	MERCY	114	I-15 SB Ramps	Mercy Rd	11161	10602
301	Polyline	2050	version_13_3_3	21958	25100	I-15 SB	MERCY	MERCY	114	I-15 SB Ramps	Mercy Rd	139738	132751
302	Polyline	2050	version_13_3_3	21959	14667	RAMP	ramp I-15 SB	ramp I-15 SB	114	I-15 SB Ramps	Mercy Rd	14896	14151
303	Polyline	2050	version_13_3_3	21969	3925	MERCY	RAMP	RAMP	114	I-15 SB Ramps	Mercy Rd	38464	36541

304	Polyline	2050	version_13_3_3	21970	8326	SCRIPPS POWAY	RAMP	ramp I-15 HOV NB	115	I-15 NB Ramps		Mercy Rd	55195	52435

LAND USE INPUTS FOR PREFERRED MODEL RUN WITH MIRA MESA OVERRIDES

TAZ	MGRA	lu_type_id	LU CODE	Amount_
2279	6285	3	7609	0
2279	6284	3	2301	0
2279	6284	3	7609	0
2279	6283		4102	0
2279	6283	3	2201	205
2279	6283	3	7609	0
2200	6282	3	4117	0
2200	6281		4102	0
2200	6281	3	6701	0
2200	6281	3	7609	0
2200	6281	3	9101	0
2233	6270	3	4112	0
2233	6270	3	4118	0
2233	6270	3	7609	0
2222	6269	3	4118	0
2222	6269	3	7609	0
2222	6268	3	4118	0
2222	6268	3	5033	67
2406	5434	3	4113	0
2329	5209	1	102	92
2329	5209	3	4117	0
2329	5209	3	4118	0
2329	5209	3	7607	0
2329	5209	3	7609	0
2329	5208	1	102	214
2329	5208	3	4118	0
2329	5208	3	7607	0
2303	5207	3	7606	0
2303	5207	3	9101	0
2282	5206	1	102	444
2282	5206	3	6102	9
2282	5205	1	102	330
2282	5205	3	6071	578
2303	5204	1	101	75
2303	5204	3	4118	0
2303	5204	3	7606	0
2303	5204	3	7607	0
2303	5203	1	102	338
2282	5202	1	102	383
2282	5202	3	4118	0
2282	5202	3	7607	0
2282	5201	1	102	466
2282	5201	3	4118	0
2329	5200	1	101	146
2329	5200	3	4118	0
2329	5200	3	7606	0

2303	5199	1	101	102
2303	5199	3	4118	0
2303	5199	3	7606	0
2303	5199	3	7607	0
2303	5198	1	102	123
2303	5198	3	4118	0
2303	5198	3	7607	0
2303	5197	1	102	244
2303	5197	3	4118	0
2303	5197	3	7607	0
2283	5196	3	4118	0
2283	5196	3	5003	186
2283	5195	1	102	586
2283	5194	1	102	1390
2283	5194	3	4118	0
2283	5193	1	102	381
2283	5193	3	4118	0
2311	5192	1	102	467
2311	5192	3	4118	0
2311	5192	3	7601	0
2311	5192	3	7607	0
2311	5190	1	102	318
2311	5190	3	4112	0
2311	5190	3	4118	0
2311	5188	1	102	310
2311	5188	3	4112	0
2311	5188	3	4118	0
2311	5188	3	7609	0
2300	5185	1	102	548
2300	5185	3	4118	0
2269	5184	1	102	256
2269	5184	3	4118	0
2269	5184	3	7607	0
2269	5183	1	102	532
2269	5183	3	4118	0
2266	5182	1	102	30
2266	5182	3	4118	0
2266	5182	3	5003	346
2269	5181	1	102	418
2269	5181	3	4118	0
2269	5181	3	5012	53
2269	5181	3	6081	611
2269	5181	3	7607	0
2269	5180	1	102	84
2269	5180	3	1501	97
2269	5180	3	4118	0
2269	5180	7	1501	288

2266	5179	3	1501	37
2266	5179	3	4118	0
2266	5179	3	5007	57
2266	5179	3	5021	11
2266	5179	3	5027	33
2266	5179	3	6041	128
2266	5179	3	6071	488
2266	5179	7	1501	400
2222	4966	3	2101	10
2222	4966	3	4118	0
2222	4966	3	5026	28
2222	4966	3	5029	96
2222	4966	3	5033	7
2222	4965	3	2101	46
2222	4965	3	2103	74
2222	4965	3	2105	4
2222	4965	3	4118	0
2222	4965	3	5029	8
2222	4965	3	6109	12
2222	4964			0
2222	4964		9503	0
2222	4964	3	2101	20
2222	4964	3	2103	25
2222	4964	3	2104	102
2222	4964	3	4114	0
2222	4964	3	4118	0
2222	4964	3	5029	11
2222	4964	3	5033	50
2222	4963	3	2101	238
2233	4962	3	4112	0
2233	4962	3	4113	100
2233	4961	3	4118	0
2233	4961	3	7609	0
2222	4960	3	2101	156
2222	4960	3	2103	21
2222	4960	3	2104	18
2222	4960	3	4117	0
2222	4960	3	4118	0
2222	4960	3	5033	9
2222	4959	3	2104	21
2222	4959	3	2107	6
2222	4959	3	5033	25
2222	4959	3	7609	0
2210	4958	3	2101	152
2210	4958	3	2103	2
2210	4958	3	2105	6
2210	4958	3	2107	8

2210	4958	3	4118	0
2210	4957	3	2103	370
2210	4957	3	2201	93
2210	4956	3	2101	37
2210	4956	3	2103	250
2210	4956	3	2105	12
2210	4956	3	4118	0
2222	4955	3	2101	198
2222	4955	3	2103	409
2222	4955	3	2104	22
2222	4955	3	2107	20
2222	4955	3	4117	0
2222	4955	3	4118	0
2222	4955	3	5029	10
2222	4955	3	5033	7
2222	4955	3	7609	0
2222	4955	3	9101	0
2210	4954	3	2101	130
2210	4954	3	2103	163
2210	4954	3	7609	0
2210	4953	3	4112	0
2210	4953	3	4113	25
2210	4953	3	4117	0
2210	4953	3	4118	0
2210	4953	3	7609	0
2210	4952	3	2103	175
2210	4952	3	2107	0
2210	4952	3	7609	0
2195	4888	3	4117	0
2357	4760	1	101	24
2357	4760	3	4118	0
2357	4759	1	101	131
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2357	4758	1	101	106
2357	4758	3	4118	0
2357	4757	1	101	6
2357	4757	3	4118	0
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2357	4755	3	4118	0
2357	4755	3	5003	100
2357	4755	3	5010	52
2357	4755	3	5013	104
2357	4755	3	5016	54
2357	4755	3	5022	14

2357	4755	3	5025	16
2357	4755	3	6103	24
2357	4755	3	6511	7
2357	4755	3	6809	15
2357	4755	8	6809	133
2357	4754	1	102	52
2357	4754	3	4112	0
2357	4753	1	102	76
2357	4753	3	4118	0
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2364	4751	1	102	172
2364	4751	3	4112	0
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2357	4750	1	101	21
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2357	4748	3	4118	0
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2364	4743	1	102	54
2364	4743	3	4118	0
2342	4742	3	4118	0
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2342	4742	3	6061	627
2342	4742	3	6112	74
2342	4741	3	4113	0
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2342	4741	3	6061	616
2342	4741	3	6071	509
2342	4741	3	6081	707
2342	4740	3	4118	0
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2342	4740	3	6041	438
2342	4740	3	6071	520

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2302	4738	1	101	47
2302	4738	3	4118	0
2302	4737	1	101	48
2302	4737	3	4118	0
2328	4736	1	101	15
2302	4735	1	101	56
2302	4735	3	4118	0
2302	4734	1	101	132
2302	4734	3	4118	0
2302	4733	1	101	80
2302	4733	3	4118	0
2308	4732	1	101	114
2308	4732	3	4118	0
2302	4731	3	4118	0
2302	4731	3	6031	100
2302	4731	3	7601	0
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2328	4730	1	101	57
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2328	4730	3	6806	0
2328	4730	8	6806	0
2328	4729	1	102	75
2328	4729	3	4118	0
2328	4729	3	5025	6
2328	4729	3	6806	65
2328	4729	8	6806	593
2328	4728	1	101	145
2328	4728	3	4118	0
2308	4727	1	101	53
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2308	4726	3	4118	0
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2308	4726	3	7609	0
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2308	4725	1	101	103
2308	4725	3	4117	0
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2302	4724	1	101	257
2302	4724	3	4112	0
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2292	4723	3	4118	0
2292	4722	1	102	127
2292	4722	3	4117	0
2292	4722	3	4118	0
2292	4721	1	102	339
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2292	4720	1	102	213
2292	4720	3	4118	0
2292	4719	1	102	163
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2292	4718	1	102	240
2292	4718	3	4118	0
2292	4718	3	6806	94
2292	4718	3	7607	0
2292	4718	8	6806	1000
2286	4717	1	102	500
2286	4717	3	4118	0
2286	4717	3	7601	8
2264	4716	1	102	577
2264	4716	3	1410	499
2264	4716	3	4118	0
2264	4715	3	5003	607
2264	4714	1	102	985
2264	4714	3	4118	0
2264	4714	3	7606	0
2264	4713	1	102	560
2264	4713	3	1502	0
2264	4713	3	4118	0
2264	4713	7	1502	200
2253	4712	3	1502	369
2253	4712	3	4118	0
2253	4712	3	6007	128
2253	4712	3	6071	479
2253	4712	7	1502	360
2253	4711	3	6081	2267
2253	4710	1	102	574
2253	4710	3	5007	31
2253	4710	3	6007	110
2246	4709	3	4113	0
2246	4709	3	4118	0
2246	4709	3	6051	230
2246	4709	3	6105	125
2246	4709	3	7215	150
2246	4709	3	7601	0
2272	4708	1	102	302

2265	4707	3	4118	0
2265	4707	3	6051	210
2265	4707	3	6071	999
2272	4706	1	102	509
2272	4706	3	1410	223
2272	4706	3	4118	0
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2265	4704	1	102	355
2265	4704	3	4118	0
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2265	4703	3	1502	0
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2285	4702	1	102	644
2285	4702	3	4118	0
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2270	4701	1	102	338
2285	4700	1	102	136
2285	4700	3	4118	0
2285	4700	3	5004	96
2270	4699	1	102	318
2270	4699	3	4118	0
2270	4698	1	102	165
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2257	4697	1	102	329
2257	4696	3	4118	0
2257	4696	3	6081	1110
2257	4696	3	6114	27
2254	4695	3	2103	80
2254	4695	3	2104	11
2254	4695	3	2106	599
2254	4695	3	4113	23
2254	4695	3	4118	0
2254	4695	3	6006	2488
2254	4694	1	102	1586
2254	4694	3	4112	0
2254	4694	3	7609	0
2254	4694	3	9101	0
2275	4693	1	102	257
2275	4693	3	4118	0
2275	4693	3	7607	0

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2275	4692	3	4118	0
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2289	4688	1	102	391
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2270	4685	3	7601	9
2270	4684	1	102	923
2270	4684	3	4118	0
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2270	4683	1	102	34
2270	4683	3	4118	0
2173	4682	3	2106	391
2252	4681	3	4115	0
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2252	4681	3	5012	37
2252	4681	3	6051	466
2252	4681	3	6081	627
2252	4681	3	7606	0
2252	4680	3	4115	0
2252	4680	3	4118	0
2252	4680	3	6041	302
2252	4680	3	6081	1672
2252	4680	3	9101	0
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2250	4678	3	5012	32
2250	4678	3	6809	68
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2250	4678	7	1502	335
2250	4678	8	6809	286
2236	4677	3	2106	263
2236	4677	3	4115	0
2236	4677	3	6001	3139
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2242	4676	3	6102	13
2242	4675	3	2106	298
2242	4675	3	4118	0
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2242	4675	3	7606	0
2236	4674	3	2106	682
2236	4674	3	4118	0
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2236	4673	3	4118	0
2202	4672	1	102	365
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2202	4667	3	4118	0
2202	4666	3	2106	398
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2213	4665	3	2106	330
2213	4665	3	7609	0
2213	4664	3	2106	555
2213	4663	3	2106	132
2173	4662	3	2106	126
2173	4662	3	4118	0
2173	4662	3	7609	0
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2149	4660	3	2106	52
2149	4660	3	7609	0
2173	4659	3	2106	589
2173	4659	3	4118	0
2160	4658	3	2106	517

2160	4658	3	4118	0
2173	4657	3	2106	1071
2149	4656	3	2106	898
2149	4656	3	7609	0
2173	4655	3	2101	20
2173	4655	3	4118	0
2173	4655	3	7609	0
2160	4654	3	2106	269
2160	4654	3	4118	0
2149	4653	3	2106	309
2149	4653	3	4112	0
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2160	4652	3	2106	480
2160	4652	3	4114	0
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2149	4651	3	2106	1003
2149	4651	3	4112	0
2149	4651	3	4118	0
2130	4650	3	2106	435
2130	4650	3	4118	0
2149	4649	3	2106	29
2149	4649	3	7609	0
2130	4648		9503	0
2130	4648	3	2106	620
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2084	4646	3	2106	923
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2084	4645	3	6071	1125
2084	4645	3	7609	0
2034	4644	3	7609	0
2185	4313	3	6801	0
2185	4313	8	6801	2278
2185	4312	3	6801	1248
2185	4312	8	6801	36
2185	4311	3	2106	526
2185	4311	3	4118	0
2185	4311	3	7609	0
2163	4310	3	2106	307
2163	4310	3	4118	0
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2185	4309	3	7605	0
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2163	4308	3	6502	1469
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2034	4307	3	6502	0
2034	4307	7	1503	575
2034	4306	3	7204	59
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2379	4227	1	101	49
2379	4227	3	4118	0
2356	4226	1	102	50
2356	4226	3	4118	0
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2356	4225	3	4118	0
2379	4224	3	7609	0
2379	4223	3	4118	0
2379	4223	3	6806	90
2379	4223	8	6806	813
2356	4222	1	101	6
2356	4222	1	102	86
2356	4222	3	4118	0
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2356	4221	3	4118	0
2356	4221	3	6805	190
2356	4221	3	7601	24
2356	4221	8	6805	1257
2356	4220	1	102	132
2356	4220	3	4118	0
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2356	4220	3	6102	3
2356	4220	3	6809	14
2356	4220	3	9101	0
2356	4220	8	6809	65
2315	4219	3	4118	0
2315	4219	3	5004	192
2315	4219	3	6112	16
2315	4218	1	101	106
2315	4218	3	4118	0
2315	4217	1	101	67
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2315	4216	1	101	129

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2315	4216	3	5008	5
2315	4215	1	101	45
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2315	4214	1	101	154
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2315	4213	1	102	60
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2315	4212	1	101	110
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2379	4208	3	4118	0
2379	4207	1	101	146
2379	4207	1	102	8
2379	4207	3	4118	0
2387	4206	1	101	26
2387	4206	3	4118	0
2387	4205	1	101	16
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2387	4204	3	4112	0
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2387	4202	1	101	32
2387	4202	3	4118	0
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2387	4200	3	4112	0
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2341	4198	1	101	8
2341	4198	3	4118	0
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2341	4197	1	101	72
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2341	4197	3	6102	7
2341	4196	1	101	143
2341	4196	3	4118	0
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2387	4195	1	101	80
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2387	4190	3	4118	0
2341	4189	1	101	127
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2341	4189	3	6102	11
2341	4188	1	101	17
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2228	4184	3	6801	3415
2228	4184	8	6801	6643
2228	4183	3	4118	0
2228	4183	3	6804	77
2228	4183	8	6804	824
2249	4182	1	102	120
2249	4182	3	7607	0
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2249	4181	3	4118	0
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2249	4181	8	6801	0
2234	4180	3	4118	0
2234	4180	3	6804	0
2234	4180	8	6804	1240
2228	4179	3	4118	0
2228	4178	3	6801	3080
2228	4178	8	6801	14685
2218	4177	3	2106	33
2218	4177	3	4113	27
2218	4177	3	4118	0
2218	4177	3	6007	1984
2218	4177	3	6502	0
2218	4177	3	7609	0
2239	4173	3	4118	0
2239	4173	3	6801	2490
2239	4173	8	6801	644
2215	4172	3	4112	0
2215	4172	3	6801	5718
2215	4172	8	6801	1062
2204	4171	3	6801	322
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2199	4170	3	4118	0
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2199	4170	8	6801	14693
2019	4761	1	101	50
2019	4761	3	4118	0
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2019	4761	3	7606	0
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LAND USE INPUTS FOR ADOPTED MODEL RUN WITH MIRA MESA OVERRIDES

TAZ	Series 13 MGRA	lu_type_id	LU CODE	Amount
1986	5045	1	102	272
1986	5047	1	101	55
1986	5048	1	101	94
1986	5049	1	101	113
1986	5049	1	102	241
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1986	5052	1	102	87
1995	4807	1	101	78
1995	4809	1	101	211
1995	4810	1	101	91
1995	4811	1	101	110
1998	5025	1	101	81
1998	5030	1	101	16
1998	5031	1	101	7
1998	5032	1	101	62
1998	5038	1	101	174
1998	5039	1	101	83
2005	5041	1	101	215
2007	5022	1	101	39
2007	5023	1	101	66
2007	5024	1	101	261
2007	5026	1	101	46
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2007	5029	1	101	56
2013	5027	1	102	51
2013	5028	1	101	60
2013	5033	1	101	123
2013	5034	1	101	28
2013	5035	1	101	127
2013	5036	1	101	119
2013	5037	1	101	96
2016	5040	1	102	110
2016	5053	1	102	350
2016	5054	1	102	131
2016	5055	1	102	215
2016	5056	1	101	50
2016	5057	1	102	204
2019	4761	1	101	50
2019	4763	1	101	98
2019	4763	1	102	58
2019	4800	1	102	120
2019	4801	1	102	100
2019	4802	1	102	74
2027	4818	1	101	55
2027	4819	1	101	115
2027	4820	1	101	54
2027	4821	1	101	141
2027	4822	1	101	47
2027	4823	1	101	49
2027	4824	1	101	60
2027	4825	1	101	85
2027	4828	1	101	82
2027	4829	1	101	52

2027	4830	1	101	79
2027	4831	1	101	23
2030	5014	1	101	102
2030	5015	1	101	44
2030	5016	1	101	139
2030	5017	1	102	180
2030	5018	1	101	108
2030	5019	1	101	18
2030	5020	1	102	200
2030	5021	1	102	238
2033	5012	1	101	126
2033	5013	1	101	148
2039	4812	1	101	89
2039	4813	1	102	172
2039	4814	1	101	207
2039	4815	1	101	153
2039	4816	1	101	219
2042	4860	1	101	57
2042	4861	1	101	120
2042	4862	1	101	81
2042	4863	1	101	52
2042	4863	1	102	90
2042	4864	1	101	86
2043	5073	1	101	39
2043	5074	1	101	19
2043	5075	1	102	64
2043	5076	1	102	272
2043	5077	1	102	260
2043	5078	1	102	200
2043	5079	1	101	115
2043	5080	1	101	86
2043	5081	1	101	121
2043	5082	1	101	80
2044	5058	1	101	114
2044	5059	1	101	16
2044	5060	1	101	121
2044	5061	1	101	13
2044	5062	1	101	43
2044	5068	1	101	99
2045	5063	1	101	43
2045	5064	1	101	152
2045	5069	1	101	25
2048	5065	1	101	65
2048	5065	1	102	24
2048	5066	1	102	8
2048	5067	1	101	1
2048	5067	1	102	123
2048	5070	1	101	22
2048	5070	1	102	92
2049	5042	1	102	1656
2049	5043	1	102	511
2049	5044	1	102	112
2052	4817	1	101	118
2052	4817	1	102	120

2056	4832	1	101	83
2056	4833	1	101	49
2056	4834	1	101	18
2056	4835	1	101	61
2056	4836	1	101	42
2056	4837	1	101	98
2056	4844	1	101	12
2056	4845	1	101	109
2056	4846	1	101	67
2056	4847	1	101	17
2056	4848	1	101	61
2056	4850	1	101	10
2059	4826	1	101	121
2059	4827	1	101	102
2062	4762	1	101	58
2062	4764	1	101	242
2062	4765	1	101	70
2062	4766	1	101	137
2063	5083	1	101	82
2063	5084	1	101	125
2063	5085	1	101	66
2063	5086	1	101	84
2063	5086	1	102	406
2063	5087	1	102	72
2067	5071	1	102	544
2067	5072	1	102	340
2068	5088	1	101	78
2068	5089	1	101	83
2068	5090	1	101	69
2068	5091	1	101	19
2068	5091	1	102	92
2069	4838	1	101	13
2069	4841	1	101	120
2069	4842	1	101	44
2069	4852	1	101	94
2069	4853	1	101	48
2069	4854	1	101	83
2069	4855	1	102	184
2069	4856	1	101	40
2069	4857	1	102	200
2069	4858	1	102	80
2069	4859	1	101	58
2070	5092	1	102	408
2070	5093	1	102	135
2070	5097	1	102	259
2071	4865	1	101	39
2071	4865	1	102	89
2071	4866	1	101	109
2071	4867	1	101	61
2074	5128	1	102	512
2074	5129	1	102	570
2074	5134	1	102	492
2075	5130	1	102	384
2075	5131	1	102	171

2075	5132	1	102	1103
2075	5133	1	102	405
2076	5108	1	102	193
2076	5109	1	102	163
2076	5110	1	102	1456
2076	5111	1	102	1111
2076	5112	1	101	87
2076	5113	1	101	24
2078	4839	1	101	81
2078	4843	1	101	7
2078	4843	1	102	80
2078	4849	1	101	27
2078	4851	1	101	22
2079	4868	1	101	99
2079	4874	1	101	102
2080	4869	1	101	71
2080	4873	1	101	73
2082	5096	1	102	183
2083	4870	1	102	42
2083	4871	1	102	1501
2083	4872	1	102	220
2083	4875	1	102	77
2083	4877	1	102	50
2086	4767	1	102	340
2086	4769	1	102	497
2086	4771	1	102	355
2086	4773	1	102	500
2088	5121	1	101	54
2088	5121	1	102	113
2088	5122	1	101	3
2088	5123	1	102	108
2088	5124	1	102	96
2094	5100	1	102	189
2095	5099	1	101	96
2095	5101	1	101	86
2095	5102	1	101	113
2095	5105	1	102	236
2096	5114	1	102	166
2096	5116	1	102	168
2099	4996	1	102	432
2099	5000	1	102	205
2100	4998	1	101	39
2100	5001	1	101	84
2100	5002	1	101	71
2100	5003	1	101	37
2100	5004	1	101	216
2107	4987	1	101	70
2107	4988	1	101	109
2107	4989	1	101	73
2107	4990	1	101	44
2110	5136	1	102	355
2110	5138	1	102	64
2111	4780	1	102	1886
2113	4991	1	101	63

2113	4992	1	101	97
2113	4993	1	102	416
2113	4994	1	102	336
2114	5125	1	101	99
2114	5126	1	101	24
2114	5127	1	101	107
2115	5118	1	101	46
2115	5119	1	101	110
2115	5120	1	101	93
2116	5103	1	101	116
2116	5103	1	102	1
2116	5104	1	101	81
2116	5106	1	101	20
2116	5107	1	102	136
2121	4968	1	102	100
2121	4969	1	102	107
2121	4972	1	102	373
2122	5005	1	102	254
2122	5006	1	101	61
2122	5007	1	101	126
2122	5008	1	101	31
2122	5009	1	101	129
2122	5010	1	101	185
2122	5011	1	101	90
2123	4982	1	101	22
2123	4983	1	101	121
2123	4984	1	101	137
2127	4970	1	102	843
2127	4974	1	102	191
2131	5155	1	101	13
2131	5156	1	101	12
2131	5159	1	101	21
2131	5171	1	101	96
2131	5173	1	101	110
2131	5174	1	101	88
2131	5175	1	102	110
2131	5176	1	101	105
2131	5178	1	102	250
2132	5154	1	101	60
2132	5157	1	101	136
2132	5158	1	102	373
2132	5160	1	101	71
2132	5172	1	101	70
2132	5177	1	101	54
2135	5139	1	102	579
2135	5140	1	102	605
2143	4926	1	101	175
2143	4929	1	101	145
2143	4930	1	101	153
2143	4930	1	102	8
2143	4985	1	101	50
2143	4986	1	101	27
2144	5161	1	102	2857
2148	5141	1	102	200

2148	5142	1	102	425
2148	5143	1	102	160
2150	4925	1	102	144
2150	4927	1	101	14
2150	4928	1	101	20
2150	4928	1	102	1052
2150	4931	1	102	1338
2152	4783	1	102	811
2152	4788	1	102	749
2153	4789	1	102	254
2161	4932	1	102	328
2161	4934	1	102	791
2161	4942	1	102	291
2164	5144	1	102	510
2164	5145	1	102	152
2164	5146	1	102	241
2164	5148	1	102	226
2166	4792	1	102	890
2168	4933	1	102	615
2174	4939	1	102	64
2175	4936	1	102	376
2175	4938	1	102	202
2176	5162	1	102	135
2176	5163	1	102	158
2176	5164	1	102	409
2176	5168	1	102	158
2176	5169	1	102	85
2177	5149	1	102	82
2177	5150	1	102	155
2177	5151	1	102	239
2177	5152	1	102	93
2181	5165	1	102	1345
2182	5166	1	102	366
2182	5167	1	102	304
2189	4943	1	102	133

Appendix E – Future Year Forecast Volume Methodology

Kimley»Horn

MEMORANDUM

To:	Claudia Brizuela, P.E., T.E. City of San Diego Planning Department
From:	Amy Jackson, P.E. (MD), PTOE Kimley-Horn and Associates, Inc.
Date:	January 5, 2022
Subject:	Mira Mesa Community Plan Update: SANDAG Model Output Post-Processing Methodology

Introduction

Through the Community Plan Update process, the project team developed recommended mobility networks for pedestrians, bicycles, transit, and vehicles in the Mira Mesa Community. During the development of the San Diego Association of Governments Activity Based Model (SANDAG ABM model) for the mobility alternatives, the recommended bicycle network was not coded into the preferred alternative network for the future SANDAG ABM run. The proposed bicycle network includes miles of new separates bikeways, bike lanes, and bike routes for improving bicycle connectivity throughout the community. These improvements are anticipated to shift mode choice by encouraging people who live and work in the community to commute by bike rather than by vehicle. The purpose of this memorandum is to outline the methodologies for post-processing the SANDAG ABM model to accurately forecast the future bicycle mode share.

Methodology

The recommended methodology for forecasting bicycle mode share is a method presented the Urban Land Institutes' (ULI) July 2009 report titled *Moving Cooler: An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emission* which provides a methodology to quantify changes in the bicycle mode share resulting from changes to a bicycle network. Bicycle facility densities can be calculated (miles of bicycle facilities per square mile) using the existing and future bicycle network mileage. This method accounts for Class II bike lanes traversing areas with qualifying urban densities. For the Mira Mesa Community Plan Update, the Moving Cooler methodology was modified to account for Class IV facilities that had not been recognized by the State of California at the time the document was published.

MOVING COOLER METHODOLOGY

The ULI's Moving Cooler Study outlines methodologies for estimating future bicycle mode share that results from increased bicycle facility densities for Class I and Class II facilities. Data needed for these calculations include existing bike mode share, and existing & planned bike network density.

Below is a step-by-step process to identify proposed bicycle mode share:

1) Calculate existing and planned bike network density based on centerline miles of bike facilities
2) Planned Bike Network Density – Existing Bike Network Density = Bike Network Density Change

   a. 1-to-1 relationship between bike network density change and mode share change
3) Existing Bike Mode Share + Mode Share Change = Future Mode Share

Data source:

- Existing Bike Network (SANGIS Files)
- Community Plan Update
  - Future Bike Network (GIS Files)

MODIFIED METHODOLOGY

The Moving Cooler method was developed prior to the implementation of Class IV bikeway facilities. Class I and IV facilities have a higher level of protection for bicyclists as compared to Class II bike lanes that do not incorporate vertical protection between vehicle and bicycle lanes. It is expected that Class I and Class IV facilities attract a significantly larger number of bicyclists and should not receive the same mode share calculation.

Therefore, a hybrid approach to the Moving Cooler methodology was used in which the centerline miles for Class II facilities were used in accordance with the Moving Cooler methodology, but lane miles for the Class I and Class IV facilities were accounted for prior to performing the calculation shown below.

CALCULATION

Using existing and proposed data obtained from GIS files, the total shift in mode share is calculated below:

There are segments of roadway in the Mira Mesa community where two different bike facility classifications are recommended on opposing sides of the same roadway. As a result, lane miles were not always calculated by doubling the centerline miles. Instead, the following process was used:

- For segments with new Class I or Class IV facilities in both directions, centerline miles were doubled to calculate lane miles
- For segments with new Class II facilities in both directions, centerline miles were used
- For segments with new Class I or Class IV facilities in one direction, and new Class II facilities in the other direction, centerline miles were used once for each facility
- For segments that currently have Class II facilities that are being upgraded to Class IV facilities, centerline miles would be used to account for the enhancement (this scenario did not occur in the Mira Mesa Community)

The resulting centerline and lane miles for the Mira Mesa Community are summarized below in **Table 1**.

Table 1 - Mira Mesa Community New Bike Facility Mileage

Bike Facility Classification	Centerline Miles	Lane Miles
Class I	8	**16**
Class II	**8**	19
Class IV	32	**60**

The bold values in Table 1 were used in the calculation below.

Calculation:

Increase in Bicycle Mode Share = $\frac{\text{Miles of new High Quality Bike facilities in Community}}{\text{Area of Community (square miles)}}$

Mira Mesa Community Plan Update:

Increase in Bicycle Mode Share = $\frac{\text{84 miles of Class II or better}}{\text{16.4 (square miles)}}$

Increase in Bicycle Mode Share = 5%

Analysis Results

The analysis results from applying the methodology presented above depict the effect of applying multimodal mobility strategies on commute patterns for the proposed land use scenarios in the community plan update (CPU). The table below provides a summary of the results of this analysis for the Mira Mesa Community. **Table 2** shows a breakdown of the community's existing and future mode share before and after post-processing using methodologies outlined above.

Table 2 - Mira Mesa Daily Mode Share

Mode	Existing Network[1]	Preferred Network[2]	Preferred Network After Post-Processing
Bicycle	1%	1.2%	6.2%

Source:

1. GIS data published by SANGIS
2. SANDAG ABM Model

Conclusion

The bicycle mode share based on the SANDAG ABM preferred network model was 1.2%. The model was not able to account for the recommended bicycle network which includes miles of Class I, II, III, and IV facilities. Therefore, a post-processing methodology was applied to the mode share to shift users onto the bike network. Based on the proposed bike network density, the anticipated mode shift from vehicle to bike was 5%. Therefore, the resulting bike mode share percentage after post-processing is 6.2%. The calculated mode shift was applied to the SANDAG ABM model to adjust the roadway traffic volumes and the total Vehicle Miles Traveled (VMT). The results of the post-processed volumes were used to develop turning movement counts for future condition intersection level of service analysis.

MIZUTA
TRAFFIC CONSULTING

Int 1 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**Sorento Valley Blvd**
Intersection #:	**1**

Vista Sorrento Pkwy

71%		29%	
1161	1633	472	10.4%
⇩		⇧	15,635
162	724	275	

Sorento Valley Blvd (west)

61%	1053	⇦	
	1728		62
39%	675	⇨	211
9.0%			402
19,200			

3509

Sorento Valley Blvd (east)

319			
779	⇦	1350	69%
252		1956	
	⇨	606	31%
		9.0%	
		21,733	

112	91	120	
⇩	⇧		
1378	1701	323	9.0%
81%		19%	18,900

Vista Sorrento Pkwy

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**Sorento Valley Blvd**

Vista Sorrento Pkwy

1498	2101	603	10.4%
⇩		⇧	20,092
306	824	369	

Sorento Valley Blvd (west)

	1981	⇦	
	3266		119
	1285	⇨	444
9.0%			722
36,333			

5386

Sorento Valley Blvd (east)

385		
1483	⇦	2165
296		3125
	⇨	960
		9.0%
		34,647

192	99	147	
⇩	⇧		
1841	2278	437	9.0%
			25,400

Vista Sorrento Pkwy

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

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TRAFFIC CONSULTING

Int 1 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**Sorento Valley Blvd**
Intersection #:	**1**

Vista Sorrento Pkwy

36%		64%	
685	1907	1222	12.2%
⇩		⇧	15,635

103	84	498

Sorento Valley Blvd (West)

46%	778 ⇦
	1700
54%	922 ⇨
8.9%	
19,200	

129	
734	
59	

3827

266	
237	
31	

Sorento Valley Blvd (East)

⇦ 534	24%
2187	
⇨ 1653	76%
10.1%	
21,733	

438	827	421

⇩		⇧	
174	1860	1686	9.8%
9%		91%	18,900

Vista Sorrento Pkwy

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**Sorento Valley Blvd**

Vista Sorrento Pkwy

893	2441	1548	12.2%
⇩		⇧	20,092

183	91	620

Sorento Valley Blvd (West)

	1451 ⇦
	3222
	1771 ⇨
8.9%	
36,333	

233	
1435	
102	

5829

348	
478	
39	

Sorento Valley Blvd (East)

⇦ 864	
3462	
⇨ 2598	
10.1%	
34,647	

790	967	543

⇩		⇧	
231	2531	2300	9.8%
			25,400

Vista Sorrento Pkwy

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 2 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Sorento Valley Blvd**
Intersection #:	**2**

Camino Santa Fe (North Leg)

0%		0%	
0	0	0	0.0%
⇩		⇧	0

Southbound approach: 0 ⬃ | 0 ⇩ | 0 ⬂

Sorento Valley Blvd (West Leg)

81%	1314	⇦
	1621	
19%	307	⇨
10.3%		
15,764		

Eastbound approach: 0 ⬀ | 86 ⇨ | 221 ⬂

Total Entering Volume: **2247**

Westbound approach: 0 ⬁ | 1070 ⇦ | 574 ⬃

Sorento Valley Blvd (East Leg)

⇦	1644	92%
	1782	
⇨	138	8%
	9.0%	
	19,800	

Northbound approach: 244 ⬁ | 0 ⇧ | 52 ⬀

Camino Santa Fe (South Leg)

⇩		⇧	
795	1091	296	10.1%
73%		27%	10,792

Camino Santa Fe

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Sorento Valley Blvd**

Camino Santa Fe (North Leg)

1	1	0	0.0%
⇩		⇧	0

Southbound approach: 0 ⬃ | 0 ⇩ | 0 ⬂

Sorento Valley Blvd (West Leg)

1888	⇦
2588	
700	⇨
10.3%	
27,792	

Eastbound approach: 0 ⬀ | 49 ⇨ | 652 ⬂

Total Entering Volume: **3446**

Westbound approach: 0 ⬁ | 1075 ⇦ | 807 ⬃

Sorento Valley Blvd (East Leg)

⇦	1882
	1981
⇨	99
	9.0%
	17,507

Northbound approach: 813 ⬁ | 0 ⇧ | 50 ⬀

Camino Santa Fe (South Leg)

⇩		⇧	
1459	2322	863	10.1%
			24,315

Camino Santa Fe

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

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TRAFFIC CONSULTING

Int 2 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Sorento Valley Blvd**
Intersection #:	**2**

Camino Santa Fe (north leg)

0%		0%	
0	0	0	0.0%
			0

Southbound approach: 0 | 0 | 0

Westbound approach: 0 | 141 | 78

Sorento Valley Blvd (west leg)

20%	385	⇦
	1933	
80%	1548	⇨
12.3%		
15,764		

Eastbound approach: 0 | 1253 | 295

Total Entering Volume: **2705**

Sorento Valley Blvd (east leg)

219	10%
2166	
1947	90%
10.9%	
19,800	

Northbound approach: 244 | 0 | 694

373	1311	938	12.1%
28%		72%	10,792

Camino Santa Fe (south leg)

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Sorento Valley Blvd**

Camino Santa Fe (north leg)

1	1	0	0.0%
			0

Southbound approach: 0 | 0 | 0

Westbound approach: 0 | 88 | 72

Sorento Valley Blvd (west leg)

867	⇦
3110	
2243	⇨
12.3%	
27,792	

Eastbound approach: 0 | 1241 | 1002

Total Entering Volume: **4139**

Sorento Valley Blvd (east leg)

159
2357
2198
10.9%
17,507

Northbound approach: 779 | 0 | 957

1074	2810	1736	12.1%
			24,315

Camino Santa Fe (south leg)

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

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TRAFFIC CONSULTING

Int 3 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Calle Cristobal**
Intersection #:	**3**

Camino Ruiz

48%		53%	
19	40	21	9.0%
⇩		⇧	444

Southbound approach: 6 ⬃ | 13 ⇩ | 0 ⬂

Calle Cristobal (west)

81%	1066	⇦
	1314	
19%	248	⇨
10.7%		
12,239		

Eastbound approach: 4 ⬀ | 0 ⇨ | 244 ⬂

Total Entering Volume: **1349**

Westbound approach: ⬁ 0 | ⇦ 0 | ⬃ 3

Calle Cristobal (east)

⇦	3	60%
	5	
⇨	2	40%
	8.9%	
	56	

Northbound approach: ⬁ 1060 | ⇧ 17 | ⬀ 2

⇩		⇧	
260	1339	1079	7.3%
19%		81%	18,446

Camino Ruiz

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Calle Cristobal**

Camino Ruiz

56	107	51	9.0%
⇩		⇧	1,172

Southbound approach: 57 ⬃ | 2 ⇩ | 0 ⬂

Calle Cristobal (west)

872	⇦
1116	
244	⇨
10.7%	
10,936	

Eastbound approach: 46 ⬀ | 0 ⇨ | 152 ⬂

Total Entering Volume: **1081**

Westbound approach: ⬁ 0 | ⇦ 0 | ⬃ 2

Calle Cristobal (east)

⇦	3
	5
⇨	2
	8.9%
	56

Northbound approach: ⬁ 815 | ⇧ 5 | ⬀ 2

⇩		⇧	
157	936	779	7.3%
			12,108

Camino Ruiz

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 3 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Calle Cristobal**
Intersection #:	**3**

Camino Ruiz

37%		63%	
21	57	36	12.8%
⇩		⇧	444

Southbound: 6 ⬃ 15 ⇩ 0 ⬂

Westbound: 0 ⬁ 0 ⇦ 2 ⬃

Eastbound: 3 ⬀ 2 ⇨ 1418 ⬂

Northbound: 294 ⬁ 33 ⇧ 3 ⬀

1776

Calle Cristobal (West)

17%	300	⇦
	1723	
83%	1423	⇨
14.1%		
12,239		

Calle Cristobal (East)

⇦	2	29%
	7	
⇨	5	71%
	12.5%	
	56	

⇩		⇧	
1435	1765	330	9.6%
81%		19%	18,446

Camino Ruiz

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Calle Cristobal**

Camino Ruiz

51	155	104	12.8%
⇩		⇧	1,172

Southbound: 60 ⬃ 4 ⇩ 0 ⬂

Westbound: 0 ⬁ 0 ⇦ 2 ⬃

Eastbound: 88 ⬀ 3 ⇨ 1021 ⬂

Northbound: 232 ⬁ 16 ⇧ 2 ⬀

1428

Calle Cristobal (West)

292	⇦
1467	
1175	⇨
14.1%	
10,936	

Calle Cristobal (East)

⇦	2
	7
⇨	5
	12.5%
	56

⇩		⇧	
1027	1227	200	9.6%
			12,108

Camino Ruiz

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 4 AM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **Alemania Rd**
E/W Street: **Mercy Rd**
Intersection #: **4**

Alemania Rd (North leg)

49%		51%	
166	341	175	9.0%
⇩		⇧	3,789

Southbound approach: 16 (right), 0 (through), 150 (left)

Westbound approach: 114 (right), 661 (through), 9 (left)

Eastbound approach: 61 (left), 992 (through), 0 (right)

Northbound approach: 0 (left), 0 (through), 3 (right)

Total Entering Volume: **2006**

Mercy Rd (West leg)

39%	677	⇦
	1730	
61%	1053	⇨
9.7%		
17,747		

Mercy Rd (East leg)

⇦	784	41%
	1929	
⇨	1145	59%
	10.9%	
	17,747	

Alemania Rd (South leg)

⇩		⇧	
9	12	3	9.0%
75%		25%	133

N

Scenario: **Future Year 2035 - Recommended Network**
N/S Street: **Alemania Rd**
E/W Street: **Mercy Rd**

Alemania Rd (North leg)

86	174	88	9.0%
⇩		⇧	1,918

Southbound approach: 3 (right), 0 (through), 93 (left)

Westbound approach: 82 (right), 698 (through), 47 (left)

Eastbound approach: 6 (left), 1239 (through), 0 (right)

Northbound approach: 0 (left), 0 (through), 18 (right)

Total Entering Volume: **2186**

Mercy Rd (West leg)

701	⇦
1829	
1128	⇨
9.7%	
18,688	

Mercy Rd (East leg)

⇦	955
	2304
⇨	1349
	10.9%
	21,265

Alemania Rd (South leg)

⇩		⇧	
47	63	16	9.0%
			706

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 4 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Alemania Rd**
E/W Street:	**Mercy Rd**
Intersection #:	**4**

Alemania Rd

44%		56%	
140	315	175	8.3%
⇩		⇧	3,789

Southbound approach: 30 ⬃ | 0 ⇩ | 110 ⬂

Mercy Rd (west)

53%	984	⇦
	1851	
47%	867	⇨
10.4%		
17,747		

Eastbound approach: 42 ⬀ | 825 ⇨ | 0 ⬂

2110

Westbound approach: 133 ⬁ | 954 ⇦ | 12 ⬃

Mercy Rd (east)

⇦	1099	54%
	2038	
⇨	939	46%
	11.5%	
	17,747	

Northbound approach: 0 ⬁ | 0 ⇧ | 4 ⬀

⇩		⇧	
12	16	4	12.0%
75%		25%	133

Alemania Rd

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Alemania Rd**
E/W Street:	**Mercy Rd**

Alemania Rd

71	159	88	8.3%
⇩		⇧	1,918

Southbound approach: 4 ⬃ | 0 ⇩ | 77 ⬂

Mercy Rd (west)

1038	⇦
1949	
911	⇨
10.4%	
18,688	

Eastbound approach: 4 ⬀ | 1026 ⇨ | 0 ⬂

2317

Westbound approach: 84 ⬁ | 1034 ⇦ | 64 ⬃

Mercy Rd (east)

⇦	1314
	2441
⇨	1127
	11.5%
	21,265

Northbound approach: 0 ⬁ | 0 ⇧ | 24 ⬀

⇩		⇧	
64	85	21	12.0%
			706

Alemania Rd

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 5 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Mercy Rd**
Intersection #:	**5**

I-15 SB Ramps

100%		0%	
590	590	0	9.0%
⇩		⇧	6,556

Southbound approach: 161 ⇙ | 2 ⇩ | 427 ⇘

Mercy Rd (west)

42%	802	⇦
	1909	
58%	1107	⇨
10.8%		
17,747		

Eastbound approach: 0 ⬀ | 653 ⇨ | 454 ⇘

Total Entering Volume: **3282**

Westbound approach: 0 ⇖ | 641 ⇦ | 944 ⇙

Mercy Rd (east)

⇦	1585	59%
	2665	
⇨	1080	41%
	7.2%	
	36,813	

Northbound approach: 0 ⇖ | 0 ⇧ | 0 ⬀

⇩		⇧	
1400	1400	0	9.0%
100%		0%	15,556

I-15 SB Ramps

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Mercy Rd**

I-15 SB Ramps

885	885	0	9.0%
⇩		⇧	10,602

Southbound approach: 352 ⇙ | 7 ⇩ | 526 ⇘

Mercy Rd (west)

1040	⇦
2272	
1232	⇨
10.8%	
21,265	

Eastbound approach: 0 ⬀ | 634 ⇨ | 598 ⇘

Total Entering Volume: **3579**

Westbound approach: 0 ⇖ | 688 ⇦ | 774 ⇙

Mercy Rd (east)

⇦	1462
	2622
⇨	1160
	7.2%
	36,541

Northbound approach: 0 ⇖ | 0 ⇧ | 0 ⬀

⇩		⇧	
1379	1379	0	9.0%
			14,151

I-15 SB Ramps

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 5 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Mercy Rd**
Intersection #:	**5**

I-15 SB Ramps (north leg)

100%		0%	
1026	1026	0	15.6%
⇩		⇧	6,556

Southbound movements: 321 ⬃ | 3 ⇩ | 702 ⬂

Mercy Rd (west leg)

55%	1119 ⇦
	2030
45%	911 ⇨
11.4%	
17,747	

Eastbound movements: 0 ⬀ | 763 ⇨ | 148 ⬂

Total Entering Volume: **3781**

Westbound movements: 0 ⬁ | 798 ⇦ | 1046 ⬃

Mercy Rd (east leg)

⇦ 1844	56%
3309	
⇨ 1465	44%
9.0%	
36,813	

Northbound movements: 0 ⬁ | 0 ⇧ | 0 ⬀

I-15 SB Ramps (south leg)

⇩		⇧	
1197	1197	0	7.7%
100%		0%	15,556

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Mercy Rd**

I-15 SB Ramps (north leg)

1533	1533	0	15.6%
⇩		⇧	10,602

Southbound movements: 694 ⬃ | 10 ⇩ | 829 ⬂

Mercy Rd (west leg)

1460 ⇦
2469
1009 ⇨
11.4%
21,265

Eastbound movements: 0 ⬀ | 757 ⇨ | 252 ⬂

Total Entering Volume: **4233**

Westbound movements: 0 ⬁ | 766 ⇦ | 925 ⬃

Mercy Rd (east leg)

⇦ 1691
3277
⇨ 1586
9.0%
36,541

Northbound movements: 0 ⬁ | 0 ⇧ | 0 ⬀

I-15 SB Ramps (south leg)

⇩		⇧	
1187	1187	0	7.7%
			14,151

N

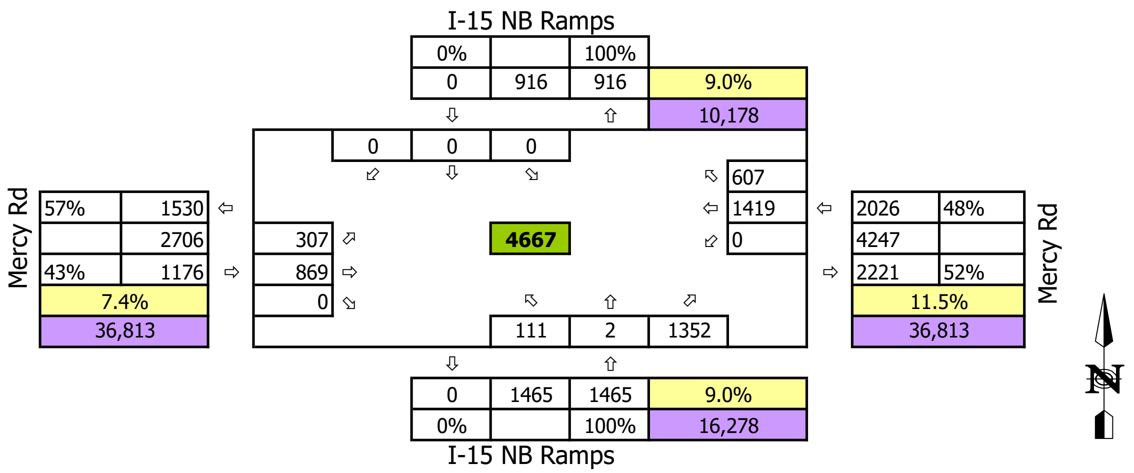
LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

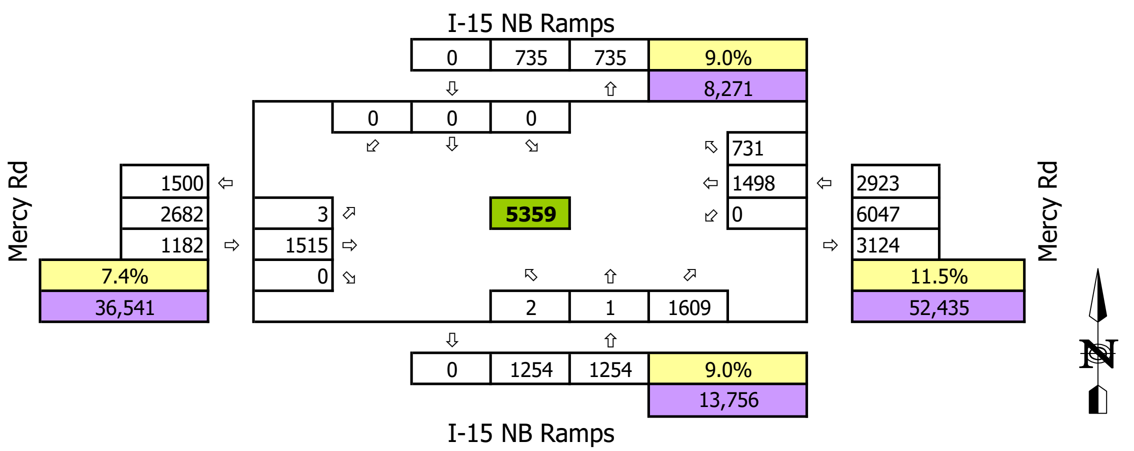
MIZUTA TRAFFIC CONSULTING

Int 6 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Mercy Rd**
Intersection #:	**6**



Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Mercy Rd**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 6 PM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **I-15 NB Ramps**
E/W Street: **Mercy Rd**
Intersection #: **6**

I-15 NB Ramps (north leg)

0%		100%	
0	1112	1112	10.9%
			10,178

Southbound: 0 / 0 / 0

Westbound: 775 / 1592 / 0

Eastbound: 321 / 1146 / 0

Total Entering Volume: **4847**

Northbound: 263 / 16 / 734

Mercy Rd (west leg)

56%	1855
	3322
44%	1467
9.0%	
36,813	

Mercy Rd (east leg)

2367	56%
4247	
1880	44%
11.5%	
36,813	

I-15 NB Ramps (south leg)

0	1013	1013	6.2%
0%		100%	16,278

N

Scenario: **Future Year 2035 - Recommended Network**
N/S Street: **I-15 NB Ramps**
E/W Street: **Mercy Rd**

I-15 NB Ramps (north leg)

0	926	926	10.9%
			8,271

Southbound: 0 / 0 / 0

Westbound: 918 / 1880 / 0

Eastbound: 6 / 1731 / 0

Total Entering Volume: **5554**

Northbound: 5 / 3 / 1011

Mercy Rd (west leg)

1885
3308
1423
9.0%
36,541

Mercy Rd (east leg)

3294
6036
2742
11.5%
52,435

I-15 NB Ramps (south leg)

0	836	836	6.2%
			13,756

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 7 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Babauta Rd**
Intersection #:	**7**

Black Mountain Rd

68%		32%	
2103	3082	979	8.7%
⇩		⇧	35,556

4	2078	21

48
0
0

Babauta Rd

21%	4 ⇦
	19
79%	15 ⇨
9.0%	
211	

0
0
15

3107

48	61%
79	
31	39%
9.0%	
878	

Babauta Rd

0	931	10

⇩		⇧	
2093	3034	941	8.5%
69%		31%	35,556

Black Mountain Rd

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Babauta Rd**

Black Mountain Rd

2618	3788	1170	8.7%
⇩		⇧	43,362

4	2763	9

43
0
0

Babauta Rd

4 ⇦
19
15 ⇨
9.0%
211

0
0
16

3983

49
79
30
9.0%
878

Babauta Rd

0	1127	21

⇩		⇧	
2779	4080	1301	8.5%
			48,175

Black Mountain Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 7 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Babauta Rd**
Intersection #:	**7**

Black Mountain Rd (north leg)

39%		61%	
1294	3297	2003	9.3%
⇩		⇧	35,556

Southbound movements: 18 ⇙ | 1263 ⇩ | 13 ⇘

Westbound movements: 20 ⇖ | 0 ⇦ | 0 ⇙

Eastbound movements: 0 ⬀ | 0 ⇨ | 6 ⇘

Northbound movements: 0 ⇖ | 1983 ⇧ | 23 ⬀

Total Entering Volume: **3326**

Babauta Rd (west leg)

75%	18	⇦
	24	
25%	6	⇨
11.4%		
211		

Babauta Rd (east leg)

⇦	20	36%
	56	
⇨	36	64%
	6.4%	
	878	

Black Mountain Rd (south leg)

⇩		⇧	
1269	3275	2006	9.2%
39%		61%	35,556

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Babauta Rd**

Black Mountain Rd (north leg)

1558	4032	2474	9.3%
⇩		⇧	43,362

Southbound movements: 18 ⇙ | 1734 ⇩ | 6 ⇘

Westbound movements: 19 ⇖ | 0 ⇦ | 0 ⇙

Eastbound movements: 0 ⬀ | 0 ⇨ | 7 ⇘

Northbound movements: 0 ⇖ | 2455 ⇧ | 30 ⬀

Total Entering Volume: **4269**

Babauta Rd (west leg)

18	⇦
24	
6	⇨
11.4%	
211	

Babauta Rd (east leg)

⇦	20
	56
⇨	36
	6.4%
	878

Black Mountain Rd (south leg)

⇩		⇧	
1741	4426	2685	9.2%
			48,175

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 8 AM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **Vista Sorrento Pkwy**
E/W Street: **I-805 NB Ramps**
Intersection #: **8**

Vista Sorrento Pkwy (north leg)
30% | | 70%
340 | 1140 | 800 | 8.4% | 13,504
Southbound approach: 29 | 198 | 113

I-805 NB Ramps (west leg)
28% | 475
1702
72% | 1227
9.0%
18,911
Eastbound approach: 557 | 508 | 162

Total Entering Volume: **2436**

Westbound approach: 49 | 46 | 21
Mira Sorrento Pl (east leg)
116 | 13%
896
780 | 87%
8.8%
10,145

Northbound approach: 400 | 194 | 159
Vista Sorrento Pkwy (south leg)
381 | 1134 | 753 | 6.7%
34% | | 66% | 17,009

N

Scenario: **Future Year 2035 - Recommended Network**
N/S Street: **Vista Sorrento Pkwy**
E/W Street: **I-805 NB Ramps**

Vista Sorrento Pkwy (north leg)
586 | 1753 | 1167 | 8.4% | 21,342
Southbound approach: 109 | 165 | 312

I-805 NB Ramps (west leg)
905
3670
2765
9.0%
39,041
Eastbound approach: 953 | 1647 | 162

Total Entering Volume: **4555**

Westbound approach: 106 | 243 | 28
Mira Sorrento Pl (east leg)
374
2500
2126
8.8%
29,970

Northbound approach: 553 | 109 | 168
354 | 1181 | 827 | 6.7% | 17,131
Vista Sorrento Pkwy (south leg)

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 8 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**I-805 NB Ramps**
Intersection #:	**8**

Vista Sorrento Pkwy

54%		46%	
536	986	450	7.3%
⇩		⇧	13,504

Southbound approach: 200 (right), 300 (through), 36 (left)

Westbound approach (I-805 NB Ramps, east leg): 105 (left), 552 (through), 137 (right)

Eastbound approach (I-805 NB Ramps, west leg): 227 (left), 51 (through), 96 (right)

Northbound approach: 764 (left), 118 (through), 15 (right)

Total Entering Volume: **2601**

I-805 NB Ramps (west leg)

80%	1516 ⇦
	1890
20%	374 ⇨
10.0%	
18,911	

I-805 NB Ramps (east leg)

⇦ 794	89%
896	
⇨ 102	11%
8.8%	
10,145	

⇩		⇧	
533	1430	897	8.4%
37%		63%	17,009

Vista Sorrento Pkwy

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**I-805 NB Ramps**

Vista Sorrento Pkwy

831	1556	725	7.3%
⇩		⇧	21,342

Southbound approach: 479 (right), 256 (through), 96 (left)

Westbound approach (I-805 NB Ramps, east leg): 210 (left), 1919 (through), 171 (right)

Eastbound approach (I-805 NB Ramps, west leg): 443 (left), 192 (through), 121 (right)

Northbound approach: 795 (left), 72 (through), 19 (right)

Total Entering Volume: **4773**

I-805 NB Ramps (west leg)

3193 ⇦
3950
757 ⇨
10.0%
39,041

I-805 NB Ramps (east leg)

⇦ 2300
2607
⇨ 307
8.8%
29,970

⇩		⇧	
548	1433	885	8.4%
			17,131

Vista Sorrento Pkwy

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 9 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Scranton Rd**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**9**

Scranton Rd (north leg)

21%		79%	
232	1128	896	6.2%
⇩		⇧	18,296

Southbound turning volumes: 124 (right), 57 (through), 51 (left)

Westbound turning volumes: 144 (right), 992 (through), 56 (left)

Eastbound turning volumes: 684 (left), 2197 (through), 636 (right)

Northbound turning volumes: 57 (left), 68 (through), 24 (right)

Total Entering Volume: **5090**

Mira Mesa Blvd (west leg)

25%	1173 ⇦
	4690
75%	3517 ⇨
7.7%	
60,870	

Mira Mesa Blvd (east leg)

⇦ 1192	34%
3464	
⇨ 2272	66%
7.2%	
47,868	

Scranton Rd (south leg)

⇩		⇧	
749	898	149	8.7%
83%		17%	10,303

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Scranton Rd**
E/W Street:	**Mira Mesa Blvd**

Scranton Rd (north leg)

421	1892	1471	6.2%
⇩		⇧	31,535

Southbound turning volumes: 274 (right), 107 (through), 43 (left)

Westbound turning volumes: 103 (right), 747 (through), 41 (left)

Eastbound turning volumes: 1240 (left), 1461 (through), 1070 (right)

Northbound turning volumes: 122 (left), 129 (through), 20 (right)

Total Entering Volume: **5357**

Mira Mesa Blvd (west leg)

1143 ⇦
4927
3784 ⇨
7.7%
62,244

Mira Mesa Blvd (east leg)

⇦ 883
2407
⇨ 1524
7.2%
33,699

Scranton Rd (south leg)

⇩		⇧	
1218	1486	268	8.7%
			17,599

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 9 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Scranton Rd**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**9**

Scranton Rd

64%		36%
591	930	339

5.1%
18,296

Southbound: 344 143 104

Westbound: 104 1315 114

Eastbound: 168 1075 224

Northbound: 310 67 34

4002

Mira Mesa Blvd (West)

57%	1969
	3436
43%	1467

5.6%
60,870

Mira Mesa Blvd (East)

1533	56%
2746	
1213	44%

5.7%
47,868

481	892	411
54%		46%

8.7%
10,303

Scranton Rd

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Scranton Rd**
E/W Street:	**Mira Mesa Blvd**

Scranton Rd

1017	1603	586

5.1%
31,535

Southbound: 617 312 88

Westbound: 98 881 98

Eastbound: 336 741 415

Northbound: 521 152 28

4287

Mira Mesa Blvd (West)

2020
3515
1495

5.6%
62,244

Mira Mesa Blvd (East)

1076
1933
857

5.7%
33,699

825	1525	700

8.7%
17,599

Scranton Rd

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 10 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Lusk Blvd**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**10**

Lusk Blvd

16%		84%	
115	733	618	6.6%
⇩		⇧	11,068

Southbound: 51 ⬋ | 9 ⇩ | 55 ⬊

Westbound: 393 ⬉ | 1139 ⇦ | 97 ⬋

Eastbound: 211 ⬀ | 2119 ⇨ | 31 ⬂

Northbound: 6 ⬉ | 14 ⇧ | 23 ⬈

Total Entering Volume: **4148**

Mira Mesa Blvd (West)

34%	1196	⇦
	3557	
66%	2361	⇨
7.4%		
47,868		

Mira Mesa Blvd (East)

⇦	1629	43%
	3826	
⇨	2197	57%
	8.4%	
	45,646	

⇩		⇧	
137	180	43	9.0%
76%		24%	2,000

Lusk Blvd

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Lusk Blvd**
E/W Street:	**Mira Mesa Blvd**

Lusk Blvd

382	1752	1370	6.6%
⇩		⇧	29,455

Southbound: 91 ⬋ | 203 ⇩ | 89 ⬊

Westbound: 595 ⬉ | 563 ⇦ | 604 ⬋

Eastbound: 462 ⬀ | 1340 ⇨ | 278 ⬂

Northbound: 47 ⬉ | 314 ⇧ | 151 ⬈

Total Entering Volume: **4737**

Mira Mesa Blvd (West)

701	⇦
2781	
2080	⇨
7.4%	
33,699	

Mira Mesa Blvd (East)

⇦	1762
	3342
⇨	1580
	8.4%
	39,445

⇩		⇧	
1085	1597	512	9.0%
			19,019

Lusk Blvd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 10 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Lusk Blvd**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**10**

Lusk Blvd (North leg)

84%		16%	
793	946	153	8.5%
⇩		⇧	11,068

Southbound approach: 225 (right) | 111 (through) | 457 (left)

Westbound approach: 69 (right) | 1200 (through) | 43 (left)

Eastbound approach: 66 (left) | 1152 (through) | 6 (right)

Northbound approach: 20 (left) | 18 (through) | 151 (right)

Total Entering Volume: **3518**

Mira Mesa Blvd (West leg)

54%	1445	⇦
	2669	
46%	1224	⇨
5.6%		
47,868		

Mira Mesa Blvd (East leg)

⇦	1312	43%
	3072	
⇨	1760	57%
	6.7%	
	45,646	

Lusk Blvd (South leg)

⇩		⇧	
160	349	189	17.5%
46%		54%	2,000

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Lusk Blvd**
E/W Street:	**Mira Mesa Blvd**

Lusk Blvd (North leg)

1853	2327	474	8.5%
⇩		⇧	29,455

Southbound approach: 240 (right) | 1389 (through) | 226 (left)

Westbound approach: 52 (right) | 660 (through) | 286 (left)

Eastbound approach: 94 (left) | 571 (through) | 91 (right)

Northbound approach: 280 (left) | 328 (through) | 968 (right)

Total Entering Volume: **5185**

Mira Mesa Blvd (West leg)

1180	⇦
1937	
757	⇨
5.6%	
33,699	

Mira Mesa Blvd (East leg)

⇦	996
	2761
⇨	1765
	6.7%
	39,445

Lusk Blvd (South leg)

⇩		⇧	
1766	3345	1579	17.5%
			19,019

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 11 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**11**

Pacific Heights Blvd (North)

12%		88%	
187	1622	1435	9.7%
			16,772
66	35	86	

Mira Mesa Blvd (West)

43%	1664	
	3829	457
57%	2165	1366
8.4%		342
45,646		

5325

Mira Mesa Blvd (East)

922		
1565	2798	65%
311	4336	
	1538	35%
	10.5%	
	41,338	

Pacific Heights Blvd (South)

33	56	86	
688	863	175	10.7%
80%		20%	8,045

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Mira Mesa Blvd**

Pacific Heights Blvd (North)

358	2621	2263	9.7%
			29,003
44	107	209	

Mira Mesa Blvd (West)

1311	
3383	295
2072	1361
8.4%	417
39,445	

7172

Mira Mesa Blvd (East)

1821	
1230	4221
1164	6132
	1911
	10.5%
	56,324

Pacific Heights Blvd (South)

37	147	340	
1688	2210	522	10.7%
			21,651

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 11 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**11**

Pacific Heights Blvd

83%		17%	
1547	1874	327	11.2%
			16,772

316	243	988

Mira Mesa Blvd

45%	1350		171
	3014		909
55%	1664		108
6.6%			
45,646			

115		**4884**		1188	30%
1448				3943	
101				2755	70%
				9.5%	
				41,338	

Mira Mesa Blvd

125	41	319

452	937	485	11.6%
48%		52%	8,045

Pacific Heights Blvd

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Mira Mesa Blvd**

Pacific Heights Blvd

2611	3191	580	11.2%
			29,003

224	703	1685

Mira Mesa Blvd

1196		362
2600		814
1404		403
6.6%		
39,445		

93	**6871**	1581
1171		5428
141		3847
		9.5%
		56,324

Mira Mesa Blvd

159	125	991

1247	2521	1274	11.6%
			21,651

Pacific Heights Blvd

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 12 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Sequence Dr**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**12**

Sequence Dr (North Leg)

36%		64%	
263	727	464	9.0%
⇩		⇧	8,078

Southbound approach: 236 (right), 15 (through), 12 (left)

Mira Mesa Blvd (West Leg)

66%	2940	⇦
	4453	
34%	1513	⇨
10.8%		
41,338		

Eastbound approach: 340 (left), 838 (through), 335 (right)

Total Entering Volume: **4746**

Mira Mesa Blvd (East Leg)

Westbound approach: 118 (right), 2647 (through), 128 (left)

⇦	2893	77%
	3757	
⇨	864	23%
	9.1%	
	41,338	

Northbound approach: 57 (left), 6 (through), 14 (right)

Sequence Dr (South Leg)

⇩		⇧	
478	555	77	9.0%
86%		14%	6,167

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Sequence Dr**
E/W Street:	**Mira Mesa Blvd**

Sequence Dr (North Leg)

291	716	425	9.0%
⇩		⇧	8,078

Southbound approach: 284 (right), 11 (through), 5 (left)

Mira Mesa Blvd (West Leg)

3666	⇦
5938	
2272	⇨
10.8%	
56,324	

Eastbound approach: 392 (left), 775 (through), 988 (right)

Total Entering Volume: **5951**

Mira Mesa Blvd (East Leg)

Westbound approach: 27 (right), 3182 (through), 71 (left)

⇦	3179
	3967
⇨	788
	9.1%
	41,211

Northbound approach: 200 (left), 7 (through), 9 (right)

Sequence Dr (South Leg)

⇩		⇧	
1071	1279	208	9.0%
			15,113

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 12 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Sequence Dr**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**12**

Sequence Dr (North leg)

59%		41%	
351	597	246	7.4%
⇩		⇧	8,078

Southbound approach: 277 (right) | 8 (through) | 66 (left)

Westbound approach: 10 (left) | 790 (through) | 22 (right)

Eastbound approach: 219 (left) | 2487 (through) | 101 (right)

Northbound approach: 236 (left) | 17 (through) | 90 (right)

Total Entering Volume: **4323**

Mira Mesa Blvd (West leg)

32%	1303	⇦
	4110	
68%	2807	⇨
9.9%		
41,338		

Mira Mesa Blvd (East leg)

⇦	822	24%
	3465	
⇨	2643	76%
	8.4%	
	41,338	

Sequence Dr (South leg)

⇩		⇧	
131	474	343	7.7%
28%		72%	6,167

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Sequence Dr**
E/W Street:	**Mira Mesa Blvd**

Sequence Dr (North leg)

325	592	267	7.4%
⇩		⇧	8,078

Southbound approach: 331 (right) | 8 (through) | 12 (left)

Westbound approach: 5 (left) | 808 (through) | 10 (right)

Eastbound approach: 253 (left) | 2808 (through) | 331 (right)

Northbound approach: 789 (left) | 10 (through) | 41 (right)

Total Entering Volume: **5406**

Mira Mesa Blvd (West leg)

1928	⇦
5471	
3543	⇨
9.9%	
56,324	

Mira Mesa Blvd (East leg)

⇦	759
	3621
⇨	2862
	8.4%
	41,211

Sequence Dr (South leg)

⇩		⇧	
349	1128	779	7.7%
			15,113

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 13 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Genetic Center Dr**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**13**

Genetic Center Dr (north leg)

32%		68%	
95	294	199	9.0%
⇩		⇧	3,267

Southbound: 50 (right), 16 (through), 29 (left)

Westbound (east side): 122 (left), 2844 (through), 230 (right)

Eastbound (west side): 73 (left), 726 (through), 45 (right)

Northbound: 10 (left), 4 (through), 28 (right)

Total Entering Volume: **4177**

Mira Mesa Blvd (west leg)

77%	2904 ⇦
	3748
23%	844 ⇨
9.1%	
41,338	

Mira Mesa Blvd (east leg)

⇦ 3196	80%
3979	
⇨ 783	20%
9.6%	
41,338	

Genetic Center Dr (south leg)

⇩		⇧	
291	333	42	9.0%
87%		13%	3,700

Genetic Center Dr

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Genetic Center Dr**
E/W Street:	**Mira Mesa Blvd**

Genetic Center Dr (north leg)

688	1738	1050	9.0%
⇩		⇧	19,962

Southbound: 331 (right), 263 (through), 94 (left)

Westbound (east side): 509 (left), 2132 (through), 435 (right)

Eastbound (west side): 460 (left), 404 (through), 134 (right)

Northbound: 37 (left), 81 (through), 49 (right)

Total Entering Volume: **4929**

Mira Mesa Blvd (west leg)

2500 ⇦
3499
999 ⇨
9.1%
41,211

Mira Mesa Blvd (east leg)

⇦ 3077
3624
⇨ 547
9.6%
33,508

Genetic Center Dr (south leg)

⇩		⇧	
832	997	165	9.0%
			12,260

Genetic Center Dr

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 13 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Genetic Center Dr**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**13**

Genetic Center Dr (North leg)

65%		35%	
166	257	91	7.9%
⇩		⇧	3,267

Southbound: 74 (right) | 2 (through) | 90 (left)

Mira Mesa Blvd (West leg)

22%	758	⇦
	3493	
78%	2735	⇨
8.4%		
41,338		

Eastbound: 40 (left) | 2685 (through) | 10 (right)

Total Entering Volume: **3864**

Westbound: 36 (right) | 669 (through) | 23 (left)

Mira Mesa Blvd (East leg)

⇦	728	20%
	3708	
⇨	2980	80%
	9.0%	
	41,338	

Northbound: 15 (left) | 15 (through) | 205 (right)

Genetic Center Dr (South leg)

⇩		⇧	
35	270	235	7.3%
13%		87%	3,700

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Genetic Center Dr**
E/W Street:	**Mira Mesa Blvd**

Genetic Center Dr (North leg)

888	1536	648	7.9%
⇩		⇧	19,962

Southbound: 473 (right) | 46 (through) | 370 (left)

Mira Mesa Blvd (West leg)

879	⇦
3268	
2389	⇨
8.4%	
41,211	

Eastbound: 279 (left) | 2063 (through) | 47 (right)

Total Entering Volume: **4478**

Westbound: 116 (right) | 359 (through) | 43 (left)

Mira Mesa Blvd (East leg)

⇦	517
	3331
⇨	2814
	9.0%
	33,508

Northbound: 47 (left) | 254 (through) | 381 (right)

Genetic Center Dr (South leg)

⇩		⇧	
135	817	682	7.3%
			12,260

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 14 AM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **Flanders Dr**
E/W Street: **Mira Mesa Blvd**
Intersection #: **14**

Flanders Dr

25%		75%	
77	303	226	9.0%
⇩		⇧	3,367

Southbound: 42 ⬃ | 17 ⇩ | 18 ⬂

Mira Mesa Blvd (west leg)

80%	3201	⇦
	3997	
20%	796	⇨
9.7%		
41,338		

Eastbound: 51 ⬀ | 454 ⇨ | 291 ⬂

Total Entering Volume: **4338**

Westbound: 131 ⬁ | 2825 ⇦ | 84 ⬃

Mira Mesa Blvd (east leg)

⇦	3040	85%
	3559	
⇨	519	15%
	8.5%	
	41,679	

Northbound: 334 ⬁ | 44 ⇧ | 47 ⬀

⇩		⇧	
392	817	425	10.8%
48%		52%	7,549

Flanders Dr

N

Scenario: **Future Year 2035 - Preferred Network**
N/S Street: **Flanders Dr**
E/W Street: **Mira Mesa Blvd**

Flanders Dr

219	754	535	9.0%
⇩		⇧	8,707

Southbound: 105 ⬃ | 84 ⇩ | 32 ⬂

Mira Mesa Blvd (west leg)

2373	⇦
3084	
711	⇨
9.7%	
33,508	

Eastbound: 105 ⬀ | 210 ⇨ | 396 ⬂

Total Entering Volume: **3796**

Westbound: 234 ⬁ | 1751 ⇦ | 110 ⬃

Mira Mesa Blvd (east leg)

⇦	2095
	2392
⇨	297
	8.5%
	26,040

Northbound: 518 ⬁ | 196 ⇧ | 55 ⬀

⇩		⇧	
589	1358	769	10.8%
			12,388

Flanders Dr

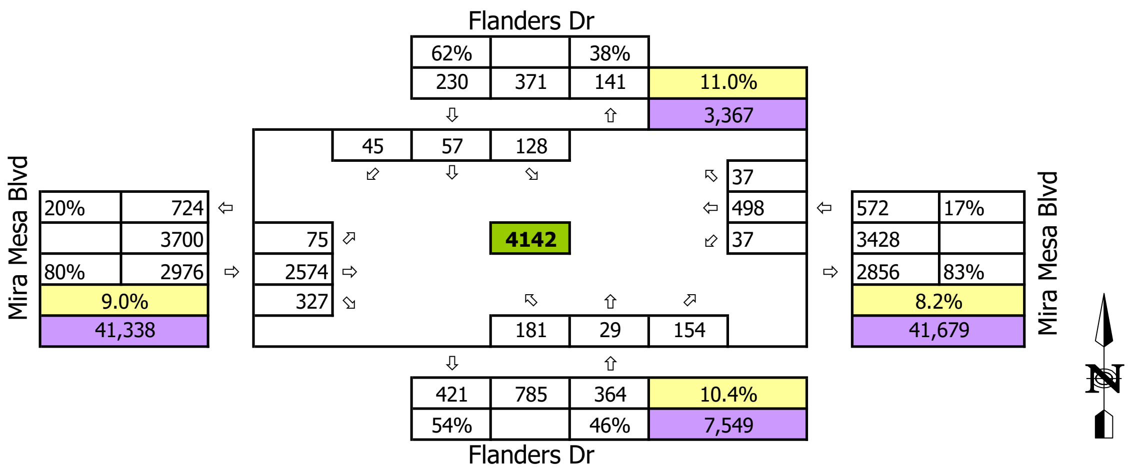
N

LEGEND

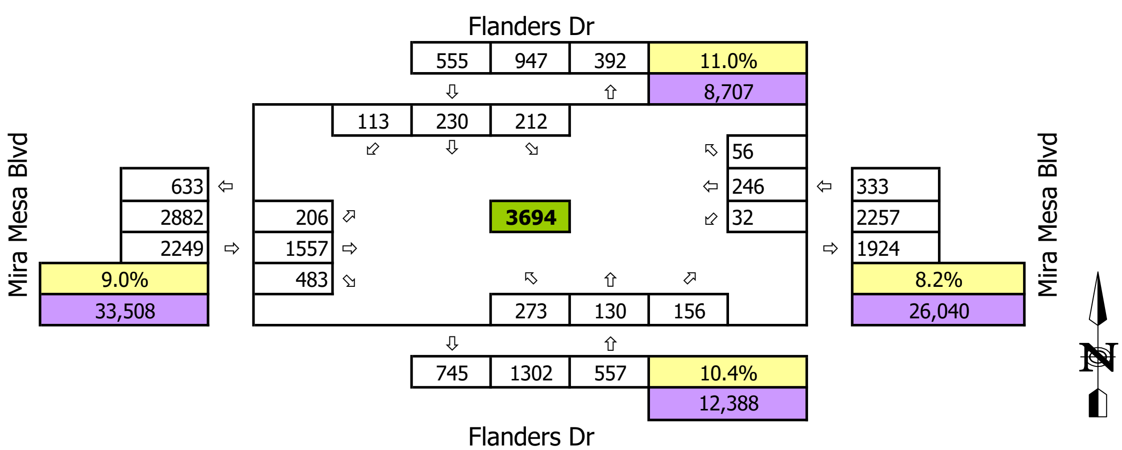
Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 14 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Flanders Dr**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**14**



Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Flanders Dr**
E/W Street:	**Mira Mesa Blvd**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 15 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Viper Way**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**15**

Viper Way

20%		80%	
29	143	114	9.0%
⇩		⇧	1,589

Southbound approach: 8 ⇙ | 13 ⇩ | 8 ⇘

Westbound approach: 65 ⇖ | 2860 ⇦ | 52 ⇙

Eastbound approach: 24 ⬀ | 374 ⇨ | 98 ⇘

Northbound approach: 147 ⇖ | 25 ⇧ | 50 ⬀

Total Entering Volume: **3724**

Mira Mesa Blvd (West)

86%	3015 ⇦
	3511
14%	496 ⇨
8.4%	
41,679	

Mira Mesa Blvd (East)

⇦ 2977	87%
3409	
⇨ 432	13%
8.2%	
41,679	

⇩		⇧	
163	385	222	9.0%
42%		58%	4,278

Viper Way

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Viper Way**
E/W Street:	**Mira Mesa Blvd**

Viper Way

254	1355	1101	9.0%
⇩		⇧	14,616

Southbound approach: 14 ⇙ | 186 ⇩ | 55 ⇘

Westbound approach: 666 ⇖ | 1817 ⇦ | 347 ⇙

Eastbound approach: 38 ⬀ | 161 ⇨ | 98 ⇘

Northbound approach: 148 ⇖ | 397 ⇧ | 237 ⬀

Total Entering Volume: **4164**

Mira Mesa Blvd (West)

1979 ⇦
2275
296 ⇨
8.4%
26,040

Mira Mesa Blvd (East)

⇦ 2833
3286
⇨ 453
8.2%
41,564

⇩		⇧	
631	1412	781	9.0%
			15,784

Viper Way

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 15 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Viper Way**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**15**

Viper Way

47%		53%	
81	173	92	10.9%
⇩		⇧	1,589

Mira Mesa Blvd (West)			West Approach		East Approach		Mira Mesa Blvd (East)	
			Southbound: 18 (⇙), 22 (⇩), 41 (⇘)					
					27 (⇖)			
17%	577	⇦			470 (⇦)	⇦	557	17%
	3431		37 (⬀)	**3731**	60 (⬃)		3275	
83%	2854	⇨	2555 (⇨)			⇨	2718	83%
8.2%			262 (⇘)				7.9%	
41,679				Northbound: 89 (⇖), 28 (⇧), 122 (⬀)			41,679	

⇩		⇧	
344	583	239	13.6%
59%		41%	4,278

Viper Way

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Viper Way**
E/W Street:	**Mira Mesa Blvd**

Viper Way

859	1605	746	10.9%
⇩		⇧	14,616

Mira Mesa Blvd (West)		West Approach		East Approach		Mira Mesa Blvd (East)
		Southbound: 39 (⇙), 467 (⇩), 353 (⇘)				
				193 (⇖)		
318	⇦			195 (⇦)	⇦	641
2376		97 (⬀)	**4576**	253 (⬃)		3033
2058	⇨	1561 (⇨)			⇨	2392
8.2%		400 (⇘)				7.9%
26,040			Northbound: 84 (⇖), 456 (⇧), 478 (⬀)			41,564

⇩		⇧	
1120	2138	1018	13.6%
			15,784

Viper Way

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 16 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**16**

Camino Santa Fe (North Leg)

55%		45%	
523	957	434	5.7%
⇩		⇧	16,903

Southbound approach: 116 (right) | 293 (through) | 114 (left)

Westbound approach: 305 (left) | 2831 (through) | 585 (right)

Eastbound approach: 24 (left) | 311 (through) | 89 (right)

Northbound approach: 91 (left) | 105 (through) | 66 (right)

Total Entering Volume: **4930**

Mira Mesa Blvd (West Leg)

88%	3038 ⇦
	3462
12%	424 ⇨
8.3%	
41,679	

Mira Mesa Blvd (East Leg)

⇦ 3721	88%
4212	
⇨ 491	12%
8.9%	
47,281	

Camino Santa Fe (South Leg)

⇩		⇧	
967	1229	262	6.5%
79%		21%	18,925

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Mira Mesa Blvd**

Camino Santa Fe (North Leg)

443	786	343	5.7%
⇩		⇧	13,832

Southbound approach: 121 (right) | 246 (through) | 76 (left)

Westbound approach: 222 (left) | 2706 (through) | 455 (right)

Eastbound approach: 32 (left) | 295 (through) | 112 (right)

Northbound approach: 101 (left) | 89 (through) | 46 (right)

Total Entering Volume: **4501**

Mira Mesa Blvd (West Leg)

2928 ⇦	
3366	
438 ⇨	
8.3%	
41,564	

Mira Mesa Blvd (East Leg)

⇦ 3384	
3801	
⇨ 417	
8.9%	
41,507	

Camino Santa Fe (South Leg)

⇩		⇧	
813	1049	236	6.5%
			16,467

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 16 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**16**

Camino Santa Fe (North)

53%		47%	
606	1134	528	6.7%
⇩		⇧	16,903

Southbound: 35 ⬃ | 186 ⇩ | 385 ⬂

Westbound: ⬁ 149 | ⇦ 491 | ⬃ 156

Eastbound: 61 ⬀ | 2547 ⇨ | 75 ⬂

Northbound: ⬁ 108 | ⇧ 318 | ⬀ 509

Total Entering Volume: **5020**

Mira Mesa Blvd (West)

19%	634	⇦
	3317	
81%	2683	⇨
8.0%		
41,679		

Mira Mesa Blvd (East)

⇦	796	19%
	4237	
⇨	3441	81%
	9.0%	
	47,281	

Camino Santa Fe (South)

⇩		⇧	
417	1352	935	7.1%
31%		69%	18,925

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Mira Mesa Blvd**

Camino Santa Fe (North)

485	929	444	6.7%
⇩		⇧	13,832

Southbound: 43 ⬃ | 167 ⇩ | 275 ⬂

Westbound: ⬁ 101 | ⇦ 468 | ⬃ 112

Eastbound: 70 ⬀ | 2444 ⇨ | 93 ⬂

Northbound: ⬁ 138 | ⇧ 273 | ⬀ 383

Total Entering Volume: **4567**

Mira Mesa Blvd (West)

649	⇦
3257	
2608	⇨
8.0%	
41,564	

Mira Mesa Blvd (East)

⇦	681
	3783
⇨	3102
	9.0%
	41,507

Camino Santa Fe (South)

⇩		⇧	
372	1165	793	7.1%
			16,467

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 17 AM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **Schilling Ave**
E/W Street: **Mira Mesa Blvd**
Intersection #: **17**

Schilling Ave (North Leg)

79%		21%	
189	239	50	9.0%
⇩		⇧	2,656

Southbound approach: 103 (right) / 8 (through) / 78 (left)

Westbound approach: 27 (right) / 3533 (through) / 22 (left)

Eastbound approach: 21 (left) / 465 (through) / 7 (right)

Northbound approach: 45 (left) / 2 (through) / 50 (right)

Total Entering Volume: **4361**

Mira Mesa Blvd (West Leg)

88%	3681 ⇦
	4174
12%	493 ⇨
8.8%	
47,281	

Mira Mesa Blvd (East Leg)

⇦ 3582	86%
4175	
⇨ 593	14%
8.8%	
47,281	

Schilling Ave (South Leg)

⇩		⇧	
37	134	97	9.0%
28%		72%	1,489

N

Scenario: **Future Year 2035 - Preferred Network**
N/S Street: **Schilling Ave**
E/W Street: **Mira Mesa Blvd**

Schilling Ave (North Leg)

217	273	56	9.0%
⇩		⇧	3,009

Southbound approach: 145 (right) / 13 (through) / 60 (left)

Westbound approach: 19 (right) / 2987 (through) / 19 (left)

Eastbound approach: 29 (left) / 389 (through) / 14 (right)

Northbound approach: 68 (left) / 8 (through) / 41 (right)

Total Entering Volume: **3792**

Mira Mesa Blvd (West Leg)

3200 ⇦
3637
437 ⇨
8.8%
41,507

Mira Mesa Blvd (East Leg)

⇦ 3019
3509
⇨ 490
8.8%
39,464

Schilling Ave (South Leg)

⇩		⇧	
45	163	118	9.0%
			1,798

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 17 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Schilling Ave**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**17**

Schilling Ave (North Leg)

24%		76%	
65	273	208	10.3%
⇩		⇧	2,656

Southbound: 14 (right) | 0 (through) | 51 (left)

Westbound: 55 (right) | 757 (through) | 46 (left)

Eastbound: 132 (left) | 3227 (through) | 39 (right)

Northbound: 17 (left) | 21 (through) | 75 (right)

Total Entering Volume: **4434**

Mira Mesa Blvd (West Leg)

19%	788 ⇦
	4186
81%	3398 ⇨
8.9%	
47,281	

Mira Mesa Blvd (East Leg)

⇦ 858	20%
4211	
⇨ 3353	80%
8.9%	
47,281	

Schilling Ave (South Leg)

⇩		⇧	
85	198	113	13.3%
43%		57%	1,489

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Schilling Ave**
E/W Street:	**Mira Mesa Blvd**

Schilling Ave (North Leg)

72	309	237	10.3%
⇩		⇧	3,009

Southbound: 28 (right) | 0 (through) | 46 (left)

Westbound: 42 (right) | 640 (through) | 41 (left)

Eastbound: 163 (left) | 2710 (through) | 63 (right)

Northbound: 32 (left) | 32 (through) | 73 (right)

Total Entering Volume: **3870**

Mira Mesa Blvd (West Leg)

699 ⇦
3651
2952 ⇨
8.9%
41,507

Mira Mesa Blvd (East Leg)

⇦ 709
3537
⇨ 2828
8.9%
39,464

Schilling Ave (South Leg)

⇩		⇧	
104	239	135	13.3%
			1,798

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 18 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Aderman Ave**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**18**

Aderman Ave

78%		22%	
178	227	49	9.0%
⇩		⇧	2,522

Southbound approach: 43 ⇙ | 16 ⇩ | 119 ⇘

Mira Mesa Blvd (west)

85%	3577	⇦
	4186	
15%	609	⇨
8.9%		
47,281		

Eastbound approach: 11 ⬀ | 596 ⇨ | 2 ⇘

Total Entering Volume: **4418**

Westbound approach: ⇖ 32 | ⇦ 3520 | ⇙ 22

Mira Mesa Blvd (east)

⇦	3574	83%
	4326	
⇨	752	17%
	9.1%	
	47,281	

Northbound approach: ⇖ 14 | ⇧ 6 | ⬀ 37

⇩		⇧	
40	97	57	9.0%
41%		59%	1,078

Aderman Ave

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Aderman Ave**
E/W Street:	**Mira Mesa Blvd**

Aderman Ave

193	248	55	9.0%
⇩		⇧	2,773

Southbound approach: 39 ⇙ | 14 ⇩ | 146 ⇘

Mira Mesa Blvd (west)

3047	⇦
3545	
498	⇨
8.9%	
39,464	

Eastbound approach: 12 ⬀ | 498 ⇨ | 2 ⇘

Total Entering Volume: **3811**

Westbound approach: ⇖ 37 | ⇦ 2997 | ⇙ 17

Mira Mesa Blvd (east)

⇦	3072
	3746
⇨	674
	9.1%
	41,462

Northbound approach: ⇖ 11 | ⇧ 7 | ⬀ 31

⇩		⇧	
33	79	46	9.0%
			883

Aderman Ave

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 18 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Aderman Ave**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**18**

Aderman Ave

45%		55%	
69	154	85	6.1%
⇩		⇧	2,522

Southbound: 11 ⬃ | 4 ⇩ | 54 ⬂

Mira Mesa Blvd (West)

21%	863	⇦
	4195	
79%	3332	⇨
8.9%		
47,281		

Eastbound: 30 ⬀ | 3278 ⇨ | 24 ⬂

4395

Westbound: ⬁ 46 | ⇦ 841 | ⬃ 45

Mira Mesa Blvd (East)

⇦	932	22%
	4306	
⇨	3374	78%
	9.1%	
	47,281	

Northbound: ⬁ 11 | ⇧ 9 | ⬀ 42

⇩		⇧	
73	135	62	12.5%
54%		46%	1,078

Aderman Ave

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Aderman Ave**
E/W Street:	**Mira Mesa Blvd**

Aderman Ave

77	169	92	6.1%
⇩		⇧	2,773

Southbound: 9 ⬃ | 5 ⇩ | 65 ⬂

Mira Mesa Blvd (West)

710	⇦
3531	
2821	⇨
8.9%	
39,464	

Eastbound: 21 ⬀ | 2817 ⇨ | 12 ⬂

3781

Westbound: ⬁ 62 | ⇦ 694 | ⬃ 43

Mira Mesa Blvd (East)

⇦	829
	3747
⇨	2918
	9.1%
	41,462

Northbound: ⬁ 8 | ⇧ 9 | ⬀ 36

⇩		⇧	
59	111	52	12.5%
			883

Aderman Ave

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 19 AM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **Parkdale Ave**
E/W Street: **Mira Mesa Blvd**
Intersection #: **19**

Parkdale Ave (north leg)

77%		23%	
340	443	103	9.0%
⇩		⇧	4,922

Southbound approach: 199 ⇙, 69 ⇩, 72 ⇘

Westbound approach: 35 ⇖, 3277 ⇦, 39 ⇙

Total Entering Volume: **4648**

Eastbound approach: 48 ⬀, 660 ⇨, 50 ⇘

Northbound approach: 96 ⇖, 20 ⇧, 83 ⬀

Mira Mesa Blvd (west leg)

82%	3572	⇦
	4330	
18%	758	⇨
9.2%		
47,281		

Mira Mesa Blvd (east leg)

⇦	3351	80%
	4166	
⇨	815	20%
	8.1%	
	51,329	

Parkdale Ave (south leg)

⇩		⇧	
158	357	199	7.3%
44%		56%	4,862

N

Scenario: **Future Year 2035 - Preferred Network**
N/S Street: **Parkdale Ave**
E/W Street: **Mira Mesa Blvd**

Parkdale Ave (north leg)

487	622	135	9.0%
⇩		⇧	6,724

Southbound approach: 368 ⇙, 95 ⇩, 24 ⇘

Westbound approach: 15 ⇖, 2339 ⇦, 24 ⇙

Total Entering Volume: **3909**

Eastbound approach: 91 ⬀, 452 ⇨, 141 ⇘

Northbound approach: 285 ⇖, 29 ⇧, 46 ⬀

Mira Mesa Blvd (west leg)

2991	⇦
3689	
698	⇨
9.2%	
41,462	

Mira Mesa Blvd (east leg)

⇦	2364
	2886
⇨	522
	8.1%
	34,490

Parkdale Ave (south leg)

⇩		⇧	
260	619	359	7.3%
			8,363

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 19 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Parkdale Ave**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**19**

Parkdale Ave (North leg)

29%		71%	
137	467	330	9.5%
⇩		⇧	4,922

Southbound turning volumes: 56 (right) | 55 (through) | 26 (left)

Westbound turning volumes (Mira Mesa Blvd, east approach): 96 (right) | 865 (through) | 93 (left)

Eastbound turning volumes (Mira Mesa Blvd, west approach): 140 (left) | 2929 (through) | 280 (right)

Northbound turning volumes: 42 (left) | 94 (through) | 80 (right)

Total Entering Volume: **4756**

Mira Mesa Blvd (West leg)

22%	963 ⇦
	4312
78%	3349 ⇨
9.1%	
47,281	

Mira Mesa Blvd (East leg)

⇦ 1054	26%
4089	
⇨ 3035	74%
8.0%	
51,329	

Parkdale Ave (South leg)

⇩		⇧	
428	644	216	13.2%
66%		34%	4,862

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Parkdale Ave**
E/W Street:	**Mira Mesa Blvd**

Parkdale Ave (North leg)

183	641	458	9.5%
⇩		⇧	6,724

Southbound turning volumes: 101 (right) | 71 (through) | 14 (left)

Westbound turning volumes (Mira Mesa Blvd, east approach): 41 (right) | 619 (through) | 51 (left)

Eastbound turning volumes (Mira Mesa Blvd, west approach): 245 (left) | 2000 (through) | 627 (right)

Northbound turning volumes: 139 (left) | 172 (through) | 60 (right)

Total Entering Volume: **4140**

Mira Mesa Blvd (West leg)

858 ⇦
3749
2891 ⇨
9.1%
41,462

Mira Mesa Blvd (East leg)

⇦ 697
2770
⇨ 2073
8.0%
34,490

Parkdale Ave (South leg)

⇩		⇧	
748	1114	366	13.2%
			8,363

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 20 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Reagan Rd**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**20**

Reagan Rd

77%		23%	
447	579	132	9.0%
⇩		⇧	6,433

Southbound approach: 254 ⬃ | 120 ⇩ | 73 ⬂

Westbound approach: ⬁ 23 | ⇦ 2908 | ⬃ 24

Eastbound approach: 51 ⬀ | 677 ⇨ | 57 ⬂

Northbound approach: 156 ⬁ | 58 ⇧ | 20 ⬀

Total Entering Volume: **4421**

Mira Mesa Blvd (west)

81%	3318	⇦
	4103	
19%	785	⇨
8.0%		
51,329		

Mira Mesa Blvd (east)

⇦	2955	79%
	3725	
⇨	770	21%
	8.2%	
	45,330	

⇩		⇧	
201	435	234	6.4%
46%		54%	6,849

Reagan Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Reagan Rd**
E/W Street:	**Mira Mesa Blvd**

Reagan Rd

126	161	35	9.0%
⇩		⇧	1,767

Southbound approach: 60 ⬃ | 49 ⇩ | 18 ⬂

Westbound approach: ⬁ 8 | ⇦ 1831 | ⬃ 29

Eastbound approach: 11 ⬀ | 429 ⇨ | 62 ⬂

Northbound approach: 134 ⬁ | 17 ⇧ | 18 ⬀

Total Entering Volume: **2666**

Mira Mesa Blvd (west)

2025	⇦
2526	
501	⇨
8.0%	
32,033	

Mira Mesa Blvd (east)

⇦	1868
	2333
⇨	465
	8.2%
	28,016

⇩		⇧	
139	308	169	6.4%
			4,834

Reagan Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 20 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Reagan Rd**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**20**

Reagan Rd (north leg)

37%		63%	
257	688	431	10.7%
⇩		⇧	6,433

Southbound movements: 79 ⬃ | 127 ⇩ | 51 ⬂

Westbound movements: 86 ⬁ | 871 ⇦ | 45 ⬃

Eastbound movements: 187 ⬀ | 2295 ⇨ | 238 ⬂

Northbound movements: 137 ⬁ | 158 ⇧ | 21 ⬀

Total Entering Volume: **4295**

Mira Mesa Blvd (west leg)

29%	1087 ⇦
	3807
71%	2720 ⇨
7.4%	
51,329	

Mira Mesa Blvd (east leg)

⇦ 1002	30%
3369	
⇨ 2367	70%
7.4%	
45,330	

Reagan Rd (south leg)

⇩		⇧	
410	726	316	10.6%
56%		44%	6,849

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Reagan Rd**
E/W Street:	**Mira Mesa Blvd**

Reagan Rd (north leg)

70	189	119	10.7%
⇩		⇧	1,767

Southbound movements: 17 ⬃ | 41 ⇩ | 12 ⬂

Westbound movements: 25 ⬁ | 535 ⇦ | 51 ⬃

Eastbound movements: 36 ⬀ | 1441 ⇨ | 200 ⬂

Northbound movements: 135 ⬁ | 58 ⇧ | 28 ⬀

Total Entering Volume: **2579**

Mira Mesa Blvd (west leg)

687 ⇦
2364
1677 ⇨
7.4%
32,033

Mira Mesa Blvd (east leg)

⇦ 612
2093
⇨ 1481
7.4%
28,016

Reagan Rd (south leg)

⇩		⇧	
292	512	220	10.6%
			4,834

N

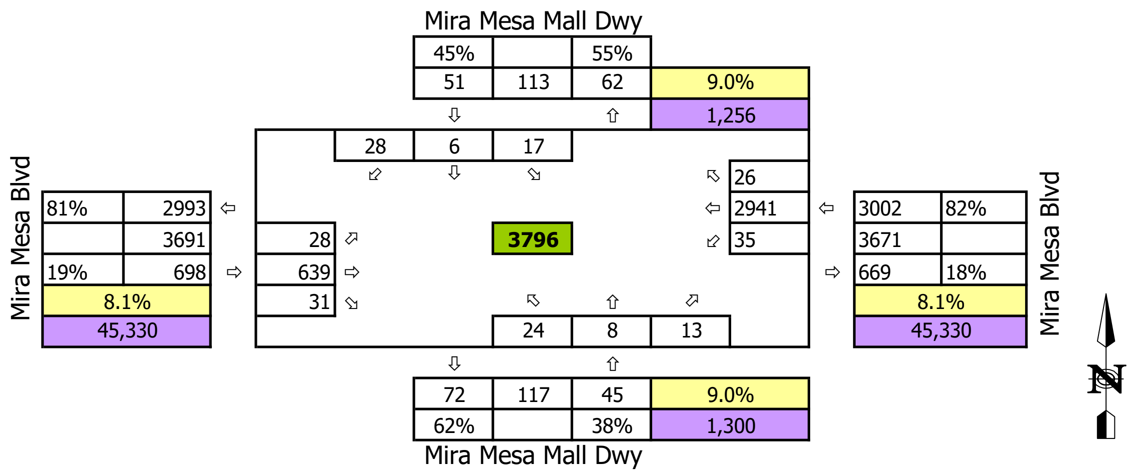
LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

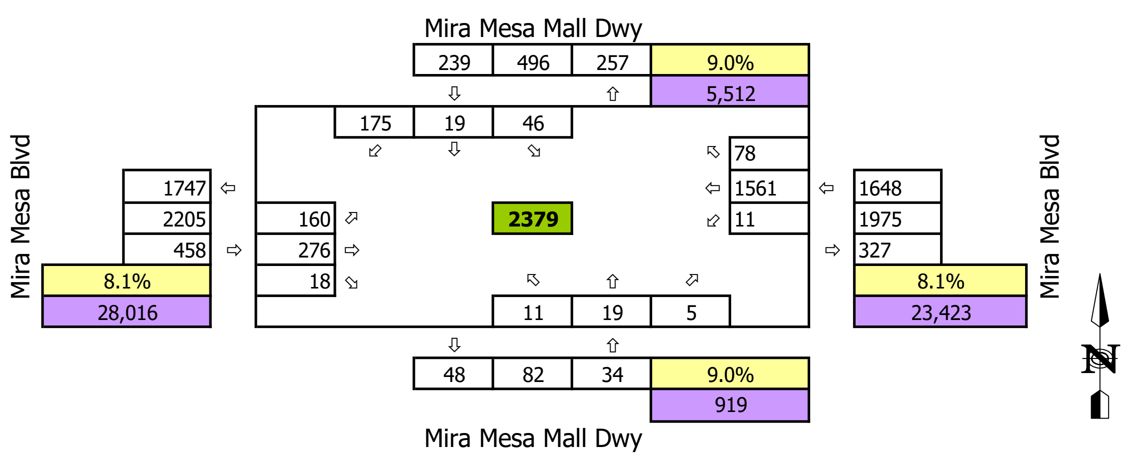
MIZUTA TRAFFIC CONSULTING

Int 21 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Mira Mesa Mall Dwy**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**21**



Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Mira Mesa Mall Dwy**
E/W Street:	**Mira Mesa Blvd**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 21 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Mira Mesa Mall Dwy**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**21**

Mira Mesa Mall Dwy

36%		64%	
176	492	316	39.2%
			1,256

32	46	98

Mira Mesa Blvd

29%	949
	3282
71%	2333
7.2%	
45,330	

138
2087
108

3878

101
853
138

1092	32%
3413	
2321	68%
7.5%	
45,330	

Mira Mesa Blvd

64	77	136

292	569	277	43.8%
51%		49%	1,300

Mira Mesa Mall Dwy

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Mira Mesa Mall Dwy**
E/W Street:	**Mira Mesa Blvd**

Mira Mesa Mall Dwy

826	2130	1304	39.2%
			5,512

262	145	419

Mira Mesa Blvd

551
2091
1540
7.2%
28,016

820
690
30

3178

310
273
19

602
1730
1128
7.5%
23,423

Mira Mesa Blvd

17	174	19

194	403	209	43.8%
			919

Mira Mesa Mall Dwy

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 22 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**22**

Camino Ruiz

69%		31%	
993	1444	451	7.4%
⇩		⇧	19,562

Approach	Movement	Volume
Southbound	⬃	174
Southbound	⇩	452
Southbound	⬂	367
Westbound	⬉	110
Westbound	⇦	2559
Westbound	⬃	167
Eastbound	⬀	86
Eastbound	⇨	711
Eastbound	⬂	15
Northbound	⬉	92
Northbound	⇧	255
Northbound	⬀	192

5180

Mira Mesa Blvd (West)

78%	2825	⇦
	3637	
22%	812	⇨
8.0%		
45,330		

Mira Mesa Blvd (East)

⇦	2836	69%
	4106	
⇨	1270	31%
	13.0%	
	31,552	

⇩		⇧	
634	1173	539	5.1%
54%		46%	22,819

Camino Ruiz

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Mira Mesa Blvd**

Camino Ruiz

1103	1775	672	7.4%
⇩		⇧	24,906

Approach	Movement	Volume
Southbound	⬃	14
Southbound	⇩	120
Southbound	⬂	1023
Westbound	⬉	585
Westbound	⇦	1689
Westbound	⬃	411
Eastbound	⬀	13
Eastbound	⇨	372
Eastbound	⬂	3
Northbound	⬉	6
Northbound	⇧	75
Northbound	⬀	272

4583

Mira Mesa Blvd (West)

1709	⇦
2075	
366	⇨
8.0%	
23,423	

Mira Mesa Blvd (East)

⇦	2773
	4439
⇨	1666
	13.0%
	35,352

⇩		⇧	
534	873	339	5.1%
			16,418

Camino Ruiz

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 22 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**22**

Camino Ruiz (North Leg)

46%		54%	
884	1908	1024	9.8%
⇩		⇧	19,562

Southbound movements: 73 ⬋ | 469 ⇩ | 342 ⬊

Mira Mesa Blvd (West Leg)

34%	1185	⇦
	3513	
66%	2328	⇨
7.7%		
45,330		

Eastbound movements: 224 ⬀ | 2053 ⇨ | 51 ⬂

Total Entering Volume: **5543**

Westbound movements: ⬉ 224 | ⇦ 963 | ⬃ 267

Mira Mesa Blvd (East Leg)

⇦	1454	36%
	4001	
⇨	2547	64%
	12.7%	
	31,552	

Northbound movements: 149 ⬉ | 576 ⇧ | 152 ⬈

Camino Ruiz (South Leg)

⇩		⇧	
787	1664	877	7.3%
47%		53%	22,819

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Mira Mesa Blvd**

Camino Ruiz (North Leg)

1217	2430	1213	9.8%
⇩		⇧	24,906

Southbound movements: 12 ⬋ | 153 ⇩ | 1065 ⬊

Mira Mesa Blvd (West Leg)

569	⇦
1870	
1301	⇨
7.7%	
23,423	

Eastbound movements: 42 ⬀ | 1269 ⇨ | 7 ⬂

Total Entering Volume: **4961**

Westbound movements: ⬉ 827 | ⇦ 540 | ⬃ 366

Mira Mesa Blvd (East Leg)

⇦	1762
	4416
⇨	2654
	12.7%
	35,352

Northbound movements: 18 ⬉ | 343 ⇧ | 319 ⬈

Camino Ruiz (South Leg)

⇩		⇧	
526	1208	682	7.3%
			16,418

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 23 AM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **New Salem St**
E/W Street: **Mira Mesa Blvd**
Intersection #: **23**

New Salem St

49% | | 51%
311 | 633 | 322 | 9.0%
7,033

33 | 135 | 143

103
2483
125

Mira Mesa Blvd

67% | 2637
3952
33% | 1315
12.5%
31,552

124
1125
66

4639

2711 | 67%
4065
1354 | 33%
7.1%
57,445

Mira Mesa Blvd

121 | 95 | 86

326 | 628 | 302 | 9.0%
52% | | 48% | 6,978

New Salem St

N

Scenario: **Future Year 2035 - Recommended Network**
N/S Street: **New Salem St**
E/W Street: **Mira Mesa Blvd**

New Salem St

196 | 369 | 173 | 9.0%
4,069

239 | 2 | 1

1
3020
1

Mira Mesa Blvd

3397
5375
1978
12.5%
43,795

172
1036
100

4712

2425
3463
1038
7.1%
47,405

Mira Mesa Blvd

138 | 1 | 1

103 | 215 | 112 | 9.0%
2,382

New Salem St

N

LEGEND

Existing K-Factor | xx%
ADT Volume | xx
Total Entering Volume | **xx**

MIZUTA TRAFFIC CONSULTING

Int 23 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**New Salem St**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**23**

New Salem St

45%		55%	
266	585	319	8.3%
⇩		⇧	7,033

Southbound: 33 ⇙ | 111 ⇩ | 122 ⇘

Westbound: ⇖ 176 | ⇦ 1302 | ⇙ 58

Eastbound: 47 ⇗ | 2296 ⇨ | 167 ⇘

Northbound: ⇖ 106 | ⇧ 96 | ⇗ 40

Total Entering Volume: **4554**

Mira Mesa Blvd (west)

36%	1441	⇦
	3951	
64%	2510	⇨
12.5%		
31,552		

Mira Mesa Blvd (east)

⇦	1536	38%
	3994	
⇨	2458	62%
	7.0%	
	57,445	

⇩		⇧	
336	578	242	8.3%
58%		42%	6,978

New Salem St

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**New Salem St**
E/W Street:	**Mira Mesa Blvd**

New Salem St

143	341	198	8.3%
⇩		⇧	4,069

Southbound: 217 ⇙ | 2 ⇩ | 2 ⇘

Westbound: ⇖ 2 | ⇦ 1819 | ⇙ 2

Eastbound: 195 ⇗ | 2181 ⇨ | 120 ⇘

Northbound: ⇖ 117 | ⇧ 2 | ⇗ 1

Total Entering Volume: **4660**

Mira Mesa Blvd (west)

2153	⇦
5406	
3253	⇨
12.5%	
43,795	

Mira Mesa Blvd (east)

⇦	1184
	3367
⇨	2183
	7.0%
	47,405

⇩		⇧	
123	200	77	8.3%
			2,382

New Salem St

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 24 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Westonhill Dr**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**24**

Westonhill Dr (North Leg)

Southbound Exit	Total	Northbound Entry	K-Factor / ADT
77%		23%	
492	640	148	7.2%
⇩		⇧	8,896

Southbound approach: Right 112, Through 103, Left 277

Mira Mesa Blvd (West Leg)

Split	Volume	
70%	2960	⇦
	4256	
30%	1296	⇨
7.4%		
57,445		

Eastbound approach: Left 29, Through 1258, Right 9

Total Entering Volume: 4809

Mira Mesa Blvd (East Leg)

Volume	Split
2831 ⇦	64%
4402	
1571 ⇨	36%
7.7%	
57,200	

Westbound approach: Right 38, Through 2775, Left 18

Northbound approach: Left 73, Through 81, Right 36

Westonhill Dr (South Leg)

Southbound Exit	Total	Northbound Entry	K-Factor / ADT
⇩		⇧	
130	320	190	7.1%
41%		59%	4,480

Westonhill Dr

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Westonhill Dr**
E/W Street:	**Mira Mesa Blvd**

Westonhill Dr (North Leg)

Southbound Exit	Total	Northbound Entry	K-Factor / ADT
497	656	159	7.2%
⇩		⇧	9,237

Southbound approach: Right 40, Through 133, Left 338

Mira Mesa Blvd (West Leg)

Volume	
2517	⇦
3555	
1038	⇨
7.4%	
47,405	

Eastbound approach: Left 13, Through 1058, Right 10

Total Entering Volume: 4403

Mira Mesa Blvd (East Leg)

Volume
2583 ⇦
4103
1520 ⇨
7.7%
53,720

Westbound approach: Right 50, Through 2409, Left 64

Northbound approach: Left 68, Through 96, Right 124

Westonhill Dr (South Leg)

Southbound Exit	Total	Northbound Entry	K-Factor / ADT
⇩		⇧	
207	492	285	7.1%
			6,920

Westonhill Dr

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 24 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Westonhill Dr**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**24**

Westonhill Dr (North leg)

43%		57%	
280	656	376	7.4%
⇩		⇧	8,896

Southbound approach: 60 ⬃ | 129 ⇩ | 91 ⬂

Mira Mesa Blvd (West leg)

38%	1509	⇦
	3997	
62%	2488	⇨
7.0%		
57,445		

Eastbound approach: 109 ⬀ | 2321 ⇨ | 58 ⬂

Total Entering Volume: **4544**

Westbound approach: 112 ⬁ | 1383 ⇦ | 45 ⬃

Mira Mesa Blvd (East leg)

⇦	1540	39%
	3967	
⇨	2427	61%
	6.9%	
	57,200	

Northbound approach: 66 ⬁ | 155 ⇧ | 15 ⬀

Westonhill Dr (South leg)

⇩		⇧	
232	468	236	10.4%
50%		50%	4,480

Westonhill Dr

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Westonhill Dr**
E/W Street:	**Mira Mesa Blvd**

Westonhill Dr (North leg)

296	681	385	7.4%
⇩		⇧	9,237

Southbound approach: 19 ⬃ | 154 ⇩ | 124 ⬂

Mira Mesa Blvd (West leg)

1228	⇦
3310	
2082	⇨
7.0%	
47,405	

Eastbound approach: 34 ⬀ | 2050 ⇨ | 47 ⬂

Total Entering Volume: **4213**

Westbound approach: 130 ⬁ | 1138 ⇦ | 151 ⬃

Mira Mesa Blvd (East leg)

⇦	1467
	3716
⇨	2249
	6.9%
	53,720

Northbound approach: 70 ⬁ | 221 ⇧ | 75 ⬀

Westonhill Dr (South leg)

⇩		⇧	
353	723	370	10.4%
			6,920

Westonhill Dr

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 25 AM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **Greenford Dr**
E/W Street: **Mira Mesa Blvd**
Intersection #: **25**

Greenford Dr

49%		51%	
88	178	90	9.0%
⇩		⇧	1,978

Southbound approach: 13 | 37 | 38

Mira Mesa Blvd (West)

62%	2692	⇦
	4329	
38%	1637	⇨
7.6%		
57,200		

Eastbound approach: 6 | 1592 | 39

Total Entering Volume: **4636**

Westbound approach: 34 | 2604 | 30

Mira Mesa Blvd (East)

⇦	2668	60%
	4416	
⇨	1748	40%
	7.3%	
	60,335	

Northbound approach: 75 | 50 | 118

⇩		⇧	
106	349	243	8.3%
30%		70%	4,198

Greenford Dr

N

Scenario: **Future Year 2035 - Recommended Network**
N/S Street: **Greenford Dr**
E/W Street: **Mira Mesa Blvd**

Greenford Dr

53	105	52	9.0%
⇩		⇧	1,163

Southbound approach: 23 | 20 | 10

Mira Mesa Blvd (West)

2502	⇦
4056	
1554	⇨
7.6%	
53,720	

Eastbound approach: 12 | 1324 | 99

Total Entering Volume: **4070**

Westbound approach: 11 | 2243 | 13

Mira Mesa Blvd (East)

⇦	2156
	3539
⇨	1383
	7.3%
	48,242

Northbound approach: 236 | 30 | 49

⇩		⇧	
132	438	306	8.3%
			5,240

Greenford Dr

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 25 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Greenford Dr**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**25**

Greenford Dr

29%		71%	
59	207	148	10.5%
⇩		⇧	1,978

Southbound: 12 ⇙ 36 ⇩ 11 ⇘

Mira Mesa Blvd (West)

39%	1559	⇦
	3962	
61%	2403	⇨
6.9%		
57,200		

Eastbound: 18 ⬀ 2271 ⇨ 114 ⇘

4238

Westbound: ⇖ 62 ⇦ 1450 ⇙ 66

Mira Mesa Blvd (East)

⇦	1578	41%
	3893	
⇨	2315	59%
	6.5%	
	60,335	

Northbound: ⇖ 97 ⇧ 68 ⬀ 33

⇩		⇧	
216	414	198	9.9%
52%		48%	4,198

Greenford Dr

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Greenford Dr**
E/W Street:	**Mira Mesa Blvd**

Greenford Dr

35	124	89	10.5%
⇩		⇧	1,163

Southbound: 16 ⇙ 15 ⇩ 5 ⇘

Mira Mesa Blvd (West)

1490	⇦
3709	
2219	⇨
6.9%	
53,720	

Eastbound: 31 ⬀ 1865 ⇨ 231 ⇘

3738

Westbound: ⇖ 16 ⇦ 1274 ⇙ 29

Mira Mesa Blvd (East)

⇦	1241
	3125
⇨	1884
	6.5%
	48,242

Northbound: ⇖ 200 ⇧ 42 ⬀ 14

⇩		⇧	
275	518	243	9.9%
			5,240

Greenford Dr

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 26 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Westmore Rd**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**26**

Westmore Rd (North Leg)

48%		52%		
110	229	119	9.0%	
⇩		⇧	2,544	

Southbound approach: 11 (⬋) | 28 (⇩) | 71 (⬊)

Westbound approach: 72 (⬉) | 2784 (⇦) | 108 (⬋)

Eastbound approach: 22 (⬀) | 1684 (⇨) | 21 (⬂)

Northbound approach: 14 (⬉) | 25 (⇧) | 69 (⬀)

Total Entering Volume: **4909**

Mira Mesa Blvd (West Leg)

62%	2809	⇦
	4536	
38%	1727	⇨
7.5%		
60,335		

Mira Mesa Blvd (East Leg)

⇦	2964	62%
	4788	
⇨	1824	38%
	7.9%	
	60,335	

Westmore Rd (South Leg)

⇩		⇧	
157	265	108	9.0%
59%		41%	2,944

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Westmore Rd**
E/W Street:	**Mira Mesa Blvd**

Westmore Rd (North Leg)

162	342	180	9.0%
⇩		⇧	3,803

Southbound approach: 16 (⬋) | 13 (⇩) | 140 (⬊)

Westbound approach: 146 (⬉) | 1806 (⇦) | 21 (⬋)

Eastbound approach: 23 (⬀) | 1115 (⇨) | 4 (⬂)

Northbound approach: 3 (⬉) | 11 (⇧) | 13 (⬀)

Total Entering Volume: **3311**

Mira Mesa Blvd (West Leg)

1825	⇦
2926	
1101	⇨
7.5%	
38,833	

Mira Mesa Blvd (East Leg)

⇦	2023
	3292
⇨	1269
	7.9%
	41,589

Westmore Rd (South Leg)

⇩		⇧	
38	64	26	9.0%
			711

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 26 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Westmore Rd**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**26**

Westmore Rd (North leg)

33%		67%	
70	214	144	8.4%
⇩		⇧	2,544

Southbound: 19 ⇙ | 21 ⇩ | 30 ⇘

Mira Mesa Blvd (West leg)

39%	1489	⇦
	3819	
61%	2330	⇨
6.3%		
60,335		

Eastbound: 14 ⬀ | 2279 ⇨ | 37 ⇘

Total Entering Volume: 4339

Westbound: ⬉ 84 | ⇦ 1432 | ⇙ 166

Mira Mesa Blvd (East leg)

⇦	1682	40%
	4164	
⇨	2482	60%
	6.9%	
	60,335	

Northbound: ⬉ 38 | ⇧ 46 | ⬀ 173

Westmore Rd (South leg)

⇩		⇧	
224	481	257	16.3%
47%		53%	2,944

Westmore Rd

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Westmore Rd**
E/W Street:	**Mira Mesa Blvd**

Westmore Rd (North leg)

107	318	211	8.4%
⇩		⇧	3,803

Southbound: 21 ⇙ | 9 ⇩ | 79 ⇘

Mira Mesa Blvd (West leg)

940	⇦
2470	
1530	⇨
6.3%	
38,833	

Eastbound: 14 ⬀ | 1555 ⇨ | 6 ⇘

Total Entering Volume: 2884

Westbound: ⬉ 183 | ⇦ 913 | ⇙ 39

Mira Mesa Blvd (East leg)

⇦	1182
	2860
⇨	1678
	6.9%
	41,589

Northbound: ⬉ 6 | ⇧ 15 | ⬀ 44

Westmore Rd (South leg)

⇩		⇧	
53	116	63	16.3%
			711

Westmore Rd

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 27 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**27**

Black Mountain Rd (North leg)

75%		25%	
1684	2249	565	8.1%
⇩		⇧	27,659

Southbound: 504 ⬃ | 675 ⇩ | 505 ⬂

Westbound: 108 ⬁ | 2210 ⇦ | 147 ⬃

Eastbound: 225 ⬀ | 1504 ⇨ | 150 ⬂

Northbound: 190 ⬁ | 232 ⇧ | 97 ⬀

Total Entering Volume: **6547**

Mira Mesa Blvd (West leg)

61%	2904 ⇦
	4783
39%	1879 ⇨
7.9%	
60,335	

Mira Mesa Blvd (East leg)

⇦ 2465	54%
4571	
⇨ 2106	46%
6.5%	
70,632	

Black Mountain Rd (South leg)

⇩		⇧	
972	1491	519	8.1%
65%		35%	18,301

Black Mountain Rd

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Mira Mesa Blvd**

Black Mountain Rd (North leg)

1809	2405	596	8.1%
⇩		⇧	29,460

Southbound: 208 ⬃ | 1211 ⇩ | 391 ⬂

Westbound: 85 ⬁ | 1469 ⇦ | 433 ⬃

Eastbound: 93 ⬀ | 984 ⇨ | 231 ⬂

Northbound: 308 ⬁ | 418 ⇧ | 292 ⬀

Total Entering Volume: **6123**

Mira Mesa Blvd (West leg)

1984 ⇦
3291
1307 ⇨
7.9%
41,589

Mira Mesa Blvd (East leg)

⇦ 1987
3654
⇨ 1667
6.5%
56,411

Black Mountain Rd (South leg)

⇩		⇧	
1875	2894	1019	8.1%
			35,618

Black Mountain Rd

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 27 PM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **Black Mountain Rd**
E/W Street: **Mira Mesa Blvd**
Intersection #: **27**

Black Mountain Rd (North Leg)

45%		55%	
1039	2334	1295	8.4%
			27,659

Southbound movements: 305 | 358 | 376

Mira Mesa Blvd (West Leg)

43%	1754
	4036
57%	2282
6.7%	
60,335	

Eastbound movements: 446 / 1721 / 115

Total Entering Volume: **6018**

Mira Mesa Blvd (East Leg)

Westbound movements: 232 / 1272 / 206

1710	43%
4000	
2290	57%
5.7%	
70,632	

Northbound movements: 177 | 617 | 193

Black Mountain Rd (South Leg)

679	1666	987	9.1%
41%		59%	18,301

Black Mountain Rd

N

Scenario: **Future Year 2035 - Recommended Network**
N/S Street: **Black Mountain Rd**
E/W Street: **Mira Mesa Blvd**

Black Mountain Rd (North Leg)

1085	2492	1407	8.4%
			29,460

Southbound movements: 154 | 674 | 258

Mira Mesa Blvd (West Leg)

1233
2776
1543
6.7%
41,589

Eastbound movements: 206 / 1123 / 214

Total Entering Volume: **5852**

Mira Mesa Blvd (East Leg)

Westbound movements: 133 / 749 / 459

1340
3205
1865
5.7%
56,411

Northbound movements: 330 | 1068 | 484

Black Mountain Rd (South Leg)

1347	3231	1884	9.1%
			35,618

Black Mountain Rd

N

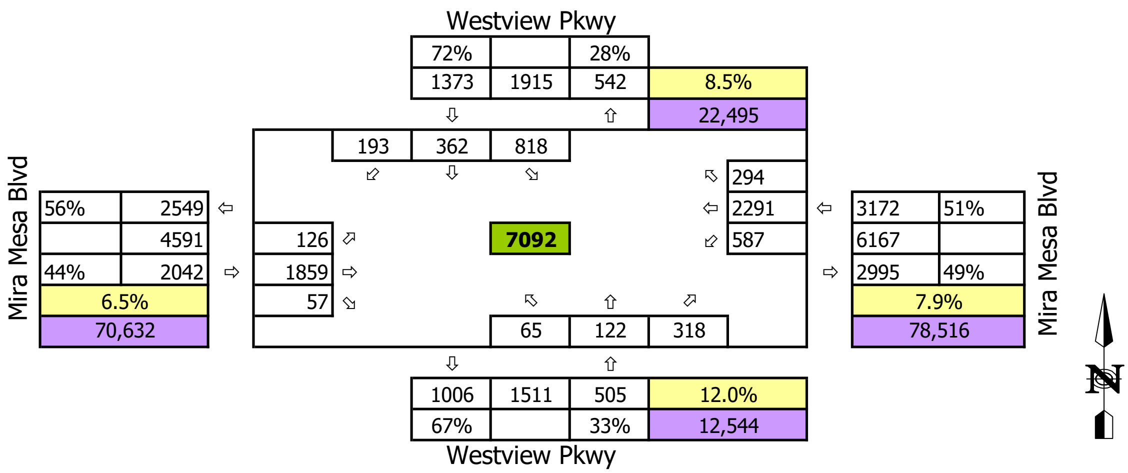
LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

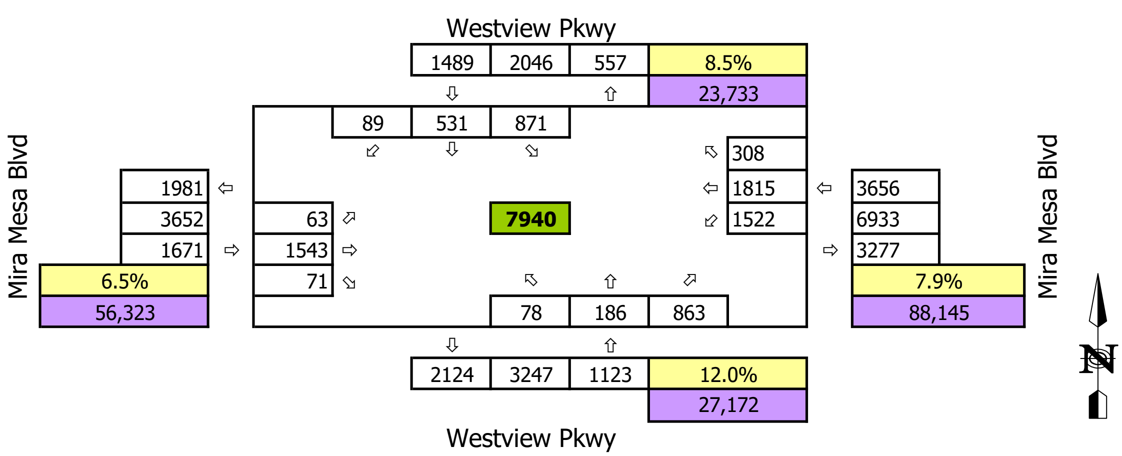
TRAFFIC CONSULTING

Int 28 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Westview Pkwy**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**28**



Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Westview Pkwy**
E/W Street:	**Mira Mesa Blvd**



LEGEND	
Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 28 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Westview Pkwy**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**28**

Westview Pkwy (North Leg)

43%		57%	
935	2154	1219	9.6%
⇩		⇧	22,495

Southbound turning movements: 120 ⬃ | 236 ⇩ | 579 ⬂

Mira Mesa Blvd (West Leg)

44%	1791	⇦
	4065	
56%	2274	⇨
5.8%		
70,632		

Eastbound turning movements: 267 ⬀ | 1938 ⇨ | 69 ⬂

Total Entering Volume: **6861**

Westbound turning movements: 633 ⬁ | 1444 ⇦ | 511 ⬃

Mira Mesa Blvd (East Leg)

⇦	2588	46%
	5623	
⇨	3035	54%
	7.2%	
	78,516	

Northbound turning movements: 227 ⬁ | 319 ⇧ | 518 ⬀

Westview Pkwy (South Leg)

⇩		⇧	
816	1880	1064	15.0%
43%		57%	12,544

Westview Pkwy

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Westview Pkwy**
E/W Street:	**Mira Mesa Blvd**

Westview Pkwy (North Leg)

979	2276	1297	9.6%
⇩		⇧	23,733

Southbound turning movements: 61 ⬃ | 401 ⇩ | 517 ⬂

Mira Mesa Blvd (West Leg)

1439	⇦
3239	
1800	⇨
5.8%	
56,323	

Eastbound turning movements: 149 ⬀ | 1543 ⇨ | 109 ⬂

Total Entering Volume: **7950**

Westbound turning movements: 568 ⬁ | 1044 ⇦ | 1270 ⬃

Mira Mesa Blvd (East Leg)

⇦	2883
	6317
⇨	3434
	7.2%
	88,145

Northbound turning movements: 335 ⬁ | 580 ⇧ | 1373 ⬀

Westview Pkwy (South Leg)

⇩		⇧	
1780	4068	2288	15.0%
			27,172

Westview Pkwy

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 29 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**29**

I-15 SB Ramps (North)

66%		34%	
1694	2552	858	9.0%
⇩		⇧	28,356

Southbound: 1411 | 0 | 283

Westbound: 858 | 1849 | 0

Mira Mesa Blvd (West)

52%	3260 ⇦
	6257
48%	2997 ⇨
8.0%	
78,516	

Eastbound: 0 | 1408 | 1589

Total Entering Volume: **7398**

Northbound: 0 | 0 | 0

Mira Mesa Blvd (East)

⇦ 2707	62%
4398	
⇨ 1691	38%
5.6%	
78,516	

I-15 SB Ramps (South)

⇩		⇧	
1589	1589	0	9.0%
100%		0%	17,656

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Mira Mesa Blvd**

I-15 SB Ramps (North)

1443	2157	714	9.0%
⇩		⇧	23,874

Southbound: 1565 | 0 | 25

Westbound: 714 | 2049 | 0

Mira Mesa Blvd (West)

3614 ⇦
7021
3407 ⇨
8.0%
88,145

Eastbound: 0 | 1497 | 1498

Total Entering Volume: **7348**

Northbound: 0 | 0 | 0

Mira Mesa Blvd (East)

⇦ 2498
4020
⇨ 1522
5.6%
71,546

I-15 SB Ramps (South)

⇩		⇧	
1498	1498	0	9.0%
			16,842

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 29 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**29**

North leg – I-15 SB Ramps

81%		19%	
1635	2009	374	7.1%
⇩		⇧	28,356

Southbound turning movements: 1247 (right) | 0 (through) | 388 (left)

West leg – Mira Mesa Blvd

47%	2667	⇦	
	5697		
53%	3030	⇨	
7.3%			
78,516			

Eastbound turning movements: 0 (left) | 2192 (through) | 838 (right)

Total Entering Volume: **6459**

East leg – Mira Mesa Blvd

Westbound turning movements: 374 (right) | 1420 (through) | 0 (left)

⇦	1794	41%	
	4374		
⇨	2580	59%	
	5.6%		
	78,516		

Northbound turning movements: 0 (left) | 0 (through) | 0 (right)

South leg – I-15 SB Ramps

⇩		⇧	
838	838	0	4.7%
100%		0%	17,656

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Mira Mesa Blvd**

North leg – I-15 SB Ramps

1381	1694	313	7.1%
⇩		⇧	23,874

Southbound turning movements: 1481 (right) | 0 (through) | 38 (left)

West leg – Mira Mesa Blvd

2984	⇦	
6398		
3414	⇨	
7.3%		
88,145		

Eastbound turning movements: 0 (left) | 2305 (through) | 796 (right)

Total Entering Volume: **6436**

East leg – Mira Mesa Blvd

Westbound turning movements: 313 (right) | 1503 (through) | 0 (left)

⇦	1641
	3984
⇨	2343
	5.6%
	71,546

Northbound turning movements: 0 (left) | 0 (through) | 0 (right)

South leg – I-15 SB Ramps

⇩		⇧	
796	796	0	4.7%
			16,842

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 30 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**30**

I-15 NB Ramps

0%		100%	
0	290	290	9.0%
⇩		⇧	3,222

Southbound: 0 ⬃ | 0 ⇩ | 0 ⬂

Westbound: ⬁ 290 | ⇦ 1695 | ⬃ 0

Eastbound: 0 ⬀ | 826 ⇨ | 874 ⬂

Northbound: ⬁ 1009 | ⇧ 0 | ⬀ 414

Total Entering Volume: **5108**

Mira Mesa Blvd (West)

61%	2704	⇦
	4404	
39%	1700	⇨
5.6%		
78,516		

Mira Mesa Blvd (East)

⇦	1985	62%
	3225	
⇨	1240	38%
	9.9%	
	32,450	

⇩		⇧	
874	2297	1423	9.0%
38%		62%	25,522

I-15 NB Ramps

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Mira Mesa Blvd**

I-15 NB Ramps

1	451	450	9.0%
⇩		⇧	4,772

Southbound: 0 ⬃ | 0 ⇩ | 0 ⬂

Westbound: ⬁ 450 | ⇦ 2402 | ⬃ 0

Eastbound: 0 ⬀ | 476 ⇨ | 1142 ⬂

Northbound: ⬁ 171 | ⇧ 0 | ⬀ 1614

Total Entering Volume: **6255**

Mira Mesa Blvd (West)

2573	⇦
4056	
1483	⇨
5.6%	
71,474	

Mira Mesa Blvd (East)

⇦	3068
	5158
⇨	2090
	9.9%
	52,324

⇩		⇧	
1142	2845	1703	9.0%
			31,873

I-15 NB Ramps

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 30 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**30**

I-15 NB Ramps (north leg)

0%		100%	
0	549	549	17.0%
⇩		⇧	3,222

Southbound approach: 0 ⇙, 0 ⇩, 0 ⇘

Mira Mesa Blvd (west leg)

41%	1808 ⇦
	4368
59%	2560 ⇨
5.6%	
78,516	

Eastbound approach: 0 ⬀, 1374 ⇨, 1186 ⇘

Total Entering Volume: **5268**

Westbound approach: 547 ⇖, 1027 ⇦, 0 ⇙

Mira Mesa Blvd (east leg)

⇦ 1574	48%
3299	
⇨ 1725	52%
10.2%	
32,450	

Northbound approach: 781 ⇖, 2 ⇧, 351 ⬀

I-15 NB Ramps (south leg)

⇩		⇧	
1186	2320	1134	9.1%
51%		49%	25,522

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Mira Mesa Blvd**

I-15 NB Ramps (north leg)

1	788	787	17.0%
⇩		⇧	4,772

Southbound approach: 0 ⇙, 0 ⇩, 0 ⇘

Mira Mesa Blvd (west leg)

1592 ⇦
4003
2411 ⇨
5.6%
71,474

Eastbound approach: 0 ⬀, 1203 ⇨, 1433 ⇘

Total Entering Volume: **6501**

Westbound approach: 785 ⇖, 1510 ⇦, 0 ⇙

Mira Mesa Blvd (east leg)

⇦ 2626
5317
⇨ 2691
10.2%
52,324

Northbound approach: 82 ⇖, 0 ⇧, 1488 ⬀

I-15 NB Ramps (south leg)

⇩		⇧	
1433	2898	1465	9.1%
			31,873

N

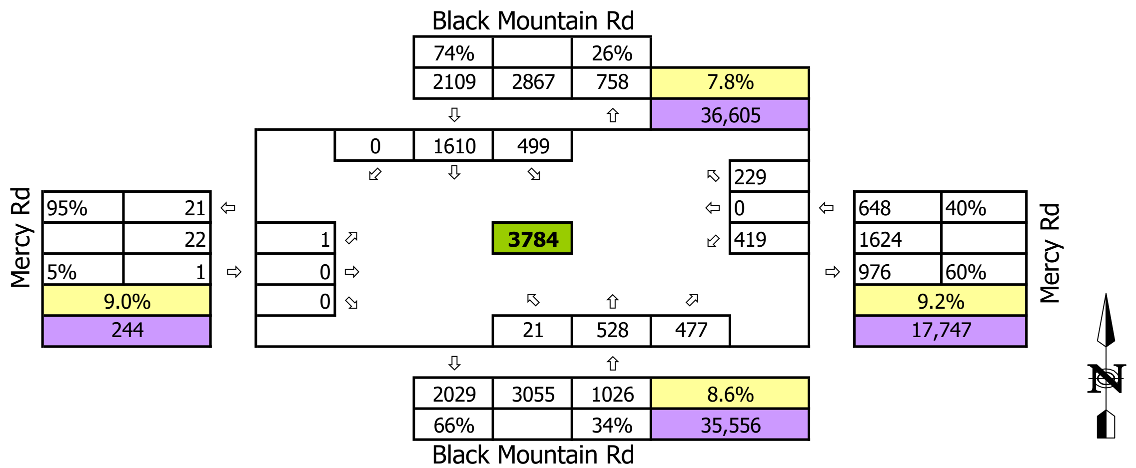
LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

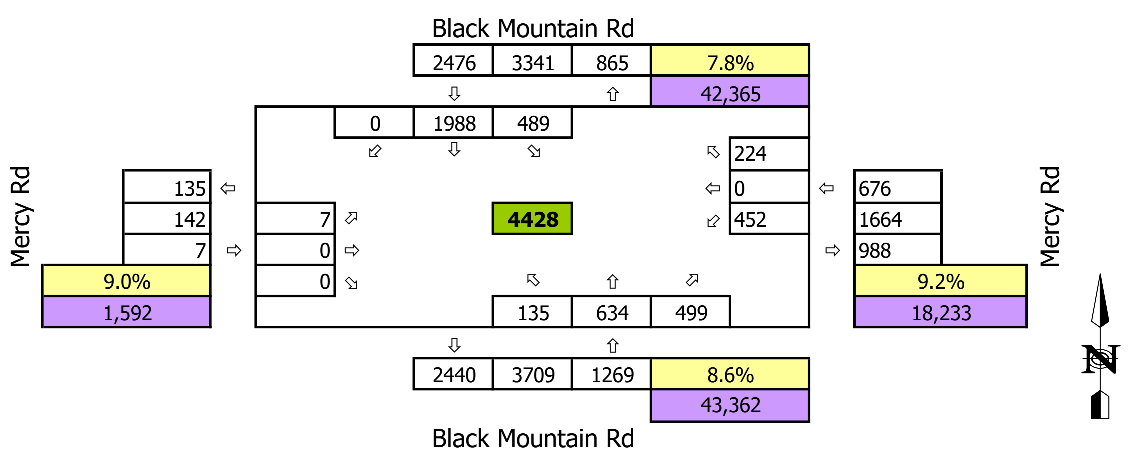
MIZUTA TRAFFIC CONSULTING

Int 31 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Mercy Rd**
Intersection #:	**31**



Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Mercy Rd**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 31 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Mercy Rd**
Intersection #:	**31**

Black Mountain Rd

37%		63%	
1072	2859	1787	7.8%
⇩		⇧	36,605

Southbound: 0 ⬃ | 796 ⇩ | 276 ⬂

Westbound: ⬁ 412 | ⇦ 2 | ⬃ 493

Mercy Rd (West)

83%	20	⇦
	24	
17%	4	⇨
9.8%		
244		

Eastbound: 0 ⬀ | 3 ⇨ | 1 ⬂

3969

Mercy Rd (East)

⇦	907	51%
	1779	
⇨	872	49%
	10.0%	
	17,747	

Northbound: ⬁ 18 | ⇧ 1375 | ⬀ 593

⇩		⇧	
1290	3276	1986	9.2%
39%		61%	35,556

Black Mountain Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Mercy Rd**

Black Mountain Rd

1247	3305	2058	7.8%
⇩		⇧	42,365

Southbound: 0 ⬃ | 1004 ⇩ | 244 ⬂

Westbound: ⬁ 374 | ⇦ 11 | ⬃ 552

Mercy Rd (West)

130	⇦
156	
26	⇨
9.8%	
1,592	

Eastbound: 0 ⬀ | 18 ⇨ | 9 ⬂

4644

Mercy Rd (East)

⇦	937
	1828
⇨	891
	10.0%
	18,233

Northbound: ⬁ 119 | ⇧ 1684 | ⬀ 629

⇩		⇧	
1565	3999	2434	9.2%
			43,362

Black Mountain Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 32 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Miramar Rd**
Intersection #:	**32**

Camino Santa Fe

51%		49%	
754	1485	731	6.9%
⇩		⇧	21,494

691 2 61

Miramar Rd (West)

64%	2984 ⇦
	4690
36%	1706 ⇨
7.1%	
66,374	

Eastbound: 626 ⬀, 1061 ⇨, 19 ⬂

4885

Westbound: 98 ⬉, 2278 ⇦, 19 ⬃

Miramar Rd (East)

⇦ 2395	68%
3525	
⇨ 1130	32%
6.0%	
58,884	

Northbound: 15 7 8

⇩		⇧	
40	70	30	9.0%
57%		43%	778

Camino Santa Fe

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Miramar Rd**

Camino Santa Fe

1442	2668	1226	6.9%
⇩		⇧	38,420

1515 4 12

Miramar Rd (West)

3137 ⇦
5182
2045 ⇨
7.1%
74,362

Eastbound: 1202 ⬀, 609 ⇨, 52 ⬂

5049

Westbound: 17 ⬉, 1575 ⇦, 6 ⬃

Miramar Rd (East)

⇦ 1508
2132
⇨ 624
6.0%
34,653

Northbound: 47 6 4

⇩		⇧	
62	116	54	9.0%
			1,293

Camino Santa Fe

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 32 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Miramar Rd**
Intersection #:	**32**

Camino Santa Fe (North)

55%		45%		
1020	1865	845	8.7%	
⇩		⇧	21,494	

Southbound turning movements: 906 (right) | 3 (through) | 111 (left)

Westbound turning movements (Miramar Rd East): 68 (right) | 1343 (through) | 33 (left)

Eastbound turning movements (Miramar Rd West): 746 (left) | 1988 (through) | 56 (right)

Northbound turning movements: 47 (left) | 31 (through) | 7 (right)

Total Entering Volume: **5339**

Miramar Rd (West)

45%	2296	⇦
	5086	
55%	2790	⇨
7.7%		
66,374		

Miramar Rd (East)

⇦	1444	41%
	3550	
⇨	2106	59%
	6.0%	
	58,884	

Camino Santa Fe (South)

⇩		⇧	
92	177	85	22.8%
52%		48%	778

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Miramar Rd**

Camino Santa Fe (North)

1751	3326	1575	8.7%
⇩		⇧	38,420

Southbound turning movements: 1776 (right) | 9 (through) | 40 (left)

Westbound turning movements (Miramar Rd East): 25 (right) | 808 (through) | 16 (left)

Eastbound turning movements (Miramar Rd West): 1513 (left) | 1247 (through) | 134 (right)

Northbound turning movements: 97 (left) | 37 (through) | 5 (right)

Total Entering Volume: **5707**

Miramar Rd (West)

2681	⇦
5685	
3004	⇨
7.7%	
74,362	

Miramar Rd (East)

⇦	817
	2109
⇨	1292
	6.0%
	34,653

Camino Santa Fe (South)

⇩		⇧	
159	294	135	22.8%
			1,293

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 33 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Commerce Ave**
E/W Street:	**Miramar Rd**
Intersection #:	**33**

Commerce Ave (North leg)

27%		73%	
89	328	239	9.0%
⇩		⇧	3,644

Southbound approach: 50 ⇙ 15 ⇩ 24 ⇘

Miramar Rd (West leg)

69%	2483	⇦
	3617	
31%	1134	⇨
6.1%		
58,884		

Eastbound approach: 107 ⬀ / 963 ⇨ / 64 ⇘

Total Entering Volume: **3906**

Westbound approach: 116 ⇖ / 2357 ⇦ / 77 ⇙

Miramar Rd (East leg)

⇦	2550	71%
	3578	
⇨	1028	29%
	6.1%	
	58,884	

Northbound approach: 76 ⇖ 16 ⇧ 41 ⬀

Commerce Ave (South leg)

⇩		⇧	
156	289	133	9.0%
54%		46%	3,211

Commerce Ave

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Commerce Ave**
E/W Street:	**Miramar Rd**

Commerce Ave (North leg)

77	272	195	9.0%
⇩		⇧	3,051

Southbound approach: 33 ⇙ 31 ⇩ 13 ⇘

Miramar Rd (West leg)

1470	⇦
2178	
708	⇨
6.1%	
35,783	

Eastbound approach: 86 ⬀ / 487 ⇨ / 135 ⇘

Total Entering Volume: **2516**

Westbound approach: 70 ⇖ / 1278 ⇦ / 123 ⇙

Miramar Rd (East leg)

⇦	1470
	2032
⇨	562
	6.1%
	33,046

Northbound approach: 159 ⇖ 39 ⇧ 62 ⬀

Commerce Ave (South leg)

⇩		⇧	
288	548	260	9.0%
			6,103

Commerce Ave

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 33 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Commerce Ave**
E/W Street:	**Miramar Rd**
Intersection #:	**33**

Commerce Ave

54%		46%	
176	328	152	9.0%
⇩		⇧	3,644
89	5	82	

Miramar Rd (west)

39%	1358	⇦		
	3454		95	⬀
61%	2096	⇨	1982	⇨
5.9%			19	⬂
58,884				

Total Entering Volume: **3677**

Miramar Rd (east)

⬉	47			
⇦	1219	⇦	1296	38%
⬃	30		3409	
		⇨	2113	62%
			5.8%	
			58,884	

Commerce Ave

50	10	49	
⇩		⇧	
54	163	109	5.1%
33%		67%	3,211

Commerce Ave

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Commerce Ave**
E/W Street:	**Miramar Rd**

Commerce Ave

144	275	131	9.0%
⇩		⇧	3,051
85	14	47	

Miramar Rd (west)

846	⇦		
2089		82	⬀
1243	⇨	1102	⇨
5.9%		49	⬂
35,783			

Total Entering Volume: **2299**

Miramar Rd (east)

⬉	27		
⇦	647	⇦	710
⬃	43		1926
		⇨	1216
			5.8%
			33,046

Commerce Ave

114	22	67	
⇩		⇧	
106	308	202	5.1%
			6,103

Commerce Ave

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 34 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Production Ave**
E/W Street:	**Miramar Rd**
Intersection #:	**34**

Production Ave

35%		65%	
101	285	184	12.1%
⇩		⇧	2,353

68	0	33

Miramar Rd (West)

71%	2592 ⇦
	3632
29%	1040 ⇨
6.2%	
58,884	

Eastbound approach: 77, 963, 0

3772

Westbound approach: 107, 2524, 0

Miramar Rd (East)

⇦ 2631	73%
3627	
⇨ 996	27%
6.7%	
54,165	

Northbound approach: 0, 0, 0

⇩		⇧	
0	0	0	0.0%
0%		0%	0

Production Ave

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Production Ave**
E/W Street:	**Miramar Rd**

Production Ave

109	309	200	12.1%
⇩		⇧	2,547

52	0	58

Miramar Rd (West)

1460 ⇦
2041
581 ⇨
6.2%
33,046

Eastbound approach: 54, 541, 0

2259

Westbound approach: 146, 1408, 0

Miramar Rd (East)

⇦ 1569
2168
⇨ 599
6.7%
32,438

Northbound approach: 0, 0, 0

⇩		⇧	
0	0	0	0.0%
			0

Production Ave

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 34 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Production Ave**
E/W Street:	**Miramar Rd**
Intersection #:	**34**

Production Ave (north leg)

63%		37%	
132	209	77	8.9%
⇩		⇧	2,353

Southbound: 80 | 0 | 52

Westbound: 30 | 1224 | 0

Total Entering Volume: **3499**

Eastbound: 47 | 2066 | 0

Northbound: 0 | 0 | 0

Miramar Rd (west leg)

38%	1304 ⇦
	3417
62%	2113 ⇨
5.8%	
58,884	

Miramar Rd (east leg)

⇦ 1254	37%
3372	
⇨ 2118	63%
6.2%	
54,165	

Production Ave (south leg)

⇩		⇧	
0	0	0	0.0%
0%		0%	0

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Production Ave**
E/W Street:	**Miramar Rd**

Production Ave (north leg)

142	225	83	8.9%
⇩		⇧	2,547

Southbound: 53 | 0 | 89

Westbound: 51 | 678 | 0

Total Entering Volume: **2081**

Eastbound: 32 | 1178 | 0

Northbound: 0 | 0 | 0

Miramar Rd (west leg)

731 ⇦
1918
1187 ⇨
5.8%
33,046

Miramar Rd (east leg)

⇦ 752
2019
⇨ 1267
6.2%
32,438

Production Ave (south leg)

⇩		⇧	
0	0	0	0.0%
			0

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 35 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Distribution Ave**
E/W Street:	**Miramar Rd**
Intersection #:	**35**

Distribution Ave

43%		57%	
111	258	147	8.8%
⇩		⇧	2,931
75	0	36	

Miramar Rd (west)

72%	2646	⇦
	3651	
28%	1005	⇨
6.7%		
54,165		

Eastbound approach: 54 ⬀, 951 ⇨, 0 ⬂

Total Entering Volume: **3780**

Westbound approach: 93 ⬉, 2571 ⇦, 0 ⬃

Miramar Rd (east)

⇦	2664	73%
	3651	
⇨	987	27%
	7.0%	
	51,816	

Northbound approach: 0, 0, 0

⇩		⇧	
0	0	0	0.0%
0%		0%	0

Distribution Ave

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Distribution Ave**
E/W Street:	**Miramar Rd**

Distribution Ave

85	200	115	8.8%
⇩		⇧	2,284
49	0	37	

Miramar Rd (west)

1591	⇦
2191	
600	⇨
6.7%	
32,438	

Eastbound approach: 38 ⬀, 571 ⇨, 0 ⬂

Total Entering Volume: **2314**

Westbound approach: 77 ⬉, 1542 ⇦, 0 ⬃

Miramar Rd (east)

⇦	1629
	2237
⇨	608
	7.0%
	31,824

Northbound approach: 0, 0, 0

⇩		⇧	
0	0	0	0.0%
			0

Distribution Ave

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 35 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Distribution Ave**
E/W Street:	**Miramar Rd**
Intersection #:	**35**

Distribution Ave (North Leg)

54%		46%	
187	346	159	11.8%
⇩		⇧	2,931

Southbound: 106 (right) / 0 (through) / 81 (left)

Miramar Rd (West Leg)

37%	1263	⇦
	3393	
63%	2130	⇨
6.3%		
54,165		

Eastbound: 83 (left) / 2047 (through) / 0 (right)

Total Entering Volume: **3550**

Westbound: 76 (right) / 1157 (through) / 0 (left)

Miramar Rd (East Leg)

1233	37%
3361	
2128	63%
6.5%	
51,816	

Northbound: 0 (left) / 0 (through) / 0 (right)

Distribution Ave (South Leg)

⇩		⇧	
0	0	0	0.0%
0%		0%	0

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Distribution Ave**
E/W Street:	**Miramar Rd**

Distribution Ave (North Leg)

148	272	124	11.8%
⇩		⇧	2,284

Southbound: 72 (right) / 0 (through) / 76 (left)

Miramar Rd (West Leg)

755	⇦
2033	
1278	⇨
6.3%	
32,438	

Eastbound: 57 (left) / 1229 (through) / 0 (right)

Total Entering Volume: **2184**

Westbound: 67 (right) / 683 (through) / 0 (left)

Miramar Rd (East Leg)

758
2063
1305
6.5%
31,824

Northbound: 0 (left) / 0 (through) / 0 (right)

Distribution Ave (South Leg)

⇩		⇧	
0	0	0	0.0%
			0

N

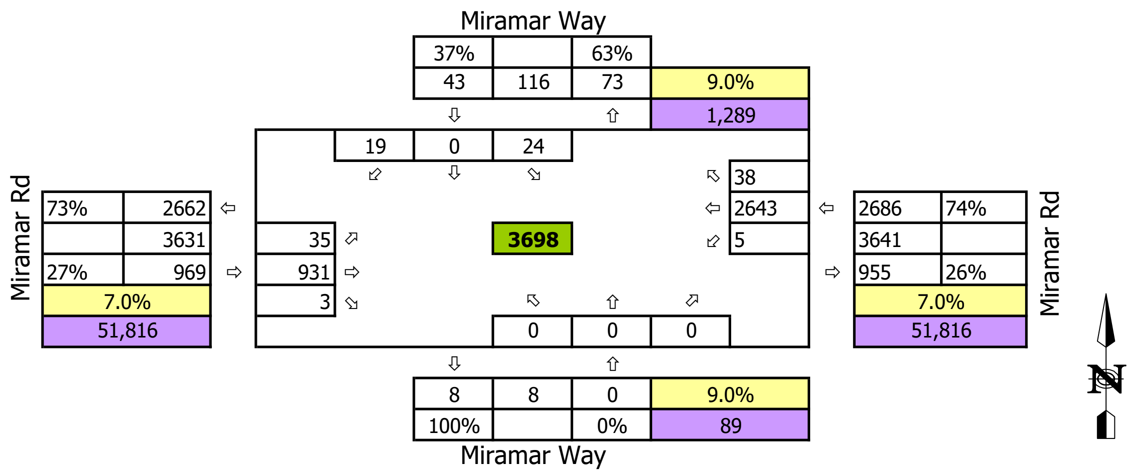
LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

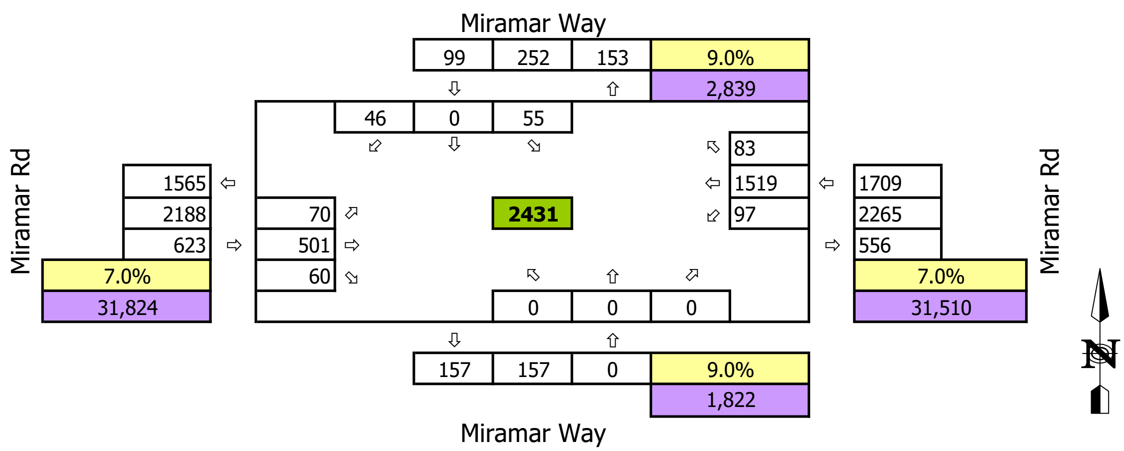
MIZUTA
TRAFFIC CONSULTING

Int 36 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Miramar Way**
E/W Street:	**Miramar Rd**
Intersection #:	**36**



Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Miramar Way**
E/W Street:	**Miramar Rd**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 36 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Miramar Way**
E/W Street:	**Miramar Rd**
Intersection #:	**36**

Miramar Way (North Leg)

44%		56%	
57	130	73	10.1%
⇩		⇧	1,289

Southbound movements: 10 ⇙, 0 ⇩, 47 ⇘

Miramar Rd (West Leg)

36%	1198	⇦
	3305	
64%	2107	⇨
6.4%		
51,816		

Eastbound movements: 36 ⬀, 1997 ⇨, 74 ⇘

3408

Westbound movements: 37 ⇖, 1136 ⇦, 15 ⇙

Miramar Rd (East Leg)

⇦	1188	37%
	3236	
⇨	2048	63%
	6.2%	
	51,816	

Northbound movements: 52 ⇖, 0 ⇧, 4 ⬀

Miramar Way (South Leg)

⇩		⇧	
89	145	56	162.9%
61%		39%	89

Miramar Way

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Miramar Way**
E/W Street:	**Miramar Rd**

Miramar Way (North Leg)

139	285	146	10.1%
⇩		⇧	2,839

Southbound movements: 7 ⇙, 0 ⇩, 131 ⇘

Miramar Rd (West Leg)

673	⇦
2100	
1427	⇨
6.4%	
31,824	

Eastbound movements: 37 ⬀, 372 ⇨, 1025 ⇘

3626

Westbound movements: 109 ⇖, 51 ⇦, 642 ⇙

Miramar Rd (East Leg)

⇦	796
	1936
⇨	1140
	6.2%
	31,510

Northbound movements: 615 ⇖, 0 ⇧, 637 ⬀

Miramar Way (South Leg)

⇩		⇧	
1667	2931	1264	162.9%
			1,822

Miramar Way

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 37 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Carroll Rd**
E/W Street:	**Miramar Rd**
Intersection #:	**37**

Carroll Rd (North Leg)

24%		76%	
248	1016	768	10.4%
⇩		⇧	9,755

Southbound approach: 108 ⬃ | 0 ⇩ | 140 ⬂

Westbound approach: 606 ⬁ | 2573 ⇦ | 1 ⬃

Eastbound approach: 162 ⬀ | 764 ⇨ | 0 ⬂

Northbound approach: 0 ⬁ | 0 ⇧ | 0 ⬀

Total Entering Volume: **4354**

Miramar Rd (West Leg)

74%	2681	⇦
	3607	
26%	926	⇨
7.0%		
51,816		

Miramar Rd (East Leg)

⇦	3180	78%
	4084	
⇨	904	22%
	8.0%	
	50,944	

Carroll Rd (South Leg)

⇩		⇧	
1	1	0	9.1%
100%		0%	11

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Carroll Rd**
E/W Street:	**Miramar Rd**

Carroll Rd (North Leg)

188	824	636	10.4%
⇩		⇧	7,724

Southbound approach: 23 ⬃ | 0 ⇩ | 177 ⬂

Westbound approach: 608 ⬁ | 1701 ⇦ | 1 ⬃

Eastbound approach: 28 ⬀ | 556 ⇨ | 0 ⬂

Northbound approach: 0 ⬁ | 0 ⇧ | 0 ⬀

Total Entering Volume: **3094**

Miramar Rd (West Leg)

1724	⇦
2270	
546	⇨
7.0%	
31,871	

Miramar Rd (East Leg)

⇦	2360
	3093
⇨	733
	8.0%
	39,464

Carroll Rd (South Leg)

⇩		⇧	
1	1	0	9.1%
			11

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 37 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Carroll Rd**
E/W Street:	**Miramar Rd**
Intersection #:	**37**

Carroll Rd

75%		25%	
652	867	215	8.9%
⇩		⇧	9,755

Southbound		
165	0	487

Westbound	
⇖	130
⇦	1007
⇙	4

Eastbound	
85	⇗
1863	⇨
0	⇘

3741

Northbound		
0	0	0

Miramar Rd (West)

38%	1172	⇦
	3120	
62%	1948	⇨
6.0%		
51,816		

Miramar Rd (East)

⇦	1141	33%
	3491	
⇨	2350	67%
	6.9%	
	50,944	

Carroll Rd

⇩		⇧	
4	4	0	36.4%
100%		0%	11

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Carroll Rd**
E/W Street:	**Miramar Rd**

Carroll Rd

527	693	166	8.9%
⇩		⇧	7,724

Southbound		
24	0	523

Westbound	
⇖	150
⇦	681
⇙	4

Eastbound	
16	⇗
1258	⇨
0	⇘

2656

Northbound		
0	0	0

Miramar Rd (West)

705	⇦
1930	
1225	⇨
6.0%	
31,871	

Miramar Rd (East)

⇦	904
	2685
⇨	1781
	6.9%
	39,464

Carroll Rd

⇩		⇧	
4	4	0	36.4%
			11

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 38 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Alesmith Ct**
E/W Street:	**Miramar Rd**
Intersection #:	**38**

Alesmith Ct (North Leg)

30%		70%	
19	64	45	9.0%
⇩		⇧	711

Southbound approach: 8 ⬃ | 0 ⇩ | 11 ⬂

Miramar Rd (West Leg)

78%	3282	⇦
	4193	
22%	911	⇨
8.2%		
50,944		

Eastbound approach: 18 ⬀ | 893 ⇨ | 0 ⬂

Total Entering Volume: 4231

Westbound approach: 27 ⬁ | 3274 ⇦ | 0 ⬃

Miramar Rd (East Leg)

⇦	3301	79%
	4205	
⇨	904	21%
	8.3%	
	50,944	

Northbound approach: 0 ⬁ | 0 ⇧ | 0 ⬀

Alesmith Ct (South Leg)

⇩		⇧	
0	0	0	0.0%
0%		0%	0

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Alesmith Ct**
E/W Street:	**Miramar Rd**

Alesmith Ct (North Leg)

19	64	45	9.0%
⇩		⇧	711

Southbound approach: 8 ⬃ | 0 ⇩ | 11 ⬂

Miramar Rd (West Leg)

2794	⇦
3570	
776	⇨
8.2%	
43,399	

Eastbound approach: 18 ⬀ | 759 ⇨ | 0 ⬂

Total Entering Volume: 3609

Westbound approach: 27 ⬁ | 2786 ⇦ | 0 ⬃

Miramar Rd (East Leg)

⇦	2814
	3584
⇨	770
	8.3%
	43,399

Northbound approach: 0 ⬁ | 0 ⇧ | 0 ⬀

Alesmith Ct (South Leg)

⇩		⇧	
0	0	0	0.0%
			0

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 38 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Alesmith Ct**
E/W Street:	**Miramar Rd**
Intersection #:	**38**

Alesmith Ct

61%		39%	
46	75	29	10.5%
⇩		⇧	711

Southbound approach: 24 ⇙ | 0 ⇩ | 22 ⇘

Westbound approach: ⇖ 17 | ⇦ 1078 | ⇙ 1

Eastbound approach: 12 ⬀ | 2379 ⇨ | 0 ⇘

Northbound approach: ⇖ 0 | ⇧ 0 | ⬀ 0

Total Entering Volume: **3533**

Miramar Rd (west)

32%	1102 ⇦
	3493
68%	2391 ⇨
6.9%	
50,944	

Miramar Rd (east)

⇦ 1096	31%
3497	
⇨ 2401	69%
6.9%	
50,944	

⇩		⇧	
1	1	0	0.0%
100%		0%	0

Alesmith Ct

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Alesmith Ct**
E/W Street:	**Miramar Rd**

Alesmith Ct

46	75	29	10.5%
⇩		⇧	711

Southbound approach: 24 ⇙ | 0 ⇩ | 22 ⇘

Westbound approach: ⇖ 17 | ⇦ 916 | ⇙ 0

Eastbound approach: 12 ⬀ | 2024 ⇨ | 0 ⇘

Northbound approach: ⇖ 0 | ⇧ 0 | ⬀ 0

Total Entering Volume: **3015**

Miramar Rd (west)

940 ⇦
2976
2036 ⇨
6.9%
43,399

Miramar Rd (east)

⇦ 933
2979
⇨ 2046
6.9%
43,399

⇩		⇧	
0	0	0	0.0%
			0

Alesmith Ct

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 39 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Dowdy Dr**
E/W Street:	**Miramar Rd**
Intersection #:	**39**

Dowdy Dr

34%		66%	
221	644	423	9.0%
⇩		⇧	7,156

Southbound approach: 114 | 0 | 107

Westbound approach: 328 | 3229 | 2

Eastbound approach: 95 | 768 | 0

Northbound approach: 0 | 0 | 0

Total Entering Volume: **4643**

Miramar Rd (west leg)

79%	3343	⇦
	4206	
21%	863	⇨
8.3%		
50,944		

Miramar Rd (east leg)

⇦	3559	80%
	4434	
⇨	875	20%
	8.7%	
	50,944	

⇩		⇧	
2	2	0	9.1%
100%		0%	22

Dowdy Dr

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Dowdy Dr**
E/W Street:	**Miramar Rd**

Dowdy Dr

109	322	213	9.0%
⇩		⇧	3,571

Southbound approach: 55 | 0 | 56

Westbound approach: 170 | 2824 | 2

Eastbound approach: 43 | 700 | 0

Northbound approach: 0 | 0 | 0

Total Entering Volume: **3850**

Miramar Rd (west leg)

2879	⇦
3606	
727	⇨
8.3%	
43,399	

Miramar Rd (east leg)

⇦	3014
	3770
⇨	756
	8.7%
	43,595

⇩		⇧	
2	2	0	9.1%
			22

Dowdy Dr

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 39 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Dowdy Dr**
E/W Street:	**Miramar Rd**
Intersection #:	**39**

Dowdy Dr (north leg)

67%		33%	
306	460	154	6.4%
⇩		⇧	7,156

Southbound movements: 119 | 0 | 187

Westbound movements: 55 | 955 | 4

Eastbound movements: 99 | 2328 | 0

Northbound movements: 0 | 0 | 0

Total Entering Volume: **3747**

Miramar Rd (west leg)

31%	1074 ⇦
	3501
69%	2427 ⇨
6.9%	
50,944	

Miramar Rd (east leg)

⇦ 1014	29%
3529	
⇨ 2515	71%
6.9%	
50,944	

Dowdy Dr (south leg)

⇩		⇧	
4	4	0	18.2%
100%		0%	22

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Dowdy Dr**
E/W Street:	**Miramar Rd**

Dowdy Dr (north leg)

155	231	76	6.4%
⇩		⇧	3,571

Southbound movements: 60 | 0 | 96

Westbound movements: 27 | 846 | 4

Eastbound movements: 49 | 2036 | 0

Northbound movements: 0 | 0 | 0

Total Entering Volume: **3118**

Miramar Rd (west leg)

906 ⇦
2993
2087 ⇨
6.9%
43,399

Miramar Rd (east leg)

⇦ 876
3008
⇨ 2132
6.9%
43,595

Dowdy Dr (south leg)

⇩		⇧	
4	4	0	18.2%
			22

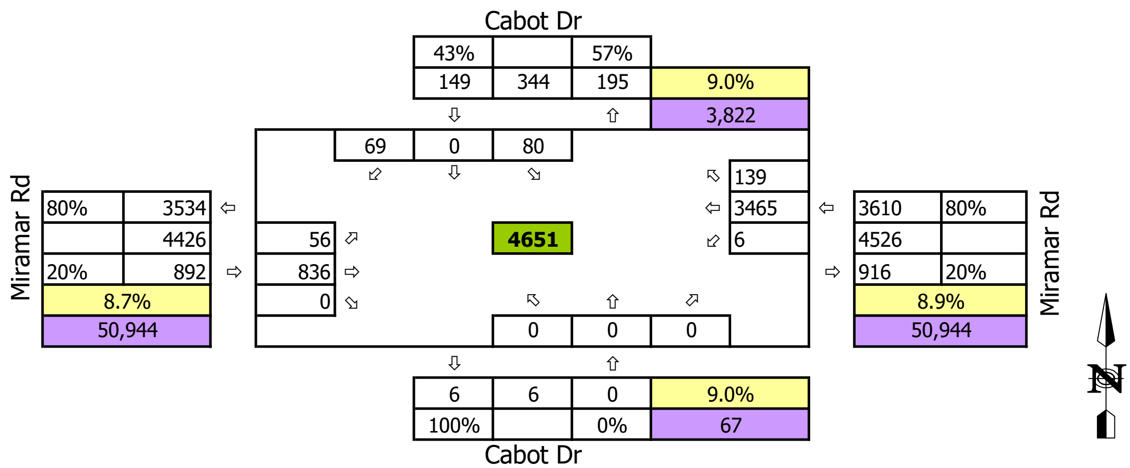
N

LEGEND

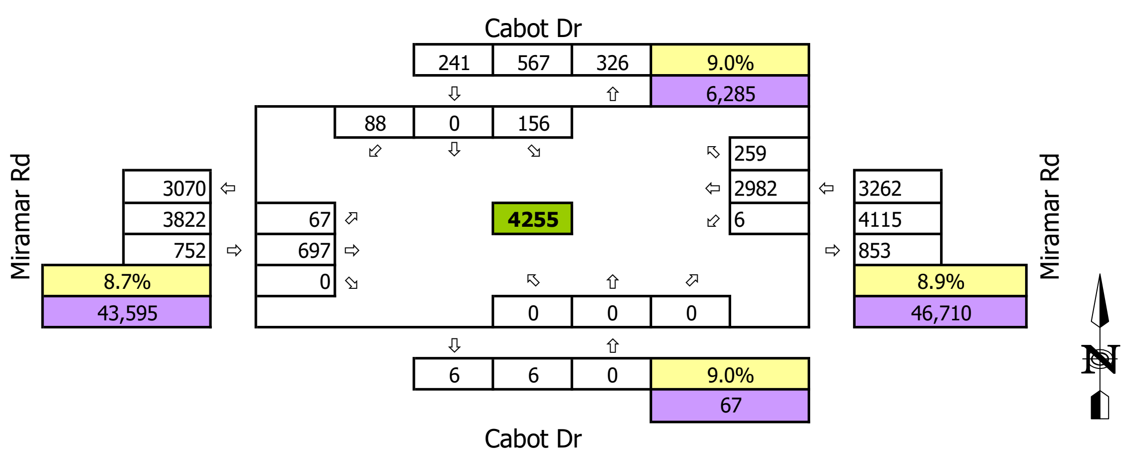
Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 40 AM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **Cabot Dr**
E/W Street: **Miramar Rd**
Intersection #: **40**



Scenario: **Future Year 2035 - Recommended Network**
N/S Street: **Cabot Dr**
E/W Street: **Miramar Rd**



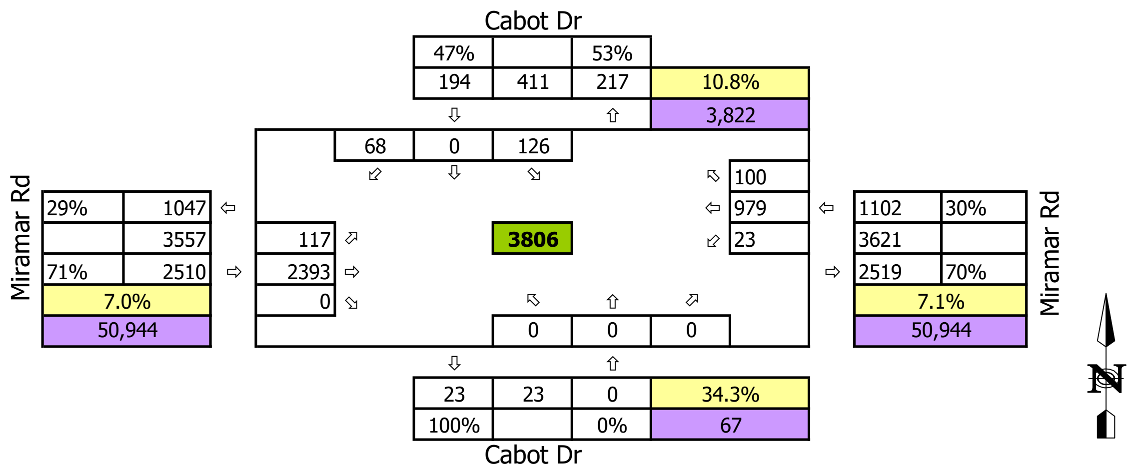
LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

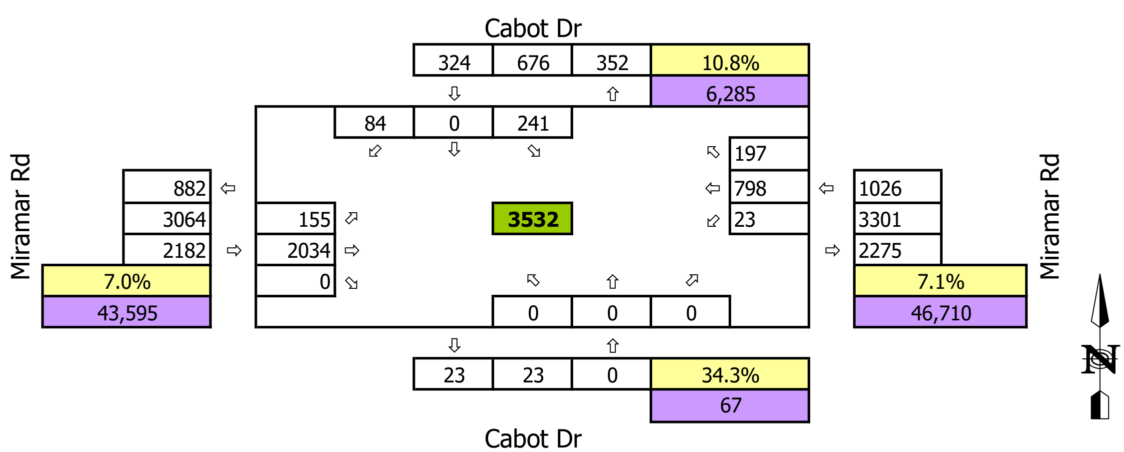
MIZUTA TRAFFIC CONSULTING

Int 40 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Cabot Dr**
E/W Street:	**Miramar Rd**
Intersection #:	**40**



Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Cabot Dr**
E/W Street:	**Miramar Rd**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 41 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Miramar Rd**
Intersection #:	**41**

Camino Ruiz (North Leg)

77%		23%	
1182	1529	347	5.7%
⇩		⇧	27,016

Southbound turning movements: 541 ⬃ | 0 ⇩ | 641 ⬂

Miramar Rd (West Leg)

83%	3640	⇦
	4382	
17%	742	⇨
8.6%		
50,944		

Eastbound turning movements: 128 ⬀ | 614 ⇨ | 0 ⬂

Total Entering Volume: **5242**

Westbound turning movements: ⬁ 219 | ⇦ 3099 | ⬃ 0

Miramar Rd (East Leg)

⇦	3318	73%
	4573	
⇨	1255	27%
	7.1%	
	64,376	

Northbound turning movements: ⬁ 0 | ⇧ 0 | ⬀ 0

Camino Ruiz (South Leg)

⇩		⇧	
0	0	0	0.0%
0%		0%	0

Camino Ruiz

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Miramar Rd**

Camino Ruiz (North Leg)

1111	1421	310	5.7%
⇩		⇧	24,696

Southbound turning movements: 646 ⬃ | 0 ⇩ | 464 ⬂

Miramar Rd (West Leg)

3370	⇦
4094	
724	⇨
8.6%	
48,411	

Eastbound turning movements: 155 ⬀ | 568 ⇨ | 0 ⬂

Total Entering Volume: **4712**

Westbound turning movements: ⬁ 155 | ⇦ 2724 | ⬃ 0

Miramar Rd (East Leg)

⇦	2877
	3909
⇨	1032
	7.1%
	54,343

Northbound turning movements: ⬁ 0 | ⇧ 0 | ⬀ 0

Camino Ruiz (South Leg)

⇩		⇧	
0	0	0	0.0%
			0

Camino Ruiz

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 41 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Miramar Rd**
Intersection #:	**41**

Camino Ruiz

35%		65%	
600	1739	1139	6.4%
⇩		⇧	27,016

Southbound	135	0	465

Miramar Rd (West)

32%	1165 ⇦
	3694
68%	2529 ⇨
7.3%	
50,944	

Eastbound: 370, 2159, 0

Westbound: 769, 1030, 0

Total Entering Volume: **4928**

Miramar Rd (East)

⇦ 1799	41%
4423	
⇨ 2624	59%
6.9%	
64,376	

Northbound: 0, 0, 0

⇩		⇧	
0	0	0	0.0%
0%		0%	0

Camino Ruiz

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Miramar Rd**

Camino Ruiz

541	1596	1055	6.4%
⇩		⇧	24,696

Southbound: 188, 0, 353

Miramar Rd (West)

1120 ⇦	
3495	
2375 ⇨	
7.3%	
48,411	

Eastbound: 484, 1889, 0

Westbound: 571, 932, 0

Total Entering Volume: **4417**

Miramar Rd (East)

⇦ 1501	
3743	
⇨ 2242	
6.9%	
54,343	

Northbound: 0, 0, 0

⇩		⇧	
0	0	0	0.0%
			0

Camino Ruiz

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 42 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Clayton Dr**
E/W Street:	**Miramar Rd**
Intersection #:	**42**

Clayton Dr (North leg): 73% / — / 27%; 165 / 227 / 62; K-Factor 9.0%; ADT 2,522

Southbound approach: 60 / 71 / 34

Westbound approach (Miramar Rd, east leg): 24 / 3132 / 233

Miramar Rd (east leg): 3389 / 75%; 4531; 1142 / 25%; K-Factor 7.0%; ADT 64,376

Miramar Rd (west leg): 74% / 3359; 4509; 26% / 1150; K-Factor 7.0%; ADT 64,376

Eastbound approach: 18 / 983 / 149

Total Entering Volume: **5016**

Northbound approach: 167 / 20 / 125

Clayton Dr (South leg): 453 / 765 / 312; 59% / — / 41%; K-Factor 9.0%; ADT 8,500

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Clayton Dr**
E/W Street:	**Miramar Rd**

Clayton Dr (North leg): 876 / 1241 / 365; K-Factor 9.0%; ADT 14,067

Southbound approach: 264 / 411 / 201

Westbound approach (Miramar Rd, east leg): 145 / 2554 / 259

Miramar Rd (east leg): 2959; 4065; 1106; K-Factor 7.0%; ADT 59,114

Miramar Rd (west leg): 2989; 3912; 923; K-Factor 7.0%; ADT 54,343

Eastbound approach: 75 / 734 / 116

Total Entering Volume: **5247**

Northbound approach: 172 / 146 / 170

Clayton Dr (South leg): 786 / 1274 / 488; K-Factor 9.0%; ADT 13,982

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 42 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Clayton Dr**
E/W Street:	**Miramar Rd**
Intersection #:	**42**

Clayton Dr

54%		46%	
141	263	122	10.4%
⇩		⇧	2,522

Southbound approach: 21 ⬃ | 41 ⇩ | 79 ⬂

Westbound approach: ⬁ 38 | ⇦ 1479 | ⬃ 118

Eastbound approach: 33 ⬀ | 2465 ⇨ | 149 ⬂

Northbound approach: 284 ⬁ | 51 ⇧ | 280 ⬀

5038

Miramar Rd (West)

40%	1784 ⇦
	4431
60%	2647 ⇨
6.9%	
64,376	

Miramar Rd (East)

⇦ 1635	37%
4459	
⇨ 2824	63%
6.9%	
64,376	

⇩		⇧	
308	923	615	10.9%
33%		67%	8,500

Clayton Dr

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Clayton Dr**
E/W Street:	**Miramar Rd**

Clayton Dr

768	1465	697	10.4%
⇩		⇧	14,067

Southbound approach: 98 ⬃ | 255 ⇩ | 415 ⬂

Westbound approach: ⬁ 197 | ⇦ 1144 | ⬃ 127

Eastbound approach: 148 ⬀ | 1900 ⇨ | 136 ⬂

Northbound approach: 299 ⬁ | 352 ⇧ | 339 ⬀

5410

Miramar Rd (West)

1541 ⇦
3725
2184 ⇨
6.9%
54,343

Miramar Rd (East)

⇦ 1468
4122
⇨ 2654
6.9%
59,114

⇩		⇧	
518	1508	990	10.9%
			13,982

Clayton Dr

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 43 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Miramar Rd**
Intersection #:	**43**

Black Mountain Rd

57%		43%	
365	641	276	5.5%
⇩		⇧	11,575

244	0	121
⬃	⇩	⬂

Miramar Rd (west)

73%	3357	⇦
	4574	
27%	1217	⇨
7.1%		
64,376		

81	⬀
1136	⇨
0	⬂

4890

⬁	195
⇦	3113
⬃	0

Miramar Rd (east)

⇦	3308	72%
	4565	
⇨	1257	28%
	7.1%	
	64,382	

⬁	⇧	⬀
0	0	0

⇩		⇧	
0	0	0	0.0%
0%		0%	0

Black Mountain Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Miramar Rd**

Black Mountain Rd

632	1117	485	5.5%
⇩		⇧	20,174

430	0	202
⬃	⇩	⬂

Miramar Rd (west)

3107	⇦
4216	
1109	⇨
7.1%	
59,114	

149	⬀
960	⇨
0	⬂

4754

⬁	336
⇦	2677
⬃	0

Miramar Rd (east)

⇦	3013
	4175
⇨	1162
	7.1%
	59,098

⬁	⇧	⬀
0	0	0

⇩		⇧	
0	0	0	0.0%
			0

Black Mountain Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 43 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Miramar Rd**
Intersection #:	**43**

Black Mountain Rd

60%		40%	
626	1049	423	9.1%
⇩		⇧	11,575
156	0	470	

Miramar Rd (West)

35%	1612 ⇦
	4583
65%	2971 ⇨
7.1%	
64,376	

Eastbound approach: 268 (left), 2703 (through), 0 (right)

5219

Westbound approach: 155 (right), 1456 (through), 11 (left)

Miramar Rd (East)

⇦ 1622	34%
4795	
⇨ 3173	66%
7.4%	
64,382	

Northbound approach: 0, 0, 0

⇩		⇧	
11	11	0	0.0%
100%		0%	0

Black Mountain Rd

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Miramar Rd**

Black Mountain Rd

1073	1823	750	9.1%
⇩		⇧	20,174
298	0	775	

Miramar Rd (West)

1506 ⇦	
4188	
2682 ⇨	
7.1%	
59,114	

Eastbound approach: 492 (left), 2188 (through), 0 (right)

5219

Westbound approach: 258 (right), 1208 (through), 0 (left)

Miramar Rd (East)

⇦ 1464
4427
⇨ 2963
7.4%
59,098

Northbound approach: 0, 0, 0

⇩		⇧	
0	0	0	0.0%
			0

Black Mountain Rd

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 44 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Kearny Villa Rd**
E/W Street:	**Miramar Rd**
Intersection #:	**44**

Kearny Villa Rd (North leg)

55%		45%	
504	915	411	7.6%
			12,079

Southbound approach: 129 | 243 | 132

Westbound approach: 87 | 2266 | 14

Eastbound approach: 25 | 843 | 373

Northbound approach: 955 | 299 | 10

Total Entering Volume: **5376**

Miramar Rd (West leg)

73%	3350
	4591
27%	1241
7.1%	
64,382	

Miramar Rd (East leg)

2367	71%
3352	
985	29%
6.3%	
52,857	

Kearny Villa Rd (South leg)

630	1894	1264	7.2%
33%		67%	26,246

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Kearny Villa Rd**
E/W Street:	**Miramar Rd**

Kearny Villa Rd (North leg)

939	1755	816	7.6%
			23,233

Southbound approach: 229 | 479 | 230

Westbound approach: 153 | 1964 | 16

Eastbound approach: 48 | 702 | 356

Northbound approach: 979 | 615 | 11

Total Entering Volume: **5782**

Miramar Rd (West leg)

3172
4277
1105
7.1%
59,098

Miramar Rd (East leg)

2132
3075
943
6.3%
49,052

Kearny Villa Rd (South leg)

851	2457	1606	7.2%
			34,364

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 44 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Kearny Villa Rd**
E/W Street:	**Miramar Rd**
Intersection #:	**44**

Kearny Villa Rd (north leg)

56%		44%	
775	1379	604	11.4%
⇩		⇧	12,079

Southbound approach: 45 ⇙, 423 ⇩, 307 ⇘

Miramar Rd (west leg)

33%	1557	⇦
	4728	
67%	3171	⇨
7.3%		
64,382		

Eastbound approach: 49 ⬀, 2253 ⇨, 869 ⇘

Total Entering Volume: **6082**

Westbound approach: 160 ⇖, 1081 ⇦, 38 ⇙

Miramar Rd (east leg)

⇦	1279	33%
	3870	
⇨	2591	67%
	7.3%	
	52,857	

Northbound approach: 431 ⇖, 395 ⇧, 31 ⬀

Kearny Villa Rd (south leg)

⇩		⇧	
1330	2187	857	8.3%
61%		39%	26,246

Kearny Villa Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Kearny Villa Rd**
E/W Street:	**Miramar Rd**

Kearny Villa Rd (north leg)

1494	2653	1159	11.4%
⇩		⇧	23,233

Southbound approach: 132 ⇙, 841 ⇩, 509 ⇘

Miramar Rd (west leg)

1426	⇦
4342	
2916	⇨
7.3%	
59,098	

Eastbound approach: 147 ⬀, 1870 ⇨, 870 ⇘

Total Entering Volume: **6722**

Westbound approach: 279 ⇖, 904 ⇦, 27 ⇙

Miramar Rd (east leg)

⇦	1189
	3589
⇨	2400
	7.3%
	49,052

Northbound approach: 390 ⇖, 732 ⇧, 21 ⬀

Kearny Villa Rd (south leg)

⇩		⇧	
1738	2862	1124	8.3%
			34,364

Kearny Villa Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 45 AM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **I-15 SB Ramps**
E/W Street: **Miramar Rd**
Intersection #: **45**

I-15 SB Ramps (North leg)

64%		36%		
1492	2338	846	9.0%	25,978

Southbound approach: 1371 (right), 0 (through), 121 (left)

Westbound approach: 846 (right), 945 (through), 0 (left)

Eastbound approach: 0 (left), 470 (through), 555 (right)

Northbound approach: 0 (left), 0 (through), 0 (right)

Total Entering Volume: **4308**

Miramar Rd (West leg)

69%	2316	⇦
	3341	
31%	1025	⇨
6.3%		
52,857		

Miramar Rd (East leg)

⇦	1791	75%
	2382	
⇨	591	25%
	4.5%	
	52,857	

I-15 SB Ramps (South leg)

555	555	0	9.0%	
100%		0%	6,167	

N

Scenario: **Future Year 2035 - Preferred Network**
N/S Street: **I-15 SB Ramps**
E/W Street: **Miramar Rd**

I-15 SB Ramps (North leg)

1193	1774	581	9.0%	19,201

Southbound approach: 877 (right), 0 (through), 295 (left)

Westbound approach: 581 (right), 1338 (through), 0 (left)

Eastbound approach: 0 (left), 271 (through), 960 (right)

Northbound approach: 0 (left), 0 (through), 0 (right)

Total Entering Volume: **4322**

Miramar Rd (West leg)

2215	⇦
3354	
1139	⇨
6.3%	
54,339	

Miramar Rd (East leg)

⇦	1990
	2556
⇨	566
	4.5%
	54,340

I-15 SB Ramps (South leg)

960	960	0	9.0%	11,462

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 45 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Miramar Rd**
Intersection #:	**45**

I-15 SB Ramps (north leg)

46%		54%		
617	1342	725	5.2%	
⇩		⇧	25,978	

Southbound: 601 ⬃ | 0 ⇩ | 16 ⬂

Westbound: ⬁ 725 | ⇦ 755 | ⬃ 0

Eastbound: 0 ⬀ | 1297 ⇨ | 1424 ⬂

Northbound: ⬁ 0 | ⇧ 0 | ⬀ 0

Total Entering Volume: **4818**

Miramar Rd (west leg)

33%	1356 ⇦
	4077
67%	2721 ⇨
7.7%	
52,857	

Miramar Rd (east leg)

⇦ 1480	53%
2793	
⇨ 1313	47%
5.3%	
52,857	

I-15 SB Ramps (south leg)

⇩		⇧	
1424	1424	0	23.1%
100%		0%	6,167

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Miramar Rd**

I-15 SB Ramps (north leg)

512	996	484	5.2%
⇩		⇧	19,201

Southbound: 313 ⬃ | 0 ⇩ | 154 ⬂

Westbound: ⬁ 484 | ⇦ 946 | ⬃ 0

Eastbound: 0 ⬀ | 1064 ⇨ | 2390 ⬂

Northbound: ⬁ 0 | ⇧ 0 | ⬀ 0

Total Entering Volume: **5351**

Miramar Rd (west leg)

1259 ⇦
4393
3134 ⇨
7.7%
54,339

Miramar Rd (east leg)

⇦ 1705
2923
⇨ 1218
5.3%
54,340

I-15 SB Ramps (south leg)

⇩		⇧	
2390	2390	0	23.1%
			11,462

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 46 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Miramar Rd**
Intersection #:	**46**

I-15 NB Ramps

0%		100%	
0	169	169	9.0%
⇩		⇧	1,878

Southbound: 0 | 0 | 0

Westbound (Miramar Rd): 169 | 1098 | 0

Eastbound (Miramar Rd): 0 | 267 | 328

Northbound: 681 | 0 | 540

Total Entering Volume: **3083**

Miramar Rd (west)

75%	1779 ⇦
	2374
25%	595 ⇨
4.5%	
52,857	

Miramar Rd (east)

⇦ 1267	61%
2074	
⇨ 807	39%
7.4%	
28,064	

⇩		⇧	
328	1549	1221	9.0%
21%		79%	17,211

I-15 NB Ramps

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Miramar Rd**

I-15 NB Ramps

-1	128	129	9.0%
⇩		⇧	1,168

Southbound: 0 | 0 | 0

Westbound (Miramar Rd): 129 | 1160 | 0

Eastbound (Miramar Rd): 0 | 1 | 737

Northbound: 302 | 0 | 1364

Total Entering Volume: **3693**

Miramar Rd (west)

1462 ⇦
1799
337 ⇨
4.5%
35,411

Miramar Rd (east)

⇦ 1473
2838
⇨ 1365
7.4%
38,666

⇩		⇧	
737	2621	1884	9.0%
			31,483

I-15 NB Ramps

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 46 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Miramar Rd**
Intersection #:	**46**

I-15 NB Ramps (North leg)

0%		100%	
0	116	116	6.2%
⇩		⇧	1,878

Southbound approach: 0 ⬃ | 0 ⇩ | 0 ⬂

Westbound approach: ⬁ 116 | ⇦ 941 | ⬃ 0

Eastbound approach: 0 ⬀ | 418 ⇨ | 894 ⬂

Northbound approach: ⬁ 536 | ⇧ 0 | ⬀ 661

Total Entering Volume: **3566**

Miramar Rd (West leg)

53%	1477 ⇦
	2789
47%	1312 ⇨
5.3%	
52,857	

Miramar Rd (East leg)

⇦ 1057	49%
2136	
⇨ 1079	51%
7.6%	
28,064	

I-15 NB Ramps (South leg)

⇩		⇧	
894	2091	1197	12.1%
43%		57%	17,211

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Miramar Rd**

I-15 NB Ramps (North leg)

0	75	75	6.2%
⇩		⇧	1,168

Southbound approach: 0 ⬃ | 0 ⇩ | 0 ⬂

Westbound approach: ⬁ 75 | ⇦ 937 | ⬃ 0

Eastbound approach: 0 ⬀ | 1 ⇨ | 1702 ⬂

Northbound approach: ⬁ 92 | ⇧ 0 | ⬀ 1547

Total Entering Volume: **4354**

Miramar Rd (West leg)

1029 ⇦
1875
846 ⇨
5.3%
35,411

Miramar Rd (East leg)

⇦ 1401
2949
⇨ 1548
7.6%
38,666

I-15 NB Ramps (South leg)

⇩		⇧	
1702	3809	2107	12.1%
			31,483

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 47 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Carroll Rd**
Intersection #:	**47**

Camino Santa Fe (North Leg)

71%		29%	
999	1402	403	7.0%
⇩		⇧	20,126

Southbound movements: 291 ⬃ | 621 ⇩ | 87 ⬂

Carroll Rd (West Leg)

70%	846	⇦
	1209	
30%	363	⇨
7.6%		
15,941		

Eastbound movements: 65 ⬀ | 142 ⇨ | 156 ⬂

Total Entering Volume: **2417**

Westbound movements: 49 ⬁ | 276 ⇦ | 47 ⬃

Carroll Rd (East Leg)

⇦	372	52%
	716	
⇨	344	48%
	7.3%	
	9,755	

Northbound movements: 279 ⬁ | 289 ⇧ | 115 ⬀

Camino Santa Fe (South Leg)

⇩		⇧	
824	1507	683	7.0%
55%		45%	21,494

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Carroll Rd**

Camino Santa Fe (North Leg)

1591	2301	710	7.0%
⇩		⇧	33,683

Southbound movements: 223 ⬃ | 1255 ⇩ | 114 ⬂

Carroll Rd (West Leg)

791	⇦
1097	
306	⇨
7.6%	
14,130	

Eastbound movements: 47 ⬀ | 95 ⇨ | 165 ⬂

Total Entering Volume: **3466**

Westbound movements: 77 ⬁ | 237 ⇦ | 110 ⬃

Carroll Rd (East Leg)

⇦	422
	855
⇨	433
	7.3%
	11,647

Northbound movements: 332 ⬁ | 587 ⇧ | 224 ⬀

Camino Santa Fe (South Leg)

⇩		⇧	
1530	2675	1145	7.0%
			37,880

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 47 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Carroll Rd**
Intersection #:	**47**

Camino Santa Fe (North Leg)

39%		61%	
712	1841	1129	9.1%
⇩		⇧	20,126

Southbound approach: 75 (right) ⬃ | 566 (through) ⇩ | 71 (left) ⬂

Westbound approach: 115 (right) | 91 (through) | 86 (left)

Eastbound approach: 294 (left) | 315 (through) | 383 (right)

Total Entering Volume: **2897**

Northbound approach: 108 (left) | 720 (through) | 73 (right)

Carroll Rd (West Leg)

22%	274	⇦
	1266	
78%	992	⇨
7.9%		
15,941		

Carroll Rd (East Leg)

⇦	292	39%
	751	
⇨	459	61%
	7.7%	
	9,755	

Camino Santa Fe (South Leg)

⇩		⇧	
1035	1936	901	9.0%
53%		47%	21,494

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Carroll Rd**

Camino Santa Fe (North Leg)

1267	3052	1785	9.1%
⇩		⇧	33,683

Southbound approach: 55 (right) | 1111 (through) | 103 (left)

Westbound approach: 147 (right) | 60 (through) | 165 (left)

Eastbound approach: 227 (left) | 258 (through) | 448 (right)

Total Entering Volume: **4257**

Northbound approach: 115 (left) | 1411 (through) | 157 (right)

Carroll Rd (West Leg)

230	⇦
1163	
933	⇨
7.9%	
14,130	

Carroll Rd (East Leg)

⇦	371
	889
⇨	518
	7.7%
	11,647

Camino Santa Fe (South Leg)

⇩		⇧	
1724	3410	1686	9.0%
			37,880

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 48 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Flanders Dr**
Intersection #:	**48**

Camino Santa Fe (north leg)

79%		21%	
914	1157	243	6.1%
⇩		⇧	18,925
142	721	51	

Flanders Dr (west leg)

85%	619	⇦	
	724		14
15%	105	⇨	20
9.6%			71
7,549			

Total Entering Volume: 2127

Flanders Dr (east leg)

114			
412	⇦	907	91%
381		999	
	⇨	92	9%
		9.6%	
		10,385	

Camino Santa Fe (south leg)

65	115	21	
⇩		⇧	
1173	1374	201	6.8%
85%		15%	20,126

Camino Santa Fe

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Flanders Dr**

Camino Santa Fe (north leg)

1159	1320	161	6.1%
⇩		⇧	16,467
280	867	13	

Flanders Dr (west leg)

1258	⇦	
1667		22
409	⇨	20
9.6%		367
20,166		

Total Entering Volume: 3039

Flanders Dr (east leg)

29		
589	⇦	954
336		1004
	⇨	50
		9.6%
		7,488

Camino Santa Fe (south leg)

389	110	17	
⇩		⇧	
1570	2087	517	6.8%
			35,412

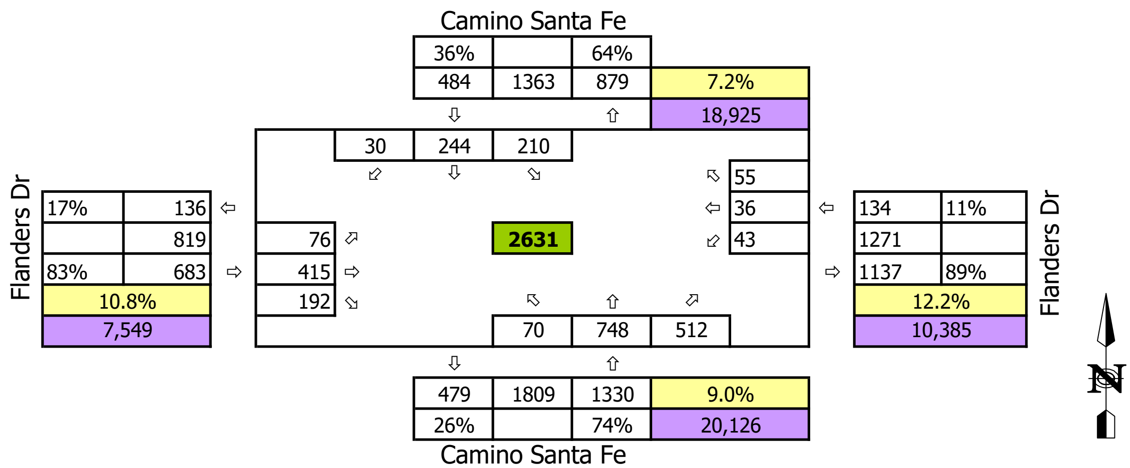
Camino Santa Fe

LEGEND

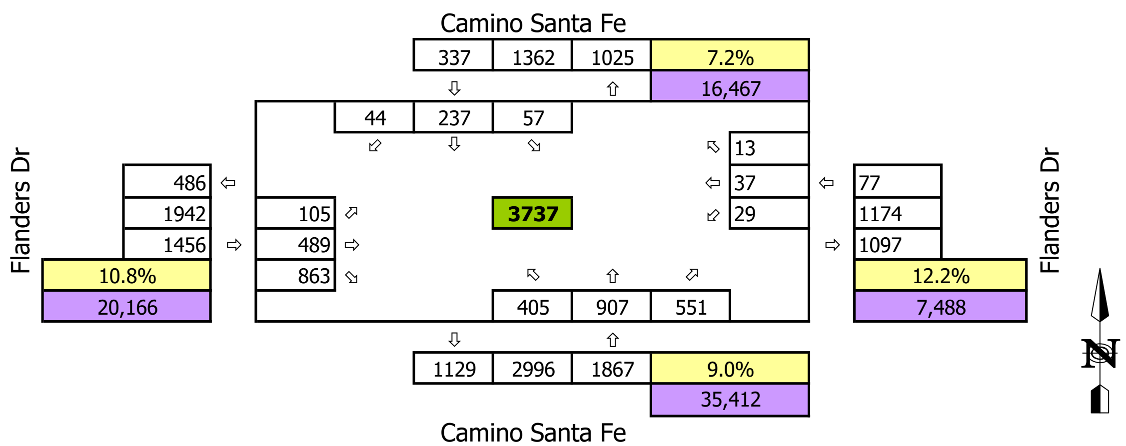
Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 48 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Flanders Dr**
Intersection #:	**48**



Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Flanders Dr**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 49 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**49**

Camino Ruiz

81%		19%	
1375	1692	317	6.2%
⇩		⇧	27,094

Southbound approach: 33 | 1342 | 0

Westbound approach: 0 | 0 | 0

Carroll Canyon Rd (West)

63%	109	⇦
	174	
37%	65	⇨
9.0%		
1,933		

Eastbound approach: 12 | 0 | 53

Total Entering Volume: **1821**

Carroll Canyon Rd (East)

0	0%
0	
0	0%
0.0%	
0	

Northbound approach: 76 | 305 | 0

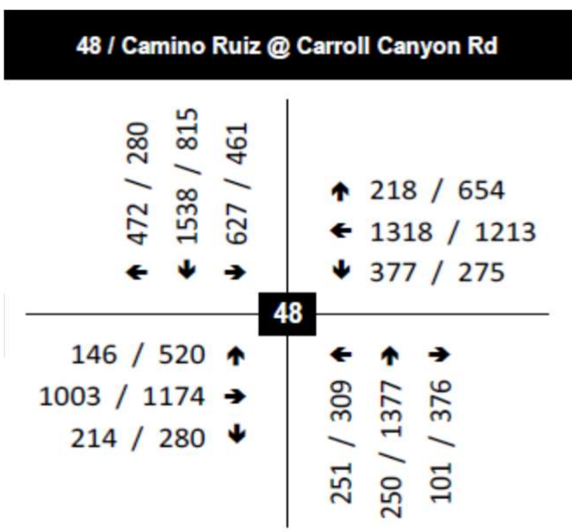
⇩		⇧	
1395	1776	381	6.3%
79%		21%	28,213

Camino Ruiz

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Carroll Canyon Rd**

Carroll Canyon Rd



Referenced from Fig 8-6c of the 3Roots TIA.

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 49 PM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **Camino Ruiz**
E/W Street: **Carroll Canyon Rd**
Intersection #: **49**

Camino Ruiz (north leg)

35%		65%	
765	2207	1442	8.1%
⇩		⇧	27,094

Southbound approach: 4 | 761 | 0

Carroll Canyon Rd (west leg)

26%	27	⇦
	102	
74%	75	⇨
5.3%		
1,933		

Eastbound approach: 23 | 0 | 52

Total Entering Volume: **2282**

Westbound approach: 0 | 0 | 0

Carroll Canyon Rd (east leg)

⇦	0	0%
	0	
⇨	0	0%
	0.0%	
	0	

Northbound approach: 23 | 1419 | 0

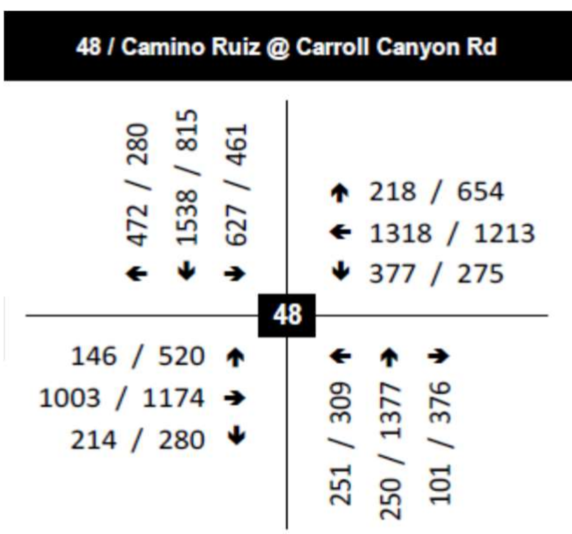
Camino Ruiz (south leg)

⇩		⇧	
813	2255	1442	8.0%
36%		64%	28,213

N

Scenario: **Future Year 2035 - Preferred Network**
N/S Street: **Camino Ruiz**
E/W Street: **Carroll Canyon Rd**

Carroll Canyon Rd



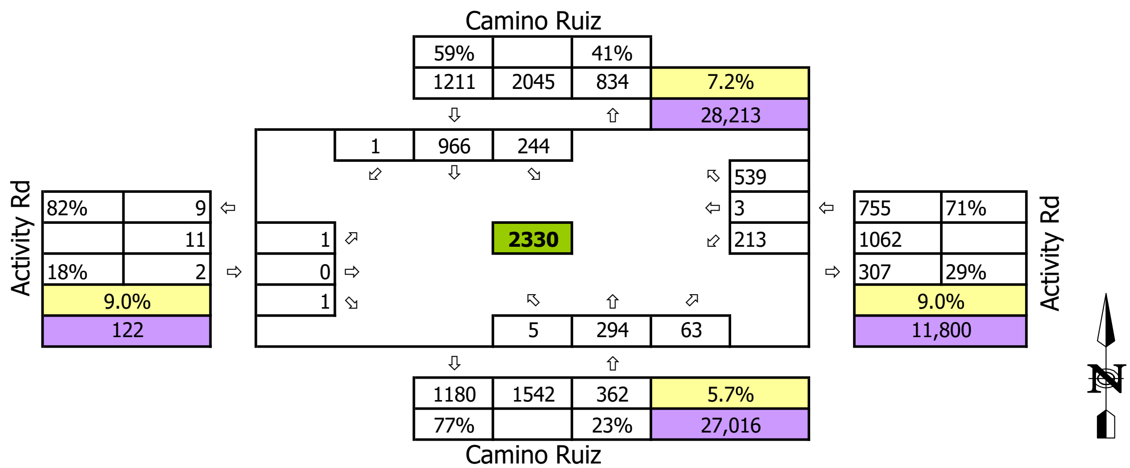
Referenced from Fig 8-6c of the 3Roots TIA.

LEGEND

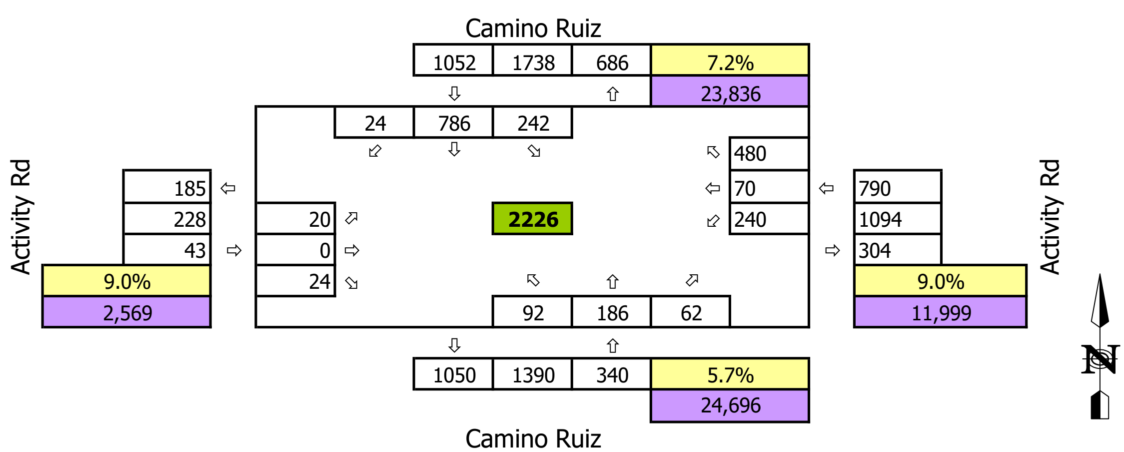
Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 50 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Activity Rd**
Intersection #:	**50**



Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Activity Rd**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 50 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Activity Rd**
Intersection #:	**50**

Camino Ruiz (north leg)

55%		45%	
1440	2599	1159	9.2%
⇩		⇧	28,213

Southbound approach: 8 | 532 | 900

Westbound approach: 239 | 0 | 53

Eastbound approach: 1 | 8 | 5

Northbound approach: 10 | 919 | 165

Total Entering Volume: **2840**

Activity Rd (west leg)

56%	18
	32
44%	14
26.2%	
122	

Activity Rd (east leg)

292	21%
1365	
1073	79%
11.6%	
11,800	

Camino Ruiz (south leg)

590	1684	1094	6.2%
35%		65%	27,016

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Activity Rd**

Camino Ruiz (north leg)

1257	2207	950	9.2%
⇩		⇧	23,836

Southbound approach: 164 | 366 | 726

Westbound approach: 249 | 0 | 58

Eastbound approach: 20 | 185 | 99

Northbound approach: 204 | 681 | 147

Total Entering Volume: **2899**

Activity Rd (west leg)

368
672
304
26.2%
2,569

Activity Rd (east leg)

306
1364
1058
11.6%
11,999

Camino Ruiz (south leg)

523	1555	1032	6.2%
			24,696

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 51 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-805 SB Off**
E/W Street:	**Sorrento Valley Rd**
Intersection #:	**51**

North Leg – I-805 SB Off

74%		26%		
1962	2668	706	9.0%	29,644

Southbound: 71 ⇙, 396 ⇩, 1495 ⇘

West Leg – Sorrento Valley Rd

50%	457	⇦
	908	
50%	451	⇨
9.0%		
10,089		

Eastbound: 0 ⬀, 308 ⇨, 143 ⇘

Total Entering Volume: 3603

East Leg – Sorrento Valley Rd

Westbound: 706 ⇖, 338 ⇦, 12 ⇙

⇦	1056	36%
	2945	
⇨	1889	64%
	9.0%	
	32,722	

Northbound: 48 ⇖, 0 ⇧, 86 ⬀

South Leg – I-805 SB Off

551	685	134	5.6%	12,130
80%		20%		

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**I-805 SB Off**
E/W Street:	**Sorrento Valley Rd**

North Leg – I-805 SB Off

2737	3590	853	9.0%	38,400

Southbound: 22 ⇙, 527 ⇩, 2284 ⇘

West Leg – Sorrento Valley Rd

1137	⇦
2431	
1294	⇨
9.0%	
26,884	

Eastbound: 0 ⬀, 952 ⇨, 386 ⇘

Total Entering Volume: 6610

East Leg – Sorrento Valley Rd

Westbound: 853 ⇖, 1081 ⇦, 187 ⇙

⇦	2270
	5790
⇨	3520
	9.0%
	65,319

Northbound: 33 ⇖, 0 ⇧, 285 ⬀

South Leg – I-805 SB Off

1100	1409	309	5.6%	25,935

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 51 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-805 SB Off**
E/W Street:	**Sorrento Valley Rd**
Intersection #:	**51**

I-805 SB Off (North approach)

38%		62%	
779	2046	1267	6.9%
⇩		⇧	29,644

Southbound turning movements: 35 ⇙ | 101 ⇩ | 643 ⇘

Westbound turning movements: 1267 ⇖ | 290 ⇦ | 40 ⇙

Eastbound turning movements: 0 ⇗ | 457 ⇨ | 96 ⇘

Northbound turning movements: 104 ⇖ | 0 ⇧ | 694 ⇗

Total Entering Volume: **3727**

Sorrento Valley Rd (West leg)

44%	429	⇦
	982	
56%	553	⇨
9.7%		
10,089		

Sorrento Valley Rd (East leg)

⇦	1597	47%
	3391	
⇨	1794	53%
	10.4%	
	32,722	

I-805 SB Off (South approach)

⇩		⇧	
237	1035	798	8.5%
23%		77%	12,130

I-805 SB Off

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**I-805 SB Off**
E/W Street:	**Sorrento Valley Rd**

I-805 SB Off (North approach)

974	2675	1701	6.9%
⇩		⇧	38,400

Southbound turning movements: 26 ⇙ | 101 ⇩ | 872 ⇘

Westbound turning movements: 1701 ⇖ | 1047 ⇦ | 230 ⇙

Eastbound turning movements: 0 ⇗ | 1264 ⇨ | 195 ⇘

Northbound turning movements: 112 ⇖ | 0 ⇧ | 1577 ⇗

Total Entering Volume: **7125**

Sorrento Valley Rd (West leg)

1185	⇦
2609	
1424	⇨
9.7%	
26,884	

Sorrento Valley Rd (East leg)

⇦	3079
	6792
⇨	3713
	10.4%
	65,319

I-805 SB Off (South approach)

⇩		⇧	
526	2174	1648	8.5%
			25,935

I-805 SB Off

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 52 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**52**

Vista Sorrento Pkwy

34%		66%	
393	1157	764	6.8%
			17,009

Southbound approach (right / through / left): 333 / 0 / 60

Westbound approach (left / through / right): 457 / 678 / 0

Eastbound approach (left / through / right): 255 / 1477 / 0

Northbound approach (left / through / right): 0 / 52 / 2058

Total entering volume: **5370**

Mira Mesa Blvd (west leg)

37%	1011
	2743
63%	1732
9.0%	
30,478	

Mira Mesa Blvd (east leg)

1135	24%
4730	
3595	76%
7.8%	
60,870	

0	2110	2110	9.0%
0%		100%	23,444

Vista Sorrento Pkwy

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**Mira Mesa Blvd**

Vista Sorrento Pkwy

401	1157	756	6.8%
			17,131

Southbound approach (right / through / left): 446 / 0 / 7

Westbound approach (left / through / right): 75 / 1246 / 0

Eastbound approach (left / through / right): 622 / 2250 / 0

Northbound approach (left / through / right): 0 / 59 / 1360

Total entering volume: **6065**

Mira Mesa Blvd (west leg)

1692
4689
2997
9.0%
51,860

Mira Mesa Blvd (east leg)

1181
4797
3616
7.8%
62,244

0	1485	1485	9.0%
			16,220

Vista Sorrento Pkwy

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 52 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**Mira Mesa Blvd**
Intersection #:	**52**

Vista Sorrento Pkwy (North Leg)

38%		62%	
540	1408	868	8.3%
⇩		⇧	17,009

Southbound turning volumes: 484 (right) | 0 (through) | 56 (left)

Mira Mesa Blvd (West Leg)

69%	1599	⇦
	2330	
31%	731	⇨
7.6%		
30,478		

Eastbound turning volumes: 78 (left) | 653 (through) | 0 (right)

Total Entering Volume: **4016**

Westbound turning volumes: 748 (right) | 1115 (through) | 0 (left)

Mira Mesa Blvd (East Leg)

⇦	1863	55%
	3412	
⇨	1549	45%
	5.6%	
	60,870	

Northbound turning volumes: 0 (left) | 42 (through) | 840 (right)

Vista Sorrento Pkwy (South Leg)

⇩		⇧	
0	882	882	3.8%
0%		100%	23,444

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**Mira Mesa Blvd**

Vista Sorrento Pkwy (North Leg)

599	1399	800	8.3%
⇩		⇧	17,131

Southbound turning volumes: 618 (right) | 0 (through) | 7 (left)

Mira Mesa Blvd (West Leg)

	2491	⇦
	3862	
	1371	⇨
7.6%		
51,860		

Eastbound turning volumes: 398 (left) | 912 (through) | 0 (right)

Total Entering Volume: **4742**

Westbound turning volumes: 295 (right) | 1873 (through) | 0 (left)

Mira Mesa Blvd (East Leg)

⇦	2099
	3549
⇨	1450
	5.6%
	62,244

Northbound turning volumes: 0 (left) | 108 (through) | 531 (right)

Vista Sorrento Pkwy (South Leg)

⇩		⇧	
0	672	672	3.8%
			16,220

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 53 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**Lusk Blvd**
Intersection #:	**53**

Vista Sorrento Pkwy (North Leg)

81%		19%	
1361	1684	323	11.3%
⇩		⇧	14,927

Southbound: 0 ⬃ | 430 ⇩ | 931 ⬂

Westbound: 111 ⬁ | 0 ⇦ | 63 ⬃

Eastbound: 0 ⬀ | 0 ⇨ | 0 ⬂

Total Entering Volume: **2048**

Northbound: 0 ⬁ | 212 ⇧ | 301 ⬀

Lusk Blvd (West Leg)

0%	0	⇦
	0	
0%	0	⇨
0.0%		
0		

Lusk Blvd (East Leg)

⇦	174	12%
	1406	
⇨	1232	88%
	12.4%	
	11,324	

Vista Sorrento Pkwy (South Leg)

⇩		⇧	
493	1006	513	7.4%
49%		51%	13,504

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**Lusk Blvd**

Vista Sorrento Pkwy (North Leg)

2545	3049	504	11.3%
⇩		⇧	25,400

Southbound: 0 ⬃ | 390 ⇩ | 2155 ⬂

Westbound: 318 ⬁ | 0 ⇦ | 124 ⬃

Eastbound: 0 ⬀ | 0 ⇨ | 0 ⬂

Total Entering Volume: **3628**

Northbound: 0 ⬁ | 186 ⇧ | 455 ⬀

Lusk Blvd (West Leg)

0	⇦
0	
0	⇨
0.0%	
0	

Lusk Blvd (East Leg)

⇦	442
	3052
⇨	2610
	12.4%
	26,163

Vista Sorrento Pkwy (South Leg)

⇩		⇧	
514	1155	641	7.4%
			15,359

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 53 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**Lusk Blvd**
Intersection #:	**53**

Vista Sorrento Pkwy

10%		90%	
179	1855	1676	12.4%
⇩		⇧	14,927

Southbound approach: 0 | 73 | 106

Westbound approach: 1113 | 0 | 294

Lusk Blvd (West)

0%	0
	0
0%	0
0.0%	
0	

Eastbound approach: 0 | 0 | 0

Total Entering Volume: **2226**

Lusk Blvd (East)

1407	88%
1590	
183	12%
14.0%	
11,324	

Northbound approach: 0 | 563 | 77

⇩		⇧	
367	1007	640	7.5%
36%		64%	13,504

Vista Sorrento Pkwy

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Vista Sorrento Pkwy**
E/W Street:	**Lusk Blvd**

Vista Sorrento Pkwy

283	3363	3080	12.4%
⇩		⇧	25,400

Southbound approach: 0 | 36 | 249

Westbound approach: 2609 | 0 | 414

Lusk Blvd (West)

0
0
0
0.0%
0

Eastbound approach: 0 | 0 | 0

Total Entering Volume: **3987**

Lusk Blvd (East)

3026
3483
457
14.0%
26,163

Northbound approach: 0 | 471 | 208

⇩		⇧	
450	1128	678	7.5%
			15,359

Vista Sorrento Pkwy

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 54 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Pacific Center Blvd**
E/W Street:	**Lusk Blvd**
Intersection #:	**54**

Pacific Center Blvd (North Leg)

14%		86%	
85	588	503	7.8%
			7,565

Southbound movements: 65 | 2 | 18

Lusk Blvd (West Leg)

34%	282	
	835	
66%	553	
7.4%		
11,324		

Eastbound movements: 334 | 211 | 8

Total Entering Volume: **1047**

Westbound movements: 167 | 216 | 19

Lusk Blvd (East Leg)

402	63%
635	
233	37%
6.0%	
10,630	

Northbound movements: 1 | 2 | 4

Pacific Center Blvd (South Leg)

29	36	7	9.0%
81%		19%	400

Pacific Center Blvd

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Pacific Center Blvd**
E/W Street:	**Lusk Blvd**

Pacific Center Blvd (North Leg)

231	1266	1035	7.8%
			17,706

Southbound movements: 177 | 25 | 30

Lusk Blvd (West Leg)

392	
1404	
1012	
7.4%	
17,905	

Eastbound movements: 765 | 187 | 60

Total Entering Volume: **1833**

Westbound movements: 246 | 205 | 85

Lusk Blvd (East Leg)

536	
772	
236	
6.0%	
12,240	

Northbound movements: 10 | 24 | 19

Pacific Center Blvd (South Leg)

169	222	53	9.0%
			2,648

Pacific Center Blvd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 54 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Pacific Center Blvd**
E/W Street:	**Lusk Blvd**
Intersection #:	**54**

Pacific Center Blvd

90%		10%	
639	713	74	9.4%
⇩		⇧	7,565

478	0	161
⬃	⇩	⬂

Lusk Blvd (West)

70%	681 ⇦
	979
30%	298 ⇨
8.6%	
11,324	

33	⬀
262	⇨
3	⬂

1208

⬁	37
⇦	184
⬃	3

Lusk Blvd (East)

⇦ 224	33%
671	
⇨ 447	67%
6.3%	
10,630	

⬁	⇧	⬀
19	4	24

⇩		⇧	
6	53	47	13.3%
11%		89%	400

Pacific Center Blvd

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Pacific Center Blvd**
E/W Street:	**Lusk Blvd**

Pacific Center Blvd

1280	1488	208	9.4%
⇩		⇧	17,706

1035	0	245
⬃	⇩	⬂

Lusk Blvd (West)

1295 ⇦
1698
403 ⇨
8.6%
17,905

100	⬀
273	⇨
30	⬂

2172

⬁	59
⇦	144
⬃	18

Lusk Blvd (East)

⇦ 221
840
⇨ 619
6.3%
12,240

⬁	⇧	⬀
116	50	102

⇩		⇧	
48	314	266	13.3%
			2,648

Pacific Center Blvd

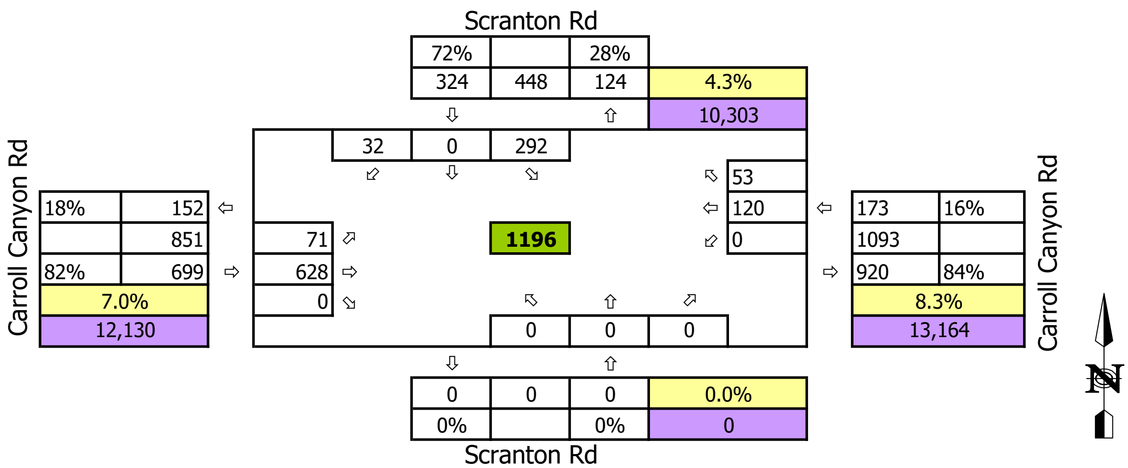
N

LEGEND

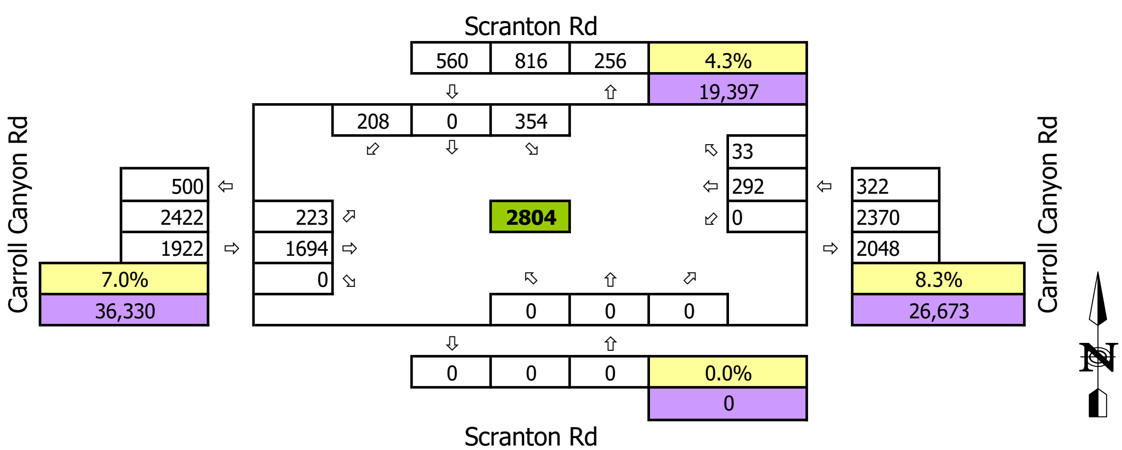
Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 55 AM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **Scranton Rd**
E/W Street: **Carroll Canyon Rd**
Intersection #: **55**



Scenario: **Future Year 2035 - Recommended Network**
N/S Street: **Scranton Rd**
E/W Street: **Carroll Canyon Rd**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 55 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Scranton Rd**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**55**

Scranton Rd (North leg)

69%		31%	
488	707	219	6.9%
⇩		⇧	10,303

Southbound movements: 310 ⬃ | 0 ⇩ | 178 ⬂

Carroll Canyon Rd (West leg)

85%	1125	⇦
	1327	
15%	202	⇨
10.9%		
12,130		

Eastbound movements: 25 ⬀ | 177 ⇨ | 0 ⬂

Total entering volume: **1699**

Westbound movements: 194 ⬁ | 815 ⇦ | 0 ⬃

Carroll Canyon Rd (East leg)

⇦	1009	74%
	1364	
⇨	355	26%
	10.4%	
	13,164	

Northbound movements: 0 ⬁ | 0 ⇧ | 0 ⬀

Scranton Rd (South leg)

⇩		⇧	
0	0	0	0.0%
0%		0%	0

Scranton Rd

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Scranton Rd**
E/W Street:	**Carroll Canyon Rd**

Scranton Rd (North leg)

1039	1408	369	6.9%
⇩		⇧	19,397

Southbound movements: 923 ⬃ | 0 ⇩ | 118 ⬂

Carroll Canyon Rd (West leg)

3020	⇦
3704	
684	⇨
10.9%	
36,330	

Eastbound movements: 151 ⬀ | 527 ⇨ | 0 ⬂

Total entering volume: **4034**

Westbound movements: 218 ⬁ | 2097 ⇦ | 0 ⬃

Carroll Canyon Rd (East leg)

⇦	2311
	2956
⇨	645
	10.4%
	26,673

Northbound movements: 0 ⬁ | 0 ⇧ | 0 ⬀

Scranton Rd (South leg)

⇩		⇧	
0	0	0	0.0%
			0

Scranton Rd

N

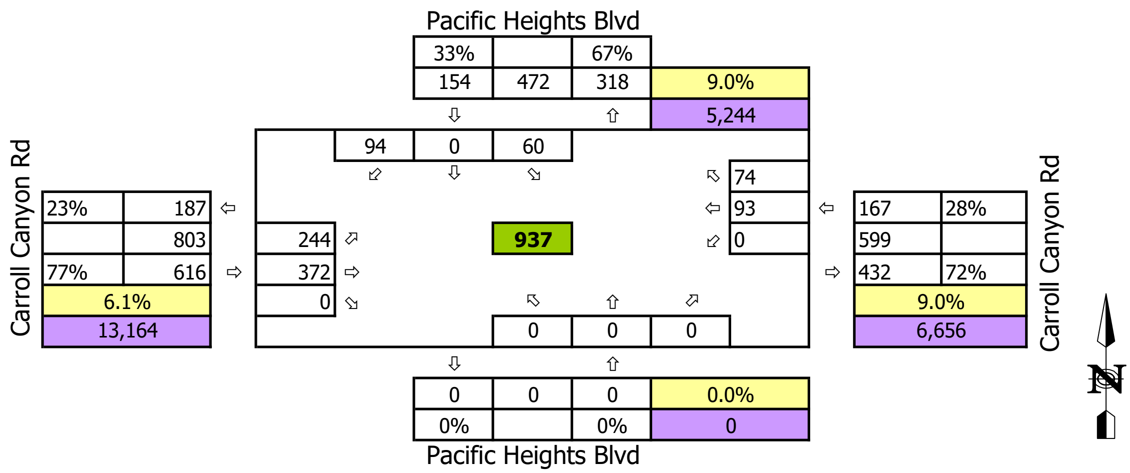
LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

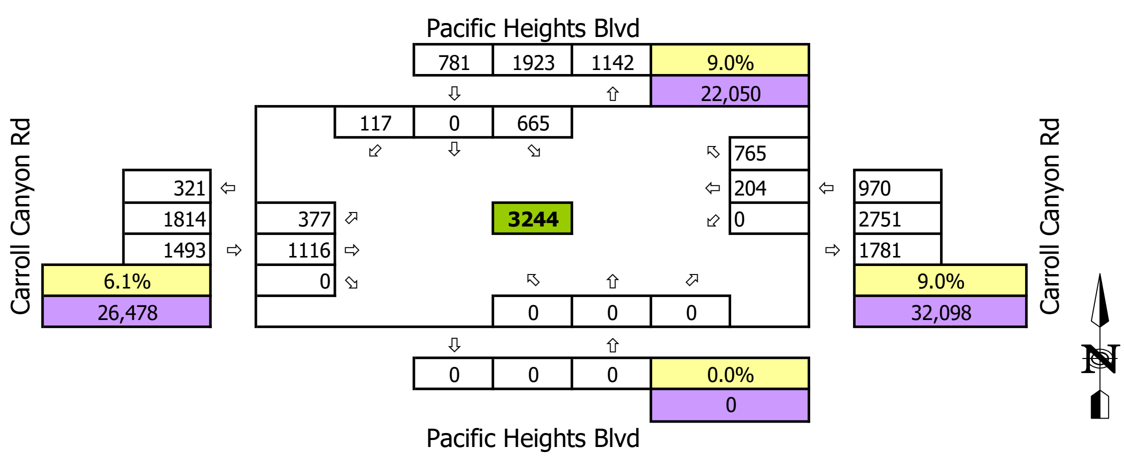
MIZUTA TRAFFIC CONSULTING

Int 56 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**56**



Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Carroll Canyon Rd**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 56 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**56**

Pacific Heights Blvd (North approach)

79%		21%	
608	771	163	14.7%
⇩		⇧	5,244
376	0	232	

Carroll Canyon Rd (West)

61%	593	⇦
	965	
39%	372	⇨
7.3%		
13,164		

Eastbound: 85 ⬀, 287 ⇨, 0 ⬂

1275

Westbound: 78 ⬁, 217 ⇦, 0 ⬃

Carroll Canyon Rd (East)

⇦	295	36%
	814	
⇨	519	64%
	12.2%	
	6,656	

Northbound: 0 ⬁, 0 ⇧, 0 ⬀

Pacific Heights Blvd (South approach)

⇩		⇧	
0	0	0	0.0%
0%		0%	0

Pacific Heights Blvd

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Carroll Canyon Rd**

Pacific Heights Blvd (North approach)

2462	3174	712	14.7%
⇩		⇧	22,050
508	0	1956	

Carroll Canyon Rd (West)

1240	⇦
1960	
720	⇨
7.3%	
26,478	

Eastbound: 77 ⬀, 645 ⇨, 0 ⬂

4553

Westbound: 635 ⬁, 732 ⇦, 0 ⬃

Carroll Canyon Rd (East)

⇦	1371
	3972
⇨	2601
	12.2%
	32,098

Northbound: 0 ⬁, 0 ⇧, 0 ⬀

Pacific Heights Blvd (South approach)

⇩		⇧	
0	0	0	0.0%
			0

Pacific Heights Blvd

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 57 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Lusk Blvd**
E/W Street:	**Barnes Canyon Rd**
Intersection #:	**57**

Lusk Blvd (North Leg)

32%		68%	
219	677	458	6.4%
⇩		⇧	10,630

Southbound turning volumes: 30 ⇙ | 134 ⇩ | 55 ⇘

Westbound turning volumes: 94 ⇖ | 150 ⇦ | 25 ⇙

Eastbound turning volumes: 117 ⬀ | 165 ⇨ | 13 ⇘

Northbound turning volumes: 35 ⇖ | 247 ⇧ | 74 ⬀

Total Entering Volume: **1139**

Barnes Canyon Rd (West Leg)

42%	215	⇦
	510	
58%	295	⇨
7.0%		
7,335		

Barnes Canyon Rd (East Leg)

⇦	269	48%
	563	
⇨	294	52%
	8.1%	
	6,924	

Lusk Blvd (South Leg)

⇩		⇧	
172	528	356	4.8%
33%		67%	11,068

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Lusk Blvd**
E/W Street:	**Barnes Canyon Rd**

Lusk Blvd (North Leg)

308	995	687	6.4%
⇩		⇧	15,468

Southbound turning volumes: 97 ⇙ | 174 ⇩ | 38 ⇘

Westbound turning volumes: 58 ⇖ | 385 ⇦ | 29 ⇙

Eastbound turning volumes: 348 ⬀ | 433 ⇨ | 74 ⇘

Northbound turning volumes: 181 ⇖ | 281 ⇧ | 78 ⬀

Total Entering Volume: **2176**

Barnes Canyon Rd (West Leg)

663	⇦
1520	
857	⇨
7.0%	
21,952	

Barnes Canyon Rd (East Leg)

⇦	471
	1019
⇨	548
	8.1%
	12,491

Lusk Blvd (South Leg)

⇩		⇧	
277	816	539	4.8%
			17,266

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 57 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Lusk Blvd**
E/W Street:	**Barnes Canyon Rd**
Intersection #:	**57**

Lusk Blvd

67%		33%	
487	724	237	6.8%
⇩		⇧	10,630

Southbound approach: 110 | 313 | 64

Westbound approach: 53 | 172 | 35

Eastbound approach: 53 | 131 | 51

Northbound approach: 15 | 131 | 57

Total Entering Volume: **1185**

Barnes Canyon Rd (west leg)

56%	297 ⇦
	532
44%	235 ⇨
7.3%	
7,335	

Barnes Canyon Rd (east leg)

⇦ 260	51%
512	
⇨ 252	49%
7.4%	
6,924	

⇩		⇧	
399	602	203	5.4%
66%		34%	11,068

Lusk Blvd

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Lusk Blvd**
E/W Street:	**Barnes Canyon Rd**

Lusk Blvd

728	1065	337	6.8%
⇩		⇧	15,468

Southbound approach: 351 | 336 | 41

Westbound approach: 28 | 421 | 33

Eastbound approach: 147 | 334 | 238

Northbound approach: 95 | 162 | 69

Total Entering Volume: **2255**

Barnes Canyon Rd (west leg)

867 ⇦
1588
721 ⇨
7.3%
21,952

Barnes Canyon Rd (east leg)

⇦ 481
925
⇨ 444
7.4%
12,491

⇩		⇧	
607	932	325	5.4%
			17,266

Lusk Blvd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 58 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Pacific Center Blvd**
Intersection #:	**58**

Pacific Heights Blvd

9%		91%	
6	64	58	9.0%
⇩		⇧	711

					2	4	0						
					⬃	⇩	⬂		⬁	0			
62%	301	⇦							⇦	29	⇦	41	17%
	487		25	⬀		625			⬃	12		239	
38%	186	⇨	109	⇨							⇨	198	83%
6.4%			52	⬂		⬁	⇧	⬀				7.3%	
7,565						270	33	89				3,293	

Pacific Center Blvd (west) — Pacific Center Blvd (east)

⇩		⇧	
68	460	392	6.3%
15%		85%	7,245

Pacific Heights Blvd

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Pacific Center Blvd**

Pacific Heights Blvd

45	296	251	9.0%
⇩		⇧	3,934

				24	20	0						
				⬃	⇩	⬂		⬁	0			
273	⇦							⇦	176	⇦	216	
571		70	⬀		1174			⬃	35		807	
298	⇨	226	⇨							⇨	591	
6.4%		5	⬂		⬁	⇧	⬀				7.3%	
8,761					72	181	365				12,555	

Pacific Center Blvd (west) — Pacific Center Blvd (east)

⇩		⇧	
60	676	616	6.3%
			8,216

Pacific Heights Blvd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 58 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Pacific Center Blvd**
Intersection #:	**58**

Pacific Heights Blvd (North Leg)

79%		21%	
93	118	25	16.6%
⇩		⇧	711

Southbound: 36 ⬃ | 57 ⇩ | 0 ⬂

Pacific Center Blvd (West Leg)

44%	314	⇦
	716	
56%	402	⇨
9.5%		
7,565		

Eastbound: 15 ⬀ | 38 ⇨ | 349 ⬂

Total Entering Volume: **927**

Westbound: ⬁ 1 | ⇦ 218 | ⬃ 90

Pacific Center Blvd (East Leg)

⇦	309	77%
	401	
⇨	92	23%
	12.2%	
	3,293	

Northbound: ⬁ 60 | ⇧ 9 | ⬀ 54

Pacific Heights Blvd (South Leg)

⇩		⇧	
496	619	123	8.5%
80%		20%	7,245

Pacific Heights Blvd

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Pacific Center Blvd**

Pacific Heights Blvd (North Leg)

417	598	181	16.6%
⇩		⇧	3,934

Southbound: 86 ⬃ | 319 ⇩ | 0 ⬂

Pacific Center Blvd (West Leg)

476	⇦
852	
376	⇨
9.5%	
8,761	

Eastbound: 33 ⬀ | 347 ⇨ | 25 ⬂

Total Entering Volume: **1857**

Westbound: ⬁ 141 | ⇦ 388 | ⬃ 395

Pacific Center Blvd (East Leg)

⇦	952
	1413
⇨	461
	12.2%
	12,555

Northbound: ⬁ 2 | ⇧ 7 | ⬀ 114

Pacific Heights Blvd (South Leg)

⇩		⇧	
739	851	112	8.5%
			8,216

Pacific Heights Blvd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 59 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Pacific Mesa Blvd**
E/W Street:	**Pacific Center Blvd**
Intersection #:	**59**

Pacific Mesa Blvd (North)

25%		75%	
2	8	6	9.0%
			89

Southbound movements: 0 (right), 1 (through), 1 (left)

Westbound movements: 0 (U-turn), 17 (through), 47 (left)

Eastbound movements: 3 (left), 27 (through), 10 (right)

Total Entering Volume: **802**

Northbound movements: 351 (left), 3 (through), 342 (right)

Pacific Center Blvd (West)

90%	368
	408
10%	40
12.4%	
3,293	

Pacific Center Blvd (East)

64	15%
434	
370	85%
9.0%	
4,822	

Pacific Mesa Blvd (South)

58	754	696	8.0%
8%		92%	9,398

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Pacific Mesa Blvd**
E/W Street:	**Pacific Center Blvd**

Pacific Mesa Blvd (North)

19	51	32	9.0%
			625

Southbound movements: 0 (right), 1 (through), 19 (left)

Westbound movements: 0 (U-turn), 510 (through), 97 (left)

Eastbound movements: 17 (left), 173 (through), 2 (right)

Total Entering Volume: **3004**

Northbound movements: 447 (left), 15 (through), 1723 (right)

Pacific Center Blvd (West)

957
1148
191
12.4%
11,089

Pacific Center Blvd (East)

608
2523
1915
9.0%
32,299

Pacific Mesa Blvd (South)

100	2286	2186	8.0%
			20,838

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 59 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Pacific Mesa Blvd**
E/W Street:	**Pacific Center Blvd**
Intersection #:	**59**

Pacific Mesa Blvd

11%		89%	
1	9	8	10.1%
⇩		⇧	89

Southbound approach: 0 ⇙ | 1 ⇩ | 0 ⇘

Pacific Center Blvd (west leg)

32%	92	⇦
	289	
68%	197	⇨
8.8%		
3,293		

Eastbound approach: 7 ⬀ | 18 ⇨ | 172 ⇘

Total Entering Volume: **601**

Westbound approach: ⇖ 0 | ⇦ 54 | ⇙ 262

Pacific Center Blvd (east leg)

⇦	316	83%
	382	
⇨	66	17%
	7.9%	
	4,822	

Northbound approach: ⇖ 38 | ⇧ 1 | ⬀ 48

⇩		⇧	
435	522	87	5.6%
83%		17%	9,398

Pacific Mesa Blvd

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Pacific Mesa Blvd**
E/W Street:	**Pacific Center Blvd**

Pacific Mesa Blvd

6	81	75	10.1%
⇩		⇧	625

Southbound approach: 0 ⇙ | 6 ⇩ | 0 ⇘

Pacific Center Blvd (west leg)

416	⇦
945	
529	⇨
8.8%	
11,089	

Eastbound approach: 67 ⬀ | 440 ⇨ | 57 ⇘

Total Entering Volume: **2377**

Westbound approach: ⇖ 0 | ⇦ 410 | ⇙ 1230

Pacific Center Blvd (east leg)

⇦	1688
	2281
⇨	593
	7.9%
	32,299

Northbound approach: ⇖ 6 | ⇧ 8 | ⬀ 153

⇩		⇧	
1293	1447	154	5.6%
			20,838

Pacific Mesa Blvd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 60 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Business Access Rd**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**60**

Business Access Rd (North Leg)

28%		72%	
8	29	21	9.0%
⇩		⇧	322

Southbound movements: 8 ⬋ | 0 ⇩ | 0 ⬊

Carroll Canyon Rd (West Leg)

19%	132	⇦
	688	
81%	556	⇨
5.7%		
12,130		

Eastbound movements: 17 ⬀ | 539 ⇨ | 0 ⬂

Total Entering Volume: **692**

Carroll Canyon Rd (East Leg)

Westbound movements: 4 ⬉ | 124 ⇦ | 0 ⬃

⇦	128	19%
	667	
⇨	539	81%
	5.5%	
	12,130	

Northbound movements: 0 ⬉ | 0 ⇧ | 0 ⬈

Business Access Rd (South Leg)

⇩		⇧	
0	0	0	0.0%
0%		0%	0

Business Access Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Business Access Rd**
E/W Street:	**Carroll Canyon Rd**

Business Access Rd (North Leg)

274	851	577	9.0%
⇩		⇧	9,824

Southbound movements: 214 ⬋ | 0 ⇩ | 0 ⬊

Carroll Canyon Rd (West Leg)

221	⇦
1380	
1159	⇨
5.7%	
22,493	

Eastbound movements: 310 ⬀ | 901 ⇨ | 0 ⬂

Total Entering Volume: **1699**

Carroll Canyon Rd (East Leg)

Westbound movements: 267 ⬉ | 7 ⇦ | 0 ⬃

⇦	266
	1167
⇨	901
	5.5%
	22,493

Northbound movements: 0 ⬉ | 0 ⇧ | 0 ⬈

Business Access Rd (South Leg)

⇩		⇧	
0	0	0	0.0%
			0

Business Access Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 60 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Business Access Rd**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**60**

Business Access Rd

76%		24%	
16	21	5	6.5%
⇩		⇧	322

Southbound movements: 15 ⇙ | 0 ⇩ | 1 ⇘

Westbound movements: 2 ⇖ | 794 ⇦ | 0 ⇙

Eastbound movements: 3 ⇗ | 223 ⇨ | 0 ⇘

Northbound movements: 0 ⇖ | 0 ⇧ | 0 ⇗

Total Entering Volume: **1038**

Carroll Canyon Rd (West)

78%	809	⇦
	1035	
22%	226	⇨
8.5%		
12,130		

Carroll Canyon Rd (East)

⇦	796	78%
	1020	
⇨	224	22%
	8.4%	
	12,130	

⇩		⇧	
0	0	0	0.0%
0%		0%	0

Business Access Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Business Access Rd**
E/W Street:	**Carroll Canyon Rd**

Business Access Rd

457	622	165	6.5%
⇩		⇧	9,824

Southbound movements: 358 ⇙ | 0 ⇩ | 99 ⇘

Westbound movements: 115 ⇖ | 1256 ⇦ | 0 ⇙

Eastbound movements: 50 ⇗ | 348 ⇨ | 0 ⇘

Northbound movements: 0 ⇖ | 0 ⇧ | 0 ⇗

Total Entering Volume: **2226**

Carroll Canyon Rd (West)

1614	⇦
2005	
391	⇨
8.5%	
22,493	

Carroll Canyon Rd (East)

⇦	1378
	1825
⇨	447
	8.4%
	22,493

⇩		⇧	
0	0	0	0.0%
			0

Business Access Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 61 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Scranton Rd**
E/W Street:	**Mira Sorrento Pl**
Intersection #:	**61**

Scranton Rd

15%		85%		
121	819	698	7.5%	
⇩		⇧	10,870	

Southbound approach: 58 ⬃ | 63 ⇩ | 0 ⬂

Mira Sorrento Pl (West)

17%	127	⇦		
	758		482 ⬀	
83%	631	⇨	0 ⇨	
7.5%			149 ⬂	
10,145				

1037

Mira Sorrento Pl (East)

⬁ 0				
⇦ 0	⇦	0	0%	
⬃ 0		0		
	⇨	0	0%	
		0.0%		
		0		

Northbound approach: ⬁ 69 | ⇧ 216 | ⬀ 0

⇩		⇧		
212	497	285	2.7%	
43%		57%	18,296	

Scranton Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Scranton Rd**
E/W Street:	**Mira Sorrento Pl**

Scranton Rd

258	1847	1589	7.5%
⇩		⇧	23,915

Southbound approach: 221 ⬃ | 39 ⇩ | 0 ⬂

Mira Sorrento Pl (West)

349	⇦		
1973		1443 ⬀	
1624	⇨	0 ⇨	
7.5%		177 ⬂	
26,973			

2154

Mira Sorrento Pl (East)

⬁ 0		
⇦ 0	⇦	0
⬃ 0		0
	⇨	0
		0.0%
		0

Northbound approach: ⬁ 128 | ⇧ 146 | ⬀ 0

⇩		⇧	
216	488	272	2.7%
			18,020

Scranton Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 61 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Scranton Rd**
E/W Street:	**Mira Sorrento Pl**
Intersection #:	**61**

Scranton Rd

77%		23%	
679	880	201	8.1%
⇩		⇧	10,870

Southbound: 414 ⇙ | 265 ⇩ | 0 ⇘

Westbound: ⇖ 0 | ⇦ 0 | ⇙ 0

Eastbound: 76 ⇗ | 0 ⇨ | 57 ⇘

Northbound: ⇖ 284 | ⇧ 125 | ⇗ 0

Total Entering Volume: **1221**

Mira Sorrento Pl (West)

84%	698	⇦
	831	
16%	133	⇨
8.2%		
10,145		

Mira Sorrento Pl (East)

⇦	0	0%
	0	
⇨	0	0%
	0.0%	
	0	

⇩		⇧	
322	731	409	4.0%
44%		56%	18,296

Scranton Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Scranton Rd**
E/W Street:	**Mira Sorrento Pl**

Scranton Rd

1614	2025	411	8.1%
⇩		⇧	23,915

Southbound: 1397 ⇙ | 216 ⇩ | 0 ⇘

Westbound: ⇖ 0 | ⇦ 0 | ⇙ 0

Eastbound: 304 ⇗ | 0 ⇨ | 79 ⇘

Northbound: ⇖ 329 | ⇧ 107 | ⇗ 0

Total Entering Volume: **2432**

Mira Sorrento Pl (West)

1726	⇦
2109	
383	⇨
8.2%	
26,973	

Mira Sorrento Pl (East)

⇦	0
	0
⇨	0
	0.0%
	0

⇩		⇧	
295	730	435	4.0%
			18,020

Scranton Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 62 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Youngstown Way**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**62**

Youngstown Way (North leg)

26%		74%	
18	68	50	9.0%
⇩		⇧	756

Southbound movements: 12 ⬃, 0 ⇩, 6 ⬂

Westbound movements: 25 ⬁, 165 ⇦, 0 ⬃

Eastbound movements: 25 ⬀, 869 ⇨, 0 ⬂

Northbound movements: 0 ⬁, 0 ⇧, 0 ⬀

Total Entering Volume: **1102**

Carroll Canyon Rd (West leg)

17%	177	⇦
	1071	
83%	894	⇨
8.1%		
13,164		

Carroll Canyon Rd (East leg)

⇦	190	18%
	1065	
⇨	875	82%
	8.1%	
	13,164	

Youngstown Way (South leg)

⇩		⇧	
0	0	0	0.0%
0%		0%	0

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Youngstown Way**
E/W Street:	**Carroll Canyon Rd**

Youngstown Way (North leg)

322	1032	710	9.0%
⇩		⇧	11,957

Southbound movements: 166 ⬃, 0 ⇩, 156 ⬂

Westbound movements: 341 ⬁, 157 ⇦, 0 ⬃

Eastbound movements: 369 ⬀, 1672 ⇨, 0 ⬂

Northbound movements: 0 ⬁, 0 ⇧, 0 ⬀

Total Entering Volume: **2861**

Carroll Canyon Rd (West leg)

323	⇦
2365	
2042	⇨
8.1%	
26,673	

Carroll Canyon Rd (East leg)

⇦	497
	2325
⇨	1828
	8.1%
	30,587

Youngstown Way (South leg)

⇩		⇧	
0	0	0	0.0%
			0

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 62 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Youngstown Way**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**62**

Youngstown Way (North Leg)

87%		13%	
162	187	25	24.7%
⇩		⇧	756

Southbound: 143 ⬃ | 0 ⇩ | 19 ⬂

Carroll Canyon Rd (West Leg)

73%	981	⇦
	1338	
27%	357	⇨
10.2%		
13,164		

Eastbound: 15 ⬀ | 342 ⇨ | 0 ⬂

Total Entering Volume: **1367**

Westbound: 10 ⬁ | 838 ⇦ | 0 ⬃

Carroll Canyon Rd (East Leg)

⇦	848	70%
	1209	
⇨	361	30%
	9.2%	
	13,164	

Northbound: 0 ⬁ | 0 ⇧ | 0 ⬀

Youngstown Way (South Leg)

⇩		⇧	
0	0	0	0.0%
0%		0%	0

Youngstown Way

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Youngstown Way**
E/W Street:	**Carroll Canyon Rd**

Youngstown Way (North Leg)

2067	2588	521	24.7%
⇩		⇧	11,957

Southbound: 1405 ⬃ | 0 ⇩ | 661 ⬂

Carroll Canyon Rd (West Leg)

2615	⇦
3198	
583	⇨
10.2%	
26,673	

Eastbound: 142 ⬀ | 442 ⇨ | 0 ⬂

Total Entering Volume: **4239**

Westbound: 379 ⬁ | 1210 ⇦ | 0 ⬃

Carroll Canyon Rd (East Leg)

⇦	1589
	2692
⇨	1103
	9.2%
	30,587

Northbound: 0 ⬁ | 0 ⇧ | 0 ⬀

Youngstown Way (South Leg)

⇩		⇧	
0	0	0	0.0%
			0

Youngstown Way

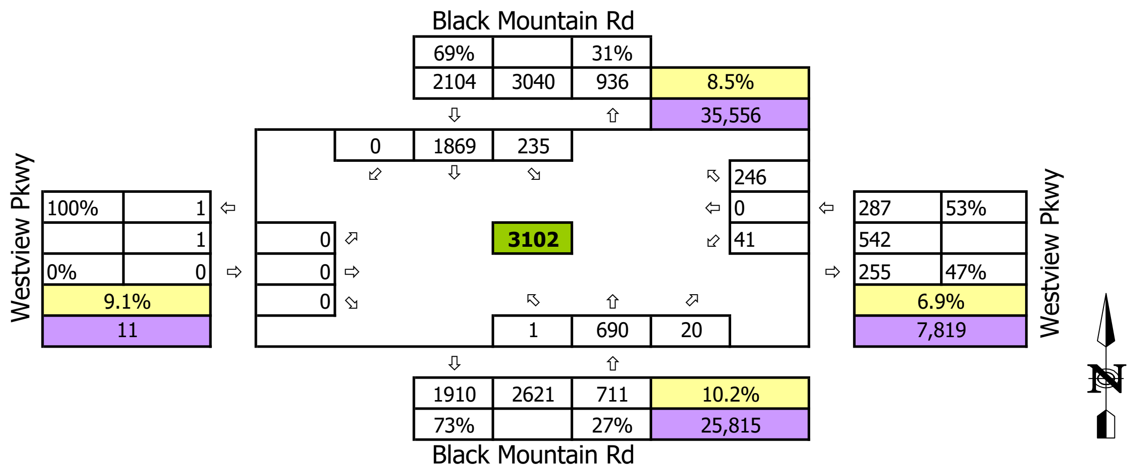
N

LEGEND

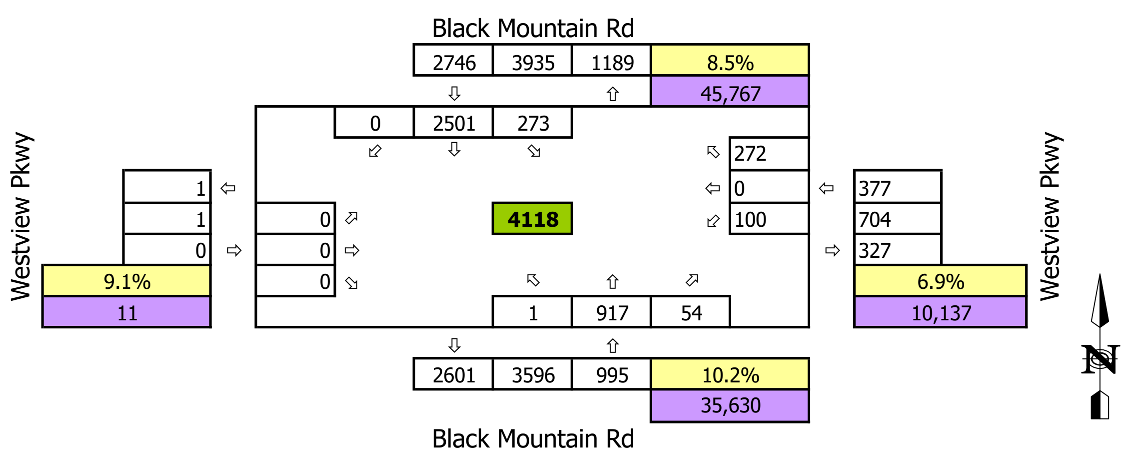
Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 63 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Westview Pkwy**
Intersection #:	**63**



Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Westview Pkwy**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 63 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Westview Pkwy**
Intersection #:	**63**

North leg – Black Mountain Rd

38%		62%	
1256	3279	2023	9.2%
⇩		⇧	35,556

Southbound movements: 0 (right ⬋), 1010 (through ⇩), 246 (left ⬊)

West leg – Westview Pkwy

100%	1 ⇦
	1
0%	0 ⇨
9.1%	
11	

Eastbound movements: 0 (left ⬀), 0 (through ⇨), 0 (right ⬂)

Total Entering Volume: **3373**

East leg – Westview Pkwy

Westbound movements: 316 (right ⬁), 0 (through ⇦), 20 (left ⬃)

⇦ 336	51%
655	
⇨ 319	49%
8.4%	
7,819	

Northbound movements: 1 (left ⬁), 1707 (through ⇧), 73 (right ⬀)

South leg – Black Mountain Rd

⇩		⇧	
1030	2811	1781	10.9%
37%		63%	25,815

Black Mountain Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Westview Pkwy**

North leg – Black Mountain Rd

1603	4228	2625	9.2%
⇩		⇧	45,767

Southbound movements: 0 (right ⬋), 1377 (through ⇩), 258 (left ⬊)

West leg – Westview Pkwy

1 ⇦
1
0 ⇨
9.1%
11

Eastbound movements: 0 (left ⬀), 0 (through ⇨), 0 (right ⬂)

Total Entering Volume: **4475**

East leg – Westview Pkwy

Westbound movements: 374 (right ⬁), 0 (through ⇦), 56 (left ⬃)

⇦ 433
849
⇨ 416
8.4%
10,137

Northbound movements: 1 (left ⬁), 2251 (through ⇧), 158 (right ⬀)

South leg – Black Mountain Rd

⇩		⇧	
1433	3872	2439	10.9%
			35,630

Black Mountain Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 64 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Capricorn Way**
Intersection #:	**64**

Black Mountain Rd

71%		29%	
1779	2514	735	9.7%
			25,815

Southbound approach (from Black Mountain Rd, north): 546 | 1199 | 34

Westbound approach (from Capricorn Way, east): 28 | 175 | 65

Eastbound approach (from Capricorn Way, west): 366 | 226 | 157

Northbound approach (from Black Mountain Rd, south): 108 | 341 | 43

Total Entering Volume: **3288**

Capricorn Way (west)

53%	829
	1578
47%	749
12.6%	
12,481	

Capricorn Way (east)

268	47%
571	
303	53%
8.9%	
6,438	

1421	1913	492	7.8%
74%		26%	24,454

Black Mountain Rd

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Capricorn Way**

Black Mountain Rd

2407	3503	1096	9.7%
			36,643

Southbound approach (from Black Mountain Rd, north): 1002 | 1376 | 25

Westbound approach (from Capricorn Way, east): 16 | 77 | 20

Eastbound approach (from Capricorn Way, west): 706 | 102 | 165

Northbound approach (from Black Mountain Rd, south): 106 | 374 | 12

Total Entering Volume: **3981**

Capricorn Way (west)

1185
2157
972
12.6%
16,976

Capricorn Way (east)

112
251
139
8.9%
2,807

1561	2051	490	7.8%
			25,553

Black Mountain Rd

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 64 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Capricorn Way**
Intersection #:	**64**

Black Mountain Rd

37%		63%	
1022	2778	1756	10.8%
⇩		⇧	25,815

Southbound approach: 425 ⬃ | 560 ⇩ | 37 ⬂

Westbound approach: 23 ⬁ | 145 ⇦ | 37 ⬃

Eastbound approach: 677 ⬀ | 251 ⇨ | 70 ⬂

Northbound approach: 161 ⬁ | 1056 ⇧ | 95 ⬀

Total Entering Volume: **3537**

Capricorn Way (west)

42%	731	⇦
	1729	
58%	998	⇨
13.9%		
12,481		

Capricorn Way (east)

⇦	205	35%
	588	
⇨	383	65%
	9.1%	
	6,438	

⇩		⇧	
667	1979	1312	8.1%
34%		66%	24,454

Black Mountain Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Capricorn Way**

Black Mountain Rd

1465	3933	2468	10.8%
⇩		⇧	36,643

Southbound approach: 798 ⬃ | 625 ⇩ | 28 ⬂

Westbound approach: 15 ⬁ | 61 ⇦ | 13 ⬃

Eastbound approach: 1217 ⬀ | 108 ⇨ | 52 ⬂

Northbound approach: 127 ⬁ | 1236 ⇧ | 29 ⬀

Total Entering Volume: **4309**

Capricorn Way (west)

986	⇦
2356	
1370	⇨
13.9%	
16,976	

Capricorn Way (east)

⇦	90
	255
⇨	165
	9.1%
	2,807

⇩		⇧	
690	2074	1384	8.1%
			25,553

Black Mountain Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 65 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Achilles Way**
Intersection #:	**65**

Black Mountain Rd

75%		25%	
1411	1889	478	7.7%
⇩		⇧	24,454
2	1364	45	

Achilles Way (West)

29%	4	⇦
	14	
71%	10	⇨
9.0%		
156		

Westbound approach (from Achilles Way East): 67, 1, 168

Eastbound approach (from Achilles Way West): 1, 4, 5

2227

Achilles Way (East)

⇦	236	53%
	444	
⇨	208	47%
	9.0%	
	4,933	

Northbound approach: 1 | 410 | 159

⇩		⇧	
1537	2107	570	8.5%
73%		27%	24,797

Black Mountain Rd

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Achilles Way**

Black Mountain Rd

1438	1935	497	7.7%
⇩		⇧	25,177
9	1419	18	

Achilles Way (West)

19	⇦
65	
46	⇨
9.0%	
723	

Westbound approach (from Achilles Way East): 28, 0, 90

Eastbound approach (from Achilles Way West): 8, 10, 29

2161

Achilles Way (East)

⇦	117
	222
⇨	105
	9.0%
	2,471

Northbound approach: 10 | 462 | 78

⇩		⇧	
1539	2098	559	8.5%
			24,570

Black Mountain Rd

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 65 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Achilles Way**
Intersection #:	**65**

Black Mountain Rd (North Leg)

33%		67%	
663	1985	1322	8.1%
⇩		⇧	24,454

Southbound movements: 2 | 621 | 40

Westbound movements: 67 | 2 | 59

Eastbound movements: 1 | 0 | 3

Northbound movements: 3 | 1254 | 214

Total Entering Volume: **2266**

Achilles Way (West Leg)

64%	7
	11
36%	4
7.1%	
156	

Achilles Way (East Leg)

128	34%
382	
254	66%
7.7%	
4,933	

Black Mountain Rd (South Leg)

⇩		⇧	
683	2154	1471	8.7%
32%		68%	24,797

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Achilles Way**

Black Mountain Rd (North Leg)

678	2048	1370	8.1%
⇩		⇧	25,177

Southbound movements: 13 | 639 | 26

Westbound movements: 33 | 5 | 27

Eastbound movements: 5 | 0 | 14

Northbound movements: 15 | 1332 | 102

Total Entering Volume: **2211**

Achilles Way (West Leg)

32
51
19
7.1%
723

Achilles Way (East Leg)

64
192
128
7.7%
2,471

Black Mountain Rd (South Leg)

⇩		⇧	
680	2129	1449	8.7%
			24,570

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 66 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Gemini Ave**
Intersection #:	**66**

Black Mountain Rd (north leg)

73%		27%	
1520	2092	572	8.4%
⇩		⇧	24,797

Southbound approach: 211 (right) / 1267 (through) / 42 (left)

Westbound approach (Gemini Ave, east leg): 22 (left) / 22 (through) / 29 (right)

Eastbound approach (Gemini Ave, west leg): 150 (left) / 20 (through) / 329 (right)

Northbound approach: 198 (left) / 400 (through) / 10 (right)

Total Entering Volume: **2700**

Gemini Ave (west leg)

46%	431 ⇦
	930
54%	499 ⇨
9.5%	
9,839	

Gemini Ave (east leg)

⇦ 73	50%
145	
⇨ 72	50%
9.0%	
1,611	

Black Mountain Rd (south leg)

⇩		⇧	
1625	2233	608	8.1%
73%		27%	27,659

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Gemini Ave**

Black Mountain Rd (north leg)

1519	2082	563	8.4%
⇩		⇧	24,570

Southbound approach: 263 (right) / 1195 (through) / 61 (left)

Westbound approach (Gemini Ave, east leg): 31 (left) / 50 (through) / 49 (right)

Eastbound approach (Gemini Ave, west leg): 179 (left) / 45 (through) / 473 (right)

Northbound approach: 279 (left) / 353 (through) / 21 (right)

Total Entering Volume: **2999**

Gemini Ave (west leg)

592 ⇦	
1289	
697 ⇨	
9.5%	
13,639	

Gemini Ave (east leg)

⇦ 129	
255	
⇨ 126	
9.0%	
2,835	

Black Mountain Rd (south leg)

⇩		⇧	
1717	2370	653	8.1%
			29,460

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 66 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Gemini Ave**
Intersection #:	**66**

Black Mountain Rd

31%		69%	
676	2155	1479	8.7%
⇩		⇧	24,797

Southbound: 83 | 542 | 51

Westbound: 81 | 64 | 85

Eastbound: 374 | 67 | 325

Northbound: 309 | 1024 | 17

Total Entering Volume: **3022**

Gemini Ave (West)

37%	456 ⇦
	1222
63%	766 ⇨
12.4%	
9,839	

Gemini Ave (East)

⇦ 230	63%
365	
⇨ 135	37%
22.7%	
1,611	

⇩		⇧	
952	2302	1350	8.3%
41%		59%	27,659

Black Mountain Rd

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Gemini Ave**

Black Mountain Rd

649	2164	1515	8.7%
⇩		⇧	24,570

Southbound: 101 | 477 | 72

Westbound: 120 | 137 | 137

Eastbound: 453 | 139 | 434

Northbound: 415 | 942 | 34

Total Entering Volume: **3461**

Gemini Ave (West)

653 ⇦
1681
1028 ⇨
12.4%
13,639

Gemini Ave (East)

⇦ 392
637
⇨ 245
22.7%
2,835

⇩		⇧	
1048	2440	1392	8.3%
			29,460

Black Mountain Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 67 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Hillery Dr**
Intersection #:	**67**

Black Mountain Rd (North leg)

68%		32%	
960	1411	451	7.7%
⇩		⇧	18,301

Southbound turning movements: 129 ⬋ | 678 ⇩ | 153 ⬊

Westbound turning movements: 122 ⬉ | 338 ⇦ | 383 ⬋

Eastbound turning movements: 87 ⬀ | 194 ⇨ | 185 ⬂

Northbound turning movements: 173 ⬉ | 242 ⇧ | 195 ⬈

Total Entering Volume: **2879**

Hillery Dr (West leg)

58%	640	⇦
	1106	
42%	466	⇨
9.0%		
12,224		

Hillery Dr (East leg)

⇦	843	61%
	1385	
⇨	542	39%
	9.0%	
	15,473	

Black Mountain Rd (South leg)

⇩		⇧	
1246	1856	610	7.9%
67%		33%	23,507

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Hillery Dr**

Black Mountain Rd (North leg)

1200	1745	545	7.7%
⇩		⇧	22,474

Southbound turning movements: 209 ⬋ | 874 ⇩ | 117 ⬊

Westbound turning movements: 95 ⬉ | 331 ⇦ | 301 ⬋

Eastbound turning movements: 138 ⬀ | 184 ⇨ | 300 ⬂

Northbound turning movements: 284 ⬉ | 312 ⇧ | 152 ⬈

Total Entering Volume: **3297**

Hillery Dr (West leg)

825	⇦
1447	
622	⇨
9.0%	
16,025	

Hillery Dr (East leg)

⇦	727
	1179
⇨	452
	9.0%
	13,113

Black Mountain Rd (South leg)

⇩		⇧	
1475	2223	748	7.9%
			28,307

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 67 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Hillery Dr**
Intersection #:	**67**

Black Mountain Rd (north leg)

43%		57%	
680	1577	897	8.6%
⇩		⇧	18,301

Southbound approach: 73 (right), 431 (through), 176 (left)

Westbound approach: 102 (right), 279 (through), 230 (left)

Eastbound approach: 165 (left), 497 (through), 110 (right)

Northbound approach: 184 (left), 630 (through), 525 (right)

Total Entering Volume: **3402**

Hillery Dr (west leg)

41%	536 ⇦
	1308
59%	772 ⇨
10.7%	
12,224	

Hillery Dr (east leg)

⇦ 611	34%
1809	
⇨ 1198	66%
11.7%	
15,473	

Black Mountain Rd (south leg)

⇩		⇧	
771	2110	1339	9.0%
37%		63%	23,507

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Hillery Dr**

Black Mountain Rd (north leg)

811	1947	1136	8.6%
⇩		⇧	22,474

Southbound approach: 120 (right), 568 (through), 125 (left)

Westbound approach: 67 (right), 259 (through), 176 (left)

Eastbound approach: 268 (left), 502 (through), 213 (right)

Northbound approach: 345 (left), 801 (through), 420 (right)

Total Entering Volume: **3864**

Hillery Dr (west leg)

724 ⇦
1707
983 ⇨
10.7%
16,025

Hillery Dr (east leg)

⇦ 503
1549
⇨ 1046
11.7%
13,113

Black Mountain Rd (south leg)

⇩		⇧	
957	2523	1566	9.0%
			28,307

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 68 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Miramar College Dwy**
Intersection #:	**68**

Black Mountain Rd

68%		32%	
1237	1817	580	7.7%
			23,507

Southbound: 0 | 994 | 243

Miramar College Dwy (West)

0%	0
	0
0%	0
0.0%	
0	

Eastbound: 0 | 0 | 0

2037

Westbound: 15 | 0 | 27

Miramar College Dwy (East)

42	9%
478	
436	91%
9.0%	
5,311	

Northbound: 0 | 565 | 193

1021	1779	758	7.6%
57%		43%	23,507

Black Mountain Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Miramar College Dwy**

Black Mountain Rd

1465	2175	710	7.7%
			28,307

Southbound: 0 | 1300 | 175

Miramar College Dwy (West)

0
0
0
0.0%
0

Eastbound: 0 | 0 | 0

2457

Westbound: 11 | 0 | 29

Miramar College Dwy (East)

39
457
418
9.0%
5,013

Northbound: 0 | 699 | 243

1329	2282	953	7.6%
			30,065

Black Mountain Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 68 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Miramar College Dwy**
Intersection #:	**68**

Black Mountain Rd (North leg)

39%		61%	
801	2076	1275	8.8%
⇩		⇧	23,507

Southbound: 0 | 633 | 168

Westbound: 89 | 0 | 76

Eastbound: 0 | 0 | 0

Northbound: 0 | 1186 | 132

Total Entering Volume: **2284**

Miramar College Dwy (West leg)

0%	0
	0
0%	0
0.0%	
0	

Miramar College Dwy (East leg)

165	35%
465	
300	65%
8.8%	
5,311	

Black Mountain Rd (South leg)

⇩		⇧	
709	2027	1318	8.6%
35%		65%	23,507

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Miramar College Dwy**

Black Mountain Rd (North leg)

950	2508	1558	8.8%
⇩		⇧	28,307

Southbound: 0 | 831 | 129

Westbound: 66 | 0 | 89

Eastbound: 0 | 0 | 0

Northbound: 0 | 1492 | 158

Total Entering Volume: **2765**

Miramar College Dwy (West leg)

0
0
0
0.0%
0

Miramar College Dwy (East leg)

154
441
287
8.8%
5,013

Black Mountain Rd (South leg)

⇩		⇧	
920	2581	1661	8.6%
			30,065

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 69 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Gold Coast Dr**
Intersection #:	**69**

Black Mountain Rd

59%		41%	
1023	1724	701	7.3%
⇩		⇧	23,507

Southbound approach: 177 | 684 | 162

Gold Coast Dr (West)

51%	646	⇦
	1272	
49%	626	⇨
12.6%		
10,120		

Eastbound approach: 131 ⬀ | 165 ⇨ | 330 ⬂

Total Entering Volume: **2742**

Westbound approach: ⬁ 185 | ⇦ 241 | ⬃ 36

Gold Coast Dr (East)

⇦	462	57%
	807	
⇨	345	43%
	10.5%	
	7,710	

Northbound approach: 228 | 385 | 18

⇩		⇧	
1050	1681	631	6.8%
62%		38%	24,794

Black Mountain Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Gold Coast Dr**

Black Mountain Rd

1317	2208	891	7.3%
⇩		⇧	30,065

Southbound approach: 233 | 935 | 149

Gold Coast Dr (West)

649	⇦
1286	
637	⇨
12.6%	
10,233	

Eastbound approach: 174 ⬀ | 116 ⇨ | 347 ⬂

Total Entering Volume: **3134**

Westbound approach: ⬁ 177 | ⇦ 175 | ⬃ 30

Gold Coast Dr (East)

⇦	381
	662
⇨	281
	10.5%
	6,329

Northbound approach: 242 | 540 | 16

⇩		⇧	
1312	2110	798	6.8%
			31,172

Black Mountain Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 69 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Gold Coast Dr**
Intersection #:	**69**

Black Mountain Rd (North Leg)

34%		66%	
680	1985	1305	8.4%
			23,507

Southbound: Right 101, Through 459, Left 120

Westbound: Right 179, Through 196, Left 30

Eastbound: Left 244, Through 163, Right 456

Northbound: Left 244, Through 882, Right 53

Total Entering Volume: **3127**

Gold Coast Dr (West Leg)

39%	541
	1404
61%	863
13.9%	
10,120	

Gold Coast Dr (East Leg)

405	55%
741	
336	45%
9.6%	
7,710	

Black Mountain Rd (South Leg)

945	2124	1179	8.6%
44%		56%	24,794

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Gold Coast Dr**

Black Mountain Rd (North Leg)

884	2525	1641	8.4%
			30,065

Southbound: Right 125, Through 648, Left 112

Westbound: Right 165, Through 145, Left 28

Eastbound: Left 281, Through 115, Right 492

Northbound: Left 268, Through 1195, Right 45

Total Entering Volume: **3619**

Gold Coast Dr (West Leg)

538
1426
888
13.9%
10,233

Gold Coast Dr (East Leg)

338
609
271
9.6%
6,329

Black Mountain Rd (South Leg)

1168	2676	1508	8.6%
			31,172

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 70 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**70**

Black Mountain Rd (North Leg)

66%		34%	
1086	1655	569	6.7%
⇩		⇧	24,797

Southbound movements: 13 | 696 | 377

Westbound movements: 316 | 1 | 777

Eastbound movements: 15 | 8 | 7

Northbound movements: 6 | 238 | 103

Total Entering Volume: **2557**

Carroll Canyon Rd (West Leg)

40%	20
	50
60%	30
9.0%	
556	

Carroll Canyon Rd (East Leg)

1094	69%
1582	
488	31%
8.4%	
18,896	

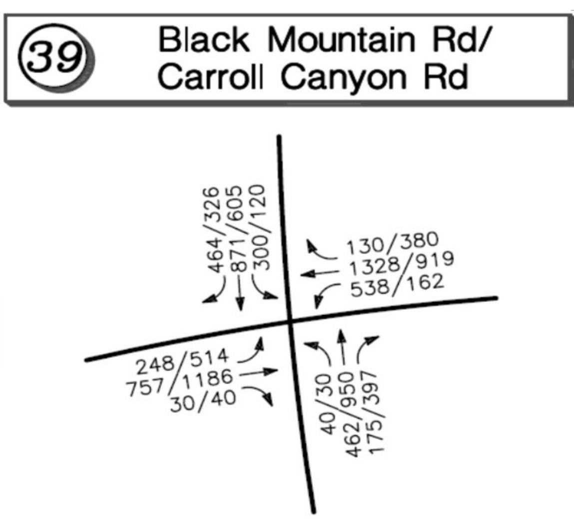
Black Mountain Rd (South Leg)

⇩		⇧	
1480	1827	347	7.6%
81%		19%	23,944

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Carroll Canyon Rd**

Carroll Canyon Rd



Referenced from Fig 11-12 of the Stone Creek TIA.

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 70 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**70**

Black Mountain Rd (north leg)

45%		55%	
971	2164	1193	8.7%
⇩		⇧	24,797

Southbound movements: 19 / 517 / 435

Westbound movements (Carroll Canyon Rd, east leg): 280 / 6 / 169

Eastbound movements (Carroll Canyon Rd, west leg): 12 / 5 / 6

Northbound movements: 16 / 901 / 472

Total Entering Volume: **2838**

Carroll Canyon Rd (west leg)

64%	41	⇦
	64	
36%	23	⇨
11.5%		
556		

Carroll Canyon Rd (east leg)

⇦	455	33%
	1367	
⇨	912	67%
	7.2%	
	18,896	

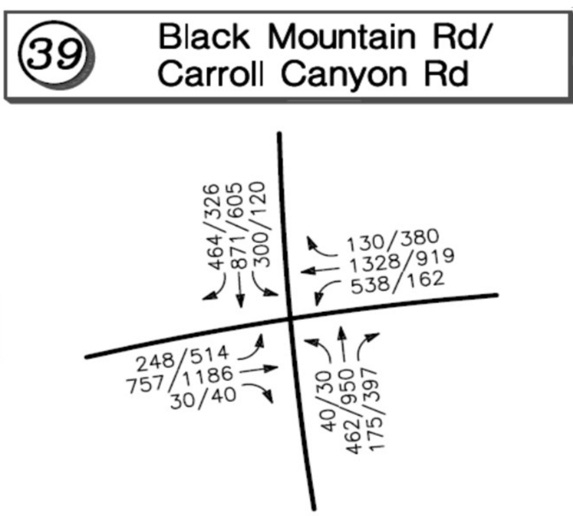
Black Mountain Rd (south leg)

⇩		⇧	
692	2081	1389	8.7%
33%		67%	23,944

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Carroll Canyon Rd**

Carroll Canyon Rd



Referenced from Fig 11-12 of the Stone Creek TIA.

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 71 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Maya Linda Rd**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**71**

Maya Linda Rd (North Leg)

46%		54%	
326	703	377	9.0%
			7,811

Southbound: 20 (right) | 30 (through) | 276 (left)

Westbound: 336 (right) | 1030 (through) | 78 (left)

Eastbound: 9 (left) | 425 (through) | 23 (right)

Northbound: 4 (left) | 32 (through) | 81 (right)

Total Entering Volume: **2344**

Carroll Canyon Rd (West Leg)

70%	1054
	1511
30%	457
8.0%	
18,896	

Carroll Canyon Rd (East Leg)

1444	65%
2226	
782	35%
11.2%	
19,862	

Maya Linda Rd (South Leg)

131	248	117	12.6%
53%		47%	1,970

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Maya Linda Rd**
E/W Street:	**Carroll Canyon Rd**

Maya Linda Rd (North Leg)

569	1300	731	9.0%
			14,327

Southbound: 3 (right) | 3 (through) | 723 (left)

Westbound: 725 (right) | 1947 (through) | 523 (left)

Eastbound: 3 (left) | 967 (through) | 3 (right)

Northbound: 3 (left) | 3 (through) | 537 (right)

Total Entering Volume: **5440**

Carroll Canyon Rd (West Leg)

1952
2711
759
8.0%
33,095

Carroll Canyon Rd (East Leg)

3687
5914
2227
11.2%
53,470

Maya Linda Rd (South Leg)

529	953	424	12.6%
			7,525

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 71 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Maya Linda Rd**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**71**

Maya Linda Rd (North leg)

32%		68%	
202	641	439	8.2%
⇩		⇧	7,811

Southbound approach: 18 ⬃ | 19 ⇩ | 165 ⬂

Carroll Canyon Rd (West leg)

37%	475	⇦
	1270	
63%	795	⇨
6.7%		
18,896		

Eastbound approach: 12 ⬀ | 765 ⇨ | 18 ⬂

Total Entering Volume: **2166**

Carroll Canyon Rd (East leg)

Westbound approach: ⬁ 391 | ⇦ 452 | ⬃ 73

⇦	916	45%
	2058	
⇨	1142	55%
	10.4%	
	19,862	

Northbound approach: ⬁ 5 | ⇧ 36 | ⬀ 212

Maya Linda Rd (South leg)

⇩		⇧	
110	363	253	18.4%
30%		70%	1,970

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Maya Linda Rd**
E/W Street:	**Carroll Canyon Rd**

Maya Linda Rd (North leg)

369	1179	810	8.2%
⇩		⇧	14,327

Southbound approach: 3 ⬃ | 4 ⇩ | 417 ⬂

Carroll Canyon Rd (West leg)

837	⇦
2221	
1384	⇨
6.7%	
33,095	

Eastbound approach: 2 ⬀ | 1582 ⇨ | 4 ⬂

Total Entering Volume: **5165**

Carroll Canyon Rd (East leg)

Westbound approach: ⬁ 802 | ⇦ 833 | ⬃ 416

⇦	2451
	5544
⇨	3093
	10.4%
	53,470

Northbound approach: ⬁ 2 | ⇧ 6 | ⬀ 1094

Maya Linda Rd (South leg)

⇩		⇧	
424	1384	960	18.4%
			7,525

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 72 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Maya Linda Rd**
Intersection #:	**72**

Black Mountain Rd (north leg)

82%		18%	
1521	1854	333	7.7%
⇩		⇧	23,944

Southbound approach: 25 (right) | 1485 (through) | 11 (left)

Maya Linda Rd (west leg)

47%	33 ⇦
	70
53%	37 ⇨
9.0%	
778	

Eastbound approach: 13 (left) | 0 (through) | 24 (right)

Westbound approach: 19 (right) | 0 (through) | 104 (left)

Total entering volume: **2006**

Maya Linda Rd (east leg)

⇦ 123	82%
150	
⇨ 27	18%
9.0%	
1,667	

Northbound approach: 8 (left) | 301 (through) | 16 (right)

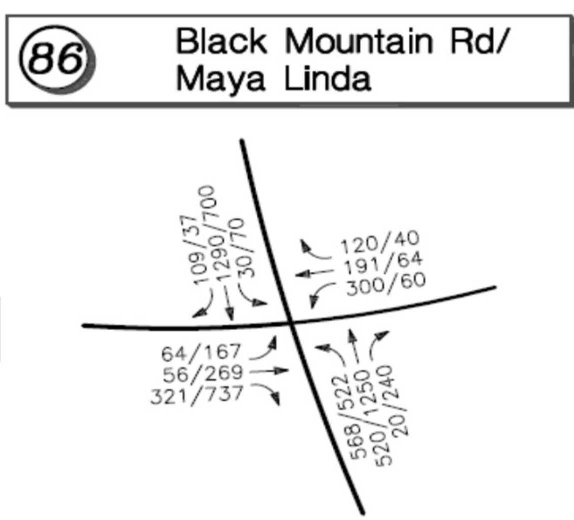
Black Mountain Rd (south leg)

⇩		⇧	
1613	1938	325	8.0%
83%		17%	24,188

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Maya Linda Rd**

Maya Linda Rd



Referenced from Fig 11-12 of the Stone Creek TIA.

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 72 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Maya Linda Rd**
Intersection #:	**72**

Black Mountain Rd

33%		67%	
685	2055	1370	8.6%
⇩		⇧	23,944

Southbound approach: 4 | 656 | 25

Westbound approach (right / through / left): 23 | 0 | 17

Eastbound approach (left / through / right): 2 | 0 | 1

Northbound approach: 3 | 1345 | 232

Total Entering Volume: **2308**

Maya Linda Rd (west leg)

70%	7
	10
30%	3
1.3%	
778	

Maya Linda Rd (east leg)

40	13%
297	
257	87%
17.8%	
1,667	

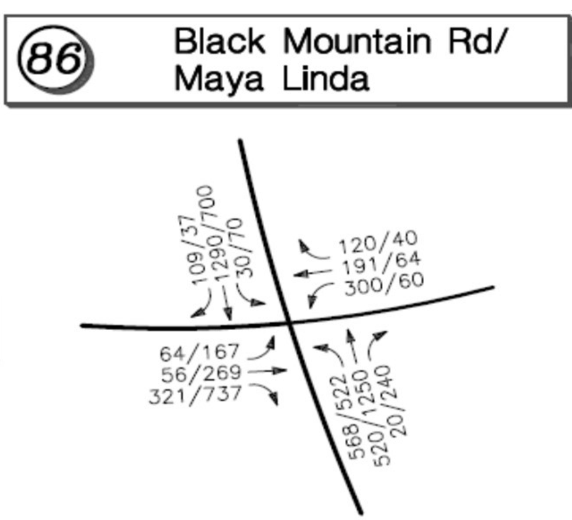
674	2254	1580	9.3%
30%		70%	24,188

Black Mountain Rd

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Maya Linda Rd**

Maya Linda Rd



Referenced from Fig 11-12 of the Stone Creek TIA.

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 73 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd/ Kearny Villa Rd**
E/W Street:	**Carroll Center Rd**
Intersection #:	**73**

Black Mountain Rd/ Kearny Villa Rd

83%		17%	
1543	1848	305	7.6%
⇩		⇧	24,188
1006	490	47	

Carroll Center Rd (West)

86%	1244	⇦		
	1446		144	⬀
14%	202	⇨	32	⇨
9.0%			26	⬂
16,067				

2268

Carroll Center Rd (East)

⬉	30			
⇦	75	⇦	173	56%
⬃	68		308	
		⇨	135	44%
			9.0%	
			3,422	

⬉	⇧	⬀	
163	131	56	
⇩	⇧		
584	934	350	7.7%
63%		37%	12,079

Black Mountain Rd/ Kearny Villa Rd

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Black Mountain Rd/ Kearny Villa Rd**
E/W Street:	**Carroll Center Rd**

Black Mountain Rd/ Kearny Villa Rd

1744	2133	389	7.6%
⇩		⇧	28,973
814	623	307	

Carroll Center Rd (West)

1154	⇦		
1320		77	⬀
166	⇨	76	⇨
9.0%		15	⬂
14,013			

3174

Carroll Center Rd (East)

⬉	169		
⇦	237	⇦	743
⬃	337		1397
		⇨	654
			9.0%
			15,575

⬉	⇧	⬀	
103	144	272	
⇩	⇧		
975	1494	519	7.7%
			18,975

Black Mountain Rd/ Kearny Villa Rd

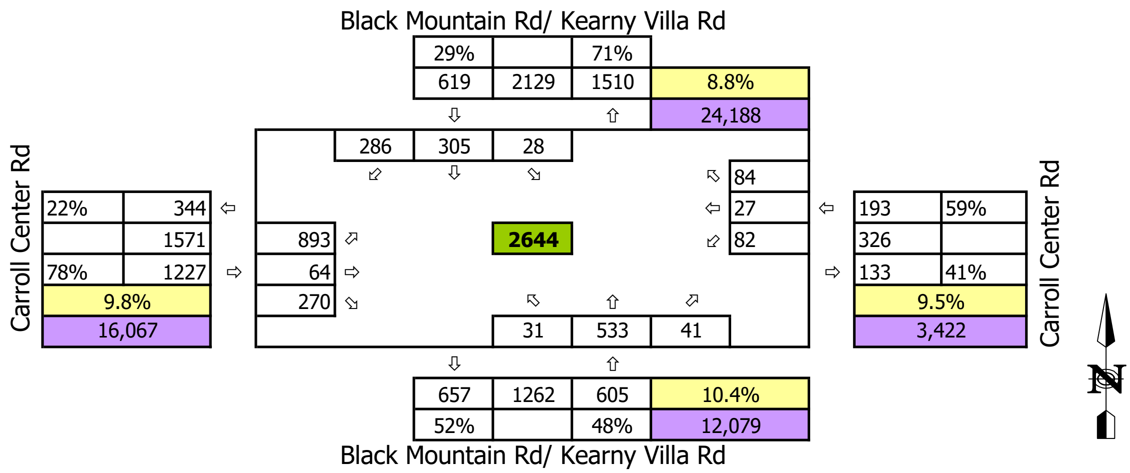
N

LEGEND

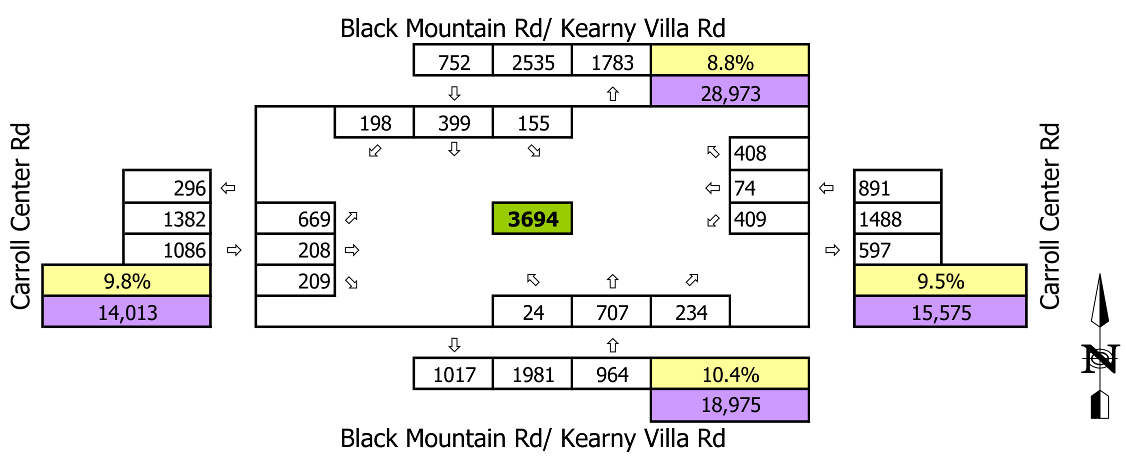
Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 73 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd/ Kearny Villa Rd**
E/W Street:	**Carroll Center Rd**
Intersection #:	**73**



Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Black Mountain Rd/ Kearny Villa Rd**
E/W Street:	**Carroll Center Rd**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 74 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Kearny Mesa Rd**
E/W Street:	**Kearny Villa Rd**
Intersection #:	**74**

Kearny Mesa Rd (North leg)

1%		99%	
1	186	185	9.0%
⇩		⇧	2,067

Southbound movements: 1 ⬃ | 0 ⇩ | 0 ⬂

Westbound movements: 185 ⬁ | 1289 ⇦ | 0 ⬃

Eastbound movements: 0 ⬀ | 625 ⇨ | 0 ⬂

Northbound movements: 0 ⬁ | 0 ⇧ | 0 ⬀

Total Entering Volume: **2100**

Kearny Villa Rd (West leg)

67%	1290	⇦
	1915	
33%	625	⇨
9.0%		
21,278		

Kearny Villa Rd (East leg)

⇦	1474	70%
	2099	
⇨	625	30%
	9.0%	
	23,322	

Kearny Mesa Rd (South leg)

⇩		⇧	
0	0	0	0.0%
0%		0%	0

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Kearny Mesa Rd**
E/W Street:	**Kearny Villa Rd**

Kearny Mesa Rd (North leg)

1	170	169	9.0%
⇩		⇧	1,894

Southbound movements: 1 ⬃ | 0 ⇩ | 0 ⬂

Westbound movements: 169 ⬁ | 2086 ⇦ | 0 ⬃

Eastbound movements: 0 ⬀ | 922 ⇨ | 0 ⬂

Northbound movements: 0 ⬁ | 0 ⇧ | 0 ⬀

Total Entering Volume: **3178**

Kearny Villa Rd (West leg)

2087	⇦
3095	
1008	⇨
9.0%	
34,364	

Kearny Villa Rd (East leg)

⇦	2169
	3091
⇨	922
	9.0%
	34,364

Kearny Mesa Rd (South leg)

⇩		⇧	
0	0	0	0.0%
			0

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 74 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Kearny Mesa Rd**
E/W Street:	**Kearny Villa Rd**
Intersection #:	**74**

Kearny Mesa Rd

10%		90%	
11	115	104	5.6%
⇩		⇧	2,067

11	0	0
⬃	⇩	⬂

Kearny Villa Rd (West)

37%	830	⇦
	2226	
63%	1396	⇨
10.5%		
21,278		

Eastbound approach: 0 ⬀; 1396 ⇨; 0 ⬂

2330

Westbound approach: ⬁ 104; ⇦ 819; ⬃ 0

Northbound approach: ⬁ 0; ⇧ 0; ⬀ 0

Kearny Villa Rd (East)

⇦	923	40%
	2319	
⇨	1396	60%
	9.9%	
	23,322	

⇩		⇧	
0	0	0	0.0%
0%		0%	0

Kearny Mesa Rd

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Kearny Mesa Rd**
E/W Street:	**Kearny Villa Rd**

Kearny Mesa Rd

10	107	97	5.6%
⇩		⇧	1,894

11	0	0
⬃	⇩	⬂

Kearny Villa Rd (West)

1366	⇦
3580	
2214	⇨
10.5%	
34,364	

Eastbound approach: 0 ⬀; 2096 ⇨; 0 ⬂

3559

Westbound approach: ⬁ 97; ⇦ 1355; ⬃ 0

Northbound approach: ⬁ 0; ⇧ 0; ⬀ 0

Kearny Villa Rd (East)

⇦	1335
	3431
⇨	2096
	9.9%
	34,364

⇩		⇧	
0	0	0	0.0%
			0

Kearny Mesa Rd

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 75 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Activity Rd**
Intersection #:	**75**

Black Mountain Rd (North Leg)

85%		15%	
1183	1398	215	8.3%
⇩		⇧	16,795

Southbound movements: 912 ⬃ | 264 ⇩ | 7 ⬂

Activity Rd (West Leg)

81%	1085	⇦
	1338	
19%	253	⇨
11.3%		
11,844		

Eastbound movements: 128 ⬀ | 5 ⇨ | 120 ⬂

Total Entering Volume: **1702**

Westbound movements: 0 ⬁ | 1 ⇦ | 2 ⬃

Activity Rd (East Leg)

⇦	3	16%
	19	
⇨	16	84%
	9.0%	
	211	

Northbound movements: 172 ⬁ | 87 ⇧ | 4 ⬀

Black Mountain Rd (South Leg)

⇩		⇧	
386	649	263	5.6%
59%		41%	11,575

Black Mountain Rd

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Activity Rd**

Black Mountain Rd (North Leg)

1215	1366	151	8.3%
⇩		⇧	14,013

Southbound movements: 896 ⬃ | 258 ⇩ | 62 ⬂

Activity Rd (West Leg)

1329	⇦
1782	
453	⇨
11.3%	
17,213	

Eastbound movements: 88 ⬀ | 101 ⇨ | 265 ⬂

Total Entering Volume: **2302**

Westbound movements: 0 ⬁ | 24 ⇦ | 45 ⬃

Activity Rd (East Leg)

⇦	69
	322
⇨	253
	9.0%
	3,951

Northbound movements: 409 ⬁ | 63 ⇧ | 91 ⬀

Black Mountain Rd (South Leg)

⇩		⇧	
567	1130	563	5.6%
			20,174

Black Mountain Rd

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 75 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Activity Rd**
Intersection #:	**75**

Black Mountain Rd (North)

22%		78%	
349	1552	1203	9.2%
⇩		⇧	16,795

Southbound approach: 167 ⇙ (right) | 180 ⇩ (through) | 2 ⇘ (left)

Activity Rd (West)

18%	290	⇦
	1626	
82%	1336	⇨
13.7%		
11,844		

Eastbound approach: 871 ⬀ | 3 ⇨ | 462 ⇘

Total Entering Volume: **2153**

Westbound approach: ⇖ 9 | ⇦ 4 | ⇙ 7

Activity Rd (East)

⇦	20	65%
	31	
⇨	11	35%
	14.7%	
	211	

Northbound approach: ⇖ 119 | ⇧ 323 | ⬀ 6

Black Mountain Rd (South)

⇩		⇧	
649	1097	448	9.5%
59%		41%	11,575

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Black Mountain Rd**
E/W Street:	**Activity Rd**

Black Mountain Rd (North)

264	1382	1118	9.2%
⇩		⇧	14,013

Southbound approach: 114 ⇙ | 131 ⇩ | 21 ⇘

Activity Rd (West)

469	⇦
2231	
1762	⇨
13.7%	
17,213	

Eastbound approach: 729 ⬀ | 68 ⇨ | 964 ⇘

Total Entering Volume: **3075**

Westbound approach: ⇖ 86 | ⇦ 90 | ⇙ 165

Activity Rd (East)

⇦	340
	568
⇨	228
	14.7%
	3,951

Northbound approach: ⇖ 265 | ⇧ 303 | ⬀ 139

Black Mountain Rd (South)

⇩		⇧	
1260	1969	709	9.5%
			20,174

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 76 AM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **Westview Pkwy**
E/W Street: **Mira Lee Way**
Intersection #: **76**

Westview Pkwy (North leg)

66%		34%	
729	1105	376	5.6%
⇩		⇧	19,810

Southbound movements: 5 (right) | 704 (through) | 20 (left)

Mira Lee Way (West leg)

36%	62 ⇦
	174
64%	112 ⇨
9.0%	
1,933	

Eastbound movements: 51 (left) | 18 (through) | 43 (right)

Total Entering Volume: **1848**

Westbound movements: 66 (right) | 18 (through) | 534 (left)

Mira Lee Way (East leg)

⇦ 618	83%
747	
⇨ 129	17%
9.0%	
8,300	

Northbound movements: 39 (left) | 259 (through) | 91 (right)

Westview Pkwy (South leg)

⇩		⇧	
1281	1670	389	8.4%
77%		23%	19,810

N

Scenario: **Future Year 2035 - Recommended Network**
N/S Street: **Westview Pkwy**
E/W Street: **Mira Lee Way**

Westview Pkwy (North leg)

563	831	268	5.6%
⇩		⇧	14,687

Southbound movements: 6 (right) | 552 (through) | 7 (left)

Mira Lee Way (West leg)

60 ⇦
177
117 ⇨
9.0%
1,933

Eastbound movements: 54 (left) | 11 (through) | 52 (right)

Total Entering Volume: **1169**

Westbound movements: 23 (right) | 11 (through) | 191 (left)

Mira Lee Way (East leg)

⇦ 224
267
⇨ 43
9.0%
2,890

Northbound movements: 44 (left) | 192 (through) | 26 (right)

Westview Pkwy (South leg)

⇩		⇧	
796	1059	263	8.4%
			12,827

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 76 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Westview Pkwy**
E/W Street:	**Mira Lee Way**
Intersection #:	**76**

Westview Pkwy

44%		56%	
488	1121	633	5.7%
⇩		⇧	19,810

Southbound approach: 2 | 405 | 81

Mira Lee Way (West)

43%	29	⇦
	68	
57%	39	⇨
3.5%		
1,933		

Eastbound approach: 13 | 8 | 18

1800

Westbound approach: 41 | 3 | 204

Mira Lee Way (East)

⇦	248	33%
	759	
⇨	511	67%
	9.1%	
	8,300	

Northbound approach: 24 | 579 | 422

⇩		⇧	
627	1652	1025	8.3%
38%		62%	19,810

Westview Pkwy

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Westview Pkwy**
E/W Street:	**Mira Lee Way**

Westview Pkwy

352	836	484	5.7%
⇩		⇧	14,687

Southbound approach: 2 | 332 | 27

Mira Lee Way (West)

30	⇦
68	
38	⇨
3.5%	
1,933	

Eastbound approach: 16 | 4 | 19

1118

Westbound approach: 16 | 2 | 68

Mira Lee Way (East)

⇦	83
	267
⇨	184
	9.1%
	2,890

Northbound approach: 26 | 453 | 153

⇩		⇧	
419	1063	644	8.3%
			12,827

Westview Pkwy

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 77 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Westview Pkwy**
E/W Street:	**Galvin Ave**
Intersection #:	**77**

Westview Pkwy

73%		27%	
1256	1717	461	8.7%
⇩		⇧	19,810

Southbound approach: 104 | 1152 | 0

Galvin Ave (West):

40%	252	⇦
	627	
60%	375	⇨
13.8%		
4,548		

Eastbound approach: 138 | 0 | 237

Total Entering Volume: **2102**

Westbound approach: 0 | 0 | 0

Galvin Ave (East):

⇦	0	0%
	0	
⇨	0	0%
	0.0%	
	0	

Northbound approach: 148 | 323 | 0

⇩		⇧	
1389	1860	471	8.3%
75%		25%	22,495

Westview Pkwy

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Westview Pkwy**
E/W Street:	**Galvin Ave**

Westview Pkwy

819	1116	297	8.7%
⇩		⇧	12,827

Southbound approach: 79 | 741 | 17

Galvin Ave (West):

210	⇦
526	
316	⇨
13.8%	
3,807	

Eastbound approach: 100 | 6 | 216

Total Entering Volume: **1903**

Westbound approach: 66 | 23 | 261

Galvin Ave (East):

⇦	0
	0
⇨	0
	0.0%
	0

Northbound approach: 131 | 197 | 66

⇩		⇧	
957	1286	329	8.3%
			15,604

Westview Pkwy

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 77 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Westview Pkwy**
E/W Street:	**Galvin Ave**
Intersection #:	**77**

Westview Pkwy

37%		63%	
596	1603	1007	8.1%
⇩		⇧	19,810

23	573	0
⬃	⇩	⬂

Galvin Ave (west)

34%	164	⇦	
	482		73 ⬀
66%	318	⇨	0 ⇨
10.6%			245 ⬂
4,548			

1989

Galvin Ave (east)

⬁ 0	⇦	0	0%	
⇦ 0		0		
⬃ 0	⇨	0	0%	
		0.0%		
		0		

⬁	⇧	⬀
141	934	0

⇩		⇧	
818	1893	1075	8.4%
43%		57%	22,495

Westview Pkwy

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**Westview Pkwy**
E/W Street:	**Galvin Ave**

Westview Pkwy

380	1042	662	8.1%
⇩		⇧	12,827

19	365	67
⬃	⇩	⬂

Galvin Ave (west)

139	⇦	
401		54 ⬀
262	⇨	23 ⇨
10.6%		211 ⬂
3,807		

1887

Galvin Ave (east)

⬁ 29		
⇦ 10	⇦	0
⬃ 114		0
	⇨	0
		0.0%
		0

⬁	⇧	⬀
120	608	267

⇩		⇧	
576	1311	735	8.4%
			15,604

Westview Pkwy

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 78 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**78**

I-15 NB Ramps

0%		100%	
0	405	405	9.0%
⇩		⇧	4,500

Southbound: 0 ⇙ | 0 ⇩ | 0 ⇘

Westbound: 166 ⇖ | 775 ⇦ | 0 ⇙

Eastbound: 239 ⬀ | 488 ⇨ | 0 ⇘

Northbound: 615 ⇖ | 0 ⇧ | 684 ⬀

Total Entering Volume: **2967**

Carroll Canyon Rd (West)

66%	1390 ⇦
	2117
34%	727 ⇨
10.7%	
19,862	

Carroll Canyon Rd (East)

⇦ 941	45%
2113	
⇨ 1172	55%
15.3%	
13,806	

⇩		⇧	
0	1299	1299	9.0%
0%		100%	14,433

I-15 NB Ramps

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Carroll Canyon Rd**

I-15 NB Ramps

-1	881	882	9.0%
⇩		⇧	11,198

Southbound: 0 ⇙ | 0 ⇩ | 0 ⇘

Westbound: 584 ⇖ | 2347 ⇦ | 0 ⇙

Eastbound: 298 ⬀ | 1584 ⇨ | 0 ⇘

Northbound: 345 ⇖ | 0 ⇧ | 1169 ⬀

Total Entering Volume: **6327**

Carroll Canyon Rd (West)

	2692 ⇦
	4567
	1875 ⇨
10.7%	
43,935	

Carroll Canyon Rd (East)

⇦ 2944	
5697	
⇨ 2753	
15.3%	
37,044	

⇩		⇧	
0	1509	1509	9.0%
			14,381

I-15 NB Ramps

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 78 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**78**

I-15 NB Ramps (North leg)

0%		100%	
0	709	709	15.8%
⇩		⇧	4,500

Southbound: 0 | 0 | 0

Carroll Canyon Rd (West leg)

50%	1058	⇦
	2102	
50%	1044	⇨
10.6%		
19,862		

Eastbound: 419 | 625 | 0

Total Entering Volume: **2963**

Westbound: 280 | 689 | 0

Carroll Canyon Rd (East leg)

⇦	969	45%
	2165	
⇨	1196	55%
	15.7%	
	13,806	

Northbound: 369 | 10 | 571

I-15 NB Ramps (South leg)

⇩		⇧	
0	950	950	6.6%
0%		100%	14,433

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**I-15 NB Ramps**
E/W Street:	**Carroll Canyon Rd**

I-15 NB Ramps (North leg)

0	1588	1588	15.8%
⇩		⇧	11,198

Southbound: 0 | 0 | 0

Carroll Canyon Rd (West leg)

2108	⇦
4704	
2596	⇨
10.6%	
43,935	

Eastbound: 582 | 2021 | 0

Total Entering Volume: **6585**

Westbound: 998 | 1916 | 0

Carroll Canyon Rd (East leg)

⇦	2924
	5813
⇨	2889
	15.7%
	37,044

Northbound: 192 | 8 | 868

I-15 NB Ramps (South leg)

⇩		⇧	
0	1065	1065	6.6%
			14,381

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 79 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**79**

I-15 SB Ramps (North leg)

100%		0%	
708	708	0	9.0%
			7,867

Southbound movements: 394 (right), 3 (through), 311 (left)

Westbound movements: 0 (U-turn), 1058 (through), 331 (left)

Eastbound movements: 0 (U-turn), 400 (through), 386 (right)

Northbound movements: 0, 0, 0

Total Entering Volume: **2883**

Carroll Canyon Rd (West leg)

65%	1452
	2238
35%	786
11.3%	
19,862	

Carroll Canyon Rd (East leg)

1389	66%
2100	
711	34%
10.6%	
19,862	

I-15 SB Ramps (South leg)

720	720	0	9.0%
100%		0%	8,000

N

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Carroll Canyon Rd**

I-15 SB Ramps (North leg)

1136	1136	0	9.0%
			12,203

Southbound movements: 867 (right), 3 (through), 269 (left)

Westbound movements: 0 (U-turn), 2916 (through), 274 (left)

Eastbound movements: 0 (U-turn), 1253 (through), 921 (right)

Northbound movements: 0, 0, 0

Total Entering Volume: **6503**

Carroll Canyon Rd (West leg)

3783
5972
2189
11.3%
53,470

Carroll Canyon Rd (East leg)

3178
4700
1522
10.6%
43,935

I-15 SB Ramps (South leg)

1198	1198	0	9.0%
			13,761

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 79 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**79**

I-15 SB Ramps (North leg)

100%		0%		
492	492	0	6.3%	
⇩		⇧	7,867	

Southbound movements: 267 ⬋ | 2 ⇩ | 223 ⬊

Carroll Canyon Rd (West leg)

44%	895	⇦
	2052	
56%	1157	⇨
10.3%		
19,862		

Eastbound movements: 0 ⬀ | 854 ⇨ | 303 ⬂

Total Entering Volume: **2687**

Carroll Canyon Rd (East leg)

⇦	1038	49%
	2115	
⇨	1077	51%
	10.6%	
	19,862	

Westbound movements: ⬉ 0 | ⇦ 628 | ⬃ 410

Northbound movements: ⬉ 0 | ⇧ 0 | ⬀ 0

I-15 SB Ramps (South leg)

⇩		⇧	
715	715	0	8.9%
100%		0%	8,000

Scenario:	**Future Year 2035 - Recommended Network**
N/S Street:	**I-15 SB Ramps**
E/W Street:	**Carroll Canyon Rd**

I-15 SB Ramps (North leg)

754	754	0	6.3%
⇩		⇧	12,203

Southbound movements: 587 ⬋ | 2 ⇩ | 169 ⬊

Carroll Canyon Rd (West leg)

2440	⇦
5516	
3076	⇨
10.3%	
53,470	

Eastbound movements: 0 ⬀ | 2243 ⇨ | 817 ⬂

Total Entering Volume: **6098**

Carroll Canyon Rd (East leg)

⇦	2268
	4680
⇨	2412
	10.6%
	43,935

Westbound movements: ⬉ 0 | ⇦ 1853 | ⬃ 427

Northbound movements: ⬉ 0 | ⇧ 0 | ⬀ 0

I-15 SB Ramps (South leg)

⇩		⇧	
1246	1246	0	8.9%
			13,761

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 80 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Kearny Mesa Rd**
E/W Street:	**Miramar Rd**
Intersection #:	**80**

Kearny Mesa Rd

43%		57%	
47	109	62	9.0%
⇩		⇧	1,211

Southbound approach: 19 ⬃ | 3 ⇩ | 25 ⬂

Westbound approach: 19 ⬁ | 2235 ⇦ | 22 ⬃

Eastbound approach: 24 ⬀ | 897 ⇨ | 31 ⬂

Northbound approach: 160 ⬁ | 19 ⇧ | 94 ⬀

Total Entering Volume: **3548**

Miramar Rd (west leg)

72%	2414	⇦
	3366	
28%	952	⇨
9.0%		
37,400		

Miramar Rd (east leg)

⇦	2276	69%
	3292	
⇨	1016	31%
	9.0%	
	36,578	

⇩		⇧	
56	329	273	9.0%
17%		83%	3,656

Kearny Mesa Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Kearny Mesa Rd**
E/W Street:	**Miramar Rd**

Kearny Mesa Rd

160	372	212	9.0%
⇩		⇧	4,132

Southbound approach: 25 ⬃ | 3 ⇩ | 141 ⬂

Westbound approach: 148 ⬁ | 3112 ⇦ | 16 ⬃

Eastbound approach: 41 ⬀ | 1280 ⇨ | 10 ⬂

Northbound approach: 34 ⬁ | 23 ⇧ | 91 ⬀

Total Entering Volume: **4924**

Miramar Rd (west leg)

3171	⇦
4418	
1247	⇨
9.0%	
49,052	

Miramar Rd (east leg)

⇦	3376
	4888
⇨	1512
	9.0%
	54,340

⇩		⇧	
29	170	141	9.0%
			1,894

Kearny Mesa Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 80 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Kearny Mesa Rd**
E/W Street:	**Miramar Rd**
Intersection #:	**80**

Kearny Mesa Rd

64%		36%	
113	176	63	14.5%
⇩		⇧	1,211

Approach	Movements		
Southbound (Kearny Mesa Rd)	32 ⇙	7 ⇩	74 ⇘
Westbound (Miramar Rd)	21 ⇖	1219 ⇦	48 ⇙
Eastbound (Miramar Rd)	36 ⇗	2497 ⇨	91 ⇘
Northbound (Kearny Mesa Rd)	34 ⇖	6 ⇧	136 ⇗

Total Entering Volume: **4201**

Miramar Rd (west)

33%	1285	⇦
	3909	
67%	2624	⇨
10.5%		
37,400		

Miramar Rd (east)

⇦	1288	32%
	3995	
⇨	2707	68%
	10.9%	
	36,578	

⇩		⇧	
146	322	176	8.8%
45%		55%	3,656

Kearny Mesa Rd

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Kearny Mesa Rd**
E/W Street:	**Miramar Rd**

Kearny Mesa Rd

392	604	212	14.5%
⇩		⇧	4,132

Approach	Movements		
Southbound (Kearny Mesa Rd)	35 ⇙	8 ⇩	361 ⇘
Westbound (Miramar Rd)	148 ⇖	1622 ⇦	47 ⇙
Eastbound (Miramar Rd)	57 ⇗	3524 ⇨	21 ⇘
Northbound (Kearny Mesa Rd)	6 ⇖	8 ⇧	82 ⇗

Total Entering Volume: **5919**

Miramar Rd (west)

1662	⇦
5153	
3491	⇨
10.5%	
49,052	

Miramar Rd (east)

⇦	1940
	5906
⇨	3966
	10.9%
	54,340

⇩		⇧	
75	167	92	8.8%
			1,894

Kearny Mesa Rd

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 81 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Top Gun St**
Intersection #:	**81**

Camino Santa Fe (North leg)

73%		27%	
837	1145	308	10.6%
⇩		⇧	10,792

Southbound: 446 ⇙ | 391 ⇩ | 0 ⇘

Westbound: ⇖ 0 | ⇦ 0 | ⇙ 0

Eastbound: 70 ⬀ | 0 ⇨ | 97 ⇘

Total Entering Volume: **1424**

Northbound: ⇖ 182 | ⇧ 238 | ⬀ 0

Top Gun St (West leg)

79%	628	⇦
	795	
21%	167	⇨
9.0%		
8,833		

Top Gun St (East leg)

⇦	0	0%
	0	
⇨	0	0%
	0.0%	
	0	

Camino Santa Fe (South leg)

⇩		⇧	
488	908	420	5.4%
54%		46%	16,903

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Top Gun St**

Camino Santa Fe (North leg)

1770	2609	839	10.6%
⇩		⇧	25,698

Southbound: 979 ⇙ | 455 ⇩ | 0 ⇘

Westbound: ⇖ 0 | ⇦ 0 | ⇙ 0

Eastbound: 334 ⬀ | 0 ⇨ | 2 ⇘

Total Entering Volume: **2277**

Northbound: ⇖ 2 | ⇧ 505 | ⬀ 0

Top Gun St (West leg)

981	⇦
1183	
202	⇨
9.0%	
12,051	

Top Gun St (East leg)

⇦	0
	0
⇨	0
	0.0%
	0

Camino Santa Fe (South leg)

⇩		⇧	
457	762	305	5.4%
			13,832

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 81 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Top Gun St**
Intersection #:	**81**

Camino Santa Fe (North)

28%		72%	
376	1348	972	12.5%
⇩		⇧	10,792

Southbound approach: 83 | 293 | 0

Westbound approach (Top Gun St, east leg): 0 | 0 | 0

Top Gun St (West)

18%	179 ⇦
	997
82%	818 ⇨
11.3%	
8,833	

Eastbound approach: 527 | 0 | 291

1735

Top Gun St (East)

⇦ 0	0%
0	
⇨ 0	0%
0.0%	
0	

Northbound approach: 96 | 445 | 0

⇩		⇧	
584	1125	541	6.7%
52%		48%	16,903

Camino Santa Fe (South)

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Top Gun St**

Camino Santa Fe (North)

1001	3094	2093	12.5%
⇩		⇧	25,698

Southbound approach: 220 | 431 | 0

Westbound approach (Top Gun St, east leg): 0 | 0 | 0

Top Gun St (West)

221 ⇦
1470
1249 ⇨
11.3%
12,051

Eastbound approach: 1498 | 0 | 1

2746

Top Gun St (East)

⇦ 0
0
⇨ 0
0.0%
0

Northbound approach: 1 | 595 | 0

⇩		⇧	
432	928	496	6.7%
			13,832

Camino Santa Fe (South)

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 82 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Miratech Dr**
Intersection #:	**82**

Camino Santa Fe

85%		15%	
1133	1334	201	6.6%
⇩		⇧	20,126

Southbound: 186 ⬃ | 947 ⇩ | 0 ⬂

Westbound (Miratech Dr): ⬁ 0 | ⇦ 0 | ⬃ 0 ⇦

Eastbound: 15 ⬀ | 0 ⇨ | 3 ⬂

Total Entering Volume: **1366**

Northbound: ⬁ 29 | ⇧ 186 | ⬀ 0

Miratech Dr (west)

92%	215 ⇦
	233
8%	18 ⇨
9.0%	
2,589	

Miratech Dr (east)

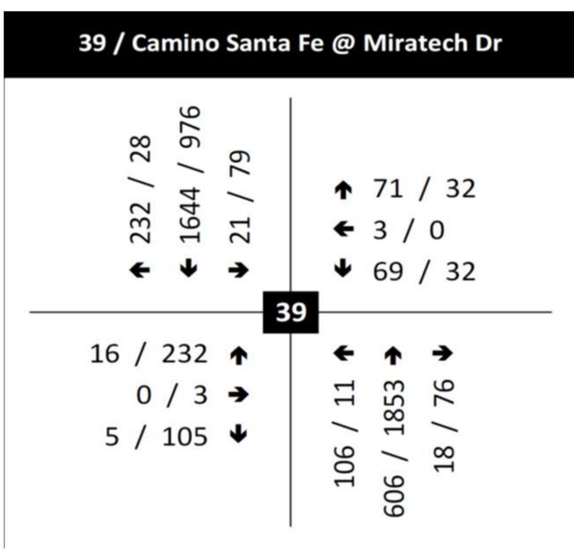
⇦ 0	0%
0	
⇨ 0	0%
0.0%	
0	

⇩		⇧	
950	1165	215	5.8%
82%		18%	20,126

Camino Santa Fe

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Miratech Dr**



Referenced from Fig 8-6c of the 3Roots TIA.

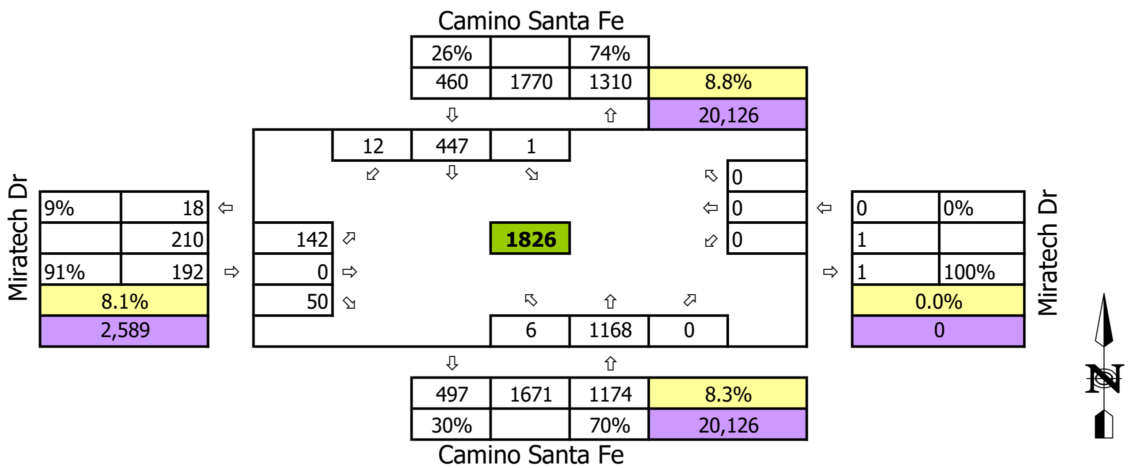
N

LEGEND

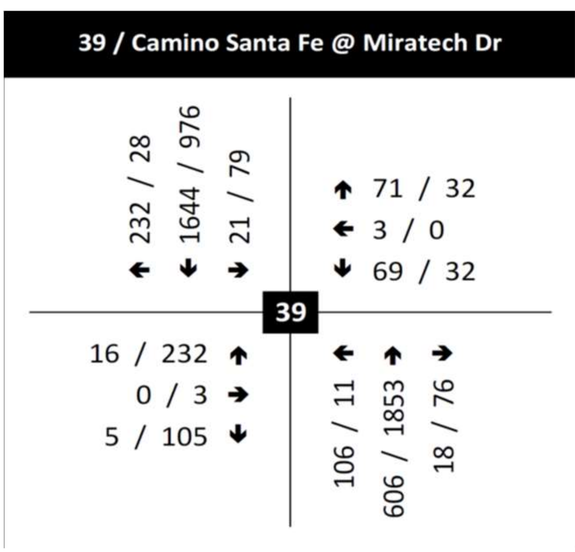
Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 82 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Miratech Dr**
Intersection #:	**82**



Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Miratech Dr**



Referenced from Fig 8-6c of the 3Roots TIA.

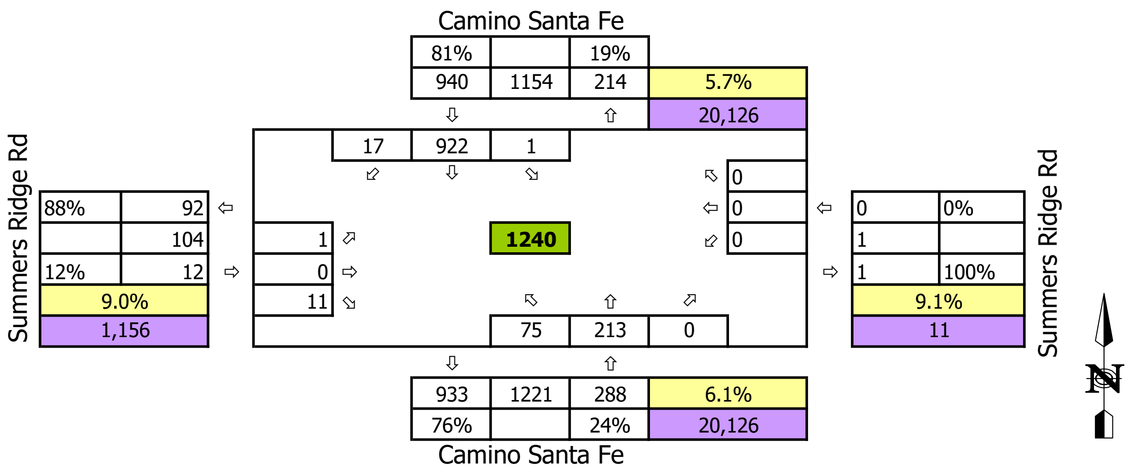
LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

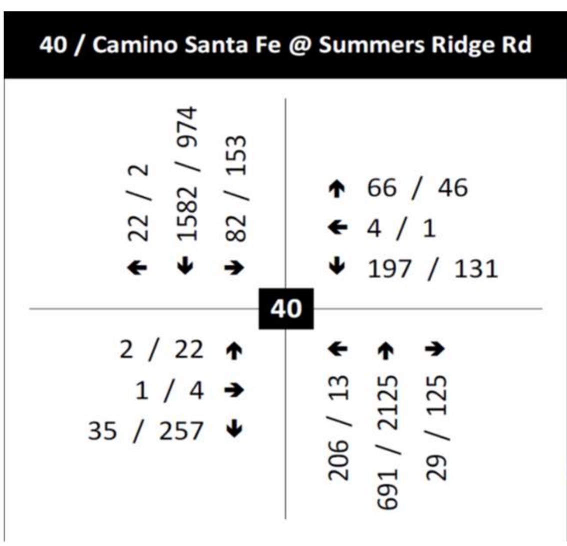
MIZUTA
TRAFFIC CONSULTING

Int 83 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Summers Ridge Rd**
Intersection #:	**83**



Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Summers Ridge Rd**



Referenced from Fig 8-6c of the 3Roots TIA.

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 83 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Summers Ridge Rd**
Intersection #:	**83**

Camino Santa Fe (north leg)

30%		70%	
507	1682	1175	8.4%
⇩		⇧	20,126

Southbound approach: 5 | 502 | 0

Westbound approach (Summers Ridge Rd, east): 0 | 0 | 0

Eastbound approach (Summers Ridge Rd, west): 13 | 0 | 68

Total Entering Volume: **1762**

Northbound approach: 12 | 1162 | 0

Summers Ridge Rd (west leg)

17%	17 ⇦
	98
83%	81 ⇨
8.5%	
1,156	

Summers Ridge Rd (east leg)

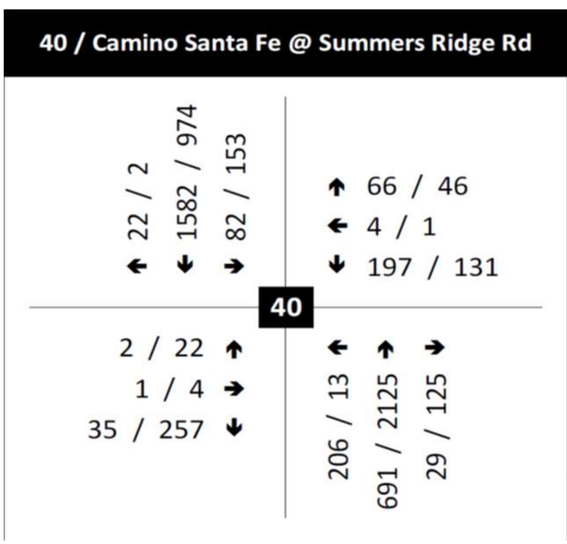
⇦ 0	0%
0	
⇨ 0	0%
0.0%	
11	

Camino Santa Fe (south leg)

⇩		⇧	
570	1744	1174	8.7%
33%		67%	20,126

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Summers Ridge Rd**



Referenced from Fig 8-6c of the 3Roots TIA.

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 84 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Trade St**
Intersection #:	**84**

Camino Santa Fe

76%		24%	
955	1252	297	6.2%
			20,126
12	828	115	

Trade St (west)

92%	34	
	37	2
8%	3	0
		1
9.0%		
411		

1563

Trade St (east)

55		
7	207	45%
145	465	
	258	55%
	9.0%	
	5,167	

15	240	143

974	1372	398	6.8%
71%		29%	20,126

Camino Santa Fe

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Trade St**

Camino Santa Fe

1827	2405	578	6.2%
			38,802
76	1415	334	

Trade St (west)

163	
177	11
14	0
	4
9.0%	
1,954	

2933

Trade St (east)

165	
41	431
225	978
	547
	9.0%
	10,861

47	402	213

1644	2304	660	6.8%
			33,683

Camino Santa Fe

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 84 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Trade St**
Intersection #:	**84**

Camino Santa Fe (North)

35%		65%		
603	1745	1142	8.7%	20,126

Southbound: 2 | 537 | 64

Westbound (Trade St, East): 105 | 3 | 152

Eastbound (Trade St, West): 10 | 6 | 28

Northbound: 4 | 1027 | 114

Total Entering Volume: **2052**

Trade St (West)

17%	9
	53
83%	44
12.9%	
411	

Trade St (East)

260	59%
444	
184	41%
8.6%	
5,167	

Camino Santa Fe (South)

717	1862	1145	9.3%	
39%		61%	20,126	

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Santa Fe**
E/W Street:	**Trade St**

Camino Santa Fe (North)

1161	3363	2202	8.7%	38,802

Southbound: 17 | 929 | 208

Westbound (Trade St, East): 346 | 14 | 186

Eastbound (Trade St, West): 85 | 38 | 86

Northbound: 11 | 1770 | 140

Total Entering Volume: **3830**

Trade St (West)

43
252
209
12.9%
1,954

Trade St (East)

547
933
386
8.6%
10,861

Camino Santa Fe (South)

1201	3116	1915	9.3%
			33,683

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 85 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Nancy Ridge Dr**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**85**

Nancy Ridge Dr

0%		0%	
0	0	0	0.0%
⇩		⇧	0

0	0	0
⬃	⇩	⬂

Carroll Canyon Rd

20%	211	⇦	
	1059		0 ⬀
80%	848	⇨	596 ⇨
8.0%			252 ⬂
13,164			

1109

⬁ 0			
⇦ 149	⇦	186	23%
⬃ 37		795	
	⇨	609	77%
		6.0%	
		13,164	

Carroll Canyon Rd

⬁	⇧	⬀
62	0	13

⇩		⇧	
289	364	75	9.0%
79%		21%	4,044

Nancy Ridge Dr

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Nancy Ridge Dr**
E/W Street:	**Carroll Canyon Rd**

Nancy Ridge Dr

1	1	0	0.0%
⇩		⇧	0

0	0	0
⬃	⇩	⬂

Carroll Canyon Rd

522	⇦	
2383		0 ⬀
1861	⇨	1295 ⇨
8.0%		498 ⬂
30,587		

2332

⬁ 0		
⇦ 394	⇦	353
⬃ 11		1654
	⇨	1301
		6.0%
		26,478

Carroll Canyon Rd

⬁	⇧	⬀
128	0	6

⇩		⇧	
509	626	117	9.0%
			6,700

Nancy Ridge Dr

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 85 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Nancy Ridge Dr**
E/W Street:	**Carroll Canyon Rd**
Intersection #:	**85**

Nancy Ridge Dr

0%		0%	
0	0	0	0.0%
⇩		⇧	0

Southbound approach: 0 | 0 | 0

Carroll Canyon Rd (West leg)

69%	812	⇦
	1184	
31%	372	⇨
9.0%		
13,164		

Eastbound approach: 0 | 316 | 56

1239

Westbound approach: 0 | 601 | 7

Carroll Canyon Rd (East leg)

⇦	608	63%
	972	
⇨	364	37%
	7.4%	
	13,164	

Northbound approach: 211 | 0 | 48

⇩		⇧	
63	322	259	8.0%
20%		80%	4,044

Nancy Ridge Dr

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Nancy Ridge Dr**
E/W Street:	**Carroll Canyon Rd**

Nancy Ridge Dr

-1	-1	0	0.0%
⇩		⇧	0

Southbound approach: 0 | 0 | 0

Carroll Canyon Rd (West leg)

1815	⇦
2715	
900	⇨
9.0%	
30,587	

Eastbound approach: 0 | 692 | 97

2619

Westbound approach: 0 | 1353 | 3

Carroll Canyon Rd (East leg)

⇦	1273
	1977
⇨	704
	7.4%
	26,478

Northbound approach: 462 | 0 | 12

⇩		⇧	
100	547	447	8.0%
			6,700

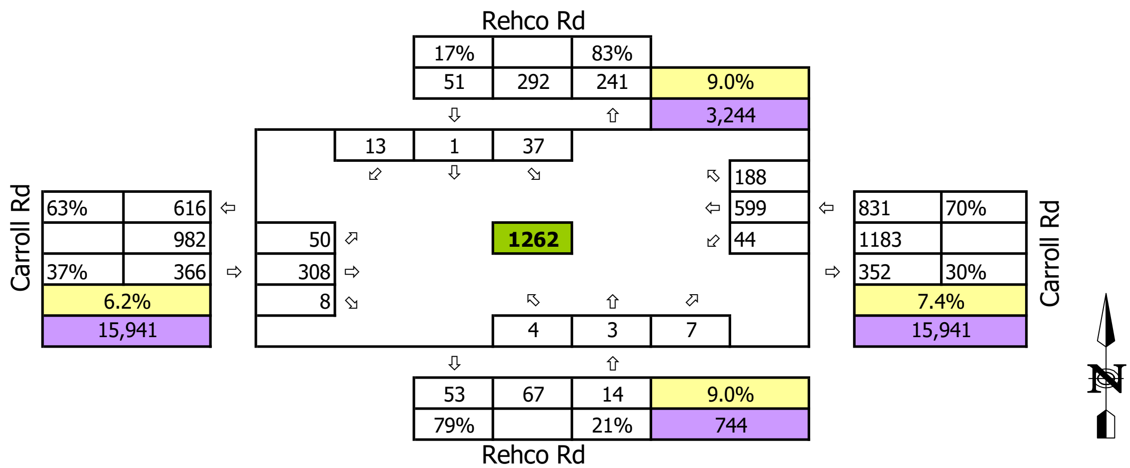
Nancy Ridge Dr

LEGEND

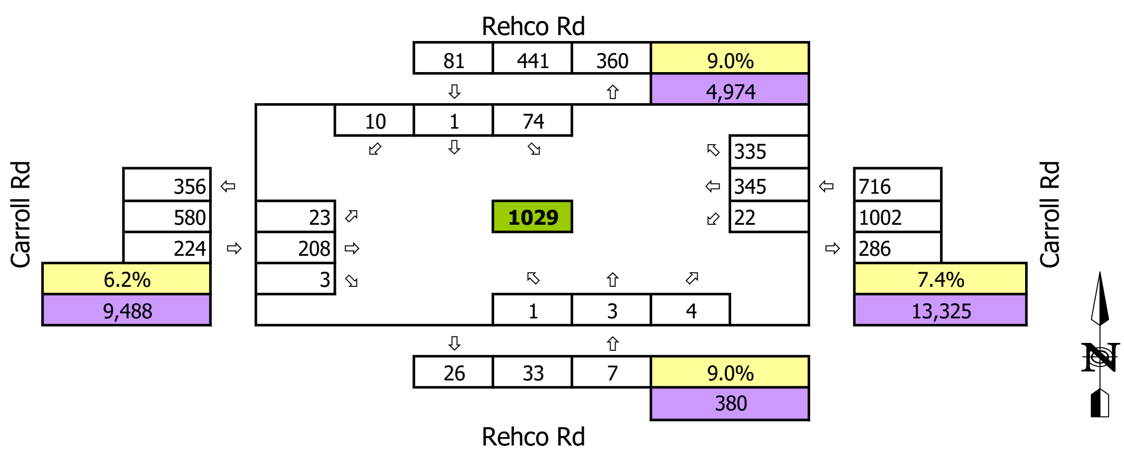
Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 86 AM Peak Volumes

Scenario: **Existing (2018)**
N/S Street: **Rehco Rd**
E/W Street: **Carroll Rd**
Intersection #: **86**



Scenario: **Future Year 2035 - Preferred Network**
N/S Street: **Rehco Rd**
E/W Street: **Carroll Rd**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 86 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Rehco Rd**
E/W Street:	**Carroll Rd**
Intersection #:	**86**

Rehco Rd (north leg)

88%		12%	
217	247	30	7.6%
⇩		⇧	3,244

Southbound movements: 35 ⬃ | 2 ⇩ | 180 ⬂

Westbound movements (Carroll Rd, east approach): 22 ⬁ | 226 ⇦ | 11 ⬃

Eastbound movements (Carroll Rd, west approach): 5 ⬀ | 688 ⇨ | 4 ⬂

Northbound movements: 9 ⬁ | 3 ⇧ | 42 ⬀

Total Entering Volume: **1227**

Carroll Rd (west leg)

28%	270	⇦
	967	
72%	697	⇨
6.1%		
15,941		

Carroll Rd (east leg)

⇦	259	22%
	1169	
⇨	910	78%
	7.3%	
	15,941	

Rehco Rd (south leg)

⇩		⇧	
17	71	54	9.5%
24%		76%	744

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Rehco Rd**
E/W Street:	**Carroll Rd**

Rehco Rd (north leg)

329	375	46	7.6%
⇩		⇧	4,974

Southbound movements: 11 ⬃ | 1 ⇩ | 324 ⬂

Westbound movements (Carroll Rd, east approach): 41 ⬁ | 149 ⇦ | 6 ⬃

Eastbound movements (Carroll Rd, west approach): 3 ⬀ | 418 ⇨ | 1 ⬂

Northbound movements: 2 ⬁ | 3 ⇧ | 25 ⬀

Total Entering Volume: **984**

Carroll Rd (west leg)

162	⇦
574	
412	⇨
6.1%	
9,488	

Carroll Rd (east leg)

⇦	214
	981
⇨	767
	7.3%
	13,325

Rehco Rd (south leg)

⇩		⇧	
8	36	28	9.5%
			380

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 87 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Carroll Rd**
E/W Street:	**Kenamar Dr**
Intersection #:	**87**

Carroll Rd

27%		73%	
195	721	526	7.4%
⇩		⇧	9,755
3	163	29	

Kenamar Dr (west)

75%	6	⇦
	8	
25%	2	⇨
9.0%		
89		

0	⬀	**1024**	7 ⬉
0	⇨		1 ⇦
2	⬂		113 ⬃

Kenamar Dr (east)

⇦	121	36%
	335	
⇨	214	64%
	9.0%	
	3,722	

2	519	185	
⇩	⇧		
278	984	706	10.1%
28%		72%	9,755

Carroll Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Carroll Rd**
E/W Street:	**Kenamar Dr**

Carroll Rd

157	636	479	7.4%
⇩		⇧	8,323
1	233	2	

Kenamar Dr (west)

2	⇦
2	
0	⇨
9.0%	
20	

0	⬀	**868**	2 ⬉
0	⇨		0 ⇦
0	⬂		64 ⬃

Kenamar Dr (east)

⇦	44
	134
⇨	90
	9.0%
	1,458

1	477	88	
⇩	⇧		
297	964	667	10.1%
			9,781

Carroll Rd

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 87 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Carroll Rd**
E/W Street:	**Kenamar Dr**
Intersection #:	**87**

Carroll Rd

75%		25%	
504	673	169	6.9%
⇩		⇧	9,755

0	477	27
⇙	⇩	⇘

Kenamar Dr (west)

33%	1	⇦	
	3		0 ⬀
67%	2	⇨	0 ⇨
3.4%			2 ⇘
89			

934

Kenamar Dr (east)

⇖ 22			
⇦ 0	⇦	176	57%
⬃ 154		307	
	⇨	131	43%
		8.2%	
		3,722	

⇖	⇧	⬀
1	147	104

⇩		⇧	
633	885	252	9.1%
72%		28%	9,755

Carroll Rd

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Carroll Rd**
E/W Street:	**Kenamar Dr**

Carroll Rd

452	589	137	6.9%
⇩		⇧	8,323

0	520	1
⇙	⇩	⇘

Kenamar Dr (west)

1	⇦	
1		0 ⬀
0	⇨	0 ⇨
3.4%		0 ⇘
20		

791

Kenamar Dr (east)

⇖ 1		
⇦ 0	⇦	73
⬃ 84		122
	⇨	49
		8.2%
		1,458

⇖	⇧	⬀
1	136	48

⇩		⇧	
604	870	266	9.1%
			9,781

Carroll Rd

N

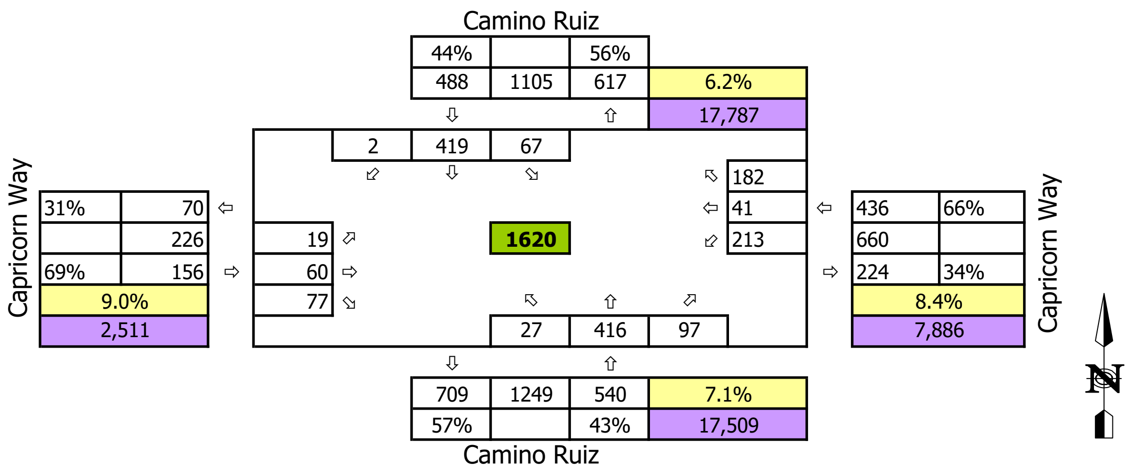
LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

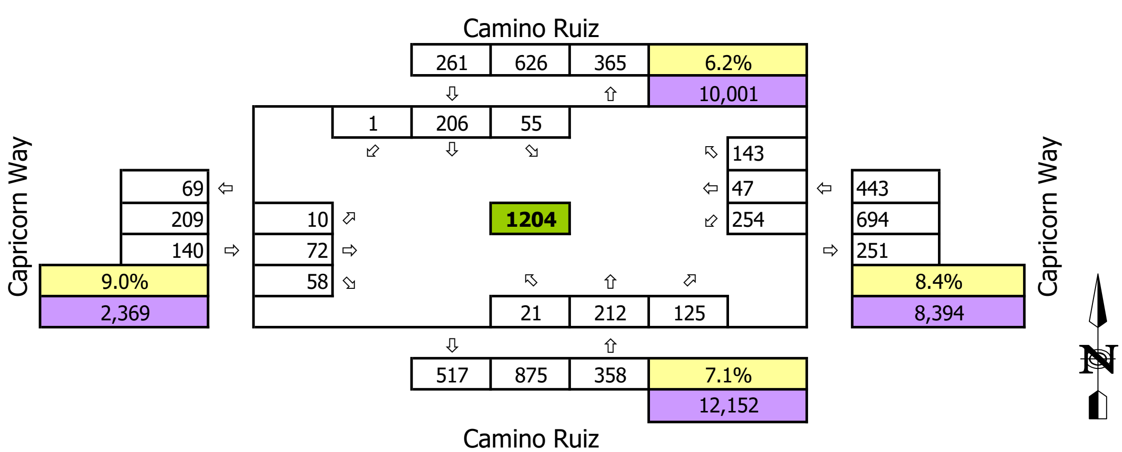
MIZUTA TRAFFIC CONSULTING

Int 88 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Capricorn Way**
Intersection #:	**88**



Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Capricorn Way**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 88 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Capricorn Way**
Intersection #:	**88**

Camino Ruiz

67%		33%	
1046	1559	513	8.8%
⇩		⇧	17,787
2	741	303	

Capricorn Way (west)

51%	109	⇦
	214	
49%	105	⇨
8.5%		
2,511		

Eastbound approach: 18, 46, 41

2120

Westbound approach: 70, 54, 178

Capricorn Way (east)

⇦	302	36%
	840	
⇨	538	64%
	10.7%	
	7,886	

Northbound approach: 53, 425, 189

⇩		⇧	
960	1627	667	9.3%
59%		41%	17,509

Camino Ruiz

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Capricorn Way**

Camino Ruiz

621	896	275	8.8%
⇩		⇧	10,001
2	374	245	

Capricorn Way (west)

98	⇦
202	
104	⇨
8.5%	
2,369	

Eastbound approach: 10, 61, 34

1552

Westbound approach: 57, 55, 225

Capricorn Way (east)

⇦	338
	883
⇨	545
	10.7%
	8,394

Northbound approach: 41, 208, 240

⇩		⇧	
633	1121	488	9.3%
			12,152

Camino Ruiz

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 89 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Gold Coast Dr**
Intersection #:	**89**

Camino Ruiz

57%		43%	
855	1505	650	7.9%
⇩		⇧	19,060

Southbound approach: 127 ⬃ | 655 ⇩ | 73 ⬂

Westbound approach: ⬁ 124 | ⇦ 124 | ⬃ 139

Eastbound approach: 243 ⬀ | 142 ⇨ | 108 ⬂

Total Entering Volume: **2089**

Northbound approach: ⬁ 49 | ⇧ 283 | ⬀ 22

Gold Coast Dr (West)

38%	300	⇦
	793	
62%	493	⇨
10.9%		
7,243		

Gold Coast Dr (East)

⇦	387	62%
	624	
⇨	237	38%
	8.8%	
	7,066	

⇩		⇧	
902	1256	354	4.6%
72%		28%	27,094

Camino Ruiz

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Gold Coast Dr**

Camino Ruiz

1166	2027	861	7.9%
⇩		⇧	25,618

Southbound approach: 235 ⬃ | 866 ⇩ | 45 ⬂

Westbound approach: ⬁ 84 | ⇦ 28 | ⬃ 24

Eastbound approach: 419 ⬀ | 28 ⇨ | 43 ⬂

Total Entering Volume: **2158**

Northbound approach: ⬁ 22 | ⇧ 358 | ⬀ 6

Gold Coast Dr (West)

284	⇦
764	
480	⇨
10.9%	
6,955	

Gold Coast Dr (East)

⇦	133
	212
⇨	79
	8.8%
	2,390

⇩		⇧	
933	1311	378	4.6%
			28,453

Camino Ruiz

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA
TRAFFIC CONSULTING

Int 89 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Gold Coast Dr**
Intersection #:	**89**

Camino Ruiz

42%		58%	
810	1943	1133	10.2%
⇩		⇧	19,060

Southbound approach: 103 ⇙ | 529 ⇩ | 178 ⇘

Westbound approach: 80 ⇖ | 104 ⇦ | 54 ⇙

Eastbound approach: 85 ⬀ | 291 ⇨ | 172 ⇘

Northbound approach: 74 ⇖ | 968 ⇧ | 71 ⬀

2709

Gold Coast Dr (west)

34%	281	⇦
	829	
66%	548	⇨
11.4%		
7,243		

Gold Coast Dr (east)

⇦	238	31%
	778	
⇨	540	69%
	11.0%	
	7,066	

⇩		⇧	
755	1868	1113	6.9%
40%		60%	27,094

Camino Ruiz

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Gold Coast Dr**

Camino Ruiz

1071	2621	1550	10.2%
⇩		⇧	25,618

Southbound approach: 234 ⇙ | 703 ⇩ | 105 ⇘

Westbound approach: 56 ⇖ | 18 ⇦ | 7 ⇙

Eastbound approach: 352 ⬀ | 72 ⇨ | 97 ⇘

Northbound approach: 22 ⇖ | 1142 ⇧ | 8 ⬀

2816

Gold Coast Dr (west)

275	⇦
792	
517	⇨
11.4%	
6,955	

Gold Coast Dr (east)

⇦	80
	265
⇨	185
	11.0%
	2,390

⇩		⇧	
807	1956	1149	6.9%
			28,453

Camino Ruiz

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 90 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Westview Pkwy**
E/W Street:	**Capricorn Way**
Intersection #:	**90**

Westview Pkwy (North leg)

65%		35%	
431	660	229	8.4%
⇩		⇧	7,819

Southbound approach: 42 (right), 387 (through), 2 (left)

Westbound approach: 15 (right), 29 (through), 69 (left)

Eastbound approach: 13 (left), 10 (through), 288 (right)

Northbound approach: 143 (left), 201 (through), 30 (right)

Total Entering Volume: **1229**

Capricorn Way (West leg)

41%	214 ⇦
	525
59%	311 ⇨
9.0%	
5,833	

Capricorn Way (East leg)

⇦ 113	73%
155	
⇨ 42	27%
9.0%	
1,722	

Westview Pkwy (South leg)

⇩		⇧	
744	1118	374	5.6%
67%		33%	19,810

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Westview Pkwy**
E/W Street:	**Capricorn Way**

Westview Pkwy (North leg)

531	844	313	8.4%
⇩		⇧	10,137

Southbound approach: 111 (right), 410 (through), 10 (left)

Westbound approach: 37 (right), 23 (through), 21 (left)

Eastbound approach: 64 (left), 17 (through), 152 (right)

Northbound approach: 45 (left), 212 (through), 7 (right)

Total Entering Volume: **1109**

Capricorn Way (West leg)

178 ⇦
412
234 ⇨
9.0%
4,615

Capricorn Way (East leg)

⇦ 79
112
⇨ 33
9.0%
1,269

Westview Pkwy (South leg)

⇩		⇧	
583	846	263	5.6%
			14,687

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 90 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Westview Pkwy**
E/W Street:	**Capricorn Way**
Intersection #:	**90**

Westview Pkwy (north leg)

36%		64%	
248	685	437	8.8%
⇩		⇧	7,819

Southbound movements: 13 (right) ⬃, 232 (through) ⇩, 3 (left) ⬂

Capricorn Way (west leg)

41%	203	⇦
	497	
59%	294	⇨
8.5%		
5,833		

Eastbound movements: 47 ⬀, 35 ⇨, 212 ⬂

Total Entering Volume: **1226**

Capricorn Way (east leg)

Westbound movements: 6 ⬁, 14 ⇦, 42 ⬃

⇦	62	38%
	162	
⇨	100	62%
	9.4%	
	1,722	

Northbound movements: 176 ⬁, 384 ⇧, 62 ⬀

Westview Pkwy (south leg)

⇩		⇧	
486	1108	622	5.6%
44%		56%	19,810

Westview Pkwy

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Westview Pkwy**
E/W Street:	**Capricorn Way**

Westview Pkwy (north leg)

336	878	542	8.8%
⇩		⇧	10,137

Southbound movements: 62 ⬃, 260 ⇩, 15 ⬂

Capricorn Way (west leg)

153	⇦
397	
244	⇨
8.5%	
4,615	

Eastbound movements: 139 ⬀, 34 ⇨, 71 ⬂

Total Entering Volume: **1112**

Capricorn Way (east leg)

Westbound movements: 18 ⬁, 17 ⇦, 14 ⬃

⇦	48
	118
⇨	70
	9.4%
	1,269

Northbound movements: 75 ⬁, 385 ⇧, 22 ⬀

Westview Pkwy (south leg)

⇩		⇧	
345	827	482	5.6%
			14,687

Westview Pkwy

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 91 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Aquarius Dr**
Intersection #:	**91**

Camino Ruiz

20%		80%	
260	1329	1069	7.2%
⇩		⇧	18,446

Southbound approach: 0 ⬃ | 189 ⇩ | 71 ⬂

Aquarius Dr (west leg)

33%	48 ⇦
	144
67%	96 ⇨
9.0%	
1,600	

Eastbound approach: 7 ⬀ | 20 ⇨ | 69 ⬂

1626

Westbound approach: ⬁ 543 | ⇦ 16 | ⬃ 92

Aquarius Dr (east leg)

⇦ 651	80%
810	
⇨ 159	20%
15.8%	
5,135	

Northbound approach: ⬁ 32 | ⇧ 519 | ⬀ 68

⇩		⇧	
350	969	619	5.4%
36%		64%	17,787

Camino Ruiz

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Aquarius Dr**

Camino Ruiz

146	989	843	7.2%
⇩		⇧	12,108

Southbound approach: 0 ⬃ | 29 ⇩ | 120 ⬂

Aquarius Dr (west leg)

58 ⇦
140
82 ⇨
9.0%
1,600

Eastbound approach: 4 ⬀ | 60 ⇨ | 20 ⬂

1413

Westbound approach: ⬁ 762 | ⇦ 45 | ⬃ 137

Aquarius Dr (east leg)

⇦ 950
1276
⇨ 326
15.8%
8,758

Northbound approach: ⬁ 13 | ⇧ 77 | ⬀ 146

⇩		⇧	
185	419	234	5.4%
			7,846

Camino Ruiz

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 91 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Camino Ruiz**
E/W Street:	**Aquarius Dr**
Intersection #:	**91**

Camino Ruiz

82%		18%	
1446	1772	326	9.6%
⇩		⇧	18,446

Southbound: 3 | 940 | 503

Aquarius Dr (west)

51%	59	⇦
	115	
49%	56	⇨
7.2%		
1,600		

Eastbound: 2 | 21 | 33

2077

Westbound: 97 | 14 | 62

Aquarius Dr (east)

⇦	173	21%
	830	
⇨	657	79%
	16.2%	
	5,135	

Northbound: 42 | 227 | 133

⇩		⇧	
1035	1437	402	8.1%
72%		28%	17,787

Camino Ruiz

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Camino Ruiz**
E/W Street:	**Aquarius Dr**

Camino Ruiz

1070	1262	192	9.6%
⇩		⇧	12,108

Southbound: 2 | 260 | 807

Aquarius Dr (west)

53	⇦
116	
63	⇨
7.2%	
1,600	

Eastbound: 1 | 48 | 15

1664

Westbound: 156 | 39 | 136

Aquarius Dr (east)

⇦	332
	1340
⇨	1008
	16.2%
	8,758

Northbound: 12 | 35 | 153

⇩		⇧	
411	610	199	8.1%
			7,846

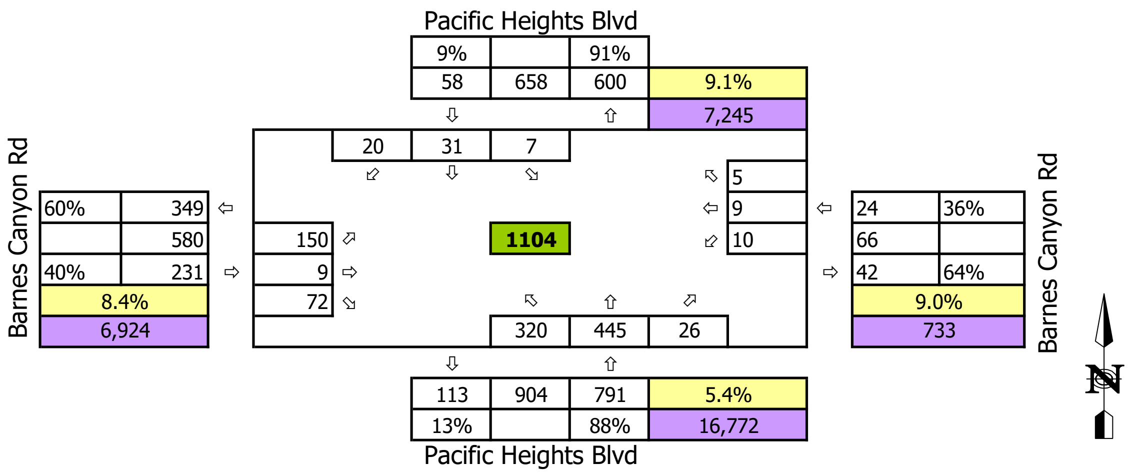
Camino Ruiz

LEGEND

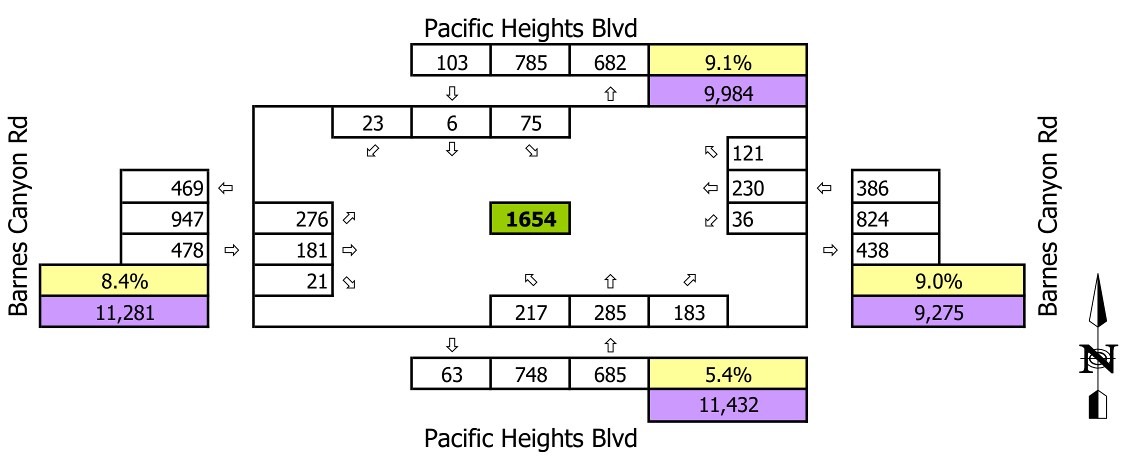
Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Int 92 AM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Barnes Canyon Rd**
Intersection #:	**92**



Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Barnes Canyon Rd**



LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

MIZUTA TRAFFIC CONSULTING

Int 92 PM Peak Volumes

Scenario:	**Existing (2018)**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Barnes Canyon Rd**
Intersection #:	**92**

Pacific Heights Blvd (north leg)

79%		21%	
590	745	155	10.3%
⇩		⇧	7,245

Southbound: 120 ⇙ | 441 ⇩ | 29 ⇘

Barnes Canyon Rd (west leg)

50%	290	⇦
	584	
50%	294	⇨
8.4%		
6,924		

Eastbound: 64 ⬀ | 23 ⇨ | 207 ⇘

Total Entering Volume: **1249**

Westbound: 9 ⇖ | 22 ⇦ | 46 ⇙

Barnes Canyon Rd (east leg)

⇦	77	41%
	187	
⇨	110	59%
	25.5%	
	733	

Northbound: 148 ⇖ | 82 ⇧ | 58 ⬀

Pacific Heights Blvd (south leg)

⇩		⇧	
694	982	288	5.9%
71%		29%	16,772

N

Scenario:	**Future Year 2035 - Preferred Network**
N/S Street:	**Pacific Heights Blvd**
E/W Street:	**Barnes Canyon Rd**

Pacific Heights Blvd (north leg)

827	1037	210	10.3%
⇩		⇧	9,984

Southbound: 43 ⇙ | 65 ⇩ | 731 ⇘

Barnes Canyon Rd (west leg)

464	⇦
952	
488	⇨
8.4%	
11,281	

Eastbound: 20 ⬀ | 449 ⇨ | 26 ⇘

Total Entering Volume: **2507**

Westbound: 184 ⇖ | 411 ⇦ | 374 ⇙

Barnes Canyon Rd (east leg)

⇦	992
	2360
⇨	1368
	25.5%
	9,275

Northbound: 10 ⇖ | 6 ⇧ | 188 ⬀

Pacific Heights Blvd (south leg)

⇩		⇧	
465	665	200	5.9%
			11,432

N

LEGEND

Existing K-Factor	xx%
ADT Volume	xx
Total Entering Volume	**xx**

Appendix F – Pedestrian Network Calculation Worksheets

SEGMENT	NOTES	changes made	NB/EB Any ped facilities?	SB/WB Any ped facilities?	NB/EB speed limit (mph)	SB/WB speed limit (mph)	NB/EB Horiz distance bet auto travel way + clear ped zone (ft)	SB/WB Horiz distance bet auto travel way + clear ped zone (ft)	NB/EB Clear ped zone 5' no obstructions	SB/WB Clear ped zone 5' no obstructions	NB/EB Lighting	SB/WB Lighting
Vista Sorrento Pkwy (NB/SB)												
Sorrento Valley Blvd to Lusk Blvd	Missing sidewalk SB side	map says add, mtr says no	1	0	50	50	5	0	2	2	1	1
Lusk Blvd to Directors Pl	Missing sidewalk SB side	map says add, mtr says no	1	0	50	50	5	0	2	2	1	1
Directors Pl to Mira Sorrento Pl	Missing sidewalk SB side	map says add, mtr says no	1	0	50	50	5	0	2	2	1	1
Mira Sorrento Pl to Mira Mesa Blvd	Missing sidewalk SB side	map says add, mtr says no	1	0	50	50	5	0	2	2	1	1
Sorrento Valley Rd (NS)												
I-805 SB Ramps to I-805 NB Ramps			1	1	45	45	0	2	2	2	1	1
Sorrento Valley Blvd (EW)												
Juniper Park Ln to Sunny Mesa Rd			1	1	45	45	10	10	2	2	1	1
Sunny Mesa Rd to Camino Santa Fe			1	1	45	45	10	10	2	2	1	1
Lusk Blvd (EW)												
Vista Sorrento Pkwy to Office Driveways			1	1	50	45	8	8	2	2	1	1
Office Driveways to W Wateridge Cir	Missing sidewalk EB side		1	1	50	45	8	8	2	2	1	1
W Wateridge Cir to Telesis Ct			1	1	50	45	8	8	2	2	1	1
Telesis Ct to E Wateridge Cir			1	1	50	45	8	8	2	2	1	1
E Wateridge Cir to Pacific Center Blvd			1	1	50	45	15	15	2	2	1	1
Pacific Center Blvd to Barnes Canyon Rd			1	1	50	45	15	15	2	2	1	1
Barnes Canyon Rd to Morehouse Dr			1	1	50	45	8	8	2	2	1	1
Morehouse Dr to Mira Mesa Blvd			1	1	50	45	8	8	2	2	1	1
Mira Sorrento Pl (EW)												
Vista Sorrento Pkwy to Scranton Rd	Lighting is spaced 600' apart on each side. Could make the 300' threshold if lighting was on		1	1	45	45	10	10	1	2	1	1
Scranton Rd (NS)												
Mira Sorrento Pl to Morehouse Dr			1	1	35	35	15	15	2	2	1	1
Morehouse Dr to Mira Mesa Blvd			1	1	35	35	2	2	2	2	1	1
Mira Mesa Blvd to Sorrento South Dvwy/Oberlin Dr			1	1	35	35	9	9	2	2	1	1
Sorrento South Dvwy/Oberlin Dr to Carroll Canyon Rd			1	1	35	35	9	9	2	2	1	1
Pacific Center Blvd (NS,EW)												
Lusk Blvd to Wireless Wy			1	1	40	40	15	8	2	2	1	1
Wireless Wy to Pacific Heights Blvd			1	1	40	40	15	8	2	2	1	1
Pacific Heights Blvd to Pacific Mesa Blvd			1	1	40	40	15	8	2	2	1	1

Pacific Heights Blvd (NS,EW)												
Pacific Center Blvd to Barnes Canyon Rd (NS)		CP 0 to 2	1	1	30	30	9	9	2	2	1	1
Barnes Canyon Rd to Pacific Mesa Blvd (EW)		CP 0 to 2	1	1	30	30	9	9	2	2	1	1
Pacific Mesa Blvd to Mira Mesa Blvd	THIS SEGMENT ADDED 9/26/18, Deleted from Vehicular analysis segments Feb 2019	SB CP 0 to 2	1	1	30	30	9	9	2	2	1	1
Mira Mesa Blvd to Cornerstone Ct (NS)		SB CP 0 to 2	1	1	40	40	9	9	2	2	1	1
Cornerstone Ct to Carroll Canyon Rd			1	1	40	40	9	9	2	2	1	1
Pacific Mesa Blvd (NS)												
Pacific Heights Blvd to Pacific Center Blvd			1	1	35	35	8	8	2	2	1	1
Calle Cristobal (EW)												
Camino Santa Fe to Lopez Point Dr			1	1	45	45	10	9	2	2	1	1
Lopez Point Dr to Camino Propico	Guardrail protection for portion of EB sidewalk		1	1	45	45	10	9	2	2	1	1
Camino Propico to Lopez Ridge Park Driveways	EB sidewalk protected by guardrail		1	1	45	45	10	9	2	2	1	1
Lopez Ridge Park Driveways to Camino Miranda	Small portion of WB sidewalk protected by guardrail		1	1	45	45	10	9	2	2	1	1
Camino Miranda to Windy Ridge Wy			1	1	45	45	10	9	2	2	1	1
Windy Ridge Wy to Prairie Wood Dr			1	1	45	45	10	9	2	2	1	1
Prairie Wood Dr to Avenida Del Gato			1	1	45	45	10	9	2	2	1	1
Avenida Del Gato to Camino Ruiz			1	1	45	45	10	9	2	2	1	1
Mira Mesa Blvd (EW)												
I-805 NB Ramps to Scranton Rd			1	1	45	40	2	2	2	2	1	1
Scranton Rd to Lusk Blvd			1	1	50	50	11	11	2	2	1	1
Lusk Blvd to Pacific Heights Blvd			1	1	50	50	11	11	2	2	1	1
Pacific Heights Blvd to Sequence Dr/Huennekens St			1	1	50	50	11	11	2	2	1	1
Sequence Dr/Huennekens St to Genetic Center Dr/Steadman St			1	1	50	50	11	11	2	2	1	1
Genetic Center Dr/Steadman St to Flanders Dr			1	1	50	50	11	11	2	2	1	1
Flanders Dr to Viper Wy	Right turn pocket in middle of segment		1	1	50	50	15	11	2	2	1	1
Viper Wy to Camino Santa Fe			1	1	50	50	15	11	2	2	1	1
Camino Santa Fe to Schilling Ave			1	1	50	50	11	11	2	2	1	1
Schilling Ave to Aderman Ave			1	1	50	50	11	10	2	2	1	1
Aderman Ave to Parkdale Ave			1	1	50	50	0	0	2	2	1	1
Parkdale Ave to Reagan Rd			1	1	45	45	0	0	2	2	1	1
Reagan Rd to Mira Mesa Mall Driveways			1	1	45	45	16	17	2	2	1	1
Mira Mesa Mall Driveways to Camino Ruiz			1	1	45	45	16	17	2	2	1	1
Camino Ruiz to New Salem St/Marauder Wy			1	1	40	40	16	17	2	2	1	1
New Salem St/Marauder Wy to Westonhill Dr			1	1	40	40	7	11	2	2	1	1
Westonhill Dr to Greenford Dr			1	1	40	40	7	7	2	2	1	1
Greenford Dr to Westmore Rd/Marbury Ave			1	1	40	40	16	7	2	2	1	1
Westmore Rd/Marbury Ave to Black Mountain Rd			1	1	40	40	16	16	2	2	1	1
Black Mountain Rd to Westview Pkwy			1	1	35	35	16	16	2	2	1	1
Westview Pkwy to I-15 SB Ramps			1	1	35	35	16	16	2	2	1	1
I-15 SB Ramps to I-15 NB Ramps			1	1	35	35	0	0	2	2	1	1
Carroll Canyon Rd/Carroll Rd (EW)												
Sorrento Valley Rd/Mira Mesa Blvd to Business Access Road	Missing sidewalk on WB side		1	1	45	45	2	2	2	2	2	1
Business Access Road to Scranton Rd	Missing sidewalk on WB side		1	1	45	45	2	2	2	2	2	1
Scranton Rd to Youngstown Wy	Missing section of sidewalk on EB side		1	1	45	45	2	2	2	2	1	1
Youngstown Wy to Nancy Ridge Dr	Missing sidewalk on EB side		1	1	45	45	2	2	2	2	1	1
Nancy Ridge Dr to Pacific Heights Blvd	EB sidewalk protected by guardrail		1	1	45	45	2	2	2	2	1	1
Pacific Heights Blvd to Rehco Rd	EB sidewalk protected by		1	1	45	45	10	12	2	2	1	1
Rehco Rd to Camino Santa Fe			1	1	35	35	10	10	2	2	1	1
Camino Santa Fe to Kenamar Dr			1	1	35	35	8	8	2	2	1	1
Kenamar Dr to Miramar Rd			1	1	35	35	8	8	2	2	1	1
Miramar Rd (EW)												
Miramar Pl to Camino Santa Fe	No lighting meets thresholds along Mira mar		1	1	50	50	3	17	2	2	2	1
Camino Santa Fe to Commerce Ave	Asphalt sidewalk section (EB side)		1	1	50	50	6	6	2	2	2	1
Commerce Ave to Production Ave	Asphalt sidewalk (EB side)		1	1	50	50	6	8	2	2	2	1
Production Ave to Distribution Ave	Asphalt sidewalk (EB side)		1	1	50	50	6	8	2	2	2	1
Distribution Ave to Miramar Wy	Asphalt sidewalk (EB side)		1	1	50	50	6	8	2	2	2	1
Miramar Wy to Carroll Rd	Asphalt sidewalk (EB side)		1	1	50	50	6	8	2	2	2	1
Carroll Rd to Empire St	Asphalt sidewalk (EB side)		1	1	50	50	6	8	2	2	2	1
Empire St to Dowdy Dr	Asphalt sidewalk (EB side)		1	1	50	50	6	8	2	2	2	1
Dowdy Dr to Cabot Dr	Asphalt sidewalk (EB side)		1	1	50	50	6	8	2	2	2	1
Cabot Dr to Camino Ruiz	Asphalt sidewalk (EB side)		1	1	50	50	6	8	2	2	2	1
Camino Ruiz to Clayton Dr/Mitscher Wy	Asphalt sidewalk (EB side)		1	1	40	45	6	3	2	2	2	1
Clayton Dr/Mitscher Wy to Black Mountain Rd	Asphalt sidewalk (EB side)		1	1	40	45	3	3	2	2	2	1

Black Mountain Rd to Kearny Villa Rd	Asphalt sidewalk (EB side)		1	1	40	45	3	3	2	2	2	1
Kearny Villa Rd to Kearny Mesa Rd	Asphalt sidewalk section (EB side)		1	1	40	45	2	6	2	2	2	1
Kearny Villa Rd to I-15 SB Ramps			1	1	40	45	2	6	2	2	2	1
I-15 SB Ramps to I-15 NB Ramps			1	1	45	45	2	8	2	2	2	1
Flanders Dr (EW)												
Mira Mesa Blvd to Camino Santa Fe	No lighting meets thresholds along Flanders	Increased HD both si	1	1	40	40	15	15	2	2	1	1
Camino Santa Fe to Keoki St		adjusted HD for buff	1	1	30	30	15	15	2	2	1	1
Keoki St to Parkdale Ave			1	1	25	25	8	8	2	2	1	1
Parkdale Ave to Camino Ruiz			1	1	30	30	8	8	2	2	1	1
Camino Ruiz to San Ramon Dr			1	1	25	25	8	8	2	2	1	1
San Ramon Dr to Westonhill Dr			1	1	25	25	8	8	2	2	1	1
Westonhill Dr to Greenford Dr			1	1	25	25	8	8	2	2	1	1
Camino Santa Fe (NS)												
Sorrento Valley Blvd/Calle Cristobal to Top Gun St	Section of lighting missing		1	1	45	50	10	10	2	2	1	1
Top Gun St to Mira Mesa Blvd			1	1	45	50	10	10	2	2	1	1
Mira Mesa Blvd to Flanders Dr			1	1	50	50	10	15	2	2	1	1
Flanders Dr to Miratech Dr			1	1	50	50	10	10	2	2	1	1
Miratech Dr to Summers Ridge Rd			1	1	50	50	10	10	2	2	1	1
Summers Ridge Rd to Unnamed Road			1	1	50	50	10	10	2	2	1	1
Unnamed Road to Trade St			1	1	50	50	11	11	2	2	1	1
Trade St to Carroll Rd			1	1	40	40	11	11	2	2	1	1
Carroll Rd to Miramar Rd			1	1	40	40	11	11	2	2	1	1
Parkdale Ave (NS)												
Mira Mesa Blvd to Flanders Dr			1	1	25	25	8	8	2	2	1	1
Flanders Dr to Gold Coast Dr			1	1	25	25	8	8	2	2	1	1
Montongo St (NS)												
New Salem St to Goleta Rd	HD increase SB for two way cycle		1	1	30	30	8	8	2	2	1	1
Goleta Rd to Mira Mesa Blvd			1	1	30	30	8	8	2	2	1	1
Camino Ruiz (NS)												
Calle Cristobal to Aquarious Dr			1	1	40	40	9	18	2	2	1	1
Aquarious Dr to Teresa Dr/Capricorn Wy			1	1	40	40	9	18	2	2	1	1
Teresa Dr/Capricorn Wy to Westmore Rd		SB CP 0 to 2	1	1	40	40	9	8	2	2	1	1
Westmore Rd to New Salem St			1	1	40	40	15	9	2	2	1	1
New Salem St to Mira Mesa Blvd			1	1	40	40	15	15	2	2	1	1
Mira Mesa Blvd to Driveway			1	1	40	40	15	9	2	2	1	1
Driveway to Reagan/Marauder Wy			1	1	40	40	15	9	2	2	1	1
Reagan Rd/Marauder Wy to Flanders Dr			1	1	40	40	10	10	2	2	1	1
Flanders Dr to Gold Coast Dr			1	1	40	40	10	10	2	2	1	1
Gold Coast Dr to Jade Coast Dr			1	1	40	40	10	10	2	2	1	0
Jade Coast Dr to Carroll Canyon Rd	Asphalt sidewalk (both sides)	CP 0 to 2	1	1	40	50	27	26	2	2	1	1
Carroll Canyon Rd to Miralani Dr		NB CP 0 to 2	1	1	40	50	13	13	2	2	1	1
Miralani Dr to Activity Rd	Asphalt sidewalk section (SB side) Missing sidewalk section (NB side)		1	1	40	50	13	13	2	2	1	1
Activity Rd to Miramar Rd			1	1	40	50	13	13	2	2	1	1
Westmore Rd (EW)												
Camino Ruiz to Westonhill Dr			1	1	25	25	8	8	2	2	1	1
Reagan Rd (NS,EW)												
Mira Mesa Blvd to Camino Ruiz			1	1	30	30	15	8	2	2	1	1
Marauder Wy (EW,NS)												
Camino Ruiz to Mira Mesa Blvd			1	1	30	30	8	8	2	2	1	1
Gold Coast Dr (EW)												
Parkdale Ave to Camino Ruiz			1	1	25	25	7	7	2	2	1	1
Camino Ruiz to San Ramon Dr			1	1	25	25	8	8	2	2	1	1
San Ramon Dr to Westonhill Dr			1	1	25	25	8	8	2	2	1	1
Westonhill Dr to Thanksgiving Ln			1	1	25	25	8	8	2	2	1	1
Thanksgiving Ln to Black Mountain Rd			1	1	25	25	8	8	2	2	1	1
Black Mountain Rd to Maya Linda Rd			1	1	25	30	8	8	2	2	1	1
Westonhill Dr (NS)												
Menkar Rd to Aquarious Dr			1	1	25	25	8	9	2	2	1	1
Aquarious Dr to Arcturus Wy			1	1	25	25	8	9	2	2	1	1
Arcturus Wy to Capricorn Wy			1	1	25	25	8	9	2	2	1	1
Capricorn Wy to Libra Dr			1	1	25	25	8	9	2	2	1	1
Libra Dr to Westmore Rd			1	1	25	25	8	9	2	2	1	1
Westmore Rd to Mira Mesa Blvd			1	1	25	25	8	9	2	2	1	1
Mira Mesa Blvd to Flanders Dr		increased HD westbo	1	1	25	25	9	9	2	2	1	1
Flanders Dr to Gold Coast Dr		increased HD westbo	1	1	25	25	9	9	2	2	1	1
Gold Coast Dr to Jade Coast Dr		increased HD westbo	1	1	25	25	9	9	2	2	1	1
Capricorn Wy (EW)												
Camino Ruiz to Westonhill Dr			1	1	25	25	8	8	2	2	1	1
Westonhill Dr to Bootes St	speed survey unavailable, assumed 25		1	1	25	25	8	8	2	2	1	1
Bootes St to Black Mountain Rd	speed survey unavailable, assumed 25		1	1	25	25	8	8	2	2	1	1
Black Mountain Rd to Westview Pkwy	speed survey unavailable, assumed 25		1	1	25	25	26	26	2	2	1	1
Black Mountain Rd (NS)												
North of Northern Community Limit to Mercy Rd			1	1	45	45	11	11	2	2	1	1
Mercy Rd to Westview Pkwy			1	1	50	50	11	11	2	2	1	1
Westview Pkwy to Capricorn Wy			1	1	50	50	11	11	2	2	1	1
Capricorn Wy to Galvin Ave			1	1	50	50	11	11	2	2	1	1
Galvin Ave to Gemini Ave			1	1	35	35	12	13	2	2	1	1
Gemini Ave to Mira Mesa Blvd			1	1	35	35	12	13	2	2	1	1
Mira Mesa Blvd to Village Green/The Hills Driveways			1	1	40	40	15	15	2	2	1	1
Village Green/The Hills Driveways to Hillery Dr			1	1	40	40	15	15	2	2	1	1
Hillery Dr to Miramar College			1	1	40	40	8	13	2	2	1	1
Miramar College to Gold Coast Dr			1	1	40	40	8	13	2	2	1	1
Gold Coast Dr to Carroll Canyon Rd			1	1	40	40	8	13	2	2	1	1
Carroll Canyon Rd to Maya Linda Rd	Asphalt sidewalk section (SB side)		1	1	40	40	8	13	2	2	1	1
Maya Linda Rd to Black Mountain Rd/Carroll Centre Rd			1	1	40	40	16	16	2	2	1	1
Black Mountain Rd/Kearny Villa Rd to Activity Rd		SB CP 0 to 2	1	1	30	30	15	15	2	2	2	2
Activity Rd to Miramar Rd			1	1	30	30	15	15	2	2	2	2
Kearny Villa Rd (NS)												
Black Mountain Rd/Carroll Centre Rd to Miramar Rd		HD increased	1	1	40	40	17	17	2	2	1	1
Hillery Dr (EW)												
Greenford Dr to Rickert Rd			1	1	30	30	8	8	2	2	1	1
Rickert Rd to Black Mountain Rd			1	1	30	30	8	8	2	2	1	1
Black Mountain Rd to Westview Pkwy			1	1	35	35	6	15	2	2	1	1
Activity Rd (EW)												

Camino Ruiz to Black Mountain Rd	HD increased for both		1	1	35	35	9	9	2	2	1	1
Mercy Rd (EW)												
Black Mountain Rd to Kika Ct			1	1	45	50	6	10	2	2	1	1
Kika Ct to Alemania Rd			1	1	45	50	6	10	2	2	1	1
I-15 SB Ramps to I-15 NB Ramps			1	1	45	50	2	2	2	2	1	1
Westview Pkwy (NS)												
Black Mountain Rd to Campus Point Dr N			1	1	45	45	9	9	2	2	1	1
Campus Point Dr N to Campus Point Dr S			1	1	45	45	9	9	2	2	1	1
Campus Point Dr S to Capricorn Wy			1	1	45	45	9	9	2	2	1	1
Capricorn Wy to Mira Lee Wy			1	1	40	40	9	9	2	2	1	1
Mira Lee Wy to Galvin Ave			1	1	40	40	9	9	2	2	1	1
Galvin Ave to Mira Mesa Blvd			1	1	40	40	8	16	2	2	1	1
Mira Mesa Blvd to Market Center Driveway			1	1	40	40	6	21	2	2	2	2
Market Center Blvd to Hillery Dr			1	1	40	40	6	21	2	2	2	2
Carroll Canyon Rd (EW)												
Black Mountain Rd to Maya Linda Rd			1	1	35	35	9	9	2	2	1	1
Maya Linda Rd to I-15 SB Ramps			1	1	35	35	9	9	2	2	1	1
I-15 SB Ramps to I-15 NB Ramps			1	1	35	35	9	9	2	2	1	1
Carroll Road to Camino Santa Fe			1	1	40	40	2	2	2	2	1	1
Camino Santa Fe to Camino Ruiz			1	1	40	40	6	6	2	2	1	1
Camino Ruiz to Black Mountain Rd			1	1	40	40	6	6	2	2	1	1

Intersection ID	Intersection		Intersection Leg	Physical	Operational	ADA Curb Ramps	Traffic Control	SCORE	GRADE
	NB/SB	EB/WB							
1	Vista Sorrento Pkwy	Lusk Blvd	North	-	-	-	2	2	Restricted
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West						
2	Vista Sorrento Pkwy	Directors Pl	North	2	1	-	2	5	Medium
			East	1	1	2	2	6	Medium
			South	-	-	-	2	2	Restricted
			West						
3	Vista Sorrento Pkwy	Mira Sorrento Pl	North	2	1	2	2	7	High
			East	1	1	2	2	6	Medium
			South	-	-	-	2	2	Restricted
			West	-	-	-	2	2	Restricted
4	Vista Sorrento Pkwy	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South	-	-	-	2	2	Restricted
			West	-	-	-	2	2	Restricted
5	I-805 NB Ramps	Carroll Canyon Rd	North	-	-	-	2	2	Restricted
			East	-	-	-	2	2	Restricted
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted
6	Juniper Park Ln	Sorrento Valley Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
7	Sunny Mesa Rd	Sorrento Valley Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
8	Camino Santa Fe	Sorrento Valley Blvd	North						
			East	1	1	2	2	6	Medium
			South	2	1	2	2	7	High
			West	-	-	-	2	2	Restricted
9	Camino Santa Fe	Top Gun St	North	1	1	2	2	6	Medium
			East						
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
10	Camino Santa Fe	Flanders Dr	North	1	1	2	2	6	Medium
			East	2	1	2	2	7	High
			South	1	1	2	2	6	Medium
			West	2	1	2	2	7	High
11	Youngstown Wy	Carroll Canyon Rd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South						
			West	1	1	2	2	6	Medium
12	Nancy Ridge Dr	Carroll Canyon Rd	North						
			East	1	1	2	2	6	Medium
			South	-	-	-	0	0	Restricted
			West	-	-	-	2	2	Restricted

Intersection ID	Intersection		Intersection Leg	Physical	Operational	ADA Curb Ramps	Traffic Control	SCORE	GRADE
	NB/SB	EB/WB							
13	Office Driveways	Lusk Blvd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
14	W Wateridge Cir	Lusk Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
15	Telesis Ct	Lusk Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
16	E Wateridge Cir	Lusk Blvd	North						
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
17	Pacific Center Blvd	Lusk Blvd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
18	Lusk Blvd	Barnes Canyon Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
19	Lusk Blvd	Morehouse Dr	North	1	1	2	2	6	Medium
			East						
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
20	Lusk Blvd	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
21	Scranton Rd	Mira Sorrento Pl	North	-	-	-	2	2	Restricted
			East						
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
22	Scranton Rd	Morehouse Dr	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
23	Scranton Rd	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted
24	Scranton Rd	Sorrento South Dwy/Oberlin Dr	North	-	-	-	2	2	Restricted
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium

Intersection ID	Intersection NB/SB	Intersection EB/WB	Intersection Leg	Physical	Operational	ADA Curb Ramps	Traffic Control	SCORE	GRADE
25	Scranton Rd	Carroll Canyon Rd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South						
			West	1	1	2	2	6	Medium
26	Pacific Heights Blvd	Barnes Canyon Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
27	Wireless Wy	Pacific Center Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted
28	Pacific Heights Blvd	Pacific Center Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted
29	Pacific Mesa Blvd	Pacific Center Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
30	Pacific Mesa Blvd	Pacific Heights Blvd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
31	Pacific Heights Blvd	Mira Mesa Blvd	North	2	1	2	2	7	High
			East	2	1	2	2	7	High
			South	2	1	2	2	7	High
			West	2	1	2	2	7	High
32	Pacific Heights Blvd	Cornerstone Ct	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
33	Pacific Heights Blvd	Carroll Canyon Rd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South						
			West	1	1	2	2	6	Medium
34	Lopez Point Dr	Calle Cristobal	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
35	Camino Propico	Calle Cristobal	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
36	Lopez Ridge Park Driveways	Calle Cristobal	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium

Intersection ID	Intersection NB/SB	Intersection EB/WB	Intersection Leg	Physical	Operational	ADA Curb Ramps	Traffic Control	SCORE	GRADE
37	Camino Miranda	Calle Cristobal	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
38	Windy Ridge Wy	Calle Cristobal	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
39	Prairie Wood Dr	Calle Cristobal	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
40	Avenida Del Gato	Calle Cristobal	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
41	Camino Ruiz	Calle Cristobal	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	-	-	-	2	2	Restricted
			West	1	1	2	2	6	Medium
42	Sequence Dr/ Huennekens St	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted
43	Genetic Center/Steadman St	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
44	Flanders Dr	Mira Mesa Blvd	North	2	1	2	2	7	High
			East	1	1	2	2	6	Medium
			South	2	1	2	2	7	High
			West	1	1	2	2	6	Medium
45	Viper Wy	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
46	Camino Santa Fe	Mira Mesa Blvd	North	2	1	2	2	7	High
			East	2	1	2	2	7	High
			South	2	1	2	2	7	High
			West	2	1	2	2	7	High
47	Schilling Ave	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
48	Aderman Ave	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium

Intersection ID	Intersection NB/SB	Intersection EB/WB	Intersection Leg	Physical	Operational	ADA Curb Ramps	Traffic Control	SCORE	GRADE
49	Parkdale Ave	Mira Mesa Blvd	North	2	1	2	2	7	High
			East	1	1	2	2	6	Medium
			South	2	1	2	2	7	High
			West	1	1	2	2	6	Medium
50	Reagan Rd	Mira Mesa Blvd	North	1	2	2	2	7	High
			East	-	-	-	2	2	Restricted
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
51	Mira Mesa Mall Driveways	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted
52	Camino Ruiz	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
53	New Salem St/Marauder Wy	Mira Mesa Blvd	North	2	1	2	2	7	High
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
54	Westonhill Dr	Mira Mesa Blvd	North	2	1	2	2	7	High
			East	-	-	-	2	2	Restricted
			South	2	1	2	2	7	High
			West	1	1	2	2	6	Medium
55	Greenford Dr	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
56	Westmore Rd/Marbury Ave	Mira Mesa Blvd	North	2	1	2	2	7	High
			East	1	1	2	2	6	Medium
			South	2	1	2	2	7	High
			West	1	1	2	2	6	Medium
57	Black Mountain Rd	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
58	Westview Pkwy	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
59	I-15 SB Ramps	Mira Mesa Blvd	North	1	2	2	2	7	High
			East	-	-	-	2	2	Restricted
			South						
			West	-	-	-	2	2	Restricted
60	I-15 NB Ramps	Mira Mesa Blvd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted

Intersection ID	Intersection		Intersection Leg	Physical	Operational	ADA Curb Ramps	Traffic Control	SCORE	GRADE
	NB/SB	EB/WB							
61	Westview Pkwy	Campus Point Dr N	North	-	-	-	2	2	Restricted
			East						
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
62	Westview Pkwy	Campus Point Dr S	North	-	-	-	2	2	Restricted
			East						
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
63	Westview Pkwy	Capricorn Wy	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	2	1	2	2	7	High
64	Westview Pkwy	Mira Lee Wy	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	2	2	2	7	High
			West	1	1	2	2	6	Medium
65	Westview Pkwy	Galvin Ave	North	1	1	2	2	6	Medium
			East						
			South	1	2	2	2	7	High
			West	1	2	2	2	7	High
66	Westview Pkwy	Market Center Driveway	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
67	Westview Pkwy	Hillery Dr	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
68	Maya Linda Rd	Carroll Canyon Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
69	I-15 SB Ramps	Carroll Canyon Rd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
70	I-15 NB Ramps	Carroll Canyon Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted
71	Camino Santa Fe	Miramar Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted
72	Commerce Ave	Miramar Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium

Intersection ID	Intersection NB/SB	Intersection EB/WB	Intersection Leg	Physical	Operational	ADA Curb Ramps	Traffic Control	SCORE	GRADE
73	Production Ave	Miramar Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South						
			West	1	1	2	2	6	Medium
74	Distribution Ave	Miramar Rd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South						
			West	1	1	2	2	6	Medium
75	Miramar Wy	Miramar Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
76	Carroll Rd	Miramar Rd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South						
			West	1	1	2	2	6	Medium
77	Alesmith Ct	Miramar Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South						
			West	1	1	2	2	6	Medium
78	Dowdy Dr	Miramar Rd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South						
			West	1	1	2	2	6	Medium
79	Cabot Dr	Miramar Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South						
			West	1	1	2	2	6	Medium
80	Camino Ruiz	Miramar Rd	North	2	1	2	2	7	High
			East	2	1	2	2	7	High
			South						
			West	-	-	-	2	2	Restricted
81	Clayton Dr/Mitscher Wy	Miramar Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted
82	Black Mountain Rd	Miramar Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South						
			West	1	1	2	2	6	Medium
83	Kearny Villa Rd	Miramar Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted
84	Kearny Mesa Rd	Miramar Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium

Intersection ID	Intersection		Intersection Leg	Physical	Operational	ADA Curb Ramps	Traffic Control	SCORE	GRADE
	NB/SB	EB/WB							
85	I-15 SB Ramps	Miramar Rd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South						
			West	-	-	-	2	2	Restricted
86	Rehco Rd	Carroll Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
87	Camino Santa Fe	Carroll Rd	North	2	1	2	2	7	High
			East	1	1	2	2	6	Medium
			South	2	1	2	2	7	High
			West	2	1	2	2	7	High
88	Carroll Rd	Kenamar Dr	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	-	-	-	2	2	Restricted
			West	1	1	2	2	6	Medium
89	Black Mountain Rd	Mercy Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
90	Black Mountain Rd	Westview Pkwy	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	-	-	-	2	2	Restricted
			West						
91	Black Mountain Rd	Capricorn Wy	North	1	1	2	2	6	Medium
			East	2	1	2	2	7	High
			South	1	1	2	2	6	Medium
			West	2	1	2	2	7	High
92	Black Mountain Rd	Galvin Ave	North	2	2	2	2	8	High
			East	1	1	2	2	6	Medium
			South	-	-	-	2	2	Restricted
			West	1	1	2	2	6	Medium
93	Black Mountain Rd	Gemini Ave	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
94	Black Mountain Rd	Hillery Dr	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
95	Black Mountain Rd	Miramar College	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West						
96	Black Mountain Rd	Gold Coast Dr	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium

Intersection ID	Intersection NB/SB	Intersection EB/WB	Intersection Leg	Physical	Operational	ADA Curb Ramps	Traffic Control	SCORE	GRADE
97	Black Mountain Rd	Carroll Canyon Rd	North	2	1	2	2	7	High
			East	2	1	2	2	7	High
			South	-	-	-	2	2	Restricted
			West	2	1	2	2	7	High
98	Black Mountain Rd	Maya Linda Rd	North	2	1	2	2	7	High
			East	2	1	2	2	7	High
			South	2	1	2	2	7	High
			West	2	1	2	2	7	High
99	Black Mountain Rd/Kearny Villa Rd	Black Mountain Rd/Carroll Centre Rd	North	2	1	2	2	7	High
			East	2	1	2	2	7	High
			South	2	1	2	2	7	High
			West	2	1	2	2	7	High
100	Black Mountain Rd	Activity Rd	North	2	2	2	2	8	High
			East	2	2	2	2	8	High
			South	2	2	2	2	8	High
			West	2	2	2	2	8	High
101	Camino Ruiz	Teresa Dr/Capricorn Wy	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
102	Camino Ruiz	Westmore Rd	North	1	1	2	2	6	Medium
			East	2	1	2	2	7	High
			South	1	0	2	2	5	Medium
			West	2	1	2	2	7	High
103	Camino Ruiz	New Salem St	North	1	1	2	2	6	Medium
			East	2	1	2	2	7	High
			South	1	1	2	2	6	Medium
			West	2	1	2	2	7	High
104	Camino Ruiz	Driveway	North	-	-	-	2	2	Restricted
			East						
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
105	Camino Ruiz	Reagan Rd/Marauder Wy	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
106	Camino Ruiz	Flanders Dr	North	1	1	2	2	6	Medium
			East	2	1	2	2	7	High
			South	1	0	2	2	5	Medium
			West	2	1	2	2	7	High
107	Camino Ruiz	Gold Coast Dr	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	0	2	2	5	Medium
			West	2	1	2	2	7	High
108	Camino Ruiz	Jade Coast Dr	North	1	1	2	2	6	Medium
			East	2	1	2	2	7	High
			South	-	-	-	2	2	Restricted
			West	2	1	2	2	7	High

Intersection ID	Intersection		Intersection Leg	Physical	Operational	ADA Curb Ramps	Traffic Control	SCORE	GRADE
	NB/SB	EB/WB							
109	Camino Ruiz	Carroll Canyon Rd	North	2	1	2	2	7	High
			East	2	1	2	2	7	High
			South	2	1	2	2	7	High
			West	2	1	2	2	7	High
110	Camino Ruiz	Miralani Dr	North	-	-	-	2	2	Restricted
			East	1	1	2	2	6	Medium
			South	1	0	2	2	5	Medium
			West	1	1	2	2	6	Medium
111	Camino Ruiz	Activity Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	-	-	-	2	2	Restricted
			West	1	1	2	2	6	Medium
112	Mercy Rd	Kika Ct	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	-	-	-	2	2	Restricted
			West						
113	Alamenia Rd	Mercy Rd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
114	I-15 SB Ramps	Mercy Rd	North	1	1	2	2	6	Medium
			East	-	-	-	2	2	Restricted
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted
115	I-15 NB Ramps	Mercy Rd	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	-	-	-	2	2	Restricted
116	Camino Santa Fe	Miratech Dr	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	-	-	-	2	2	Restricted
			West	1	1	2	2	6	Medium
117	Camino Santa Fe	Summers Ridge Rd	North	1	1	2	2	6	Medium
			East						
			South	-	-	-	2	2	Restricted
			West	1	1	2	2	6	Medium
118	Camino Santa Fe	Unnamed Road	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
119	Camino Santa Fe	Trade St	North	1	1	2	2	6	Medium
			East	1	1	2	2	6	Medium
			South	1	1	2	2	6	Medium
			West	1	1	2	2	6	Medium
120	Montongo St	New Salem St	North	1	1	2	1	5	Medium
			East	2	1	2	1	6	Medium
			South	1	1	2	1	5	Medium
			West	2	1	2	1	6	Medium

Intersection ID	Intersection NB/SB	Intersection EB/WB	Intersection Leg	Physical	Operational	ADA Curb Ramps	Traffic Control	SCORE	GRADE
122	Dabney Dr	Flanders Dr	North	1	1	2	1	5	Medium
			East	2	1	2	1	6	Medium
			South						
			West	2	1	2	1	6	Medium
123	Parkdale Ave	Flanders Dr	North	2	1	2	1	6	Medium
			East	2	1	2	1	6	Medium
			South	2	1	2	1	6	Medium
			West	2	1	2	1	6	Medium
124	Parkdale Ave	Gold Coast Dr	North	2	1	2	1	6	Medium
			East	2	1	2	1	6	Medium
			South	2	1	2	1	6	Medium
			West	2	1	2	1	6	Medium
125	Empress Ave	Gold Coast Dr	North	1	1	2	1	5	Medium
			East	2	1	2	0	5	Medium
			South	1	1	2	1	5	Medium
			West	2	1	2	0	5	Medium
126	Baroness Ave	Gold Coast Dr	North						
			East	2	1	2	0	5	Medium
			South	1	1	2	1	5	Medium
			West	2	1	2	0	5	Medium
127	San Ramon Dr	Gold Coast Dr	North	2	1	2	1	6	Medium
			East	2	1	2	1	6	Medium
			South	2	1	2	1	6	Medium
			West	2	1	2	1	6	Medium
128	Thanksgiving Ln	Gold Coast Dr	North						
			East	2	1	2	1	6	Medium
			South	1	1	2	1	5	Medium
			West	2	1	2	1	6	Medium
129	San Ramon Dr	Flanders Dr	North	2	1	2	1	6	Medium
			East	2	1	2	1	6	Medium
			South	2	1	2	1	6	Medium
			West	2	1	2	1	6	Medium
130	Ivory Coast Drive	Reagan Road	North						
			East	1	1	2	0	4	Medium
			South	1	1	2	1	5	Medium
			West	1	1	2	0	4	Medium
131	Rickert Rd	Hillery Dr	North	1	1	2	1	5	Medium
			East	2	1	2	0	5	Medium
			South						
			West	2	1	2	0	5	Medium
132	Montongo St	Acama St	North						
			East	1	1	2	1	5	Medium
			South	1	1	2	1	5	Medium
			West	1	1	2	1	5	Medium
133	Camino Ruiz	Aquarius Dr	North	1	1	2	1	5	Medium
			East	2	1	2	1	6	Medium
			South	1	0	2	1	4	Medium
			West	2	1	2	1	6	Medium
134	Westonhill Dr	Arcturus Wy	North	2	1	2	1	6	Medium
			East	1	1	2	1	5	Medium
			South	2	1	2	1	6	Medium
			West						

Appendix G – Analysis Output for Peak Hour Arterial Level of Service

Arterial Level of Service: EB Barnes Canyon Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Lusk Blvd	III	30	81.6	27.6	109.2	0.68	22.4	C
Pacific Heights Blvd	III	30	22.8	29.0	51.8	0.18	12.5	E
Total	III		104.4	56.6	161.0	0.86	19.2	C

Arterial Level of Service: WB Barnes Canyon Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Lusk Blvd	III	30	22.8	117.5	140.3	0.18	4.6	F
Total	III		22.8	117.5	140.3	0.18	4.6	F

Arterial Level of Service: NB Black Mountain Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	30	28.2	21.7	49.9	0.22	16.0	E
Kearny Villa Rd	II	30	17.1	41.0	58.1	0.13	7.9	F
Maya Linda Rd	II	40	20.8	19.4	40.2	0.18	16.2	E
Carroll Canyon Rd	II	40	14.5	69.4	83.9	0.13	5.4	F
Gold Coast Dr	II	40	20.0	12.8	32.8	0.17	19.1	D
Miramar College Drwy	II	40	29.0	16.3	45.3	0.28	22.6	C
Hillery Dr	II	40	25.9	18.2	44.1	0.24	19.2	D
Mira Mesa Blvd	II	40	29.9	72.2	102.1	0.29	10.3	F
Gemini Ave	II	35	18.8	6.1	24.9	0.15	21.7	D
Galvin Ave	II	35	10.5	6.8	17.3	0.08	17.5	D
Capricorn Wy	II	50	26.1	6.1	32.2	0.26	29.2	B
Westview Pkwy	II	50	45.0	22.2	67.2	0.62	33.5	B
Mercy Rd	II	50	28.7	54.8	83.5	0.30	13.0	E
Total	II		314.5	367.0	681.5	3.06	16.2	E

Arterial Level of Service: SB Black Mountain Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Mercy Rd	II	50	26.4	99.1	125.5	0.28	8.0	F
	II	50	28.7	14.0	42.7	0.30	25.5	C
Capricorn Wy	II	50	45.0	34.8	79.8	0.62	28.2	B
Achilles Wy	II	50	26.1	7.3	33.4	0.26	28.1	B
Gemini Ave	II	35	10.5	11.6	22.1	0.08	13.7	E
Mira Mesa Blvd	II	35	18.8	90.1	108.9	0.15	5.0	F
Hillery Dr	II	40	29.9	42.5	72.4	0.29	14.6	E
Miramar College Drwy	II	40	25.9	0.5	26.4	0.24	32.1	B
Gold Coast Dr	II	40	29.0	21.8	50.8	0.28	20.1	D
	II	40	20.0	61.5	81.5	0.17	7.7	F
	II	40	14.5	16.0	30.5	0.13	14.8	E
Black Mountain Rd	II	40	20.8	38.6	59.4	0.18	10.9	F
Activity Rd	II	30	17.1	44.9	62.0	0.13	7.4	F
Miramar Rd	II	30	28.2	63.5	91.7	0.22	8.7	F
Total	II		340.9	546.2	887.1	3.34	13.6	E

Arterial Level of Service: NB Camino Ruiz

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Activity Rd	II	40	19.6	23.0	42.6	0.17	14.4	E
Carroll Canyon Rd	II	40	36.6	63.5	100.1	0.37	13.3	E
Gold Coast Dr	II	40	53.4	10.4	63.8	0.59	33.5	B
Mira Mesa Blvd	II	40	47.9	64.1	112.0	0.53	17.1	D
Capricorn Wy	II	40	76.5	18.7	95.2	0.85	32.1	B
	II	40	13.1	6.4	19.5	0.11	21.0	D
Total	II		247.1	186.1	433.2	2.63	21.8	D

Arterial Level of Service: SB Camino Ruiz

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Calle Cristobal	II	25	17.1	8.5	25.6	0.08	10.9	F
Teresa Dr	II	40	36.7	15.6	52.3	0.38	26.3	C
Mira Mesa Blvd	II	40	76.5	33.8	110.3	0.85	27.7	C
Gold Coast Dr	II	40	47.9	30.9	78.8	0.53	24.3	C
Carroll Canyon Rd	II	44	48.6	74.2	122.8	0.59	17.4	D
	II	50	33.6	18.7	52.3	0.37	25.4	C
Miramar Rd	II	50	17.0	57.3	74.3	0.17	8.2	F
Total	II		277.4	239.0	516.4	2.98	20.7	D

Arterial Level of Service: NB Camino Santa Fe

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Miramar Rd	II	30	10.9	39.4	50.3	0.08	5.6	F
Carroll Rd	II	40	61.8	27.1	88.9	0.69	27.8	C
Trade St	II	40	25.5	33.9	59.4	0.23	14.0	E
	II	50	35.2	19.4	54.6	0.41	27.0	C
Miratech Dr	II	50	28.9	15.4	44.3	0.30	24.7	C
Flanders Dr	II	50	38.4	26.8	65.2	0.47	25.9	C
Mira Mesa Blvd	II	50	17.6	59.2	76.8	0.18	8.3	F
Top Gun St	II	45	23.8	10.1	33.9	0.23	24.3	C
Calle Cristobal	II	45	57.8	34.0	91.8	0.72	28.4	B
Total	II		299.9	265.3	565.2	3.31	21.1	D

Arterial Level of Service: SB Camino Santa Fe

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Top Gun St	I	50	52.1	11.6	63.7	0.72	40.9	B
Mira Mesa Blvd	I	50	22.9	85.0	107.9	0.23	7.6	F
Flanders Dr	I	50	17.6	74.1	91.7	0.18	6.9	F
Miratech Dr	I	50	38.4	27.5	65.9	0.47	25.6	D
Summers Ridge Rd	I	50	28.9	26.4	55.3	0.30	19.8	E
	I	50	35.2	28.6	63.8	0.41	23.1	D
Carroll Rd	I	40	25.5	66.9	92.4	0.23	9.0	F
Miramar Rd	I	40	61.8	84.9	146.7	0.69	16.9	E
Total	I		282.4	405.0	687.4	3.23	16.9	E

Arterial Level of Service: EB Mira Mesa Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-805 NB Off-ramp	II	45	25.3	43.4	68.7	0.24	12.8	F
Scranton Rd	II	45	24.4	28.3	52.7	0.22	15.3	E
Oberline Dr	II	50	41.9	71.7	113.6	0.58	18.4	D
Pacific Heights Blvd	II	50	30.9	37.6	68.5	0.34	17.8	D
	II	50	33.0	3.8	36.8	0.38	37.5	A
	II	50	23.2	20.4	43.6	0.23	19.2	D
	II	50	23.6	54.5	78.1	0.24	10.9	F
	II	50	17.1	30.0	47.1	0.17	13.1	E
Camino Santa Fe	II	50	17.5	60.3	77.8	0.18	8.1	F
	II	50	27.4	1.2	28.6	0.27	34.5	B
	II	50	26.6	2.6	29.2	0.27	32.8	B
Parkdale Ave	II	50	33.9	20.3	54.2	0.39	26.2	C
Reagan Rd	II	45	37.3	6.8	44.1	0.40	32.4	B
	II	45	15.0	1.9	16.9	0.14	29.4	B
Camino Ruiz	II	45	18.4	55.6	74.0	0.17	8.2	F
Reagan Rd	II	40	31.7	11.2	42.9	0.31	26.0	C
Westonhill Dr	II	40	19.6	20.7	40.3	0.17	15.2	E
Greenford Dr	II	40	20.2	6.4	26.6	0.18	23.7	C
Marbury Ave	II	40	27.1	5.8	32.9	0.25	26.9	C
Black Mountain Rd	II	40	31.8	98.3	130.1	0.31	8.6	F
Westview Pkwy	II	35	29.6	135.5	165.1	0.25	5.4	F
	II	35	21.9	0.2	22.1	0.18	28.6	B
I-15 NB Off-ramp	II	35	22.2	40.0	62.2	0.18	10.3	F
Total	II		599.6	756.5	1356.1	6.04	16.0	E

Arterial Level of Service: WB Mira Mesa Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	35	22.6	25.3	47.9	0.18	13.6	E
I-15 SB Off-ramp	II	35	22.2	40.5	62.7	0.18	10.2	F
Westview Pkwy	II	35	21.9	22.4	44.3	0.18	14.3	E
Black Mountain Rd	II	35	29.6	74.2	103.8	0.25	8.6	F
Westmore Rd	II	40	31.8	5.0	36.8	0.31	30.5	B
Greenford Dr	II	40	27.1	43.5	70.6	0.25	12.6	F
Westonhill Dr	II	40	20.2	167.6	187.8	0.18	3.4	F
New Salem St	II	40	19.6	351.8	371.4	0.17	1.7	F
Camino Ruiz	II	40	31.7	49.1	80.8	0.31	13.8	E
Driveway	II	45	18.4	4.1	22.5	0.17	27.1	C
Reagan Rd	II	45	15.0	6.2	21.2	0.14	23.4	C
Parkdale Ave	II	45	37.3	141.2	178.5	0.40	8.0	F
Aderman Ave	II	50	33.9	49.2	83.1	0.39	17.1	D
Schilling Ave	II	50	26.6	37.5	64.1	0.27	14.9	E
Camino Santa Fe	II	50	27.4	100.9	128.3	0.27	7.7	F
Viper Wy	II	50	17.5	15.1	32.6	0.18	19.3	D
Flanders Dr	II	50	17.1	102.4	119.5	0.17	5.2	F
Genetic Center Dr	II	50	23.6	120.5	144.1	0.24	5.9	F
Sequence Dr	II	50	23.2	209.2	232.4	0.23	3.6	F
Pacific Heights Blvd	II	50	33.0	8.9	41.9	0.38	33.0	B
Lusk Blvd	II	50	30.9	38.1	69.0	0.34	17.7	D
Scranton Rd	II	50	41.9	41.4	83.3	0.58	25.2	C
	II	40	25.7	35.1	60.8	0.22	13.2	E
Total	II		598.2	1689.2	2287.4	5.98	9.4	F

Arterial Level of Service: EB Miramar Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Camino Santa Fe	I	50	32.2	6.2	38.4	0.35	33.2	C
	I	50	25.0	24.2	49.2	0.25	18.3	E
Production Ave	I	50	21.2	1.2	22.4	0.21	34.1	B
Distribution Ave	I	50	14.1	0.4	14.5	0.14	35.1	B
Miramar Wy	I	50	16.6	3.5	20.1	0.17	29.7	C
	I	50	25.6	10.2	35.8	0.26	25.7	D
Empire St	I	50	38.6	1.9	40.5	0.49	43.9	A
	I	50	26.0	4.1	30.1	0.26	31.1	C
	I	50	18.4	3.1	21.5	0.18	30.9	C
Camino Ruiz	I	50	43.9	3.1	47.0	0.61	46.7	A
Mitscher Wy	I	40	18.0	47.6	65.6	0.16	8.6	F
Black Mountain Rd	I	40	42.0	2.0	44.0	0.44	36.1	B
Kearny Villa Rd	I	40	23.5	40.1	63.6	0.20	11.6	F
	I	40	18.0	1.7	19.7	0.16	28.6	C
Total	I		363.1	149.3	512.4	3.89	27.3	C

Arterial Level of Service: WB Miramar Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Kearny Villa Rd	I	45	16.3	80.5	96.8	0.16	5.8	F
Black Mountain Rd	I	45	21.3	7.6	28.9	0.20	25.5	D
Clayton Dr	I	45	40.2	135.6	175.8	0.44	9.0	F
Camino Ruiz	I	45	16.2	17.2	33.4	0.16	16.8	E
Cabot Dr	I	50	43.9	8.1	52.0	0.61	42.2	A
Dowdy Dr	I	50	18.4	1.2	19.6	0.18	33.9	C
Empire St	I	50	26.0	0.7	26.7	0.26	35.1	B
Carroll Rd	I	50	38.6	0.8	39.4	0.49	45.2	A
	I	50	25.6	3.6	29.2	0.26	31.5	C
Distribution Ave	I	50	16.6	0.7	17.3	0.17	34.5	B
Production Ave	I	50	14.1	2.6	16.7	0.14	30.5	C
Commerce Ave	I	50	21.2	4.6	25.8	0.21	29.6	C
Camino Santa Fe	I	50	25.0	66.2	91.2	0.25	9.9	F
Total	I		323.4	329.4	652.8	3.53	19.5	E

Arterial Level of Service: NB Scranton Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Mira Mesa Blvd	III	30	26.0	83.3	109.3	0.21	6.8	F
Mira Sorrento Pl	III	30	22.2	57.0	79.2	0.17	7.5	F
Total	III		48.2	140.3	188.5	0.37	7.1	F

Arterial Level of Service: SB Scranton Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Mira Sorrento Pl	III	33	73.8	72.7	146.5	0.68	16.7	D
Mira Mesa Blvd	III	30	22.2	126.0	148.2	0.17	4.0	F
Carroll Canyon Rd	III	30	26.0	20.1	46.1	0.21	16.0	D
Total	III		122.0	218.8	340.8	1.05	11.1	E

Arterial Level of Service: SB Westview Pkwy

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Capricorn Wy	II	45	63.1	12.2	75.3	0.79	37.7	A
	II	40	18.8	31.3	50.1	0.16	11.7	F
Galvin Ave	II	40	16.7	22.0	38.7	0.15	13.5	E
Mira Mesa Blvd	II	40	23.9	125.7	149.6	0.21	5.0	F
Total	II		122.5	191.2	313.7	1.30	15.0	E

Arterial Level of Service: WB Westview Pkwy

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Mira Mesa Blvd	II	40	26.8	68.6	95.4	0.24	9.2	F
	II	40	23.9	6.4	30.3	0.21	24.7	C
Mira Lee Way	II	40	16.7	21.2	37.9	0.15	13.8	E
Dauntless St	II	40	18.8	9.7	28.5	0.16	20.6	D
Black Mountain Rd	II	45	63.1	29.4	92.5	0.79	30.7	B
Total	II		149.3	135.3	284.6	1.55	19.6	D

Arterial Level of Service: EB Barnes Canyon Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Lusk Blvd	III	30	81.6	83.5	165.1	0.68	14.8	D
Pacific Heights Blvd	III	30	22.8	48.0	70.8	0.18	9.1	F
Total	III		104.4	131.5	235.9	0.86	13.1	E

Arterial Level of Service: WB Barnes Canyon Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Lusk Blvd	III	30	22.8	56.0	78.8	0.18	8.2	F
Total	III		22.8	56.0	78.8	0.18	8.2	F

Arterial Level of Service: NB Black Mountain Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	30	28.2	63.7	91.9	0.22	8.7	F
Kearny Villa Rd	II	30	17.1	53.4	70.5	0.13	6.5	F
Maya Linda Rd	II	40	20.8	42.7	63.5	0.18	10.2	F
Carroll Canyon Rd	II	40	14.5	125.2	139.7	0.13	3.2	F
Gold Coast Dr	II	40	20.0	23.6	43.6	0.17	14.4	E
Miramar College Drwy	II	40	29.0	7.3	36.3	0.28	28.2	B
Hillery Dr	II	40	25.9	40.5	66.4	0.24	12.7	F
Mira Mesa Blvd	II	40	29.9	54.1	84.0	0.29	12.6	F
Gemini Ave	II	35	18.8	34.0	52.8	0.15	10.3	F
Galvin Ave	II	35	10.5	4.0	14.5	0.08	20.9	D
Capricorn Wy	II	50	26.1	43.9	70.0	0.26	13.4	E
Westview Pkwy	II	50	45.0	18.8	63.8	0.62	35.3	A
Mercy Rd	II	50	28.7	74.5	103.2	0.30	10.5	F
Total	II		314.5	585.7	900.2	3.06	12.3	F

Arterial Level of Service: SB Black Mountain Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Mercy Rd	II	50	26.4	31.9	58.3	0.28	17.2	D
	II	50	28.7	1.9	30.6	0.30	35.6	A
Capricorn Wy	II	50	45.0	51.2	96.2	0.62	23.4	C
Achilles Wy	II	50	26.1	3.0	29.1	0.26	32.3	B
Gemini Ave	II	35	10.5	32.9	43.4	0.08	7.0	F
Mira Mesa Blvd	II	35	18.8	68.5	87.3	0.15	6.2	F
Hillery Dr	II	40	29.9	98.9	128.8	0.29	8.2	F
Miramar College Drwy	II	40	25.9	0.1	26.0	0.24	32.5	B
Gold Coast Dr	II	40	29.0	46.6	75.6	0.28	13.5	E
	II	40	20.0	40.2	60.2	0.17	10.4	F
	II	40	14.5	249.6	264.1	0.13	1.7	F
Black Mountain Rd	II	40	20.8	2.1	22.9	0.18	28.4	B
Activity Rd	II	30	17.1	78.2	95.3	0.13	4.8	F
Miramar Rd	II	30	28.2	63.1	91.3	0.22	8.8	F
Total	II		340.9	768.2	1109.1	3.34	10.9	F

Arterial Level of Service: NB Camino Ruiz

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Activity Rd	II	40	19.6	106.9	126.5	0.17	4.8	F
Carroll Canyon Rd	II	40	36.6	61.6	98.2	0.37	13.5	E
Gold Coast Dr	II	40	53.4	28.7	82.1	0.59	26.1	C
Mira Mesa Blvd	II	40	47.9	47.0	94.9	0.53	20.2	D
Capricorn Wy	II	40	76.5	24.0	100.5	0.85	30.4	B
	II	40	13.1	29.4	42.5	0.11	9.6	F
Total	II		247.1	297.6	544.7	2.63	17.4	D

Arterial Level of Service: SB Camino Ruiz

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Calle Cristobal	II	25	17.1	16.2	33.3	0.08	8.4	F
Teresa Dr	II	40	36.7	14.3	51.0	0.38	27.0	C
Mira Mesa Blvd	II	40	76.5	34.4	110.9	0.85	27.6	C
Gold Coast Dr	II	40	47.9	13.8	61.7	0.53	31.0	B
Carroll Canyon Rd	II	44	48.6	55.3	103.9	0.59	20.6	D
	II	50	33.6	22.9	56.5	0.37	23.5	C
Miramar Rd	II	50	17.0	80.9	97.9	0.17	6.3	F
Total	II		277.4	237.8	515.2	2.98	20.8	D

Arterial Level of Service: NB Camino Santa Fe

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Miramar Rd	II	30	10.9	69.8	80.7	0.08	3.5	F
Carroll Rd	II	40	61.8	26.1	87.9	0.69	28.1	B
Trade St	II	40	25.5	203.5	229.0	0.23	3.6	F
	II	50	35.2	26.9	62.1	0.41	23.7	C
Miratech Dr	II	50	28.9	34.8	63.7	0.30	17.2	D
Flanders Dr	II	50	38.4	58.1	96.5	0.47	17.5	D
Mira Mesa Blvd	II	50	17.6	38.5	56.1	0.18	11.3	F
Top Gun St	II	45	23.8	136.6	160.4	0.23	5.1	F
Calle Cristobal	II	45	57.8	90.7	148.5	0.72	17.5	D
Total	II		299.9	685.0	984.9	3.31	12.1	F

Arterial Level of Service: SB Camino Santa Fe

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Top Gun St	I	50	52.1	69.7	121.8	0.72	21.4	D
Mira Mesa Blvd	I	50	22.9	33.3	56.2	0.23	14.7	F
Flanders Dr	I	50	17.6	97.4	115.0	0.18	5.5	F
Miratech Dr	I	50	38.4	19.5	57.9	0.47	29.1	C
Summers Ridge Rd	I	50	28.9	14.9	43.8	0.30	25.0	D
	I	50	35.2	46.6	81.8	0.41	18.0	E
Carroll Rd	I	40	25.5	24.8	50.3	0.23	16.6	E
Miramar Rd	I	40	61.8	101.1	162.9	0.69	15.2	F
Total	I		282.4	407.3	689.7	3.23	16.9	E

Arterial Level of Service: EB Mira Mesa Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-805 NB Off-ramp	II	45	25.3	13.5	38.8	0.24	22.6	C
Scranton Rd	II	45	24.4	54.7	79.1	0.22	10.2	F
Oberline Dr	II	50	41.9	78.3	120.2	0.58	17.4	D
Pacific Heights Blvd	II	50	30.9	246.0	276.9	0.34	4.4	F
	II	50	33.0	109.0	142.0	0.38	9.7	F
	II	50	23.2	105.5	128.7	0.23	6.5	F
	II	50	23.6	19.6	43.2	0.24	19.7	D
	II	50	17.1	199.9	217.0	0.17	2.8	F
Camino Santa Fe	II	50	17.5	149.3	166.8	0.18	3.8	F
	II	50	27.4	14.7	42.1	0.27	23.4	C
	II	50	26.6	17.3	43.9	0.27	21.8	D
Parkdale Ave	II	50	33.9	74.0	107.9	0.39	13.1	E
Reagan Rd	II	45	37.3	4.3	41.6	0.40	34.4	B
	II	45	15.0	19.2	34.2	0.14	14.5	E
Camino Ruiz	II	45	18.4	49.1	67.5	0.17	9.0	F
Reagan Rd	II	40	31.7	12.3	44.0	0.31	25.4	C
Westonhill Dr	II	40	19.6	80.0	99.6	0.17	6.2	F
Greenford Dr	II	40	20.2	10.1	30.3	0.18	20.8	D
Marbury Ave	II	40	27.1	0.6	27.7	0.25	32.0	B
Black Mountain Rd	II	40	31.8	152.4	184.2	0.31	6.1	F
Westview Pkwy	II	35	29.6	135.5	165.1	0.25	5.4	F
	II	35	21.9	3.3	25.2	0.18	25.1	C
I-15 NB Off-ramp	II	35	22.2	70.0	92.2	0.18	6.9	F
Total	II		599.6	1618.6	2218.2	6.04	9.8	F

Arterial Level of Service: WB Mira Mesa Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	35	22.6	39.0	61.6	0.18	10.6	F
I-15 SB Off-ramp	II	35	22.2	34.6	56.8	0.18	11.3	F
Westview Pkwy	II	35	21.9	31.9	53.8	0.18	11.7	F
Black Mountain Rd	II	35	29.6	22.2	51.8	0.25	17.3	D
Westmore Rd	II	40	31.8	4.3	36.1	0.31	31.1	B
Greenford Dr	II	40	27.1	26.6	53.7	0.25	16.5	E
Westonhill Dr	II	40	20.2	12.9	33.1	0.18	19.1	D
New Salem St	II	40	19.6	34.1	53.7	0.17	11.4	F
Camino Ruiz	II	40	31.7	12.3	44.0	0.31	25.4	C
Driveway	II	45	18.4	42.9	61.3	0.17	9.9	F
Reagan Rd	II	45	15.0	23.6	38.6	0.14	12.9	F
Parkdale Ave	II	45	37.3	3.1	40.4	0.40	35.4	A
Aderman Ave	II	50	33.9	8.2	42.1	0.39	33.7	B
Schilling Ave	II	50	26.6	14.0	40.6	0.27	23.6	C
Camino Santa Fe	II	50	27.4	8.1	35.5	0.27	27.8	C
Viper Wy	II	50	17.5	34.7	52.2	0.18	12.1	F
Flanders Dr	II	50	17.1	14.7	31.8	0.17	19.4	D
Genetic Center Dr	II	50	23.6	41.4	65.0	0.24	13.1	E
Sequence Dr	II	50	23.2	40.3	63.5	0.23	13.2	E
Pacific Heights Blvd	II	50	33.0	63.4	96.4	0.38	14.3	E
Lusk Blvd	II	50	30.9	55.5	86.4	0.34	14.1	E
Scranton Rd	II	50	41.9	35.8	77.7	0.58	27.0	C
	II	40	25.7	19.8	45.5	0.22	17.7	D
Total	II		598.2	623.4	1221.6	5.98	17.6	D

Arterial Level of Service: EB Miramar Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Camino Santa Fe	I	50	32.2	10.3	42.5	0.35	30.0	C
	I	50	25.0	8.8	33.8	0.25	26.6	D
Production Ave	I	50	21.2	1.1	22.3	0.21	34.3	B
Distribution Ave	I	50	14.1	2.5	16.6	0.14	30.7	C
Miramar Wy	I	50	16.6	38.9	55.5	0.17	10.7	F
	I	50	25.6	6.0	31.6	0.26	29.1	C
Empire St	I	50	38.6	1.3	39.9	0.49	44.6	A
	I	50	26.0	6.0	32.0	0.26	29.3	C
	I	50	18.4	9.4	27.8	0.18	23.9	D
Camino Ruiz	I	50	43.9	8.7	52.6	0.61	41.7	B
Mitscher Wy	I	40	18.0	140.6	158.6	0.16	3.5	F
Black Mountain Rd	I	40	42.0	11.7	53.7	0.44	29.6	C
Kearny Villa Rd	I	40	23.5	143.9	167.4	0.20	4.4	F
	I	40	18.0	1.0	19.0	0.16	29.7	C
Total	I		363.1	390.2	753.3	3.89	18.6	E

Arterial Level of Service: WB Miramar Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Kearny Villa Rd	I	45	16.3	49.9	66.2	0.16	8.5	F
Black Mountain Rd	I	45	21.3	40.7	62.0	0.20	11.9	F
Clayton Dr	I	45	40.2	55.0	95.2	0.44	16.7	E
Camino Ruiz	I	45	16.2	6.6	22.8	0.16	24.7	D
Cabot Dr	I	50	43.9	6.3	50.2	0.61	43.7	A
Dowdy Dr	I	50	18.4	1.1	19.5	0.18	34.1	B
Empire St	I	50	26.0	0.3	26.3	0.26	35.6	B
Carroll Rd	I	50	38.6	5.6	44.2	0.49	40.3	B
	I	50	25.6	2.7	28.3	0.26	32.5	C
Distribution Ave	I	50	16.6	1.0	17.6	0.17	33.9	C
Production Ave	I	50	14.1	5.0	19.1	0.14	26.7	D
Commerce Ave	I	50	21.2	2.3	23.5	0.21	32.5	C
Camino Santa Fe	I	50	25.0	49.4	74.4	0.25	12.1	F
Total	I		323.4	225.9	549.3	3.53	23.2	D

Arterial Level of Service: NB Scranton Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Mira Mesa Blvd	III	32	26.0	55.4	81.4	0.21	9.1	F
Mira Sorrento Pl	III	30	22.2	1.9	24.1	0.17	24.8	B
Total	III		48.2	57.3	105.5	0.37	12.7	E

Arterial Level of Service: SB Scranton Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Mira Sorrento Pl	III	33	73.8	258.2	332.0	0.68	7.4	F
Mira Mesa Blvd	III	32	22.2	79.3	101.5	0.17	5.9	F
Carroll Canyon Rd	III	30	26.0	48.7	74.7	0.21	9.9	F
Total	III		122.0	386.2	508.2	1.05	7.4	F

Arterial Level of Service: SB Westview Pkwy

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Capricorn Wy	II	45	63.1	6.7	69.8	0.79	40.7	A
	II	40	18.8	20.2	39.0	0.16	15.1	E
Galvin Ave	II	40	16.7	9.3	26.0	0.15	20.1	D
Mira Mesa Blvd	II	40	23.9	86.3	110.2	0.21	6.8	F
Total	II		122.5	122.5	245.0	1.30	19.2	D

Arterial Level of Service: WB Westview Pkwy

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Mira Mesa Blvd	II	40	26.8	240.4	267.2	0.24	3.3	F
	II	40	23.9	3.6	27.5	0.21	27.2	C
Mira Lee Way	II	40	16.7	15.7	32.4	0.15	16.1	E
Dauntless St	II	40	18.8	5.1	23.9	0.16	24.6	C
Black Mountain Rd	II	45	63.1	63.4	126.5	0.79	22.4	C
Total	II		149.3	328.2	477.5	1.55	11.7	F

Appendix H – Analysis Output for Peak Hour Intersection Level of Service

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	450	730	300	1490	390	200	100	150	370	830	310
Future Volume (veh/h)	120	450	730	300	1490	390	200	100	150	370	830	310
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	556	901	341	1693	443	169	191	169	420	943	352
Peak Hour Factor	0.81	0.81	0.81	0.88	0.88	0.88	0.89	0.89	0.89	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	117	702	612	259	1331	331	217	229	189	359	754	416
Arrive On Green	0.07	0.40	0.40	0.15	0.48	0.48	0.12	0.12	0.12	0.20	0.20	0.20
Sat Flow, veh/h	1753	1749	1523	1753	2760	687	1781	1877	1552	1781	3741	1538
Grp Volume(v), veh/h	148	556	901	341	1041	1095	169	190	170	420	943	352
Grp Sat Flow(s),veh/h/ln	1753	1749	1523	1753	1749	1698	1781	1870	1559	1781	1870	1538
Q Serve(g_s), s	11.6	48.4	69.7	25.6	83.7	83.7	16.0	17.3	18.6	35.0	35.0	35.0
Cycle Q Clear(g_c), s	11.6	48.4	69.7	25.6	83.7	83.7	16.0	17.3	18.6	35.0	35.0	35.0
Prop In Lane	1.00		1.00	1.00		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	117	702	612	259	843	819	217	228	190	359	754	416
V/C Ratio(X)	1.26	0.79	1.47	1.32	1.23	1.34	0.78	0.83	0.89	1.17	1.25	0.85
Avail Cap(c_a), veh/h	117	702	612	259	843	819	236	248	207	359	754	416
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.0	45.6	51.9	74.0	44.9	44.9	73.9	74.5	75.1	69.3	69.3	60.2
Incr Delay (d2), s/veh	169.9	5.7	221.8	168.1	115.6	160.5	12.3	18.1	31.8	102.1	123.5	14.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	21.7	63.5	23.5	61.9	70.3	7.9	9.3	9.0	25.7	29.2	16.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	250.9	51.3	273.8	242.1	160.6	205.4	86.2	92.6	106.9	171.4	192.8	74.4
LnGrp LOS	F	D	F	F	F	F	F	F	F	F	F	E
Approach Vol, veh/h		1605			2477			529			1715	
Approach Delay, s/veh		194.6			191.6			95.1			163.3	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	30.0	75.4		41.0	16.0	89.4		27.2
Change Period (Y+Rc), s	4.4	* 5.7		6.0	4.4	5.7		6.0
Max Green Setting (Gmax), s	25.6	* 70		35.0	11.6	83.3		23.0
Max Q Clear Time (g_c+I1), s	27.6	71.7		37.0	13.6	85.7		20.6
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.2

Intersection Summary	
HCM 6th Ctrl Delay	176.6
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	50	660	810	1080	820	50
Future Volume (veh/h)	0	50	660	810	1080	820	50
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1841	1841	1841	1841	1870	1870
Adj Flow Rate, veh/h		53	695	853	1137	882	54
Peak Hour Factor		0.95	0.95	0.95	0.95	0.93	0.93
Percent Heavy Veh, %		4	4	4	4	2	2
Cap, veh/h		925	411	924	2057	992	872
Arrive On Green		0.26	0.26	0.27	0.59	0.28	0.28
Sat Flow, veh/h		3589	1554	3401	3589	3563	1585
Grp Volume(v), veh/h		53	695	853	1137	882	54
Grp Sat Flow(s),veh/h/ln		1749	1554	1700	1749	1781	1585
Q Serve(g_s), s		0.9	20.4	18.8	15.3	18.3	1.2
Cycle Q Clear(g_c), s		0.9	20.4	18.8	15.3	18.3	1.2
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		925	411	924	2057	992	872
V/C Ratio(X)		0.06	1.69	0.92	0.55	0.89	0.06
Avail Cap(c_a), veh/h		925	411	939	2057	1109	924
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		21.2	28.4	27.3	9.7	26.7	8.1
Incr Delay (d2), s/veh		0.0	321.1	13.9	0.5	8.2	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.3	43.5	8.6	4.6	8.1	0.3
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		21.2	349.5	41.2	10.2	34.9	8.1
LnGrp LOS		C	F	D	B	C	A
Approach Vol, veh/h		748			1990	936	
Approach Delay, s/veh		326.2			23.5	33.4	
Approach LOS		F			C	C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.9	26.7				51.6		25.5
Change Period (Y+Rc), s	4.0	6.3				* 6.3		4.0
Max Green Setting (Gmax), s	21.3	20.4				* 37		24.0
Max Q Clear Time (g_c+I1), s	20.8	22.4				17.3		20.3
Green Ext Time (p_c), s	0.1	0.0				11.6		1.2

Intersection Summary		
HCM 6th Ctrl Delay		87.6
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	0	160	10	0	0	820	10	10	0	10	60
Future Volume (veh/h)	50	0	160	10	0	0	820	10	10	0	10	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	0.99		1.00	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1811	1811	1811	1870	1870	1870
Adj Flow Rate, veh/h	53	0	168	13	0	0	837	10	10	0	11	65
Peak Hour Factor	0.95	0.95	0.95	0.75	0.75	0.75	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	2	2	2	6	6	6	2	2	2
Cap, veh/h	376	0	1179	312	0	0	1101	1081	900	5	238	203
Arrive On Green	0.11	0.00	0.11	0.11	0.00	0.00	0.33	0.60	0.60	0.00	0.13	0.13
Sat Flow, veh/h	1490	0	2679	881	0	0	3346	1811	1509	1781	1777	1514
Grp Volume(v), veh/h	53	0	168	13	0	0	837	10	10	0	11	65
Grp Sat Flow(s),veh/h/ln	1490	0	1339	881	0	0	1673	1811	1509	1781	1777	1514
Q Serve(g_s), s	0.0	0.0	1.2	0.3	0.0	0.0	7.4	0.1	0.1	0.0	0.2	1.3
Cycle Q Clear(g_c), s	0.9	0.0	1.2	1.3	0.0	0.0	7.4	0.1	0.1	0.0	0.2	1.3
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	376	0	1179	312	0	0	1101	1081	900	5	238	203
V/C Ratio(X)	0.14	0.00	0.14	0.04	0.00	0.00	0.76	0.01	0.01	0.00	0.05	0.32
Avail Cap(c_a), veh/h	398	0	1222	1176	0	0	2095	2527	2105	217	1582	1348
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	5.6	14.2	0.0	0.0	9.9	2.7	2.7	0.0	12.4	12.9
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.2	0.1	0.0	0.0	1.6	0.0	0.0	0.0	0.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	0.0	5.7	14.2	0.0	0.0	10.3	2.7	2.7	0.0	12.4	13.2
LnGrp LOS	B	A	A	B	A	A	B	A	A	A	B	B
Approach Vol, veh/h		221			13			857			76	
Approach Delay, s/veh		7.6			14.2			10.1			13.1	
Approach LOS		A			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	24.5		8.4	15.2	9.3		8.4
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9
Max Green Setting (Gmax), s	4.0	45.9		4.0	20.6	29.3		27.0
Max Q Clear Time (g_c+I1), s	0.0	2.1		3.2	9.4	3.3		3.3
Green Ext Time (p_c), s	0.0	0.1		0.1	1.5	0.3		0.0

Intersection Summary			
HCM 6th Ctrl Delay			9.9
HCM 6th LOS			A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1240	0	50	700	90	0	0	20	100	0	10
Future Volume (veh/h)	10	1240	0	50	700	90	0	0	20	100	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	1348	0	62	875	112	0	0	53	111	0	11
Peak Hour Factor	0.92	0.92	0.92	0.80	0.80	0.80	0.38	0.38	0.38	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	1944	867	81	2066	922	0	0	226	293	0	226
Arrive On Green	0.01	0.55	0.00	0.05	0.58	0.58	0.00	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1500	3554	1585	1781	3554	1585	0	0	1585	1070	0	1585
Grp Volume(v), veh/h	11	1348	0	62	875	112	0	0	53	111	0	11
Grp Sat Flow(s),veh/h/ln	1500	1777	1585	1781	1777	1585	0	0	1585	1070	0	1585
Q Serve(g_s), s	0.4	14.2	0.0	1.8	7.0	1.6	0.0	0.0	1.5	4.1	0.0	0.3
Cycle Q Clear(g_c), s	0.4	14.2	0.0	1.8	7.0	1.6	0.0	0.0	1.5	5.6	0.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	17	1944	867	81	2066	922	0	0	226	293	0	226
V/C Ratio(X)	0.65	0.69	0.00	0.76	0.42	0.12	0.00	0.00	0.23	0.38	0.00	0.05
Avail Cap(c_a), veh/h	117	2208	985	191	2346	1047	0	0	895	863	0	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.3	8.5	0.0	24.2	6.0	4.8	0.0	0.0	19.5	22.0	0.0	19.0
Incr Delay (d2), s/veh	14.4	1.2	0.0	5.4	0.1	0.1	0.0	0.0	0.2	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.5	0.0	0.8	1.3	0.3	0.0	0.0	0.5	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	9.7	0.0	29.6	6.1	4.9	0.0	0.0	19.7	22.3	0.0	19.0
LnGrp LOS	D	A	A	C	A	A	A	A	B	C	A	B
Approach Vol, veh/h		1359			1049			53			122	
Approach Delay, s/veh		9.9			7.4			19.7			22.0	
Approach LOS		A			A			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.3	33.7		11.3	4.6	35.5		11.3				
Change Period (Y+Rc), s	4.0	5.6		4.0	4.0	* 5.6		4.0				
Max Green Setting (Gmax), s	5.5	31.9		29.0	4.0	* 34		29.0				
Max Q Clear Time (g_c+I1), s	3.8	16.2		7.6	2.4	9.0		3.5				
Green Ext Time (p_c), s	0.0	11.9		0.4	0.0	5.7		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	640	600	780	690	0	0	0	0	530	10	360
Future Volume (veh/h)	0	640	600	780	690	0	0	0	0	530	10	360
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	711	667	821	726	0				710	0	268
Peak Hour Factor	0.90	0.90	0.90	0.95	0.95	0.95				0.91	0.91	0.91
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1243	1031	886	2280	0				791	0	352
Arrive On Green	0.00	0.33	0.33	0.26	0.64	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	3741	3103	3456	3647	0				3563	0	1585
Grp Volume(v), veh/h	0	711	667	821	726	0				710	0	268
Grp Sat Flow(s),veh/h/ln	0	1870	1552	1728	1777	0				1781	0	1585
Q Serve(g_s), s	0.0	13.9	16.2	20.6	8.2	0.0				17.2	0.0	14.1
Cycle Q Clear(g_c), s	0.0	13.9	16.2	20.6	8.2	0.0				17.2	0.0	14.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1243	1031	886	2280	0				791	0	352
V/C Ratio(X)	0.00	0.57	0.65	0.93	0.32	0.00				0.90	0.00	0.76
Avail Cap(c_a), veh/h	0	1243	1031	906	2280	0				838	0	373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	24.4	25.2	32.2	7.2	0.0				33.6	0.0	32.3
Incr Delay (d2), s/veh	0.0	0.4	1.1	14.7	0.4	0.0				11.5	0.0	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	5.6	9.6	2.4	0.0				8.5	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	24.9	26.3	46.9	7.5	0.0				45.0	0.0	39.7
LnGrp LOS	A	C	C	D	A	A				D	A	D
Approach Vol, veh/h		1378			1547						978	
Approach Delay, s/veh		25.6			28.4						43.6	
Approach LOS		C			C						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	27.5	36.5		24.8		64.0
Change Period (Y+Rc), s	* 4.7	7.0		5.1		7.0
Max Green Setting (Gmax), s	* 23	29.0		20.9		57.0
Max Q Clear Time (g_c+I1), s	22.6	18.2		19.2		10.2
Green Ext Time (p_c), s	0.2	3.7		0.5		3.0

Intersection Summary			
HCM 6th Ctrl Delay			31.2
HCM 6th LOS			C

Notes
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1520	0	0	1500	740	10	10	1610	0	0	0
Future Volume (veh/h)	10	1520	0	0	1500	740	10	10	1610	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	11	1617	0	0	1596	787	11	11	1851			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.87	0.87	0.87			
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2			
Cap, veh/h	44	1903	0	35	2820	875	559	587	1058			
Arrive On Green	0.01	0.54	0.00	0.00	0.55	0.55	0.31	0.31	0.31			
Sat Flow, veh/h	3456	3647	0	1781	5106	1583	1781	1870	3170			
Grp Volume(v), veh/h	11	1617	0	0	1596	787	11	11	1851			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	1781	1702	1583	1781	1870	1585			
Q Serve(g_s), s	0.4	50.7	0.0	0.0	26.6	57.8	0.6	0.5	41.0			
Cycle Q Clear(g_c), s	0.4	50.7	0.0	0.0	26.6	57.8	0.6	0.5	41.0			
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	44	1903	0	35	2820	875	559	587	1058			
V/C Ratio(X)	0.25	0.85	0.00	0.00	0.57	0.90	0.02	0.02	1.75			
Avail Cap(c_a), veh/h	132	1903	0	659	4427	1373	559	587	1058			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	63.9	25.9	0.0	0.0	19.0	26.0	30.9	30.9	43.5			
Incr Delay (d2), s/veh	1.1	5.0	0.0	0.0	0.1	3.7	0.0	0.0	341.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	21.0	0.0	0.0	9.7	20.4	0.2	0.2	65.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	30.8	0.0	0.0	19.1	29.7	30.9	30.9	384.9			
LnGrp LOS	E	C	A	A	B	C	C	C	F			
Approach Vol, veh/h		1628			2383			1873				
Approach Delay, s/veh		31.1			22.6			380.8				
Approach LOS		C			C			F				

Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	8.6	75.9			6.3	78.1		46.1				
Change Period (Y+Rc), s	6.0	* 6			* 4.7	6.0		5.1				
Max Green Setting (Gmax), s	48.3	* 70			* 5	113.2		41.0				
Max Q Clear Time (g_c+I1), s	10.0	52.7			2.4	59.8		43.0				
Green Ext Time (p_c), s	0.0	7.5			0.0	12.4		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		139.0
HCM 6th LOS		F

Notes
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	20	0	0	50	0	1130	30	10	2770	10
Future Vol, veh/h	0	0	20	0	0	50	0	1130	30	10	2770	10
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	3	3	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	210	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	67	67	67	92	92	92	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3
Mvmt Flow	0	0	27	0	0	75	0	1228	33	10	2856	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1435	-	-	634	-	0	0	1264	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	7.14	-	-	-	5.36	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.92	-	-	-	3.13	-	-
Pot Cap-1 Maneuver	0	0	105	0	0	362	0	-	-	289	-	-
Stage 1	0	0	-	0	0	-	0	-	-	-	-	-
Stage 2	0	0	-	0	0	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	105	-	-	361	-	-	-	288	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	50.6	17.6	0	0.1
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	105	361	288	-	-
HCM Lane V/C Ratio	-	-	0.254	0.207	0.036	-	-
HCM Control Delay (s)	-	-	50.6	17.6	18	-	-
HCM Lane LOS	-	-	F	C	C	-	-
HCM 95th %tile Q(veh)	-	-	0.9	0.8	0.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	960	1650	170	30	250	110	560	110	170	320	170	110
Future Volume (veh/h)	960	1650	170	30	250	110	560	110	170	320	170	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1055	1813	187	41	338	149	615	121	187	386	205	133
Peak Hour Factor	0.91	0.91	0.91	0.74	0.74	0.74	0.91	0.91	0.91	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	745	1487	979	199	397	177	689	260	216	341	231	192
Arrive On Green	0.42	0.42	0.42	0.11	0.11	0.11	0.20	0.14	0.14	0.19	0.12	0.12
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1553	1781	1870	1552
Grp Volume(v), veh/h	1055	1813	187	41	338	149	615	121	187	386	205	133
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1553	1781	1870	1552
Q Serve(g_s), s	61.9	61.9	0.0	3.1	13.8	13.6	25.6	8.8	17.4	28.3	16.0	12.2
Cycle Q Clear(g_c), s	61.9	61.9	0.0	3.1	13.8	13.6	25.6	8.8	17.4	28.3	16.0	12.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	745	1487	979	199	397	177	689	260	216	341	231	192
V/C Ratio(X)	1.42	1.22	0.19	0.21	0.85	0.84	0.89	0.47	0.87	1.13	0.89	0.69
Avail Cap(c_a), veh/h	745	1487	979	409	817	364	787	444	369	341	375	312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	43.0	12.3	59.8	64.5	64.4	57.7	58.7	62.4	59.8	63.8	62.2
Incr Delay (d2), s/veh	194.9	105.1	0.0	0.2	2.0	4.1	10.7	0.5	4.7	89.8	8.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	67.0	48.3	2.7	1.4	6.3	5.7	11.9	4.1	7.0	20.9	8.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	238.0	148.1	12.3	60.0	66.6	68.6	68.4	59.1	67.1	149.6	72.5	63.9
LnGrp LOS	F	F	B	E	E	E	E	E	E	F	E	E
Approach Vol, veh/h		3055			528			923			724	
Approach Delay, s/veh		170.8			66.6			66.9			112.0	
Approach LOS		F			E			E			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	35.3	24.1		21.6	33.0	26.3		67.0				
Change Period (Y+Rc), s	5.8	* 5.8		5.1	* 4.7	5.8		5.1				
Max Green Setting (Gmax), s	33.7	* 30		34.0	* 28	35.1		61.9				
Max Q Clear Time (g_c+I1), s	27.6	18.0		15.8	30.3	19.4		63.9				
Green Ext Time (p_c), s	0.3	0.3		0.7	0.0	0.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			133.8									
HCM 6th LOS			F									

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1240	1470	1070	50	750	110	130	130	20	50	110	280
Future Volume (veh/h)	1240	1470	1070	50	750	110	130	130	20	50	110	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	2116	1870	1870	2116	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1292	1531	1115	51	765	112	160	160	25	54	136	293
Peak Hour Factor	0.96	0.96	0.96	0.98	0.98	0.98	0.81	0.81	0.81	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1630	2502	985	65	902	131	476	217	34	317	166	1772
Arrive On Green	0.47	0.62	0.62	0.01	0.06	0.06	0.14	0.14	0.14	0.09	0.09	0.09
Sat Flow, veh/h	3456	4021	1583	1781	5089	739	3456	1576	246	3563	1870	3117
Grp Volume(v), veh/h	1292	1531	1115	51	578	299	160	0	185	54	136	293
Grp Sat Flow(s),veh/h/ln	1728	2011	1583	1781	1926	1976	1728	0	1823	1781	1870	1558
Q Serve(g_s), s	56.8	41.8	112.0	5.1	26.7	27.0	7.5	0.0	17.5	2.5	12.9	0.0
Cycle Q Clear(g_c), s	56.8	41.8	112.0	5.1	26.7	27.0	7.5	0.0	17.5	2.5	12.9	0.0
Prop In Lane	1.00		1.00	1.00		0.37	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	1630	2502	985	65	683	350	476	0	251	317	166	1772
V/C Ratio(X)	0.79	0.61	1.13	0.78	0.85	0.86	0.34	0.00	0.74	0.17	0.82	0.17
Avail Cap(c_a), veh/h	1630	2502	985	65	683	350	749	0	395	370	194	1819
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.16	0.16	0.16	0.63	0.63	0.63	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.1	20.7	34.0	88.2	82.3	82.4	70.1	0.0	74.5	75.9	80.6	19.2
Incr Delay (d2), s/veh	0.5	0.2	61.9	28.9	8.2	15.4	1.1	0.0	10.4	0.4	22.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.7	19.0	56.9	2.9	14.7	15.9	3.4	0.0	9.0	1.2	7.3	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	20.9	95.9	117.1	90.5	97.9	71.2	0.0	84.9	76.2	103.1	19.2
LnGrp LOS	D	C	F	F	F	F	E	A	F	E	F	B
Approach Vol, veh/h		3938			928			345			483	
Approach Delay, s/veh		48.6			94.3			78.5			49.2	
Approach LOS		D			F			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	118.0		21.3	90.9	38.1		29.7				
Change Period (Y+Rc), s	4.4	6.0		5.3	6.0	* 6.2		4.9				
Max Green Setting (Gmax), s	6.6	95.1		18.7	69.6	* 32		39.0				
Max Q Clear Time (g_c+I1), s	7.1	114.0		14.9	58.8	29.0		19.5				
Green Ext Time (p_c), s	0.0	0.0		1.1	4.1	1.5		3.4				

Intersection Summary	
HCM 6th Ctrl Delay	57.9
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	470	1340	280	610	570	600	50	320	160	90	210	100
Future Volume (veh/h)	470	1340	280	610	570	600	50	320	160	90	210	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	2116	1870	1870	2116	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	500	1426	298	656	613	645	79	508	254	110	256	122
Peak Hour Factor	0.94	0.94	0.94	0.93	0.93	0.93	0.63	0.63	0.63	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	1390	284	877	1023	909	233	479	399	123	287	242
Arrive On Green	0.34	0.84	0.84	0.42	0.85	0.85	0.13	0.26	0.26	0.04	0.15	0.15
Sat Flow, veh/h	1781	3323	680	3456	2011	1787	1781	1870	1559	3456	1870	1576
Grp Volume(v), veh/h	500	851	873	656	613	645	79	508	254	110	256	122
Grp Sat Flow(s),veh/h/ln	1781	2011	1992	1728	2011	1787	1781	1870	1559	1728	1870	1576
Q Serve(g_s), s	30.7	75.3	75.3	28.8	16.8	24.6	7.3	46.1	26.1	5.7	24.2	10.6
Cycle Q Clear(g_c), s	30.7	75.3	75.3	28.8	16.8	24.6	7.3	46.1	26.1	5.7	24.2	10.6
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	841	833	877	1023	909	233	479	399	123	287	242
V/C Ratio(X)	1.65	1.01	1.05	0.75	0.60	0.71	0.34	1.06	0.64	0.90	0.89	0.50
Avail Cap(c_a), veh/h	304	841	833	877	1023	909	233	479	399	123	434	366
HCM Platoon Ratio	2.00	2.00	2.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	0.83	0.83	0.83	1.00	1.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	59.3	14.7	14.7	47.0	7.9	8.5	71.1	66.9	59.5	86.5	74.7	47.6
Incr Delay (d2), s/veh	301.1	29.2	40.0	2.7	2.2	3.9	0.3	58.1	2.6	36.9	7.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	37.1	13.6	16.0	11.1	4.9	5.6	3.3	29.5	10.6	3.2	12.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	360.4	43.9	54.7	49.7	10.1	12.4	71.4	125.0	62.1	123.3	81.9	48.0
LnGrp LOS	F	F	F	D	B	B	E	F	E	F	F	D
Approach Vol, veh/h		2224			1914			841			488	
Approach Delay, s/veh		119.3			24.4			101.0			82.8	
Approach LOS		F			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	51.9	81.0	28.0	33.8	35.1	97.8	10.8	51.0
Change Period (Y+Rc), s	6.2	* 5.7	4.4	6.2	4.4	6.2	4.4	4.9
Max Green Setting (Gmax), s	32.8	* 75	9.4	41.8	30.7	76.9	6.4	46.1
Max Q Clear Time (g_c+I1), s	30.8	77.3	9.3	26.2	32.7	26.6	7.7	48.1
Green Ext Time (p_c), s	0.2	0.0	0.0	0.4	0.0	2.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	80.0
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	1370	420	1170	1230	1830	40	150	340	210	110	50
Future Volume (veh/h)	300	1370	420	1170	1230	1830	40	150	340	210	110	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	2116	1870	1841	2083	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	323	1473	452	1272	1337	0	45	170	386	266	139	63
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.88	0.88	0.88	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	4	4	4	2	2	2	2	2	2
Cap, veh/h	257	1296	507	672	2221		83	256	207	165	254	205
Arrive On Green	0.29	0.64	0.64	0.64	0.94	0.00	0.05	0.14	0.14	0.05	0.14	0.14
Sat Flow, veh/h	1781	4021	1573	1753	3958	1560	1781	1870	1512	3456	1870	1511
Grp Volume(v), veh/h	323	1473	452	1272	1337	0	45	170	386	266	139	63
Grp Sat Flow(s),veh/h/ln	1781	2011	1573	1753	1979	1560	1781	1870	1512	1728	1870	1511
Q Serve(g_s), s	25.9	58.0	43.3	68.9	8.8	0.0	4.4	15.5	12.2	8.6	12.5	6.8
Cycle Q Clear(g_c), s	25.9	58.0	43.3	68.9	8.8	0.0	4.4	15.5	12.2	8.6	12.5	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	1296	507	672	2221		83	256	207	165	254	205
V/C Ratio(X)	1.26	1.14	0.89	1.89	0.60		0.54	0.66	1.86	1.61	0.55	0.31
Avail Cap(c_a), veh/h	257	1296	507	672	2221		83	353	286	165	395	319
HCM Platoon Ratio	2.00	2.00	2.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.13	0.13	0.13	0.09	0.09	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.1	32.0	29.4	32.4	2.8	0.0	84.0	73.7	18.9	85.7	72.6	70.2
Incr Delay (d2), s/veh	120.3	63.0	3.6	402.9	0.1	0.0	4.2	1.1	406.7	301.2	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.7	30.0	12.3	97.0	1.9	0.0	2.1	7.5	27.7	10.8	6.1	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	184.4	95.0	32.9	435.3	2.9	0.0	88.1	74.8	425.6	386.9	73.3	70.5
LnGrp LOS	F	F	C	F	A		F	E	F	F	E	E
Approach Vol, veh/h		2248			2609	A		601			468	
Approach Delay, s/veh		95.4			213.7			301.1			251.2	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	73.3	63.7	13.6	29.3	30.3	106.7	13.0	30.0
Change Period (Y+Rc), s	4.4	5.7	5.3	* 4.9	4.4	5.7	4.4	5.3
Max Green Setting (Gmax), s	59.6	58.0	5.0	* 38	16.6	101.0	8.6	34.0
Max Q Clear Time (g_c+I1), s	70.9	60.0	6.4	14.5	27.9	10.8	10.6	17.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	3.3	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	180.7
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	400	780	990	80	3190	30	200	10	10	10	20	290
Future Volume (veh/h)	400	780	990	80	3190	30	200	10	10	10	20	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	2083	1841	1841	2083	1841	1870	1870	1796	1870	1870	1870
Adj Flow Rate, veh/h	435	848	1076	86	3430	32	259	0	12	12	24	354
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.80	0.80	0.80	0.82	0.82	0.82
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	454	2857	1111	93	2012	781	310	0	130	49	52	454
Arrive On Green	0.43	1.00	1.00	0.04	0.34	0.34	0.09	0.00	0.09	0.03	0.03	0.03
Sat Flow, veh/h	1753	3958	1539	1753	3958	1536	3563	0	1494	1781	1870	1568
Grp Volume(v), veh/h	435	848	1076	86	3430	32	259	0	12	12	24	354
Grp Sat Flow(s),veh/h/ln	1753	1979	1539	1753	1979	1536	1781	0	1494	1781	1870	1568
Q Serve(g_s), s	43.3	0.0	0.0	8.8	91.5	2.5	12.9	0.0	1.3	1.2	2.3	0.0
Cycle Q Clear(g_c), s	43.3	0.0	0.0	8.8	91.5	2.5	12.9	0.0	1.3	1.2	2.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	454	2857	1111	93	2012	781	310	0	130	49	52	454
V/C Ratio(X)	0.96	0.30	0.97	0.93	1.70	0.04	0.84	0.00	0.09	0.24	0.46	0.78
Avail Cap(c_a), veh/h	454	2857	1111	93	2012	781	752	0	315	49	52	454
HCM Platoon Ratio	1.67	1.67	1.67	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	0.0	0.0	86.5	59.3	30.0	80.9	0.0	75.6	85.6	86.2	58.9
Incr Delay (d2), s/veh	6.1	0.0	3.5	14.0	317.4	0.0	2.3	0.0	0.1	0.9	2.4	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.1	0.0	1.1	4.4	135.1	0.9	6.1	0.0	0.5	0.6	1.2	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	0.0	3.5	100.4	376.8	30.0	83.2	0.0	75.8	86.6	88.5	66.6
LnGrp LOS	E	A	A	F	F	C	F	A	E	F	F	E
Approach Vol, veh/h		2359			3548			271			390	
Approach Delay, s/veh		12.0			367.0			82.9			68.6	
Approach LOS		B			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.9	135.7		9.9	52.4	97.2		20.5
Change Period (Y+Rc), s	4.4	5.7		4.9	5.7	* 5.7		4.9
Max Green Setting (Gmax), s	9.5	107.6		5.0	25.6	* 92		38.0
Max Q Clear Time (g_c+I1), s	10.8	2.0		4.3	45.3	93.5		14.9
Green Ext Time (p_c), s	0.0	2.5		0.0	0.0	0.0		0.2

Intersection Summary	
HCM 6th Ctrl Delay	210.0
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	460	410	140	440	2140	510	40	90	50	100	270	340
Future Volume (veh/h)	460	410	140	440	2140	510	40	90	50	100	270	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.96	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	2083	1841	1841	2083	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	495	441	151	454	2206	526	49	111	62	114	307	386
Peak Hour Factor	0.93	0.93	0.93	0.97	0.97	0.97	0.81	0.81	0.81	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	428	1618	632	468	1680	633	63	173	144	216	340	284
Arrive On Green	0.08	0.13	0.13	0.35	0.56	0.56	0.04	0.09	0.09	0.12	0.18	0.18
Sat Flow, veh/h	1753	3958	1546	1753	3958	1491	1781	1870	1549	1781	1870	1567
Grp Volume(v), veh/h	495	441	151	454	2206	526	49	111	62	114	307	386
Grp Sat Flow(s),veh/h/ln	1753	1979	1546	1753	1979	1491	1781	1870	1549	1781	1870	1567
Q Serve(g_s), s	43.9	18.0	15.7	45.9	76.4	52.1	4.9	10.3	4.4	10.8	28.9	20.6
Cycle Q Clear(g_c), s	43.9	18.0	15.7	45.9	76.4	52.1	4.9	10.3	4.4	10.8	28.9	20.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	428	1618	632	468	1680	633	63	173	144	216	340	284
V/C Ratio(X)	1.16	0.27	0.24	0.97	1.31	0.83	0.78	0.64	0.43	0.53	0.90	1.36
Avail Cap(c_a), veh/h	428	1618	632	623	1680	633	76	395	327	216	415	347
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.8	53.8	52.8	57.4	39.2	33.9	86.2	78.8	32.5	74.3	72.1	29.2
Incr Delay (d2), s/veh	93.5	0.4	0.9	4.3	141.4	1.2	27.9	1.5	0.8	1.2	18.3	181.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	31.9	9.7	6.7	19.4	65.2	18.0	2.8	5.1	2.7	5.1	15.7	22.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	176.2	54.2	53.7	61.7	180.6	35.1	114.0	80.2	33.3	75.5	90.4	211.1
LnGrp LOS	F	D	D	E	F	D	F	F	C	E	F	F
Approach Vol, veh/h		1087			3186			222			807	
Approach Delay, s/veh		109.7			139.6			74.6			146.1	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	52.4	79.3	10.7	37.6	49.6	82.1	26.7	21.6
Change Period (Y+Rc), s	4.4	5.7	4.4	4.9	5.7	* 5.7	4.9	* 4.9
Max Green Setting (Gmax), s	64.0	49.0	7.7	39.9	36.6	* 76	9.6	* 38
Max Q Clear Time (g_c+I1), s	47.9	20.0	6.9	30.9	45.9	78.4	12.8	12.3
Green Ext Time (p_c), s	0.1	0.9	0.0	0.7	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	131.7
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	210	400	110	1760	240	520	200	60	40	90	110
Future Volume (veh/h)	110	210	400	110	1760	240	520	200	60	40	90	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	2083	1841	1841	2083	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	226	430	118	1892	258	424	499	71	56	127	155
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.85	0.85	0.85	0.71	0.71	0.71
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	273	1337	523	376	1563	600	393	413	343	204	214	181
Arrive On Green	0.26	0.56	0.56	0.29	0.53	0.53	0.22	0.22	0.22	0.11	0.11	0.11
Sat Flow, veh/h	1753	3958	1547	1753	3958	1519	1781	1870	1557	1781	1870	1577
Grp Volume(v), veh/h	118	226	430	118	1892	258	424	499	71	56	127	155
Grp Sat Flow(s),veh/h/ln	1753	1979	1547	1753	1979	1519	1781	1870	1557	1781	1870	1577
Q Serve(g_s), s	10.1	5.0	40.7	9.5	71.1	18.7	39.7	39.7	6.7	5.2	11.6	17.4
Cycle Q Clear(g_c), s	10.1	5.0	40.7	9.5	71.1	18.7	39.7	39.7	6.7	5.2	11.6	17.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	1337	523	376	1563	600	393	413	343	204	214	181
V/C Ratio(X)	0.43	0.17	0.82	0.31	1.21	0.43	1.08	1.21	0.21	0.27	0.59	0.86
Avail Cap(c_a), veh/h	273	1337	523	376	1563	600	393	413	343	376	395	333
HCM Platoon Ratio	1.67	1.67	1.67	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.35	0.35	0.35	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.0	27.1	34.8	53.9	42.7	30.3	70.1	70.2	57.3	72.9	75.7	78.3
Incr Delay (d2), s/veh	0.4	0.3	13.0	0.1	96.9	0.8	68.3	115.0	0.1	0.3	1.0	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	2.3	14.3	4.1	51.8	6.4	25.4	32.0	2.7	2.4	5.7	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.4	27.3	47.9	54.0	139.6	31.1	138.4	185.1	57.4	73.1	76.7	82.8
LnGrp LOS	E	C	D	D	F	C	F	F	E	E	E	F
Approach Vol, veh/h		774			2268			994			338	
Approach Delay, s/veh		43.8			122.8			156.1			78.9	
Approach LOS		D			F			F			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	66.5		25.5	32.4	77.1		45.0				
Change Period (Y+Rc), s	4.4	5.7		4.9	4.4	6.0		5.3				
Max Green Setting (Gmax), s	21.2	60.8		38.0	10.6	71.1		39.7				
Max Q Clear Time (g_c+I1), s	11.5	42.7		19.4	12.1	73.1		41.7				
Green Ext Time (p_c), s	0.0	0.6		0.3	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	113.0
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	170	100	350	1820	670	150	400	240	60	190	20
Future Volume (veh/h)	40	170	100	350	1820	670	150	400	240	60	190	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	2083	1841	1841	2083	1841	1870	1870	1796	1870	1870	1870
Adj Flow Rate, veh/h	41	173	102	368	1916	705	188	500	300	107	339	36
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.80	0.80	0.80	0.56	0.56	0.56
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	90	1381	528	380	2001	761	441	518	419	125	359	38
Arrive On Green	0.02	0.12	0.12	0.43	1.00	1.00	0.13	0.28	0.28	0.07	0.22	0.22
Sat Flow, veh/h	1753	3958	1514	1753	3958	1506	3456	1870	1512	1781	1658	176
Grp Volume(v), veh/h	41	173	102	368	1916	705	188	500	300	107	0	375
Grp Sat Flow(s),veh/h/ln	1753	1979	1514	1753	1979	1506	1728	1870	1512	1781	0	1834
Q Serve(g_s), s	4.2	7.1	8.2	36.9	0.0	0.0	9.0	47.5	32.2	10.7	0.0	36.3
Cycle Q Clear(g_c), s	4.2	7.1	8.2	36.9	0.0	0.0	9.0	47.5	32.2	10.7	0.0	36.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	90	1381	528	380	2001	761	441	518	419	125	0	397
V/C Ratio(X)	0.46	0.13	0.19	0.97	0.96	0.93	0.43	0.97	0.72	0.86	0.00	0.94
Avail Cap(c_a), veh/h	90	1381	528	517	2001	761	441	531	429	125	0	518
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	86.0	55.0	31.4	50.4	0.0	0.0	72.4	64.2	58.7	82.8	0.0	69.5
Incr Delay (d2), s/veh	1.3	0.2	0.8	4.6	1.7	2.5	0.2	29.8	4.7	39.8	0.0	20.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.6	3.4	13.6	0.5	0.5	4.1	27.0	13.0	6.3	0.0	19.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.3	55.2	32.2	55.0	1.7	2.5	72.7	94.0	63.4	122.6	0.0	90.3
LnGrp LOS	F	E	C	E	A	A	E	F	E	F	A	F
Approach Vol, veh/h		316			2989			988			482	
Approach Delay, s/veh		51.9			8.4			80.7			97.5	
Approach LOS		D			A			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	43.4	68.9	27.9	43.8	15.3	97.0	17.0	54.7
Change Period (Y+Rc), s	4.4	6.0	4.9	* 4.9	6.0	* 6	4.4	4.9
Max Green Setting (Gmax), s	53.1	43.5	12.9	* 51	5.6	* 91	12.6	51.1
Max Q Clear Time (g_c+I1), s	38.9	10.2	11.0	38.3	6.2	2.0	12.7	49.5
Green Ext Time (p_c), s	0.1	0.4	0.0	0.7	0.0	6.6	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	35.2
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	300	120	460	2710	230	110	90	50	80	250	130
Future Volume (veh/h)	40	300	120	460	2710	230	110	90	50	80	250	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	2083	1841	1811	2049	1811	1575	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	326	130	479	2823	240	112	92	51	87	272	141
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.98	0.98	0.98	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	6	6	6	2	2	2	2	2	2
Cap, veh/h	193	776	303	860	2276	879	97	548	1032	123	406	179
Arrive On Green	0.04	0.06	0.06	0.66	0.78	0.78	0.06	0.15	0.15	0.04	0.11	0.11
Sat Flow, veh/h	1753	3958	1543	1725	3894	1505	1500	3554	1570	3456	3554	1564
Grp Volume(v), veh/h	43	326	130	479	2823	240	112	92	51	87	272	141
Grp Sat Flow(s),veh/h/ln	1753	1979	1543	1725	1947	1505	1500	1777	1570	1728	1777	1564
Q Serve(g_s), s	4.3	14.3	14.6	26.7	105.2	6.3	11.6	4.0	0.4	4.5	13.2	15.8
Cycle Q Clear(g_c), s	4.3	14.3	14.6	26.7	105.2	6.3	11.6	4.0	0.4	4.5	13.2	15.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	193	776	303	860	2276	879	97	548	1032	123	406	179
V/C Ratio(X)	0.22	0.42	0.43	0.56	1.24	0.27	1.16	0.17	0.05	0.71	0.67	0.79
Avail Cap(c_a), veh/h	193	871	340	860	2276	879	97	833	1158	131	730	322
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.2	74.3	74.5	19.7	20.0	5.6	84.2	66.1	5.2	85.9	76.5	77.6
Incr Delay (d2), s/veh	0.2	0.1	0.3	0.0	108.6	0.1	140.5	0.1	0.0	12.5	0.7	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	7.6	6.1	9.0	65.5	2.3	8.2	1.8	0.4	2.2	6.0	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.4	74.4	74.8	19.7	128.6	5.6	224.7	66.1	5.2	98.4	77.2	80.5
LnGrp LOS	E	E	E	B	F	A	F	E	A	F	E	F
Approach Vol, veh/h		499			3542			255			500	
Approach Delay, s/veh		75.0			105.6			123.6			81.8	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	94.1	41.3	17.6	27.0	24.2	111.2	10.8	33.8				
Change Period (Y+Rc), s	4.4	6.0	6.0	* 6.4	4.4	6.0	4.4	6.0				
Max Green Setting (Gmax), s	70.6	39.6	11.6	* 37	5.0	105.2	6.8	42.2				
Max Q Clear Time (g_c+I1), s	28.7	16.6	13.6	17.8	6.3	107.2	6.5	6.0				
Green Ext Time (p_c), s	0.2	0.6	0.0	0.5	0.0	0.0	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			100.9									
HCM 6th LOS			F									

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	390	20	20	2990	20	70	10	50	60	20	150
Future Volume (veh/h)	30	390	20	20	2990	20	70	10	50	60	20	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	0.98		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1811	1811	2049	1739	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	424	22	21	3082	21	86	12	62	67	22	169
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.81	0.81	0.81	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	38	2845	1113	26	2818	1035	209	27	261	156	316	261
Arrive On Green	0.04	1.00	1.00	0.03	1.00	1.00	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1725	3894	1523	1725	3894	1430	1013	159	1546	1303	1870	1546
Grp Volume(v), veh/h	33	424	22	21	3082	21	98	0	62	67	22	169
Grp Sat Flow(s),veh/h/ln	1725	1947	1523	1725	1947	1430	1172	0	1546	1303	1870	1546
Q Serve(g_s), s	3.4	0.0	0.0	2.2	0.0	0.0	12.7	0.0	6.2	8.9	1.8	18.4
Cycle Q Clear(g_c), s	3.4	0.0	0.0	2.2	0.0	0.0	14.5	0.0	6.2	23.4	1.8	18.4
Prop In Lane	1.00		1.00	1.00		1.00	0.88		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	38	2845	1113	26	2818	1035	236	0	261	156	316	261
V/C Ratio(X)	0.86	0.15	0.02	0.81	1.09	0.02	0.42	0.00	0.24	0.43	0.07	0.65
Avail Cap(c_a), veh/h	38	2845	1113	63	2818	1035	267	0	301	189	364	301
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	85.7	0.0	0.0	87.0	0.0	0.0	68.7	0.0	64.7	78.8	62.9	69.8
Incr Delay (d2), s/veh	73.6	0.1	0.0	2.0	42.9	0.0	0.4	0.0	0.2	0.7	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	1.0	16.8	0.0	4.2	0.0	2.5	3.0	0.9	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	159.3	0.1	0.0	89.1	42.9	0.0	69.1	0.0	64.9	79.5	62.9	72.2
LnGrp LOS	F	A	A	F	F	A	E	A	E	E	E	E
Approach Vol, veh/h		479			3124			160			258	
Approach Delay, s/veh		11.0			42.9			67.5			73.3	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.1	137.5		35.3	8.4	136.3		35.3
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	6.0		4.9
Max Green Setting (Gmax), s	6.6	123.1		35.0	4.0	125.7		35.0
Max Q Clear Time (g_c+I1), s	4.2	2.0		25.4	5.4	2.0		16.5
Green Ext Time (p_c), s	0.0	4.8		0.3	0.0	117.9		0.4

Intersection Summary	
HCM 6th Ctrl Delay	42.0
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	500	10	20	3000	40	20	10	40	150	20	40
Future Volume (veh/h)	20	500	10	20	3000	40	20	10	40	150	20	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1739	1811	2049	1739	1870	1870	1870	1870	1870	1796
Adj Flow Rate, veh/h	22	543	11	20	3030	40	27	13	53	195	26	52
Peak Hour Factor	0.92	0.92	0.92	0.99	0.99	0.99	0.75	0.75	0.75	0.77	0.77	0.77
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	27	2665	1006	82	2822	1041	90	51	153	250	323	262
Arrive On Green	0.03	1.00	1.00	0.09	1.00	1.00	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1725	3894	1470	1725	3894	1436	374	294	885	1334	1870	1519
Grp Volume(v), veh/h	22	543	11	20	3030	40	93	0	0	195	26	52
Grp Sat Flow(s),veh/h/ln	1725	1947	1470	1725	1947	1436	1553	0	0	1334	1870	1519
Q Serve(g_s), s	2.3	0.0	0.0	1.9	0.0	0.0	4.2	0.0	0.0	19.6	2.1	5.3
Cycle Q Clear(g_c), s	2.3	0.0	0.0	1.9	0.0	0.0	9.1	0.0	0.0	28.7	2.1	5.3
Prop In Lane	1.00		1.00	1.00		1.00	0.29		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	27	2665	1006	82	2822	1041	294	0	0	250	323	262
V/C Ratio(X)	0.80	0.20	0.01	0.25	1.07	0.04	0.32	0.00	0.00	0.78	0.08	0.20
Avail Cap(c_a), veh/h	38	2665	1006	82	2822	1041	327	0	0	279	364	295
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	0.09	0.09	0.09	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	86.9	0.0	0.0	78.5	0.0	0.0	65.3	0.0	0.0	74.5	62.5	63.8
Incr Delay (d2), s/veh	39.8	0.2	0.0	0.1	34.0	0.0	0.2	0.0	0.0	10.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.1	0.0	0.8	13.3	0.0	3.8	0.0	0.0	9.7	1.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.6	0.2	0.0	78.6	34.0	0.0	65.5	0.0	0.0	84.7	62.5	63.9
LnGrp LOS	F	A	A	E	F	A	E	A	A	F	E	E
Approach Vol, veh/h		576			3090			93			273	
Approach Delay, s/veh		5.0			33.8			65.5			78.6	
Approach LOS		A			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.8	129.2		36.0	7.3	136.8		36.0				
Change Period (Y+Rc), s	6.3	* 6		4.9	4.4	6.3		4.9				
Max Green Setting (Gmax), s	6.5	* 1.2E2		35.0	4.0	125.4		35.0				
Max Q Clear Time (g_c+I1), s	3.9	2.0		30.7	4.3	2.0		11.1				
Green Ext Time (p_c), s	0.0	4.7		0.2	0.0	107.2		0.3				

Intersection Summary	
HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	460	150	30	2340	20	290	30	50	30	100	370
Future Volume (veh/h)	100	460	150	30	2340	20	290	30	50	30	100	370
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1811	1811	2049	1811	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	109	500	163	32	2463	21	354	37	61	32	106	394
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95	0.82	0.82	0.82	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	92	1492	483	95	2098	18	283	133	109	415	271	226
Arrive On Green	0.11	1.00	1.00	0.07	0.71	0.71	0.16	0.07	0.07	0.23	0.15	0.15
Sat Flow, veh/h	1725	2870	929	1725	3956	34	1781	1870	1531	1781	1870	1559
Grp Volume(v), veh/h	109	338	325	32	1210	1274	354	37	61	32	106	394
Grp Sat Flow(s),veh/h/ln	1725	1947	1853	1725	1947	2042	1781	1870	1531	1781	1870	1559
Q Serve(g_s), s	9.6	0.0	0.0	3.2	95.5	95.5	28.6	3.4	6.9	2.5	9.2	22.9
Cycle Q Clear(g_c), s	9.6	0.0	0.0	3.2	95.5	95.5	28.6	3.4	6.9	2.5	9.2	22.9
Prop In Lane	1.00		0.50	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	1012	963	95	1033	1083	283	133	109	415	271	226
V/C Ratio(X)	1.18	0.33	0.34	0.34	1.17	1.18	1.25	0.28	0.56	0.08	0.39	1.74
Avail Cap(c_a), veh/h	92	1012	963	95	1033	1083	283	507	415	415	301	251
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.55	0.55	0.55	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	80.4	0.0	0.0	80.3	26.5	26.5	75.7	79.2	80.9	53.9	69.7	59.2
Incr Delay (d2), s/veh	148.5	0.8	0.9	0.4	83.4	84.9	138.7	0.4	1.7	0.0	0.3	351.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	0.2	0.2	1.4	59.0	62.3	24.1	1.7	2.8	1.2	4.5	31.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	228.9	0.8	0.9	80.8	109.9	111.4	214.4	79.7	82.6	53.9	70.1	410.6
LnGrp LOS	F	A	A	F	F	F	F	E	F	D	E	F
Approach Vol, veh/h		772			2516			452			532	
Approach Delay, s/veh		33.1			110.3			185.5			321.3	
Approach LOS		C			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	99.6	33.0	31.0	14.0	102.0	46.3	17.7
Change Period (Y+Rc), s	6.5	* 6	4.4	4.9	4.4	6.5	4.4	4.9
Max Green Setting (Gmax), s	9.1	* 94	28.6	29.0	9.6	92.6	8.8	48.8
Max Q Clear Time (g_c+I1), s	15.2	2.0	30.6	24.9	11.6	97.5	4.5	8.9
Green Ext Time (p_c), s	0.0	5.1	0.0	0.6	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	130.6
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	430	70	30	1840	10	140	20	20	20	50	60
Future Volume (veh/h)	20	430	70	30	1840	10	140	20	20	20	50	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1811	1781	2016	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	467	76	32	1937	11	192	27	27	23	58	70
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95	0.73	0.73	0.73	0.86	0.86	0.86
Percent Heavy Veh, %	6	6	6	8	8	8	2	2	2	2	2	2
Cap, veh/h	239	1742	282	285	2107	816	212	214	183	146	146	126
Arrive On Green	0.28	1.00	1.00	0.34	1.00	1.00	0.12	0.12	0.12	0.08	0.08	0.08
Sat Flow, veh/h	1725	3347	541	1697	3830	1485	1781	1800	1538	1781	1777	1544
Grp Volume(v), veh/h	22	271	272	32	1937	11	192	27	27	23	58	70
Grp Sat Flow(s),veh/h/ln	1725	1947	1941	1697	1915	1485	1781	1777	1561	1781	1777	1544
Q Serve(g_s), s	1.7	0.0	0.0	2.3	0.0	0.0	19.2	2.4	2.8	2.2	5.6	7.8
Cycle Q Clear(g_c), s	1.7	0.0	0.0	2.3	0.0	0.0	19.2	2.4	2.8	2.2	5.6	7.8
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.99	1.00		1.00
Lane Grp Cap(c), veh/h	239	1013	1010	285	2107	816	212	211	185	146	146	126
V/C Ratio(X)	0.09	0.27	0.27	0.11	0.92	0.01	0.91	0.13	0.15	0.16	0.40	0.55
Avail Cap(c_a), veh/h	239	1013	1010	285	2107	816	229	228	200	336	336	292
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.69	0.69	0.69	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.6	0.0	0.0	50.4	0.0	0.0	78.3	71.0	71.1	76.9	78.4	79.5
Incr Delay (d2), s/veh	0.1	0.6	0.6	0.0	5.8	0.0	34.9	0.3	0.5	0.8	2.7	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.2	0.2	1.0	1.7	0.0	10.9	1.1	1.2	1.0	2.7	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	0.6	0.6	50.5	5.8	0.0	113.3	71.3	71.6	77.6	81.1	85.1
LnGrp LOS	E	A	A	D	A	A	F	E	E	E	F	F
Approach Vol, veh/h		565			1980			246			151	
Approach Delay, s/veh		2.8			6.5			104.1			82.4	
Approach LOS		A			A			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.7	99.4		19.6	29.4	104.7		26.3				
Change Period (Y+Rc), s	4.4	5.7		4.9	4.4	5.7		4.9				
Max Green Setting (Gmax), s	9.3	93.7		34.0	4.0	99.0		23.1				
Max Q Clear Time (g_c+I1), s	4.3	2.0		9.8	3.7	2.0		21.2				
Green Ext Time (p_c), s	0.0	5.4		1.1	0.0	61.0		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		17.8
HCM 6th LOS		B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	280	20	20	1570	80	20	20	10	50	20	180
Future Volume (veh/h)	160	280	20	20	1570	80	20	20	10	50	20	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	2016	1710	1781	2016	1710	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	174	304	22	21	1653	84	29	29	14	59	24	212
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95	0.70	0.70	0.70	0.85	0.85	0.85
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	311	2658	1002	118	2092	767	91	350	292	274	30	267
Arrive On Green	0.37	1.00	1.00	0.07	1.00	1.00	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1697	3830	1444	3291	3830	1405	1136	1870	1560	1344	161	1425
Grp Volume(v), veh/h	174	304	22	21	1653	84	29	29	14	59	0	236
Grp Sat Flow(s),veh/h/ln	1697	1915	1444	1646	1915	1405	1136	1870	1560	1344	0	1586
Q Serve(g_s), s	14.7	0.0	0.0	1.1	0.0	0.0	4.5	2.3	1.3	6.8	0.0	25.6
Cycle Q Clear(g_c), s	14.7	0.0	0.0	1.1	0.0	0.0	30.1	2.3	1.3	9.1	0.0	25.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	311	2658	1002	118	2092	767	91	350	292	274	0	297
V/C Ratio(X)	0.56	0.11	0.02	0.18	0.79	0.11	0.32	0.08	0.05	0.22	0.00	0.80
Avail Cap(c_a), veh/h	311	2658	1002	118	2092	767	106	375	313	292	0	318
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.17	0.17	0.17	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.2	0.0	0.0	81.1	0.0	0.0	84.2	60.4	60.0	64.2	0.0	69.9
Incr Delay (d2), s/veh	1.3	0.1	0.0	0.0	0.5	0.0	0.7	0.0	0.0	0.1	0.0	11.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	0.0	0.5	0.2	0.0	1.4	1.1	0.5	2.4	0.0	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	0.1	0.0	81.1	0.5	0.0	85.0	60.5	60.0	64.3	0.0	80.9
LnGrp LOS	D	A	A	F	A	A	F	E	E	E	A	F
Approach Vol, veh/h		500			1758			72			295	
Approach Delay, s/veh		18.3			1.5			70.3			77.6	
Approach LOS		B			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.8	130.6		38.6	37.4	104.0		38.6
Change Period (Y+Rc), s	4.4	5.7		4.9	4.4	5.7		4.9
Max Green Setting (Gmax), s	4.0	124.9		36.1	30.6	98.3		36.1
Max Q Clear Time (g_c+I1), s	3.1	2.0		27.6	16.7	2.0		32.1
Green Ext Time (p_c), s	0.0	2.7		0.7	0.2	26.1		0.0

Intersection Summary			
HCM 6th Ctrl Delay			15.1
HCM 6th LOS			B

Notes
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	380	10	420	1690	590	10	80	280	1030	120	20
Future Volume (veh/h)	20	380	10	420	1690	590	10	80	280	1030	120	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.93	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	2016	1781	1500	2016	1781	1841	1841	1841	1811	1811	1739
Adj Flow Rate, veh/h	22	413	11	457	1837	641	11	87	304	1120	130	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	4	4	4	6	6	6
Cap, veh/h	131	879	23	603	1568	599	16	959	278	829	643	109
Arrive On Green	0.08	0.46	0.46	0.29	0.54	0.54	0.01	0.19	0.19	0.25	0.43	0.43
Sat Flow, veh/h	3291	3806	101	2772	3830	1463	1753	5025	1454	3346	1499	254
Grp Volume(v), veh/h	22	207	217	457	1837	641	11	87	304	1120	0	152
Grp Sat Flow(s),veh/h/ln	1646	1915	1992	1386	1915	1463	1753	1675	1454	1673	0	1752
Q Serve(g_s), s	1.1	13.4	13.5	27.0	73.7	35.8	1.1	2.6	22.7	44.6	0.0	9.8
Cycle Q Clear(g_c), s	1.1	13.4	13.5	27.0	73.7	35.8	1.1	2.6	22.7	44.6	0.0	9.8
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	131	443	460	603	1568	599	16	959	278	829	0	752
V/C Ratio(X)	0.17	0.47	0.47	0.76	1.17	1.07	0.67	0.09	1.10	1.35	0.00	0.20
Avail Cap(c_a), veh/h	131	443	460	603	1568	599	56	1061	307	829	0	752
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	80.1	40.8	40.8	59.7	41.0	9.7	88.9	60.0	31.9	67.7	0.0	32.1
Incr Delay (d2), s/veh	0.2	3.5	3.4	0.5	77.8	35.4	15.9	0.1	81.5	165.8	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.9	6.2	9.1	48.5	14.6	0.6	1.1	14.3	38.0	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.3	44.3	44.2	60.1	118.8	45.0	104.8	60.0	113.4	233.5	0.0	32.3
LnGrp LOS	F	D	D	E	F	F	F	E	F	F	A	C
Approach Vol, veh/h		446			2935			402			1272	
Approach Delay, s/veh		46.0			93.6			101.6			209.5	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	43.5	47.4	6.1	83.0	11.5	79.4	49.0	40.1
Change Period (Y+Rc), s	4.4	5.8	4.4	5.7	4.4	5.7	4.4	* 5.7
Max Green Setting (Gmax), s	36.0	41.6	5.7	76.4	4.0	73.7	44.6	* 38
Max Q Clear Time (g_c+I1), s	29.0	15.5	3.1	11.8	3.1	75.7	46.6	24.7
Green Ext Time (p_c), s	0.6	4.9	0.0	1.4	0.0	0.0	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	119.2
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1040	100	10	3020	10	140	10	10	10	10	240
Future Volume (veh/h)	180	1040	100	10	3020	10	140	10	10	10	10	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.89	1.00		0.89
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1500	2016	1781	1811	2049	1811	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	196	1130	109	11	3283	11	209	15	15	16	16	375
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.67	0.67	0.67	0.64	0.64	0.64
Percent Heavy Veh, %	8	8	8	6	6	6	2	2	2	2	2	2
Cap, veh/h	116	2207	859	47	2099	7	125	156	156	163	404	304
Arrive On Green	0.08	0.58	0.58	0.04	0.70	0.70	0.07	0.19	0.19	0.09	0.22	0.22
Sat Flow, veh/h	1429	3830	1491	1725	3980	13	1781	802	802	1781	1870	1410
Grp Volume(v), veh/h	196	1130	109	11	1605	1689	209	0	30	16	16	375
Grp Sat Flow(s),veh/h/ln	1429	1915	1491	1725	1947	2047	1781	0	1604	1781	1870	1410
Q Serve(g_s), s	14.6	31.9	6.0	1.1	94.9	94.9	12.6	0.0	2.8	1.5	1.2	32.3
Cycle Q Clear(g_c), s	14.6	31.9	6.0	1.1	94.9	94.9	12.6	0.0	2.8	1.5	1.2	32.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	116	2207	859	47	1027	1080	125	0	312	163	404	304
V/C Ratio(X)	1.69	0.51	0.13	0.23	1.56	1.56	1.68	0.00	0.10	0.10	0.04	1.23
Avail Cap(c_a), veh/h	116	2207	859	55	1027	1080	125	0	407	163	405	306
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.10	0.10	0.10	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.7	22.9	17.4	84.9	26.9	26.9	83.7	0.0	59.5	74.9	55.8	48.7
Incr Delay (d2), s/veh	314.9	0.1	0.0	0.1	253.7	254.5	336.6	0.0	0.0	0.1	0.0	129.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	14.3	2.2	0.5	108.4	114.3	17.5	0.0	1.1	0.7	0.6	22.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	397.6	23.0	17.5	85.0	280.5	281.4	420.3	0.0	59.6	75.0	55.8	178.2
LnGrp LOS	F	C	B	F	F	F	F	A	E	E	E	F
Approach Vol, veh/h		1435			3305			239			407	
Approach Delay, s/veh		73.8			280.3			375.0			169.3	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	109.0	17.0	43.8	19.0	100.2	20.9	39.9
Change Period (Y+Rc), s	5.3	* 5.3	4.4	4.9	4.4	5.3	4.4	4.9
Max Green Setting (Gmax), s	5.7	* 1E2	12.6	39.0	14.6	94.8	5.9	45.7
Max Q Clear Time (g_c+I1), s	3.1	33.9	14.6	34.3	16.6	96.9	3.5	4.8
Green Ext Time (p_c), s	0.0	20.1	0.0	0.5	0.0	0.0	0.0	0.1

Intersection Summary		
HCM 6th Ctrl Delay		221.1
HCM 6th LOS		F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1060	10	70	2410	50	70	100	130	340	140	40
Future Volume (veh/h)	20	1060	10	70	2410	50	70	100	130	340	140	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1811	1811	2049	1811	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	1152	11	76	2620	54	91	130	169	296	346	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.77	0.77	0.77	0.81	0.81	0.81
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	27	1692	16	163	1997	41	298	123	160	351	368	306
Arrive On Green	0.03	0.86	0.86	0.19	1.00	1.00	0.17	0.17	0.17	0.20	0.20	0.20
Sat Flow, veh/h	1725	3950	38	1725	3899	80	1781	736	956	1781	1870	1555
Grp Volume(v), veh/h	22	568	595	76	1303	1371	91	0	299	296	346	49
Grp Sat Flow(s),veh/h/ln	1725	1947	2041	1725	1947	2032	1781	0	1692	1781	1870	1555
Q Serve(g_s), s	2.3	18.0	18.1	7.0	92.2	92.2	8.1	0.0	30.1	28.8	32.8	4.7
Cycle Q Clear(g_c), s	2.3	18.0	18.1	7.0	92.2	92.2	8.1	0.0	30.1	28.8	32.8	4.7
Prop In Lane	1.00		0.02	1.00		0.04	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	27	834	874	163	997	1041	298	0	283	351	368	306
V/C Ratio(X)	0.80	0.68	0.68	0.46	1.31	1.32	0.31	0.00	1.06	0.84	0.94	0.16
Avail Cap(c_a), veh/h	41	834	874	163	997	1041	298	0	283	367	386	321
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	86.9	8.7	8.7	68.9	0.0	0.0	65.8	0.0	75.0	69.6	71.2	59.9
Incr Delay (d2), s/veh	25.9	3.9	3.7	0.1	138.5	143.4	0.2	0.0	69.2	14.8	29.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.8	5.0	3.0	38.4	41.5	3.8	0.0	18.7	14.8	18.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.7	12.6	12.4	69.0	138.5	143.4	66.0	0.0	144.2	84.4	100.8	60.0
LnGrp LOS	F	B	B	E	F	F	E	A	F	F	F	E
Approach Vol, veh/h		1185			2750			390			691	
Approach Delay, s/veh		14.3			139.0			125.9			90.9	
Approach LOS		B			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.3	82.4		40.3	7.3	97.4		35.0
Change Period (Y+Rc), s	5.2	* 5.3		4.9	4.4	5.2		4.9
Max Green Setting (Gmax), s	16.2	* 77		37.1	4.3	89.1		30.1
Max Q Clear Time (g_c+I1), s	9.0	20.1		34.8	4.3	94.2		32.1
Green Ext Time (p_c), s	0.0	10.5		0.6	0.0	0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		101.9
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1330	100	20	2250	20	240	30	50	10	20	30
Future Volume (veh/h)	20	1330	100	20	2250	20	240	30	50	10	20	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1811	1811	2049	1811	1870	1870	1796	1870	1870	1870
Adj Flow Rate, veh/h	22	1446	109	22	2446	22	348	43	72	12	25	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.69	0.69	0.69	0.81	0.81	0.81
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	34	2209	166	38	2381	21	132	12	441	23	49	49
Arrive On Green	0.04	1.00	1.00	0.04	1.00	1.00	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1725	3664	275	1725	3953	35	320	40	1496	0	165	165
Grp Volume(v), veh/h	22	765	790	22	1202	1266	391	0	72	74	0	0
Grp Sat Flow(s),veh/h/ln	1725	1947	1992	1725	1947	2042	360	0	1496	330	0	0
Q Serve(g_s), s	2.3	0.0	0.0	2.3	0.0	97.0	0.0	0.0	6.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.3	0.0	0.0	2.3	0.0	97.0	53.1	0.0	6.4	53.1	0.0	0.0
Prop In Lane	1.00		0.14	1.00		0.02	0.89		1.00	0.16		0.50
Lane Grp Cap(c), veh/h	34	1174	1201	38	1172	1230	144	0	441	121	0	0
V/C Ratio(X)	0.64	0.65	0.66	0.57	1.03	1.03	2.72	0.00	0.16	0.61	0.00	0.00
Avail Cap(c_a), veh/h	41	1174	1201	65	1172	1230	144	0	441	121	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	0.57	0.57	0.57	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	85.8	0.0	0.0	85.2	0.0	0.0	70.4	0.0	47.0	51.9	0.0	0.0
Incr Delay (d2), s/veh	7.6	1.7	1.7	2.8	26.6	27.3	791.1	0.0	0.1	6.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.6	0.6	1.0	8.7	9.3	38.5	0.0	2.5	2.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.4	1.7	1.7	88.0	26.6	27.3	861.5	0.0	47.1	58.4	0.0	0.0
LnGrp LOS	F	A	A	F	F	F	F	A	D	E	A	A
Approach Vol, veh/h		1577			2490			463			74	
Approach Delay, s/veh		3.0			27.5			734.8			58.4	
Approach LOS		A			C			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	113.6		58.0	8.7	113.3		58.0				
Change Period (Y+Rc), s	4.4	5.1		4.9	5.1	* 4.9		4.9				
Max Green Setting (Gmax), s	6.8	105.7		53.1	4.3	* 1.1E2		53.1				
Max Q Clear Time (g_c+I1), s	4.3	2.0		55.1	4.3	99.0		55.1				
Green Ext Time (p_c), s	0.0	23.7		0.0	0.0	9.1		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	90.8
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1120	10	30	1810	150	10	20	20	140	20	20
Future Volume (veh/h)	30	1120	10	30	1810	150	10	20	20	140	20	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1811	1525	2049	1811	1870	1870	1796	1870	1870	1796
Adj Flow Rate, veh/h	33	1217	11	33	1967	163	11	23	23	147	21	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	92	2699	24	39	2374	193	26	43	314	38	0	319
Arrive On Green	0.11	1.00	1.00	0.05	1.00	1.00	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1725	3953	36	1452	3637	296	0	206	1493	0	0	1513
Grp Volume(v), veh/h	33	599	629	33	1038	1092	34	0	23	168	0	21
Grp Sat Flow(s),veh/h/ln	1725	1947	2042	1452	1947	1986	206	0	1493	0	0	1513
Q Serve(g_s), s	3.2	0.0	0.0	4.1	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.0
Cycle Q Clear(g_c), s	3.2	0.0	0.0	4.1	0.0	0.0	37.9	0.0	2.2	37.9	0.0	2.0
Prop In Lane	1.00		0.02	1.00		0.15	0.32		1.00	0.87		1.00
Lane Grp Cap(c), veh/h	92	1329	1394	39	1271	1297	70	0	314	38	0	319
V/C Ratio(X)	0.36	0.45	0.45	0.84	0.82	0.84	0.49	0.00	0.07	4.48	0.00	0.07
Avail Cap(c_a), veh/h	98	1329	1394	90	1271	1297	70	0	314	38	0	319
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	0.19	0.19	0.19	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	77.5	0.0	0.0	84.7	0.0	0.0	60.3	0.0	57.0	90.0	0.0	56.9
Incr Delay (d2), s/veh	0.6	0.8	0.8	3.4	1.2	1.4	1.9	0.0	0.0	1625.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.3	0.3	1.5	0.4	0.5	1.3	0.0	0.9	18.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.2	0.8	0.8	88.1	1.2	1.4	62.2	0.0	57.0	1715.5	0.0	56.9
LnGrp LOS	E	A	A	F	A	A	E	A	E	F	A	E
Approach Vol, veh/h		1261			2163			57			189	
Approach Delay, s/veh		2.8			2.6			60.1			1531.2	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	127.9		42.8	14.6	122.6		42.8
Change Period (Y+Rc), s	4.4	5.0		4.9	5.0	* 5.1		4.9
Max Green Setting (Gmax), s	11.2	116.6		37.9	10.2	* 1.2E2		37.9
Max Q Clear Time (g_c+I1), s	6.1	2.0		39.9	5.2	2.0		39.9
Green Ext Time (p_c), s	0.0	26.0		0.0	0.0	92.7		0.0

Intersection Summary	
HCM 6th Ctrl Delay	82.3
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	990	240	440	1470	90	310	420	300	400	1220	210
Future Volume (veh/h)	100	990	240	440	1470	90	310	420	300	400	1220	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1525	2049	1811	1575	2116	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	109	1076	261	478	1598	98	337	457	326	435	1326	228
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	2	2	2	3	3	3	3	3	3
Cap, veh/h	116	1032	552	751	1958	1109	347	819	362	764	1273	557
Arrive On Green	0.01	0.09	0.09	0.26	0.49	0.49	0.03	0.08	0.08	0.45	0.72	0.72
Sat Flow, veh/h	2818	3894	1498	2910	4021	1554	3428	3526	1560	3428	3526	1541
Grp Volume(v), veh/h	109	1076	261	478	1598	98	337	457	326	435	1326	228
Grp Sat Flow(s),veh/h/ln	1409	1947	1498	1455	2011	1554	1714	1763	1560	1714	1763	1541
Q Serve(g_s), s	7.0	47.7	16.3	26.3	60.9	0.8	17.7	22.5	37.3	17.0	65.0	10.5
Cycle Q Clear(g_c), s	7.0	47.7	16.3	26.3	60.9	0.8	17.7	22.5	37.3	17.0	65.0	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	116	1032	552	751	1958	1109	347	819	362	764	1273	557
V/C Ratio(X)	0.94	1.04	0.47	0.64	0.82	0.09	0.97	0.56	0.90	0.57	1.04	0.41
Avail Cap(c_a), veh/h	116	1032	552	751	1958	1109	347	985	436	764	1273	557
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	0.91	0.91	0.91	0.74	0.74	0.74	0.92	0.92	0.92	0.68	0.68	0.68
Uniform Delay (d), s/veh	88.6	82.1	33.0	59.3	39.3	7.1	86.7	74.2	81.0	43.5	25.0	17.4
Incr Delay (d2), s/veh	61.0	38.6	2.6	1.0	2.9	0.1	38.7	0.4	17.1	0.4	32.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	30.7	6.9	9.8	30.7	1.1	10.1	10.8	17.5	6.3	23.3	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	149.5	120.7	35.6	60.3	42.3	7.2	125.5	74.6	98.1	43.9	57.5	17.7
LnGrp LOS	F	F	D	E	D	A	F	E	F	D	F	B
Approach Vol, veh/h		1446			2174			1120			1989	
Approach Delay, s/veh		107.5			44.6			96.7			50.0	
Approach LOS		F			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	51.6	53.0	22.6	71.0	11.8	92.8	46.1	47.5
Change Period (Y+Rc), s	5.1	* 5.3	4.4	6.0	4.4	5.1	6.0	* 5.7
Max Green Setting (Gmax), s	29.0	* 48	18.2	65.0	7.4	69.5	33.2	* 50
Max Q Clear Time (g_c+I1), s	28.3	49.7	19.7	67.0	9.0	62.9	19.0	39.3
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	6.0	0.7	2.5

Intersection Summary	
HCM 6th Ctrl Delay	68.4
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1550	80	1530	1820	310	80	190	870	880	540	90
Future Volume (veh/h)	70	1550	80	1530	1820	310	80	190	870	880	540	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	2116	1870	1563	2100	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	1582	82	1594	1896	323	91	216	989	936	574	96
Peak Hour Factor	0.98	0.98	0.98	0.96	0.96	0.96	0.88	0.88	0.88	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	176	1351	70	1132	2971	1050	111	288	463	798	527	434
Arrive On Green	0.12	0.38	0.38	0.26	0.35	0.35	0.03	0.15	0.15	0.16	0.28	0.28
Sat Flow, veh/h	2910	7134	370	2887	5732	1544	3563	1870	3009	5023	1870	1541
Grp Volume(v), veh/h	71	1211	453	1594	1896	323	91	216	989	936	574	96
Grp Sat Flow(s),veh/h/ln	1455	1820	2043	1444	1911	1544	1781	1870	1505	1674	1870	1541
Q Serve(g_s), s	4.1	34.1	34.1	70.6	49.9	0.0	4.6	19.9	13.1	28.6	50.7	8.6
Cycle Q Clear(g_c), s	4.1	34.1	34.1	70.6	49.9	0.0	4.6	19.9	13.1	28.6	50.7	8.6
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	1034	387	1132	2971	1050	111	288	463	798	527	434
V/C Ratio(X)	0.40	1.17	1.17	1.41	0.64	0.31	0.82	0.75	2.14	1.17	1.09	0.22
Avail Cap(c_a), veh/h	184	1034	387	1132	2971	1050	111	319	513	798	527	434
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.44	0.10	0.10	0.10	1.00	1.00	1.00	0.68	0.68	0.68
Uniform Delay (d), s/veh	76.1	55.9	55.9	66.3	44.6	17.6	86.7	72.8	17.0	75.7	64.7	49.5
Incr Delay (d2), s/veh	0.2	81.6	89.2	184.0	0.1	0.1	34.9	10.6	518.1	87.1	59.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	21.6	25.0	55.6	24.8	7.8	2.6	10.4	37.9	18.7	32.6	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.3	137.5	145.1	250.4	44.7	17.7	121.6	83.4	535.1	162.8	124.1	49.8
LnGrp LOS	E	F	F	F	D	B	F	F	F	F	F	D
Approach Vol, veh/h		1735			3813			1296			1606	
Approach Delay, s/veh		137.0			128.4			430.8			142.2	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	75.0	39.0	10.0	56.0	15.8	98.2	33.0	33.0
Change Period (Y+Rc), s	4.4	4.9	4.4	5.3	4.9	* 4.9	4.4	5.3
Max Green Setting (Gmax), s	70.6	34.1	5.6	50.7	11.4	* 93	25.6	30.7
Max Q Clear Time (g_c+I1), s	72.6	36.1	6.6	52.7	6.1	51.9	30.6	21.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	38.9	0.0	5.8

Intersection Summary	
HCM 6th Ctrl Delay	179.2
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1500	1500	0	2050	720	0	0	0	30	0	1570
Future Volume (veh/h)	0	1500	1500	0	2050	720	0	0	0	30	0	1570
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1856	2100	1856	0	2100	1856				1870	0	1870
Adj Flow Rate, veh/h	0	1630	0	0	2158	758				31	0	1635
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95				0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	0	3	3				2	0	2
Cap, veh/h	1	4586		0	4586	1447				478	0	313
Arrive On Green	0.00	1.00	0.00	0.00	1.00	1.00				0.14	0.00	0.14
Sat Flow, veh/h	1767	5732	2768	0	5921	1537				3456	0	2790
Grp Volume(v), veh/h	0	1630	0	0	2158	758				31	0	1635
Grp Sat Flow(s),veh/h/ln	1767	1911	1384	0	1911	1537				1728	0	1395
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				1.4	0.0	24.9
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				1.4	0.0	24.9
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	1	4586		0	4586	1447				478	0	313
V/C Ratio(X)	0.00	0.36		0.00	0.47	0.52				0.06	0.00	5.22
Avail Cap(c_a), veh/h	661	4586		0	4586	1447				478	0	313
HCM Platoon Ratio	1.67	1.67	1.67	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.00	0.00	0.60	0.60				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				67.4	0.0	117.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.2	0.8				0.0	0.0	1907.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.1	0.3				0.6	0.0	82.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.2	0.8				67.4	0.0	2024.8
LnGrp LOS	A	A		A	A	A				E	A	F
Approach Vol, veh/h		1630	A		2916						1666	
Approach Delay, s/veh		0.0			0.4						1988.4	
Approach LOS		A			A						F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		150.0		30.0	0.0	150.0
Change Period (Y+Rc), s		6.0		5.1	* 4.7	6.0
Max Green Setting (Gmax), s		144.0		24.9	* 67	72.0
Max Q Clear Time (g_c+I1), s		2.0		26.9	0.0	2.0
Green Ext Time (p_c), s		11.4		0.0	0.0	26.6

Intersection Summary	
HCM 6th Ctrl Delay	533.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	480	1150	0	2410	450	180	0	1620	0	0	0
Future Volume (veh/h)	0	480	1150	0	2410	450	180	0	1620	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1856	1856	1856	1856	1856	1870	0	1870			
Adj Flow Rate, veh/h	0	527	1264	0	2648	0	214	0	1929			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.84	0.84	0.84			
Percent Heavy Veh, %	0	3	3	3	3	3	2	0	2			
Cap, veh/h	0	1210	895	579	3039		1169	0	1858			
Arrive On Green	0.00	0.40	0.40	0.00	0.60	0.00	0.34	0.00	0.34			
Sat Flow, veh/h	0	5233	1519	1767	5066	1572	3456	0	2790			
Grp Volume(v), veh/h	0	527	1264	0	2648	0	214	0	1929			
Grp Sat Flow(s),veh/h/ln	0	1689	1519	1767	1689	1572	1728	0	1395			
Q Serve(g_s), s	0.0	13.6	43.0	0.0	78.9	0.0	7.9	0.0	60.9			
Cycle Q Clear(g_c), s	0.0	13.6	43.0	0.0	78.9	0.0	7.9	0.0	60.9			
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	1210	895	579	3039		1169	0	1858			
V/C Ratio(X)	0.00	0.44	1.41	0.00	0.87		0.18	0.00	1.04			
Avail Cap(c_a), veh/h	0	1210	895	592	3039		1169	0	1858			
HCM Platoon Ratio	1.00	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.96	0.96	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	45.3	19.9	0.0	30.2	0.0	42.0	0.0	30.0			
Incr Delay (d2), s/veh	0.0	1.1	191.9	0.0	3.8	0.0	0.0	0.0	31.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	5.4	87.8	0.0	32.3	0.0	3.4	0.0	62.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	46.4	211.8	0.0	33.9	0.0	42.0	0.0	61.5			
LnGrp LOS	A	D	F	A	C		D	A	F			
Approach Vol, veh/h		1791			2648	A		2143				
Approach Delay, s/veh		163.1			33.9			59.6				
Approach LOS		F			C			E				

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	65.0	49.0	66.0	114.0
Change Period (Y+Rc), s	6.0	* 6	5.1	6.0
Max Green Setting (Gmax), s	60.3	* 43	60.9	108.0
Max Q Clear Time (g_c+I1), s	10.0	45.0	62.9	80.9
Green Ext Time (p_c), s	0.0	0.0	0.0	18.9

Intersection Summary	
HCM 6th Ctrl Delay	77.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	0	460	0	230	140	640	500	490	1990	0
Future Volume (veh/h)	10	0	0	460	0	230	140	640	500	490	1990	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1870	1870	1563	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	40	0	0	548	0	274	152	696	543	527	2140	0
Peak Hour Factor	0.25	0.25	0.25	0.84	0.84	0.84	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	78	0	67	653	0	576	174	1582	993	595	2560	795
Arrive On Green	0.04	0.00	0.00	0.18	0.00	0.18	0.12	0.45	0.45	0.17	0.51	0.00
Sat Flow, veh/h	1781	0	1522	3563	0	3144	1488	3526	1572	3428	5066	1572
Grp Volume(v), veh/h	40	0	0	548	0	274	152	696	543	527	2140	0
Grp Sat Flow(s),veh/h/ln	1781	0	1522	1781	0	1572	1488	1763	1572	1714	1689	1572
Q Serve(g_s), s	2.6	0.0	0.0	17.8	0.0	9.3	12.0	16.3	23.3	18.0	43.4	0.0
Cycle Q Clear(g_c), s	2.6	0.0	0.0	17.8	0.0	9.3	12.0	16.3	23.3	18.0	43.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	0	67	653	0	576	174	1582	993	595	2560	795
V/C Ratio(X)	0.51	0.00	0.00	0.84	0.00	0.48	0.87	0.44	0.55	0.89	0.84	0.00
Avail Cap(c_a), veh/h	579	0	495	1040	0	918	211	1582	993	898	2797	868
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.1	0.0	0.0	47.3	0.0	43.8	52.1	22.7	12.4	48.4	25.4	0.0
Incr Delay (d2), s/veh	1.9	0.0	0.0	1.8	0.0	0.2	24.4	0.2	0.6	5.1	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	7.8	0.0	3.5	5.5	6.4	12.3	7.8	16.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	0.0	0.0	49.1	0.0	44.0	76.5	22.9	13.0	53.5	27.6	0.0
LnGrp LOS	E	A	A	D	A	D	E	C	B	D	C	A
Approach Vol, veh/h		40			822			1391			2667	
Approach Delay, s/veh		58.0			47.4			24.9			32.7	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	24.8	59.9	9.2	18.0	66.7	26.0
Change Period (Y+Rc), s	4.0	6.1	4.0	4.0	* 6.1	4.0
Max Green Setting (Gmax), s	31.4	51.5	39.0	17.0	* 66	35.0
Max Q Clear Time (g_c+I1), s	20.0	25.3	4.6	14.0	45.4	19.8
Green Ext Time (p_c), s	0.8	6.8	0.1	0.0	15.2	1.5

Intersection Summary	
HCM 6th Ctrl Delay	33.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1210	610	60	10	1580	20	50	10	10	20	10	1520
Future Volume (veh/h)	1210	610	60	10	1580	20	50	10	10	20	10	1520
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	2033	1796	1525	2049	1811	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1315	663	65	10	1629	21	54	11	11	16	18	1617
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	6	6	6	2	2	2	2	2	2
Cap, veh/h	1236	3447	933	465	2364	638	92	44	44	45	47	1257
Arrive On Green	0.37	0.62	0.62	0.22	0.56	0.56	0.05	0.05	0.05	0.03	0.03	0.03
Sat Flow, veh/h	3319	5549	1501	2818	5595	1509	1781	850	850	1781	1870	3056
Grp Volume(v), veh/h	1315	663	65	10	1629	21	54	0	22	16	18	1617
Grp Sat Flow(s),veh/h/ln	1659	1850	1501	1409	1865	1509	1781	0	1700	1781	1870	1528
Q Serve(g_s), s	59.6	8.2	2.7	0.4	33.3	1.0	4.7	0.0	2.0	1.4	1.5	4.0
Cycle Q Clear(g_c), s	59.6	8.2	2.7	0.4	33.3	1.0	4.7	0.0	2.0	1.4	1.5	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	1236	3447	933	465	2364	638	92	0	88	45	47	1257
V/C Ratio(X)	1.06	0.19	0.07	0.02	0.69	0.03	0.58	0.00	0.25	0.36	0.38	1.29
Avail Cap(c_a), veh/h	1236	3447	933	465	2364	638	356	0	340	45	47	1257
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	13.0	12.0	52.3	27.5	20.5	74.2	0.0	72.9	76.7	76.8	48.3
Incr Delay (d2), s/veh	44.4	0.1	0.1	0.0	1.5	0.1	2.2	0.0	0.5	4.4	4.6	134.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	31.3	3.3	0.9	0.2	13.1	0.4	2.2	0.0	0.9	0.7	0.8	48.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.6	13.2	12.1	52.3	29.0	20.5	76.3	0.0	73.4	81.1	81.4	183.2
LnGrp LOS	F	B	B	D	C	C	E	A	E	F	F	F
Approach Vol, veh/h		2043			1660			76			1651	
Approach Delay, s/veh		65.5			29.1			75.5			181.1	
Approach LOS		E			C			E			F	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	32.1	105.2	9.5	64.0	73.3	13.2
Change Period (Y+Rc), s	5.7	* 5.8	5.5	4.4	5.7	4.9
Max Green Setting (Gmax), s	4.0	* 99	4.0	59.6	43.9	32.0
Max Q Clear Time (g_c+I1), s	12.4	10.2	6.0	61.6	35.3	6.7
Green Ext Time (p_c), s	0.0	9.9	0.0	0.0	7.7	0.1

Intersection Summary	
HCM 6th Ctrl Delay	89.7
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	490	140	130	1280	70	160	40	70	20	40	40
Future Volume (veh/h)	90	490	140	130	1280	70	160	40	70	20	40	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1525	2049	1811	1525	2049	1811	1870	1870	1796	1870	1870	1870
Adj Flow Rate, veh/h	96	521	149	134	1320	72	250	62	109	23	47	47
Peak Hour Factor	0.94	0.94	0.94	0.97	0.97	0.97	0.64	0.64	0.64	0.86	0.86	0.86
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	128	1243	344	275	2394	131	41	0	638	30	48	664
Arrive On Green	0.09	0.57	0.57	0.19	0.44	0.44	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	2818	4325	1198	1452	5424	296	0	0	1521	0	114	1584
Grp Volume(v), veh/h	96	447	223	134	908	484	312	0	109	70	0	47
Grp Sat Flow(s),veh/h/ln	1409	1865	1793	1452	1865	1990	0	0	1521	114	0	1584
Q Serve(g_s), s	5.3	10.7	11.3	13.2	28.7	28.7	0.0	0.0	7.2	0.0	0.0	2.8
Cycle Q Clear(g_c), s	5.3	10.7	11.3	13.2	28.7	28.7	67.1	0.0	7.2	67.1	0.0	2.8
Prop In Lane	1.00		0.67	1.00		0.15	0.80		1.00	0.33		1.00
Lane Grp Cap(c), veh/h	128	1072	515	275	1646	879	41	0	638	78	0	664
V/C Ratio(X)	0.75	0.42	0.43	0.49	0.55	0.55	7.70	0.00	0.17	0.90	0.00	0.07
Avail Cap(c_a), veh/h	240	1072	515	287	1646	879	41	0	638	78	0	664
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	0.94	0.94	0.94	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.8	26.5	26.6	57.9	33.0	33.0	80.0	0.0	29.1	40.4	0.0	27.8
Incr Delay (d2), s/veh	3.2	1.2	2.6	0.5	1.3	2.3	3064.4	0.0	0.1	70.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	4.2	4.4	4.8	12.9	14.0	36.2	0.0	2.7	3.2	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.1	27.7	29.2	58.4	34.2	35.3	3144.4	0.0	29.2	111.0	0.0	27.9
LnGrp LOS	E	C	C	E	C	D	F	A	C	F	A	C
Approach Vol, veh/h		766			1526			421			117	
Approach Delay, s/veh		34.1			36.7			2337.8			77.6	
Approach LOS		C			D			F			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	36.0	52.0		72.0	11.7	76.3		72.0				
Change Period (Y+Rc), s	5.7	* 6		4.9	4.4	5.7		4.9				
Max Green Setting (Gmax), s	31.6	* 46		67.1	13.6	64.3		67.1				
Max Q Clear Time (g_c+I1), s	15.2	13.3		69.1	7.3	30.7		69.1				
Green Ext Time (p_c), s	0.1	8.0		0.0	0.1	20.7		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			380.0
HCM 6th LOS			F

Notes

User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	60	550	1410	150	60	60
Future Volume (veh/h)	60	550	1410	150	60	60
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1811	2049	2033	1796	1870	1870
Adj Flow Rate, veh/h	63	579	1454	155	81	81
Peak Hour Factor	0.95	0.95	0.97	0.97	0.74	0.74
Percent Heavy Veh, %	6	6	7	7	2	2
Cap, veh/h	549	4857	2865	766	115	102
Arrive On Green	0.64	1.00	0.69	0.69	0.06	0.06
Sat Flow, veh/h	1725	5779	5732	1484	1781	1585
Grp Volume(v), veh/h	63	579	1454	155	81	81
Grp Sat Flow(s),veh/h/ln	1725	1865	1850	1484	1781	1585
Q Serve(g_s), s	2.3	0.0	20.2	6.1	7.1	8.1
Cycle Q Clear(g_c), s	2.3	0.0	20.2	6.1	7.1	8.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	549	4857	2865	766	115	102
V/C Ratio(X)	0.11	0.12	0.51	0.20	0.71	0.79
Avail Cap(c_a), veh/h	549	4857	2865	766	458	407
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh	20.3	0.0	15.3	13.1	73.4	73.8
Incr Delay (d2), s/veh	0.0	0.0	0.6	0.6	3.0	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	6.9	2.0	3.4	7.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.3	0.0	15.9	13.6	76.3	79.0
LnGrp LOS	C	A	B	B	E	E
Approach Vol, veh/h		642	1609		162	
Approach Delay, s/veh		2.0	15.7		77.7	
Approach LOS		A	B		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		144.8		15.2	56.8	88.0
Change Period (Y+Rc), s		5.9		4.9	5.9	* 5.4
Max Green Setting (Gmax), s		108.1		41.1	21.6	* 83
Max Q Clear Time (g_c+I1), s		2.0		10.1	4.3	22.2
Green Ext Time (p_c), s		10.7		0.2	0.0	44.8

Intersection Summary			
HCM 6th Ctrl Delay			16.2
HCM 6th LOS			B

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	580	1550	80	40	50
Future Volume (veh/h)	40	580	1550	80	40	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1796	2033	2033	1796	1870	1870
Adj Flow Rate, veh/h	43	617	1582	82	44	56
Peak Hour Factor	0.94	0.94	0.98	0.98	0.90	0.90
Percent Heavy Veh, %	7	7	7	7	2	2
Cap, veh/h	472	4931	3211	859	85	76
Arrive On Green	0.55	1.00	1.00	1.00	0.05	0.05
Sat Flow, veh/h	1711	5732	5732	1485	1781	1585
Grp Volume(v), veh/h	43	617	1582	82	44	56
Grp Sat Flow(s),veh/h/ln	1711	1850	1850	1485	1781	1585
Q Serve(g_s), s	1.9	0.0	0.0	0.0	3.9	5.6
Cycle Q Clear(g_c), s	1.9	0.0	0.0	0.0	3.9	5.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	472	4931	3211	859	85	76
V/C Ratio(X)	0.09	0.13	0.49	0.10	0.52	0.74
Avail Cap(c_a), veh/h	472	4931	3211	859	396	353
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.90	0.90	1.00	1.00
Uniform Delay (d), s/veh	26.4	0.0	0.0	0.0	74.4	75.2
Incr Delay (d2), s/veh	0.0	0.1	0.5	0.2	1.8	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.1	0.0	1.8	5.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.4	0.1	0.5	0.2	76.2	80.5
LnGrp LOS	C	A	A	A	E	F
Approach Vol, veh/h		660	1664		100	
Approach Delay, s/veh		1.8	0.5		78.6	
Approach LOS		A	A		E	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	148.0	12.0	50.0	98.0
Change Period (Y+Rc), s	5.8	4.4	5.8	* 5.4
Max Green Setting (Gmax), s	114.2	35.6	17.6	* 93
Max Q Clear Time (g_c+I1), s	2.0	7.6	3.9	2.0
Green Ext Time (p_c), s	8.5	0.1	0.0	41.4

Intersection Summary	
HCM 6th Ctrl Delay	4.0
HCM 6th LOS	A

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	510	60	100	1520	90	0	0	0	60	0	50
Future Volume (veh/h)	70	510	60	100	1520	90	0	0	0	60	0	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	2033	1796	1796	2033	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	537	63	102	1551	92	0	0	0	78	0	65
Peak Hour Factor	0.95	0.95	0.95	0.98	0.98	0.98	0.25	0.25	0.25	0.77	0.77	0.77
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	457	4024	1101	121	2794	166	45	204	173	120	4	74
Arrive On Green	0.09	0.24	0.24	0.14	1.00	1.00	0.00	0.00	0.00	0.11	0.00	0.11
Sat Flow, veh/h	1711	5549	1518	1711	5348	317	1337	1870	1585	781	36	681
Grp Volume(v), veh/h	74	537	63	102	1073	570	0	0	0	143	0	0
Grp Sat Flow(s),veh/h/ln	1711	1850	1518	1711	1850	1966	1337	1870	1585	1498	0	0
Q Serve(g_s), s	6.4	12.2	5.1	9.3	0.0	0.0	0.0	0.0	0.0	14.4	0.0	0.0
Cycle Q Clear(g_c), s	6.4	12.2	5.1	9.3	0.0	0.0	0.0	0.0	0.0	15.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	0.55		0.45
Lane Grp Cap(c), veh/h	457	4024	1101	121	1933	1027	45	204	173	199	0	0
V/C Ratio(X)	0.16	0.13	0.06	0.85	0.55	0.56	0.00	0.00	0.00	0.72	0.00	0.00
Avail Cap(c_a), veh/h	457	4024	1101	284	1933	1027	242	480	407	418	0	0
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	56.4	21.3	18.7	67.9	0.0	0.0	0.0	0.0	0.0	70.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.1	0.1	5.6	1.1	2.0	0.0	0.0	0.0	1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	5.7	1.7	3.9	0.3	0.6	0.0	0.0	0.0	5.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	21.4	18.8	73.4	1.1	2.0	0.0	0.0	0.0	71.9	0.0	0.0
LnGrp LOS	E	C	B	E	A	A	A	A	A	E	A	A
Approach Vol, veh/h		674			1745			0			143	
Approach Delay, s/veh		25.0			5.6			0.0			71.9	
Approach LOS		C			A						E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.7	121.9		22.4	48.6	89.0		22.4				
Change Period (Y+Rc), s	4.4	5.9		4.9	5.9	* 5.4		4.9				
Max Green Setting (Gmax), s	26.6	77.1		41.1	20.6	* 84		41.1				
Max Q Clear Time (g_c+I1), s	11.3	14.2		17.0	8.4	2.0		0.0				
Green Ext Time (p_c), s	0.1	8.1		0.5	0.0	45.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			14.4
HCM 6th LOS			B

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	560	0	10	1710	610	0	0	0	180	0	30
Future Volume (veh/h)	30	560	0	10	1710	610	0	0	0	180	0	30
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1796	2033	0	1870	2033	1796				1870	1870	1870
Adj Flow Rate, veh/h	31	571	0	10	1745	622				228	0	24
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.83	0.83	0.83
Percent Heavy Veh, %	7	7	0	2	7	7				2	2	2
Cap, veh/h	493	4519	0	16	2913	907				295	0	130
Arrive On Green	0.58	1.00	0.00	0.02	1.00	1.00				0.08	0.00	0.08
Sat Flow, veh/h	1711	5732	0	1781	5549	1488				3563	0	1574
Grp Volume(v), veh/h	31	571	0	10	1745	622				228	0	24
Grp Sat Flow(s),veh/h/ln	1711	1850	0	1781	1850	1488				1781	0	1574
Q Serve(g_s), s	1.3	0.0	0.0	0.9	0.0	0.0				10.0	0.0	2.3
Cycle Q Clear(g_c), s	1.3	0.0	0.0	0.9	0.0	0.0				10.0	0.0	2.3
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	493	4519	0	16	2913	907				295	0	130
V/C Ratio(X)	0.06	0.13	0.00	0.63	0.60	0.69				0.77	0.00	0.18
Avail Cap(c_a), veh/h	493	4519	0	62	2913	907				1138	0	503
HCM Platoon Ratio	2.00	2.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.76	0.76	0.76				0.96	0.00	0.96
Uniform Delay (d), s/veh	24.4	0.0	0.0	78.3	0.0	0.0				71.9	0.0	68.3
Incr Delay (d2), s/veh	0.0	0.1	0.0	10.8	0.7	3.2				1.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.4	0.2	0.8				4.6	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	0.1	0.0	89.1	0.7	3.2				73.5	0.0	68.6
LnGrp LOS	C	A	A	F	A	A				E	A	E
Approach Vol, veh/h		602			2377						252	
Approach Delay, s/veh		1.3			1.7						73.0	
Approach LOS		A			A						E	
Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	5.8	136.0		18.2	51.8	90.0						
Change Period (Y+Rc), s	4.4	5.7		4.9	5.7	* 6						
Max Green Setting (Gmax), s	5.6	88.3		51.1	9.6	* 84						
Max Q Clear Time (g_c+I1), s	2.9	2.0		12.0	3.3	2.0						
Green Ext Time (p_c), s	0.0	7.2		0.5	0.0	50.4						

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	20	760	0	2790	30	20	10
Future Volume (veh/h)	20	760	0	2790	30	20	10
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00				0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No	
Adj Sat Flow, veh/h/ln	1796	2033		2033	1796	1870	1870
Adj Flow Rate, veh/h	22	817		2847	31	29	15
Peak Hour Factor	0.93	0.93		0.98	0.98	0.68	0.68
Percent Heavy Veh, %	7	7		7	7	2	2
Cap, veh/h	343	5033		3718	998	37	19
Arrive On Green	0.40	1.00		1.00	1.00	0.03	0.03
Sat Flow, veh/h	1711	5732		5732	1489	1104	571
Grp Volume(v), veh/h	22	817		2847	31	45	0
Grp Sat Flow(s),veh/h/ln	1711	1850		1850	1489	1712	0
Q Serve(g_s), s	1.3	0.0		0.0	0.0	4.2	0.0
Cycle Q Clear(g_c), s	1.3	0.0		0.0	0.0	4.2	0.0
Prop In Lane	1.00				1.00	0.64	0.33
Lane Grp Cap(c), veh/h	343	5033		3718	998	58	0
V/C Ratio(X)	0.06	0.16		0.77	0.03	0.78	0.00
Avail Cap(c_a), veh/h	343	5033		3718	998	342	0
HCM Platoon Ratio	2.00	2.00		2.00	2.00	1.00	1.00
Upstream Filter(I)	0.99	0.99		0.64	0.64	1.00	0.00
Uniform Delay (d), s/veh	38.6	0.0		0.0	0.0	76.7	0.0
Incr Delay (d2), s/veh	0.0	0.1		1.0	0.0	8.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0		0.3	1.4	2.0	0.0
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	38.7	0.1		1.0	0.0	85.0	0.0
LnGrp LOS	D	A		A	A	F	A
Approach Vol, veh/h		839		2878		45	
Approach Delay, s/veh		1.1		1.0		85.0	
Approach LOS		A		A		F	
Timer - Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		150.6		9.4	37.6	113.0	
Change Period (Y+Rc), s		5.5		4.0	5.5	* 5.8	
Max Green Setting (Gmax), s		110.0		32.0	7.0*	1.1E2	
Max Q Clear Time (g_c+I1), s		2.0		6.2	3.3	2.0	
Green Ext Time (p_c), s		13.7		0.0	0.0	98.5	

Intersection Summary	
HCM 6th Ctrl Delay	2.0
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	700	0	10	2830	170	0	0	0	60	0	60
Future Volume (veh/h)	50	700	0	10	2830	170	0	0	0	60	0	60
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1796	2033	0	1870	2033	1796				1870	0	1870
Adj Flow Rate, veh/h	54	761	0	11	2979	179				70	0	70
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95				0.86	0.86	0.86
Percent Heavy Veh, %	7	7	0	2	7	7				2	0	2
Cap, veh/h	68	3697	0	303	4477	1201				99	0	151
Arrive On Green	0.08	1.00	0.00	0.34	1.00	1.00				0.06	0.00	0.06
Sat Flow, veh/h	1711	5732	0	1781	5549	1488				1781	0	1585
Grp Volume(v), veh/h	54	761	0	11	2979	179				70	0	70
Grp Sat Flow(s),veh/h/ln	1711	1850	0	1781	1850	1488				1781	0	1585
Q Serve(g_s), s	5.0	0.0	0.0	0.7	0.0	0.0				6.2	0.0	6.7
Cycle Q Clear(g_c), s	5.0	0.0	0.0	0.7	0.0	0.0				6.2	0.0	6.7
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	68	3697	0	303	4477	1201				99	0	151
V/C Ratio(X)	0.80	0.21	0.00	0.04	0.67	0.15				0.71	0.00	0.46
Avail Cap(c_a), veh/h	113	3697	0	303	4477	1201				379	0	400
HCM Platoon Ratio	2.00	2.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.00	0.50	0.50	0.50				1.00	0.00	1.00
Uniform Delay (d), s/veh	73.0	0.0	0.0	44.0	0.0	0.0				74.3	0.0	68.5
Incr Delay (d2), s/veh	7.6	0.1	0.0	0.0	0.4	0.1				3.5	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	0.3	0.2	0.0				2.9	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.6	0.1	0.0	44.0	0.4	0.1				77.8	0.0	69.4
LnGrp LOS	F	A	A	D	A	A				E	A	E
Approach Vol, veh/h		815			3169						140	
Approach Delay, s/veh		5.5			0.5						73.6	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2	4	5	6
Phs Duration (G+Y+Rc), s	33.6	112.6	13.8	10.7	135.5
Change Period (Y+Rc), s	6.4	* 6	4.9	4.4	6.4
Max Green Setting (Gmax), s	41	* 1.1E2	34.0	10.6	99.7
Max Q Clear Time (g_c+I1), s	12.7	2.0	8.7	7.0	2.0
Green Ext Time (p_c), s	0.0	7.6	0.2	0.0	85.0

Intersection Summary	
HCM 6th Ctrl Delay	4.0
HCM 6th LOS	A

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	700	0	10	2990	260	0	0	0	160	0	90
Future Volume (veh/h)	70	700	0	10	2990	260	0	0	0	160	0	90
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1796	2033	0	1870	2033	1796				1870	1870	1870
Adj Flow Rate, veh/h	76	761	0	10	3051	265				147	57	106
Peak Hour Factor	0.92	0.92	0.92	0.98	0.98	0.98				0.85	0.85	0.85
Percent Heavy Veh, %	7	7	0	2	7	7				2	2	2
Cap, veh/h	268	4345	0	16	3472	931				200	66	122
Arrive On Green	0.31	1.00	0.00	0.01	0.63	0.63				0.11	0.11	0.11
Sat Flow, veh/h	1711	5732	0	1781	5549	1488				1781	586	1089
Grp Volume(v), veh/h	76	761	0	10	3051	265				147	0	163
Grp Sat Flow(s),veh/h/ln	1711	1850	0	1781	1850	1488				1781	0	1674
Q Serve(g_s), s	5.4	0.0	0.0	0.9	73.2	13.0				12.8	0.0	15.3
Cycle Q Clear(g_c), s	5.4	0.0	0.0	0.9	73.2	13.0				12.8	0.0	15.3
Prop In Lane	1.00		0.00	1.00		1.00				1.00		0.65
Lane Grp Cap(c), veh/h	268	4345	0	16	3472	931				200	0	188
V/C Ratio(X)	0.28	0.18	0.00	0.63	0.88	0.28				0.73	0.00	0.87
Avail Cap(c_a), veh/h	268	4345	0	45	3472	931				345	0	324
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.00	0.34	0.34	0.34				1.00	0.00	1.00
Uniform Delay (d), s/veh	48.2	0.0	0.0	79.0	24.9	13.6				68.7	0.0	69.8
Incr Delay (d2), s/veh	0.2	0.1	0.0	5.0	1.3	0.3				2.0	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	0.4	29.4	4.2				5.9	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.4	0.1	0.0	84.0	26.2	13.9				70.7	0.0	74.7
LnGrp LOS	D	A	A	F	C	B				E	A	E
Approach Vol, veh/h		837			3326						310	
Approach Delay, s/veh		4.5			25.4						72.8	
Approach LOS		A			C						E	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	5.8	131.3		22.9	31.0	106.1
Change Period (Y+Rc), s	4.4	6.0		4.9	6.0	* 6
Max Green Setting (Gmax), s	4.6	109.7		31.0	13.6	* 1E2
Max Q Clear Time (g_c+I1), s	2.9	2.0		17.3	7.4	75.2
Green Ext Time (p_c), s	0.0	9.6		0.7	0.0	24.6

Intersection Summary			
HCM 6th Ctrl Delay			24.7
HCM 6th LOS			C

Notes
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	160	570	2730	160	470	650
Future Volume (veh/h)	160	570	2730	160	470	650
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1796	2033	2033	1796	1841	1841
Adj Flow Rate, veh/h	174	620	2904	170	490	677
Peak Hour Factor	0.92	0.92	0.94	0.94	0.96	0.96
Percent Heavy Veh, %	7	7	7	7	4	4
Cap, veh/h	452	4259	3628	882	557	824
Arrive On Green	0.14	0.77	1.00	1.00	0.16	0.16
Sat Flow, veh/h	3319	5732	6098	1482	3401	2745
Grp Volume(v), veh/h	174	620	2904	170	490	677
Grp Sat Flow(s),veh/h/ln	1659	1850	2033	1482	1700	1373
Q Serve(g_s), s	7.6	4.7	0.0	0.0	22.5	14.9
Cycle Q Clear(g_c), s	7.6	4.7	0.0	0.0	22.5	14.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	452	4259	3628	882	557	824
V/C Ratio(X)	0.38	0.15	0.80	0.19	0.88	0.82
Avail Cap(c_a), veh/h	452	4259	3628	882	659	906
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.09	0.09	0.85	0.85
Uniform Delay (d), s/veh	63.0	4.9	0.0	0.0	65.4	52.0
Incr Delay (d2), s/veh	0.2	0.1	0.2	0.0	9.1	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	1.5	0.1	0.0	10.3	19.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	63.2	4.9	0.2	0.0	74.4	56.4
LnGrp LOS	E	A	A	A	E	E
Approach Vol, veh/h		794	3074		1167	
Approach Delay, s/veh		17.7	0.2		64.0	
Approach LOS		B	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		128.8		31.2	27.8	101.0
Change Period (Y+Rc), s		6.0		5.0	6.0	* 5.8
Max Green Setting (Gmax), s		118.0		31.0	18.6	* 95
Max Q Clear Time (g_c+I1), s		6.7		24.5	9.6	2.0
Green Ext Time (p_c), s		5.9		1.7	0.2	85.4

Intersection Summary			
HCM 6th Ctrl Delay			17.7
HCM 6th LOS			B

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	740	120	260	2560	150	180	150	170	210	420	270
Future Volume (veh/h)	80	740	120	260	2560	150	180	150	170	210	420	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	2033	1796	1513	2033	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	796	129	265	2612	153	189	194	184	244	488	314
Peak Hour Factor	0.93	0.93	0.93	0.98	0.98	0.98	0.89	0.89	0.89	0.86	0.86	0.86
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	158	1474	397	561	1992	115	254	267	221	165	330	419
Arrive On Green	0.18	0.53	0.53	0.40	0.74	0.74	0.14	0.14	0.14	0.27	0.27	0.27
Sat Flow, veh/h	1711	5549	1495	2795	5358	308	1781	1870	1544	613	1226	1554
Grp Volume(v), veh/h	86	796	129	265	1789	976	189	194	184	732	0	314
Grp Sat Flow(s),veh/h/ln	1711	1850	1495	1397	1850	1967	1781	1870	1544	1840	0	1554
Q Serve(g_s), s	7.3	15.1	7.8	11.2	59.5	59.5	16.3	15.9	18.6	43.1	0.0	29.6
Cycle Q Clear(g_c), s	7.3	15.1	7.8	11.2	59.5	59.5	16.3	15.9	18.6	43.1	0.0	29.6
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	0.33		1.00
Lane Grp Cap(c), veh/h	158	1474	397	561	1376	731	254	267	221	496	0	419
V/C Ratio(X)	0.55	0.54	0.32	0.47	1.30	1.33	0.74	0.73	0.83	1.48	0.00	0.75
Avail Cap(c_a), veh/h	158	1474	397	561	1376	731	345	362	299	496	0	419
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.49	0.49	0.49	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.2	31.1	29.4	41.6	20.5	20.5	65.8	65.6	66.7	58.5	0.0	53.5
Incr Delay (d2), s/veh	2.0	1.3	1.9	0.1	137.8	155.4	3.3	2.5	10.5	225.4	0.0	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	5.6	2.8	3.4	37.8	43.7	7.7	7.9	8.0	51.1	0.0	12.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	32.3	31.3	41.7	158.3	175.9	69.1	68.1	77.2	283.9	0.0	60.3
LnGrp LOS	E	C	C	D	F	F	E	E	E	F	A	E
Approach Vol, veh/h		1011			3030			567			1046	
Approach Delay, s/veh		34.9			153.8			71.4			216.7	
Approach LOS		C			F			E			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	36.5	47.7		48.0	19.1	65.1		27.8
Change Period (Y+Rc), s	4.4	5.2		4.9	4.4	5.6		4.9
Max Green Setting (Gmax), s	24.0	42.5		43.1	6.6	59.5		31.0
Max Q Clear Time (g_c+I1), s	13.2	17.1		45.1	9.3	61.5		20.6
Green Ext Time (p_c), s	0.4	14.2		0.0	0.0	0.0		1.1

Intersection Summary	
HCM 6th Ctrl Delay	135.9
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	150	960	0	2680	340	210	430
Future Volume (veh/h)	150	960	0	2680	340	210	430
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00				0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No	
Adj Sat Flow, veh/h/ln	1796	2033		2033	1796	1563	1856
Adj Flow Rate, veh/h	163	1043		2821	358	266	544
Peak Hour Factor	0.92	0.92		0.95	0.95	0.79	0.79
Percent Heavy Veh, %	7	7		7	7	3	3
Cap, veh/h	172	4092		3333	891	300	635
Arrive On Green	0.20	1.00		1.00	1.00	0.20	0.20
Sat Flow, veh/h	1711	5732		5732	1483	1488	3145
Grp Volume(v), veh/h	163	1043		2821	358	266	544
Grp Sat Flow(s),veh/h/ln	1711	1850		1850	1483	1488	1572
Q Serve(g_s), s	15.0	0.0		0.0	0.0	27.8	26.7
Cycle Q Clear(g_c), s	15.0	0.0		0.0	0.0	27.8	26.7
Prop In Lane	1.00				1.00	1.00	1.00
Lane Grp Cap(c), veh/h	172	4092		3333	891	300	635
V/C Ratio(X)	0.95	0.25		0.85	0.40	0.89	0.86
Avail Cap(c_a), veh/h	172	4092		3333	891	335	708
HCM Platoon Ratio	2.00	2.00		2.00	2.00	1.00	1.00
Upstream Filter(I)	0.88	0.88		0.09	0.09	0.91	0.91
Uniform Delay (d), s/veh	63.5	0.0		0.0	0.0	62.1	61.6
Incr Delay (d2), s/veh	48.7	0.1		0.3	0.1	21.3	9.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.1		0.1	0.0	12.3	22.5
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	112.2	0.1		0.3	0.1	83.4	70.8
LnGrp LOS	F	A		A	A	F	E
Approach Vol, veh/h		1206		3179		810	
Approach Delay, s/veh		15.3		0.3		74.9	
Approach LOS		B		A		E	

Timer - Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		123.2		36.8	21.3	101.9	
Change Period (Y+Rc), s		5.2		4.5	5.2	* 5.8	
Max Green Setting (Gmax), s		105.8		36.0	13.6	* 96	
Max Q Clear Time (g_c+I1), s		2.0		29.8	17.0	2.0	
Green Ext Time (p_c), s		22.4		2.5	0.0	87.7	

Intersection Summary		
HCM 6th Ctrl Delay		15.4
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	650	370	200	1970	160	1020	650	120	230	480	230
Future Volume (veh/h)	100	650	370	200	1970	160	1020	650	120	230	480	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	2033	1796	1796	2033	1724	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	684	389	211	2074	168	976	820	126	274	571	274
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.84	0.84	0.84
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	103	1443	770	256	1984	514	891	935	389	685	458	219
Arrive On Green	0.02	0.09	0.09	0.15	0.36	0.36	0.25	0.25	0.25	0.20	0.20	0.20
Sat Flow, veh/h	1711	5549	1498	1711	5549	1438	3563	3741	1556	3456	2310	1107
Grp Volume(v), veh/h	105	684	389	211	2074	168	976	820	126	274	439	406
Grp Sat Flow(s),veh/h/ln	1711	1850	1498	1711	1850	1438	1781	1870	1556	1728	1777	1640
Q Serve(g_s), s	9.6	18.8	27.5	19.1	57.2	13.6	40.0	33.7	10.6	11.0	31.7	31.7
Cycle Q Clear(g_c), s	9.6	18.8	27.5	19.1	57.2	13.6	40.0	33.7	10.6	11.0	31.7	31.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	103	1443	770	256	1984	514	891	935	389	685	352	325
V/C Ratio(X)	1.02	0.47	0.51	0.83	1.05	0.33	1.10	0.88	0.32	0.40	1.25	1.25
Avail Cap(c_a), veh/h	103	1443	770	271	1984	514	891	935	389	685	352	325
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00	0.60	0.60	0.60
Uniform Delay (d), s/veh	78.4	62.7	32.1	66.0	51.4	37.4	60.0	57.6	49.0	55.9	64.2	64.2
Incr Delay (d2), s/veh	89.6	1.0	2.1	16.4	33.3	1.7	59.8	9.2	0.3	0.1	124.9	127.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	9.5	17.3	9.4	31.8	5.0	25.1	16.8	4.1	4.8	26.4	24.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	168.0	63.7	34.1	82.5	84.7	39.1	119.8	66.8	49.2	56.0	189.1	191.2
LnGrp LOS	F	E	C	F	F	D	F	E	D	E	F	F
Approach Vol, veh/h		1178			2453			1922			1119	
Approach Delay, s/veh		63.2			81.4			92.6			157.3	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.7	47.3		37.0	14.0	63.0		46.0				
Change Period (Y+Rc), s	5.8	* 5.7		5.3	4.4	5.8		6.0				
Max Green Setting (Gmax), s	25.3	* 42		31.7	9.6	57.2		40.0				
Max Q Clear Time (g_c+I1), s	21.1	29.5		33.7	11.6	59.2		42.0				
Green Ext Time (p_c), s	0.1	5.1		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			94.1									
HCM 6th LOS			F									

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	280	960	0	1340	590	0	0	0	300	0	880
Future Volume (veh/h)	0	280	960	0	1340	590	0	0	0	300	0	880
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1796	2033	1796	0	2033	1796				1870	0	1870
Adj Flow Rate, veh/h	0	304	0	0	1411	0				341	0	1000
Peak Hour Factor	0.92	0.92	0.92	0.95	0.95	0.95				0.88	0.88	0.88
Percent Heavy Veh, %	7	7	7	0	7	7				2	0	2
Cap, veh/h	1	3017		0	3017					516	0	335
Arrive On Green	0.00	1.00	0.00	0.00	0.78	0.00				0.15	0.00	0.15
Sat Flow, veh/h	1711	3862	1522	0	3964	2679				3456	0	2790
Grp Volume(v), veh/h	0	304	0	0	1411	0				341	0	1000
Grp Sat Flow(s),veh/h/ln	1711	1931	1522	0	1931	1340				1728	0	1395
Q Serve(g_s), s	0.0	0.0	0.0	0.0	20.1	0.0				14.9	0.0	23.9
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	20.1	0.0				14.9	0.0	23.9
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	1	3017		0	3017					516	0	335
V/C Ratio(X)	0.00	0.10		0.00	0.47					0.66	0.00	2.99
Avail Cap(c_a), veh/h	489	3017		0	3017					516	0	335
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	0.93	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	6.0	0.0				64.2	0.0	105.4
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.5	0.0				2.5	0.0	902.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	7.0	0.0				6.8	0.0	41.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.1	0.0	0.0	6.5	0.0				66.7	0.0	1007.6
LnGrp LOS	A	A		A	A					E	A	F
Approach Vol, veh/h		304	A		1411	A					1341	
Approach Delay, s/veh		0.1			6.5						768.4	
Approach LOS		A			A						F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		131.0		29.0	0.0	131.0
Change Period (Y+Rc), s		6.0		5.1	* 4.7	6.0
Max Green Setting (Gmax), s		125.0		23.9	* 46	74.6
Max Q Clear Time (g_c+I1), s		2.0		25.9	0.0	22.1
Green Ext Time (p_c), s		1.3		0.0	0.0	8.1

Intersection Summary	
HCM 6th Ctrl Delay	340.2
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	10	740	0	1160	130	310	0	1370	0	0	0
Future Volume (veh/h)	0	10	740	0	1160	130	310	0	1370	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1796	1796	1796	1796	1796	1870	0	1870			
Adj Flow Rate, veh/h	0	11	0	0	1208	0	337	0	1489			
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96	0.92	0.92	0.92			
Percent Heavy Veh, %	0	7	7	7	7	7	2	0	2			
Cap, veh/h	0	895		2	1620		2092	0	1517			
Arrive On Green	0.00	0.26	0.00	0.00	0.26	0.00	0.61	0.00	0.61			
Sat Flow, veh/h	0	3503	1522	1711	6179	1522	3456	0	2790			
Grp Volume(v), veh/h	0	11	0	0	1208	0	337	0	1489			
Grp Sat Flow(s),veh/h/ln	0	1706	1522	1711	1545	1522	1728	0	1395			
Q Serve(g_s), s	0.0	0.2	0.0	0.0	17.7	0.0	4.2	0.0	57.8			
Cycle Q Clear(g_c), s	0.0	0.2	0.0	0.0	17.7	0.0	4.2	0.0	57.8			
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	895		2	1620		2092	0	1517			
V/C Ratio(X)	0.00	0.01		0.00	0.75		0.16	0.00	0.98			
Avail Cap(c_a), veh/h	0	1553		605	5380		2097	0	1520			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	27.0	0.0	0.0	33.5	0.0	8.5	0.0	27.5			
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	18.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	6.3	0.0	1.5	0.0	21.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	27.0	0.0	0.0	33.7	0.0	8.5	0.0	46.2			
LnGrp LOS	A	C		A	C		A	A	D			
Approach Vol, veh/h		11	A		1208	A		1826				
Approach Delay, s/veh		27.0			33.7			39.2				
Approach LOS		C			C			D				
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	0.0	32.9				32.9		66.0				
Change Period (Y+Rc), s	6.1	7.0				7.0		6.1				
Max Green Setting (Gmax), s	35.0	45.0				86.1		60.0				
Max Q Clear Time (g_c+I1), s	0.0	2.2				19.7		59.8				
Green Ext Time (p_c), s	0.0	0.0				6.2		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			37.0									
HCM 6th LOS			D									

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	100	170	110	240	80	340	590	230	120	1260	230
Future Volume (veh/h)	50	100	170	110	240	80	340	590	230	120	1260	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	110	187	124	270	90	370	641	250	124	1299	237
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.92	0.92	0.92	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	217	520	288	303	251	382	1800	1042	145	1328	776
Arrive On Green	0.12	0.12	0.12	0.16	0.16	0.16	0.21	0.51	0.51	0.08	0.37	0.37
Sat Flow, veh/h	1781	1870	1548	1781	1870	1553	1781	3554	1551	1781	3554	1583
Grp Volume(v), veh/h	55	110	187	124	270	90	370	641	250	124	1299	237
Grp Sat Flow(s),veh/h/ln	1781	1870	1548	1781	1870	1553	1781	1777	1551	1781	1777	1583
Q Serve(g_s), s	4.4	8.6	14.4	9.8	22.1	8.1	32.2	17.0	10.0	10.8	56.5	14.1
Cycle Q Clear(g_c), s	4.4	8.6	14.4	9.8	22.1	8.1	32.2	17.0	10.0	10.8	56.5	14.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	217	520	288	303	251	382	1800	1042	145	1328	776
V/C Ratio(X)	0.27	0.51	0.36	0.43	0.89	0.36	0.97	0.36	0.24	0.85	0.98	0.31
Avail Cap(c_a), veh/h	375	394	667	330	346	288	382	1800	1042	240	1328	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	65.0	39.9	59.1	64.3	58.4	60.9	23.2	10.3	71.0	48.4	23.9
Incr Delay (d2), s/veh	0.4	1.0	0.2	1.0	21.9	0.8	37.3	0.1	0.1	7.1	19.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.2	5.6	4.5	12.4	3.2	18.3	7.1	5.4	5.2	28.1	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.4	65.9	40.1	60.1	86.2	59.2	98.2	23.4	10.4	78.1	68.0	24.3
LnGrp LOS	E	E	D	E	F	E	F	C	B	E	E	C
Approach Vol, veh/h		352			484			1261			1660	
Approach Delay, s/veh		51.8			74.5			42.8			62.5	
Approach LOS		D			E			D			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.2	85.0		24.1	38.0	64.2		30.2				
Change Period (Y+Rc), s	4.4	5.7		5.9	4.4	5.7		4.9				
Max Green Setting (Gmax), s	21.1	71.0		33.0	33.6	58.5		29.0				
Max Q Clear Time (g_c+I1), s	12.8	19.0		16.4	34.2	58.5		24.1				
Green Ext Time (p_c), s	0.1	7.6		0.8	0.0	0.0		1.0				
Intersection Summary												
HCM 6th Ctrl Delay			56.4									
HCM 6th LOS			E									
Notes												

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	20	370	340	590	30	390	110	20	20	870	280
Future Volume (veh/h)	30	20	370	340	590	30	390	110	20	20	870	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1870	1796	1870	1870	1870	1575	1870	1870
Adj Flow Rate, veh/h	31	21	381	358	621	32	433	122	22	22	935	301
Peak Hour Factor	0.97	0.97	0.97	0.95	0.95	0.95	0.90	0.90	0.90	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	473	285	342	637	406	424	2060	637	26	931	286
Arrive On Green	0.19	0.19	0.19	0.27	0.27	0.27	0.24	0.40	0.40	0.02	0.18	0.18
Sat Flow, veh/h	1083	2510	1510	1252	2332	1487	1781	5106	1578	1500	5106	1569
Grp Volume(v), veh/h	52	0	381	517	462	32	433	122	22	22	935	301
Grp Sat Flow(s),veh/h/ln	1816	1777	1510	1808	1777	1487	1781	1702	1578	1500	1702	1569
Q Serve(g_s), s	4.2	0.0	33.0	47.8	44.7	2.8	41.7	2.6	1.5	2.6	31.9	31.9
Cycle Q Clear(g_c), s	4.2	0.0	33.0	47.8	44.7	2.8	41.7	2.6	1.5	2.6	31.9	31.9
Prop In Lane	0.60		1.00	0.69		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	342	335	285	494	485	406	424	2060	637	26	931	286
V/C Ratio(X)	0.15	0.00	1.34	1.05	0.95	0.08	1.02	0.06	0.03	0.86	1.00	1.05
Avail Cap(c_a), veh/h	342	335	285	494	485	406	424	2060	637	64	931	286
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.3	0.0	71.0	63.6	62.5	47.2	66.7	31.9	31.6	85.8	71.5	71.5
Incr Delay (d2), s/veh	0.6	0.0	174.2	53.2	29.8	0.2	48.9	0.0	0.0	24.4	30.6	67.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	26.5	29.2	24.1	1.1	24.3	1.1	0.6	1.2	16.3	17.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	0.0	245.2	116.8	92.3	47.5	115.5	31.9	31.6	110.2	102.2	139.1
LnGrp LOS	E	A	F	F	F	D	F	C	C	F	F	F
Approach Vol, veh/h		433			1011			577			1258	
Approach Delay, s/veh		222.9			103.4			94.7			111.1	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.4	77.0		37.9	46.1	38.3		52.7
Change Period (Y+Rc), s	4.4	* 6.4		4.9	4.4	6.4		4.9
Max Green Setting (Gmax), s	7.5	* 67		33.0	41.7	31.9		47.8
Max Q Clear Time (g_c+I1), s	4.6	4.6		35.0	43.7	33.9		49.8
Green Ext Time (p_c), s	0.0	1.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	120.6
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	1010	220	380	1320	220	260	250	110	630	1540	480
Future Volume (veh/h)	150	1010	220	380	1320	220	260	250	110	630	1540	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1870	1885	1870	1870	1870	1841	1841	1870	1870	1841	1767
Adj Flow Rate, veh/h	163	1098	239	413	1435	239	283	272	120	685	1674	522
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	1	2	2	2	4	4	2	2	4	4
Cap, veh/h	210	1256	630	467	1625	1494	505	1397	441	751	1665	579
Arrive On Green	0.06	0.25	0.25	0.14	0.32	0.32	0.15	0.28	0.28	0.22	0.33	0.33
Sat Flow, veh/h	3483	5106	1598	3456	5106	2790	3401	5025	1585	3456	5025	1475
Grp Volume(v), veh/h	163	1098	239	413	1435	239	283	272	120	685	1674	522
Grp Sat Flow(s),veh/h/ln	1742	1702	1598	1728	1702	1395	1700	1675	1585	1728	1675	1475
Q Serve(g_s), s	7.4	33.1	4.6	18.8	42.6	7.0	12.4	6.6	9.5	31.0	53.0	37.0
Cycle Q Clear(g_c), s	7.4	33.1	4.6	18.8	42.6	7.0	12.4	6.6	9.5	31.0	53.0	37.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	210	1256	630	467	1625	1494	505	1397	441	751	1665	579
V/C Ratio(X)	0.78	0.87	0.38	0.88	0.88	0.16	0.56	0.19	0.27	0.91	1.01	0.90
Avail Cap(c_a), veh/h	612	1430	684	583	1625	1494	505	1397	441	911	1665	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.1	58.0	15.7	68.0	51.7	18.9	63.3	44.1	45.1	61.1	53.5	25.6
Incr Delay (d2), s/veh	2.4	5.2	0.1	12.9	6.1	0.0	0.8	0.3	1.4	11.7	23.4	19.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	14.9	3.9	9.2	19.1	2.3	5.4	2.8	4.0	14.5	25.1	16.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.5	63.2	15.9	80.8	57.8	18.9	64.1	44.4	46.5	72.8	76.9	45.4
LnGrp LOS	E	E	B	F	E	B	E	D	D	E	F	D
Approach Vol, veh/h		1500			2087			675			2881	
Approach Delay, s/veh		57.1			57.9			53.0			70.2	
Approach LOS		E			E			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.3	50.4	26.1	44.2	29.6	60.0	14.5	55.8				
Change Period (Y+Rc), s	4.5	5.9	4.5	4.9	5.9	* 7	4.9	* 4.9				
Max Green Setting (Gmax), s	42.2	26.2	27.0	44.8	14.4	* 53	28.1	* 44				
Max Q Clear Time (g_c+I1), s	33.0	11.5	20.8	35.1	14.4	55.0	9.4	44.6				
Green Ext Time (p_c), s	1.8	4.6	0.8	4.3	0.0	0.0	0.3	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			62.3									
HCM 6th LOS			E									

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	30	240	70	480	100	190	70	250	790	30
Future Volume (veh/h)	20	0	30	240	70	480	100	190	70	250	790	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	40	0	60	276	80	552	109	207	76	278	878	33
Peak Hour Factor	0.50	0.50	0.50	0.87	0.87	0.87	0.92	0.92	0.92	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	4	4	4	4	4	4
Cap, veh/h	32	13	19	313	79	1273	384	272	97	694	979	37
Arrive On Green	0.41	0.00	0.41	0.41	0.41	0.41	0.22	0.11	0.11	0.79	0.57	0.57
Sat Flow, veh/h	0	31	47	670	194	1585	1753	2525	898	1753	3437	129
Grp Volume(v), veh/h	100	0	0	356	0	552	109	141	142	278	447	464
Grp Sat Flow(s),veh/h/ln	78	0	0	865	0	1585	1753	1749	1674	1753	1749	1817
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	8.3	12.6	13.2	7.7	35.9	35.9
Cycle Q Clear(g_c), s	65.1	0.0	0.0	65.1	0.0	0.0	8.3	12.6	13.2	7.7	35.9	35.9
Prop In Lane	0.40		0.60	0.78		1.00	1.00		0.54	1.00		0.07
Lane Grp Cap(c), veh/h	63	0	0	392	0	1273	384	188	180	694	498	518
V/C Ratio(X)	1.58	0.00	0.00	0.91	0.00	0.43	0.28	0.75	0.79	0.40	0.90	0.90
Avail Cap(c_a), veh/h	63	0	0	392	0	1273	384	437	419	694	634	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.95	0.95	0.95	0.30	0.30	0.30
Uniform Delay (d), s/veh	48.1	0.0	0.0	47.8	0.0	4.8	52.1	69.3	69.6	10.8	32.3	32.3
Incr Delay (d2), s/veh	325.1	0.0	0.0	24.0	0.0	0.1	0.1	22.7	27.2	0.0	8.0	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	0.0	0.0	16.7	0.0	4.8	3.7	6.8	7.0	2.3	11.7	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	373.2	0.0	0.0	71.8	0.0	4.9	52.2	92.1	96.8	10.9	40.3	40.1
LnGrp LOS	F	A	A	E	A	A	D	F	F	B	D	D
Approach Vol, veh/h		100			908			392			1189	
Approach Delay, s/veh		373.2			31.1			82.7			33.4	
Approach LOS		F			C			F			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	67.8	22.2		70.0	39.4	50.6		70.0
Change Period (Y+Rc), s	4.4	5.0		4.9	4.4	5.0		4.9
Max Green Setting (Gmax), s	40.6	40.0		65.1	22.6	58.0		65.1
Max Q Clear Time (g_c+I1), s	19.7	15.2		67.1	10.3	37.9		67.1
Green Ext Time (p_c), s	0.4	2.0		0.0	0.1	7.6		0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.2
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	960	390	190	1090	860	40	0	290	2290	530	30
Future Volume (veh/h)	0	960	390	190	1090	860	40	0	290	2290	530	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	1870	1885	0	1885	1870	1870	1796
Adj Flow Rate, veh/h	0	1043	424	202	1160	915	54	0	392	2411	558	32
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.94	0.74	0.74	0.74	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	2	1	0	1	2	2	2
Cap, veh/h	0	1123	494	217	1384	2541	330	0	0	1801	1395	597
Arrive On Green	0.00	0.22	0.22	0.12	0.39	0.39	0.09	0.00	0.00	0.52	0.39	0.39
Sat Flow, veh/h	0	5274	1564	1781	3554	2790	3483	54		3456	3554	1522
Grp Volume(v), veh/h	0	1043	424	202	1160	915	54	74.7		2411	558	32
Grp Sat Flow(s),veh/h/ln	0	1702	1564	1781	1777	1395	1742	E		1728	1777	1522
Q Serve(g_s), s	0.0	35.9	29.0	20.1	53.1	7.8	2.6			93.5	20.3	2.3
Cycle Q Clear(g_c), s	0.0	35.9	29.0	20.1	53.1	7.8	2.6			93.5	20.3	2.3
Prop In Lane	0.00		1.00	1.00		1.00	1.00			1.00		1.00
Lane Grp Cap(c), veh/h	0	1123	494	217	1384	2541	330			1801	1395	597
V/C Ratio(X)	0.00	0.93	0.86	0.93	0.84	0.36	0.16			1.34	0.40	0.05
Avail Cap(c_a), veh/h	0	1210	521	217	1397	2551	573			1801	1395	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	68.6	26.7	78.0	49.6	1.1	74.6			42.9	39.3	33.8
Incr Delay (d2), s/veh	0.0	11.4	12.1	41.1	4.4	0.0	0.1			156.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.6	12.2	11.6	23.9	0.6	1.1			77.2	8.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	80.0	38.8	119.1	54.0	1.1	74.7			199.1	39.3	33.8
LnGrp LOS	A	F	D	F	D	A	E			F	D	C
Approach Vol, veh/h		1467			2277						3001	
Approach Delay, s/veh		68.1			38.5						167.6	
Approach LOS		E			D						F	

Timer - Assigned Phs	1	2	3	4		6	7
Phs Duration (G+Y+Rc), s	30.4	48.0	23.1	77.9		78.4	101.0
Change Period (Y+Rc), s	8.5	* 8.5	6.1	7.5		8.5	7.5
Max Green Setting (Gmax), s	21.9	* 43	29.5	57.9		70.5	93.5
Max Q Clear Time (g_c+I1), s	22.1	37.9	4.6	22.3		55.1	95.5
Green Ext Time (p_c), s	0.0	1.6	0.0	1.2		3.6	0.0

Intersection Summary			
HCM 6th Ctrl Delay			102.2
HCM 6th LOS			F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	630	2250	0	0	1250	80	0	60	1360	10	0	450
Future Volume (veh/h)	630	2250	0	0	1250	80	0	60	1360	10	0	450
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	2116	0	1870	2116	1870	0	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	685	2446	0	0	1359	87	0	62	1402	11	0	506
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	0	2	2	2	0	2	2	2	0	2
Cap, veh/h	730	2971	0	1	1549	496	0	557	950	80	0	0
Arrive On Green	0.21	0.51	0.00	0.00	0.27	0.27	0.00	0.30	0.30	0.05	0.00	0.00
Sat Flow, veh/h	3456	5968	0	1781	5778	1583	0	1870	3614	1781	11	
Grp Volume(v), veh/h	685	2446	0	0	1359	87	0	62	1402	11	61.9	
Grp Sat Flow(s),veh/h/ln	1728	1926	0	1781	1926	1583	0	1870	1205	1781	E	
Q Serve(g_s), s	26.2	47.9	0.0	0.0	30.2	5.4	0.0	3.2	40.0	0.8		
Cycle Q Clear(g_c), s	26.2	47.9	0.0	0.0	30.2	5.4	0.0	3.2	40.0	0.8		
Prop In Lane	1.00		0.00	1.00		1.00	0.00		1.00	1.00		
Lane Grp Cap(c), veh/h	730	2971	0	1	1549	496	0	557	950	80		
V/C Ratio(X)	0.94	0.82	0.00	0.00	0.88	0.18	0.00	0.11	1.48	0.14		
Avail Cap(c_a), veh/h	772	2971	0	265	2065	637	0	557	950	264		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	52.1	27.5	0.0	0.0	47.1	33.5	0.0	34.3	62.9	61.6		
Incr Delay (d2), s/veh	18.1	1.9	0.0	0.0	2.9	0.1	0.0	0.0	220.1	0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	12.9	21.1	0.0	0.0	14.6	2.2	0.0	1.4	19.4	0.4		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.2	29.3	0.0	0.0	50.0	33.6	0.0	34.3	283.0	61.9		
LnGrp LOS	E	C	A	A	D	C	A	C	F	E		
Approach Vol, veh/h		3131			1446			1464				
Approach Delay, s/veh		38.3			49.0			272.5				
Approach LOS		D			D			F				

Timer - Assigned Phs	1	2		5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	76.1		33.1	43.0	12.2	46.1
Change Period (Y+Rc), s	* 4.7	7.0		* 4.7	7.0	6.1	6.1
Max Green Setting (Gmax), s	* 26	54.0		* 30	48.0	19.9	40.0
Max Q Clear Time (g_c+I1), s	0.0	49.9		28.2	32.2	2.8	42.0
Green Ext Time (p_c), s	0.0	2.9		0.2	3.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	97.5
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	130	320	190	460	2160	390
Future Volume (veh/h)	130	320	190	460	2160	390
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	368	207	500	2400	433
Peak Hour Factor	0.87	0.87	0.92	0.92	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	170	2085	294	260	2253	1576
Arrive On Green	0.10	0.10	0.17	0.17	0.65	0.84
Sat Flow, veh/h	1781	2790	1870	1571	3456	1870
Grp Volume(v), veh/h	149	368	207	500	2400	433
Grp Sat Flow(s),veh/h/ln	1781	1395	1777	1571	1728	1870
Q Serve(g_s), s	14.5	6.7	19.3	29.1	114.6	8.3
Cycle Q Clear(g_c), s	14.5	6.7	19.3	29.1	114.6	8.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	170	2085	294	260	2253	1576
V/C Ratio(X)	0.88	0.18	0.70	1.92	1.07	0.27
Avail Cap(c_a), veh/h	213	2153	294	260	2253	1576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.5	6.5	69.2	73.3	30.6	2.8
Incr Delay (d2), s/veh	23.9	0.0	6.3	429.1	39.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	1.9	9.2	42.5	55.0	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	102.4	6.5	75.5	502.4	69.6	2.9
LnGrp LOS	F	A	E	F	F	A
Approach Vol, veh/h	517		707			2833
Approach Delay, s/veh	34.1		377.4			59.4
Approach LOS	C		F			E

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	119.0	35.1				154.1		21.6
Change Period (Y+Rc), s	4.4	6.0				6.0		4.9
Max Green Setting (Gmax), s	114.6	29.1				148.1		21.0
Max Q Clear Time (g_c+I1), s	116.6	31.1				10.3		16.5
Green Ext Time (p_c), s	0.0	0.0				0.7		0.2

Intersection Summary	
HCM 6th Ctrl Delay	111.6
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	770	190	60	90	210	250	10	30	20	30	30	180
Future Volume (veh/h)	770	190	60	90	210	250	10	30	20	30	30	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	0.99		0.96	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	975	241	76	108	253	301	11	34	23	34	34	202
Peak Hour Factor	0.79	0.79	0.79	0.83	0.83	0.83	0.88	0.88	0.88	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1057	790	249	138	275	328	72	131	76	158	134	695
Arrive On Green	0.31	0.58	0.58	0.08	0.36	0.36	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	3456	1353	427	1781	776	923	125	976	562	638	996	1562
Grp Volume(v), veh/h	975	0	317	108	0	554	68	0	0	68	0	202
Grp Sat Flow(s),veh/h/ln	1728	0	1780	1781	0	1699	1662	0	0	1633	0	1562
Q Serve(g_s), s	20.5	0.0	6.8	4.5	0.0	23.5	0.0	0.0	0.0	0.0	0.0	6.3
Cycle Q Clear(g_c), s	20.5	0.0	6.8	4.5	0.0	23.5	2.7	0.0	0.0	2.5	0.0	6.3
Prop In Lane	1.00		0.24	1.00		0.54	0.16		0.34	0.50		1.00
Lane Grp Cap(c), veh/h	1057	0	1039	138	0	603	279	0	0	292	0	695
V/C Ratio(X)	0.92	0.00	0.31	0.78	0.00	0.92	0.24	0.00	0.00	0.23	0.00	0.29
Avail Cap(c_a), veh/h	1266	0	1127	305	0	744	684	0	0	681	0	1086
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	7.9	34.1	0.0	23.3	29.3	0.0	0.0	29.3	0.0	13.5
Incr Delay (d2), s/veh	9.2	0.0	0.1	3.7	0.0	13.1	0.2	0.0	0.0	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	0.0	1.9	1.9	0.0	10.4	1.1	0.0	0.0	1.1	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	0.0	8.0	37.8	0.0	36.4	29.5	0.0	0.0	29.4	0.0	13.6
LnGrp LOS	C	A	A	D	A	D	C	A	A	C	A	B
Approach Vol, veh/h		1292			662			68			270	
Approach Delay, s/veh		28.0			36.6			29.5			17.6	
Approach LOS		C			D			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	49.7		15.4	27.4	32.4		15.4				
Change Period (Y+Rc), s	4.4	5.7		5.3	4.4	5.7		* 5.3				
Max Green Setting (Gmax), s	12.9	47.7		29.0	27.6	33.0		* 29				
Max Q Clear Time (g_c+I1), s	6.5	8.8		8.3	22.5	25.5		4.7				
Green Ext Time (p_c), s	0.0	0.5		0.2	0.5	0.8		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		29.3
HCM 6th LOS		C

Notes

User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	230	1700	300	40	360	210
Future Volume (veh/h)	230	1700	300	40	360	210
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	2133	2133	1885	1870	1870
Adj Flow Rate, veh/h	247	1828	366	49	411	206
Peak Hour Factor	0.93	0.93	0.82	0.82	0.92	0.92
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	306	2466	1770	698	728	324
Arrive On Green	0.09	0.61	0.44	0.44	0.20	0.20
Sat Flow, veh/h	3483	4160	4160	1598	3563	1585
Grp Volume(v), veh/h	247	1828	366	49	411	206
Grp Sat Flow(s),veh/h/ln	1742	2027	2027	1598	1781	1585
Q Serve(g_s), s	3.6	16.8	2.9	0.9	5.4	6.2
Cycle Q Clear(g_c), s	3.6	16.8	2.9	0.9	5.4	6.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	306	2466	1770	698	728	324
V/C Ratio(X)	0.81	0.74	0.21	0.07	0.56	0.64
Avail Cap(c_a), veh/h	306	2570	1873	738	1837	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	7.3	9.1	8.6	18.7	19.0
Incr Delay (d2), s/veh	13.7	1.4	0.1	0.1	0.8	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	4.0	1.0	0.3	2.1	5.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.2	8.7	9.3	8.7	19.5	21.4
LnGrp LOS	D	A	A	A	B	C
Approach Vol, veh/h		2075	415		617	
Approach Delay, s/veh		12.1	9.2		20.1	
Approach LOS		B	A		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		36.8		15.6	9.0	27.8
Change Period (Y+Rc), s		4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s		33.2		27.0	4.6	24.2
Max Q Clear Time (g_c+I1), s		18.8		8.2	5.6	4.9
Green Ext Time (p_c), s		13.0		2.5	0.0	4.0

Intersection Summary			
HCM 6th Ctrl Delay			13.3
HCM 6th LOS			B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	380	1120	210	770	670	120
Future Volume (veh/h)	380	1120	210	770	670	120
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	2133	2133	1885	1870	1870
Adj Flow Rate, veh/h	432	1273	236	865	798	143
Peak Hour Factor	0.88	0.88	0.89	0.89	0.84	0.84
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	345	1284	1557	612	570	812
Arrive On Green	0.19	0.60	0.38	0.38	0.32	0.32
Sat Flow, veh/h	1795	2133	4160	1593	1781	1585
Grp Volume(v), veh/h	432	1273	236	865	798	143
Grp Sat Flow(s),veh/h/ln	1795	2133	2027	1593	1781	1585
Q Serve(g_s), s	30.0	92.0	5.9	60.0	50.0	7.6
Cycle Q Clear(g_c), s	30.0	92.0	5.9	60.0	50.0	7.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	345	1284	1557	612	570	812
V/C Ratio(X)	1.25	0.99	0.15	1.41	1.40	0.18
Avail Cap(c_a), veh/h	345	1284	1557	612	570	812
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	30.7	31.5	48.1	53.1	20.4
Incr Delay (d2), s/veh	135.5	23.1	0.1	195.5	190.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	26.4	51.5	2.9	56.2	52.1	9.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	198.6	53.8	31.6	243.6	243.3	20.5
LnGrp LOS	F	D	C	F	F	C
Approach Vol, veh/h		1705	1101		941	
Approach Delay, s/veh		90.5	198.2		209.5	
Approach LOS		F	F		F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		99.7		56.5	34.0	65.7
Change Period (Y+Rc), s		5.7		6.5	4.0	5.7
Max Green Setting (Gmax), s		94.0		50.0	30.0	60.0
Max Q Clear Time (g_c+I1), s		94.0		52.0	32.0	62.0
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		152.0
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	440	80	30	390	60	190	290	80	40	180	100
Future Volume (veh/h)	350	440	80	30	390	60	190	290	80	40	180	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	376	473	86	36	470	72	253	387	107	45	205	114
Peak Hour Factor	0.93	0.93	0.93	0.83	0.83	0.83	0.75	0.75	0.75	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	385	838	687	52	413	63	264	599	503	58	228	127
Arrive On Green	0.22	0.45	0.45	0.03	0.26	0.26	0.15	0.32	0.32	0.03	0.20	0.20
Sat Flow, veh/h	1781	1870	1534	1781	1580	242	1781	1870	1570	1781	1113	619
Grp Volume(v), veh/h	376	473	86	36	0	542	253	387	107	45	0	319
Grp Sat Flow(s),veh/h/ln	1781	1870	1534	1781	0	1822	1781	1870	1570	1781	0	1732
Q Serve(g_s), s	24.9	22.1	3.9	2.4	0.0	31.0	16.7	21.0	5.9	3.0	0.0	21.3
Cycle Q Clear(g_c), s	24.9	22.1	3.9	2.4	0.0	31.0	16.7	21.0	5.9	3.0	0.0	21.3
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	385	838	687	52	0	476	264	599	503	58	0	354
V/C Ratio(X)	0.98	0.56	0.13	0.69	0.00	1.14	0.96	0.65	0.21	0.78	0.00	0.90
Avail Cap(c_a), veh/h	385	838	687	102	0	476	264	623	523	132	0	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.2	24.2	19.1	57.0	0.0	43.8	50.1	34.5	29.4	56.9	0.0	46.0
Incr Delay (d2), s/veh	39.7	0.6	0.0	5.9	0.0	84.8	43.1	1.6	0.1	7.9	0.0	15.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.2	9.8	1.4	1.2	0.0	25.1	10.4	9.4	2.2	1.4	0.0	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.9	24.7	19.2	62.9	0.0	128.6	93.2	36.2	29.5	64.8	0.0	61.9
LnGrp LOS	F	C	B	E	A	F	F	D	C	E	A	E
Approach Vol, veh/h		935			578			747			364	
Approach Delay, s/veh		48.8			124.5			54.5			62.2	
Approach LOS		D			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	43.7	7.9	58.7	22.0	30.0	30.0	36.6
Change Period (Y+Rc), s	4.4	5.7	4.4	* 5.6	4.4	5.7	4.4	5.6
Max Green Setting (Gmax), s	3.8	39.5	6.8	* 50	17.6	30.7	25.6	31.0
Max Q Clear Time (g_c+I1), s	5.0	23.0	4.4	24.1	18.7	23.3	26.9	33.0
Green Ext Time (p_c), s	0.0	0.6	0.0	1.1	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	69.0
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	230	10	40	180	0	80	190	370	0	20	30
Future Volume (veh/h)	70	230	10	40	180	0	80	190	370	0	20	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	303	13	55	247	0	94	224	435	0	40	60
Peak Hour Factor	0.76	0.76	0.76	0.73	0.73	0.73	0.85	0.85	0.85	0.50	0.50	0.50
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	713	894	72	620	0	653	686	578	0	109	90
Arrive On Green	0.07	0.20	0.20	0.04	0.17	0.00	0.37	0.37	0.37	0.00	0.06	0.06
Sat Flow, veh/h	1781	3554	1561	1781	3647	0	1781	1870	1577	0	1870	1543
Grp Volume(v), veh/h	92	303	13	55	247	0	94	224	435	0	40	60
Grp Sat Flow(s),veh/h/ln	1781	1777	1561	1781	1777	0	1781	1870	1577	0	1870	1543
Q Serve(g_s), s	3.0	4.4	0.2	1.8	3.6	0.0	2.1	5.1	14.2	0.0	1.2	2.2
Cycle Q Clear(g_c), s	3.0	4.4	0.2	1.8	3.6	0.0	2.1	5.1	14.2	0.0	1.2	2.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	118	713	894	72	620	0	653	686	578	0	109	90
V/C Ratio(X)	0.78	0.43	0.01	0.77	0.40	0.00	0.14	0.33	0.75	0.00	0.37	0.67
Avail Cap(c_a), veh/h	312	1870	1403	200	1653	0	865	908	766	0	130	107
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	20.6	5.6	28.0	21.6	0.0	12.5	13.4	16.3	0.0	26.7	27.2
Incr Delay (d2), s/veh	4.1	0.7	0.0	6.2	0.7	0.0	0.2	0.6	4.9	0.0	0.8	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.7	0.1	0.8	1.4	0.0	0.8	2.0	5.0	0.0	0.5	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	21.3	5.6	34.2	22.3	0.0	12.7	14.0	21.2	0.0	27.5	34.5
LnGrp LOS	C	C	A	C	C	A	B	B	C	A	C	C
Approach Vol, veh/h		408			302			753			100	
Approach Delay, s/veh		23.0			24.5			18.0			31.7	
Approach LOS		C			C			B			C	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.5	6.8	17.3		8.3	8.3	15.8
Change Period (Y+Rc), s		4.9	4.4	5.5		4.9	4.4	* 5.5
Max Green Setting (Gmax), s		28.6	6.6	31.0		4.1	10.3	* 27
Max Q Clear Time (g_c+I1), s		16.2	3.8	6.4		4.2	5.0	5.6
Green Ext Time (p_c), s		5.1	0.0	3.0		0.0	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	180	10	100	510	0	450	20	1730	20	10	0
Future Volume (veh/h)	20	180	10	100	510	0	450	20	1730	20	10	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1575	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	269	15	125	638	0	603	0	2247	40	20	0
Peak Hour Factor	0.67	0.67	0.67	0.80	0.80	0.80	0.77	0.77	0.77	0.50	0.50	0.50
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	38	599	266	87	697	0	1818	0	959	61	31	0
Arrive On Green	0.02	0.17	0.17	0.05	0.20	0.00	0.61	0.00	0.61	0.05	0.05	0.00
Sat Flow, veh/h	1781	3554	1577	1781	3647	0	3000	0	1583	1207	603	0
Grp Volume(v), veh/h	30	269	15	125	638	0	603	0	2247	60	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1577	1781	1777	0	1500	0	1583	1810	0	0
Q Serve(g_s), s	2.6	10.6	1.2	7.6	27.3	0.0	15.4	0.0	94.1	5.1	0.0	0.0
Cycle Q Clear(g_c), s	2.6	10.6	1.2	7.6	27.3	0.0	15.4	0.0	94.1	5.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.67		0.00
Lane Grp Cap(c), veh/h	38	599	266	87	697	0	1818	0	959	92	0	0
V/C Ratio(X)	0.78	0.45	0.06	1.43	0.92	0.00	0.33	0.00	2.34	0.65	0.00	0.00
Avail Cap(c_a), veh/h	46	643	285	87	719	0	1818	0	959	303	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	75.6	58.1	54.2	73.8	61.2	0.0	15.1	0.0	30.6	72.3	0.0	0.0
Incr Delay (d2), s/veh	42.8	1.1	0.2	248.8	16.8	0.0	0.3	0.0	607.5	2.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.8	0.5	9.5	13.8	0.0	5.3	0.0	195.6	2.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	118.4	59.1	54.4	322.6	78.0	0.0	15.4	0.0	638.1	75.2	0.0	0.0
LnGrp LOS	F	E	D	F	E	A	B	A	F	E	A	A
Approach Vol, veh/h		314			763			2850			60	
Approach Delay, s/veh		64.6			118.1			506.4			75.2	
Approach LOS		E			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	31.5		12.8	7.7	35.7		99.0
Change Period (Y+Rc), s	4.4	* 5.3		4.9	4.4	5.3		4.9
Max Green Setting (Gmax), s	7.6	* 28		26.0	4.0	31.4		94.1
Max Q Clear Time (g_c+I1), s	9.6	12.6		7.1	4.6	29.3		96.1
Green Ext Time (p_c), s	0.0	2.4		0.1	0.0	1.1		0.0

Intersection Summary		
HCM 6th Ctrl Delay		390.8
HCM 6th LOS		F

Notes
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	310	910	10	270	0	220
Future Volume (veh/h)	310	910	10	270	0	220
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1870	1870
Adj Flow Rate, veh/h	383	1123	14	380	0	220
Peak Hour Factor	0.81	0.81	0.71	0.71	1.00	1.00
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	464	2027	341	305	311	277
Arrive On Green	0.26	0.57	0.19	0.19	0.00	0.17
Sat Flow, veh/h	1795	3676	1885	1598	1781	1585
Grp Volume(v), veh/h	383	1123	14	380	0	220
Grp Sat Flow(s),veh/h/ln	1795	1791	1791	1598	1781	1585
Q Serve(g_s), s	7.6	7.5	0.2	7.2	0.0	5.0
Cycle Q Clear(g_c), s	7.6	7.5	0.2	7.2	0.0	5.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	464	2027	341	305	311	277
V/C Ratio(X)	0.82	0.55	0.04	1.25	0.00	0.79
Avail Cap(c_a), veh/h	789	2674	341	305	1038	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	5.2	12.5	15.3	0.0	14.9
Incr Delay (d2), s/veh	1.4	0.1	0.0	135.9	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.8	0.1	13.3	0.0	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.6	5.3	12.5	151.2	0.0	16.9
LnGrp LOS	B	A	B	F	A	B
Approach Vol, veh/h		1506	394		220	
Approach Delay, s/veh		7.7	146.2		16.9	
Approach LOS		A	F		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		26.3		11.5	14.2	12.1
Change Period (Y+Rc), s		4.9		4.9	4.4	4.9
Max Green Setting (Gmax), s		28.2		22.0	16.6	7.2
Max Q Clear Time (g_c+I1), s		9.5		7.0	9.6	9.2
Green Ext Time (p_c), s		4.8		0.3	0.4	0.0

Intersection Summary		
HCM 6th Ctrl Delay		34.4
HCM 6th LOS		C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1450	180	130	150	40	230
Future Volume (veh/h)	1450	180	130	150	40	230
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1648	205	137	158	51	295
Peak Hour Factor	0.88	0.88	0.95	0.95	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1218	1084	105	488	42	242
Arrive On Green	0.68	0.68	0.06	0.26	0.18	0.18
Sat Flow, veh/h	1781	1585	1781	1870	235	1359
Grp Volume(v), veh/h	1648	205	137	158	0	346
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	0	1594
Q Serve(g_s), s	123.1	8.5	10.6	12.3	0.0	32.0
Cycle Q Clear(g_c), s	123.1	8.5	10.6	12.3	0.0	32.0
Prop In Lane	1.00	1.00	1.00			0.85
Lane Grp Cap(c), veh/h	1218	1084	105	488	0	283
V/C Ratio(X)	1.35	0.19	1.31	0.32	0.00	1.22
Avail Cap(c_a), veh/h	1218	1084	105	488	0	283
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.4	10.3	84.7	53.7	0.0	74.0
Incr Delay (d2), s/veh	164.2	0.1	190.6	0.5	0.0	127.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	102.8	13.5	10.5	5.9	0.0	23.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	192.7	10.4	275.3	54.2	0.0	201.1
LnGrp LOS	F	B	F	D	A	F
Approach Vol, veh/h	1853			295	346	
Approach Delay, s/veh	172.5			156.9	201.1	
Approach LOS	F			F	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		52.0		128.0	15.0	37.0
Change Period (Y+Rc), s		5.0		4.9	4.4	5.0
Max Green Setting (Gmax), s		47.0		123.1	10.6	32.0
Max Q Clear Time (g_c+I1), s		14.3		125.1	12.6	34.0
Green Ext Time (p_c), s		1.2		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		174.6
HCM 6th LOS		F

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	370	1680	160	350	160	170
Future Volume (veh/h)	370	1680	160	350	160	170
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	2133	2133	1885	1870	1870
Adj Flow Rate, veh/h	381	1732	195	427	286	304
Peak Hour Factor	0.97	0.97	0.82	0.82	0.56	0.56
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	412	2145	489	435	267	284
Arrive On Green	0.23	0.53	0.24	0.24	0.33	0.33
Sat Flow, veh/h	1795	4160	2133	1804	810	861
Grp Volume(v), veh/h	381	1732	195	427	591	0
Grp Sat Flow(s),veh/h/ln	1795	2027	2027	1804	1675	0
Q Serve(g_s), s	15.6	26.3	6.1	17.6	24.7	0.0
Cycle Q Clear(g_c), s	15.6	26.3	6.1	17.6	24.7	0.0
Prop In Lane	1.00			1.00	0.48	0.51
Lane Grp Cap(c), veh/h	412	2145	489	435	552	0
V/C Ratio(X)	0.93	0.81	0.40	0.98	1.07	0.00
Avail Cap(c_a), veh/h	412	2145	489	435	552	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.3	14.5	23.9	28.3	25.2	0.0
Incr Delay (d2), s/veh	26.2	2.5	0.7	38.0	58.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	10.1	2.7	11.4	18.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	54.5	17.0	24.6	66.3	84.0	0.0
LnGrp LOS	D	B	C	E	F	A
Approach Vol, veh/h		2113	622		591	
Approach Delay, s/veh		23.8	53.2		84.0	
Approach LOS		C	D		F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		45.4		29.6	21.6	23.8
Change Period (Y+Rc), s		5.7		4.9	4.4	5.7
Max Green Setting (Gmax), s		39.7		24.7	17.2	18.1
Max Q Clear Time (g_c+I1), s		28.3		26.7	17.6	19.6
Green Ext Time (p_c), s		9.4		0.0	0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			40.0			
HCM 6th LOS			D			

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	100	0	280	10	920	60	280	2510	0
Future Volume (veh/h)	0	0	0	100	0	280	10	920	60	280	2510	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1856	1856	1856	1856	0
Adj Flow Rate, veh/h				102	0	286	11	1000	65	292	2615	0
Peak Hour Factor				0.98	0.98	0.98	0.92	0.92	0.92	0.96	0.96	0.96
Percent Heavy Veh, %				2	0	2	2	3	3	3	3	0
Cap, veh/h				268	0	420	19	2347	711	334	3250	0
Arrive On Green				0.15	0.00	0.15	0.01	0.46	0.46	0.19	0.64	0.00
Sat Flow, veh/h				1781	0	2790	1781	5066	1534	1767	5233	0
Grp Volume(v), veh/h				102	0	286	11	1000	65	292	2615	0
Grp Sat Flow(s),veh/h/ln				1781	0	1395	1781	1689	1534	1767	1689	0
Q Serve(g_s), s				4.1	0.0	7.8	0.5	10.6	1.9	12.9	30.7	0.0
Cycle Q Clear(g_c), s				4.1	0.0	7.8	0.5	10.6	1.9	12.9	30.7	0.0
Prop In Lane				1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				268	0	420	19	2347	711	334	3250	0
V/C Ratio(X)				0.38	0.00	0.68	0.57	0.43	0.09	0.87	0.80	0.00
Avail Cap(c_a), veh/h				724	0	1134	124	2347	711	608	3292	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				30.7	0.0	32.2	39.5	14.4	12.1	31.6	10.6	0.0
Incr Delay (d2), s/veh				1.4	0.0	3.0	9.4	0.2	0.1	2.8	1.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.8	0.0	2.6	0.3	3.4	0.6	5.3	8.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.0	0.0	35.2	48.9	14.6	12.1	34.4	12.4	0.0
LnGrp LOS				C	A	D	D	B	B	C	B	A
Approach Vol, veh/h					388			1076			2907	
Approach Delay, s/veh					34.4			14.8			14.6	
Approach LOS					C			B			B	

Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	19.6	44.1			5.3	58.4		16.5				
Change Period (Y+Rc), s	4.4	7.0			4.4	* 7		4.4				
Max Green Setting (Gmax), s	27.6	29.0			5.6	* 52		32.6				
Max Q Clear Time (g_c+I1), s	14.9	12.6			2.5	32.7		9.8				
Green Ext Time (p_c), s	0.3	7.7			0.0	18.8		2.3				

Intersection Summary			
HCM 6th Ctrl Delay			16.4
HCM 6th LOS			B

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	710	110	170	20	80	20	110	380	20	30	1380	1010
Future Volume (veh/h)	710	110	170	20	80	20	110	380	20	30	1380	1010
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1870	1796	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	798	124	191	24	94	24	120	413	22	33	1500	1098
Peak Hour Factor	0.89	0.89	0.89	0.85	0.85	0.85	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	451	1018	429	31	178	75	277	2830	875	42	2102	640
Arrive On Green	0.25	0.29	0.29	0.02	0.05	0.05	0.16	0.56	0.56	0.02	0.41	0.41
Sat Flow, veh/h	1781	3554	1499	1781	3554	1503	1767	5066	1566	1767	5066	1541
Grp Volume(v), veh/h	798	124	191	24	94	24	120	413	22	33	1500	1098
Grp Sat Flow(s),veh/h/ln	1781	1777	1499	1781	1777	1503	1767	1689	1566	1767	1689	1541
Q Serve(g_s), s	45.6	4.6	12.9	2.4	4.6	2.8	11.1	7.1	1.1	3.3	44.3	34.7
Cycle Q Clear(g_c), s	45.6	4.6	12.9	2.4	4.6	2.8	11.1	7.1	1.1	3.3	44.3	34.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	451	1018	429	31	178	75	277	2830	875	42	2102	640
V/C Ratio(X)	1.77	0.12	0.44	0.79	0.53	0.32	0.43	0.15	0.03	0.78	0.71	1.72
Avail Cap(c_a), veh/h	451	1380	582	66	612	259	277	2830	875	89	2102	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.56	0.56	0.56
Uniform Delay (d), s/veh	67.2	47.5	25.0	88.1	83.4	82.5	68.7	19.1	17.8	87.4	43.8	11.4
Incr Delay (d2), s/veh	354.7	0.1	2.0	15.0	6.5	6.5	0.4	0.1	0.1	6.3	1.2	326.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	65.4	2.1	5.0	1.3	2.3	1.2	5.0	2.8	0.4	1.6	18.3	69.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	421.9	47.6	27.0	103.1	89.9	89.0	69.1	19.2	17.8	93.6	44.9	337.5
LnGrp LOS	F	D	C	F	F	F	E	B	B	F	D	F
Approach Vol, veh/h		1113			142			555			2631	
Approach Delay, s/veh		312.4			92.0			29.9			167.7	
Approach LOS		F			F			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	107.3	7.5	56.4	35.0	81.1	50.0	13.9
Change Period (Y+Rc), s	4.4	6.8	4.4	4.9	6.8	* 6.4	4.4	4.9
Max Green Setting (Gmax), s	9.1	73.8	6.7	69.9	8.6	* 75	45.6	31.0
Max Q Clear Time (g_c+I1), s	5.3	9.1	4.4	14.9	13.1	46.3	47.6	6.6
Green Ext Time (p_c), s	0.0	2.7	0.0	4.1	0.0	18.9	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	184.3
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	30	90	0	30	10	470	80	20	1420	10
Future Volume (veh/h)	10	10	30	90	0	30	10	470	80	20	1420	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	16	16	48	123	0	41	11	511	87	22	1543	11
Peak Hour Factor	0.62	0.62	0.62	0.73	0.73	0.73	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	19	19	58	164	0	250	17	2352	1044	197	2722	1181
Arrive On Green	0.06	0.06	0.06	0.05	0.00	0.05	0.02	1.00	1.00	0.11	0.77	0.77
Sat Flow, veh/h	335	335	1004	3563	0	1585	1767	3526	1564	1767	3526	1529
Grp Volume(v), veh/h	80	0	0	123	0	41	11	511	87	22	1543	11
Grp Sat Flow(s),veh/h/ln	1673	0	0	1781	0	1585	1767	1763	1564	1767	1763	1529
Q Serve(g_s), s	8.5	0.0	0.0	6.1	0.0	0.0	1.1	0.0	0.0	2.0	31.9	0.3
Cycle Q Clear(g_c), s	8.5	0.0	0.0	6.1	0.0	0.0	1.1	0.0	0.0	2.0	31.9	0.3
Prop In Lane	0.20		0.60	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	0	0	164	0	250	17	2352	1044	197	2722	1181
V/C Ratio(X)	0.83	0.00	0.00	0.75	0.00	0.16	0.66	0.22	0.08	0.11	0.57	0.01
Avail Cap(c_a), veh/h	150	0	0	317	0	318	75	2352	1044	197	2722	1181
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.88	0.00	0.88	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	83.9	0.0	0.0	84.8	0.0	65.5	88.0	0.0	0.0	71.9	8.3	4.7
Incr Delay (d2), s/veh	11.2	0.0	0.0	2.3	0.0	0.1	14.2	0.2	0.1	0.1	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	2.9	0.0	1.7	0.6	0.1	0.0	0.9	10.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.1	0.0	0.0	87.1	0.0	65.6	102.2	0.2	0.1	72.0	9.2	4.7
LnGrp LOS	F	A	A	F	A	E	F	A	A	E	A	A
Approach Vol, veh/h		80			164			609			1576	
Approach Delay, s/veh		95.1			81.7			2.0			10.0	
Approach LOS		F			F			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.4	125.0		15.3	6.1	145.3		13.3				
Change Period (Y+Rc), s	6.3	* 4.9		4.9	4.4	6.3		5.0				
Max Green Setting (Gmax), s	8.6	* 1.2E2		16.1	7.6	119.7		16.0				
Max Q Clear Time (g_c+I1), s	4.0	2.0		10.5	3.1	33.9		8.1				
Green Ext Time (p_c), s	0.0	7.1		0.1	0.0	9.0		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		15.7
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	50	480	50	50	40	280	360	30	70	1200	270
Future Volume (veh/h)	180	50	480	50	50	40	280	360	30	70	1200	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1563	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	225	0	641	55	55	44	304	391	33	76	1304	293
Peak Hour Factor	0.80	0.80	0.80	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	300	0	690	218	446	320	603	1852	156	227	1706	749
Arrive On Green	0.23	0.00	0.23	0.23	0.23	0.23	0.42	1.00	1.00	0.26	0.97	0.97
Sat Flow, veh/h	1287	0	3043	785	1968	1410	2887	3291	276	1767	3526	1548
Grp Volume(v), veh/h	225	0	641	55	49	50	304	209	215	76	1304	293
Grp Sat Flow(s),veh/h/ln	1287	0	1522	785	1777	1601	1444	1763	1805	1767	1763	1548
Q Serve(g_s), s	30.4	0.0	37.1	10.5	3.9	4.5	14.0	0.0	0.0	6.3	8.2	1.8
Cycle Q Clear(g_c), s	34.9	0.0	37.1	10.5	3.9	4.5	14.0	0.0	0.0	6.3	8.2	1.8
Prop In Lane	1.00		1.00	1.00		0.88	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	300	0	690	218	403	363	603	992	1016	227	1706	749
V/C Ratio(X)	0.75	0.00	0.93	0.25	0.12	0.14	0.50	0.21	0.21	0.34	0.76	0.39
Avail Cap(c_a), veh/h	352	0	813	250	475	428	603	992	1016	227	1706	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68	0.80	0.80	0.80
Uniform Delay (d), s/veh	69.5	0.0	68.2	57.9	55.4	55.6	45.5	0.0	0.0	60.7	1.6	1.5
Incr Delay (d2), s/veh	5.8	0.0	14.4	0.2	0.0	0.1	0.2	0.3	0.3	0.3	2.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.6	0.0	16.0	2.1	1.8	1.9	4.4	0.1	0.1	2.7	1.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.3	0.0	82.6	58.1	55.4	55.6	45.7	0.3	0.3	60.9	4.3	2.8
LnGrp LOS	E	A	F	E	E	E	D	A	A	E	A	A
Approach Vol, veh/h		866			154			728			1673	
Approach Delay, s/veh		80.7			56.4			19.3			6.6	
Approach LOS		F			E			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.5	106.8		45.7	42.0	92.3		45.7				
Change Period (Y+Rc), s	4.4	5.5		4.9	4.4	5.2		4.9				
Max Green Setting (Gmax), s	15.8	101.3		48.1	30.3	87.1		48.1				
Max Q Clear Time (g_c+I1), s	18.3	2.0		39.1	16.0	10.2		12.5				
Green Ext Time (p_c), s	0.0	5.0		1.7	0.5	34.6		0.7				

Intersection Summary		
HCM 6th Ctrl Delay		30.3
HCM 6th LOS		C

Notes
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	190	300	310	340	100	290	320	160	120	880	210
Future Volume (veh/h)	140	190	300	310	340	100	290	320	160	120	880	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1563	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	159	216	341	330	362	106	315	348	174	125	917	219
Peak Hour Factor	0.88	0.88	0.88	0.94	0.94	0.94	0.92	0.92	0.92	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	177	186	294	324	546	440	348	1353	588	208	952	408
Arrive On Green	0.10	0.29	0.29	0.09	0.29	0.29	0.16	0.26	0.26	0.08	0.18	0.18
Sat Flow, veh/h	1781	631	996	3456	1870	1505	1488	3526	1532	1767	3526	1512
Grp Volume(v), veh/h	159	0	557	330	362	106	315	348	174	125	917	219
Grp Sat Flow(s),veh/h/ln	1781	0	1627	1728	1870	1505	1488	1763	1532	1767	1763	1512
Q Serve(g_s), s	15.9	0.0	53.1	16.9	30.6	7.3	37.4	14.1	16.4	12.3	46.4	18.7
Cycle Q Clear(g_c), s	15.9	0.0	53.1	16.9	30.6	7.3	37.4	14.1	16.4	12.3	46.4	18.7
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	0	480	324	546	440	348	1353	588	208	952	408
V/C Ratio(X)	0.90	0.00	1.16	1.02	0.66	0.24	0.91	0.26	0.30	0.60	0.96	0.54
Avail Cap(c_a), veh/h	204	0	480	324	546	440	353	1353	588	214	952	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	0.17	0.17	0.17
Uniform Delay (d), s/veh	80.1	0.0	63.5	81.6	55.9	28.0	73.9	46.4	47.3	78.8	72.8	39.8
Incr Delay (d2), s/veh	31.2	0.0	93.1	54.4	4.6	0.8	23.8	0.4	1.2	0.5	6.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.0	34.4	10.0	15.2	2.8	17.0	6.6	6.8	5.8	22.3	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.3	0.0	156.6	135.9	60.5	28.8	97.8	46.9	48.5	79.3	79.0	40.7
LnGrp LOS	F	A	F	F	E	C	F	D	D	E	E	D
Approach Vol, veh/h		716			798			837			1261	
Approach Delay, s/veh		146.5			87.5			66.4			72.4	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.6	74.5	21.9	58.0	46.5	53.6	22.3	57.6
Change Period (Y+Rc), s	4.4	5.4	5.0	* 4.9	4.4	5.0	4.4	5.0
Max Green Setting (Gmax), s	21.8	69.1	16.9	* 53	42.7	48.6	20.6	49.3
Max Q Clear Time (g_c+I1), s	14.3	18.4	18.9	55.1	39.4	48.4	17.9	32.6
Green Ext Time (p_c), s	0.1	4.5	0.0	0.0	0.2	0.1	0.1	4.8

Intersection Summary	
HCM 6th Ctrl Delay	89.0
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	20	700	250	180	1300
Future Volume (veh/h)	30	20	700	250	180	1300
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1856	1781	1856	1856
Adj Flow Rate, veh/h	43	29	761	272	196	1413
Peak Hour Factor	0.70	0.70	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	3	3	3	3
Cap, veh/h	61	55	1761	728	677	3212
Arrive On Green	0.03	0.03	0.66	0.66	0.77	1.00
Sat Flow, veh/h	1781	1585	3618	1458	1767	3618
Grp Volume(v), veh/h	43	29	761	272	196	1413
Grp Sat Flow(s),veh/h/ln	1781	1585	1763	1458	1767	1763
Q Serve(g_s), s	4.3	3.2	18.3	15.0	6.0	0.0
Cycle Q Clear(g_c), s	4.3	3.2	18.3	15.0	6.0	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	61	55	1761	728	677	3212
V/C Ratio(X)	0.70	0.53	0.43	0.37	0.29	0.44
Avail Cap(c_a), veh/h	278	247	1761	728	677	3212
HCM Platoon Ratio	1.00	1.00	1.33	1.33	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.83	0.83	0.13	0.13
Uniform Delay (d), s/veh	86.0	85.5	18.2	17.6	13.7	0.0
Incr Delay (d2), s/veh	5.3	2.9	0.6	1.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	1.4	6.7	4.8	2.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	91.3	88.4	18.8	18.9	13.7	0.1
LnGrp LOS	F	F	B	B	B	A
Approach Vol, veh/h	72		1033			1609
Approach Delay, s/veh	90.1		18.8			1.7
Approach LOS	F		B			A

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	73.9	95.0				168.9		11.1
Change Period (Y+Rc), s	4.9	* 5.1				4.9		4.9
Max Green Setting (Gmax), s	47.6	* 90				142.1		28.1
Max Q Clear Time (g_c+I1), s	8.0	20.3				2.0		6.3
Green Ext Time (p_c), s	0.3	8.8				27.0		0.1

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	120	350	30	180	180	250	540	20	150	940	240
Future Volume (veh/h)	180	120	350	30	180	180	250	540	20	150	940	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.88	1.00		0.94	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1870	1796	1856	1856	1781	1563	1856	1856
Adj Flow Rate, veh/h	220	357	286	34	207	207	269	581	22	161	1011	258
Peak Hour Factor	0.82	0.82	0.82	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	238	519	391	44	310	221	360	1674	674	177	1053	267
Arrive On Green	0.13	0.28	0.28	0.02	0.17	0.17	0.41	0.95	0.95	0.08	0.26	0.26
Sat Flow, veh/h	1781	1870	1409	1781	1870	1338	1767	3526	1420	1488	2736	694
Grp Volume(v), veh/h	220	357	286	34	207	207	269	581	22	161	649	620
Grp Sat Flow(s),veh/h/ln	1781	1870	1409	1781	1870	1338	1767	1763	1420	1488	1763	1667
Q Serve(g_s), s	22.0	30.7	21.3	3.4	18.7	21.9	23.4	2.2	0.1	19.3	65.3	66.1
Cycle Q Clear(g_c), s	22.0	30.7	21.3	3.4	18.7	21.9	23.4	2.2	0.1	19.3	65.3	66.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.42
Lane Grp Cap(c), veh/h	238	519	391	44	310	221	360	1674	674	177	679	642
V/C Ratio(X)	0.92	0.69	0.73	0.78	0.67	0.93	0.75	0.35	0.03	0.91	0.96	0.97
Avail Cap(c_a), veh/h	275	597	450	46	356	255	360	1674	674	261	682	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.44	0.44	0.44	0.89	0.89	0.89
Uniform Delay (d), s/veh	77.0	58.1	24.3	87.3	70.5	46.9	49.4	2.4	2.4	81.8	65.3	65.6
Incr Delay (d2), s/veh	30.4	3.4	6.1	50.6	4.3	37.1	3.4	0.3	0.0	18.2	23.6	26.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	15.3	8.0	2.2	9.5	9.8	9.2	0.7	0.1	8.5	34.5	33.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.4	61.5	30.4	137.9	74.8	84.0	52.9	2.7	2.4	100.0	88.9	91.8
LnGrp LOS	F	E	C	F	E	F	D	A	A	F	F	F
Approach Vol, veh/h		863			448			872			1430	
Approach Delay, s/veh		62.9			83.8			18.2			91.4	
Approach LOS		E			F			B			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.9	90.5	8.8	54.9	41.6	74.7	29.0	34.7
Change Period (Y+Rc), s	4.4	5.0	4.4	4.9	5.0	* 5.4	4.9	* 4.9
Max Green Setting (Gmax), s	31.6	67.6	4.6	57.5	29.2	* 70	27.8	* 34
Max Q Clear Time (g_c+I1), s	21.3	4.2	5.4	32.7	25.4	68.1	24.0	23.9
Green Ext Time (p_c), s	0.1	7.4	0.0	5.6	0.2	1.2	0.1	1.8

Intersection Summary	
HCM 6th Ctrl Delay	66.0
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	760	30	540	1330	130	40	470	180	300	880	470
Future Volume (veh/h)	250	760	30	540	1330	130	40	470	180	300	880	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1563	1856	1856
Adj Flow Rate, veh/h	368	1118	44	587	1446	141	43	511	196	323	946	505
Peak Hour Factor	0.68	0.68	0.68	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	389	1181	46	824	1520	147	105	697	297	354	1007	607
Arrive On Green	0.11	0.34	0.34	0.24	0.46	0.46	0.02	0.13	0.13	0.08	0.19	0.19
Sat Flow, veh/h	3483	3512	138	3483	3298	319	3428	3526	1502	2887	3526	1509
Grp Volume(v), veh/h	368	570	592	587	781	806	43	511	196	323	946	505
Grp Sat Flow(s),veh/h/ln	1742	1791	1859	1742	1791	1826	1714	1763	1502	1444	1763	1509
Q Serve(g_s), s	18.9	55.8	55.8	27.9	75.0	76.7	2.2	25.1	14.2	20.0	47.6	43.0
Cycle Q Clear(g_c), s	18.9	55.8	55.8	27.9	75.0	76.7	2.2	25.1	14.2	20.0	47.6	43.0
Prop In Lane	1.00		0.07	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	389	602	625	824	826	842	105	697	297	354	1007	607
V/C Ratio(X)	0.95	0.95	0.95	0.71	0.95	0.96	0.41	0.73	0.66	0.91	0.94	0.83
Avail Cap(c_a), veh/h	389	618	641	824	836	852	105	697	297	379	1007	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.96	0.96	0.96	0.42	0.42	0.42
Uniform Delay (d), s/veh	79.4	58.2	58.2	63.1	46.3	46.8	86.6	73.5	29.3	81.6	71.3	36.8
Incr Delay (d2), s/veh	32.1	23.5	23.0	0.3	2.8	3.4	0.9	6.4	10.6	12.2	8.8	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	29.3	30.3	12.4	33.7	35.2	1.0	12.3	6.4	8.2	23.2	17.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.5	81.6	81.2	63.4	49.1	50.2	87.5	80.0	39.9	93.9	80.1	42.5
LnGrp LOS	F	F	F	E	D	D	F	E	D	F	F	D
Approach Vol, veh/h		1530			2174			750			1774	
Approach Delay, s/veh		88.6			53.4			69.9			71.9	
Approach LOS		F			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.5	40.5	47.6	65.4	10.4	56.6	25.0	88.0
Change Period (Y+Rc), s	4.4	4.9	5.0	4.9	4.9	* 5.2	4.9	5.0
Max Green Setting (Gmax), s	23.6	33.1	42.0	62.1	5.0	* 51	20.1	84.0
Max Q Clear Time (g_c+I1), s	22.0	27.1	29.9	57.8	4.2	49.6	20.9	78.7
Green Ext Time (p_c), s	0.1	2.9	2.1	2.7	0.0	1.6	0.0	4.3

Intersection Summary	
HCM 6th Ctrl Delay	69.3
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	970	10	530	1950	730	10	10	540	730	10	10
Future Volume (veh/h)	10	970	10	530	1950	730	10	10	540	730	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.99		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1810	1885	1885	1885	1870	1870	1796	1870	1870	1870
Adj Flow Rate, veh/h	11	1102	11	589	2167	811	14	14	771	811	11	11
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.70	0.70	0.70	0.90	0.90	0.90
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	18	1329	556	411	1526	532	271	258	454	257	259	259
Arrive On Green	0.01	0.37	0.37	0.23	0.59	0.59	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1795	3582	1497	1795	2587	902	754	847	1489	687	848	848
Grp Volume(v), veh/h	11	1102	11	589	1451	1527	28	0	771	811	0	22
Grp Sat Flow(s),veh/h/ln	1795	1791	1497	1795	1791	1698	1601	0	1489	687	0	1696
Q Serve(g_s), s	0.8	36.7	0.6	30.0	77.4	77.4	0.0	0.0	40.0	38.6	0.0	1.2
Cycle Q Clear(g_c), s	0.8	36.7	0.6	30.0	77.4	77.4	1.4	0.0	40.0	40.0	0.0	1.2
Prop In Lane	1.00		1.00	1.00		0.53	0.50		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	18	1329	556	411	1056	1001	529	0	454	257	0	517
V/C Ratio(X)	0.61	0.83	0.02	1.43	1.37	1.53	0.05	0.00	1.70	3.15	0.00	0.04
Avail Cap(c_a), veh/h	411	1638	685	411	1056	1001	529	0	454	257	0	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	64.7	37.5	26.1	50.6	26.9	26.9	32.2	0.0	45.6	50.4	0.0	32.1
Incr Delay (d2), s/veh	11.6	3.3	0.0	209.1	174.2	241.4	0.0	0.0	323.5	979.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	16.4	0.2	37.1	81.6	96.1	0.6	0.0	55.6	78.6	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.3	40.8	26.2	259.7	201.1	268.4	32.2	0.0	369.1	1029.5	0.0	32.1
LnGrp LOS	E	D	C	F	F	F	C	A	F	F	A	C
Approach Vol, veh/h		1124			3567			799			833	
Approach Delay, s/veh		41.0			239.6			357.3			1003.1	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.0	53.2		44.0	5.3	81.9		44.0				
Change Period (Y+Rc), s	4.0	4.5		4.0	4.0	4.5		4.0				
Max Green Setting (Gmax), s	30.0	60.0		40.0	30.0	60.0		40.0				
Max Q Clear Time (g_c+I1), s	32.0	38.7		42.0	2.8	79.4		42.0				
Green Ext Time (p_c), s	0.0	10.0		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		319.7
HCM 6th LOS		F

Notes
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	60	330	300	200	120	570	520	20	30	1290	110
Future Volume (veh/h)	70	60	330	300	200	120	570	520	20	30	1290	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	83	71	393	380	253	152	582	531	20	32	1372	117
Peak Hour Factor	0.84	0.84	0.84	0.79	0.79	0.79	0.98	0.98	0.98	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	119	172	501	341	466	394	769	2074	901	41	1260	107
Arrive On Green	0.03	0.09	0.09	0.19	0.25	0.25	0.22	0.59	0.59	0.05	0.77	0.77
Sat Flow, veh/h	3456	1870	1580	1781	1870	1583	3428	3526	1531	1767	3282	279
Grp Volume(v), veh/h	83	71	393	380	253	152	582	531	20	32	734	755
Grp Sat Flow(s),veh/h/ln	1728	1870	1580	1781	1870	1583	1714	1763	1531	1767	1763	1798
Q Serve(g_s), s	4.3	6.5	12.9	34.5	21.1	14.4	28.5	13.1	1.0	3.2	69.1	69.1
Cycle Q Clear(g_c), s	4.3	6.5	12.9	34.5	21.1	14.4	28.5	13.1	1.0	3.2	69.1	69.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	119	172	501	341	466	394	769	2074	901	41	677	690
V/C Ratio(X)	0.70	0.41	0.79	1.11	0.54	0.39	0.76	0.26	0.02	0.78	1.08	1.09
Avail Cap(c_a), veh/h	167	312	619	341	580	491	769	2074	901	87	677	690
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98	0.44	0.44	0.44
Uniform Delay (d), s/veh	86.0	77.2	25.9	72.8	58.7	56.2	65.2	18.0	15.4	85.4	20.9	20.9
Incr Delay (d2), s/veh	7.1	0.6	4.1	82.8	0.4	0.2	3.8	0.3	0.0	5.2	49.5	53.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.2	9.9	23.8	10.3	5.9	12.8	5.5	0.4	1.5	23.7	24.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.0	77.8	30.0	155.5	59.1	56.4	69.0	18.2	15.5	90.6	70.4	73.9
LnGrp LOS	F	E	C	F	E	E	E	B	B	F	F	F
Approach Vol, veh/h		547			785			1133			1521	
Approach Delay, s/veh		45.8			105.2			44.3			72.6	
Approach LOS		D			F			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	111.0	39.0	21.4	45.5	74.1	10.7	49.7				
Change Period (Y+Rc), s	4.4	5.1	4.5	4.9	5.1	* 5	4.5	4.9				
Max Green Setting (Gmax), s	8.3	87.7	34.5	30.0	27.6	* 69	8.7	55.8				
Max Q Clear Time (g_c+I1), s	5.2	15.1	36.5	14.9	30.5	71.1	6.3	23.1				
Green Ext Time (p_c), s	0.0	4.5	0.0	0.9	0.0	0.0	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			67.3									
HCM 6th LOS			E									

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	80	20	340	240	170	110	150	280	310	630	820
Future Volume (veh/h)	80	80	20	340	240	170	110	150	280	310	630	820
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1796	1856	1856	1856
Adj Flow Rate, veh/h	89	89	22	466	329	233	120	163	304	330	670	872
Peak Hour Factor	0.90	0.90	0.90	0.73	0.73	0.73	0.92	0.92	0.92	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	3	3	3
Cap, veh/h	139	148	123	494	634	439	145	1012	422	357	1429	684
Arrive On Green	0.04	0.08	0.08	0.28	0.32	0.32	0.08	0.28	0.28	0.20	0.41	0.41
Sat Flow, veh/h	3428	1856	1543	1781	2005	1390	1781	3554	1482	1767	3526	1530
Grp Volume(v), veh/h	89	89	22	466	291	271	120	163	304	330	670	872
Grp Sat Flow(s),veh/h/ln	1714	1856	1543	1781	1777	1619	1781	1777	1482	1767	1763	1530
Q Serve(g_s), s	3.3	5.9	1.7	32.8	17.1	17.6	8.5	4.4	23.6	23.5	17.9	51.9
Cycle Q Clear(g_c), s	3.3	5.9	1.7	32.8	17.1	17.6	8.5	4.4	23.6	23.5	17.9	51.9
Prop In Lane	1.00		1.00	1.00		0.86	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	148	123	494	562	512	145	1012	422	357	1429	684
V/C Ratio(X)	0.64	0.60	0.18	0.94	0.52	0.53	0.83	0.16	0.72	0.92	0.47	1.27
Avail Cap(c_a), veh/h	1650	541	450	801	562	512	319	1012	422	588	1429	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.5	57.0	55.0	45.3	35.8	36.0	57.9	34.3	41.2	50.1	27.9	35.5
Incr Delay (d2), s/veh	1.8	3.6	0.6	10.1	1.3	1.6	4.4	0.1	6.7	9.3	0.6	134.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	2.9	0.7	15.8	7.7	7.2	3.9	1.9	9.4	11.1	7.5	46.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.3	60.5	55.6	55.4	37.1	37.6	62.3	34.4	47.8	59.4	28.5	170.2
LnGrp LOS	E	E	E	E	D	D	E	C	D	E	C	F
Approach Vol, veh/h		200			1028			587			1872	
Approach Delay, s/veh		60.8			45.5			47.1			100.0	
Approach LOS		E			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.3	42.0	39.9	15.9	14.8	57.4	9.6	46.2
Change Period (Y+Rc), s	4.4	5.5	4.4	5.7	4.4	* 5.5	4.4	* 5.7
Max Green Setting (Gmax), s	42.6	31.6	57.6	37.3	22.9	* 52	61.6	* 34
Max Q Clear Time (g_c+I1), s	25.5	25.6	34.8	7.9	10.5	53.9	5.3	19.6
Green Ext Time (p_c), s	0.4	1.7	0.7	0.5	0.1	0.0	0.2	4.7

Intersection Summary		
HCM 6th Ctrl Delay		74.2
HCM 6th LOS		E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	260.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	930	2090	170	0	180
Future Vol, veh/h	0	930	2090	170	0	180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	92	92	25	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	989	2272	185	0	720

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1229
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	~ 170
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 170
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	$ 1509.3
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	170
HCM Lane V/C Ratio	-	-	-	4.235
HCM Control Delay (s)	-	-	-	$ 1509.3
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	72.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	110	270	50	30	0	410	70	100	70	260	900
Future Volume (veh/h)	90	110	270	50	30	0	410	70	100	70	260	900
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	98	120	293	67	40	0	446	76	109	75	280	968
Peak Hour Factor	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	381	103	251	80	48	0	423	1028	851	92	681	562
Arrive On Green	0.21	0.21	0.21	0.07	0.07	0.00	0.24	0.55	0.55	0.05	0.37	0.37
Sat Flow, veh/h	1781	481	1175	1136	678	0	1767	1856	1536	1767	1856	1532
Grp Volume(v), veh/h	98	0	413	107	0	0	446	76	109	75	280	968
Grp Sat Flow(s),veh/h/ln	1781	0	1656	1814	0	0	1767	1856	1536	1767	1856	1532
Q Serve(g_s), s	8.0	0.0	37.1	10.1	0.0	0.0	41.6	3.3	5.9	7.3	19.5	63.7
Cycle Q Clear(g_c), s	8.0	0.0	37.1	10.1	0.0	0.0	41.6	3.3	5.9	7.3	19.5	63.7
Prop In Lane	1.00		0.71	0.63		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	0	354	127	0	0	423	1028	851	92	681	562
V/C Ratio(X)	0.26	0.00	1.17	0.84	0.00	0.00	1.05	0.07	0.13	0.81	0.41	1.72
Avail Cap(c_a), veh/h	381	0	354	184	0	0	423	1028	851	155	681	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.8	0.0	68.3	79.8	0.0	0.0	66.0	18.0	18.6	81.4	41.0	55.0
Incr Delay (d2), s/veh	0.1	0.0	101.8	14.5	0.0	0.0	58.6	0.0	0.1	11.7	0.3	332.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	25.7	5.3	0.0	0.0	25.7	1.5	2.2	3.7	9.2	76.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.0	0.0	170.0	94.3	0.0	0.0	124.6	18.1	18.7	93.2	41.3	387.6
LnGrp LOS	E	A	F	F	A	A	F	B	B	F	D	F
Approach Vol, veh/h		511			107			631			1323	
Approach Delay, s/veh		148.4			94.3			93.5			297.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.5	101.1		42.0	46.0	68.6		17.1				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	15.2	90.1		37.1	41.6	63.7		17.6				
Max Q Clear Time (g_c+I1), s	9.3	7.9		39.1	43.6	65.7		12.1				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.0	0.0		0.1				

Intersection Summary			
HCM 6th Ctrl Delay			209.4
HCM 6th LOS			F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	20	60	200	20	30	50	200	30	10	560	10
Future Volume (veh/h)	60	20	60	200	20	30	50	200	30	10	560	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.84	1.00		0.83	1.00		0.95	1.00		0.87
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	29	86	236	0	33	56	225	34	12	651	12
Peak Hour Factor	0.70	0.70	0.70	0.91	0.91	0.91	0.89	0.89	0.89	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	60	179	894	0	332	73	1013	427	20	909	17
Arrive On Green	0.27	0.27	0.27	0.25	0.00	0.25	0.04	0.29	0.29	0.01	0.26	0.26
Sat Flow, veh/h	671	226	671	3563	0	1322	1781	3554	1498	1781	3559	66
Grp Volume(v), veh/h	201	0	0	236	0	33	56	225	34	12	325	338
Grp Sat Flow(s),veh/h/ln	1569	0	0	1781	0	1322	1781	1777	1498	1781	1777	1847
Q Serve(g_s), s	11.3	0.0	0.0	5.6	0.0	2.0	3.3	5.1	1.7	0.7	17.5	17.5
Cycle Q Clear(g_c), s	11.3	0.0	0.0	5.6	0.0	2.0	3.3	5.1	1.7	0.7	17.5	17.5
Prop In Lane	0.43		0.43	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	419	0	0	894	0	332	73	1013	427	20	454	472
V/C Ratio(X)	0.48	0.00	0.00	0.26	0.00	0.10	0.77	0.22	0.08	0.60	0.72	0.72
Avail Cap(c_a), veh/h	598	0	0	1357	0	503	509	2030	856	509	1015	1055
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	0.0	0.0	31.6	0.0	30.2	49.9	28.7	27.5	51.7	35.6	35.6
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.1	0.0	0.0	6.3	0.2	0.1	10.2	3.5	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	0.0	2.4	0.0	0.6	1.6	2.1	0.6	0.4	7.7	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.2	0.0	0.0	31.6	0.0	30.3	56.2	28.8	27.6	61.9	39.1	39.0
LnGrp LOS	C	A	A	C	A	C	E	C	C	E	D	D
Approach Vol, veh/h		201			269			315			675	
Approach Delay, s/veh		33.2			31.4			33.6			39.4	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	35.2		32.9	8.7	32.1		31.3				
Change Period (Y+Rc), s	4.4	5.3		4.9	4.4	5.3		4.9				
Max Green Setting (Gmax), s	30.0	60.0		40.0	30.0	60.0		40.0				
Max Q Clear Time (g_c+I1), s	2.7	7.1		13.3	5.3	19.5		7.6				
Green Ext Time (p_c), s	0.0	2.6		1.3	0.1	7.3		0.5				

Intersection Summary			
HCM 6th Ctrl Delay			35.8
HCM 6th LOS			D

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	0	220	0	0	0	140	200	0	0	750	80
Future Volume (veh/h)	100	0	220	0	0	0	140	200	0	0	750	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	130	0	286	0	0	0	152	217	0	0	815	87
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	377	0	397	3	3	0	194	2085	0	111	1343	143
Arrive On Green	0.25	0.00	0.25	0.00	0.00	0.00	0.11	0.59	0.00	0.00	0.42	0.42
Sat Flow, veh/h	1500	0	1581	1781	1870	0	1781	3647	0	1164	3228	345
Grp Volume(v), veh/h	130	0	286	0	0	0	152	217	0	0	449	453
Grp Sat Flow(s),veh/h/ln	1500	0	1581	1781	1870	0	1781	1777	0	1164	1777	1796
Q Serve(g_s), s	4.6	0.0	10.7	0.0	0.0	0.0	5.4	1.7	0.0	0.0	12.8	12.8
Cycle Q Clear(g_c), s	4.6	0.0	10.7	0.0	0.0	0.0	5.4	1.7	0.0	0.0	12.8	12.8
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.19
Lane Grp Cap(c), veh/h	377	0	397	3	3	0	194	2085	0	111	739	747
V/C Ratio(X)	0.35	0.00	0.72	0.00	0.00	0.00	0.78	0.10	0.00	0.00	0.61	0.61
Avail Cap(c_a), veh/h	1157	0	1220	495	519	0	825	5100	0	705	1645	1663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	0.0	22.2	0.0	0.0	0.0	28.1	5.9	0.0	0.0	14.8	14.8
Incr Delay (d2), s/veh	0.7	0.0	3.2	0.0	0.0	0.0	2.6	0.0	0.0	0.0	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	4.1	0.0	0.0	0.0	2.2	0.5	0.0	0.0	4.6	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	0.0	25.3	0.0	0.0	0.0	30.7	5.9	0.0	0.0	16.1	16.1
LnGrp LOS	C	A	C	A	A	A	C	A	A	A	B	B
Approach Vol, veh/h		416			0			369			902	
Approach Delay, s/veh		23.9			0.0			16.1			16.1	
Approach LOS		C						B			B	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		44.0		20.8	11.1	33.0		0.0				
Change Period (Y+Rc), s		6.0		4.5	4.0	* 6		4.5				
Max Green Setting (Gmax), s		93.0		50.0	30.0	* 60		18.0				
Max Q Clear Time (g_c+I1), s		3.7		12.7	7.4	14.8		0.0				
Green Ext Time (p_c), s		2.3		3.3	0.2	11.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			18.0
HCM 6th LOS			B

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	1590	0	0	2350	590	350	0	1170	0	0	0
Future Volume (veh/h)	300	1590	0	0	2350	590	350	0	1170	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1885	1885	0	0	1885	1885	1870	1870	1870			
Adj Flow Rate, veh/h	345	1828	0	0	2448	615	933	0	5180			
Peak Hour Factor	0.87	0.87	0.87	0.96	0.96	0.96	0.25	0.25	0.25			
Percent Heavy Veh, %	1	1	0	0	1	1	2	2	2			
Cap, veh/h	274	2000	0	0	1075	257	820	0	1460			
Arrive On Green	0.20	0.74	0.00	0.00	0.38	0.38	0.46	0.00	0.46			
Sat Flow, veh/h	1795	3676	0	0	2945	682	1781	0	3170			
Grp Volume(v), veh/h	345	1828	0	0	1492	1571	933	0	5180			
Grp Sat Flow(s),veh/h/ln	1795	1791	0	0	1791	1742	1781	0	1585			
Q Serve(g_s), s	27.5	73.6	0.0	0.0	67.9	67.9	82.9	0.0	82.9			
Cycle Q Clear(g_c), s	27.5	73.6	0.0	0.0	67.9	67.9	82.9	0.0	82.9			
Prop In Lane	1.00		0.00	0.00		0.39	1.00		1.00			
Lane Grp Cap(c), veh/h	274	2000	0	0	676	657	820	0	1460			
V/C Ratio(X)	1.26	0.91	0.00	0.00	2.21	2.39	1.14	0.00	3.55			
Avail Cap(c_a), veh/h	274	2000	0	0	676	657	820	0	1460			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	71.7	19.7	0.0	0.0	56.0	56.1	48.6	0.0	48.6			
Incr Delay (d2), s/veh	118.8	0.8	0.0	0.0	548.8	630.3	76.5	0.0	1148.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	21.3	25.1	0.0	0.0	133.4	144.6	54.0	0.0	265.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	190.5	20.6	0.0	0.0	604.8	686.3	125.0	0.0	1196.8			
LnGrp LOS	F	C	A	A	F	F	F	A	F			
Approach Vol, veh/h		2173			3063			6113				
Approach Delay, s/veh		47.5			646.6			1033.2				
Approach LOS		D			F			F				

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		106.0			33.0	73.0		88.0				
Change Period (Y+Rc), s		5.1			5.1	* 5.1		5.1				
Max Green Setting (Gmax), s		86.9			14.3	* 68		82.9				
Max Q Clear Time (g_c+I1), s		75.6			29.5	69.9		84.9				
Green Ext Time (p_c), s		8.8			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	740.2
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1260	930	280	2920	0	0	0	0	270	10	870
Future Volume (veh/h)	0	1260	930	280	2920	0	0	0	0	270	10	870
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1885	1885	1885	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1326	979	311	3244	0				1109	0	3480
Peak Hour Factor	0.95	0.95	0.95	0.90	0.90	0.90				0.25	0.25	0.25
Percent Heavy Veh, %	0	1	1	1	1	0				2	2	2
Cap, veh/h	0	654	424	163	1550	0				1819	0	809
Arrive On Green	0.00	0.32	0.32	0.06	0.29	0.00				0.51	0.00	0.51
Sat Flow, veh/h	0	2163	1340	1795	3676	0				3563	0	1585
Grp Volume(v), veh/h	0	1123	1182	311	3244	0				1109	0	3480
Grp Sat Flow(s),veh/h/ln	0	1791	1618	1795	1791	0				1781	0	1585
Q Serve(g_s), s	0.0	56.9	56.9	16.3	77.9	0.0				39.8	0.0	91.9
Cycle Q Clear(g_c), s	0.0	56.9	56.9	16.3	77.9	0.0				39.8	0.0	91.9
Prop In Lane	0.00		0.83	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	566	511	163	1550	0				1819	0	809
V/C Ratio(X)	0.00	1.98	2.31	1.91	2.09	0.00				0.61	0.00	4.30
Avail Cap(c_a), veh/h	0	566	511	163	1550	0				1819	0	809
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	61.5	61.6	84.5	63.9	0.0				31.3	0.0	44.0
Incr Delay (d2), s/veh	0.0	443.2	590.6	412.9	491.9	0.0				0.4	0.0	1488.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	95.4	107.1	26.4	142.4	0.0				17.5	0.0	370.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	504.7	652.1	497.4	555.8	0.0				31.7	0.0	1532.1
LnGrp LOS	A	F	F	F	F	A				C	A	F
Approach Vol, veh/h		2305			3555						4589	
Approach Delay, s/veh		580.3			550.7						1169.5	
Approach LOS		F			F						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	21.0	62.0		97.0		83.0
Change Period (Y+Rc), s	* 4.7	5.1		5.1		5.1
Max Green Setting (Gmax), s	* 16	56.9		91.9		77.9
Max Q Clear Time (g_c+I1), s	18.3	58.9		93.9		79.9
Green Ext Time (p_c), s	0.0	0.0		0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		829.0
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	38.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	1530	3140	150	0	190
Future Vol, veh/h	0	1530	3140	150	0	190
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	50	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	99	99	84	84
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	0	1663	3172	152	0	226

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1587
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	-	0	~ 83
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 83
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	$ 888.1
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	83
HCM Lane V/C Ratio	-	-	-	2.725
HCM Control Delay (s)	-	-	-	$ 888.1
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	21.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	340	10	10	510	460	980
Future Volume (veh/h)	340	10	10	510	460	980
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	430	13	11	543	500	1065
Peak Hour Factor	0.79	0.79	0.94	0.94	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	477	424	20	2033	1773	772
Arrive On Green	0.27	0.27	0.01	0.57	0.50	0.50
Sat Flow, veh/h	1781	1585	1781	3647	3647	1548
Grp Volume(v), veh/h	430	13	11	543	500	1065
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1548
Q Serve(g_s), s	16.4	0.4	0.4	5.4	5.8	35.2
Cycle Q Clear(g_c), s	16.4	0.4	0.4	5.4	5.8	35.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	477	424	20	2033	1773	772
V/C Ratio(X)	0.90	0.03	0.56	0.27	0.28	1.38
Avail Cap(c_a), veh/h	631	562	103	2206	1773	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	19.1	34.7	7.6	10.3	17.7
Incr Delay (d2), s/veh	11.4	0.0	9.0	0.1	0.1	178.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.4	0.2	1.6	1.8	47.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.3	19.1	43.8	7.7	10.4	196.4
LnGrp LOS	D	B	D	A	B	F
Approach Vol, veh/h	443			554	1565	
Approach Delay, s/veh	35.8			8.4	137.0	
Approach LOS	D			A	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		46.8		23.8	5.2	41.6
Change Period (Y+Rc), s		* 6.4		4.9	4.4	6.4
Max Green Setting (Gmax), s		* 44		25.0	4.1	35.2
Max Q Clear Time (g_c+I1), s		7.4		18.4	2.4	37.2
Green Ext Time (p_c), s		4.4		0.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	91.7
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	10	70	10	80	110	610	20	30	1650	240
Future Volume (veh/h)	20	0	10	70	10	80	110	610	20	30	1650	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	0	13	280	40	320	117	649	21	34	1897	276
Peak Hour Factor	0.50	0.50	0.50	0.25	0.25	0.25	0.94	0.94	0.94	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	0	90	402	423	358	174	2507	81	44	2106	303
Arrive On Green	0.06	0.00	0.06	0.23	0.23	0.23	0.05	0.49	0.49	0.02	0.47	0.47
Sat Flow, veh/h	3563	0	1585	1781	1870	1585	3456	5077	164	1781	4501	647
Grp Volume(v), veh/h	46	0	13	280	40	320	117	434	236	34	1429	744
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1781	1870	1585	1728	1702	1836	1781	1702	1744
Q Serve(g_s), s	1.2	0.0	0.8	14.3	1.7	19.4	3.3	7.3	7.4	1.9	38.1	39.2
Cycle Q Clear(g_c), s	1.2	0.0	0.8	14.3	1.7	19.4	3.3	7.3	7.4	1.9	38.1	39.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.37
Lane Grp Cap(c), veh/h	202	0	90	402	423	358	174	1681	907	44	1593	816
V/C Ratio(X)	0.23	0.00	0.14	0.70	0.09	0.89	0.67	0.26	0.26	0.78	0.90	0.91
Avail Cap(c_a), veh/h	255	0	114	651	684	579	174	1681	907	119	1616	828
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	0.0	44.4	35.2	30.3	37.2	46.2	14.5	14.6	48.0	24.2	24.5
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.8	0.0	6.5	7.9	0.1	0.2	10.5	7.1	14.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.3	6.0	0.7	7.8	1.5	2.5	2.8	0.9	14.9	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	0.0	44.7	36.0	30.3	43.7	54.1	14.6	14.7	58.5	31.2	38.7
LnGrp LOS	D	A	D	D	C	D	D	B	B	E	C	D
Approach Vol, veh/h		59			640			787			2207	
Approach Delay, s/veh		44.8			39.5			20.5			34.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.8	54.9		10.5	9.4	52.3		26.8
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	6.0		4.4
Max Green Setting (Gmax), s	6.6	45.4		7.1	5.0	47.0		36.2
Max Q Clear Time (g_c+I1), s	3.9	9.4		3.2	5.3	41.2		21.4
Green Ext Time (p_c), s	0.0	5.0		0.0	0.0	5.1		1.0

Intersection Summary		
HCM 6th Ctrl Delay		32.4
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	40	200	10	70	210	700	30	90	1590	30
Future Volume (veh/h)	10	10	40	200	10	70	210	700	30	90	1590	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	43	33	217	11	76	216	722	31	102	1807	34
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.97	0.97	0.97	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	146	124	343	20	140	301	2471	750	131	2426	46
Arrive On Green	0.08	0.08	0.08	0.10	0.10	0.10	0.09	0.48	0.48	0.07	0.47	0.47
Sat Flow, veh/h	1781	1870	1585	3456	204	1412	3456	5106	1549	1781	5158	97
Grp Volume(v), veh/h	13	43	33	217	0	87	216	722	31	102	1192	649
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	0	1616	1728	1702	1549	1781	1702	1851
Q Serve(g_s), s	0.5	1.7	1.5	4.6	0.0	3.9	4.6	6.5	0.8	4.3	21.7	21.8
Cycle Q Clear(g_c), s	0.5	1.7	1.5	4.6	0.0	3.9	4.6	6.5	0.8	4.3	21.7	21.8
Prop In Lane	1.00		1.00	1.00		0.87	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	139	146	124	343	0	160	301	2471	750	131	1601	871
V/C Ratio(X)	0.09	0.29	0.27	0.63	0.00	0.54	0.72	0.29	0.04	0.78	0.74	0.75
Avail Cap(c_a), veh/h	845	887	752	822	0	384	390	2471	750	346	1878	1021
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	33.1	33.0	33.0	0.0	32.6	33.8	11.8	10.3	34.6	16.4	16.4
Incr Delay (d2), s/veh	0.1	0.4	0.4	1.9	0.0	2.8	2.6	0.1	0.0	3.7	1.4	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	0.6	2.0	0.0	1.6	1.9	2.0	0.2	1.8	7.1	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.7	33.5	33.5	34.9	0.0	35.5	36.5	11.9	10.4	38.3	17.9	19.1
LnGrp LOS	C	C	C	C	A	D	D	B	B	D	B	B
Approach Vol, veh/h		89			304			969			1943	
Approach Delay, s/veh		33.4			35.1			17.3			19.4	
Approach LOS		C			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	43.2		10.8	11.0	42.2		12.0				
Change Period (Y+Rc), s	4.4	* 6.4		4.9	4.4	6.4		4.5				
Max Green Setting (Gmax), s	14.8	* 36		36.1	8.6	42.0		18.1				
Max Q Clear Time (g_c+I1), s	6.3	8.5		3.7	6.6	23.8		6.6				
Green Ext Time (p_c), s	0.1	5.8		0.2	0.1	12.1		1.0				

Intersection Summary		
HCM 6th Ctrl Delay		20.6
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	10	230	50	170	50	410	220	340	1420	80
Future Volume (veh/h)	20	0	10	230	50	170	50	410	220	340	1420	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	0	26	252	64	191	54	441	237	370	1543	87
Peak Hour Factor	0.38	0.38	0.38	0.89	0.89	0.89	0.93	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	69	0	34	341	79	237	69	1137	495	404	1805	804
Arrive On Green	0.06	0.00	0.06	0.19	0.19	0.19	0.04	0.32	0.32	0.23	0.51	0.51
Sat Flow, veh/h	1148	0	563	1781	414	1234	1781	3554	1547	1781	3554	1583
Grp Volume(v), veh/h	79	0	0	252	0	255	54	441	237	370	1543	87
Grp Sat Flow(s),veh/h/ln	1712	0	0	1781	0	1648	1781	1777	1547	1781	1777	1583
Q Serve(g_s), s	4.5	0.0	0.0	13.2	0.0	14.6	3.0	9.5	12.2	20.0	37.4	2.8
Cycle Q Clear(g_c), s	4.5	0.0	0.0	13.2	0.0	14.6	3.0	9.5	12.2	20.0	37.4	2.8
Prop In Lane	0.67		0.33	1.00		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	103	0	0	341	0	316	69	1137	495	404	1805	804
V/C Ratio(X)	0.77	0.00	0.00	0.74	0.00	0.81	0.78	0.39	0.48	0.92	0.85	0.11
Avail Cap(c_a), veh/h	467	0	0	450	0	417	92	1137	495	587	1904	848
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	0.0	0.0	37.6	0.0	38.2	47.1	26.1	27.0	37.3	21.2	12.7
Incr Delay (d2), s/veh	4.4	0.0	0.0	6.1	0.0	10.6	18.7	0.4	1.2	11.8	4.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	6.1	0.0	6.6	1.6	3.9	4.5	9.5	14.3	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.2	0.0	0.0	43.8	0.0	48.9	65.9	26.5	28.2	49.1	25.3	12.8
LnGrp LOS	D	A	A	D	A	D	E	C	C	D	C	B
Approach Vol, veh/h		79			507			732			2000	
Approach Delay, s/veh		50.2			46.3			29.9			29.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	26.8	36.9	10.9	8.2	55.5	24.3
Change Period (Y+Rc), s	4.4	5.3	4.9	4.4	5.3	5.3
Max Green Setting (Gmax), s	32.6	25.5	27.0	5.1	53.0	25.0
Max Q Clear Time (g_c+I1), s	22.0	14.2	6.5	5.0	39.4	16.6
Green Ext Time (p_c), s	0.4	4.1	0.2	0.0	10.9	2.3

Intersection Summary	
HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1300	500	20	400	130	10
Future Volume (veh/h)	1300	500	20	400	130	10
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	2133	1885	1885	2133	1870	1870
Adj Flow Rate, veh/h	1398	538	24	488	173	13
Peak Hour Factor	0.93	0.93	0.82	0.82	0.75	0.75
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	1785	645	194	2834	220	195
Arrive On Green	0.61	0.61	0.02	0.70	0.12	0.12
Sat Flow, veh/h	3023	1054	1795	4160	1781	1585
Grp Volume(v), veh/h	944	992	24	488	173	13
Grp Sat Flow(s),veh/h/ln	2027	1943	1795	2027	1781	1585
Q Serve(g_s), s	22.7	27.1	0.3	2.8	6.3	0.5
Cycle Q Clear(g_c), s	22.7	27.1	0.3	2.8	6.3	0.5
Prop In Lane		0.54	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1240	1189	194	2834	220	195
V/C Ratio(X)	0.76	0.83	0.12	0.17	0.79	0.07
Avail Cap(c_a), veh/h	1306	1252	295	3192	672	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	10.3	10.9	3.4	28.5	26.0
Incr Delay (d2), s/veh	2.7	5.0	0.1	0.0	2.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	9.1	0.1	0.6	2.6	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.2	15.3	11.0	3.5	30.9	26.0
LnGrp LOS	B	B	B	A	C	C
Approach Vol, veh/h	1936			512	186	
Approach Delay, s/veh	13.8			3.8	30.6	
Approach LOS	B			A	C	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	5.8	47.0				52.9		14.2
Change Period (Y+Rc), s	4.4	6.0				6.0		5.9
Max Green Setting (Gmax), s	5.8	43.2				52.8		25.3
Max Q Clear Time (g_c+I1), s	2.3	29.1				4.8		8.3
Green Ext Time (p_c), s	0.0	11.9				4.3		0.2

Intersection Summary			
HCM 6th Ctrl Delay			13.0
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	210	10	30	350	340	10	10	10	80	10	10
Future Volume (veh/h)	30	210	10	30	350	340	10	10	10	80	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		0.97	1.00		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	256	12	36	417	405	17	17	17	107	13	13
Peak Hour Factor	0.82	0.82	0.82	0.84	0.84	0.84	0.58	0.58	0.58	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	476	799	657	673	799	657	264	95	79	437	20	20
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	664	1870	1539	1106	1870	1538	456	689	573	1199	146	146
Grp Volume(v), veh/h	37	256	12	36	417	405	51	0	0	133	0	0
Grp Sat Flow(s),veh/h/ln	664	1870	1539	1106	1870	1538	1718	0	0	1490	0	0
Q Serve(g_s), s	1.0	2.2	0.1	0.5	3.9	4.9	0.0	0.0	0.0	1.3	0.0	0.0
Cycle Q Clear(g_c), s	5.0	2.2	0.1	2.7	3.9	4.9	0.6	0.0	0.0	2.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.33		0.33	0.80		0.10
Lane Grp Cap(c), veh/h	476	799	657	673	799	657	438	0	0	478	0	0
V/C Ratio(X)	0.08	0.32	0.02	0.05	0.52	0.62	0.12	0.00	0.00	0.28	0.00	0.00
Avail Cap(c_a), veh/h	725	1502	1236	1061	1455	1196	1609	0	0	1530	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.9	4.5	4.0	5.4	5.1	5.3	9.1	0.0	0.0	9.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.0	0.5	0.9	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.0	0.1	0.5	0.6	0.2	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.9	4.8	4.0	5.5	5.5	6.2	9.2	0.0	0.0	9.8	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		305			858			51			133	
Approach Delay, s/veh		5.0			5.8			9.2			9.8	
Approach LOS		A			A			A			A	

Timer - Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		15.7		8.2		15.7		8.2
Change Period (Y+Rc), s		* 5.5		4.9		5.5		4.9
Max Green Setting (Gmax), s		* 19		21.0		18.6		21.0
Max Q Clear Time (g_c+I1), s		7.0		4.0		6.9		2.6
Green Ext Time (p_c), s		1.2		0.4		3.1		0.1

Intersection Summary	
HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	70	0	10	10	480	90	10	240	10
Future Volume (veh/h)	0	0	0	70	0	10	10	480	90	10	240	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	88	0	12	11	505	95	12	300	12
Peak Hour Factor	0.50	0.50	0.50	0.80	0.80	0.80	0.95	0.95	0.95	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	7	0	147	0	131	21	819	805	23	821	691
Arrive On Green	0.00	0.00	0.00	0.08	0.00	0.08	0.01	0.44	0.44	0.01	0.44	0.44
Sat Flow, veh/h	0	1870	0	1774	0	1574	1781	1870	1539	1781	1870	1574
Grp Volume(v), veh/h	0	0	0	88	0	12	11	505	95	12	300	12
Grp Sat Flow(s),veh/h/ln	0	1870	0	1774	0	1574	1781	1870	1539	1781	1870	1574
Q Serve(g_s), s	0.0	0.0	0.0	1.3	0.0	0.2	0.2	5.6	0.8	0.2	2.9	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	1.3	0.0	0.2	0.2	5.6	0.8	0.2	2.9	0.1
Prop In Lane	0.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	7	0	147	0	131	21	819	805	23	821	691
V/C Ratio(X)	0.00	0.00	0.00	0.60	0.00	0.09	0.53	0.62	0.12	0.53	0.37	0.02
Avail Cap(c_a), veh/h	0	2791	0	2648	0	2350	1994	4187	3576	1994	4187	3524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	11.9	0.0	11.4	13.2	5.8	3.3	13.2	5.0	4.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4	0.0	0.1	7.4	0.8	0.1	6.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.4	0.0	0.1	0.1	0.9	0.1	0.1	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	13.3	0.0	11.5	20.6	6.6	3.3	20.0	5.3	4.3
LnGrp LOS	A	A	A	B	A	B	C	A	A	C	A	A
Approach Vol, veh/h		0			100			611			324	
Approach Delay, s/veh		0.0			13.1			6.3			5.8	
Approach LOS					B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.3	16.2		0.0	4.3	16.3		6.2				
Change Period (Y+Rc), s	4.0	4.5		4.0	4.0	4.5		4.0				
Max Green Setting (Gmax), s	30.0	60.0		40.0	30.0	60.0		40.0				
Max Q Clear Time (g_c+I1), s	2.2	7.6		0.0	2.2	4.9		3.3				
Green Ext Time (p_c), s	0.0	3.9		0.0	0.0	1.9		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			6.8									
HCM 6th LOS			A									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	80	60	260	50	150	30	220	130	60	210	10
Future Volume (veh/h)	10	80	60	260	50	150	30	220	130	60	210	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.98		0.99	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	11	90	67	325	62	188	33	239	141	65	228	11
Peak Hour Factor	0.89	0.89	0.89	0.80	0.80	0.80	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	577	745	606	600	745	624	51	820	351	84	886	379
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.03	0.24	0.24	0.05	0.26	0.26
Sat Flow, veh/h	1120	1870	1521	1211	1870	1566	1725	3441	1470	1725	3441	1473
Grp Volume(v), veh/h	11	90	67	325	62	188	33	239	141	65	228	11
Grp Sat Flow(s),veh/h/ln	1120	1870	1521	1211	1870	1566	1725	1721	1470	1725	1721	1473
Q Serve(g_s), s	0.3	1.4	1.3	10.8	1.0	3.8	0.9	2.7	3.8	1.7	2.5	0.3
Cycle Q Clear(g_c), s	1.3	1.4	1.3	12.3	1.0	3.8	0.9	2.7	3.8	1.7	2.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	577	745	606	600	745	624	51	820	351	84	886	379
V/C Ratio(X)	0.02	0.12	0.11	0.54	0.08	0.30	0.64	0.29	0.40	0.77	0.26	0.03
Avail Cap(c_a), veh/h	924	1323	1076	974	1323	1108	667	2140	915	667	2140	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.1	8.9	8.9	12.8	8.8	9.6	22.4	14.6	15.0	22.0	13.8	13.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.1	4.9	0.1	0.3	5.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	0.4	2.5	0.3	1.1	0.4	0.9	1.1	0.7	0.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	8.9	8.9	13.0	8.8	9.7	27.3	14.7	15.3	27.5	14.0	13.0
LnGrp LOS	A	A	A	B	A	A	C	B	B	C	B	B
Approach Vol, veh/h		168			575			413			304	
Approach Delay, s/veh		8.9			11.5			15.9			16.8	
Approach LOS		A			B			B			B	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	6.7	16.6	23.5	5.8	17.4	23.5
Change Period (Y+Rc), s	4.4	5.4	4.9	4.4	5.4	4.9
Max Green Setting (Gmax), s	18.1	29.1	33.1	18.1	29.1	33.1
Max Q Clear Time (g_c+I1), s	3.7	5.8	3.4	2.9	4.5	14.3
Green Ext Time (p_c), s	0.0	1.1	0.5	0.0	1.5	1.2

Intersection Summary	
HCM 6th Ctrl Delay	13.6
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	30	50	30	30	90	30	360	10	50	870	240
Future Volume (veh/h)	420	30	50	30	30	90	30	360	10	50	870	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1550	1841	1841	1550	1841	1841
Adj Flow Rate, veh/h	646	46	77	33	33	99	33	391	11	54	946	261
Peak Hour Factor	0.65	0.65	0.65	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	4	4	4	4	4	4
Cap, veh/h	705	152	124	400	42	126	377	894	380	468	1110	474
Arrive On Green	0.20	0.08	0.08	0.22	0.11	0.11	0.26	0.26	0.26	0.32	0.32	0.32
Sat Flow, veh/h	3456	1870	1523	1781	399	1198	1476	3497	1488	1476	3497	1494
Grp Volume(v), veh/h	646	46	77	33	0	132	33	391	11	54	946	261
Grp Sat Flow(s),veh/h/ln	1728	1870	1523	1781	0	1597	1476	1749	1488	1476	1749	1494
Q Serve(g_s), s	29.3	3.7	7.8	2.3	0.0	12.9	2.7	15.0	0.9	4.1	40.5	14.2
Cycle Q Clear(g_c), s	29.3	3.7	7.8	2.3	0.0	12.9	2.7	15.0	0.9	4.1	40.5	14.2
Prop In Lane	1.00		1.00	1.00		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	705	152	124	400	0	168	377	894	380	468	1110	475
V/C Ratio(X)	0.92	0.30	0.62	0.08	0.00	0.78	0.09	0.44	0.03	0.12	0.85	0.55
Avail Cap(c_a), veh/h	1244	916	746	400	0	280	377	894	380	468	1110	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.4	69.2	71.1	49.0	0.0	69.8	45.4	49.9	44.7	38.7	51.1	17.0
Incr Delay (d2), s/veh	3.0	1.4	6.4	0.0	0.0	3.0	0.0	1.6	0.1	0.0	8.3	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.3	1.9	3.3	1.1	0.0	5.5	1.0	6.7	0.4	1.5	18.8	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.4	70.6	77.5	49.0	0.0	72.8	45.4	51.5	44.8	38.8	59.4	21.5
LnGrp LOS	E	E	E	D	A	E	D	D	D	D	E	C
Approach Vol, veh/h		769			165			435			1261	
Approach Delay, s/veh		66.9			68.1			50.8			50.7	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	55.1	46.1	40.9	17.9	45.2	56.0	37.0	21.8
Change Period (Y+Rc), s	4.4	5.2	4.9	* 4.9	4.4	5.2	4.4	4.9
Max Green Setting (Gmax), s	14.6	40.9	7.2	* 78	4.7	50.8	57.6	28.0
Max Q Clear Time (g_c+I1), s	16.1	17.0	4.3	9.8	4.7	42.5	31.3	14.9
Green Ext Time (p_c), s	0.0	3.1	0.0	0.8	0.0	5.1	1.3	0.4

Intersection Summary	
HCM 6th Ctrl Delay	56.5
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	20	160	30	30	40	50	220	10	10	410	120
Future Volume (veh/h)	70	20	160	30	30	40	50	220	10	10	410	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	1.00		0.99	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1796	1870	1870	1796
Adj Flow Rate, veh/h	88	25	200	42	42	56	57	250	11	11	466	136
Peak Hour Factor	0.80	0.80	0.80	0.72	0.72	0.72	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	393	90	378	375	174	232	87	1226	515	21	1094	449
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.05	0.35	0.35	0.01	0.31	0.31
Sat Flow, veh/h	868	374	1573	1151	723	965	1781	3554	1493	1781	3554	1458
Grp Volume(v), veh/h	113	0	200	42	0	98	57	250	11	11	466	136
Grp Sat Flow(s),veh/h/ln	1242	0	1573	1151	0	1688	1781	1777	1493	1781	1777	1458
Q Serve(g_s), s	1.7	0.0	3.8	1.1	0.0	1.6	1.1	1.7	0.2	0.2	3.6	2.5
Cycle Q Clear(g_c), s	3.3	0.0	3.8	4.4	0.0	1.6	1.1	1.7	0.2	0.2	3.6	2.5
Prop In Lane	0.78		1.00	1.00		0.57	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	483	0	378	375	0	405	87	1226	515	21	1094	449
V/C Ratio(X)	0.23	0.00	0.53	0.11	0.00	0.24	0.66	0.20	0.02	0.53	0.43	0.30
Avail Cap(c_a), veh/h	1367	0	1382	1126	0	1508	349	3072	1290	282	2990	1227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.4	0.0	11.5	13.2	0.0	10.6	16.2	8.0	7.5	17.1	9.6	9.2
Incr Delay (d2), s/veh	0.2	0.0	1.0	0.0	0.0	0.1	3.1	0.1	0.0	7.7	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.2	0.2	0.0	0.5	0.4	0.4	0.0	0.1	0.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	0.0	12.5	13.2	0.0	10.8	19.3	8.1	7.5	24.7	9.9	9.6
LnGrp LOS	B	A	B	B	A	B	B	A	A	C	A	A
Approach Vol, veh/h		313			140			318			613	
Approach Delay, s/veh		12.2			11.5			10.1			10.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.4	17.5		12.8	5.7	16.2		12.8
Change Period (Y+Rc), s	4.0	5.5		4.5	4.0	* 5.5		* 4.5
Max Green Setting (Gmax), s	5.5	30.0		30.5	6.8	* 29		* 31
Max Q Clear Time (g_c+I1), s	2.2	3.7		5.8	3.1	5.6		6.4
Green Ext Time (p_c), s	0.0	2.1		1.3	0.0	3.9		0.4

Intersection Summary		
HCM 6th Ctrl Delay		10.7
HCM 6th LOS		B

Notes

User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	197.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	10	60	20	140	50	770	0	20	80	150	120	30	0
Future Vol, veh/h	10	60	20	140	50	770	0	20	80	150	120	30	0
Peak Hour Factor	0.73	0.73	0.73	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	6	6	6	6	6	6	6
Mvmt Flow	14	82	27	149	53	819	0	22	87	163	130	33	0
Number of Lanes	0	1	0	0	1	0	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	1
HCM Control Delay	12.6	297.1	14.3	14.9
HCM LOS	B	F	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	11%	15%	100%	0%	0%
Vol Thru, %	0%	100%	15%	67%	5%	0%	100%	100%
Vol Right, %	0%	0%	85%	22%	80%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	53	177	90	960	120	15	15
LT Vol	20	0	0	10	140	120	0	0
Through Vol	0	53	27	60	50	0	15	15
RT Vol	0	0	150	20	770	0	0	0
Lane Flow Rate	22	58	192	123	1021	130	16	16
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.046	0.115	0.35	0.231	1.61	0.284	0.033	0.025
Departure Headway (Hd)	9.234	8.706	8.079	7.636	5.674	9.48	8.95	7.041
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	390	414	449	473	654	382	403	511
Service Time	6.934	6.406	5.779	5.336	3.374	7.18	6.65	4.741
HCM Lane V/C Ratio	0.056	0.14	0.428	0.26	1.561	0.34	0.04	0.031
HCM Control Delay	12.4	12.5	15.1	12.6	297.1	15.9	12	9.9
HCM Lane LOS	B	B	C	B	F	C	B	A
HCM 95th-tile Q	0.1	0.4	1.5	0.9	55.3	1.2	0.1	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	190	30	40	230	130	220	290	190	80	10	30
Future Volume (veh/h)	280	190	30	40	230	130	220	290	190	80	10	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.99	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1870	1870	1870	1870	1870	1575	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	346	235	37	67	383	217	250	330	216	133	17	50
Peak Hour Factor	0.81	0.81	0.81	0.60	0.60	0.60	0.88	0.88	0.88	0.60	0.60	0.60
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	714	592	389	426	241	277	404	265	164	120	354
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.18	0.39	0.39	0.09	0.30	0.30
Sat Flow, veh/h	689	1870	1552	1095	1115	632	1500	1042	682	1781	408	1199
Grp Volume(v), veh/h	346	235	37	67	0	600	250	0	546	133	0	67
Grp Sat Flow(s),veh/h/ln	689	1870	1552	1095	0	1747	1500	0	1724	1781	0	1607
Q Serve(g_s), s	6.1	9.3	1.6	4.8	0.0	33.9	17.1	0.0	29.7	7.7	0.0	3.2
Cycle Q Clear(g_c), s	40.0	9.3	1.6	14.1	0.0	33.9	17.1	0.0	29.7	7.7	0.0	3.2
Prop In Lane	1.00		1.00	1.00		0.36	1.00		0.40	1.00		0.75
Lane Grp Cap(c), veh/h	109	714	592	389	0	667	277	0	669	164	0	475
V/C Ratio(X)	3.18	0.33	0.06	0.17	0.00	0.90	0.90	0.00	0.82	0.81	0.00	0.14
Avail Cap(c_a), veh/h	109	714	592	389	0	667	429	0	987	510	0	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.3	22.9	20.5	27.9	0.0	30.5	41.8	0.0	28.7	46.7	0.0	27.2
Incr Delay (d2), s/veh	1004.9	0.5	0.1	0.1	0.0	14.9	11.1	0.0	7.3	3.7	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	33.2	4.2	0.6	1.3	0.0	16.6	7.1	0.0	13.3	3.6	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1056.2	23.4	20.6	28.0	0.0	45.4	52.9	0.0	36.0	50.4	0.0	27.4
LnGrp LOS	F	C	C	C	A	D	D	A	D	D	A	C
Approach Vol, veh/h		618			667			796			200	
Approach Delay, s/veh		601.4			43.7			41.3			42.7	
Approach LOS		F			D			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	45.9		44.9	23.8	36.2		44.9				
Change Period (Y+Rc), s	4.4	* 5.2		4.9	4.4	5.2		4.9				
Max Green Setting (Gmax), s	30.0	* 60		40.0	30.0	60.0		40.0				
Max Q Clear Time (g_c+I1), s	9.7	31.7		42.0	19.1	5.2		35.9				
Green Ext Time (p_c), s	0.2	9.0		0.0	0.3	0.7		1.2				

Intersection Summary		
HCM 6th Ctrl Delay		193.9
HCM 6th LOS		F

Notes
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	1440	110	40	480	350	790	970	550	620	100	190
Future Volume (veh/h)	240	1440	110	40	480	350	790	970	550	620	100	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	282	1694	129	47	558	407	811	1051	579	667	108	204
Peak Hour Factor	0.85	0.85	0.85	0.86	0.86	0.86	0.95	0.95	0.95	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	470	1790	135	49	562	410	623	802	420	455	239	621
Arrive On Green	0.27	0.54	0.54	0.03	0.30	0.30	0.35	0.35	0.35	0.13	0.13	0.13
Sat Flow, veh/h	1753	3290	248	1753	1898	1385	1781	2291	1200	3563	1870	1531
Grp Volume(v), veh/h	282	891	932	47	514	451	811	848	782	667	108	204
Grp Sat Flow(s),veh/h/ln	1753	1749	1789	1753	1749	1534	1781	1870	1621	1781	1870	1531
Q Serve(g_s), s	25.2	85.3	89.2	4.8	52.8	52.8	63.0	63.0	63.0	23.0	9.6	0.0
Cycle Q Clear(g_c), s	25.2	85.3	89.2	4.8	52.8	52.8	63.0	63.0	63.0	23.0	9.6	0.0
Prop In Lane	1.00		0.14	1.00		0.90	1.00		0.74	1.00		1.00
Lane Grp Cap(c), veh/h	470	951	973	49	518	454	623	655	567	455	239	621
V/C Ratio(X)	0.60	0.94	0.96	0.97	0.99	0.99	1.30	1.30	1.38	1.47	0.45	0.33
Avail Cap(c_a), veh/h	470	951	973	49	518	454	623	655	567	455	239	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	38.2	39.1	87.4	63.2	63.2	58.5	58.5	58.5	78.5	72.7	37.7
Incr Delay (d2), s/veh	1.5	17.4	20.2	115.0	37.8	40.5	136.5	133.9	171.6	221.1	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	39.6	42.8	3.7	28.5	25.3	51.2	53.3	52.1	24.3	4.6	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	55.6	59.3	202.4	101.0	103.6	195.0	192.4	230.1	299.6	73.2	37.8
LnGrp LOS	E	E	E	F	F	F	F	F	F	F	E	D
Approach Vol, veh/h		2105			1012			2441			979	
Approach Delay, s/veh		57.7			106.9			205.3			220.1	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	104.1		29.0	54.5	59.0		69.0				
Change Period (Y+Rc), s	4.4	5.3		6.0	5.3	* 5.7		6.0				
Max Green Setting (Gmax), s	5.0	67.3		23.0	18.6	* 53		63.0				
Max Q Clear Time (g_c+I1), s	6.8	91.2		25.0	27.2	54.8		65.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		144.8
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1250	1010	80	90	780	960
Future Volume (veh/h)	1250	1010	80	90	780	960
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1870	1870
Adj Flow Rate, veh/h	1420	1148	89	100	592	1199
Peak Hour Factor	0.88	0.88	0.90	0.90	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	2	2
Cap, veh/h	1529	665	499	2164	584	1504
Arrive On Green	0.44	0.44	0.15	0.62	0.33	0.33
Sat Flow, veh/h	3589	1521	3401	3589	1781	3170
Grp Volume(v), veh/h	1420	1148	89	100	592	1199
Grp Sat Flow(s),veh/h/ln	1749	1521	1700	1749	1781	1585
Q Serve(g_s), s	69.2	78.7	4.1	2.0	59.0	31.1
Cycle Q Clear(g_c), s	69.2	78.7	4.1	2.0	59.0	31.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1529	665	499	2164	584	1504
V/C Ratio(X)	0.93	1.73	0.18	0.05	1.01	0.80
Avail Cap(c_a), veh/h	1529	665	529	2164	584	1504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	50.7	67.3	13.5	60.5	40.0
Incr Delay (d2), s/veh	11.3	333.2	0.1	0.0	40.8	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	31.8	90.6	1.8	0.8	32.7	10.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	59.3	383.9	67.4	13.5	101.3	43.0
LnGrp LOS	E	F	E	B	F	D
Approach Vol, veh/h	2568			189	1791	
Approach Delay, s/veh	204.4			38.9	62.2	
Approach LOS	F			D	E	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	32.0	85.0				117.0		63.0
Change Period (Y+Rc), s	5.6	* 6.3				5.6		4.0
Max Green Setting (Gmax), s	28.0	* 79				101.9		59.0
Max Q Clear Time (g_c+I1), s	6.1	80.7				4.0		61.0
Green Ext Time (p_c), s	0.1	0.0				1.1		0.0

Intersection Summary	
HCM 6th Ctrl Delay	141.5
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	10	1030	10	0	0	240	20	10	0	10	60
Future Volume (veh/h)	90	10	1030	10	0	0	240	20	10	0	10	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	1.00		1.00	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1811	1811	1811	1870	1870	1870
Adj Flow Rate, veh/h	100	11	1144	40	0	0	261	22	11	0	11	65
Peak Hour Factor	0.90	0.90	0.90	0.25	0.25	0.25	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	2	2	2	6	6	6	2	2	2
Cap, veh/h	678	67	1503	337	0	0	541	690	561	4	189	160
Arrive On Green	0.39	0.39	0.39	0.39	0.00	0.00	0.16	0.38	0.38	0.00	0.11	0.11
Sat Flow, veh/h	1325	169	2706	435	0	0	3346	1811	1472	1781	1777	1502
Grp Volume(v), veh/h	111	0	1144	40	0	0	261	22	11	0	11	65
Grp Sat Flow(s),veh/h/ln	1495	0	1353	435	0	0	1673	1811	1472	1781	1777	1502
Q Serve(g_s), s	0.0	0.0	7.1	2.5	0.0	0.0	3.1	0.3	0.2	0.0	0.2	1.8
Cycle Q Clear(g_c), s	1.8	0.0	7.1	4.3	0.0	0.0	3.1	0.3	0.2	0.0	0.2	1.8
Prop In Lane	0.90		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	745	0	1503	337	0	0	541	690	561	4	189	160
V/C Ratio(X)	0.15	0.00	0.76	0.12	0.00	0.00	0.48	0.03	0.02	0.00	0.06	0.41
Avail Cap(c_a), veh/h	1106	0	2195	686	0	0	3984	3373	2741	164	1357	1147
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	8.5	0.0	7.4	9.9	0.0	0.0	16.5	8.4	8.4	0.0	17.4	18.1
Incr Delay (d2), s/veh	0.1	0.0	1.2	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	2.7	0.2	0.0	0.0	1.0	0.1	0.0	0.0	0.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.6	0.0	8.6	10.0	0.0	0.0	16.8	8.4	8.4	0.0	17.5	18.7
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	B	B
Approach Vol, veh/h		1255			40			294			76	
Approach Delay, s/veh		8.6			10.0			15.8			18.5	
Approach LOS		A			A			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	21.4		21.9	11.9	9.5		21.9				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	4.0	80.7		28.1	51.6	* 33		48.1				
Max Q Clear Time (g_c+I1), s	0.0	2.3		9.1	5.1	3.8		6.3				
Green Ext Time (p_c), s	0.0	0.2		8.0	0.5	0.3		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			10.4									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1030	0	70	1040	90	0	0	30	80	0	10
Future Volume (veh/h)	10	1030	0	70	1040	90	0	0	30	80	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	1144	0	72	1072	93	0	0	91	94	0	12
Peak Hour Factor	0.90	0.90	0.90	0.97	0.97	0.97	0.33	0.33	0.33	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	2041	911	370	2778	1213	0	0	216	149	0	216
Arrive On Green	0.01	0.57	0.00	0.42	1.00	1.00	0.00	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3554	1552	0	0	1585	801	0	1585
Grp Volume(v), veh/h	11	1144	0	72	1072	93	0	0	91	94	0	12
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1552	0	0	1585	801	0	1585
Q Serve(g_s), s	1.1	36.4	0.0	4.6	0.0	0.0	0.0	0.0	9.5	12.8	0.0	1.2
Cycle Q Clear(g_c), s	1.1	36.4	0.0	4.6	0.0	0.0	0.0	0.0	9.5	22.3	0.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	17	2041	911	370	2778	1213	0	0	216	149	0	216
V/C Ratio(X)	0.66	0.56	0.00	0.19	0.39	0.08	0.00	0.00	0.42	0.63	0.00	0.06
Avail Cap(c_a), veh/h	99	2041	911	370	2778	1213	0	0	335	247	0	335
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.80	0.80	0.80	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	88.9	24.0	0.0	43.0	0.0	0.0	0.0	0.0	71.2	81.4	0.0	67.7
Incr Delay (d2), s/veh	15.0	1.1	0.0	0.1	0.3	0.1	0.0	0.0	0.5	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	15.2	0.0	2.0	0.1	0.0	0.0	0.0	3.9	4.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.9	25.2	0.0	43.1	0.3	0.1	0.0	0.0	71.7	83.1	0.0	67.7
LnGrp LOS	F	C	A	D	A	A	A	A	E	F	A	E
Approach Vol, veh/h		1155			1237			91			106	
Approach Delay, s/veh		25.9			2.8			71.7			81.3	
Approach LOS		C			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	42.5	109.0		28.5	5.7	145.8		28.5
Change Period (Y+Rc), s	5.1	* 5.6		4.0	4.0	5.1		4.0
Max Green Setting (Gmax), s	25.0	* 1E2		38.0	10.0	118.9		38.0
Max Q Clear Time (g_c+I1), s	6.6	38.4		24.3	3.1	2.0		11.5
Green Ext Time (p_c), s	0.1	22.8		0.2	0.0	8.3		0.3

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	760	260	930	770	0	0	0	0	830	10	700
Future Volume (veh/h)	0	760	260	930	770	0	0	0	0	830	10	700
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	844	280	1022	846	0				1108	0	495
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1532	433	1042	2134	0				1183	0	527
Arrive On Green	0.00	0.55	0.55	0.50	1.00	0.00				0.33	0.00	0.33
Sat Flow, veh/h	0	5611	1585	3456	3647	0				3563	0	1585
Grp Volume(v), veh/h	0	844	280	1022	846	0				1108	0	495
Grp Sat Flow(s),veh/h/ln	0	1870	1585	1728	1777	0				1781	0	1585
Q Serve(g_s), s	0.0	17.6	22.3	52.2	0.0	0.0				54.3	0.0	54.6
Cycle Q Clear(g_c), s	0.0	17.6	22.3	52.2	0.0	0.0				54.3	0.0	54.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1532	433	1042	2134	0				1183	0	527
V/C Ratio(X)	0.00	0.55	0.65	0.98	0.40	0.00				0.94	0.00	0.94
Avail Cap(c_a), veh/h	0	1532	433	1042	2134	0				1364	0	607
HCM Platoon Ratio	1.00	2.00	2.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.88	0.88	0.90	0.90	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	33.7	34.8	44.2	0.0	0.0				58.3	0.0	58.4
Incr Delay (d2), s/veh	0.0	1.3	6.4	21.8	0.5	0.0				10.7	0.0	20.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.5	7.5	21.8	0.1	0.0				26.3	0.0	24.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	34.9	41.2	66.0	0.5	0.0				68.9	0.0	78.6
LnGrp LOS	A	C	D	E	A	A				E	A	E
Approach Vol, veh/h		1124			1868						1603	
Approach Delay, s/veh		36.5			36.3						71.9	
Approach LOS		D			D						E	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	59.0	56.1	64.9	115.1
Change Period (Y+Rc), s	* 4.7	7.0	5.1	7.0
Max Green Setting (Gmax), s	* 54	40.0	68.9	99.0
Max Q Clear Time (g_c+I1), s	54.2	24.3	56.6	2.0
Green Ext Time (p_c), s	0.0	3.7	3.2	3.6

Intersection Summary	
HCM 6th Ctrl Delay	48.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1740	0	0	1880	920	10	10	1020	0	0	0
Future Volume (veh/h)	10	1740	0	0	1880	920	10	10	1020	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	1870	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	11	1851	0	0	1979	968	11	11	1085			
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	2	2	2	2	2	2			
Cap, veh/h	766	1830	0	647	3353	1028	61	64	1259			
Arrive On Green	0.22	0.51	0.00	0.00	0.66	0.66	0.03	0.03	0.03			
Sat Flow, veh/h	3456	3647	0	1781	5106	1565	1781	1870	3170			
Grp Volume(v), veh/h	11	1851	0	0	1979	968	11	11	1085			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	1781	1702	1565	1781	1870	1585			
Q Serve(g_s), s	0.4	92.7	0.0	0.0	39.1	100.1	1.1	1.0	0.0			
Cycle Q Clear(g_c), s	0.4	92.7	0.0	0.0	39.1	100.1	1.1	1.0	0.0			
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	766	1830	0	647	3353	1028	61	64	1259			
V/C Ratio(X)	0.01	1.01	0.00	0.00	0.59	0.94	0.18	0.17	0.86			
Avail Cap(c_a), veh/h	766	1830	0	647	3353	1028	406	426	1874			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.45	0.45	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	54.7	43.7	0.0	0.0	17.3	27.8	84.5	84.5	49.7			
Incr Delay (d2), s/veh	0.0	17.0	0.0	0.0	0.8	17.1	0.5	0.5	1.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.2	43.3	0.0	0.0	14.7	38.9	0.5	0.5	22.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.7	60.6	0.0	0.0	18.1	44.9	85.0	85.0	51.7			
LnGrp LOS	D	F	A	A	B	D	F	F	D			
Approach Vol, veh/h		1862			2947			1107				
Approach Delay, s/veh		60.6			26.9			52.3				
Approach LOS		E			C			D				

Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	70.1	98.7			44.6	124.2		11.2				
Change Period (Y+Rc), s	4.7	* 6			4.7	* 6		5.1				
Max Green Setting (Gmax), s	30.5	* 93			5.0	* 1.2E2		41.0				
Max Q Clear Time (g_c+I1), s	0.0	94.7			2.4	102.1		3.1				
Green Ext Time (p_c), s	0.0	0.0			0.0	10.8		3.0				

Intersection Summary		
HCM 6th Ctrl Delay		42.3
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	0	0	20	0	2460	30	10	1740	20
Future Vol, veh/h	0	0	10	0	0	20	0	2460	30	10	1740	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	5	5	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	210	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	71	71	71	95	95	95	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	3	3	3
Mvmt Flow	0	0	13	0	0	28	0	2589	32	11	1871	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	947	-	-	1316	-	0	0	2626	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	7.14	-	-	-	5.36	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.92	-	-	-	3.13	-	-
Pot Cap-1 Maneuver	0	0	225	0	0	127	0	-	-	59	-	-
Stage 1	0	0	-	0	0	-	0	-	-	-	-	-
Stage 2	0	0	-	0	0	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	225	-	-	126	-	-	-	59	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22	41.6	0	0.4
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	225	126	59	-	-
HCM Lane V/C Ratio	-	-	0.059	0.224	0.182	-	-
HCM Control Delay (s)	-	-	22	41.6	79.1	-	-
HCM Lane LOS	-	-	C	E	F	-	-
HCM 95th %tile Q(veh)	-	-	0.2	0.8	0.6	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	200	130	180	1920	210	800	80	20	100	260	480
Future Volume (veh/h)	450	200	130	180	1920	210	800	80	20	100	260	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	489	217	141	196	2087	228	860	86	22	132	560	487
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	531	460	741	1479	660	486	175	145	392	335	283
Arrive On Green	0.15	0.15	0.15	0.42	0.42	0.42	0.05	0.03	0.03	0.22	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1552	1781	1870	1580
Grp Volume(v), veh/h	489	217	141	196	2087	228	860	86	22	132	560	487
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1552	1781	1870	1580
Q Serve(g_s), s	26.9	10.0	12.5	13.0	74.9	17.7	25.3	8.1	2.5	11.2	32.2	32.2
Cycle Q Clear(g_c), s	26.9	10.0	12.5	13.0	74.9	17.7	25.3	8.1	2.5	11.2	32.2	32.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	531	460	741	1479	660	486	175	145	392	335	283
V/C Ratio(X)	1.84	0.41	0.31	0.26	1.41	0.35	1.77	0.49	0.15	0.34	1.67	1.72
Avail Cap(c_a), veh/h	266	531	460	741	1479	660	486	397	329	392	335	283
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.71	0.71	0.71	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.5	69.3	49.8	34.5	52.5	35.8	85.8	83.0	80.3	59.2	73.9	73.9
Incr Delay (d2), s/veh	390.9	0.2	0.1	0.0	185.5	0.0	352.7	0.6	0.1	0.2	316.0	340.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	41.2	4.6	5.0	5.6	70.5	6.9	35.6	4.0	1.0	5.0	44.6	39.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	467.5	69.5	49.9	34.5	238.0	35.8	438.5	83.6	80.4	59.3	389.9	413.9
LnGrp LOS	F	E	D	C	F	D	F	F	F	E	F	F
Approach Vol, veh/h		847			2511			968			1179	
Approach Delay, s/veh		296.0			203.8			398.9			362.8	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	38.0		80.0	45.4	22.6		32.0				
Change Period (Y+Rc), s	* 4.7	5.8		5.1	5.8	* 5.8		5.1				
Max Green Setting (Gmax), s	* 25	32.2		74.9	19.3	* 38		26.9				
Max Q Clear Time (g_c+I1), s	27.3	34.2		76.9	13.2	10.1		28.9				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			286.3									
HCM 6th LOS			F									

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	750	420	100	890	100	530	160	30	90	320	620
Future Volume (veh/h)	340	750	420	100	890	100	530	160	30	90	320	620
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	2116	1870	1870	2116	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	362	798	447	104	927	104	570	172	32	99	352	681
Peak Hour Factor	0.94	0.94	0.94	0.96	0.96	0.96	0.93	0.93	0.93	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	890	916	360	390	989	111	694	308	57	848	445	1567
Arrive On Green	0.34	0.30	0.30	0.07	0.06	0.06	0.20	0.20	0.20	0.24	0.24	0.24
Sat Flow, veh/h	3456	4021	1579	1781	5268	589	3456	1532	285	3563	1870	3150
Grp Volume(v), veh/h	362	798	447	104	677	354	570	0	204	99	352	681
Grp Sat Flow(s),veh/h/ln	1728	2011	1579	1781	1926	2005	1728	0	1817	1781	1870	1575
Q Serve(g_s), s	14.4	33.8	41.0	9.9	31.5	31.7	28.4	0.0	18.2	3.9	31.8	0.0
Cycle Q Clear(g_c), s	14.4	33.8	41.0	9.9	31.5	31.7	28.4	0.0	18.2	3.9	31.8	0.0
Prop In Lane	1.00		1.00	1.00		0.29	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	890	916	360	390	723	376	694	0	365	848	445	1567
V/C Ratio(X)	0.41	0.87	1.24	0.27	0.94	0.94	0.82	0.00	0.56	0.12	0.79	0.43
Avail Cap(c_a), veh/h	890	916	360	390	723	376	808	0	425	1162	610	1844
HCM Platoon Ratio	1.33	1.33	1.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.34	0.34	0.34	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	60.2	62.7	69.8	83.3	83.4	68.8	0.0	64.7	53.7	64.4	29.2
Incr Delay (d2), s/veh	0.3	10.5	129.5	0.0	9.3	16.0	8.0	0.0	3.5	0.1	6.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	17.6	28.5	4.7	17.3	18.8	13.4	0.0	8.8	1.8	15.9	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.9	70.7	192.2	69.9	92.7	99.4	76.8	0.0	68.2	53.8	70.4	29.4
LnGrp LOS	D	E	F	E	F	F	E	A	E	D	E	C
Approach Vol, veh/h		1607			1135			774			1132	
Approach Delay, s/veh		99.6			92.7			74.6			44.3	
Approach LOS		F			F			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	43.8	47.0		48.1	50.8	40.0		41.1				
Change Period (Y+Rc), s	4.4	6.0		5.3	4.4	6.2		4.9				
Max Green Setting (Gmax), s	17.6	41.0		58.7	24.6	33.8		42.1				
Max Q Clear Time (g_c+I1), s	11.9	43.0		33.8	16.4	33.7		30.4				
Green Ext Time (p_c), s	0.0	0.0		9.1	0.8	0.1		5.4				

Intersection Summary		
HCM 6th Ctrl Delay		80.3
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	580	100	290	660	60	280	330	970	230	1390	240
Future Volume (veh/h)	100	580	100	290	660	60	280	330	970	230	1390	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	2116	1870	1870	2116	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	109	630	109	315	717	65	292	344	1010	253	1527	264
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.96	0.96	0.96	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	49	653	113	1325	2058	186	224	1110	936	165	964	803
Arrive On Green	0.01	0.06	0.06	0.13	0.18	0.18	0.13	0.59	0.59	0.06	0.69	0.69
Sat Flow, veh/h	1781	3425	591	3456	3720	337	1781	1870	1578	3456	1870	1557
Grp Volume(v), veh/h	109	369	370	315	387	395	292	344	1010	253	1527	264
Grp Sat Flow(s),veh/h/ln	1781	2011	2006	1728	2011	2046	1781	1870	1578	1728	1870	1557
Q Serve(g_s), s	5.0	33.0	33.1	14.8	30.3	30.3	22.6	16.5	77.3	8.6	92.8	12.4
Cycle Q Clear(g_c), s	5.0	33.0	33.1	14.8	30.3	30.3	22.6	16.5	77.3	8.6	92.8	12.4
Prop In Lane	1.00		0.29	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	383	382	1325	1113	1132	224	1110	936	165	964	803
V/C Ratio(X)	2.20	0.96	0.97	0.24	0.35	0.35	1.31	0.31	1.08	1.53	1.58	0.33
Avail Cap(c_a), veh/h	49	383	382	1325	1113	1132	224	1123	948	165	964	803
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	0.73	0.73	0.73	0.51	0.51	0.51	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	89.2	83.7	83.8	54.9	45.2	45.2	78.7	18.2	19.2	84.3	28.3	15.7
Incr Delay (d2), s/veh	586.2	31.3	32.0	0.0	0.4	0.4	166.0	0.1	53.1	242.3	263.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	21.3	21.3	6.9	16.5	16.9	20.6	7.2	40.0	9.3	103.3	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	675.4	115.1	115.8	55.0	45.7	45.7	244.7	18.3	72.3	326.6	291.4	15.7
LnGrp LOS	F	F	F	D	D	D	F	B	F	F	F	B
Approach Vol, veh/h		848			1097			1646			2044	
Approach Delay, s/veh		187.4			48.3			91.6			260.1	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	77.0	40.0	27.0	99.0	9.4	107.6	13.0	113.0
Change Period (Y+Rc), s	6.2	* 5.7	4.4	6.2	4.4	6.2	4.4	* 6.2
Max Green Setting (Gmax), s	9.6	* 34	22.6	92.8	5.0	38.4	8.6	* 1.1E2
Max Q Clear Time (g_c+I1), s	16.8	35.1	24.6	94.8	7.0	32.3	10.6	79.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	158.7
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	1180	150	410	820	370	160	130	1000	1690	710	230
Future Volume (veh/h)	100	1180	150	410	820	370	160	130	1000	1690	710	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	2116	1870	1841	2083	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	109	1283	163	441	882	0	198	160	1235	1817	763	247
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.81	0.81	0.81	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	4	4	4	2	2	2	2	2	2
Cap, veh/h	128	923	346	769	2389		170	600	504	799	862	727
Arrive On Green	0.02	0.08	0.08	0.44	0.60	0.00	0.10	0.32	0.32	0.23	0.46	0.46
Sat Flow, veh/h	1781	4021	1509	1753	3958	1560	1781	1870	1572	3456	1870	1576
Grp Volume(v), veh/h	109	1283	163	441	882	0	198	160	1235	1817	763	247
Grp Sat Flow(s),veh/h/ln	1781	2011	1509	1753	1979	1560	1781	1870	1572	1728	1870	1576
Q Serve(g_s), s	11.0	41.3	23.2	33.9	20.5	0.0	17.2	11.4	57.7	41.6	66.8	18.0
Cycle Q Clear(g_c), s	11.0	41.3	23.2	33.9	20.5	0.0	17.2	11.4	57.7	41.6	66.8	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	923	346	769	2389		170	600	504	799	862	727
V/C Ratio(X)	0.85	1.39	0.47	0.57	0.37		1.16	0.27	2.45	2.28	0.88	0.34
Avail Cap(c_a), veh/h	132	923	346	769	2389		170	600	504	799	862	727
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.30	0.30	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	86.9	83.2	112.6	37.9	18.2	0.0	81.4	45.4	61.1	69.2	44.1	31.0
Incr Delay (d2), s/veh	4.7	176.4	0.4	0.2	0.1	0.0	119.7	0.1	659.1	577.8	10.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	45.0	9.6	14.3	9.1	0.0	13.5	5.4	114.9	82.5	33.5	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.6	259.6	113.0	38.1	18.3	0.0	201.1	45.5	720.2	647.0	54.6	31.1
LnGrp LOS	F	F	F	D	B		F	D	F	F	D	C
Approach Vol, veh/h		1555			1323	A		1593			2827	
Approach Delay, s/veh		232.4			24.9			587.9			433.3	
Approach LOS		F			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.5	47.0	21.6	87.9	17.3	116.2	46.5	63.0
Change Period (Y+Rc), s	5.7	* 5.7	4.4	4.9	4.4	5.7	4.9	* 5.3
Max Green Setting (Gmax), s	19.6	* 41	17.2	82.5	13.3	47.6	41.6	* 58
Max Q Clear Time (g_c+I1), s	35.9	43.3	19.2	68.8	13.0	22.5	43.6	59.7
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	1.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	350.2
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	2810	340	10	810	10	790	10	50	20	10	340
Future Volume (veh/h)	260	2810	340	10	810	10	790	10	50	20	10	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	2083	1841	1841	2083	1841	1870	1870	1796	1870	1870	1870
Adj Flow Rate, veh/h	271	2927	354	11	880	11	1139	0	71	26	13	436
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.70	0.70	0.70	0.78	0.78	0.78
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	490	2350	910	21	1291	501	912	0	387	49	52	485
Arrive On Green	0.19	0.40	0.40	0.02	0.65	0.65	0.26	0.00	0.26	0.03	0.03	0.03
Sat Flow, veh/h	1753	3958	1533	1753	3958	1535	3563	0	1513	1781	1870	1499
Grp Volume(v), veh/h	271	2927	354	11	880	11	1139	0	71	26	13	436
Grp Sat Flow(s),veh/h/ln	1753	1979	1533	1753	1979	1535	1781	0	1513	1781	1870	1499
Q Serve(g_s), s	25.2	106.9	29.6	1.1	25.1	0.5	46.1	0.0	6.6	2.6	1.2	5.0
Cycle Q Clear(g_c), s	25.2	106.9	29.6	1.1	25.1	0.5	46.1	0.0	6.6	2.6	1.2	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	490	2350	910	21	1291	501	912	0	387	49	52	485
V/C Ratio(X)	0.55	1.25	0.39	0.53	0.68	0.02	1.25	0.00	0.18	0.53	0.25	0.90
Avail Cap(c_a), veh/h	490	2350	910	49	1291	501	912	0	387	49	52	485
HCM Platoon Ratio	0.67	0.67	0.67	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.82	0.82	0.82	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.0	54.2	30.9	87.4	25.5	21.2	66.9	0.0	52.3	86.3	85.7	59.8
Incr Delay (d2), s/veh	0.4	110.8	0.1	6.4	2.4	0.1	120.9	0.0	0.1	5.0	0.9	19.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	90.0	11.6	0.5	8.2	0.2	36.4	0.0	2.6	1.3	0.6	21.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.4	165.0	31.0	93.8	27.9	21.2	187.9	0.0	52.3	91.3	86.6	78.9
LnGrp LOS	E	F	C	F	C	C	F	A	D	F	F	E
Approach Vol, veh/h		3552			902			1210			475	
Approach Delay, s/veh		143.9			28.6			179.9			79.8	
Approach LOS		F			C			F			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	112.6		9.9	54.7	64.4		51.0				
Change Period (Y+Rc), s	4.4	5.7		4.9	4.4	5.7		4.9				
Max Green Setting (Gmax), s	5.0	104.0		5.0	50.3	58.7		46.1				
Max Q Clear Time (g_c+I1), s	3.1	108.9		7.0	27.2	27.1		48.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.1	1.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		129.1
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	2070	50	50	360	120	50	260	390	370	50	480
Future Volume (veh/h)	280	2070	50	50	360	120	50	260	390	370	50	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	2083	1841	1841	2083	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	292	2156	52	54	391	130	61	317	476	430	58	558
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.82	0.82	0.82	0.86	0.86	0.86
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	601	1831	708	215	961	368	77	396	335	333	670	567
Arrive On Green	0.46	0.62	0.62	0.25	0.49	0.49	0.04	0.21	0.21	0.19	0.36	0.36
Sat Flow, veh/h	1753	3958	1531	1753	3958	1517	1781	1870	1583	1781	1870	1584
Grp Volume(v), veh/h	292	2156	52	54	391	130	61	317	476	430	58	558
Grp Sat Flow(s),veh/h/ln	1753	1979	1531	1753	1979	1517	1781	1870	1583	1781	1870	1584
Q Serve(g_s), s	21.0	83.3	2.4	4.5	11.4	9.6	6.1	29.0	38.1	33.6	3.7	33.5
Cycle Q Clear(g_c), s	21.0	83.3	2.4	4.5	11.4	9.6	6.1	29.0	38.1	33.6	3.7	33.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	601	1831	708	215	961	368	77	396	335	333	670	567
V/C Ratio(X)	0.49	1.18	0.07	0.25	0.41	0.35	0.80	0.80	1.42	1.29	0.09	0.98
Avail Cap(c_a), veh/h	601	1831	708	215	961	368	127	396	335	333	670	567
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	34.6	18.7	61.2	38.0	37.5	85.4	67.3	70.9	73.2	38.3	16.2
Incr Delay (d2), s/veh	0.0	80.3	0.0	0.2	1.1	2.3	6.9	10.4	206.0	152.6	0.0	33.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	54.2	0.9	1.9	5.0	3.5	3.0	15.1	34.7	29.5	1.8	17.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	114.9	18.8	61.4	39.1	39.8	92.2	77.7	277.0	225.8	38.3	49.7
LnGrp LOS	D	F	B	E	D	D	F	E	F	F	D	D
Approach Vol, veh/h		2500			575			854			1046	
Approach Delay, s/veh		103.9			41.4			189.8			121.4	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	89.0	12.1	69.4	66.6	49.4	38.5	43.0
Change Period (Y+Rc), s	4.4	5.7	4.4	4.9	4.4	5.7	4.9	* 4.9
Max Green Setting (Gmax), s	5.6	83.3	12.8	58.9	45.2	43.7	33.6	* 38
Max Q Clear Time (g_c+I1), s	6.5	85.3	8.1	35.5	23.0	13.4	35.6	40.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.1	0.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	115.1
HCM 6th LOS	F

Notes
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1560	490	40	250	60	280	130	160	220	230	120
Future Volume (veh/h)	210	1560	490	40	250	60	280	130	160	220	230	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	2083	1841	1841	2083	1841	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	219	1625	510	43	272	65	236	270	184	310	324	169
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.87	0.87	0.87	0.71	0.71	0.71
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	473	1717	663	183	1055	413	287	301	253	335	351	296
Arrive On Green	0.54	0.87	0.87	0.21	0.53	0.53	0.16	0.16	0.16	0.19	0.19	0.19
Sat Flow, veh/h	1753	3958	1528	1753	3958	1549	1781	1870	1573	1781	1870	1575
Grp Volume(v), veh/h	219	1625	510	43	272	65	236	270	184	310	324	169
Grp Sat Flow(s),veh/h/ln	1753	1979	1528	1753	1979	1549	1781	1870	1573	1781	1870	1575
Q Serve(g_s), s	13.8	54.7	23.9	3.7	6.7	3.8	23.1	25.5	20.0	30.8	30.6	17.6
Cycle Q Clear(g_c), s	13.8	54.7	23.9	3.7	6.7	3.8	23.1	25.5	20.0	30.8	30.6	17.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	473	1717	663	183	1055	413	287	301	253	335	351	296
V/C Ratio(X)	0.46	0.95	0.77	0.23	0.26	0.16	0.82	0.90	0.73	0.93	0.92	0.57
Avail Cap(c_a), veh/h	473	1717	663	183	1055	413	376	395	332	376	395	332
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	10.4	8.3	65.2	32.4	31.7	73.0	74.0	71.7	71.9	71.8	66.5
Incr Delay (d2), s/veh	0.0	1.6	0.8	0.2	0.6	0.8	8.3	16.1	3.3	25.7	24.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	5.5	3.3	1.6	3.1	1.5	11.2	13.5	8.3	16.5	17.1	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	11.9	9.1	65.5	32.9	32.5	81.3	90.1	75.0	97.6	95.8	67.3
LnGrp LOS	C	B	A	E	C	C	F	F	E	F	F	E
Approach Vol, veh/h		2354			380			690			803	
Approach Delay, s/veh		13.3			36.6			83.1			90.5	
Approach LOS		B			D			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.2	83.8		38.7	53.0	54.0		34.3				
Change Period (Y+Rc), s	4.4	5.7		4.9	4.4	6.0		5.3				
Max Green Setting (Gmax), s	5.6	78.1		38.0	35.4	48.0		38.0				
Max Q Clear Time (g_c+I1), s	15.7	56.7		32.8	15.8	8.7		27.5				
Green Ext Time (p_c), s	0.0	4.5		0.6	0.1	0.5		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			41.5									
HCM 6th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	1570	400	260	200	200	90	460	480	360	470	40
Future Volume (veh/h)	100	1570	400	260	200	200	90	460	480	360	470	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	2083	1841	1841	2083	1841	1870	1870	1796	1870	1870	1870
Adj Flow Rate, veh/h	102	1602	408	283	217	217	134	687	716	375	490	42
Peak Hour Factor	0.98	0.98	0.98	0.92	0.92	0.92	0.67	0.67	0.67	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	2	2	2	2	2	2
Cap, veh/h	184	1187	449	182	1183	452	640	500	406	391	512	44
Arrive On Green	0.14	0.40	0.40	0.03	0.10	0.10	0.19	0.27	0.27	0.22	0.30	0.30
Sat Flow, veh/h	1753	3958	1496	1753	3958	1511	3456	1870	1518	1781	1698	146
Grp Volume(v), veh/h	102	1602	408	283	217	217	134	687	716	375	0	532
Grp Sat Flow(s),veh/h/ln	1753	1979	1496	1753	1979	1511	1728	1870	1518	1781	0	1844
Q Serve(g_s), s	9.8	54.0	46.3	18.7	9.1	24.5	5.9	48.1	48.1	37.5	0.0	51.0
Cycle Q Clear(g_c), s	9.8	54.0	46.3	18.7	9.1	24.5	5.9	48.1	48.1	37.5	0.0	51.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	184	1187	449	182	1183	452	640	500	406	391	0	556
V/C Ratio(X)	0.55	1.35	0.91	1.55	0.18	0.48	0.21	1.37	1.76	0.96	0.00	0.96
Avail Cap(c_a), veh/h	184	1187	449	182	1183	452	640	500	406	392	0	833
HCM Platoon Ratio	1.33	1.33	1.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	73.5	54.1	51.8	86.9	61.0	67.9	62.2	65.9	65.9	69.5	0.0	61.8
Incr Delay (d2), s/veh	1.1	160.0	14.5	272.4	0.3	3.4	0.1	180.9	354.1	34.7	0.0	14.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	51.1	18.6	22.7	4.7	10.5	2.6	48.1	58.6	20.9	0.0	26.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	214.1	66.3	359.3	61.3	71.3	62.2	246.8	420.1	104.2	0.0	75.9
LnGrp LOS	E	F	E	F	E	E	E	F	F	F	A	E
Approach Vol, veh/h		2112			717			1537			907	
Approach Delay, s/veh		178.8			182.0			311.4			87.6	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.1	60.0	37.7	59.1	23.3	59.8	43.9	53.0
Change Period (Y+Rc), s	4.4	6.0	4.4	4.9	4.4	6.0	4.4	4.9
Max Green Setting (Gmax), s	18.6	54.0	6.4	81.3	18.8	53.8	39.6	48.1
Max Q Clear Time (g_c+I1), s	20.7	56.0	7.9	53.0	11.8	26.5	39.5	50.1
Green Ext Time (p_c), s	0.0	0.0	0.0	1.2	0.0	0.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	202.2
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	2450	100	120	470	110	140	280	390	280	170	50
Future Volume (veh/h)	70	2450	100	120	470	110	140	280	390	280	170	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	2083	1841	1811	2049	1811	1575	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	2634	108	130	511	120	152	304	424	304	185	54
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	6	6	6	2	2	2	2	2	2
Cap, veh/h	169	2141	828	102	1925	745	317	762	432	242	253	112
Arrive On Green	0.13	0.72	0.72	0.12	0.99	0.99	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1753	3958	1530	1725	3894	1508	1500	3554	1581	3456	3554	1572
Grp Volume(v), veh/h	75	2634	108	130	511	120	152	304	424	304	185	54
Grp Sat Flow(s),veh/h/ln	1753	1979	1530	1725	1947	1508	1500	1777	1581	1728	1777	1572
Q Serve(g_s), s	7.1	97.4	1.6	10.6	0.4	0.2	17.6	14.7	36.0	12.6	9.2	5.9
Cycle Q Clear(g_c), s	7.1	97.4	1.6	10.6	0.4	0.2	17.6	14.7	36.0	12.6	9.2	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	169	2141	828	102	1925	745	317	762	432	242	253	112
V/C Ratio(X)	0.44	1.23	0.13	1.28	0.27	0.16	0.48	0.40	0.98	1.26	0.73	0.48
Avail Cap(c_a), veh/h	169	2141	828	102	1925	745	317	829	462	242	744	329
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.97	0.97	0.97	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.0	25.2	2.1	79.4	0.5	0.5	74.2	72.5	48.7	83.7	81.9	80.4
Incr Delay (d2), s/veh	0.1	104.0	0.0	180.7	0.3	0.4	0.3	0.1	28.9	144.6	1.5	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	65.3	1.3	9.5	0.2	0.1	7.1	7.1	18.7	10.4	4.2	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.0	129.2	2.1	260.1	0.8	1.0	74.5	72.6	77.7	228.3	83.5	81.6
LnGrp LOS	E	F	A	F	A	A	E	E	E	F	F	F
Approach Vol, veh/h		2817			761			880			543	
Approach Delay, s/veh		122.9			45.1			75.4			164.4	
Approach LOS		F			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	103.4	42.4	19.2	23.4	95.0	17.0	44.6
Change Period (Y+Rc), s	4.4	6.0	4.4	6.4	6.0	* 6	4.4	6.0
Max Green Setting (Gmax), s	10.6	94.0	16.5	37.7	15.6	* 89	12.6	42.0
Max Q Clear Time (g_c+I1), s	12.6	99.4	19.6	11.2	9.1	2.4	14.6	38.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	1.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	107.2
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	2710	70	50	640	50	40	40	80	50	0	30
Future Volume (veh/h)	170	2710	70	50	640	50	40	40	80	50	0	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1811	1811	2049	1739	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	177	2823	73	54	696	54	58	58	116	68	0	41
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.69	0.69	0.69	0.74	0.74	0.74
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	370	2846	1089	54	2098	772	141	132	239	145	286	239
Arrive On Green	0.43	1.00	1.00	0.06	1.00	1.00	0.15	0.15	0.15	0.15	0.00	0.15
Sat Flow, veh/h	1725	3894	1490	1725	3894	1432	726	862	1560	1199	1870	1560
Grp Volume(v), veh/h	177	2823	73	54	696	54	116	0	116	68	0	41
Grp Sat Flow(s),veh/h/ln	1725	1947	1490	1725	1947	1432	1587	0	1560	1199	1870	1560
Q Serve(g_s), s	13.3	0.0	0.0	5.6	0.0	0.0	9.8	0.0	12.2	9.9	0.0	4.1
Cycle Q Clear(g_c), s	13.3	0.0	0.0	5.6	0.0	0.0	11.8	0.0	12.2	21.7	0.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	0.50		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	370	2846	1089	54	2098	772	273	0	239	145	286	239
V/C Ratio(X)	0.48	0.99	0.07	1.01	0.33	0.07	0.43	0.00	0.49	0.47	0.00	0.17
Avail Cap(c_a), veh/h	370	2846	1089	54	2098	772	338	0	303	195	364	303
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.2	0.0	0.0	84.4	0.0	0.0	69.4	0.0	69.8	79.4	0.0	66.3
Incr Delay (d2), s/veh	0.0	3.5	0.0	123.4	0.4	0.2	0.4	0.0	0.6	0.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	1.4	0.0	4.2	0.1	0.0	5.0	0.0	5.0	3.1	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	3.5	0.0	207.8	0.4	0.2	69.8	0.0	70.3	80.3	0.0	66.4
LnGrp LOS	D	A	A	F	A	A	E	A	E	F	A	E
Approach Vol, veh/h		3073			804			232			109	
Approach Delay, s/veh		5.8			14.3			70.1			75.1	
Approach LOS		A			B			E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	137.6		32.4	44.6	103.0		32.4				
Change Period (Y+Rc), s	4.4	6.0		4.9	6.0	* 6		4.9				
Max Green Setting (Gmax), s	5.6	124.1		35.0	32.7	* 97		35.0				
Max Q Clear Time (g_c+I1), s	7.6	2.0		23.7	15.3	2.0		14.2				
Green Ext Time (p_c), s	0.0	112.0		0.1	0.2	8.8		0.6				
Intersection Summary												
HCM 6th Ctrl Delay			12.8									
HCM 6th LOS			B									

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	2820	20	50	700	70	10	10	40	70	10	10
Future Volume (veh/h)	30	2820	20	50	700	70	10	10	40	70	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1739	1811	2049	1739	1870	1870	1870	1870	1870	1796
Adj Flow Rate, veh/h	31	2938	21	52	722	72	13	13	51	119	17	17
Peak Hour Factor	0.96	0.96	0.96	0.97	0.97	0.97	0.78	0.78	0.78	0.59	0.59	0.59
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	190	2685	985	155	2600	955	46	50	143	204	254	200
Arrive On Green	0.22	1.00	1.00	0.09	0.67	0.67	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1725	3894	1429	1725	3894	1431	169	370	1057	1322	1870	1478
Grp Volume(v), veh/h	31	2938	21	52	722	72	77	0	0	119	17	17
Grp Sat Flow(s),veh/h/ln	1725	1947	1429	1725	1947	1431	1596	0	0	1322	1870	1478
Q Serve(g_s), s	2.6	124.1	0.0	5.1	13.6	3.2	0.0	0.0	0.0	10.0	1.4	1.8
Cycle Q Clear(g_c), s	2.6	124.1	0.0	5.1	13.6	3.2	7.6	0.0	0.0	17.6	1.4	1.8
Prop In Lane	1.00		1.00	1.00		1.00	0.17		0.66	1.00		1.00
Lane Grp Cap(c), veh/h	190	2685	985	155	2600	955	240	0	0	204	254	200
V/C Ratio(X)	0.16	1.09	0.02	0.34	0.28	0.08	0.32	0.00	0.00	0.58	0.07	0.08
Avail Cap(c_a), veh/h	190	2685	985	155	2600	955	332	0	0	282	364	287
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.19	0.19	0.19	0.85	0.85	0.85	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.5	0.0	0.0	76.8	12.2	10.5	70.5	0.0	0.0	75.5	67.9	68.0
Incr Delay (d2), s/veh	0.0	43.9	0.0	0.4	0.2	0.1	0.3	0.0	0.0	1.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	16.4	0.0	2.3	5.8	1.0	3.3	0.0	0.0	5.4	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.5	43.9	0.0	77.2	12.4	10.6	70.8	0.0	0.0	76.5	67.9	68.1
LnGrp LOS	E	F	A	E	B	B	E	A	A	E	E	E
Approach Vol, veh/h		2990			846			77			153	
Approach Delay, s/veh		43.8			16.2			70.8			74.6	
Approach LOS		D			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.6	130.1		29.3	24.2	126.5		29.3
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	6.3		4.9
Max Green Setting (Gmax), s	5.6	124.1		35.0	9.2	120.2		35.0
Max Q Clear Time (g_c+I1), s	7.1	126.1		19.6	4.6	15.6		9.6
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	6.7		0.2

Intersection Summary		
HCM 6th Ctrl Delay		39.7
HCM 6th LOS		D

Notes
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	2000	630	60	620	50	140	180	60	20	80	110
Future Volume (veh/h)	250	2000	630	60	620	50	140	180	60	20	80	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1811	1811	2049	1811	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	263	2105	663	65	667	54	161	207	69	24	96	133
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93	0.87	0.87	0.87	0.83	0.83	0.83
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	282	1830	542	134	1986	161	135	302	250	31	193	161
Arrive On Green	0.16	0.62	0.62	0.16	1.00	1.00	0.08	0.16	0.16	0.02	0.10	0.10
Sat Flow, veh/h	1725	2939	870	1725	3639	294	1781	1870	1550	1781	1870	1567
Grp Volume(v), veh/h	263	1349	1419	65	357	364	161	207	69	24	96	133
Grp Sat Flow(s),veh/h/ln	1725	1947	1862	1725	1947	1986	1781	1870	1550	1781	1870	1567
Q Serve(g_s), s	27.1	112.1	112.1	6.2	0.0	0.0	13.6	18.8	5.9	2.4	8.7	15.0
Cycle Q Clear(g_c), s	27.1	112.1	112.1	6.2	0.0	0.0	13.6	18.8	5.9	2.4	8.7	15.0
Prop In Lane	1.00		0.47	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	1212	1160	134	1063	1084	135	302	250	31	193	161
V/C Ratio(X)	0.93	1.11	1.22	0.49	0.34	0.34	1.20	0.69	0.28	0.79	0.50	0.82
Avail Cap(c_a), veh/h	418	1212	1160	134	1063	1084	135	376	312	63	301	252
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.3	33.9	34.0	72.8	0.0	0.0	83.2	71.2	45.9	88.1	76.3	79.1
Incr Delay (d2), s/veh	2.4	51.8	101.6	1.0	0.8	0.8	139.8	2.2	0.2	15.0	0.7	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	65.9	79.1	2.7	0.2	0.2	11.6	9.3	2.3	1.3	4.3	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.7	85.7	135.6	73.7	0.8	0.8	223.0	73.4	46.1	103.1	77.1	85.4
LnGrp LOS	E	F	F	E	A	A	F	E	D	F	E	F
Approach Vol, veh/h		3031			786			437			253	
Approach Delay, s/veh		108.3			6.8			124.2			83.9	
Approach LOS		F			A			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.5	118.1	18.0	23.4	33.8	104.8	7.5	34.0
Change Period (Y+Rc), s	6.5	* 6	4.4	4.9	4.4	6.5	4.4	4.9
Max Green Setting (Gmax), s	5.6	* 1.1E2	13.6	29.0	43.6	73.6	6.4	36.2
Max Q Clear Time (g_c+I1), s	18.2	114.1	15.6	17.0	29.1	2.0	4.4	20.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.3	5.0	0.0	0.8

Intersection Summary		
HCM 6th Ctrl Delay		90.8
HCM 6th LOS		F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1450	200	60	540	30	140	60	30	20	50	20
Future Volume (veh/h)	40	1450	200	60	540	30	140	60	30	20	50	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1811	1781	2016	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	1526	211	65	587	33	161	69	34	22	54	22
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.87	0.87	0.87	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	8	8	8	2	2	2	2	2	2
Cap, veh/h	358	1761	239	342	1943	751	185	243	110	127	177	67
Arrive On Green	0.41	1.00	1.00	0.40	1.00	1.00	0.10	0.10	0.10	0.07	0.07	0.07
Sat Flow, veh/h	1725	3434	467	1697	3830	1480	1781	2339	1059	1781	2487	941
Grp Volume(v), veh/h	42	854	883	65	587	33	161	51	52	22	37	39
Grp Sat Flow(s),veh/h/ln	1725	1947	1954	1697	1915	1480	1781	1777	1622	1781	1777	1652
Q Serve(g_s), s	2.7	0.0	0.0	4.5	0.0	0.0	16.0	4.8	5.3	2.1	3.6	4.0
Cycle Q Clear(g_c), s	2.7	0.0	0.0	4.5	0.0	0.0	16.0	4.8	5.3	2.1	3.6	4.0
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.65	1.00		0.57
Lane Grp Cap(c), veh/h	358	998	1002	342	1943	751	185	185	168	127	126	117
V/C Ratio(X)	0.12	0.86	0.88	0.19	0.30	0.04	0.87	0.28	0.31	0.17	0.30	0.33
Avail Cap(c_a), veh/h	358	998	1002	342	1943	751	238	238	217	337	337	313
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	0.0	0.0	44.2	0.0	0.0	79.5	74.4	74.7	78.6	79.3	79.5
Incr Delay (d2), s/veh	0.0	0.9	1.2	0.1	0.3	0.1	24.4	1.0	1.3	1.0	2.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.3	0.3	1.8	0.1	0.0	8.7	2.3	2.3	1.0	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	0.9	1.2	44.3	0.3	0.1	103.9	75.4	76.0	79.6	81.3	82.0
LnGrp LOS	D	A	A	D	A	A	F	E	E	E	F	F
Approach Vol, veh/h		1779			685			264			98	
Approach Delay, s/veh		2.0			4.5			92.9			81.2	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.7	98.0		17.7	41.7	97.0		23.6
Change Period (Y+Rc), s	4.4	5.7		4.9	4.4	5.7		4.9
Max Green Setting (Gmax), s	9.6	92.3		34.1	10.6	91.3		24.1
Max Q Clear Time (g_c+I1), s	6.5	2.0		6.0	4.7	2.0		18.0
Green Ext Time (p_c), s	0.0	41.2		0.7	0.0	8.0		0.7

Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	820	690	30	20	280	310	20	180	20	420	150	270
Future Volume (veh/h)	820	690	30	20	280	310	20	180	20	420	150	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.95	0.99		0.97	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	2016	1710	1781	2016	1710	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	891	750	33	22	304	337	21	189	21	477	170	307
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95	0.88	0.88	0.88
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	647	1832	679	155	581	208	163	718	591	406	227	409
Arrive On Green	0.51	0.64	0.64	0.05	0.15	0.15	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1697	3830	1419	3291	3830	1370	912	1870	1538	1162	590	1066
Grp Volume(v), veh/h	891	750	33	22	304	337	21	189	21	477	0	477
Grp Sat Flow(s),veh/h/ln	1697	1915	1419	1646	1915	1370	912	1870	1538	1162	0	1656
Q Serve(g_s), s	68.6	17.3	1.6	1.2	13.2	27.3	3.7	12.5	1.5	56.6	0.0	44.9
Cycle Q Clear(g_c), s	68.6	17.3	1.6	1.2	13.2	27.3	48.5	12.5	1.5	69.1	0.0	44.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	647	1832	679	155	581	208	163	718	591	406	0	636
V/C Ratio(X)	1.38	0.41	0.05	0.14	0.52	1.62	0.13	0.26	0.04	1.18	0.00	0.75
Avail Cap(c_a), veh/h	647	1832	679	179	581	208	163	718	591	406	0	636
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.4	20.2	17.4	82.3	70.4	76.3	69.0	38.0	34.6	64.5	0.0	48.0
Incr Delay (d2), s/veh	176.4	0.4	0.1	0.1	3.2	299.8	0.1	0.1	0.0	102.3	0.0	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	57.8	6.9	0.5	0.5	6.7	26.8	0.9	5.9	0.6	30.6	0.0	19.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	220.7	20.7	17.5	82.4	73.5	376.2	69.1	38.1	34.6	166.8	0.0	52.4
LnGrp LOS	F	C	B	F	E	F	E	D	C	F	A	D
Approach Vol, veh/h		1674			663			231			954	
Approach Delay, s/veh		127.1			227.7			40.6			109.6	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	14.2	91.8	74.0	73.0	33.0	74.0
Change Period (Y+Rc), s	5.7	* 5.7	4.9	4.4	5.7	4.9
Max Green Setting (Gmax), s	9.8	* 86	69.1	68.6	27.3	69.1
Max Q Clear Time (g_c+I1), s	13.2	19.3	71.1	70.6	29.3	50.5
Green Ext Time (p_c), s	0.0	7.7	0.0	0.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	135.6
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1270	10	370	540	830	20	350	320	1070	160	20
Future Volume (veh/h)	50	1270	10	370	540	830	20	350	320	1070	160	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.90	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1500	2016	1781	1500	2016	1781	1550	1841	1841	1811	1811	1739
Adj Flow Rate, veh/h	52	1323	10	402	587	902	22	380	348	1163	174	22
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	4	4	4	6	6	6
Cap, veh/h	62	1428	11	1279	3116	1198	26	1061	298	718	1420	575
Arrive On Green	0.01	0.12	0.12	0.77	1.00	1.00	0.02	0.21	0.21	0.21	0.41	0.41
Sat Flow, veh/h	2772	3895	29	2772	3830	1472	1476	5025	1412	3346	3441	1392
Grp Volume(v), veh/h	52	650	683	402	587	902	22	380	348	1163	174	22
Grp Sat Flow(s),veh/h/ln	1386	1915	2009	1386	1915	1472	1476	1675	1412	1673	1721	1392
Q Serve(g_s), s	3.4	60.5	60.5	7.9	0.0	0.0	2.7	11.6	38.0	38.6	5.6	1.7
Cycle Q Clear(g_c), s	3.4	60.5	60.5	7.9	0.0	0.0	2.7	11.6	38.0	38.6	5.6	1.7
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	702	737	1279	3116	1198	26	1061	298	718	1420	575
V/C Ratio(X)	0.84	0.93	0.93	0.31	0.19	0.75	0.86	0.36	1.17	1.62	0.12	0.04
Avail Cap(c_a), veh/h	62	702	737	1279	3116	1198	57	1061	298	718	1420	575
HCM Platoon Ratio	0.33	0.33	0.33	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	0.35	0.35	0.35	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	89.0	76.7	76.7	12.0	0.0	0.0	88.2	60.6	71.0	70.7	32.7	31.5
Incr Delay (d2), s/veh	44.8	14.5	14.1	0.0	0.0	1.6	24.8	0.4	105.6	285.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	34.2	35.8	2.2	0.0	0.5	1.2	5.0	22.4	44.9	2.4	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	133.8	91.2	90.8	12.0	0.0	1.6	113.0	60.9	176.6	356.4	32.8	31.6
LnGrp LOS	F	F	F	B	A	A	F	E	F	F	C	C
Approach Vol, veh/h		1385			1891			750			1359	
Approach Delay, s/veh		92.6			3.3			116.1			309.7	
Approach LOS		F			A			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	71.8	7.5	80.0	8.4	153.4	44.3	43.2				
Change Period (Y+Rc), s	5.7	* 5.8	4.4	5.7	4.4	5.7	5.7	* 5.2				
Max Green Setting (Gmax), s	17.6	* 66	7.0	69.1	4.0	79.7	38.6	* 38				
Max Q Clear Time (g_c+I1), s	9.9	62.5	4.7	7.6	5.4	2.0	40.6	40.0				
Green Ext Time (p_c), s	0.5	3.0	0.0	1.9	0.0	39.8	0.0	0.0				

Intersection Summary		
HCM 6th Ctrl Delay		119.3
HCM 6th LOS		F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	2190	120	10	1820	10	120	10	10	10	10	220
Future Volume (veh/h)	200	2190	120	10	1820	10	120	10	10	10	10	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1500	2016	1781	1811	2049	1811	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	204	2235	122	11	1978	11	140	12	12	11	11	247
Peak Hour Factor	0.98	0.98	0.98	0.92	0.92	0.92	0.86	0.86	0.86	0.89	0.89	0.89
Percent Heavy Veh, %	8	8	8	6	6	6	2	2	2	2	2	2
Cap, veh/h	224	2344	898	16	1826	10	154	75	75	327	349	287
Arrive On Green	0.31	1.00	1.00	0.02	0.92	0.92	0.09	0.09	0.09	0.18	0.19	0.19
Sat Flow, veh/h	1429	3830	1467	1725	3969	22	1781	844	844	1781	1870	1538
Grp Volume(v), veh/h	204	2235	122	11	969	1020	140	0	24	11	11	247
Grp Sat Flow(s),veh/h/ln	1429	1915	1467	1725	1947	2045	1781	0	1687	1781	1870	1538
Q Serve(g_s), s	24.7	0.0	0.0	1.1	82.8	82.8	14.0	0.0	2.4	0.9	0.9	28.0
Cycle Q Clear(g_c), s	24.7	0.0	0.0	1.1	82.8	82.8	14.0	0.0	2.4	0.9	0.9	28.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	224	2344	898	16	896	941	154	0	150	327	349	287
V/C Ratio(X)	0.91	0.95	0.14	0.68	1.08	1.08	0.91	0.00	0.16	0.03	0.03	0.86
Avail Cap(c_a), veh/h	224	2344	898	38	896	941	154	0	457	327	405	333
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.74	0.74	0.74	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.7	0.0	0.0	88.0	7.2	7.2	81.5	0.0	75.7	60.3	59.9	71.0
Incr Delay (d2), s/veh	5.6	1.3	0.0	12.8	51.1	51.5	45.2	0.0	0.2	0.0	0.0	16.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.4	0.0	0.6	16.1	17.0	8.4	0.0	1.0	0.4	0.4	12.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	1.3	0.0	100.8	58.3	58.7	126.7	0.0	75.9	60.3	59.9	87.3
LnGrp LOS	E	A	A	F	F	F	F	A	E	E	E	F
Approach Vol, veh/h		2561			2000			164			269	
Approach Delay, s/veh		6.4			58.7			119.3			85.0	
Approach LOS		A			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	115.5	20.0	38.4	33.5	88.1	37.5	21.0
Change Period (Y+Rc), s	4.4	5.3	4.4	4.9	5.3	* 5.3	4.4	4.9
Max Green Setting (Gmax), s	4.0	102.4	15.6	39.0	23.6	* 83	5.9	48.7
Max Q Clear Time (g_c+I1), s	3.1	2.0	16.0	30.0	26.7	84.8	2.9	4.4
Green Ext Time (p_c), s	0.0	76.7	0.0	0.3	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	2050	50	160	1140	130	70	230	80	130	160	20
Future Volume (veh/h)	40	2050	50	160	1140	130	70	230	80	130	160	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1811	1811	2049	1811	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	2092	51	170	1213	138	83	274	95	159	195	24
Peak Hour Factor	0.98	0.98	0.98	0.94	0.94	0.94	0.84	0.84	0.84	0.82	0.82	0.82
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	230	1719	42	266	1631	185	278	205	71	247	259	211
Arrive On Green	0.27	0.89	0.89	0.31	0.93	0.93	0.16	0.16	0.16	0.14	0.14	0.14
Sat Flow, veh/h	1725	3881	94	1725	3511	398	1781	1313	455	1781	1870	1521
Grp Volume(v), veh/h	41	1044	1099	170	671	680	83	0	369	159	195	24
Grp Sat Flow(s),veh/h/ln	1725	1947	2029	1725	1947	1963	1781	0	1768	1781	1870	1521
Q Serve(g_s), s	3.3	79.7	79.7	15.3	14.2	14.5	7.4	0.0	28.1	15.2	18.0	2.5
Cycle Q Clear(g_c), s	3.3	79.7	79.7	15.3	14.2	14.5	7.4	0.0	28.1	15.2	18.0	2.5
Prop In Lane	1.00		0.05	1.00		0.20	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	230	862	898	266	904	912	278	0	276	247	259	211
V/C Ratio(X)	0.18	1.21	1.22	0.64	0.74	0.75	0.30	0.00	1.34	0.64	0.75	0.11
Avail Cap(c_a), veh/h	230	862	898	266	904	912	278	0	276	367	386	313
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.43	0.81	0.81	0.81	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.5	10.3	10.3	57.9	3.9	3.9	67.2	0.0	76.0	73.3	74.6	67.9
Incr Delay (d2), s/veh	0.1	99.9	105.1	3.2	4.5	4.5	0.2	0.0	174.0	1.1	1.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	28.7	31.2	6.1	3.3	3.4	3.5	0.0	26.3	7.1	8.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	110.2	115.4	61.1	8.4	8.5	67.4	0.0	250.0	74.4	76.4	67.9
LnGrp LOS	E	F	F	E	A	A	E	A	F	E	E	E
Approach Vol, veh/h		2184			1521			452			378	
Approach Delay, s/veh		111.8			14.3			216.5			75.0	
Approach LOS		F			B			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.2	85.0		29.8	28.4	88.8		33.0
Change Period (Y+Rc), s	4.4	5.3		4.9	4.4	5.2		4.9
Max Green Setting (Gmax), s	15.6	79.7		37.1	11.8	83.6		28.1
Max Q Clear Time (g_c+I1), s	17.3	81.7		20.0	5.3	16.5		30.1
Green Ext Time (p_c), s	0.0	0.0		0.9	0.0	30.5		0.0

Intersection Summary		
HCM 6th Ctrl Delay		86.5
HCM 6th LOS		F

Notes
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1870	240	30	1280	20	200	50	20	10	20	20
Future Volume (veh/h)	40	1870	240	30	1280	20	200	50	20	10	20	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1811	1525	2049	1811	1870	1870	1796	1870	1870	1870
Adj Flow Rate, veh/h	41	1928	247	33	1391	22	215	54	22	13	26	26
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.93	0.93	0.93	0.78	0.78	0.78
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	103	2140	267	52	2327	37	136	25	398	24	46	31
Arrive On Green	0.12	1.00	1.00	0.07	1.00	1.00	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1725	3471	433	1452	3923	62	374	94	1488	0	171	114
Grp Volume(v), veh/h	41	1060	1115	33	690	723	269	0	22	65	0	0
Grp Sat Flow(s),veh/h/ln	1725	1947	1957	1452	1947	2038	468	0	1488	285	0	0
Q Serve(g_s), s	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.0	0.0	0.0	4.0	0.0	0.0	48.2	0.0	2.0	48.2	0.0	0.0
Prop In Lane	1.00		0.22	1.00		0.03	0.80		1.00	0.20		0.40
Lane Grp Cap(c), veh/h	103	1201	1207	52	1155	1209	161	0	398	100	0	0
V/C Ratio(X)	0.40	0.88	0.92	0.64	0.60	0.60	1.67	0.00	0.06	0.65	0.00	0.00
Avail Cap(c_a), veh/h	103	1201	1207	52	1155	1209	161	0	398	100	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	76.2	0.0	0.0	82.5	0.0	0.0	71.3	0.0	49.0	54.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	1.0	1.6	17.2	2.1	2.0	326.0	0.0	0.0	10.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.3	0.5	1.7	0.7	0.7	22.2	0.0	0.8	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.3	1.0	1.6	99.7	2.1	2.0	397.3	0.0	49.0	65.5	0.0	0.0
LnGrp LOS	E	A	A	F	A	A	F	A	D	E	A	A
Approach Vol, veh/h		2216			1446			291			65	
Approach Delay, s/veh		2.7			4.3			370.9			65.5	
Approach LOS		A			A			F			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	116.1		53.1	15.2	111.7		53.1				
Change Period (Y+Rc), s	4.4	5.1		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	6.4	111.0		48.2	10.8	106.8		48.2				
Max Q Clear Time (g_c+I1), s	6.0	2.0		50.2	6.0	2.0		50.2				
Green Ext Time (p_c), s	0.0	60.2		0.0	0.0	20.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			30.9									
HCM 6th LOS			C									
Notes												

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1560	10	40	920	190	10	20	50	80	10	30
Future Volume (veh/h)	20	1560	10	40	920	190	10	20	50	80	10	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	2049	1811	1525	2049	1811	1870	1870	1796	1870	1870	1796
Adj Flow Rate, veh/h	21	1625	10	43	989	204	13	26	65	105	13	39
Peak Hour Factor	0.96	0.96	0.96	0.93	0.93	0.93	0.77	0.77	0.77	0.76	0.76	0.76
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	73	2530	16	103	2130	438	27	42	320	38	1	320
Arrive On Green	0.08	1.00	1.00	0.14	1.00	1.00	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1725	3967	24	1452	3198	658	0	196	1513	0	5	1513
Grp Volume(v), veh/h	21	797	838	43	601	592	39	0	65	118	0	39
Grp Sat Flow(s),veh/h/ln	1725	1947	2044	1452	1947	1909	196	0	1513	5	0	1513
Q Serve(g_s), s	2.1	0.0	0.0	4.9	0.0	0.0	0.0	0.0	6.4	0.0	0.0	3.8
Cycle Q Clear(g_c), s	2.1	0.0	0.0	4.9	0.0	0.0	38.1	0.0	6.4	38.1	0.0	3.8
Prop In Lane	1.00		0.01	1.00		0.34	0.33		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	73	1242	1304	103	1297	1272	68	0	320	39	0	320
V/C Ratio(X)	0.29	0.64	0.64	0.42	0.46	0.47	0.57	0.00	0.20	3.03	0.00	0.12
Avail Cap(c_a), veh/h	73	1242	1304	103	1297	1272	68	0	320	39	0	320
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.42	0.73	0.73	0.73	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	79.9	0.0	0.0	73.8	0.0	0.0	60.4	0.0	58.4	88.9	0.0	57.4
Incr Delay (d2), s/veh	0.3	1.1	1.0	0.7	0.9	0.9	7.2	0.0	0.1	980.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.4	0.4	1.8	0.3	0.3	1.6	0.0	2.5	12.4	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.2	1.1	1.0	74.5	0.9	0.9	67.6	0.0	58.6	1069.1	0.0	57.5
LnGrp LOS	F	A	A	E	A	A	E	A	E	F	A	E
Approach Vol, veh/h		1656			1236			104			157	
Approach Delay, s/veh		2.1			3.4			61.9			817.8	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.2	119.8		43.0	12.0	125.0		43.0
Change Period (Y+Rc), s	4.4	5.0		4.9	4.4	5.1		4.9
Max Green Setting (Gmax), s	12.8	114.8		38.1	7.6	119.9		38.1
Max Q Clear Time (g_c+I1), s	6.9	2.0		40.1	4.1	2.0		40.1
Green Ext Time (p_c), s	0.0	50.7		0.0	0.0	27.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.2
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1130	220	460	750	140	330	1070	490	260	680	160
Future Volume (veh/h)	210	1130	220	460	750	140	330	1070	490	260	680	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1525	2049	1811	1575	2116	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	223	1202	234	500	815	152	359	1163	533	265	694	163
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	2	2	2	3	3	3	3	3	3
Cap, veh/h	373	967	544	554	1235	610	396	1254	546	298	1178	514
Arrive On Green	0.18	0.33	0.33	0.06	0.10	0.10	0.23	0.71	0.71	0.17	0.67	0.67
Sat Flow, veh/h	2818	3894	1478	2910	4021	1538	3428	3526	1535	3428	3526	1539
Grp Volume(v), veh/h	223	1202	234	500	815	152	359	1163	533	265	694	163
Grp Sat Flow(s),veh/h/ln	1409	1947	1478	1455	2011	1538	1714	1763	1535	1714	1763	1539
Q Serve(g_s), s	13.1	44.7	11.8	30.7	35.1	0.0	18.3	50.4	59.1	13.6	19.4	5.7
Cycle Q Clear(g_c), s	13.1	44.7	11.8	30.7	35.1	0.0	18.3	50.4	59.1	13.6	19.4	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	373	967	544	554	1235	610	396	1254	546	298	1178	514
V/C Ratio(X)	0.60	1.24	0.43	0.90	0.66	0.25	0.91	0.93	0.98	0.89	0.59	0.32
Avail Cap(c_a), veh/h	373	967	544	554	1235	610	549	1279	557	316	1178	514
HCM Platoon Ratio	1.33	1.33	1.33	0.33	0.33	0.33	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.81	0.81	0.81	0.78	0.78	0.78	0.64	0.64	0.64	0.82	0.82	0.82
Uniform Delay (d), s/veh	69.7	60.3	17.0	82.7	71.8	48.9	68.3	24.0	25.3	73.5	23.1	10.8
Incr Delay (d2), s/veh	1.5	116.6	2.0	14.6	2.2	0.8	8.5	8.0	24.5	19.9	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	36.6	3.9	13.3	19.5	6.2	7.7	14.7	17.3	6.3	6.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.2	176.9	19.0	97.3	74.0	49.7	76.8	32.0	49.8	93.4	23.6	11.0
LnGrp LOS	E	F	B	F	E	D	E	C	D	F	C	B
Approach Vol, veh/h		1659			1467			2055			1122	
Approach Delay, s/veh		140.4			79.4			44.5			38.3	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	38.6	50.0	25.2	66.2	28.2	60.4	21.7	69.7
Change Period (Y+Rc), s	4.4	5.3	4.4	6.0	4.4	5.1	6.0	* 5.7
Max Green Setting (Gmax), s	33.6	44.7	28.8	52.8	23.2	55.3	16.6	* 65
Max Q Clear Time (g_c+I1), s	32.7	46.7	20.3	21.4	15.1	37.1	15.6	61.1
Green Ext Time (p_c), s	0.1	0.0	0.5	4.8	0.2	9.6	0.1	2.9

Intersection Summary		
HCM 6th Ctrl Delay		76.8
HCM 6th LOS		E

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	1550	110	1270	1050	570	340	580	1380	520	410	70
Future Volume (veh/h)	150	1550	110	1270	1050	570	340	580	1380	520	410	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.94	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	2116	1870	1563	2100	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	156	1615	115	1380	1141	620	382	652	1551	559	441	75
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	344	1359	97	908	2226	758	447	527	843	519	485	381
Arrive On Green	0.12	0.19	0.19	0.53	0.65	0.65	0.13	0.28	0.28	0.10	0.26	0.26
Sat Flow, veh/h	2910	6970	496	2887	5732	1534	3563	1870	2995	5023	1870	1470
Grp Volume(v), veh/h	156	1265	465	1380	1141	620	382	652	1551	559	441	75
Grp Sat Flow(s),veh/h/ln	1455	1820	2006	1444	1911	1534	1781	1870	1497	1674	1870	1470
Q Serve(g_s), s	9.0	35.1	35.1	56.6	18.9	20.0	18.9	50.7	24.7	18.6	41.1	7.2
Cycle Q Clear(g_c), s	9.0	35.1	35.1	56.6	18.9	20.0	18.9	50.7	24.7	18.6	41.1	7.2
Prop In Lane	1.00		0.25	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	1065	391	908	2226	758	447	527	843	519	485	381
V/C Ratio(X)	0.45	1.19	1.19	1.52	0.51	0.82	0.85	1.24	1.84	1.08	0.91	0.20
Avail Cap(c_a), veh/h	352	1065	391	908	2226	758	447	527	843	519	537	422
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.32	0.32	0.32	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	73.9	72.4	72.5	42.7	22.7	17.8	77.1	64.7	15.3	80.7	64.6	52.0
Incr Delay (d2), s/veh	0.0	85.6	87.5	235.9	0.3	3.3	14.2	122.5	382.1	61.6	19.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	24.8	27.5	47.5	7.1	10.9	9.5	41.8	53.1	11.0	22.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.0	158.0	160.0	278.6	22.9	21.1	91.3	187.1	397.5	142.3	83.8	52.4
LnGrp LOS	E	F	F	F	C	C	F	F	F	F	F	D
Approach Vol, veh/h		1886			3141			2585			1075	
Approach Delay, s/veh		151.5			134.9			299.2			112.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	61.0	40.0	27.0	52.0	26.2	74.8	23.0	56.0
Change Period (Y+Rc), s	4.4	4.9	4.4	5.3	4.9	* 4.9	4.4	5.3
Max Green Setting (Gmax), s	56.6	35.1	17.6	51.7	21.8	* 70	18.6	50.7
Max Q Clear Time (g_c+I1), s	58.6	37.1	20.9	43.1	11.0	22.0	20.6	52.7
Green Ext Time (p_c), s	0.0	0.0	0.0	2.8	0.2	38.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	184.6
HCM 6th LOS	F

Notes
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2310	800	0	1510	320	0	0	0	40	0	1490
Future Volume (veh/h)	0	2310	800	0	1510	320	0	0	0	40	0	1490
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1856	2100	1856	0	2100	1856				1870	0	1870
Adj Flow Rate, veh/h	0	2381	0	0	1641	348				43	0	1602
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92				0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	0	3	3				2	0	2
Cap, veh/h	974	5114		0	1762	537				160	0	1667
Arrive On Green	0.00	1.00	0.00	0.00	0.61	0.61				0.05	0.00	0.05
Sat Flow, veh/h	1767	5732	2768	0	5921	1510				3456	0	2790
Grp Volume(v), veh/h	0	2381	0	0	1641	348				43	0	1602
Grp Sat Flow(s),veh/h/ln	1767	1911	1384	0	1911	1510				1728	0	1395
Q Serve(g_s), s	0.0	0.0	0.0	0.0	46.5	27.7				2.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	46.5	27.7				2.2	0.0	0.0
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	974	5114		0	1762	537				160	0	1667
V/C Ratio(X)	0.00	0.47		0.00	0.93	0.65				0.27	0.00	0.96
Avail Cap(c_a), veh/h	974	5114		0	1911	576				305	0	1785
HCM Platoon Ratio	2.00	2.00	2.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.00	0.00	0.73	0.73				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	33.0	25.9				82.9	0.0	34.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	8.0	4.4				0.3	0.0	12.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	18.0	9.1				1.0	0.0	42.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	41.0	30.3				83.2	0.0	46.8
LnGrp LOS	A	A		A	D	C				F	A	D
Approach Vol, veh/h		2381	A		1989						1645	
Approach Delay, s/veh		0.0			39.1						47.7	
Approach LOS		A			D						D	
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		166.6		13.4	105.3	61.3						
Change Period (Y+Rc), s		6.0		5.1	6.0	* 6						
Max Green Setting (Gmax), s		153.0		15.9	88.3	* 60						
Max Q Clear Time (g_c+I1), s		2.0		4.2	0.0	48.5						
Green Ext Time (p_c), s		27.5		4.2	0.0	6.9						
Intersection Summary												
HCM 6th Ctrl Delay			26.0									
HCM 6th LOS			C									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1210	1440	0	1510	790	90	0	1490	0	0	0
Future Volume (veh/h)	0	1210	1440	0	1510	790	90	0	1490	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1856	1856	1856	1856	1856	1870	0	1870			
Adj Flow Rate, veh/h	0	1222	1455	0	1641	0	99	0	1637			
Peak Hour Factor	0.99	0.99	0.99	0.92	0.92	0.92	0.91	0.91	0.91			
Percent Heavy Veh, %	0	3	3	3	3	3	2	0	2			
Cap, veh/h	0	1295	498	1022	4394		245	0	1812			
Arrive On Green	0.00	0.34	0.34	0.00	0.87	0.00	0.07	0.00	0.07			
Sat Flow, veh/h	0	5233	1512	1767	5066	1572	3456	0	2790			
Grp Volume(v), veh/h	0	1222	1455	0	1641	0	99	0	1637			
Grp Sat Flow(s),veh/h/ln	0	1689	1512	1767	1689	1572	1728	0	1395			
Q Serve(g_s), s	0.0	42.2	46.0	0.0	11.4	0.0	4.9	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	42.2	46.0	0.0	11.4	0.0	4.9	0.0	0.0			
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	1295	498	1022	4394		245	0	1812			
V/C Ratio(X)	0.00	0.94	2.92	0.00	0.37		0.40	0.00	0.90			
Avail Cap(c_a), veh/h	0	1295	498	1022	4394		1572	0	2883			
HCM Platoon Ratio	1.00	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.88	0.88	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	58.2	49.9	0.0	2.3	0.0	80.0	0.0	26.8			
Incr Delay (d2), s/veh	0.0	13.4	869.2	0.0	0.2	0.0	0.4	0.0	1.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	18.9	143.1	0.0	2.9	0.0	2.2	0.0	41.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	71.6	919.1	0.0	2.6	0.0	80.4	0.0	28.6			
LnGrp LOS	A	E	F	A	A		F	A	C			
Approach Vol, veh/h		2677			1641	A		1736				
Approach Delay, s/veh		532.3			2.6			31.5				
Approach LOS		F			A			C				

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	110.1	52.0	17.9	162.1
Change Period (Y+Rc), s	6.0	* 6	5.1	6.0
Max Green Setting (Gmax), s	36.3	* 46	81.9	87.0
Max Q Clear Time (g_c+I1), s	0.0	48.0	6.9	13.4
Green Ext Time (p_c), s	0.0	0.0	5.8	11.5

Intersection Summary	
HCM 6th Ctrl Delay	245.1
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	20	10	560	20	380	120	1690	630	250	1010	0
Future Volume (veh/h)	0	20	10	560	20	380	120	1690	630	250	1010	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1870	1870	1563	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	40	20	615	0	433	126	1779	663	272	1098	0
Peak Hour Factor	0.50	0.50	0.50	0.91	0.91	0.91	0.95	0.95	0.95	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	0	67	53	661	0	574	140	2175	1247	210	2958	918
Arrive On Green	0.00	0.04	0.04	0.19	0.00	0.19	0.19	1.00	1.00	0.06	0.58	0.00
Sat Flow, veh/h	0	1870	1482	3563	0	3092	1488	3526	1548	3428	5066	1572
Grp Volume(v), veh/h	0	40	20	615	0	433	126	1779	663	272	1098	0
Grp Sat Flow(s),veh/h/ln	0	1870	1482	1781	0	1546	1488	1763	1548	1714	1689	1572
Q Serve(g_s), s	0.0	3.8	2.4	30.6	0.0	23.9	14.9	0.0	0.0	11.0	20.7	0.0
Cycle Q Clear(g_c), s	0.0	3.8	2.4	30.6	0.0	23.9	14.9	0.0	0.0	11.0	20.7	0.0
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	67	53	661	0	574	140	2175	1247	210	2958	918
V/C Ratio(X)	0.00	0.60	0.38	0.93	0.00	0.75	0.90	0.82	0.53	1.30	0.37	0.00
Avail Cap(c_a), veh/h	0	405	321	693	0	601	228	2175	1247	210	2958	918
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	85.5	84.8	72.2	0.0	69.4	72.2	0.0	0.0	84.5	19.9	0.0
Incr Delay (d2), s/veh	0.0	3.1	1.6	18.3	0.0	4.5	15.1	3.6	1.6	164.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.9	0.9	15.4	0.0	9.7	5.7	1.1	0.6	9.6	8.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	88.6	86.4	90.5	0.0	73.9	87.3	3.6	1.6	249.2	20.3	0.0
LnGrp LOS	A	F	F	F	A	E	F	A	A	F	C	A
Approach Vol, veh/h		60			1048			2568			1370	
Approach Delay, s/veh		87.9			83.6			7.2			65.7	
Approach LOS		F			F			A			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	117.2		10.5	21.0	111.2		37.4				
Change Period (Y+Rc), s	4.0	6.1		4.0	4.0	* 6.1		4.0				
Max Green Setting (Gmax), s	11.0	76.9		39.0	27.6	* 61		35.0				
Max Q Clear Time (g_c+I1), s	13.0	2.0		5.8	16.9	22.7		32.6				
Green Ext Time (p_c), s	0.0	32.1		0.1	0.1	8.7		0.8				
Intersection Summary												
HCM 6th Ctrl Delay			39.9									
HCM 6th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1520	1250	140	20	810	30	100	40	10	40	10	1780
Future Volume (veh/h)	1520	1250	140	20	810	30	100	40	10	40	10	1780
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	2033	1796	1525	2049	1811	1870	1870	1870	1575	1870	1870
Adj Flow Rate, veh/h	1583	1302	146	22	880	33	141	56	14	30	36	2070
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.71	0.71	0.71	0.86	0.86	0.86
Percent Heavy Veh, %	7	7	7	6	6	6	2	2	2	2	2	2
Cap, veh/h	1617	3665	989	288	1585	426	166	135	34	33	42	1614
Arrive On Green	0.49	0.66	0.66	0.10	0.28	0.28	0.09	0.09	0.09	0.02	0.02	0.02
Sat Flow, veh/h	3319	5549	1498	2818	5595	1503	1781	1443	361	1500	1870	3127
Grp Volume(v), veh/h	1583	1302	146	22	880	33	141	0	70	30	36	2070
Grp Sat Flow(s),veh/h/ln	1659	1850	1498	1409	1865	1503	1781	0	1804	1500	1870	1564
Q Serve(g_s), s	84.2	18.7	6.6	1.3	24.1	2.9	14.0	0.0	6.6	3.6	3.5	4.0
Cycle Q Clear(g_c), s	84.2	18.7	6.6	1.3	24.1	2.9	14.0	0.0	6.6	3.6	3.5	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	1617	3665	989	288	1585	426	166	0	168	33	42	1614
V/C Ratio(X)	0.98	0.36	0.15	0.08	0.56	0.08	0.85	0.00	0.42	0.90	0.87	1.28
Avail Cap(c_a), veh/h	1652	3665	989	288	1585	426	317	0	321	33	42	1614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	13.5	11.5	73.1	54.9	47.3	80.4	0.0	77.0	87.8	87.7	44.2
Incr Delay (d2), s/veh	17.0	0.3	0.3	0.0	1.4	0.3	4.6	0.0	0.6	114.8	88.8	131.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	36.9	7.6	2.2	0.5	11.4	1.1	6.7	0.0	3.1	2.5	2.7	65.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.2	13.8	11.8	73.1	56.2	47.6	84.9	0.0	77.6	202.6	176.6	176.0
LnGrp LOS	E	B	B	E	E	D	F	A	E	F	F	F
Approach Vol, veh/h		3031			935			211			2136	
Approach Delay, s/veh		39.0			56.3			82.5			176.4	
Approach LOS		D			E			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	34.1	124.7		9.5	92.1	56.7		21.7
Change Period (Y+Rc), s	5.7	* 5.8		5.5	4.4	5.7		4.9
Max Green Setting (Gmax), s	4.5	* 1.2E2		4.0	89.6	33.9		32.0
Max Q Clear Time (g_c+I1), s	13.3	20.7		6.0	86.2	26.1		16.0
Green Ext Time (p_c), s	0.0	30.1		0.0	1.6	5.1		0.4

Intersection Summary	
HCM 6th Ctrl Delay	89.5
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	1110	50	50	650	30	120	30	70	50	20	90
Future Volume (veh/h)	90	1110	50	50	650	30	120	30	70	50	20	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1525	2049	1811	1525	2049	1811	1870	1870	1796	1870	1870	1870
Adj Flow Rate, veh/h	94	1156	52	57	739	34	128	32	74	65	26	117
Peak Hour Factor	0.96	0.96	0.96	0.88	0.88	0.88	0.94	0.94	0.94	0.77	0.77	0.77
Percent Heavy Veh, %	6	6	6	6	6	6	2	2	2	2	2	2
Cap, veh/h	124	2436	110	196	2983	137	36	1	498	34	8	519
Arrive On Green	0.09	0.89	0.89	0.27	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	2818	5481	246	1452	5479	251	0	3	1516	0	25	1579
Grp Volume(v), veh/h	94	786	422	57	502	271	160	0	74	91	0	117
Grp Sat Flow(s),veh/h/ln	1409	1865	1998	1452	1865	2000	3	0	1516	25	0	1579
Q Serve(g_s), s	5.9	7.3	7.3	5.6	0.0	0.0	0.0	0.0	6.2	0.0	0.0	9.7
Cycle Q Clear(g_c), s	5.9	7.3	7.3	5.6	0.0	0.0	59.1	0.0	6.2	59.1	0.0	9.7
Prop In Lane	1.00		0.12	1.00		0.13	0.80		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	124	1658	888	196	2031	1089	37	0	498	43	0	519
V/C Ratio(X)	0.76	0.47	0.47	0.29	0.25	0.25	4.32	0.00	0.15	2.14	0.00	0.23
Avail Cap(c_a), veh/h	322	1658	888	207	2031	1089	37	0	498	43	0	519
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	81.2	6.0	6.0	58.9	0.0	0.0	88.4	0.0	42.7	78.5	0.0	43.9
Incr Delay (d2), s/veh	3.4	0.9	1.7	0.3	0.3	0.5	1555.5	0.0	0.1	581.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.2	2.5	2.0	0.1	0.2	17.7	0.0	2.4	8.9	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.6	6.9	7.7	59.2	0.3	0.5	1643.8	0.0	42.8	659.7	0.0	44.2
LnGrp LOS	F	A	A	E	A	A	F	A	D	F	A	D
Approach Vol, veh/h		1302			830			234			208	
Approach Delay, s/veh		12.8			4.4			1137.5			313.5	
Approach LOS		B			A			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	86.0		64.0	12.3	103.7		64.0				
Change Period (Y+Rc), s	5.7	* 6		4.9	4.4	5.7		4.9				
Max Green Setting (Gmax), s	25.6	* 80		59.1	20.6	85.3		59.1				
Max Q Clear Time (g_c+I1), s	7.6	9.3		61.1	7.9	2.0		61.1				
Green Ext Time (p_c), s	0.0	20.9		0.0	0.1	12.2		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		136.6
HCM 6th LOS		F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	1180	680	60	90	60
Future Volume (veh/h)	40	1180	680	60	90	60
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1811	2049	2033	1796	1870	1870
Adj Flow Rate, veh/h	43	1283	723	64	129	86
Peak Hour Factor	0.92	0.92	0.94	0.94	0.70	0.70
Percent Heavy Veh, %	6	6	7	7	2	2
Cap, veh/h	642	4787	2516	674	150	134
Arrive On Green	0.74	1.00	0.15	0.15	0.08	0.08
Sat Flow, veh/h	1725	5779	5732	1487	1781	1585
Grp Volume(v), veh/h	43	1283	723	64	129	86
Grp Sat Flow(s),veh/h/ln	1725	1865	1850	1487	1781	1585
Q Serve(g_s), s	1.2	0.0	20.8	6.7	12.9	9.5
Cycle Q Clear(g_c), s	1.2	0.0	20.8	6.7	12.9	9.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	642	4787	2516	674	150	134
V/C Ratio(X)	0.07	0.27	0.29	0.09	0.86	0.64
Avail Cap(c_a), veh/h	642	4787	2516	674	575	512
HCM Platoon Ratio	2.00	2.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.98	0.98	1.00	1.00
Uniform Delay (d), s/veh	14.6	0.0	50.7	44.7	81.3	79.8
Incr Delay (d2), s/veh	0.0	0.1	0.3	0.3	5.4	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	10.4	2.6	6.2	8.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.6	0.1	51.0	45.0	86.7	81.7
LnGrp LOS	B	A	D	D	F	F
Approach Vol, veh/h		1326	787		215	
Approach Delay, s/veh		0.6	50.5		84.7	
Approach LOS		A	D		F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		159.9		20.1	72.9	87.0
Change Period (Y+Rc), s		5.9		4.9	5.9	* 5.4
Max Green Setting (Gmax), s		111.1		58.1	25.6	* 82
Max Q Clear Time (g_c+I1), s		2.0		14.9	3.2	22.8
Green Ext Time (p_c), s		37.9		0.3	0.0	18.1

Intersection Summary		
HCM 6th Ctrl Delay		25.2
HCM 6th LOS		C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	60	1230	690	70	80	80
Future Volume (veh/h)	60	1230	690	70	80	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1796	2033	2033	1796	1870	1870
Adj Flow Rate, veh/h	65	1337	734	74	91	91
Peak Hour Factor	0.92	0.92	0.94	0.94	0.88	0.88
Percent Heavy Veh, %	7	7	7	7	2	2
Cap, veh/h	649	4850	2577	692	123	110
Arrive On Green	0.76	1.00	0.93	0.93	0.07	0.07
Sat Flow, veh/h	1711	5732	5732	1489	1781	1585
Grp Volume(v), veh/h	65	1337	734	74	91	91
Grp Sat Flow(s),veh/h/ln	1711	1850	1850	1489	1781	1585
Q Serve(g_s), s	1.8	0.0	2.3	0.7	9.0	10.2
Cycle Q Clear(g_c), s	1.8	0.0	2.3	0.7	9.0	10.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	649	4850	2577	692	123	110
V/C Ratio(X)	0.10	0.28	0.28	0.11	0.74	0.83
Avail Cap(c_a), veh/h	649	4850	2577	692	491	437
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	13.7	0.0	3.5	3.5	82.2	82.7
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	3.2	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	0.8	0.2	4.3	9.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.7	0.1	3.5	3.5	85.4	88.6
LnGrp LOS	B	A	A	A	F	F
Approach Vol, veh/h		1402	808		182	
Approach Delay, s/veh		0.8	3.5		87.0	
Approach LOS		A	A		F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		163.1		16.9	74.1	89.0
Change Period (Y+Rc), s		5.8		4.4	5.8	* 5.4
Max Green Setting (Gmax), s		120.2		49.6	32.6	* 84
Max Q Clear Time (g_c+I1), s		2.0		12.2	3.8	4.3
Green Ext Time (p_c), s		28.7		0.3	0.1	11.8
Intersection Summary						
HCM 6th Ctrl Delay			8.3			
HCM 6th LOS			A			

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	380	1030	650	60	110	620	0	640	140	0	10
Future Volume (veh/h)	40	380	1030	650	60	110	620	0	640	140	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	2033	1796	1796	2033	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	400	1084	670	62	113	756	0	780	197	0	14
Peak Hour Factor	0.95	0.95	0.95	0.97	0.97	0.97	0.82	0.82	0.82	0.71	0.71	0.71
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	98	1514	403	405	1683	766	694	760	643	311	0	19
Arrive On Green	0.02	0.09	0.09	0.24	0.46	0.46	0.41	0.00	0.41	0.41	0.00	0.41
Sat Flow, veh/h	1711	5549	1477	1711	3699	1683	1400	1870	1583	671	0	48
Grp Volume(v), veh/h	42	400	1084	670	62	113	756	0	780	211	0	0
Grp Sat Flow(s),veh/h/ln	1711	1850	1477	1711	1850	1683	1400	1870	1583	719	0	0
Q Serve(g_s), s	4.4	12.1	49.1	42.6	1.7	7.1	28.7	0.0	73.1	44.4	0.0	0.0
Cycle Q Clear(g_c), s	4.4	12.1	49.1	42.6	1.7	7.1	73.1	0.0	73.1	44.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.93		0.07
Lane Grp Cap(c), veh/h	98	1514	403	405	1683	766	694	760	643	331	0	0
V/C Ratio(X)	0.43	0.26	2.69	1.65	0.04	0.15	1.09	0.00	1.21	0.64	0.00	0.00
Avail Cap(c_a), veh/h	98	1514	403	405	1683	766	694	760	643	331	0	0
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	85.4	65.1	81.9	68.7	27.2	28.7	53.8	0.0	53.5	44.9	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.4	767.8	305.4	0.0	0.4	61.1	0.0	110.0	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	6.0	105.5	52.6	0.7	2.9	43.5	0.0	47.9	8.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.5	65.5	849.7	374.1	27.2	29.1	114.9	0.0	163.4	48.1	0.0	0.0
LnGrp LOS	F	E	F	F	C	C	F	A	F	D	A	A
Approach Vol, veh/h		1526			845			1536			211	
Approach Delay, s/veh		623.1			302.5			139.5			48.1	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	47.0	55.0		78.0	14.7	87.3		78.0
Change Period (Y+Rc), s	4.4	5.9		4.9	4.4	5.4		4.9
Max Green Setting (Gmax), s	42.6	49.1		73.1	10.3	81.9		73.1
Max Q Clear Time (g_c+I1), s	44.6	51.1		46.4	6.4	9.1		75.1
Green Ext Time (p_c), s	0.0	0.0		2.0	0.0	2.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	347.5
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1260	0	10	690	150	0	0	0	530	0	30
Future Volume (veh/h)	20	1260	0	10	690	150	0	0	0	530	0	30
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1796	2033	0	1870	2033	1796				1870	1870	1870
Adj Flow Rate, veh/h	21	1340	0	10	711	155				599	0	22
Peak Hour Factor	0.94	0.94	0.94	0.97	0.97	0.97				0.90	0.90	0.90
Percent Heavy Veh, %	7	7	0	2	7	7				2	2	2
Cap, veh/h	26	2599	0	457	3978	1345				652	0	287
Arrive On Green	0.03	0.94	0.00	0.26	0.72	0.72				0.18	0.00	0.18
Sat Flow, veh/h	1711	5732	0	1781	5549	1488				3563	0	1569
Grp Volume(v), veh/h	21	1340	0	10	711	155				599	0	22
Grp Sat Flow(s),veh/h/ln	1711	1850	0	1781	1850	1488				1781	0	1569
Q Serve(g_s), s	2.2	5.3	0.0	0.8	7.5	2.1				29.7	0.0	2.1
Cycle Q Clear(g_c), s	2.2	5.3	0.0	0.8	7.5	2.1				29.7	0.0	2.1
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	26	2599	0	457	3978	1345				652	0	287
V/C Ratio(X)	0.81	0.52	0.00	0.02	0.18	0.12				0.92	0.00	0.08
Avail Cap(c_a), veh/h	110	2599	0	457	3978	1345				1407	0	620
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.00	0.99	0.99	0.99				0.93	0.00	0.93
Uniform Delay (d), s/veh	87.0	3.2	0.0	50.0	8.3	1.0				72.2	0.0	60.9
Incr Delay (d2), s/veh	14.4	0.5	0.0	0.0	0.1	0.2				2.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.4	0.0	0.3	2.8	1.9				13.8	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	101.4	3.7	0.0	50.0	8.4	1.2				74.4	0.0	61.0
LnGrp LOS	F	A	A	D	A	A				E	A	E
Approach Vol, veh/h		1361			876						621	
Approach Delay, s/veh		5.2			7.6						74.0	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	52.2	90.0		37.8	7.1	135.0		
Change Period (Y+Rc), s	6.0	* 5.7		4.9	4.4	6.0		
Max Green Setting (Gmax), s	9.6	* 84		71.1	11.6	82.0		
Max Q Clear Time (g_c+I1), s	2.8	7.3		31.7	4.2	9.5		
Green Ext Time (p_c), s	0.0	24.8		1.2	0.0	9.5		

Intersection Summary		
HCM 6th Ctrl Delay		20.9
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	20	2030	0	920	20	30	30
Future Volume (veh/h)	20	2030	0	920	20	30	30
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00				0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No	
Adj Sat Flow, veh/h/ln	1796	2033		2033	1796	1870	1870
Adj Flow Rate, veh/h	20	2051		948	21	34	34
Peak Hour Factor	0.99	0.99		0.97	0.97	0.89	0.89
Percent Heavy Veh, %	7	7		7	7	2	2
Cap, veh/h	25	4966		4763	1276	42	42
Arrive On Green	0.03	1.00		1.00	1.00	0.05	0.05
Sat Flow, veh/h	1711	5732		5732	1487	828	828
Grp Volume(v), veh/h	20	2051		948	21	69	0
Grp Sat Flow(s),veh/h/ln	1711	1850		1850	1487	1680	0
Q Serve(g_s), s	2.1	0.0		0.0	0.0	7.3	0.0
Cycle Q Clear(g_c), s	2.1	0.0		0.0	0.0	7.3	0.0
Prop In Lane	1.00				1.00	0.49	0.49
Lane Grp Cap(c), veh/h	25	4966		4763	1276	85	0
V/C Ratio(X)	0.81	0.41		0.20	0.02	0.81	0.00
Avail Cap(c_a), veh/h	124	4966		4763	1276	299	0
HCM Platoon Ratio	2.00	2.00		2.00	2.00	1.00	1.00
Upstream Filter(I)	0.90	0.90		0.98	0.98	1.00	0.00
Uniform Delay (d), s/veh	87.2	0.0		0.0	0.0	84.6	0.0
Incr Delay (d2), s/veh	18.7	0.2		0.1	0.0	6.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.1		0.0	0.0	3.4	0.0
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	105.9	0.2		0.1	0.0	91.4	0.0
LnGrp LOS	F	A		A	A	F	A
Approach Vol, veh/h		2071		969		69	
Approach Delay, s/veh		1.2		0.1		91.4	
Approach LOS		A		A		F	
Timer - Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		166.9		13.1	6.6	160.3	
Change Period (Y+Rc), s		* 5.8		4.0	4.0	5.8	
Max Green Setting (Gmax), s		* 1.4E2		32.0	13.0	121.2	
Max Q Clear Time (g_c+I1), s		2.0		9.3	4.1	2.0	
Green Ext Time (p_c), s		82.5		0.1	0.0	17.7	
Intersection Summary							
HCM 6th Ctrl Delay			2.9				
HCM 6th LOS			A				

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	2040	0	10	850	30	0	0	0	100	0	60
Future Volume (veh/h)	50	2040	0	10	850	30	0	0	0	100	0	60
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1796	2033	0	1870	2033	1796				1870	0	1870
Adj Flow Rate, veh/h	54	2217	0	10	885	31				145	0	87
Peak Hour Factor	0.92	0.92	0.92	0.96	0.96	0.96				0.69	0.69	0.69
Percent Heavy Veh, %	7	7	0	2	7	7				2	0	2
Cap, veh/h	398	3576	0	316	3255	870				166	0	517
Arrive On Green	0.47	1.00	0.00	0.35	1.00	1.00				0.09	0.00	0.09
Sat Flow, veh/h	1711	5732	0	1781	5549	1483				1781	0	1585
Grp Volume(v), veh/h	54	2217	0	10	885	31				145	0	87
Grp Sat Flow(s),veh/h/ln	1711	1850	0	1781	1850	1483				1781	0	1585
Q Serve(g_s), s	3.2	0.0	0.0	0.7	0.0	0.0				14.5	0.0	0.0
Cycle Q Clear(g_c), s	3.2	0.0	0.0	0.7	0.0	0.0				14.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	398	3576	0	316	3255	870				166	0	517
V/C Ratio(X)	0.14	0.62	0.00	0.03	0.27	0.04				0.87	0.00	0.17
Avail Cap(c_a), veh/h	398	3576	0	316	3255	870				407	0	731
HCM Platoon Ratio	2.00	2.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.00	0.97	0.97	0.97				1.00	0.00	1.00
Uniform Delay (d), s/veh	37.8	0.0	0.0	48.0	0.0	0.0				80.5	0.0	43.2
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.0	0.2	0.1				5.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.2	0.0	0.3	0.1	0.0				7.0	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	0.7	0.0	48.0	0.2	0.1				86.0	0.0	43.3
LnGrp LOS	D	A	A	D	A	A				F	A	D
Approach Vol, veh/h		2271			926						232	
Approach Delay, s/veh		1.6			0.7						70.0	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	36.3	122.0		21.7	46.3	112.0						
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	6.4						
Max Green Setting (Gmax), s	7.6	116.0		41.1	17.6	105.6						
Max Q Clear Time (g_c+I1), s	2.7	2.0		16.5	5.2	2.0						
Green Ext Time (p_c), s	0.0	55.6		0.3	0.0	9.6						

Intersection Summary		
HCM 6th Ctrl Delay		6.0
HCM 6th LOS		A

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	2040	0	30	800	200	0	0	0	250	0	90
Future Volume (veh/h)	160	2040	0	30	800	200	0	0	0	250	0	90
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1796	2033	0	1575	2033	1796				1870	1870	1870
Adj Flow Rate, veh/h	168	2147	0	32	860	215				193	127	102
Peak Hour Factor	0.95	0.95	0.95	0.93	0.93	0.93				0.88	0.88	0.88
Percent Heavy Veh, %	7	7	0	2	7	7				2	2	2
Cap, veh/h	489	4112	0	39	2620	701				264	142	114
Arrive On Green	0.57	1.00	0.00	0.03	0.47	0.47				0.15	0.15	0.15
Sat Flow, veh/h	1711	5732	0	1500	5549	1485				1781	958	770
Grp Volume(v), veh/h	168	2147	0	32	860	215				193	0	229
Grp Sat Flow(s),veh/h/ln	1711	1850	0	1500	1850	1485				1781	0	1728
Q Serve(g_s), s	9.4	0.0	0.0	3.8	17.4	16.1				18.6	0.0	23.4
Cycle Q Clear(g_c), s	9.4	0.0	0.0	3.8	17.4	16.1				18.6	0.0	23.4
Prop In Lane	1.00		0.00	1.00		1.00				1.00		0.45
Lane Grp Cap(c), veh/h	489	4112	0	39	2620	701				264	0	256
V/C Ratio(X)	0.34	0.52	0.00	0.83	0.33	0.31				0.73	0.00	0.89
Avail Cap(c_a), veh/h	489	4112	0	113	2620	701				427	0	414
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.00	0.92	0.92	0.92				1.00	0.00	1.00
Uniform Delay (d), s/veh	29.6	0.0	0.0	87.3	29.7	29.3				73.2	0.0	75.3
Incr Delay (d2), s/veh	0.1	0.4	0.0	13.8	0.3	1.0				1.5	0.0	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.2	0.0	1.6	7.7	5.9				8.7	0.0	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.7	0.4	0.0	101.0	30.0	30.4				74.7	0.0	84.2
LnGrp LOS	C	A	A	F	C	C				E	A	F
Approach Vol, veh/h		2315			1107						422	
Approach Delay, s/veh		2.5			32.1						79.9	
Approach LOS		A			C						E	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	9.1	139.4		31.6	57.4	91.0
Change Period (Y+Rc), s	4.4	6.0		4.9	6.0	* 6
Max Green Setting (Gmax), s	13.6	108.0		43.1	36.6	* 85
Max Q Clear Time (g_c+I1), s	5.8	2.0		25.4	11.4	19.4
Green Ext Time (p_c), s	0.0	63.0		1.0	0.2	14.3

Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	490	1890	940	580	360	190
Future Volume (veh/h)	490	1890	940	580	360	190
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1796	2033	2033	1796	1550	1841
Adj Flow Rate, veh/h	533	2054	861	683	387	204
Peak Hour Factor	0.92	0.92	0.96	0.96	0.93	0.93
Percent Heavy Veh, %	7	7	7	7	4	4
Cap, veh/h	578	4379	2400	1756	429	890
Arrive On Green	0.17	0.79	1.00	1.00	0.15	0.15
Sat Flow, veh/h	3319	5732	4065	2974	2864	2745
Grp Volume(v), veh/h	533	2054	861	683	387	204
Grp Sat Flow(s),veh/h/ln	1659	1850	2033	1487	1432	1373
Q Serve(g_s), s	28.4	22.3	0.0	0.0	23.9	9.8
Cycle Q Clear(g_c), s	28.4	22.3	0.0	0.0	23.9	9.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	578	4379	2400	1756	429	890
V/C Ratio(X)	0.92	0.47	0.36	0.39	0.90	0.23
Avail Cap(c_a), veh/h	933	4379	2400	1756	700	1150
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.32	0.32	0.96	0.96
Uniform Delay (d), s/veh	73.1	6.4	0.0	0.0	75.2	44.4
Incr Delay (d2), s/veh	5.4	0.3	0.1	0.2	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	7.5	0.0	0.1	9.0	8.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	78.5	6.6	0.1	0.2	81.0	44.5
LnGrp LOS	E	A	A	A	F	D
Approach Vol, veh/h		2587	1544		591	
Approach Delay, s/veh		21.5	0.2		68.4	
Approach LOS		C	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		148.0		32.0	35.8	112.3
Change Period (Y+Rc), s		6.0		5.0	4.4	* 6
Max Green Setting (Gmax), s		125.0		44.0	50.6	* 70
Max Q Clear Time (g_c+I1), s		24.3		25.9	30.4	2.0
Green Ext Time (p_c), s		44.8		1.1	0.9	22.7

Intersection Summary						
HCM 6th Ctrl Delay			20.4			
HCM 6th LOS			C			

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	1900	140	130	1150	200	300	360	340	420	260	100
Future Volume (veh/h)	150	1900	140	130	1150	200	300	360	340	420	260	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	2033	1796	1513	2033	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	2043	151	141	1250	217	306	367	347	477	295	114
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.98	0.98	0.98	0.88	0.88	0.88
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	371	2559	702	118	1327	230	387	406	343	362	224	511
Arrive On Green	0.22	0.46	0.46	0.01	0.09	0.09	0.22	0.22	0.22	0.32	0.32	0.32
Sat Flow, veh/h	1711	5549	1522	2795	4740	823	1781	1870	1581	1121	693	1582
Grp Volume(v), veh/h	161	2043	151	141	976	491	306	367	347	772	0	114
Grp Sat Flow(s),veh/h/ln	1711	1850	1522	1397	1850	1863	1781	1870	1581	1814	0	1582
Q Serve(g_s), s	14.6	56.5	10.7	7.6	47.2	47.2	29.2	34.4	39.1	58.1	0.0	9.5
Cycle Q Clear(g_c), s	14.6	56.5	10.7	7.6	47.2	47.2	29.2	34.4	39.1	58.1	0.0	9.5
Prop In Lane	1.00		1.00	1.00		0.44	1.00		1.00	0.62		1.00
Lane Grp Cap(c), veh/h	371	2559	702	118	1036	522	387	406	343	586	0	511
V/C Ratio(X)	0.43	0.80	0.22	1.19	0.94	0.94	0.79	0.90	1.01	1.32	0.00	0.22
Avail Cap(c_a), veh/h	371	2559	702	118	1036	522	387	406	343	586	0	511
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.59	0.59	0.59	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.0	41.4	29.0	88.7	80.2	80.2	66.6	68.6	70.4	61.0	0.0	44.5
Incr Delay (d2), s/veh	0.2	2.3	0.6	126.1	11.5	19.1	9.8	22.4	51.3	155.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	26.0	4.1	4.9	25.3	26.6	14.5	19.2	20.9	52.0	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	43.6	29.6	214.8	91.8	99.3	76.4	91.1	121.7	215.9	0.0	44.6
LnGrp LOS	E	D	C	F	F	F	E	F	F	F	A	D
Approach Vol, veh/h		2355			1608			1020			886	
Approach Delay, s/veh		43.9			104.9			97.1			193.9	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	89.0		63.0	45.0	56.0		44.0
Change Period (Y+Rc), s	4.4	5.2		4.9	5.2	* 5.6		4.9
Max Green Setting (Gmax), s	7.6	55.8		58.1	12.6	* 50		39.1
Max Q Clear Time (g_c+I1), s	9.6	58.5		60.1	16.6	49.2		41.1
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	1.1		0.0

Intersection Summary	
HCM 6th Ctrl Delay	92.5
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	500	2190	1210	260	780	300
Future Volume (veh/h)	500	2190	1210	260	780	300
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1796	2033	2033	1796	1563	1856
Adj Flow Rate, veh/h	515	2258	1247	268	857	330
Peak Hour Factor	0.97	0.97	0.97	0.97	0.91	0.91
Percent Heavy Veh, %	7	7	7	7	3	3
Cap, veh/h	524	3512	1688	450	922	487
Arrive On Green	0.61	1.00	0.20	0.20	0.31	0.31
Sat Flow, veh/h	1711	5732	5732	1478	2976	1572
Grp Volume(v), veh/h	515	2258	1247	268	857	330
Grp Sat Flow(s),veh/h/ln	1711	1850	1850	1478	1488	1572
Q Serve(g_s), s	52.7	0.0	37.9	29.6	50.2	33.0
Cycle Q Clear(g_c), s	52.7	0.0	37.9	29.6	50.2	33.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	524	3512	1688	450	922	487
V/C Ratio(X)	0.98	0.64	0.74	0.60	0.93	0.68
Avail Cap(c_a), veh/h	570	3512	1688	450	967	511
HCM Platoon Ratio	2.00	2.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.80	0.80	0.71	0.71
Uniform Delay (d), s/veh	34.4	0.0	65.0	61.6	60.2	54.3
Incr Delay (d2), s/veh	7.3	0.1	2.4	4.6	11.3	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.5	0.0	18.7	12.0	20.5	28.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.7	0.1	67.3	66.2	71.5	57.0
LnGrp LOS	D	A	E	E	E	E
Approach Vol, veh/h		2773	1515		1187	
Approach Delay, s/veh		7.8	67.1		67.5	
Approach LOS		A	E		E	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		119.7		60.3	59.2	60.6
Change Period (Y+Rc), s		* 5.8		4.5	4.0	5.8
Max Green Setting (Gmax), s		* 1.1E2		58.5	60.0	47.2
Max Q Clear Time (g_c+I1), s		2.0		52.2	54.7	39.9
Green Ext Time (p_c), s		87.5		3.5	0.5	5.9
Intersection Summary						
HCM 6th Ctrl Delay			37.2			
HCM 6th LOS			D			

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1790	900	460	910	280	400	750	120	510	850	140
Future Volume (veh/h)	210	1790	900	460	910	280	400	750	120	510	850	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	2033	1796	1796	2033	1724	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	219	1865	938	500	989	304	449	843	135	573	955	157
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	7	7	7	2	2	2	2	2	2
Cap, veh/h	238	1652	789	319	1915	502	792	831	346	666	587	96
Arrive On Green	0.05	0.10	0.10	0.37	0.69	0.69	0.22	0.22	0.22	0.19	0.19	0.19
Sat Flow, veh/h	1711	5549	1513	1711	5549	1454	3563	3741	1559	3456	3045	500
Grp Volume(v), veh/h	219	1865	938	500	989	304	449	843	135	573	557	555
Grp Sat Flow(s),veh/h/ln	1711	1850	1513	1711	1850	1454	1781	1870	1559	1728	1777	1768
Q Serve(g_s), s	23.0	53.6	53.6	33.6	15.4	20.0	20.2	40.0	13.3	28.9	34.7	34.7
Cycle Q Clear(g_c), s	23.0	53.6	53.6	33.6	15.4	20.0	20.2	40.0	13.3	28.9	34.7	34.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	238	1652	789	319	1915	502	792	831	346	666	343	341
V/C Ratio(X)	0.92	1.13	1.19	1.57	0.52	0.61	0.57	1.01	0.39	0.86	1.63	1.63
Avail Cap(c_a), veh/h	276	1652	789	319	1915	502	792	831	346	666	343	341
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	84.9	81.2	43.1	56.4	20.6	21.4	62.3	70.0	59.6	70.3	72.7	72.7
Incr Delay (d2), s/veh	20.0	63.0	92.7	269.3	1.0	5.4	0.7	34.8	0.4	8.4	291.8	292.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	36.5	58.9	36.2	5.1	5.4	9.1	22.9	5.3	13.5	43.5	43.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.8	144.2	135.9	325.7	21.6	26.7	63.0	104.8	60.0	78.7	364.4	365.3
LnGrp LOS	F	F	F	F	C	C	E	F	E	E	F	F
Approach Vol, veh/h		3022			1793			1427			1685	
Approach Delay, s/veh		138.7			107.3			87.4			267.5	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	38.0	59.5		40.0	29.5	68.0		46.0
Change Period (Y+Rc), s	4.4	* 5.8		5.3	4.4	5.8		6.0
Max Green Setting (Gmax), s	33.6	* 50		34.7	29.0	54.8		40.0
Max Q Clear Time (g_c+I1), s	35.6	55.6		36.7	25.0	22.0		42.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.1	10.1		0.0

Intersection Summary	
HCM 6th Ctrl Delay	149.8
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1070	2390	0	950	490	0	0	0	160	0	320
Future Volume (veh/h)	0	1070	2390	0	950	490	0	0	0	160	0	320
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1796	2033	1796	0	2033	1796				1870	0	1870
Adj Flow Rate, veh/h	0	1081	0	0	960	0				168	0	337
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.95	0.95	0.95
Percent Heavy Veh, %	7	7	7	0	7	7				2	0	2
Cap, veh/h	1	3025		0	3025					536	0	360
Arrive On Green	0.00	1.00	0.00	0.00	0.78	0.00				0.16	0.00	0.16
Sat Flow, veh/h	1711	3862	1522	0	3964	2679				3456	0	2790
Grp Volume(v), veh/h	0	1081	0	0	960	0				168	0	337
Grp Sat Flow(s),veh/h/ln	1711	1931	1522	0	1931	1340				1728	0	1395
Q Serve(g_s), s	0.0	0.0	0.0	0.0	12.9	0.0				7.8	0.0	26.2
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	12.9	0.0				7.8	0.0	26.2
Prop In Lane	1.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	1	3025		0	3025					536	0	360
V/C Ratio(X)	0.00	0.36		0.00	0.32					0.31	0.00	0.94
Avail Cap(c_a), veh/h	297	3025		0	3025					536	0	360
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	5.6	0.0				67.5	0.0	112.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.3	0.0				0.1	0.0	31.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	4.8	0.0				3.5	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.3	0.0	0.0	5.9	0.0				67.7	0.0	143.4
LnGrp LOS	A	A		A	A					E	A	F
Approach Vol, veh/h		1081	A		960	A					505	
Approach Delay, s/veh		0.3			5.9						118.2	
Approach LOS		A			A						F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		147.0		33.0	0.0	147.0
Change Period (Y+Rc), s		6.0		5.1	* 4.7	6.0
Max Green Setting (Gmax), s		141.0		27.9	* 31	105.0
Max Q Clear Time (g_c+I1), s		2.0		28.2	0.0	14.9
Green Ext Time (p_c), s		5.7		0.0	0.0	4.5

Intersection Summary	
HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	10	1710	0	940	80	100	0	1550	0	0	0
Future Volume (veh/h)	0	10	1710	0	940	80	100	0	1550	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1796	1796	1796	1796	1796	1870	0	1870			
Adj Flow Rate, veh/h	0	10	0	0	1011	0	105	0	1632			
Peak Hour Factor	0.97	0.97	0.97	0.93	0.93	0.93	0.95	0.95	0.95			
Percent Heavy Veh, %	0	7	7	7	7	7	2	0	2			
Cap, veh/h	0	1601		5	2899		507	0	0			
Arrive On Green	0.00	0.47	0.00	0.00	0.47	0.00	0.15	0.00	0.15			
Sat Flow, veh/h	0	3503	1522	1711	6179	1522	3456	0	2790			
Grp Volume(v), veh/h	0	10	0	0	1011	0	105	0	1632			
Grp Sat Flow(s),veh/h/ln	0	1706	1522	1711	1545	1522	1728	0	1395			
Q Serve(g_s), s	0.0	0.1	0.0	0.0	3.5	0.0	0.9	0.0	5.0			
Cycle Q Clear(g_c), s	0.0	0.1	0.0	0.0	3.5	0.0	0.9	0.0	5.0			
Prop In Lane	0.00		1.00	1.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	1601		5	2899		507	0	-90			
V/C Ratio(X)	0.00	0.01		0.00	0.35		0.21	0.00	-18.14			
Avail Cap(c_a), veh/h	0	13802		898	29337		507	0	-90			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	4.8	0.0	0.0	5.7	0.0	12.8	0.0	0.0			
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.4	0.0	0.3	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.8	0.0	0.0	5.8	0.0	12.9	0.0	0.0			
LnGrp LOS	A	A		A	A		B	A	A			
Approach Vol, veh/h		10	A		1011	A		1737				
Approach Delay, s/veh		4.8			5.8			0.8				
Approach LOS		A			A			A				

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	0.0	23.0				23.0		11.1
Change Period (Y+Rc), s	6.1	7.0				7.0		6.1
Max Green Setting (Gmax), s	17.9	137.9				161.9		5.0
Max Q Clear Time (g_c+I1), s	0.0	2.1				5.5		7.0
Green Ext Time (p_c), s	0.0	0.0				4.9		0.0

Intersection Summary	
HCM 6th Ctrl Delay	2.6
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	260	450	170	60	150	120	1420	160	110	1120	60
Future Volume (veh/h)	230	260	450	170	60	150	120	1420	160	110	1120	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	271	306	529	210	74	185	140	1651	186	124	1258	67
Peak Hour Factor	0.85	0.85	0.85	0.81	0.81	0.81	0.86	0.86	0.86	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	327	343	427	238	250	208	159	1649	931	170	1696	1030
Arrive On Green	0.06	0.06	0.06	0.13	0.13	0.13	0.09	0.46	0.46	0.19	0.95	0.95
Sat Flow, veh/h	1781	1870	1558	1781	1870	1552	1781	3554	1550	1781	3554	1549
Grp Volume(v), veh/h	271	306	529	210	74	185	140	1651	186	124	1258	67
Grp Sat Flow(s),veh/h/ln	1781	1870	1558	1781	1870	1552	1781	1777	1550	1781	1777	1549
Q Serve(g_s), s	27.1	29.2	33.0	20.8	6.4	21.1	14.0	83.5	9.9	11.8	9.9	0.3
Cycle Q Clear(g_c), s	27.1	29.2	33.0	20.8	6.4	21.1	14.0	83.5	9.9	11.8	9.9	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	327	343	427	238	250	208	159	1649	931	170	1696	1030
V/C Ratio(X)	0.83	0.89	1.24	0.88	0.30	0.89	0.88	1.00	0.20	0.73	0.74	0.07
Avail Cap(c_a), veh/h	327	343	427	287	301	250	297	1649	931	170	1696	1030
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	0.70	0.70	0.70
Uniform Delay (d), s/veh	81.8	82.8	74.2	76.5	70.3	76.7	81.0	48.3	16.5	70.6	2.4	0.9
Incr Delay (d2), s/veh	13.3	20.5	122.9	22.6	0.6	26.8	5.9	22.5	0.5	9.2	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.3	16.8	33.7	11.1	3.1	10.0	6.7	41.2	5.1	5.4	1.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.1	103.3	197.0	99.1	70.9	103.5	86.9	70.8	17.0	79.8	4.5	1.0
LnGrp LOS	F	F	F	F	E	F	F	F	B	E	A	A
Approach Vol, veh/h		1106			469			1977			1449	
Approach Delay, s/veh		146.1			96.4			66.9			10.7	
Approach LOS		F			F			E			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.9	89.2		38.9	20.5	91.6		29.0				
Change Period (Y+Rc), s	5.7	* 5.7		5.9	4.4	5.7		4.9				
Max Green Setting (Gmax), s	13.6	* 84		33.0	30.0	67.1		29.0				
Max Q Clear Time (g_c+I1), s	13.8	85.5		35.0	16.0	11.9		23.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.1	18.8		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			70.9									
HCM 6th LOS			E									

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	490	870	30	40	20	410	910	560	60	240	50
Future Volume (veh/h)	110	490	870	30	40	20	410	910	560	60	240	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1870	1796	1870	1870	1870	1575	1870	1870
Adj Flow Rate, veh/h	131	583	1036	35	47	23	461	1022	629	70	279	58
Peak Hour Factor	0.84	0.84	0.84	0.86	0.86	0.86	0.89	0.89	0.89	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	1146	575	68	101	70	672	1450	443	259	394	121
Arrive On Green	0.38	0.38	0.38	0.05	0.05	0.05	0.38	0.28	0.28	0.06	0.03	0.03
Sat Flow, veh/h	631	2985	1498	1437	2139	1478	1781	5106	1560	1500	5106	1567
Grp Volume(v), veh/h	382	332	1036	44	38	23	461	1022	629	70	279	58
Grp Sat Flow(s),veh/h/ln	1839	1777	1498	1799	1777	1478	1781	1702	1560	1500	1702	1567
Q Serve(g_s), s	29.1	25.5	69.1	4.3	3.8	2.7	39.2	32.3	51.1	8.0	9.8	6.6
Cycle Q Clear(g_c), s	29.1	25.5	69.1	4.3	3.8	2.7	39.2	32.3	51.1	8.0	9.8	6.6
Prop In Lane	0.34		1.00	0.80		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	706	682	575	85	84	70	672	1450	443	259	394	121
V/C Ratio(X)	0.54	0.49	1.80	0.51	0.45	0.33	0.69	0.71	1.42	0.27	0.71	0.48
Avail Cap(c_a), veh/h	706	682	575	330	326	271	672	1450	443	259	672	206
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.55	0.55	0.55	0.86	0.86	0.86
Uniform Delay (d), s/veh	43.1	42.0	55.4	83.7	83.5	83.0	47.1	57.7	64.5	74.0	85.7	84.1
Incr Delay (d2), s/veh	1.9	1.5	367.8	12.6	10.1	7.3	1.5	1.6	196.5	0.2	8.9	11.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	11.6	84.6	2.3	2.0	1.2	17.3	13.9	44.0	3.2	4.7	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	43.5	423.3	96.3	93.6	90.3	48.6	59.3	260.9	74.2	94.6	95.4
LnGrp LOS	D	D	F	F	F	F	D	E	F	E	F	F
Approach Vol, veh/h		1750			105			2112			407	
Approach Delay, s/veh		268.7			94.0			117.0			91.2	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	35.5	57.1	74.0	72.3	20.3	13.4
Change Period (Y+Rc), s	4.4	6.0	4.9	4.4	6.4	4.9
Max Green Setting (Gmax), s	6.6	51.1	69.1	33.6	23.7	33.0
Max Q Clear Time (g_c+I1), s	10.0	53.1	71.1	41.2	11.8	6.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	1.5	1.0

Intersection Summary	
HCM 6th Ctrl Delay	174.7
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	520	1180	280	280	1220	660	310	1380	380	100	820	280
Future Volume (veh/h)	520	1180	280	280	1220	660	310	1380	380	100	820	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	2116	1885	1870	2116	1870	1841	1841	1870	1870	1841	1767
Adj Flow Rate, veh/h	565	1283	304	304	1326	717	337	1500	413	109	891	304
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	2	1	2	2	2	4	4	2	2	4	4
Cap, veh/h	626	1894	831	266	1300	538	654	2442	770	2	1224	628
Arrive On Green	0.18	0.33	0.33	0.08	0.22	0.22	0.19	0.49	0.49	0.00	0.24	0.24
Sat Flow, veh/h	3483	5778	1598	3456	5778	2790	3401	5025	1584	3456	5025	1471
Grp Volume(v), veh/h	565	1283	304	304	1326	717	337	1500	413	109	891	304
Grp Sat Flow(s),veh/h/ln	1742	1926	1598	1728	1926	1395	1700	1675	1584	1728	1675	1471
Q Serve(g_s), s	22.2	26.9	0.0	10.8	31.5	31.5	12.4	30.6	17.9	0.1	22.8	9.4
Cycle Q Clear(g_c), s	22.2	26.9	0.0	10.8	31.5	31.5	12.4	30.6	17.9	0.1	22.8	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	626	1894	831	266	1300	538	654	2442	770	2	1224	628
V/C Ratio(X)	0.90	0.68	0.37	1.14	1.02	1.33	0.52	0.61	0.54	44.16	0.73	0.48
Avail Cap(c_a), veh/h	863	1894	831	501	1300	538	654	2442	770	230	1364	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.39	0.39	0.39	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	40.7	19.9	64.6	54.3	75.6	50.7	26.4	12.5	70.0	48.7	10.7
Incr Delay (d2), s/veh	8.2	2.0	1.2	81.3	30.1	162.1	0.1	0.5	1.1	19580.5	3.8	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	13.1	6.2	7.8	18.9	12.1	5.3	12.0	6.5	6.8	9.7	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.4	42.6	21.1	145.9	84.4	237.7	50.8	26.8	13.5	19650.5	52.5	13.3
LnGrp LOS	E	D	C	F	F	F	D	C	B	F	D	B
Approach Vol, veh/h		2152			2347			2250			1304	
Approach Delay, s/veh		45.3			139.2			28.0			1681.5	
Approach LOS		D			F			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	73.9	15.3	50.8	32.8	41.1	30.1	36.0
Change Period (Y+Rc), s	4.5	5.9	4.5	4.9	5.9	* 7	4.9	4.5
Max Green Setting (Gmax), s	9.3	44.7	20.3	45.9	15.0	* 38	34.7	31.5
Max Q Clear Time (g_c+I1), s	0.0	32.6	0.0	2.0	14.4	24.8	24.2	0.0
Green Ext Time (p_c), s	0.0	10.8	0.0	0.1	0.0	9.2	0.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	332.8
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	190	100	60	0	250	210	690	150	730	370	170
Future Volume (veh/h)	20	190	100	60	0	250	210	690	150	730	370	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	29	271	143	71	0	298	228	750	163	753	381	175
Peak Hour Factor	0.70	0.70	0.70	0.84	0.84	0.84	0.92	0.92	0.92	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	4	4	4	4	4	4
Cap, veh/h	21	81	39	92	0	1053	247	961	209	756	1473	667
Arrive On Green	0.23	0.23	0.23	0.23	0.00	0.23	0.14	0.34	0.34	0.43	0.63	0.63
Sat Flow, veh/h	0	347	165	224	0	1581	1753	2855	620	1753	2338	1059
Grp Volume(v), veh/h	443	0	0	71	0	298	228	459	454	753	284	272
Grp Sat Flow(s),veh/h/ln	512	0	0	224	0	1581	1753	1749	1727	1753	1749	1648
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	23.1	42.5	42.6	77.1	12.9	13.2
Cycle Q Clear(g_c), s	42.1	0.0	0.0	42.1	0.0	0.0	23.1	42.5	42.6	77.1	12.9	13.2
Prop In Lane	0.07		0.32	1.00		1.00	1.00		0.36	1.00		0.64
Lane Grp Cap(c), veh/h	141	0	0	92	0	1053	247	588	581	756	1102	1038
V/C Ratio(X)	3.14	0.00	0.00	0.77	0.00	0.28	0.92	0.78	0.78	1.00	0.26	0.26
Avail Cap(c_a), veh/h	141	0	0	92	0	1053	366	588	581	756	1102	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.68	0.68	0.68	0.71	0.71	0.71
Uniform Delay (d), s/veh	62.1	0.0	0.0	74.5	0.0	12.4	76.4	53.7	53.7	51.1	14.7	14.8
Incr Delay (d2), s/veh	981.6	0.0	0.0	29.2	0.0	0.1	13.2	4.8	4.9	26.6	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	44.0	0.0	0.0	4.1	0.0	5.0	11.3	19.4	19.2	38.1	5.1	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1043.7	0.0	0.0	103.7	0.0	12.5	89.5	58.6	58.6	77.7	15.1	15.2
LnGrp LOS	F	A	A	F	A	B	F	E	E	E	B	B
Approach Vol, veh/h		443			369			1141			1309	
Approach Delay, s/veh		1043.7			30.0			64.8			51.1	
Approach LOS		F			C			E			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	82.6	65.6		47.0	29.8	118.5		47.0				
Change Period (Y+Rc), s	5.0	* 5		4.9	4.4	5.0		4.9				
Max Green Setting (Gmax), s	77.6	* 46		42.1	37.6	86.0		42.1				
Max Q Clear Time (g_c+I1), s	79.1	44.6		44.1	25.1	15.2		44.1				
Green Ext Time (p_c), s	0.0	0.9		0.0	0.2	5.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			188.3									
HCM 6th LOS			F									

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1270	200	230	1050	1710	120	0	1580	880	110	30
Future Volume (veh/h)	0	1270	200	230	1050	1710	120	0	1580	880	110	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	1870	1885	0	1885	1870	1870	1796
Adj Flow Rate, veh/h	0	1411	222	250	1141	1859	126	0	1663	1143	143	39
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.95	0.95	0.95	0.77	0.77	0.77
Percent Heavy Veh, %	0	2	2	2	2	2	1	0	1	2	2	2
Cap, veh/h	0	1970	761	268	2026	2542	329	0	0	1179	756	324
Arrive On Green	0.00	0.39	0.39	0.15	0.57	0.57	0.09	0.00	0.00	0.34	0.21	0.21
Sat Flow, veh/h	0	5274	1585	1781	3554	2790	3483	126		3456	3554	1522
Grp Volume(v), veh/h	0	1411	222	250	1141	1859	126	76.6		1143	143	39
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1781	1777	1395	1742	E		1728	1777	1522
Q Serve(g_s), s	0.0	42.2	15.2	25.0	36.6	32.0	6.1			58.6	5.9	3.7
Cycle Q Clear(g_c), s	0.0	42.2	15.2	25.0	36.6	32.0	6.1			58.6	5.9	3.7
Prop In Lane	0.00		1.00	1.00		1.00	1.00			1.00		1.00
Lane Grp Cap(c), veh/h	0	1970	761	268	2026	2542	329			1179	756	324
V/C Ratio(X)	0.00	0.72	0.29	0.93	0.56	0.73	0.38			0.97	0.19	0.12
Avail Cap(c_a), veh/h	0	1970	761	444	2026	2542	385			1469	997	427
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	0.21			1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	46.9	28.3	75.6	24.5	2.1	76.6			58.4	58.1	57.2
Incr Delay (d2), s/veh	0.0	2.3	1.0	12.9	1.1	1.9	0.1			14.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	18.1	6.0	12.3	15.4	3.1	2.7			27.4	2.7	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	49.2	29.2	88.5	25.7	4.0	76.6			72.5	58.2	57.3
LnGrp LOS	A	D	C	F	C	A	E			E	E	E
Approach Vol, veh/h		1633			3250						1325	
Approach Delay, s/veh		46.5			18.1						70.5	
Approach LOS		D			B						E	

Timer - Assigned Phs	1	2	3	4		6	7
Phs Duration (G+Y+Rc), s	33.2	77.9	23.1	45.8		111.1	68.9
Change Period (Y+Rc), s	6.1	8.5	6.1	7.5		8.5	7.5
Max Green Setting (Gmax), s	44.9	36.5	19.9	50.5		87.5	76.5
Max Q Clear Time (g_c+I1), s	27.0	44.2	8.1	7.9		38.6	60.6
Green Ext Time (p_c), s	0.1	0.0	0.1	0.3		6.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	37.6
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	400	920	0	0	1880	300	0	110	540	10	0	620
Future Volume (veh/h)	400	920	0	0	1880	300	0	110	540	10	0	620
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	2116	0	1870	2116	1870	0	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	440	1011	0	0	2022	323	0	122	600	14	0	838
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.90	0.90	0.90	0.74	0.74	0.74
Percent Heavy Veh, %	2	2	0	2	2	2	0	2	2	2	0	2
Cap, veh/h	478	4168	0	1	3218	952	0	228	345	90	0	0
Arrive On Green	0.14	0.72	0.00	0.00	1.00	1.00	0.00	0.12	0.12	0.05	0.00	0.00
Sat Flow, veh/h	3456	5968	0	1781	5778	1565	0	1870	3614	1781	14	
Grp Volume(v), veh/h	440	1011	0	0	2022	323	0	122	600	14	81.8	
Grp Sat Flow(s),veh/h/ln	1728	1926	0	1781	1926	1565	0	1870	1205	1781	F	
Q Serve(g_s), s	22.6	10.6	0.0	0.0	0.0	0.0	0.0	11.0	21.9	1.4		
Cycle Q Clear(g_c), s	22.6	10.6	0.0	0.0	0.0	0.0	0.0	11.0	21.9	1.4		
Prop In Lane	1.00		0.00	1.00		1.00	0.00		1.00	1.00		
Lane Grp Cap(c), veh/h	478	4168	0	1	3218	952	0	228	345	90		
V/C Ratio(X)	0.92	0.24	0.00	0.00	0.63	0.34	0.00	0.54	1.74	0.16		
Avail Cap(c_a), veh/h	697	4168	0	142	3218	952	0	228	345	227		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.68	0.68	0.00	1.00	1.00	0.09		
Uniform Delay (d), s/veh	76.6	8.5	0.0	0.0	0.0	0.0	0.0	74.3	126.5	81.8		
Incr Delay (d2), s/veh	10.8	0.1	0.0	0.0	0.6	0.7	0.0	1.3	343.7	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	10.7	4.3	0.0	0.0	0.2	0.2	0.0	5.3	11.0	0.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.4	8.6	0.0	0.0	0.6	0.7	0.0	75.6	470.2	81.8		
LnGrp LOS	F	A	A	A	A	A	A	E	F	F		
Approach Vol, veh/h		1451			2345			722				
Approach Delay, s/veh		32.5			0.6			403.5				
Approach LOS		C			A			F				

Timer - Assigned Phs	1	2			5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	136.8			29.6	107.3	15.2	28.0
Change Period (Y+Rc), s	* 4.7	7.0			* 4.7	7.0	6.1	6.1
Max Green Setting (Gmax), s	* 14	97.0			* 36	75.0	22.9	21.9
Max Q Clear Time (g_c+I1), s	0.0	12.6			24.6	2.0	3.4	23.9
Green Ext Time (p_c), s	0.0	2.5			0.3	7.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	75.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	420	2610	480	210	250	40
Future Volume (veh/h)	420	2610	480	210	250	40
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	462	2868	533	233	278	44
Peak Hour Factor	0.91	0.91	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	387	861	1445	629	316	1351
Arrive On Green	0.22	0.22	0.61	0.61	0.09	0.72
Sat Flow, veh/h	1781	2790	2477	1038	3456	1870
Grp Volume(v), veh/h	462	2868	397	369	278	44
Grp Sat Flow(s),veh/h/ln	1781	1395	1777	1645	1728	1870
Q Serve(g_s), s	39.1	39.1	20.4	20.5	14.3	1.2
Cycle Q Clear(g_c), s	39.1	39.1	20.4	20.5	14.3	1.2
Prop In Lane	1.00	1.00		0.63	1.00	
Lane Grp Cap(c), veh/h	387	861	1077	997	316	1351
V/C Ratio(X)	1.19	3.33	0.37	0.37	0.88	0.03
Avail Cap(c_a), veh/h	387	861	1077	997	1759	1351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.09	0.09
Uniform Delay (d), s/veh	70.4	62.2	18.0	18.0	80.8	7.1
Incr Delay (d2), s/veh	110.0	1051.6	1.0	1.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.4	145.1	8.4	7.9	6.3	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	180.5	1113.8	18.9	19.0	81.1	7.1
LnGrp LOS	F	F	B	B	F	A
Approach Vol, veh/h	3330		766			322
Approach Delay, s/veh	984.3		19.0			71.0
Approach LOS	F		B			E

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	20.9	115.1				136.0		44.0
Change Period (Y+Rc), s	4.4	6.0				6.0		4.9
Max Green Setting (Gmax), s	91.6	34.0				130.0		39.1
Max Q Clear Time (g_c+I1), s	16.3	22.5				3.2		41.1
Green Ext Time (p_c), s	0.2	1.2				0.1		0.0

Intersection Summary		
HCM 6th Ctrl Delay		750.4
HCM 6th LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	280	30	20	150	60	120	50	110	250	0	1040
Future Volume (veh/h)	100	280	30	20	150	60	120	50	110	250	0	1040
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	418	45	22	169	67	226	94	208	269	0	1118
Peak Hour Factor	0.67	0.67	0.67	0.89	0.89	0.89	0.53	0.53	0.53	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1487	437	47	563	190	75	29	0	0	307	0	1209
Arrive On Green	0.43	0.26	0.26	0.32	0.15	0.15	0.33	0.33	0.33	0.33	0.00	0.33
Sat Flow, veh/h	3456	1653	178	1781	1263	501	0	0	0	799	0	1578
Grp Volume(v), veh/h	149	0	463	22	0	236	528	0	0	269	0	1118
Grp Sat Flow(s),veh/h/ln	1728	0	1831	1781	0	1764	0	0	0	799	0	1578
Q Serve(g_s), s	4.6	0.0	44.8	1.5	0.0	23.6	0.0	0.0	0.0	0.0	0.0	24.6
Cycle Q Clear(g_c), s	4.6	0.0	44.8	1.5	0.0	23.6	60.1	0.0	0.0	60.1	0.0	24.6
Prop In Lane	1.00		0.10	1.00		0.28	0.43		0.39	1.00		1.00
Lane Grp Cap(c), veh/h	1487	0	484	563	0	265	29	0	0	307	0	1209
V/C Ratio(X)	0.10	0.00	0.96	0.04	0.00	0.89	18.49	0.00	0.00	0.88	0.00	0.92
Avail Cap(c_a), veh/h	1487	0	999	563	0	346	29	0	0	307	0	1209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.56	0.00	0.56	1.00	0.00	0.00	0.89	0.00	0.89
Uniform Delay (d), s/veh	30.5	0.0	65.2	42.6	0.0	75.0	90.0	0.0	0.0	60.2	0.0	17.0
Incr Delay (d2), s/veh	0.0	0.0	31.5	0.0	0.0	10.5	7935.2	0.0	0.0	20.8	0.0	10.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	24.7	0.7	0.0	11.4	64.3	0.0	0.0	13.9	0.0	35.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.6	0.0	96.7	42.6	0.0	85.5	8025.2	0.0	0.0	81.0	0.0	27.7
LnGrp LOS	C	A	F	D	A	F	F	A	A	F	A	C
Approach Vol, veh/h		612			258			528			1387	
Approach Delay, s/veh		80.6			81.9			8025.2			38.0	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	61.3	53.3		65.4	81.8	32.8		65.4
Change Period (Y+Rc), s	4.4	5.7		5.3	4.4	5.7		* 5.3
Max Green Setting (Gmax), s	6.7	98.2		59.7	69.6	35.3		* 60
Max Q Clear Time (g_c+I1), s	13.5	46.8		62.1	6.6	25.6		62.1
Green Ext Time (p_c), s	0.0	0.7		0.0	0.1	0.3		0.0

Intersection Summary	
HCM 6th Ctrl Delay	1565.7
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	160	530	2100	220	120	930
Future Volume (veh/h)	160	530	2100	220	120	930
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	2133	2133	1885	1870	1870
Adj Flow Rate, veh/h	178	589	2258	237	125	969
Peak Hour Factor	0.90	0.90	0.93	0.93	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	187	2745	2417	930	478	851
Arrive On Green	0.05	0.68	0.79	0.79	0.27	0.27
Sat Flow, veh/h	3483	4160	4160	1561	1781	3170
Grp Volume(v), veh/h	178	589	2258	237	125	969
Grp Sat Flow(s),veh/h/ln	1742	2027	2027	1561	1781	1585
Q Serve(g_s), s	9.2	9.9	80.1	7.1	9.9	48.3
Cycle Q Clear(g_c), s	9.2	9.9	80.1	7.1	9.9	48.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	187	2745	2417	930	478	851
V/C Ratio(X)	0.95	0.21	0.93	0.25	0.26	1.14
Avail Cap(c_a), veh/h	187	2745	2441	940	478	851
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	84.9	11.0	15.8	8.3	51.8	65.8
Incr Delay (d2), s/veh	50.2	0.2	0.9	0.1	0.3	76.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	4.4	24.8	2.2	4.6	45.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	135.2	11.1	16.7	8.3	52.1	142.6
LnGrp LOS	F	B	B	A	D	F
Approach Vol, veh/h		767	2495		1094	
Approach Delay, s/veh		39.9	15.9		132.3	
Approach LOS		D	B		F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		126.8		53.2	14.6	112.2
Change Period (Y+Rc), s		4.9		4.9	4.9	* 4.9
Max Green Setting (Gmax), s		121.9		48.3	9.1	* 1.1E2
Max Q Clear Time (g_c+I1), s		11.9		50.3	11.2	82.1
Green Ext Time (p_c), s		8.8		0.0	0.0	25.2

Intersection Summary			
HCM 6th Ctrl Delay			49.4
HCM 6th LOS			D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	80	650	740	640	1960	510
Future Volume (veh/h)	80	650	740	640	1960	510
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	2133	2133	1885	1870	1870
Adj Flow Rate, veh/h	86	699	937	810	2513	654
Peak Hour Factor	0.93	0.93	0.79	0.79	0.78	0.78
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	619	1400	1133	434	1064	1493
Arrive On Green	0.34	0.66	0.28	0.28	0.60	0.60
Sat Flow, veh/h	1795	2133	4160	1553	1781	1585
Grp Volume(v), veh/h	86	699	937	810	2513	654
Grp Sat Flow(s),veh/h/ln	1795	2133	2027	1553	1781	1585
Q Serve(g_s), s	5.9	30.2	39.0	50.3	107.5	0.0
Cycle Q Clear(g_c), s	5.9	30.2	39.0	50.3	107.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	619	1400	1133	434	1064	1493
V/C Ratio(X)	0.14	0.50	0.83	1.87	2.36	0.44
Avail Cap(c_a), veh/h	619	1400	1133	434	1064	1493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	15.8	60.8	64.8	36.2	0.5
Incr Delay (d2), s/veh	0.0	1.3	7.0	398.7	615.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	14.7	20.9	67.6	226.4	32.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.6	17.1	67.8	463.5	652.2	0.7
LnGrp LOS	D	B	E	F	F	A
Approach Vol, veh/h		785	1747		3167	
Approach Delay, s/veh		19.7	251.3		517.6	
Approach LOS		B	F		F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		125.5		114.0	69.5	56.0
Change Period (Y+Rc), s		5.7		6.5	5.7	* 5.7
Max Green Setting (Gmax), s		60.3		107.5	6.0	* 50
Max Q Clear Time (g_c+I1), s		32.2		109.5	7.9	52.3
Green Ext Time (p_c), s		9.5		0.0	0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			367.4			
HCM 6th LOS			F			

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	340	240	40	430	30	100	170	70	50	340	360
Future Volume (veh/h)	150	340	240	40	430	30	100	170	70	50	340	360
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	174	395	279	43	457	32	109	185	76	69	472	500
Peak Hour Factor	0.86	0.86	0.86	0.94	0.94	0.94	0.92	0.92	0.92	0.72	0.72	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	414	344	209	406	28	354	237	194	745	286	303
Arrive On Green	0.11	0.22	0.22	0.12	0.24	0.24	0.20	0.13	0.13	0.70	0.58	0.58
Sat Flow, veh/h	1781	1870	1553	1781	1722	121	1781	1870	1535	1781	826	875
Grp Volume(v), veh/h	174	395	279	43	0	489	109	185	76	69	0	972
Grp Sat Flow(s),veh/h/ln	1781	1870	1553	1781	0	1842	1781	1870	1535	1781	0	1701
Q Serve(g_s), s	17.4	37.5	30.7	3.9	0.0	42.4	9.4	17.3	8.2	2.2	0.0	62.3
Cycle Q Clear(g_c), s	17.4	37.5	30.7	3.9	0.0	42.4	9.4	17.3	8.2	2.2	0.0	62.3
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	192	414	344	209	0	434	354	237	194	745	0	589
V/C Ratio(X)	0.90	0.95	0.81	0.21	0.00	1.13	0.31	0.78	0.39	0.09	0.00	1.65
Avail Cap(c_a), veh/h	293	631	524	209	0	434	354	772	634	745	0	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	0.55	0.00	0.55	0.55	0.55	0.55	0.74	0.00	0.74
Uniform Delay (d), s/veh	79.4	69.2	66.5	71.9	0.0	68.8	61.6	76.2	72.2	16.1	0.0	38.0
Incr Delay (d2), s/veh	16.3	15.9	3.0	0.1	0.0	73.0	0.1	13.2	3.2	0.0	0.0	298.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	19.9	12.5	1.8	0.0	28.8	4.2	9.1	3.4	0.9	0.0	69.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.7	85.0	69.5	72.0	0.0	141.8	61.7	89.4	75.5	16.1	0.0	336.6
LnGrp LOS	F	F	E	E	A	F	E	F	E	B	A	F
Approach Vol, veh/h		848			532			370			1041	
Approach Delay, s/veh		82.1			136.1			78.3			315.4	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	79.7	28.5	26.7	45.2	40.2	68.0	23.8	48.0
Change Period (Y+Rc), s	4.4	5.7	5.6	* 5.3	4.4	5.7	4.4	5.6
Max Green Setting (Gmax), s	13.6	74.3	11.6	* 61	25.6	62.3	29.6	42.4
Max Q Clear Time (g_c+I1), s	14.2	19.3	5.9	39.5	11.4	64.3	19.4	44.4
Green Ext Time (p_c), s	0.0	0.3	0.0	0.3	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	178.9
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	350	30	400	390	150	10	10	120	0	320	90
Future Volume (veh/h)	40	350	30	400	390	150	10	10	120	0	320	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	407	35	533	520	200	18	18	211	0	471	132
Peak Hour Factor	0.86	0.86	0.86	0.75	0.75	0.75	0.57	0.57	0.57	0.68	0.68	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	513	532	553	1035	396	350	367	308	0	448	376
Arrive On Green	0.04	0.14	0.14	0.10	0.14	0.14	0.20	0.20	0.20	0.00	0.24	0.24
Sat Flow, veh/h	1500	3554	1530	1781	2486	951	1781	1870	1566	0	1870	1569
Grp Volume(v), veh/h	47	407	35	533	371	349	18	18	211	0	471	132
Grp Sat Flow(s),veh/h/ln	1500	1777	1530	1781	1777	1660	1781	1870	1566	0	1870	1569
Q Serve(g_s), s	5.6	19.9	2.8	53.6	34.8	35.1	1.5	1.4	22.5	0.0	43.1	12.6
Cycle Q Clear(g_c), s	5.6	19.9	2.8	53.6	34.8	35.1	1.5	1.4	22.5	0.0	43.1	12.6
Prop In Lane	1.00		1.00	1.00		0.57	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	57	513	532	553	740	691	350	367	308	0	448	376
V/C Ratio(X)	0.82	0.79	0.07	0.96	0.50	0.51	0.05	0.05	0.69	0.00	1.05	0.35
Avail Cap(c_a), veh/h	99	614	576	570	759	709	350	367	308	0	448	376
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.99	0.99	0.99	0.65	0.65	0.65	0.00	1.00	1.00
Uniform Delay (d), s/veh	85.9	74.4	40.0	79.8	60.3	60.4	58.7	58.7	67.2	0.0	68.4	56.8
Incr Delay (d2), s/veh	1.0	0.7	0.0	27.9	0.9	1.0	0.2	0.2	7.9	0.0	56.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	9.1	1.4	30.2	16.9	16.0	0.7	0.7	9.7	0.0	27.7	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.0	75.1	40.0	107.7	61.2	61.4	58.9	58.8	75.0	0.0	125.2	57.0
LnGrp LOS	F	E	D	F	E	E	E	E	E	A	F	E
Approach Vol, veh/h		489			1253			247			603	
Approach Delay, s/veh		73.8			81.0			72.7			110.3	
Approach LOS		E			F			E			F	

Timer - Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		40.3	60.3	31.5		48.0	11.3	80.5
Change Period (Y+Rc), s		4.9	4.4	5.5		4.9	4.4	* 5.5
Max Green Setting (Gmax), s		28.5	57.6	31.1		43.1	11.9	* 77
Max Q Clear Time (g_c+I1), s		24.5	55.6	21.9		45.1	7.6	37.1
Green Ext Time (p_c), s		0.6	0.2	2.6		0.0	0.0	8.7

Intersection Summary	
HCM 6th Ctrl Delay	85.7
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	440	60	1230	410	0	10	10	160	0	10	0
Future Volume (veh/h)	70	440	60	1230	410	0	10	10	160	0	10	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	81	512	70	1577	526	0	11	11	184	0	40	0
Peak Hour Factor	0.86	0.86	0.86	0.78	0.78	0.78	0.87	0.87	0.87	0.25	0.25	0.25
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	862	377	798	2255	0	240	252	203	0	125	0
Arrive On Green	0.02	0.08	0.08	0.45	0.63	0.00	0.13	0.13	0.13	0.00	0.07	0.00
Sat Flow, veh/h	1781	3554	1554	1781	3647	0	1781	1870	1508	0	1870	0
Grp Volume(v), veh/h	81	512	70	1577	526	0	11	11	184	0	40	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1554	1781	1777	0	1781	1870	1508	0	1870	0
Q Serve(g_s), s	8.2	25.0	7.6	80.6	11.4	0.0	1.0	0.9	21.7	0.0	3.7	0.0
Cycle Q Clear(g_c), s	8.2	25.0	7.6	80.6	11.4	0.0	1.0	0.9	21.7	0.0	3.7	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	99	862	377	798	2255	0	240	252	203	0	125	0
V/C Ratio(X)	0.82	0.59	0.19	1.98	0.23	0.00	0.05	0.04	0.91	0.00	0.32	0.00
Avail Cap(c_a), veh/h	185	862	377	798	2255	0	247	260	209	0	270	0
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	87.4	74.2	66.2	49.7	14.1	0.0	67.8	67.8	76.8	0.0	80.1	0.0
Incr Delay (d2), s/veh	4.2	2.1	0.8	444.2	0.2	0.0	0.3	0.2	40.8	0.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	12.3	3.2	133.5	4.7	0.0	0.5	0.5	10.7	0.0	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.7	76.3	67.0	493.9	14.3	0.0	68.1	68.0	117.6	0.0	80.6	0.0
LnGrp LOS	F	E	E	F	B	A	E	E	F	A	F	A
Approach Vol, veh/h		663			2103			206			40	
Approach Delay, s/veh		77.2			374.0			112.3			80.6	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	85.0	49.0		16.9	14.4	119.5		29.1				
Change Period (Y+Rc), s	4.4	* 5.3		4.9	4.4	5.3		4.9				
Max Green Setting (Gmax), s	80.6	* 29		26.0	18.7	90.8		25.0				
Max Q Clear Time (g_c+I1), s	82.6	27.0		5.7	10.2	13.4		23.7				
Green Ext Time (p_c), s	0.0	1.1		0.1	0.0	7.1		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		286.9
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	50	350	1260	120	100	360
Future Volume (veh/h)	50	350	1260	120	100	360
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1870	1870
Adj Flow Rate, veh/h	63	443	1416	135	200	720
Peak Hour Factor	0.79	0.79	0.89	0.89	0.50	0.50
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	442	2509	1409	133	436	388
Arrive On Green	0.25	0.70	0.85	0.85	0.25	0.25
Sat Flow, veh/h	1795	3676	3392	312	1781	1585
Grp Volume(v), veh/h	63	443	765	786	200	720
Grp Sat Flow(s),veh/h/ln	1795	1791	1791	1819	1781	1585
Q Serve(g_s), s	4.9	7.6	76.4	76.9	17.2	44.1
Cycle Q Clear(g_c), s	4.9	7.6	76.4	76.9	17.2	44.1
Prop In Lane	1.00			0.17	1.00	1.00
Lane Grp Cap(c), veh/h	442	2509	765	778	436	388
V/C Ratio(X)	0.14	0.18	1.00	1.01	0.46	1.85
Avail Cap(c_a), veh/h	442	2509	1105	1123	436	388
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.20	0.20	1.00	1.00
Uniform Delay (d), s/veh	53.0	9.2	13.0	13.1	57.8	67.9
Incr Delay (d2), s/veh	0.1	0.1	14.3	17.3	0.3	394.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	2.9	8.5	9.3	7.8	76.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.1	9.4	27.3	30.4	58.1	462.1
LnGrp LOS	D	A	C	F	E	F
Approach Vol, veh/h		506	1551		920	
Approach Delay, s/veh		14.8	28.9		374.3	
Approach LOS		B	C		F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		131.0		49.0	44.4	86.6
Change Period (Y+Rc), s		4.9		4.9	4.9	* 4.9
Max Green Setting (Gmax), s		126.1		44.1	10.6	* 1.1E2
Max Q Clear Time (g_c+I1), s		9.6		46.1	6.9	78.9
Green Ext Time (p_c), s		1.8		0.0	0.0	7.6

Intersection Summary		
HCM 6th Ctrl Delay		133.2
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	310	80	330	110	220	1400
Future Volume (veh/h)	310	80	330	110	220	1400
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	337	87	388	129	242	1538
Peak Hour Factor	0.92	0.92	0.85	0.85	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	278	247	400	1687	142	905
Arrive On Green	0.16	0.16	0.22	0.90	0.65	0.65
Sat Flow, veh/h	1781	1585	1781	1870	219	1393
Grp Volume(v), veh/h	337	87	388	129	0	1780
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	0	1612
Q Serve(g_s), s	28.1	8.8	38.9	1.3	0.0	117.0
Cycle Q Clear(g_c), s	28.1	8.8	38.9	1.3	0.0	117.0
Prop In Lane	1.00	1.00	1.00			0.86
Lane Grp Cap(c), veh/h	278	247	400	1687	0	1048
V/C Ratio(X)	1.21	0.35	0.97	0.08	0.00	1.70
Avail Cap(c_a), veh/h	278	247	400	1687	0	1048
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	76.0	67.8	69.2	0.9	0.0	31.5
Incr Delay (d2), s/veh	122.4	1.1	37.0	0.1	0.0	318.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.2	8.1	21.9	0.3	0.0	136.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	198.4	68.9	106.2	1.0	0.0	350.1
LnGrp LOS	F	E	F	A	A	F
Approach Vol, veh/h	424			517	1780	
Approach Delay, s/veh	171.8			80.0	350.1	
Approach LOS	F			E	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		168.0		33.0	46.0	122.0
Change Period (Y+Rc), s		5.0		4.9	5.0	* 5
Max Green Setting (Gmax), s		142.0		28.1	20.6	* 1.2E2
Max Q Clear Time (g_c+I1), s		3.3		30.1	40.9	119.0
Green Ext Time (p_c), s		1.1		0.0	0.0	0.0

Intersection Summary			
HCM 6th Ctrl Delay			271.0
HCM 6th LOS			F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	150	450	1210	380	670	1410
Future Volume (veh/h)	150	450	1210	380	670	1410
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	2133	2133	1885	1870	1870
Adj Flow Rate, veh/h	170	511	1476	463	905	1905
Peak Hour Factor	0.88	0.88	0.82	0.82	0.74	0.74
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	524	2488	890	263	303	638
Arrive On Green	0.58	1.00	0.58	0.58	0.57	0.57
Sat Flow, veh/h	1795	4160	3170	905	529	1114
Grp Volume(v), veh/h	170	511	945	994	2811	0
Grp Sat Flow(s),veh/h/ln	1795	2027	2027	1941	1643	0
Q Serve(g_s), s	8.8	0.0	52.3	52.3	103.1	0.0
Cycle Q Clear(g_c), s	8.8	0.0	52.3	52.3	103.1	0.0
Prop In Lane	1.00			0.47	0.32	0.68
Lane Grp Cap(c), veh/h	524	2488	589	564	941	0
V/C Ratio(X)	0.32	0.21	1.61	1.76	2.99	0.00
Avail Cap(c_a), veh/h	524	2488	589	564	941	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.54	0.54	1.00	0.00
Uniform Delay (d), s/veh	28.4	0.0	37.7	37.7	38.5	0.0
Incr Delay (d2), s/veh	0.1	0.2	276.7	346.6	896.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.1	64.7	72.9	275.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.5	0.2	314.4	384.3	935.1	0.0
LnGrp LOS	C	A	F	F	F	A
Approach Vol, veh/h		681	1939		2811	
Approach Delay, s/veh		7.2	350.3		935.1	
Approach LOS		A	F		F	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	117.5	108.0	59.5	58.0
Change Period (Y+Rc), s	5.7	4.9	5.7	* 5.7
Max Green Setting (Gmax), s	66.3	103.1	9.6	* 52
Max Q Clear Time (g_c+I1), s	2.0	105.1	10.8	54.3
Green Ext Time (p_c), s	4.9	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	610.0
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	60	0	380	10	2260	160	260	1380	0
Future Volume (veh/h)	0	0	0	60	0	380	10	2260	160	260	1380	0
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1856	1856	1856	1856	0
Adj Flow Rate, veh/h				68	0	432	11	2430	172	283	1500	0
Peak Hour Factor				0.88	0.88	0.88	0.93	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	3	3	3	3	0
Cap, veh/h				300	0	471	17	2733	823	346	3750	0
Arrive On Green				0.17	0.00	0.17	0.01	0.54	0.54	0.39	1.00	0.00
Sat Flow, veh/h				1781	0	2790	1781	5066	1526	1767	5233	0
Grp Volume(v), veh/h				68	0	432	11	2430	172	283	1500	0
Grp Sat Flow(s),veh/h/ln				1781	0	1395	1781	1689	1526	1767	1689	0
Q Serve(g_s), s				5.9	0.0	27.4	1.1	76.4	10.5	25.8	0.0	0.0
Cycle Q Clear(g_c), s				5.9	0.0	27.4	1.1	76.4	10.5	25.8	0.0	0.0
Prop In Lane				1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				300	0	471	17	2733	823	346	3750	0
V/C Ratio(X)				0.23	0.00	0.92	0.66	0.89	0.21	0.82	0.40	0.00
Avail Cap(c_a), veh/h				323	0	505	55	2786	839	346	3750	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.09	1.00	1.00	0.00
Uniform Delay (d), s/veh				64.7	0.0	73.6	88.9	36.7	21.5	51.9	0.0	0.0
Incr Delay (d2), s/veh				0.6	0.0	21.7	1.5	0.5	0.1	13.4	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.7	0.0	11.1	0.5	30.0	3.7	10.8	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				65.2	0.0	95.3	90.3	37.1	21.6	65.4	0.3	0.0
LnGrp LOS				E	A	F	F	D	C	E	A	A
Approach Vol, veh/h					500			2613			1783	
Approach Delay, s/veh					91.2			36.3			10.6	
Approach LOS					F			D			B	

Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	41.1	104.1			6.1	139.1		34.8				
Change Period (Y+Rc), s	5.9	* 7			4.4	5.9		4.4				
Max Green Setting (Gmax), s	32.6	* 99			5.6	127.1		32.6				
Max Q Clear Time (g_c+I1), s	27.8	78.4			3.1	2.0		29.4				
Green Ext Time (p_c), s	0.2	18.7			0.0	36.6		0.9				

Intersection Summary	
HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1220	110	60	20	70	20	130	1240	30	30	630	800
Future Volume (veh/h)	1220	110	60	20	70	20	130	1240	30	30	630	800
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1870	1796	1563	1856	1856	1563	1856	1856
Adj Flow Rate, veh/h	1258	113	62	27	95	27	137	1305	32	31	656	833
Peak Hour Factor	0.97	0.97	0.97	0.74	0.74	0.74	0.95	0.95	0.95	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	709	1566	659	35	221	92	88	2031	620	37	1860	569
Arrive On Green	0.40	0.44	0.44	0.02	0.06	0.06	0.06	0.40	0.40	0.03	0.37	0.37
Sat Flow, veh/h	1781	3554	1497	1781	3554	1478	1488	5066	1547	1488	5066	1548
Grp Volume(v), veh/h	1258	113	62	27	95	27	137	1305	32	31	656	833
Grp Sat Flow(s),veh/h/ln	1781	1777	1497	1781	1777	1478	1488	1689	1547	1488	1689	1548
Q Serve(g_s), s	71.6	3.3	4.4	2.7	4.6	3.1	10.6	37.4	2.3	3.7	16.9	66.1
Cycle Q Clear(g_c), s	71.6	3.3	4.4	2.7	4.6	3.1	10.6	37.4	2.3	3.7	16.9	66.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	709	1566	659	35	221	92	88	2031	620	37	1860	569
V/C Ratio(X)	1.78	0.07	0.09	0.78	0.43	0.29	1.56	0.64	0.05	0.83	0.35	1.47
Avail Cap(c_a), veh/h	709	1887	795	69	612	254	88	2031	620	40	1860	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	54.2	29.1	29.4	87.9	81.3	80.6	84.7	43.5	33.0	87.4	41.4	56.9
Incr Delay (d2), s/veh	354.7	0.1	0.2	13.1	3.6	4.8	301.4	1.6	0.2	69.4	0.5	218.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	102.1	1.5	1.7	1.4	2.3	1.3	11.4	15.6	0.9	2.1	7.1	60.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	408.9	29.1	29.6	101.0	84.9	85.4	386.1	45.1	33.1	156.7	41.9	275.2
LnGrp LOS	F	C	C	F	F	F	F	D	C	F	D	F
Approach Vol, veh/h		1433			149			1474			1520	
Approach Delay, s/veh		362.5			87.9			76.5			172.1	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	79.0	7.9	84.2	15.0	72.9	76.0	16.1
Change Period (Y+Rc), s	4.4	6.8	4.4	4.9	4.4	* 6.8	4.4	4.9
Max Green Setting (Gmax), s	4.8	52.1	7.0	95.6	10.6	* 47	71.6	31.0
Max Q Clear Time (g_c+I1), s	5.7	39.4	4.7	6.4	12.6	68.1	73.6	6.6
Green Ext Time (p_c), s	0.0	6.6	0.0	2.5	0.0	0.0	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	198.2
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	20	30	10	40	20	1340	110	30	640	20
Future Volume (veh/h)	10	0	20	30	10	40	20	1340	110	30	640	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	20	0	40	28	33	54	21	1426	117	31	660	21
Peak Hour Factor	0.50	0.50	0.50	0.74	0.74	0.74	0.94	0.94	0.94	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	25	0	50	79	83	106	178	2755	1193	40	2442	1060
Arrive On Green	0.05	0.00	0.05	0.04	0.04	0.04	0.20	1.00	1.00	0.02	0.69	0.69
Sat Flow, veh/h	548	0	1097	1781	1870	1585	1767	3526	1527	1767	3526	1529
Grp Volume(v), veh/h	60	0	0	28	33	54	21	1426	117	31	660	21
Grp Sat Flow(s),veh/h/ln	1645	0	0	1781	1870	1585	1767	1763	1527	1767	1763	1529
Q Serve(g_s), s	6.5	0.0	0.0	2.7	3.1	5.9	1.8	0.0	0.0	3.1	12.7	0.8
Cycle Q Clear(g_c), s	6.5	0.0	0.0	2.7	3.1	5.9	1.8	0.0	0.0	3.1	12.7	0.8
Prop In Lane	0.33		0.67	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	74	0	0	79	83	106	178	2755	1193	40	2442	1060
V/C Ratio(X)	0.81	0.00	0.00	0.36	0.40	0.51	0.12	0.52	0.10	0.78	0.27	0.02
Avail Cap(c_a), veh/h	129	0	0	109	114	133	178	2755	1193	124	2442	1060
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.55	0.55	0.55	0.18	0.18	0.18	1.00	1.00	1.00
Uniform Delay (d), s/veh	85.2	0.0	0.0	83.5	83.7	81.2	65.4	0.0	0.0	87.5	10.5	8.6
Incr Delay (d2), s/veh	7.5	0.0	0.0	0.6	0.6	0.8	0.0	0.1	0.0	11.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0	1.3	1.5	2.5	0.8	0.0	0.0	1.5	4.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.6	0.0	0.0	84.1	84.3	81.9	65.4	0.1	0.0	98.9	10.7	8.6
LnGrp LOS	F	A	A	F	F	F	E	A	A	F	B	A
Approach Vol, veh/h		60			115			1564			712	
Approach Delay, s/veh		92.6			83.2			1.0			14.5	
Approach LOS		F			F			A			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	145.6		13.0	23.0	131.0		13.0
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 6.3		5.0
Max Green Setting (Gmax), s	12.6	123.1		14.1	9.6	* 1.2E2		11.0
Max Q Clear Time (g_c+I1), s	5.1	2.0		8.5	3.8	14.7		7.9
Green Ext Time (p_c), s	0.0	37.7		0.1	0.0	2.7		0.1

Intersection Summary		
HCM 6th Ctrl Delay		11.0
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	460	140	440	140	140	120	420	950	40	80	480	110
Future Volume (veh/h)	460	140	440	140	140	120	420	950	40	80	480	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1563	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	511	406	322	192	192	164	447	1011	43	87	522	120
Peak Hour Factor	0.90	0.90	0.90	0.73	0.73	0.73	0.94	0.94	0.94	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	535	1011	842	340	1004	805	477	1098	47	355	1274	557
Arrive On Green	0.54	0.54	0.54	0.54	0.54	0.54	0.22	0.42	0.42	0.07	0.12	0.12
Sat Flow, veh/h	1023	1870	1558	727	1858	1489	2887	3438	146	1767	3526	1542
Grp Volume(v), veh/h	511	406	322	192	183	173	447	518	536	87	522	120
Grp Sat Flow(s),veh/h/ln	1023	1870	1558	727	1777	1571	1444	1763	1822	1767	1763	1542
Q Serve(g_s), s	87.1	22.9	21.6	37.9	9.5	10.2	27.4	50.0	50.0	8.4	24.7	12.7
Cycle Q Clear(g_c), s	97.3	22.9	21.6	60.9	9.5	10.2	27.4	50.0	50.0	8.4	24.7	12.7
Prop In Lane	1.00		1.00	1.00		0.95	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	535	1011	842	340	960	849	477	563	582	355	1274	557
V/C Ratio(X)	0.96	0.40	0.38	0.56	0.19	0.20	0.94	0.92	0.92	0.24	0.41	0.22
Avail Cap(c_a), veh/h	535	1011	842	340	960	849	529	563	582	355	1274	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.45	0.45	0.45	0.98	0.98	0.98
Uniform Delay (d), s/veh	47.8	24.3	23.9	42.1	21.2	21.3	69.3	49.6	49.6	71.1	61.5	56.2
Incr Delay (d2), s/veh	27.7	0.1	0.1	1.4	0.0	0.0	12.5	12.4	12.1	0.1	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.7	10.5	8.3	7.1	4.1	4.0	10.6	22.9	23.6	4.0	12.0	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.5	24.4	24.1	43.5	21.2	21.4	81.8	62.0	61.7	71.2	62.4	57.1
LnGrp LOS	E	C	C	D	C	C	F	E	E	E	E	E
Approach Vol, veh/h		1239			548			1501			729	
Approach Delay, s/veh		45.4			29.1			67.7			62.6	
Approach LOS		D			C			E			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	42.1	63.0		102.2	34.2	70.9		102.2
Change Period (Y+Rc), s	5.2	* 5.5		4.9	4.4	5.2		4.9
Max Green Setting (Gmax), s	10.4	* 58		97.3	33.0	35.2		97.3
Max Q Clear Time (g_c+I1), s	10.4	52.0		99.3	29.4	26.7		62.9
Green Ext Time (p_c), s	0.0	3.9		0.0	0.4	3.6		2.9

Intersection Summary		
HCM 6th Ctrl Delay		54.6
HCM 6th LOS		D

Notes
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	510	220	180	260	70	350	810	420	130	570	120
Future Volume (veh/h)	270	510	220	180	260	70	350	810	420	130	570	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1563	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	303	573	247	196	283	76	372	862	447	141	620	130
Peak Hour Factor	0.89	0.89	0.89	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	531	514	222	200	330	273	353	1091	465	193	648	273
Arrive On Green	0.30	0.42	0.42	0.06	0.18	0.18	0.47	0.62	0.62	0.07	0.12	0.12
Sat Flow, veh/h	1781	1233	531	3456	1870	1549	1488	3526	1504	1767	3526	1485
Grp Volume(v), veh/h	303	0	820	196	283	76	372	862	447	141	620	130
Grp Sat Flow(s),veh/h/ln	1781	0	1764	1728	1870	1549	1488	1763	1504	1767	1763	1485
Q Serve(g_s), s	25.9	0.0	75.1	10.2	26.4	7.6	42.7	32.8	50.3	14.1	31.5	14.7
Cycle Q Clear(g_c), s	25.9	0.0	75.1	10.2	26.4	7.6	42.7	32.8	50.3	14.1	31.5	14.7
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	531	0	736	200	330	273	353	1091	465	193	648	273
V/C Ratio(X)	0.57	0.00	1.11	0.98	0.86	0.28	1.05	0.79	0.96	0.73	0.96	0.48
Avail Cap(c_a), veh/h	531	0	736	200	430	356	353	1091	465	193	648	273
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	0.65	0.65	0.65
Uniform Delay (d), s/veh	53.5	0.0	52.5	84.7	71.9	64.2	47.3	29.9	33.3	80.8	78.2	70.8
Incr Delay (d2), s/veh	0.9	0.0	69.0	58.0	18.4	1.5	55.8	4.3	27.2	7.7	19.7	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	0.0	47.3	6.2	14.4	3.2	18.6	11.1	17.6	7.0	16.4	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	0.0	121.5	142.7	90.3	65.7	103.1	34.3	60.4	88.5	97.9	74.7
LnGrp LOS	D	A	F	F	F	E	F	C	E	F	F	E
Approach Vol, veh/h		1123			555			1681			891	
Approach Delay, s/veh		103.4			105.5			56.5			93.0	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.1	61.1	14.8	80.0	47.1	38.1	58.0	36.8
Change Period (Y+Rc), s	4.4	5.4	4.4	4.9	4.4	5.0	4.4	5.0
Max Green Setting (Gmax), s	19.7	55.7	10.4	75.1	42.7	33.1	44.0	41.4
Max Q Clear Time (g_c+I1), s	16.1	52.3	12.2	77.1	44.7	33.5	27.9	28.4
Green Ext Time (p_c), s	0.1	2.6	0.0	0.0	0.0	0.0	0.4	3.0

Intersection Summary	
HCM 6th Ctrl Delay	82.9
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	90	70	1500	160	130	840
Future Volume (veh/h)	90	70	1500	160	130	840
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1856	1781	1563	1856
Adj Flow Rate, veh/h	110	85	1596	170	141	913
Peak Hour Factor	0.82	0.82	0.94	0.94	0.92	0.92
Percent Heavy Veh, %	2	2	3	3	3	3
Cap, veh/h	131	116	2617	1092	155	3071
Arrive On Green	0.07	0.07	1.00	1.00	0.21	1.00
Sat Flow, veh/h	1781	1585	3618	1471	1488	3618
Grp Volume(v), veh/h	110	85	1596	170	141	913
Grp Sat Flow(s),veh/h/ln	1781	1585	1763	1471	1488	1763
Q Serve(g_s), s	11.0	9.5	0.0	0.0	16.7	0.0
Cycle Q Clear(g_c), s	11.0	9.5	0.0	0.0	16.7	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	131	116	2617	1092	155	3071
V/C Ratio(X)	0.84	0.73	0.61	0.16	0.91	0.30
Avail Cap(c_a), veh/h	288	256	2617	1092	253	3071
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.54	0.54	0.16	0.16
Uniform Delay (d), s/veh	82.3	81.6	0.0	0.0	70.4	0.0
Incr Delay (d2), s/veh	5.4	3.3	0.6	0.2	3.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	4.0	0.2	0.0	5.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	87.7	84.9	0.6	0.2	73.6	0.0
LnGrp LOS	F	F	A	A	E	A
Approach Vol, veh/h	195		1766			1054
Approach Delay, s/veh	86.5		0.5			9.9
Approach LOS	F		A			A

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	23.2	138.7				161.9		18.1
Change Period (Y+Rc), s	4.4	5.1				* 5.1		4.9
Max Green Setting (Gmax), s	30.6	105.9				* 1.4E2		29.1
Max Q Clear Time (g_c+I1), s	18.7	2.0				2.0		13.0
Green Ext Time (p_c), s	0.1	28.3				11.8		0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	120	500	30	150	170	270	1200	50	120	650	130
Future Volume (veh/h)	290	120	500	30	150	170	270	1200	50	120	650	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.95	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1796	1870	1870	1796	1563	1856	1781	1563	1856	1856
Adj Flow Rate, veh/h	309	431	330	33	182	176	281	1250	52	130	707	141
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.96	0.96	0.96	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	327	571	453	43	272	213	435	1653	672	146	776	155
Arrive On Green	0.18	0.31	0.31	0.02	0.15	0.15	0.58	0.94	0.94	0.07	0.18	0.18
Sat Flow, veh/h	1781	1870	1482	1781	1870	1461	1488	3526	1433	1488	2886	575
Grp Volume(v), veh/h	309	431	330	33	182	176	281	1250	52	130	432	416
Grp Sat Flow(s),veh/h/ln	1781	1870	1482	1781	1870	1461	1488	1763	1433	1488	1763	1698
Q Serve(g_s), s	30.8	37.4	17.9	3.3	16.6	21.1	22.7	13.6	0.4	15.6	43.2	43.3
Cycle Q Clear(g_c), s	30.8	37.4	17.9	3.3	16.6	21.1	22.7	13.6	0.4	15.6	43.2	43.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	327	571	453	43	272	213	435	1653	672	146	474	457
V/C Ratio(X)	0.94	0.75	0.73	0.78	0.67	0.83	0.65	0.76	0.08	0.89	0.91	0.91
Avail Cap(c_a), veh/h	368	616	488	88	322	252	435	1653	672	177	504	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	0.95	0.95	0.95
Uniform Delay (d), s/veh	72.6	56.4	14.0	87.4	72.8	74.7	31.1	3.4	3.0	83.1	71.7	71.7
Incr Delay (d2), s/veh	30.0	5.5	5.8	10.6	4.6	18.2	0.2	0.3	0.0	30.5	23.3	24.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.0	18.8	7.0	1.7	8.4	9.1	6.4	1.8	0.1	7.4	23.1	22.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.5	61.9	19.7	98.0	77.4	92.9	31.4	3.7	3.0	113.6	94.9	95.8
LnGrp LOS	F	E	B	F	E	F	C	A	A	F	F	F
Approach Vol, veh/h		1070			391			1583			978	
Approach Delay, s/veh		60.7			86.1			8.6			97.8	
Approach LOS		E			F			A			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	89.4	8.7	59.9	57.6	53.8	37.5	31.1
Change Period (Y+Rc), s	4.4	5.0	4.4	4.9	5.0	* 5.4	4.4	4.9
Max Green Setting (Gmax), s	21.4	71.7	8.9	59.3	41.2	* 52	37.2	31.0
Max Q Clear Time (g_c+I1), s	17.6	15.6	5.3	39.4	24.7	45.3	32.8	23.1
Green Ext Time (p_c), s	0.1	22.2	0.0	6.2	0.3	3.1	0.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	51.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	520	1190	40	170	920	380	30	950	400	120	610	330
Future Volume (veh/h)	520	1190	40	170	920	380	30	950	400	120	610	330
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1856	1856	1856	1563	1856	1856
Adj Flow Rate, veh/h	812	1859	62	207	1122	463	33	1033	435	124	629	340
Peak Hour Factor	0.64	0.64	0.64	0.82	0.82	0.82	0.92	0.92	0.92	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	3	3	3
Cap, veh/h	389	1554	52	254	998	401	62	1169	507	138	1274	729
Arrive On Green	0.11	0.44	0.44	0.10	0.53	0.53	0.01	0.22	0.22	0.10	0.72	0.72
Sat Flow, veh/h	3483	3537	117	3483	2492	1000	3428	3526	1529	2887	3526	1531
Grp Volume(v), veh/h	812	936	985	207	797	788	33	1033	435	124	629	340
Grp Sat Flow(s),veh/h/ln	1742	1791	1864	1742	1791	1701	1714	1763	1529	1444	1763	1531
Q Serve(g_s), s	20.1	79.1	79.1	10.5	72.1	72.1	1.7	51.0	39.7	7.6	13.8	16.4
Cycle Q Clear(g_c), s	20.1	79.1	79.1	10.5	72.1	72.1	1.7	51.0	39.7	7.6	13.8	16.4
Prop In Lane	1.00		0.06	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	389	787	819	254	717	681	62	1169	507	138	1274	729
V/C Ratio(X)	2.09	1.19	1.20	0.82	1.11	1.16	0.54	0.88	0.86	0.90	0.49	0.47
Avail Cap(c_a), veh/h	389	787	819	484	836	794	166	1169	507	138	1274	729
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.45	0.45	0.45	0.70	0.70	0.70
Uniform Delay (d), s/veh	79.9	50.4	50.5	80.1	42.0	42.0	88.2	66.6	42.9	81.0	17.8	12.7
Incr Delay (d2), s/veh	498.2	97.8	102.7	0.7	52.1	71.9	1.2	4.8	8.5	36.6	1.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	36.0	56.7	60.1	4.7	39.9	41.6	0.8	24.3	16.9	3.4	4.4	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	578.1	148.2	153.2	80.8	94.2	114.0	89.4	71.5	51.4	117.6	18.8	14.2
LnGrp LOS	F	F	F	F	F	F	F	E	D	F	B	B
Approach Vol, veh/h		2733			1792			1501			1093	
Approach Delay, s/veh		277.8			101.3			66.0			28.6	
Approach LOS		F			F			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	64.9	18.1	84.0	7.6	70.3	25.0	77.1
Change Period (Y+Rc), s	4.4	* 5.2	5.0	4.9	4.4	5.2	4.9	5.0
Max Green Setting (Gmax), s	8.6	* 48	25.0	79.1	8.7	47.7	20.1	84.0
Max Q Clear Time (g_c+I1), s	9.6	53.0	12.5	81.1	3.7	15.8	22.1	0.0
Green Ext Time (p_c), s	0.0	0.0	0.6	0.0	0.0	5.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	150.4
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1590	10	420	840	810	10	10	1100	420	10	10
Future Volume (veh/h)	10	1590	10	420	840	810	10	10	1100	420	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1810	1885	1885	1885	1870	1870	1796	1870	1870	1870
Adj Flow Rate, veh/h	11	1674	11	438	875	844	11	11	1236	483	11	11
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.89	0.89	0.89	0.87	0.87	0.87
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	17	1065	443	229	746	646	423	414	766	263	430	430
Arrive On Green	0.01	0.40	0.40	0.21	0.69	0.69	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1795	3582	1492	1795	1794	1554	778	819	1514	445	850	850
Grp Volume(v), veh/h	11	1674	11	438	873	846	22	0	1236	483	0	22
Grp Sat Flow(s),veh/h/ln	1795	1791	1492	1795	1791	1558	1597	0	1514	445	0	1700
Q Serve(g_s), s	1.1	53.5	0.8	23.0	74.8	74.8	0.0	0.0	91.0	89.9	0.0	1.2
Cycle Q Clear(g_c), s	1.1	53.5	0.8	23.0	74.8	74.8	1.1	0.0	91.0	91.0	0.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	0.50		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	17	1065	443	229	744	647	837	0	766	263	0	859
V/C Ratio(X)	0.65	1.57	0.02	1.91	1.17	1.31	0.03	0.00	1.61	1.84	0.00	0.03
Avail Cap(c_a), veh/h	40	1065	443	229	744	647	837	0	766	263	0	859
HCM Platoon Ratio	1.33	1.33	1.33	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	88.6	54.4	38.5	70.8	27.5	27.5	22.3	0.0	44.5	51.9	0.0	22.3
Incr Delay (d2), s/veh	1.4	258.0	0.0	410.6	79.3	139.0	0.0	0.0	282.5	392.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	61.1	0.3	36.1	41.0	46.4	0.5	0.0	94.2	41.0	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.0	312.4	38.5	481.4	106.9	166.5	22.3	0.0	327.0	444.1	0.0	22.3
LnGrp LOS	F	F	D	F	F	F	C	A	F	F	A	C
Approach Vol, veh/h		1696			2157			1258			505	
Approach Delay, s/veh		309.2			206.3			321.7			425.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	27.0	58.0		95.0	5.7	79.3		95.0
Change Period (Y+Rc), s	4.0	4.5		4.0	4.0	4.5		4.0
Max Green Setting (Gmax), s	23.0	53.5		91.0	4.0	72.5		91.0
Max Q Clear Time (g_c+I1), s	25.0	55.5		93.0	3.1	76.8		93.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	283.0
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	270	740	60	70	40	530	1250	240	70	700	40
Future Volume (veh/h)	170	270	740	60	70	40	530	1250	240	70	700	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	680	1080	2960	78	91	52	576	1359	261	75	753	43
Peak Hour Factor	0.25	0.25	0.25	0.77	0.77	0.77	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	983	593	1115	64	129	108	1326	1430	618	240	526	30
Arrive On Green	0.28	0.32	0.32	0.04	0.07	0.07	0.77	0.81	0.81	0.18	0.21	0.21
Sat Flow, veh/h	3456	1870	1582	1781	1870	1571	3428	3526	1523	1767	3383	193
Grp Volume(v), veh/h	680	1080	2960	78	91	52	576	1359	261	75	392	404
Grp Sat Flow(s),veh/h/ln	1728	1870	1582	1781	1870	1571	1714	1763	1523	1767	1763	1814
Q Serve(g_s), s	31.6	57.1	57.1	6.5	8.6	5.7	10.3	57.1	8.8	6.6	28.0	28.0
Cycle Q Clear(g_c), s	31.6	57.1	57.1	6.5	8.6	5.7	10.3	57.1	8.8	6.6	28.0	28.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	983	593	1115	64	129	108	1326	1430	618	240	274	282
V/C Ratio(X)	0.69	1.82	2.66	1.21	0.71	0.48	0.43	0.95	0.42	0.31	1.43	1.43
Avail Cap(c_a), veh/h	983	593	1115	64	314	264	1326	1655	715	240	274	282
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.52	0.52	0.52	0.79	0.79	0.79
Uniform Delay (d), s/veh	57.4	61.4	26.6	86.8	82.0	80.7	13.7	15.5	10.9	66.4	71.4	71.4
Incr Delay (d2), s/veh	2.1	375.7	747.5	180.3	2.6	1.2	0.0	8.9	1.1	0.2	209.5	209.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	89.1	246.5	6.3	4.3	2.4	3.1	9.9	2.6	3.0	28.1	28.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.5	437.2	774.1	267.1	84.7	81.9	13.7	24.4	12.0	66.6	280.9	280.9
LnGrp LOS	E	F	F	F	F	F	B	C	B	E	F	F
Approach Vol, veh/h		4720			221			2196			871	
Approach Delay, s/veh		594.0			148.4			20.1			262.5	
Approach LOS		F			F			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.9	78.1	11.0	62.0	74.0	33.0	55.7	17.3
Change Period (Y+Rc), s	4.4	5.1	4.5	4.9	4.4	5.0	4.5	4.9
Max Green Setting (Gmax), s	13.0	84.5	6.5	57.1	69.6	28.0	33.4	30.2
Max Q Clear Time (g_c+I1), s	18.6	59.1	8.5	59.1	12.3	30.0	33.6	10.6
Green Ext Time (p_c), s	0.0	13.9	0.0	0.0	1.1	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	388.3
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	670	210	210	410	80	410	30	710	240	160	400	200
Future Volume (veh/h)	670	210	210	410	80	410	30	710	240	160	400	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1796	1856	1856	1856
Adj Flow Rate, veh/h	728	228	228	477	93	477	33	772	261	172	430	215
Peak Hour Factor	0.92	0.92	0.92	0.86	0.86	0.86	0.92	0.92	0.92	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	3	3	3
Cap, veh/h	778	289	237	606	491	427	43	1008	418	188	1291	924
Arrive On Green	0.07	0.05	0.05	0.34	0.28	0.28	0.02	0.28	0.28	0.21	0.73	0.73
Sat Flow, veh/h	3428	1856	1522	1781	1777	1548	1781	3554	1473	1767	3526	1547
Grp Volume(v), veh/h	728	228	228	477	93	477	33	772	261	172	430	215
Grp Sat Flow(s),veh/h/ln	1714	1856	1522	1781	1777	1548	1781	1777	1473	1767	1763	1547
Q Serve(g_s), s	38.0	21.9	24.4	43.5	7.2	49.7	3.3	35.8	12.3	17.1	7.8	5.9
Cycle Q Clear(g_c), s	38.0	21.9	24.4	43.5	7.2	49.7	3.3	35.8	12.3	17.1	7.8	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	778	289	237	606	491	427	43	1008	418	188	1291	924
V/C Ratio(X)	0.94	0.79	0.96	0.79	0.19	1.12	0.78	0.77	0.62	0.91	0.33	0.23
Avail Cap(c_a), veh/h	851	320	262	619	491	427	89	1008	418	202	1291	924
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.26	0.26	0.26	1.00	1.00	1.00	0.09	0.09	0.09	0.09	0.09	0.09
Uniform Delay (d), s/veh	81.9	82.4	69.5	53.6	49.8	65.2	87.4	59.0	11.1	70.0	16.3	6.8
Incr Delay (d2), s/veh	5.4	3.1	18.5	6.0	0.3	79.0	1.0	0.5	0.6	5.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	11.3	11.3	20.6	3.3	29.0	1.5	16.1	4.2	7.3	2.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.3	85.6	88.0	59.5	50.1	144.2	88.4	59.5	11.7	75.9	16.4	6.8
LnGrp LOS	F	F	F	E	D	F	F	E	B	E	B	A
Approach Vol, veh/h		1184			1047			1066			817	
Approach Delay, s/veh		87.1			97.3			48.7			26.4	
Approach LOS		F			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.6	56.6	66.1	33.8	8.7	71.4	45.3	54.6
Change Period (Y+Rc), s	4.4	5.5	4.9	* 5.7	4.4	* 5.5	4.4	4.9
Max Green Setting (Gmax), s	20.6	45.8	62.6	* 31	9.0	* 58	44.7	49.7
Max Q Clear Time (g_c+I1), s	19.1	37.8	45.5	26.4	5.3	9.8	40.0	51.7
Green Ext Time (p_c), s	0.0	4.9	0.7	0.9	0.0	9.0	0.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	67.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.8					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	2100	1360	100	0	130
Future Vol, veh/h	0	2100	1360	100	0	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2234	1478	109	0	141

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	794
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	331
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	331
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	23.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	331
HCM Lane V/C Ratio	-	-	-	0.427
HCM Control Delay (s)	-	-	-	23.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	730	70	970	170	90	90	270	310	140	30	140	120
Future Volume (veh/h)	730	70	970	170	90	90	270	310	140	30	140	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	793	76	1054	274	145	145	293	337	152	33	152	130
Peak Hour Factor	0.92	0.92	0.92	0.62	0.62	0.62	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	763	46	640	180	95	95	192	362	295	99	269	220
Arrive On Green	0.43	0.43	0.43	0.21	0.21	0.21	0.11	0.20	0.20	0.02	0.05	0.05
Sat Flow, veh/h	1781	108	1494	849	449	449	1767	1856	1513	1767	1856	1516
Grp Volume(v), veh/h	793	0	1130	564	0	0	293	337	152	33	152	130
Grp Sat Flow(s),veh/h/ln	1781	0	1601	1747	0	0	1767	1856	1513	1767	1856	1516
Q Serve(g_s), s	77.1	0.0	77.1	38.1	0.0	0.0	19.6	32.2	16.2	3.3	14.4	15.1
Cycle Q Clear(g_c), s	77.1	0.0	77.1	38.1	0.0	0.0	19.6	32.2	16.2	3.3	14.4	15.1
Prop In Lane	1.00		0.93	0.49		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	763	0	686	370	0	0	192	362	295	99	269	220
V/C Ratio(X)	1.04	0.00	1.65	1.53	0.00	0.00	1.52	0.93	0.51	0.33	0.56	0.59
Avail Cap(c_a), veh/h	763	0	686	370	0	0	192	407	332	99	269	220
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.41	0.41	0.41	0.79	0.79	0.79
Uniform Delay (d), s/veh	51.4	0.0	51.5	71.0	0.0	0.0	80.2	71.3	64.8	85.0	80.1	80.5
Incr Delay (d2), s/veh	43.2	0.0	297.8	249.7	0.0	0.0	245.9	17.6	2.6	1.1	6.6	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	43.2	0.0	87.3	42.7	0.0	0.0	22.1	17.1	6.5	1.6	7.8	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.7	0.0	349.3	320.7	0.0	0.0	326.1	88.8	67.4	86.2	86.8	89.4
LnGrp LOS	F	A	F	F	A	A	F	F	E	F	F	F
Approach Vol, veh/h		1923			564			782			315	
Approach Delay, s/veh		244.3			320.7			173.6			87.8	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	40.0		82.0	24.0	31.0		43.0				
Change Period (Y+Rc), s	4.9	* 4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	6.2	* 40		77.1	19.6	26.1		38.1				
Max Q Clear Time (g_c+I1), s	5.3	34.2		79.1	21.6	16.4		40.1				
Green Ext Time (p_c), s	0.0	1.0		0.0	0.0	0.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			227.1									
HCM 6th LOS			F									

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	10	20	70	10	20	30	460	160	30	340	10
Future Volume (veh/h)	20	10	20	70	10	20	30	460	160	30	340	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.92	1.00		0.99	1.00		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	31	15	31	91	0	24	31	479	167	33	370	11
Peak Hour Factor	0.65	0.65	0.65	0.85	0.85	0.85	0.96	0.96	0.96	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	36	74	350	0	143	973	2341	1036	42	461	14
Arrive On Green	0.11	0.11	0.11	0.10	0.00	0.10	0.55	0.66	0.66	0.05	0.26	0.26
Sat Flow, veh/h	666	322	666	3563	0	1454	1781	3554	1573	1781	3513	104
Grp Volume(v), veh/h	77	0	0	91	0	24	31	479	167	33	187	194
Grp Sat Flow(s),veh/h/ln	1655	0	0	1781	0	1454	1781	1777	1573	1781	1777	1840
Q Serve(g_s), s	7.8	0.0	0.0	4.3	0.0	2.7	1.4	9.6	7.3	3.3	17.6	17.8
Cycle Q Clear(g_c), s	7.8	0.0	0.0	4.3	0.0	2.7	1.4	9.6	7.3	3.3	17.6	17.8
Prop In Lane	0.40		0.40	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	184	0	0	350	0	143	973	2341	1036	42	233	241
V/C Ratio(X)	0.42	0.00	0.00	0.26	0.00	0.17	0.03	0.20	0.16	0.78	0.80	0.81
Avail Cap(c_a), veh/h	387	0	0	695	0	284	973	2341	1036	174	649	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.98	0.98	0.98	0.99	0.99	0.99
Uniform Delay (d), s/veh	74.6	0.0	0.0	75.1	0.0	74.4	18.8	12.1	11.7	85.2	64.2	64.2
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.1	0.0	0.2	0.0	0.2	0.3	10.6	24.2	24.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	2.0	0.0	1.0	0.6	3.9	2.7	1.6	8.7	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.1	0.0	0.0	75.3	0.0	74.6	18.8	12.3	12.0	95.8	88.3	88.2
LnGrp LOS	E	A	A	E	A	E	B	B	B	F	F	F
Approach Vol, veh/h		77			115			677			414	
Approach Delay, s/veh		76.1			75.1			12.5			88.9	
Approach LOS		E			E			B			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.7	123.9		24.9	103.7	28.9		22.6
Change Period (Y+Rc), s	4.4	5.3		4.9	5.3	* 5.3		4.9
Max Green Setting (Gmax), s	17.6	65.7		42.1	17.6	* 66		35.1
Max Q Clear Time (g_c+I1), s	5.3	11.6		9.8	3.4	19.8		6.3
Green Ext Time (p_c), s	0.0	7.0		0.4	0.0	3.8		0.2

Intersection Summary		
HCM 6th Ctrl Delay		46.6
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	220	0	0	0	120	610	0	0	370	20
Future Volume (veh/h)	60	0	220	0	0	0	120	610	0	0	370	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	0	272	0	0	0	128	649	0	0	398	22
Peak Hour Factor	0.81	0.92	0.81	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	343	0	301	1	1	0	1031	2685	0	36	517	28
Arrive On Green	0.19	0.00	0.19	0.00	0.00	0.00	0.58	0.76	0.00	0.00	0.15	0.15
Sat Flow, veh/h	1781	0	1565	1781	1870	0	1781	3647	0	782	3409	188
Grp Volume(v), veh/h	74	0	272	0	0	0	128	649	0	0	207	213
Grp Sat Flow(s),veh/h/ln	1781	0	1565	1781	1870	0	1781	1777	0	782	1777	1820
Q Serve(g_s), s	7.1	0.0	34.3	0.0	0.0	0.0	6.6	11.0	0.0	0.0	22.5	22.8
Cycle Q Clear(g_c), s	7.1	0.0	34.3	0.0	0.0	0.0	6.6	11.0	0.0	0.0	22.5	22.8
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.10
Lane Grp Cap(c), veh/h	343	0	301	1	1	0	1031	2685	0	36	269	276
V/C Ratio(X)	0.22	0.00	0.90	0.00	0.00	0.00	0.12	0.24	0.00	0.00	0.77	0.77
Avail Cap(c_a), veh/h	525	0	461	159	167	0	1031	2685	0	149	528	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.00	0.98	0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.99	0.99
Uniform Delay (d), s/veh	68.7	0.0	79.7	0.0	0.0	0.0	19.3	7.4	0.0	0.0	82.2	82.3
Incr Delay (d2), s/veh	0.4	0.0	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	15.3	0.0	0.0	0.0	2.8	4.1	0.0	0.0	10.9	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.1	0.0	95.8	0.0	0.0	0.0	19.3	7.4	0.0	0.0	89.2	89.4
LnGrp LOS	E	A	F	A	A	A	B	A	A	A	F	F
Approach Vol, veh/h		346			0			777			420	
Approach Delay, s/veh		90.1			0.0			9.4			89.3	
Approach LOS		F						A			F	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		158.6		43.4	123.0	35.6		0.0				
Change Period (Y+Rc), s		6.0		4.5	6.0	* 5		4.5				
Max Green Setting (Gmax), s		110.0		59.5	47.0	* 60		18.0				
Max Q Clear Time (g_c+I1), s		13.0		36.3	8.6	24.8		0.0				
Green Ext Time (p_c), s		8.1		2.6	0.2	4.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			49.2									
HCM 6th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	590	2030	0	0	1920	1000	200	10	870	0	0	0
Future Volume (veh/h)	590	2030	0	0	1920	1000	200	10	870	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1885	1885	0	0	1885	1885	1870	1870	1870			
Adj Flow Rate, veh/h	648	2231	0	0	2021	1053	547	0	3778			
Peak Hour Factor	0.91	0.91	0.91	0.95	0.95	0.95	0.25	0.25	0.25			
Percent Heavy Veh, %	1	1	0	0	1	1	2	2	2			
Cap, veh/h	364	2099	0	0	830	392	771	0	1372			
Arrive On Green	0.27	0.78	0.00	0.00	0.35	0.35	0.43	0.00	0.43			
Sat Flow, veh/h	1795	3676	0	0	2434	1103	1781	0	3170			
Grp Volume(v), veh/h	648	2231	0	0	1498	1576	547	0	3778			
Grp Sat Flow(s),veh/h/ln	1795	1791	0	0	1791	1652	1781	0	1585			
Q Serve(g_s), s	36.5	105.5	0.0	0.0	63.9	63.9	45.2	0.0	77.9			
Cycle Q Clear(g_c), s	36.5	105.5	0.0	0.0	63.9	63.9	45.2	0.0	77.9			
Prop In Lane	1.00		0.00	0.00		0.67	1.00		1.00			
Lane Grp Cap(c), veh/h	364	2099	0	0	636	586	771	0	1372			
V/C Ratio(X)	1.78	1.06	0.00	0.00	2.36	2.69	0.71	0.00	2.75			
Avail Cap(c_a), veh/h	364	2099	0	0	636	586	771	0	1372			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	65.7	19.8	0.0	0.0	58.0	58.1	41.8	0.0	51.0			
Incr Delay (d2), s/veh	352.0	29.5	0.0	0.0	614.9	764.5	2.6	0.0	791.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	51.7	41.4	0.0	0.0	137.3	151.0	20.7	0.0	181.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	417.7	49.3	0.0	0.0	672.9	822.5	44.4	0.0	842.3			
LnGrp LOS	F	F	A	A	F	F	D	A	F			
Approach Vol, veh/h		2879			3074			4325				
Approach Delay, s/veh		132.2			749.6			741.4				
Approach LOS		F			F			F				

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		111.0			42.0	69.0		83.0				
Change Period (Y+Rc), s		5.1			5.1	* 5.1		5.1				
Max Green Setting (Gmax), s		91.9			23.3	* 64		77.9				
Max Q Clear Time (g_c+I1), s		107.5			38.5	65.9		79.9				
Green Ext Time (p_c), s		0.0			0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		573.2
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2250	820	430	1860	0	0	0	0	170	10	590
Future Volume (veh/h)	0	2250	820	430	1860	0	0	0	0	170	10	590
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1885	1885	1885	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2296	837	439	1898	0				709	0	2360
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.25	0.25	0.25
Percent Heavy Veh, %	0	1	1	1	1	0				2	2	2
Cap, veh/h	0	969	330	183	1789	0				1581	0	704
Arrive On Green	0.00	0.49	0.49	0.20	1.00	0.00				0.44	0.00	0.44
Sat Flow, veh/h	0	2703	889	1795	3676	0				3563	0	1585
Grp Volume(v), veh/h	0	1526	1607	439	1898	0				709	0	2360
Grp Sat Flow(s),veh/h/ln	0	1791	1706	1795	1791	0				1781	0	1585
Q Serve(g_s), s	0.0	66.9	66.9	18.3	89.9	0.0				24.9	0.0	79.9
Cycle Q Clear(g_c), s	0.0	66.9	66.9	18.3	89.9	0.0				24.9	0.0	79.9
Prop In Lane	0.00		0.52	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	666	634	183	1789	0				1581	0	704
V/C Ratio(X)	0.00	2.29	2.53	2.41	1.06	0.00				0.45	0.00	3.35
Avail Cap(c_a), veh/h	0	666	634	183	1789	0				1581	0	704
HCM Platoon Ratio	1.00	1.33	1.33	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	45.5	45.5	71.7	0.1	0.0				34.7	0.0	50.0
Incr Delay (d2), s/veh	0.0	582.3	690.5	633.8	28.9	0.0				0.1	0.0	1063.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	135.5	148.1	39.8	7.2	0.0				11.0	0.0	239.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	627.8	736.0	705.5	29.0	0.0				34.8	0.0	1113.1
LnGrp LOS	A	F	F	F	F	A				C	A	F
Approach Vol, veh/h		3133			2337						3069	
Approach Delay, s/veh		683.3			156.1						864.0	
Approach LOS		F			F						F	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	23.0	72.0	85.0	95.0
Change Period (Y+Rc), s	* 4.7	5.1	5.1	5.1
Max Green Setting (Gmax), s	* 18	66.9	79.9	89.9
Max Q Clear Time (g_c+I1), s	20.3	68.9	81.9	91.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	604.0
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	52.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3990	1680	150	0	420
Future Vol, veh/h	0	3990	1680	150	0	420
Conflicting Peds, #/hr	2	0	0	2	1	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	50	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	97	97	74	74
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	0	4156	1732	155	0	568

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	871
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	-	0	~ 253
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 252
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	$ 607.4
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	252
HCM Lane V/C Ratio	-	-	-	2.252
HCM Control Delay (s)	-	-	-	$ 607.4
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	44.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1500	10	10	600	440	220
Future Volume (veh/h)	1500	10	10	600	440	220
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1630	11	11	645	489	244
Peak Hour Factor	0.92	0.92	0.93	0.93	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1357	1207	17	691	571	252
Arrive On Green	0.76	0.76	0.01	0.19	0.16	0.16
Sat Flow, veh/h	1781	1585	1781	3647	3647	1570
Grp Volume(v), veh/h	1630	11	11	645	489	244
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1570
Q Serve(g_s), s	137.1	0.3	1.1	32.2	24.1	27.8
Cycle Q Clear(g_c), s	137.1	0.3	1.1	32.2	24.1	27.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1357	1207	17	691	571	252
V/C Ratio(X)	1.20	0.01	0.66	0.93	0.86	0.97
Avail Cap(c_a), veh/h	1357	1207	41	691	571	252
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	5.1	88.9	71.4	73.5	75.1
Incr Delay (d2), s/veh	98.0	0.0	15.0	21.3	15.3	48.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	88.3	0.7	0.6	16.5	12.0	14.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	119.4	5.1	103.9	92.7	88.8	124.0
LnGrp LOS	F	A	F	F	F	F
Approach Vol, veh/h	1641			656	733	
Approach Delay, s/veh	118.6			92.9	100.5	
Approach LOS	F			F	F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		41.5		142.0	6.1	35.4
Change Period (Y+Rc), s		* 6.4		4.9	4.4	6.4
Max Green Setting (Gmax), s		* 32		137.1	4.1	23.1
Max Q Clear Time (g_c+I1), s		34.2		139.1	3.1	29.8
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	108.7
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	10	110	40	0	40	20	1860	80	80	980	30
Future Volume (veh/h)	240	10	110	40	0	40	20	1860	80	80	980	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	397	0	109	160	0	160	21	1918	82	93	1140	35
Peak Hour Factor	0.70	0.70	0.70	0.25	0.25	0.25	0.97	0.97	0.97	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	473	0	211	188	198	168	58	2589	110	117	2952	904
Arrive On Green	0.13	0.00	0.13	0.11	0.00	0.11	0.02	0.52	0.52	0.07	0.58	0.58
Sat Flow, veh/h	3563	0	1585	1781	1870	1585	3456	5017	214	1781	5106	1564
Grp Volume(v), veh/h	397	0	109	160	0	160	21	1300	700	93	1140	35
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1781	1870	1585	1728	1702	1826	1781	1702	1564
Q Serve(g_s), s	12.9	0.0	7.6	10.5	0.0	11.9	0.7	35.4	35.6	6.1	14.4	1.1
Cycle Q Clear(g_c), s	12.9	0.0	7.6	10.5	0.0	11.9	0.7	35.4	35.6	6.1	14.4	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	473	0	211	188	198	168	58	1757	943	117	2952	904
V/C Ratio(X)	0.84	0.00	0.52	0.85	0.00	0.95	0.36	0.74	0.74	0.80	0.39	0.04
Avail Cap(c_a), veh/h	996	0	443	545	572	485	123	2254	1209	190	3743	1146
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	0.0	47.8	52.0	0.0	52.7	57.6	22.4	22.5	54.6	13.6	10.8
Incr Delay (d2), s/veh	1.6	0.0	0.7	4.1	0.0	11.6	1.4	1.1	2.0	4.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	3.0	4.9	0.0	5.3	0.3	13.0	14.3	2.8	5.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.7	0.0	48.5	56.1	0.0	64.2	59.0	23.5	24.5	59.2	13.7	10.8
LnGrp LOS	D	A	D	E	A	E	E	C	C	E	B	B
Approach Vol, veh/h		506			320			2021			1268	
Approach Delay, s/veh		51.0			60.2			24.2			16.9	
Approach LOS		D			E			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.7	67.1		20.6	6.4	74.5		16.9				
Change Period (Y+Rc), s	6.0	* 6		4.9	4.4	6.0		4.4				
Max Green Setting (Gmax), s	12.6	* 78		33.1	4.2	86.8		36.2				
Max Q Clear Time (g_c+I1), s	8.1	37.6		14.9	2.7	16.4		12.5				
Green Ext Time (p_c), s	0.0	23.5		0.9	0.0	11.0		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			28.1									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	10	260	140	10	50	20	2130	130	160	980	10
Future Volume (veh/h)	30	10	260	140	10	50	20	2130	130	160	980	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	0	409	152	11	54	21	2266	134	182	1077	11
Peak Hour Factor	0.65	0.75	0.65	0.92	0.92	0.92	0.94	0.94	0.97	0.88	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	286	0	510	4	0	2	64	3604	1119	2	3275	33
Arrive On Green	0.16	0.00	0.16	0.00	0.00	0.00	0.02	0.71	0.71	0.00	0.63	0.63
Sat Flow, veh/h	1781	0	3170	3456	275	1352	3456	5106	1585	1781	5211	53
Grp Volume(v), veh/h	46	0	409	152	0	65	21	2266	134	182	703	385
Grp Sat Flow(s),veh/h/ln	1781	0	1585	1728	0	1627	1728	1702	1585	1781	1702	1860
Q Serve(g_s), s	1.8	0.0	10.2	0.1	0.0	0.1	0.5	19.2	2.2	0.1	7.9	7.9
Cycle Q Clear(g_c), s	1.8	0.0	10.2	0.1	0.0	0.1	0.5	19.2	2.2	0.1	7.9	7.9
Prop In Lane	1.00		1.00	1.00		0.83	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	286	0	510	4	0	2	64	3604	1119	2	2139	1169
V/C Ratio(X)	0.16	0.00	0.80	35.95	0.00	32.65	0.33	0.63	0.12	83.50	0.33	0.33
Avail Cap(c_a), veh/h	785	0	1396	761	0	358	169	5185	1610	109	4240	2317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	0.0	33.0	40.9	0.0	40.9	39.6	6.4	3.9	40.9	7.1	7.1
Incr Delay (d2), s/veh	0.1	0.0	1.1	15820.9	0.0	14441.0	1.1	0.2	0.1	37944.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	3.9	9.3	0.0	8.0	0.2	4.0	0.4	23.0	2.1	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	0.0	34.2	15861.8	0.0	14481.9	40.7	6.6	3.9	37985.0	7.2	7.3
LnGrp LOS	C	A	C	F	A	F	D	A	A	F	A	A
Approach Vol, veh/h		455			217			2421			1270	
Approach Delay, s/veh		33.7			15448.4			6.7			5449.7	
Approach LOS		C			F			A			F	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	0.0	63.7	18.0	5.9	57.8	0.0
Change Period (Y+Rc), s	6.4	* 6	4.9	4.4	6.4	4.5
Max Green Setting (Gmax), s	5.0	* 83	36.0	4.0	101.8	18.0
Max Q Clear Time (g_c+I1), s	0.0	21.2	12.2	2.5	9.9	0.0
Green Ext Time (p_c), s	0.0	36.5	1.0	0.0	9.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	2361.9
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	40	90	190	20	350	20	1770	140	210	930	20
Future Volume (veh/h)	90	40	90	190	20	350	20	1770	140	210	930	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	155	69	155	213	22	393	22	1967	156	221	979	21
Peak Hour Factor	0.58	0.58	0.58	0.89	0.89	0.89	0.90	0.90	0.90	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	73	163	254	12	216	313	1497	653	164	1183	515
Arrive On Green	0.23	0.23	0.23	0.14	0.14	0.14	0.35	0.84	0.84	0.09	0.33	0.33
Sat Flow, veh/h	699	311	699	1781	85	1513	1781	3554	1550	1781	3554	1546
Grp Volume(v), veh/h	379	0	0	213	0	415	22	1967	156	221	979	21
Grp Sat Flow(s),veh/h/ln	1710	0	0	1781	0	1598	1781	1777	1550	1781	1777	1546
Q Serve(g_s), s	39.3	0.0	0.0	21.0	0.0	25.7	1.5	75.8	3.6	16.6	45.7	1.7
Cycle Q Clear(g_c), s	39.3	0.0	0.0	21.0	0.0	25.7	1.5	75.8	3.6	16.6	45.7	1.7
Prop In Lane	0.41		0.41	1.00		0.95	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	398	0	0	254	0	228	313	1497	653	164	1183	515
V/C Ratio(X)	0.95	0.00	0.00	0.84	0.00	1.82	0.07	1.31	0.24	1.35	0.83	0.04
Avail Cap(c_a), veh/h	428	0	0	254	0	228	313	1497	653	164	1635	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.31	0.31	0.31	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.0	0.0	0.0	75.1	0.0	77.2	48.6	14.2	8.5	81.7	55.3	40.6
Incr Delay (d2), s/veh	29.6	0.0	0.0	22.1	0.0	385.3	0.0	142.7	0.3	190.3	6.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.7	0.0	0.0	11.1	0.0	34.9	0.7	35.6	1.2	16.2	21.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.6	0.0	0.0	97.3	0.0	462.4	48.6	156.8	8.7	272.0	62.0	40.8
LnGrp LOS	F	A	A	F	A	F	D	F	A	F	E	D
Approach Vol, veh/h		379			628			2145			1221	
Approach Delay, s/veh		97.6			338.6			145.0			99.6	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.0	81.1		46.9	36.9	65.2		31.0				
Change Period (Y+Rc), s	4.4	5.3		4.9	5.3	* 5.3		5.3				
Max Green Setting (Gmax), s	16.6	72.7		45.1	6.5	* 83		25.7				
Max Q Clear Time (g_c+I1), s	18.6	77.8		41.3	3.5	47.7		27.7				
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	12.3		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		156.0
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.
User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	700	100	10	1360	470	20
Future Volume (veh/h)	700	100	10	1360	470	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.98	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1870	1870
Adj Flow Rate, veh/h	761	109	11	1528	553	24
Peak Hour Factor	0.92	0.92	0.89	0.89	0.85	0.85
Percent Heavy Veh, %	1	1	1	1	2	2
Cap, veh/h	848	121	622	2194	572	509
Arrive On Green	0.54	0.54	0.31	0.61	0.32	0.32
Sat Flow, veh/h	3229	449	1795	3676	1781	1585
Grp Volume(v), veh/h	435	435	11	1528	553	24
Grp Sat Flow(s),veh/h/ln	1791	1793	1795	1791	1781	1585
Q Serve(g_s), s	38.9	39.0	0.0	51.9	55.0	1.9
Cycle Q Clear(g_c), s	38.9	39.0	0.0	51.9	55.0	1.9
Prop In Lane		0.25	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	485	485	622	2194	572	509
V/C Ratio(X)	0.90	0.90	0.02	0.70	0.97	0.05
Avail Cap(c_a), veh/h	771	772	622	2194	803	714
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	39.1	38.5	23.6	60.1	42.1
Incr Delay (d2), s/veh	2.7	2.8	0.0	1.9	17.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	13.8	0.3	21.7	27.4	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.8	41.8	38.5	25.4	77.8	42.1
LnGrp LOS	D	D	D	C	E	D
Approach Vol, veh/h	870			1539	577	
Approach Delay, s/veh	41.8			25.5	76.4	
Approach LOS	D			C	E	

Timer - Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	61.5	54.7				116.3		63.7
Change Period (Y+Rc), s	6.0	* 6				6.0		5.9
Max Green Setting (Gmax), s	5.1	* 78				87.0		81.1
Max Q Clear Time (g_c+I1), s	2.0	41.0				53.9		57.0
Green Ext Time (p_c), s	0.0	7.7				17.8		0.8

Intersection Summary	
HCM 6th Ctrl Delay	40.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	420	10	10	150	50	10	10	30	330	10	20
Future Volume (veh/h)	10	420	10	10	150	50	10	10	30	330	10	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	483	11	12	183	61	11	11	33	471	14	29
Peak Hour Factor	0.87	0.87	0.87	0.82	0.82	0.82	0.90	0.90	0.90	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	584	1050	870	409	1050	869	146	152	412	529	15	30
Arrive On Green	0.56	0.56	0.56	0.19	0.19	0.19	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1136	1870	1550	903	1870	1547	321	400	1082	1288	38	79
Grp Volume(v), veh/h	11	483	11	12	183	61	55	0	0	514	0	0
Grp Sat Flow(s),veh/h/ln	1136	1870	1550	903	1870	1547	1803	0	0	1406	0	0
Q Serve(g_s), s	0.9	27.5	0.6	2.1	14.8	5.9	0.0	0.0	0.0	60.4	0.0	0.0
Cycle Q Clear(g_c), s	15.7	27.5	0.6	29.6	14.8	5.9	3.8	0.0	0.0	64.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.20		0.60	0.92		0.06
Lane Grp Cap(c), veh/h	584	1050	870	409	1050	869	710	0	0	573	0	0
V/C Ratio(X)	0.02	0.46	0.01	0.03	0.17	0.07	0.08	0.00	0.00	0.90	0.00	0.00
Avail Cap(c_a), veh/h	584	1050	870	409	1050	869	944	0	0	778	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.7	23.3	17.4	56.1	38.2	34.5	35.7	0.0	0.0	53.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	1.5	0.0	0.1	0.3	0.1	0.0	0.0	0.0	8.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	12.4	0.2	0.5	7.6	2.3	1.6	0.0	0.0	24.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	24.8	17.5	56.3	38.5	34.7	35.7	0.0	0.0	62.5	0.0	0.0
LnGrp LOS	C	C	B	E	D	C	D	A	A	E	A	A
Approach Vol, veh/h		505			256			55			514	
Approach Delay, s/veh		24.6			38.4			35.7			62.5	
Approach LOS		C			D			D			E	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	106.6	73.4	106.6	73.4
Change Period (Y+Rc), s	* 5.5	4.9	5.5	4.9
Max Green Setting (Gmax), s	* 75	95.1	74.5	95.1
Max Q Clear Time (g_c+I1), s	29.5	66.2	31.6	5.8
Green Ext Time (p_c), s	2.8	2.4	1.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	42.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	90	0	10	10	140	50	10	520	0
Future Volume (veh/h)	0	0	0	90	0	10	10	140	50	10	520	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	0.99		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	127	0	14	12	169	60	12	605	0
Peak Hour Factor	0.50	0.50	0.50	0.71	0.71	0.71	0.83	0.83	0.83	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	1	0	150	0	133	18	1563	1429	18	1563	1324
Arrive On Green	0.00	0.00	0.00	0.08	0.00	0.08	0.02	1.00	1.00	0.01	0.84	0.00
Sat Flow, veh/h	0	1870	0	1769	0	1566	1781	1870	1549	1781	1870	1585
Grp Volume(v), veh/h	0	0	0	127	0	14	12	169	60	12	605	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1769	0	1566	1781	1870	1549	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	0.0	12.7	0.0	1.5	1.2	0.0	0.0	1.2	14.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	12.7	0.0	1.5	1.2	0.0	0.0	1.2	14.2	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	1	0	150	0	133	18	1563	1429	18	1563	1324
V/C Ratio(X)	0.00	0.00	0.00	0.85	0.00	0.11	0.67	0.11	0.04	0.67	0.39	0.00
Avail Cap(c_a), veh/h	0	57	0	295	0	261	89	1563	1429	89	1563	1324
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	81.2	0.0	76.0	87.9	0.0	0.0	88.8	3.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.9	0.0	0.1	15.0	0.1	0.1	15.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	6.1	0.0	0.6	0.6	0.1	0.0	0.6	4.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	86.1	0.0	76.2	102.9	0.1	0.1	103.8	4.3	0.0
LnGrp LOS	A	A	A	F	A	E	F	A	A	F	A	A
Approach Vol, veh/h		0			141			241			617	
Approach Delay, s/veh		0.0			85.1			5.2			6.3	
Approach LOS					F			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	154.9		0.0	5.8	154.9		19.3
Change Period (Y+Rc), s	4.0	4.5		4.0	4.0	4.5		4.0
Max Green Setting (Gmax), s	9.0	119.0		5.5	9.0	119.0		30.0
Max Q Clear Time (g_c+I1), s	3.2	2.0		0.0	3.2	16.2		14.7
Green Ext Time (p_c), s	0.0	1.2		0.0	0.0	4.6		0.4

Intersection Summary			
HCM 6th Ctrl Delay			17.1
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	70	40	230	60	60	50	210	240	250	380	10
Future Volume (veh/h)	10	70	40	230	60	60	50	210	240	250	380	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.99	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1811	1811	1811	1525	1811	1811
Adj Flow Rate, veh/h	13	91	52	245	64	64	54	228	261	266	404	11
Peak Hour Factor	0.77	0.77	0.77	0.94	0.94	0.94	0.92	0.92	0.92	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	6	6	6	6	6	6
Cap, veh/h	463	554	460	445	554	466	69	834	362	307	1425	612
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.04	0.24	0.24	0.21	0.41	0.41
Sat Flow, veh/h	1255	1870	1554	1239	1870	1574	1725	3441	1494	1452	3441	1479
Grp Volume(v), veh/h	13	91	52	245	64	64	54	228	261	266	404	11
Grp Sat Flow(s),veh/h/ln	1255	1870	1554	1239	1870	1574	1725	1721	1494	1452	1721	1479
Q Serve(g_s), s	0.4	2.1	1.4	10.7	1.5	1.8	1.8	3.2	9.4	10.4	4.6	0.3
Cycle Q Clear(g_c), s	1.9	2.1	1.4	12.8	1.5	1.8	1.8	3.2	9.4	10.4	4.6	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	463	554	460	445	554	466	69	834	362	307	1425	612
V/C Ratio(X)	0.03	0.16	0.11	0.55	0.12	0.14	0.79	0.27	0.72	0.87	0.28	0.02
Avail Cap(c_a), veh/h	795	1050	872	773	1050	883	531	1679	729	459	1709	734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	15.3	15.1	20.1	15.1	15.2	28.0	18.1	20.5	22.4	11.4	10.2
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.4	0.0	0.0	7.2	0.1	1.0	7.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.9	0.5	2.9	0.6	0.6	0.8	1.1	3.0	3.7	1.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.8	15.4	15.1	20.5	15.1	15.2	35.1	18.1	21.5	29.9	11.6	10.2
LnGrp LOS	B	B	B	C	B	B	D	B	C	C	B	B
Approach Vol, veh/h		156			373			543			681	
Approach Delay, s/veh		15.3			18.6			21.4			18.7	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.8	19.7		22.3	6.7	29.7		22.3
Change Period (Y+Rc), s	4.4	5.4		4.9	4.4	5.4		4.9
Max Green Setting (Gmax), s	18.6	28.7		33.0	18.1	29.2		33.0
Max Q Clear Time (g_c+I1), s	12.4	11.4		4.1	3.8	6.6		14.8
Green Ext Time (p_c), s	0.2	1.2		0.4	0.0	2.7		0.8

Intersection Summary	
HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	80	100	10	20	60	30	1150	10	110	710	240
Future Volume (veh/h)	360	80	100	10	20	60	30	1150	10	110	710	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1550	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	387	86	108	11	22	67	33	1250	11	120	772	261
Peak Hour Factor	0.93	0.93	0.93	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	4	4	4	4	4	4
Cap, veh/h	434	387	318	17	34	105	40	1397	602	482	2279	988
Arrive On Green	0.13	0.21	0.21	0.01	0.09	0.09	0.03	0.40	0.40	0.27	0.65	0.65
Sat Flow, veh/h	3456	1870	1538	1781	391	1190	1476	3497	1507	1753	3497	1516
Grp Volume(v), veh/h	387	86	108	11	0	89	33	1250	11	120	772	261
Grp Sat Flow(s),veh/h/ln	1728	1870	1538	1781	0	1581	1476	1749	1507	1753	1749	1516
Q Serve(g_s), s	19.9	6.9	10.8	1.1	0.0	9.8	4.0	60.1	0.7	9.6	17.8	6.2
Cycle Q Clear(g_c), s	19.9	6.9	10.8	1.1	0.0	9.8	4.0	60.1	0.7	9.6	17.8	6.2
Prop In Lane	1.00		1.00	1.00		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	434	387	318	17	0	139	40	1397	602	482	2279	988
V/C Ratio(X)	0.89	0.22	0.34	0.66	0.00	0.64	0.83	0.89	0.02	0.25	0.34	0.26
Avail Cap(c_a), veh/h	856	698	574	53	0	246	87	1397	602	482	2279	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	77.5	59.3	60.9	88.9	0.0	79.3	87.2	50.5	26.2	50.8	14.0	3.0
Incr Delay (d2), s/veh	2.6	0.4	0.8	15.0	0.0	1.8	14.7	9.2	0.1	0.1	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	3.4	4.4	0.6	0.0	4.1	1.7	27.7	0.3	4.3	7.1	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.1	59.7	61.7	103.9	0.0	81.1	101.9	59.7	26.3	50.9	14.4	3.7
LnGrp LOS	F	E	E	F	A	F	F	E	C	D	B	A
Approach Vol, veh/h		581			100			1294			1153	
Approach Delay, s/veh		73.7			83.6			60.5			15.8	
Approach LOS		E			F			E			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	54.7	77.1	6.1	42.2	9.3	122.5	27.5	20.7
Change Period (Y+Rc), s	5.2	* 5.2	4.4	4.9	4.4	5.2	4.9	* 4.9
Max Green Setting (Gmax), s	16.6	* 72	5.4	67.2	10.6	77.9	44.6	* 28
Max Q Clear Time (g_c+I1), s	11.6	62.1	3.1	12.8	6.0	19.8	21.9	11.8
Green Ext Time (p_c), s	0.1	6.5	0.0	1.3	0.0	10.0	0.7	0.3

Intersection Summary	
HCM 6th Ctrl Delay	47.2
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	40	80	20	20	20	80	390	30	20	260	70
Future Volume (veh/h)	140	40	80	20	20	20	80	390	30	20	260	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.96	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1796	1870	1870	1796
Adj Flow Rate, veh/h	165	47	94	30	30	30	86	419	32	22	286	77
Peak Hour Factor	0.85	0.85	0.85	0.67	0.67	0.67	0.93	0.93	0.93	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	315	266	223	144	144	1141	536	221	1074	413	165
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.21	0.05	0.05	0.60	0.12	0.12
Sat Flow, veh/h	1337	1870	1577	1242	855	855	1781	3554	1466	1781	3554	1416
Grp Volume(v), veh/h	165	47	94	30	0	60	86	419	32	22	286	77
Grp Sat Flow(s),veh/h/ln	1337	1870	1577	1242	0	1711	1781	1777	1466	1781	1777	1416
Q Serve(g_s), s	21.8	3.9	9.5	3.8	0.0	5.4	7.0	21.0	3.8	0.9	13.9	9.1
Cycle Q Clear(g_c), s	27.3	3.9	9.5	7.7	0.0	5.4	7.0	21.0	3.8	0.9	13.9	9.1
Prop In Lane	1.00		1.00	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	315	266	223	0	288	1141	536	221	1074	413	165
V/C Ratio(X)	0.73	0.15	0.35	0.13	0.00	0.21	0.08	0.78	0.14	0.02	0.69	0.47
Avail Cap(c_a), veh/h	612	857	723	586	0	789	1141	1372	566	1074	987	393
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.3	63.8	66.2	67.1	0.0	64.5	28.3	82.6	74.4	14.4	76.5	74.3
Incr Delay (d2), s/veh	4.2	0.2	0.7	0.1	0.0	0.1	0.0	10.7	1.4	0.0	9.2	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	1.9	3.9	1.2	0.0	2.4	3.1	10.9	1.5	0.4	6.8	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.4	64.0	66.9	67.2	0.0	64.6	28.3	93.3	75.7	14.4	85.7	83.6
LnGrp LOS	F	E	E	E	A	E	C	F	E	B	F	F
Approach Vol, veh/h		306			90			537			385	
Approach Delay, s/veh		73.8			65.5			81.8			81.2	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	112.5	32.7	34.8	119.3	25.9	34.8
Change Period (Y+Rc), s	4.0	5.5	4.5	4.0	5.0	* 4.5
Max Green Setting (Gmax), s	14.0	69.5	82.5	34.0	50.0	* 83
Max Q Clear Time (g_c+I1), s	2.9	23.0	29.3	9.0	15.9	9.7
Green Ext Time (p_c), s	0.0	4.2	1.0	0.1	2.4	0.3

Intersection Summary	
HCM 6th Ctrl Delay	78.6
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	204.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	10	50	20	140	40	160	0	20	40	160	810	260	10
Future Vol, veh/h	10	50	20	140	40	160	0	20	40	160	810	260	10
Peak Hour Factor	0.78	0.78	0.78	0.86	0.86	0.86	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	6	6	6	6	6	6	6
Mvmt Flow	13	64	26	163	47	186	0	22	43	174	880	283	11
Number of Lanes	0	1	0	0	1	0	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	1
HCM Control Delay	15.1	38.7	15.2	316.1
HCM LOS	C	E	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	12%	41%	100%	0%	0%
Vol Thru, %	0%	100%	8%	62%	12%	0%	100%	90%
Vol Right, %	0%	0%	92%	25%	47%	0%	0%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	27	173	80	340	810	173	97
LT Vol	20	0	0	10	140	810	0	0
Through Vol	0	27	13	50	40	0	173	87
RT Vol	0	0	160	20	160	0	0	10
Lane Flow Rate	22	29	188	103	395	880	188	105
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.051	0.064	0.38	0.234	0.812	1.868	0.373	0.206
Departure Headway (Hd)	9.439	8.913	8.234	9.519	8.465	7.638	7.122	7.047
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	382	404	441	379	431	475	503	506
Service Time	7.139	6.613	5.934	7.219	6.165	5.42	4.903	4.829
HCM Lane V/C Ratio	0.058	0.072	0.426	0.272	0.916	1.853	0.374	0.208
HCM Control Delay	12.6	12.2	15.9	15.1	38.7	417	14.1	11.7
HCM Lane LOS	B	B	C	C	E	F	B	B
HCM 95th-tile Q	0.2	0.2	1.7	0.9	7.4	56.4	1.7	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	450	30	380	420	190	10	10	190	740	70	50
Future Volume (veh/h)	20	450	30	380	420	190	10	10	190	740	70	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1870	1870	1870	1870	1870	1575	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	495	33	452	500	226	11	11	216	787	74	53
Peak Hour Factor	0.91	0.91	0.91	0.84	0.84	0.84	0.88	0.88	0.88	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	936	782	266	609	275	14	15	285	501	466	334
Arrive On Green	0.17	0.17	0.17	0.50	0.50	0.50	0.01	0.19	0.19	0.47	0.78	0.78
Sat Flow, veh/h	613	1870	1563	875	1216	550	1500	75	1466	1781	1001	717
Grp Volume(v), veh/h	22	495	33	452	0	726	11	0	227	787	0	127
Grp Sat Flow(s),veh/h/ln	613	1870	1563	875	0	1766	1500	0	1541	1781	0	1717
Q Serve(g_s), s	6.2	43.6	3.2	46.5	0.0	62.8	1.3	0.0	25.0	50.6	0.0	3.4
Cycle Q Clear(g_c), s	69.0	43.6	3.2	90.1	0.0	62.8	1.3	0.0	25.0	50.6	0.0	3.4
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.95	1.00		0.42
Lane Grp Cap(c), veh/h	133	936	782	266	0	884	14	0	300	501	0	801
V/C Ratio(X)	0.17	0.53	0.04	1.70	0.00	0.82	0.78	0.00	0.76	1.57	0.00	0.16
Avail Cap(c_a), veh/h	133	936	782	266	0	884	58	0	300	501	0	801
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00	0.26	0.00	0.26
Uniform Delay (d), s/veh	96.5	55.7	38.9	70.2	0.0	38.1	89.0	0.0	68.5	47.7	0.0	11.0
Incr Delay (d2), s/veh	0.8	0.7	0.0	329.7	0.0	5.9	28.3	0.0	16.3	259.8	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	22.3	1.3	36.9	0.0	28.7	0.6	0.0	11.3	56.6	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.3	56.4	38.9	400.0	0.0	44.0	117.2	0.0	84.8	307.5	0.0	11.1
LnGrp LOS	F	E	D	F	A	D	F	A	F	F	A	B
Approach Vol, veh/h		550			1178			238			914	
Approach Delay, s/veh		57.0			180.6			86.3			266.4	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	55.0	40.5		95.0	6.1	89.4		95.0
Change Period (Y+Rc), s	4.4	* 5.2		4.9	4.4	5.2		4.9
Max Green Setting (Gmax), s	50.6	* 25		90.1	7.0	68.4		90.1
Max Q Clear Time (g_c+I1), s	52.6	27.0		71.0	3.3	5.4		92.1
Green Ext Time (p_c), s	0.0	0.0		5.4	0.0	1.4		0.0

Intersection Summary		
HCM 6th Ctrl Delay		176.4
HCM 6th LOS		F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.