TO:	Ann French Gonsalves, RTE, DCE; City of San Diego Transportation Development Mary Rose Santos; City of San Diego Transportation Development
FROM:	Jonathan Sanchez, PE, TE; CR Associates Joseph Perez, EIT; CR Associates
DATE:	July 27, 2022
RE:	BDM Mixed Use – Traffic Analysis Memorandum, PTS# 673818

The purpose of this Traffic Analysis Memorandum is to identify and document potential significant transportation impacts associated with the development of the proposed BDM Mixed Use project (the "Proposed Project"), as well as to recommend mitigation measures for any identified significant traffic impacts on study area intersections or roadways. The project intends to tier off the Otay Mesa Community Plan Final Environmental Impact Report (OMCPU FEIR) as discussed later in this memo.

Project Description

The 13.45-acre project site is located on the south side of Otay Mesa Road, east of Emerald Crest Court, west of Corporate Center Drive, and north of State Route 905, within the City of San Diego Otay Mesa Community Planning Area (CPA). The project proposes a total of 430 multi-family residential dwelling units and approximately 6,000 square feet of commercial use. The multi-family residential use includes 378 market-rate dwelling units, situated in the northern portion of the site, and 52 affordable dwelling units (affordable to low-income households) situated in the western portion of the site. Commercial uses are to be in the northwestern portion of the site, in a separate building. The project overall will consist of five buildings.

The project requires an Amendment to the Otay Mesa Community Plan to change the land use designation from "Community Commercial – Residential Prohibited" to "Community Commercial – Residential Permitted," Rezone from the existing CC-2-3 zone to CC-3-6, Vesting Tentative Map, Site Development Permit, Neighborhood Development Permit, and Public Right-of-Way Vacation to vacate Corporate Center Drive south of Otay Mesa Road. Vacation of Corporate Center Drive also requires a Community Plan Amendment due to its current classification of four-lane Collector in the Otay Mesa Community Plan.

Access to the project is provided via new private driveways located off roadway extensions of Emerald Crest Court and Corporate Center Drive south of Otay Mesa Road. Parking will be provided in surface parking areas located throughout the project. The project opening year is anticipated to take place in 2027.

The following facilities will be constructed by the project as part of project frontage and shall be completed and operational prior to first occupancy:

<u>Roadway Segments</u>

- Emerald Crest Court, between Otay Mesa Road and the southern property boundary – This segment of Emerald Crest Court has been constructed by Cal Terraces PA 61 with interim frontage improvements as a 3-lane undivided roadway (2 northbound and 1 southbound lanes). This segment serves as the project frontage and will be widened as a (60 ft on 80 ft) 4-lane undivided roadway (2 northbound lanes and 2 southbound lanes).

- Corporate Center Drive, between Otay Mesa Road and the southern property boundary – This segment is proposed to be vacated via the Public Right-of-Way Vacation process, extended south of Otay Mesa Road, and will be constructed as a 3-lane undivided roadway (1 northbound lane and 2 southbound lanes).

Intersection

- Emerald Crest Court & Otay Mesa Road – A traffic signal has been installed at this intersection by Cal Terraces PA 61. Intersection lane configurations by approach are as follows:
    - Northbound – Exclusive left-turn lane and shared through-right lane
    - Southbound – Exclusive left-turn lane and shared through-right lane
    - Eastbound – Exclusive left-turn lane, three through lanes, and exclusive right-turn lane
    - Westbound – Exclusive left-turn lane, three-through lanes, and exclusive right-turn lane

  No changes to the existing lane configuration at this intersection is proposed with the construction of the project.

  Restripe the existing Class II bike lane as a Class II bike lane with buffer in the eastbound direction between the through lane and exclusive right-turn lane. This intersection operates with protected left-turn phasing for all approaches. Striping plan and as-built signal plans are provided in **Attachment 1**.
- Corporate Center Drive & Otay Mesa Road – Construction of the south leg at existing signalized intersection with a left-through-right lane configuration in the northbound direction. Additionally, a right-turn lane will be constructed in the eastbound direction for traffic entering the project site. Due to uneven intersection lane configuration (south leg will be constructed to align with the north leg), this intersection will operate with split phasing in the northbound and southbound directions.

Figure 1 displays the Proposed Project location while **Figure 2** displays the proposed site plan, respectively.

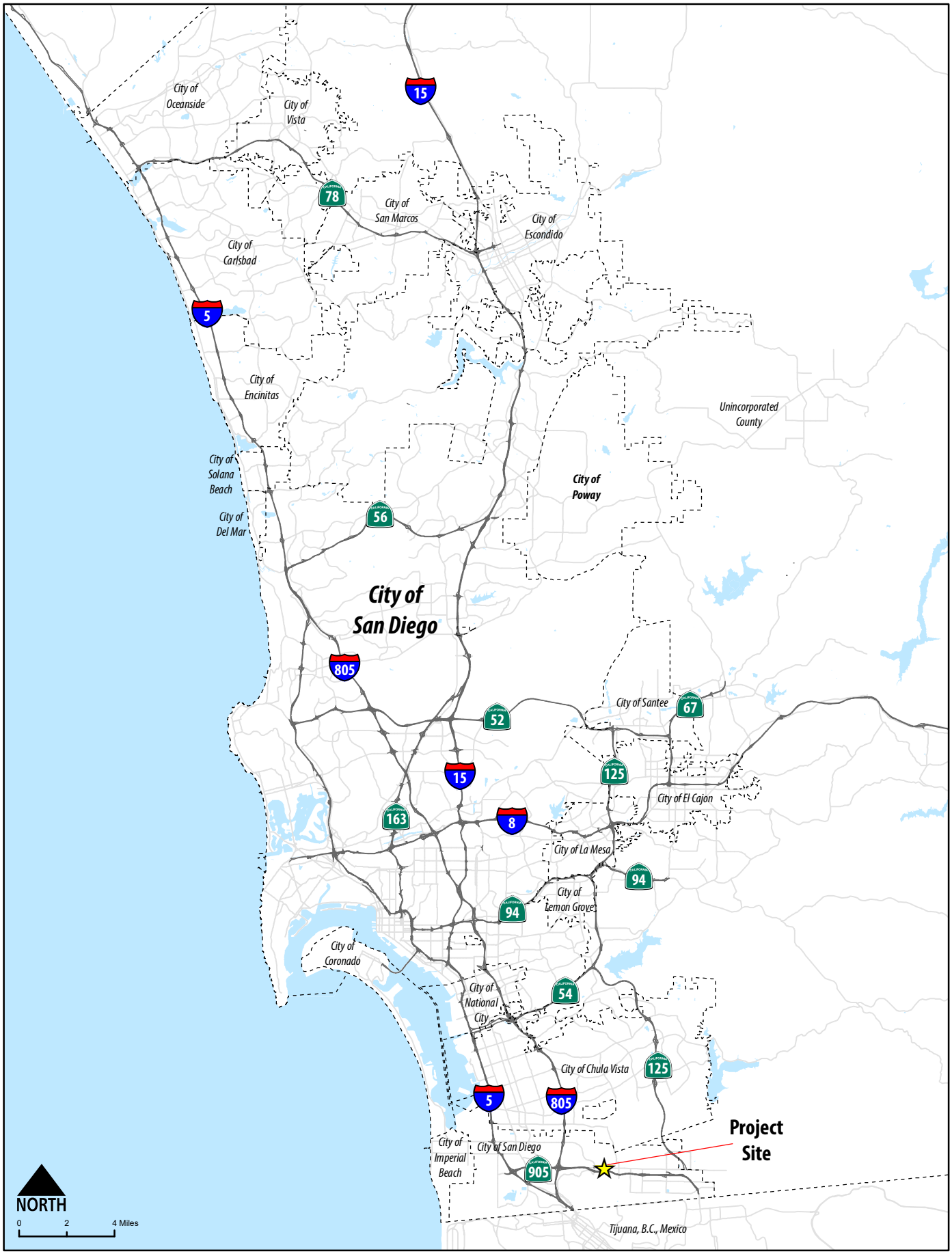

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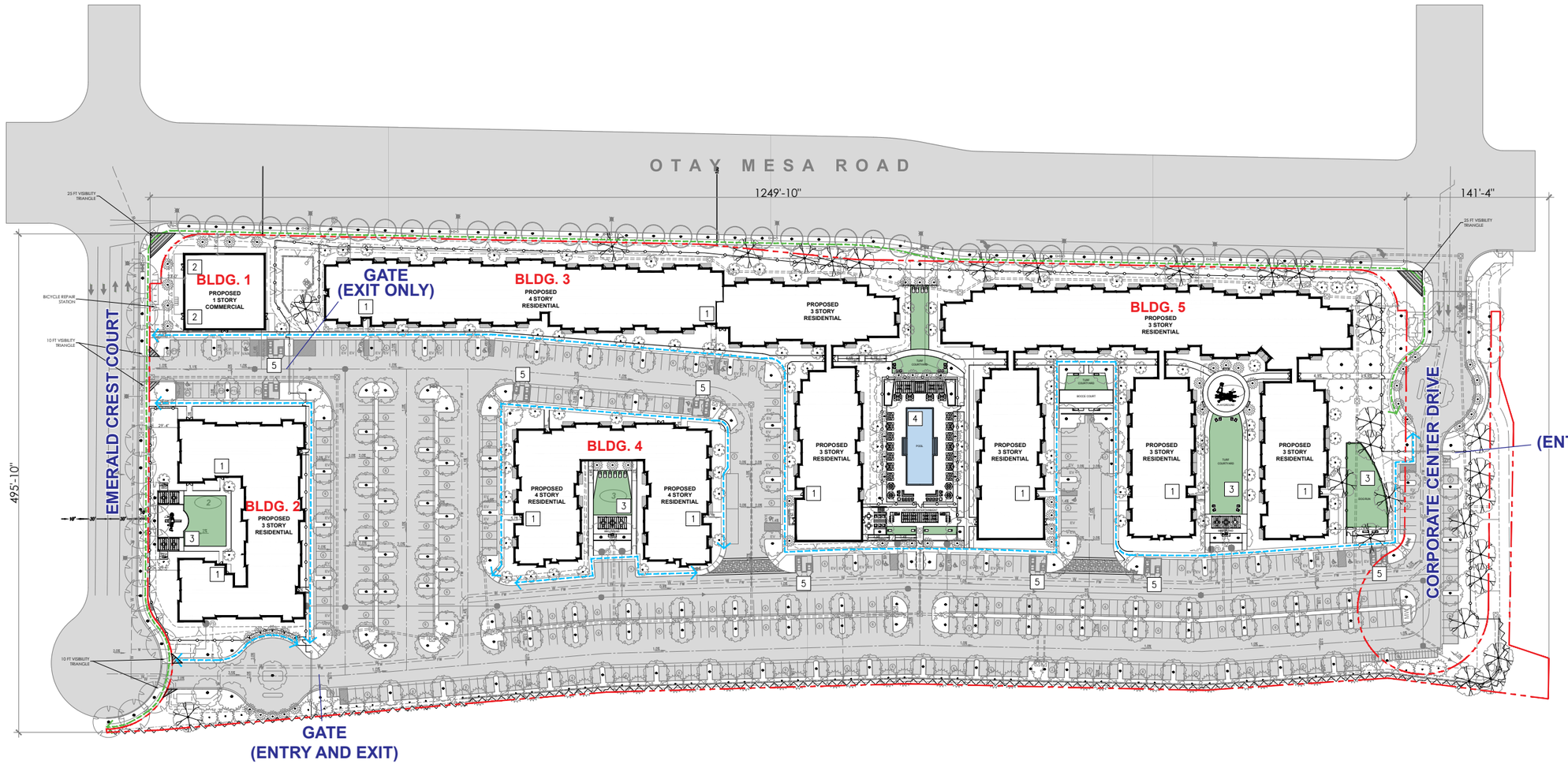
Figure 1
Project Regional Location



N

0' 20' 40' 80' 120'

KEYNOTES

1. STAIR ACCESS
2. COMMERCIAL ENTRANCE
3. COURTYARD (SEE LANDSCAPE PLANS)
4. POOL (SEE LANDSCAPE PLANS)
5. TRASH AND GREEN WASTE ENCLOSURE

GENERAL NOTE

- NO OBJECTS HIGHER THAN 24 INCHES WILL BE PROPOSED IN THE VISIBILITY AREAS

LEGEND

- ACCESS AISLE AREA
- ACCESSIBLE PARKING STALL
- OFF - SITE PEDESTRIAN CIRCULATION
- ON- SITE PEDESTRIAN CIRCULATION
- PROPERTY LINE

Figure 2A
Project Site Plan

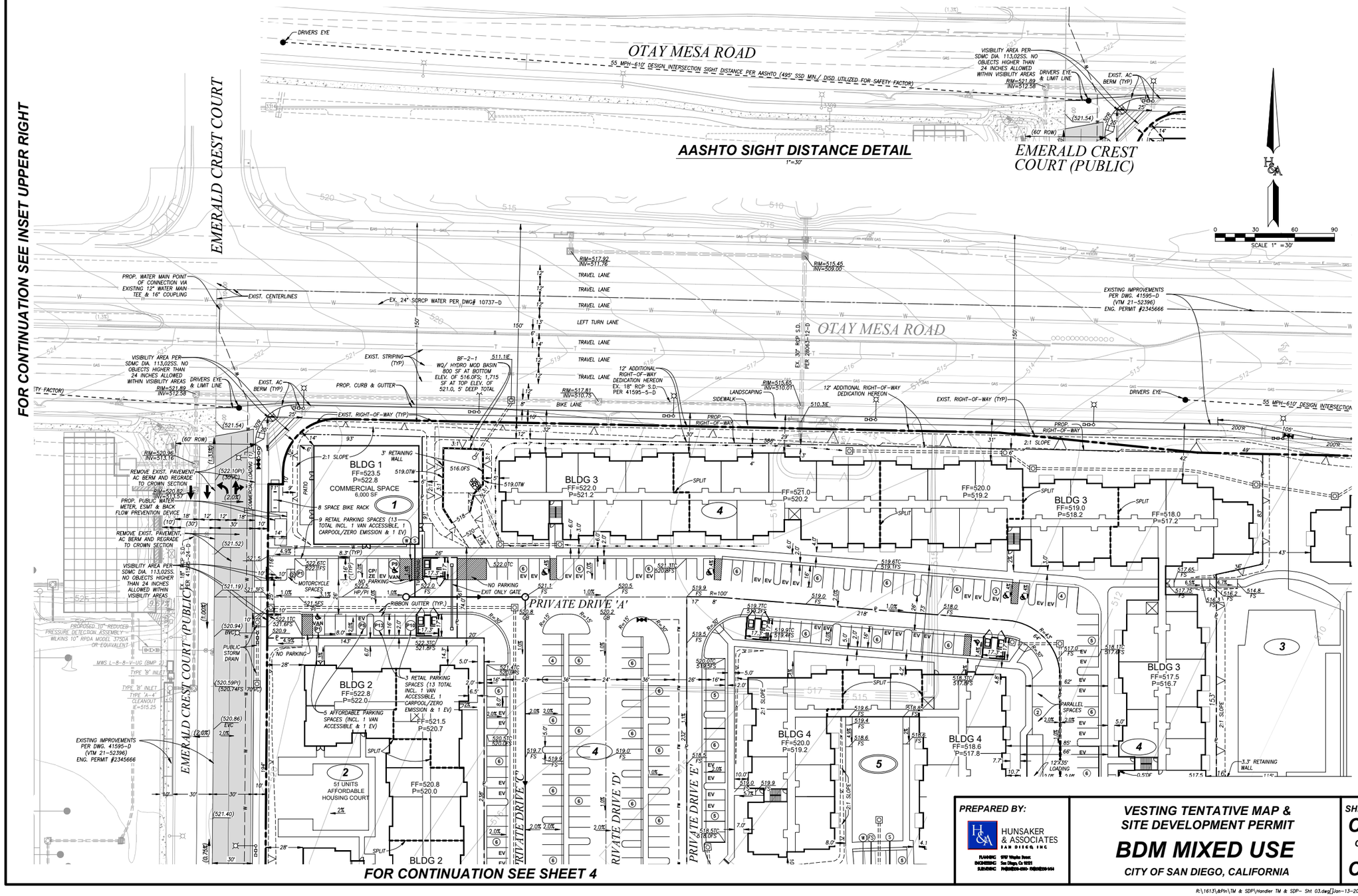


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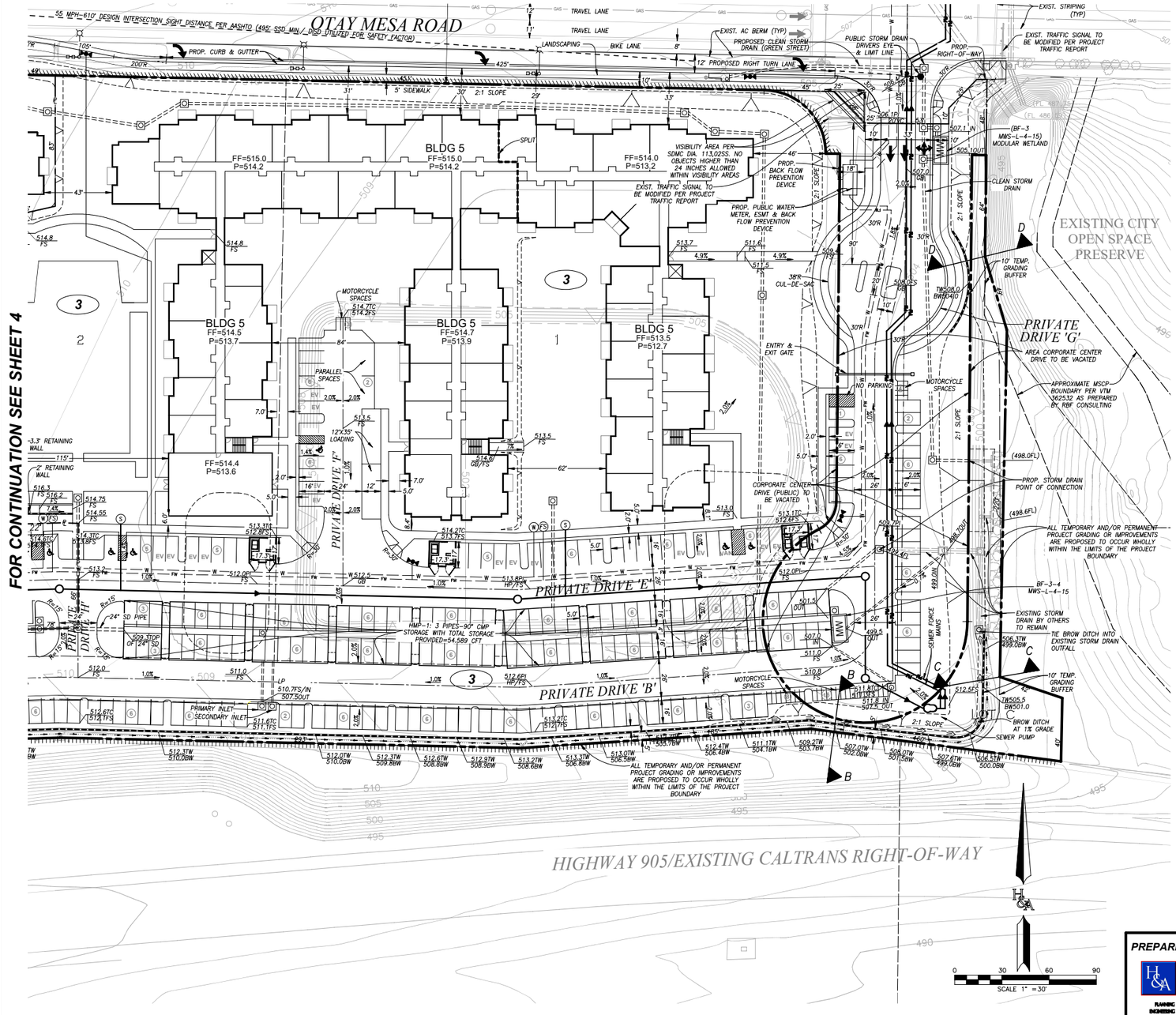
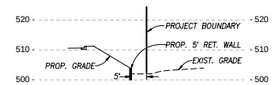
Figure 2B
Project Site Plan

FOR CONTINUATION SEE SHEET 6

FOR CONTINUATION SEE SHEET 4

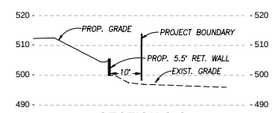




SECTION B-B

SCALE: 1"=20' HORIZ/VERT

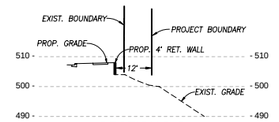
NOTE: REFER TO LANDSCAPING DEVELOPMENT PLANS FOR LANDSCAPE SCREENING TREATMENT FOR WALLS, FENCES, OR COMBINATION THEREOF FACING HWY 905/CALTRANS RIGHT-OF-WAY.



SECTION C-C

SCALE: 1"=20' HORIZ/VERT

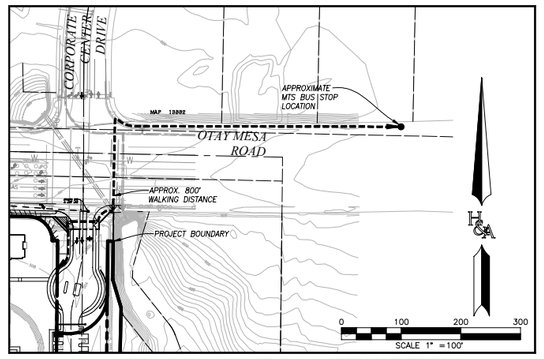
NOTE: REFER TO LANDSCAPING DEVELOPMENT PLANS FOR LANDSCAPE SCREENING TREATMENT FOR WALLS, FENCES, OR COMBINATION THEREOF FACING HWY 905/CALTRANS RIGHT-OF-WAY.



SECTION D-D

SCALE: 1"=20' HORIZ/VERT

NOTE: REFER TO LANDSCAPING DEVELOPMENT PLANS FOR LANDSCAPE SCREENING TREATMENT FOR WALLS, FENCES, OR COMBINATION THEREOF FACING HWY 905/CALTRANS RIGHT-OF-WAY.



MTS BUS STOP LOCATION DETAIL

PREPARED BY:
HUNSAKER & ASSOCIATES SAN DIEGO, INC
PLANNING
ENGINEERING
SURVEYING

VESTING TENTATIVE MAP & SITE DEVELOPMENT PERMIT

BDM MIXED USE

CITY OF SAN DIEGO, CALIFORNIA

SHEET C5 OF C8

W.O. 3592-0002

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Figure 2C
Project Site Plan

Project Trip Generation

Project trip generation estimates were derived utilizing the trip generation rates outlined in the *City of San Diego Land Development Code – Trip Generation Manual, May 2003*. **Table 1** displays the Proposed Project's trip generation.

Table 1 BDM Mixed Use – Trip Generation

				AM Peak Hour					PM Peak Hour				
Land Use	Units	Trip Rate	ADT	%	Trips	Split	In	Out	%	Trips	Split	In	Out
Commercial	6,000 SF	40 / KSF	240	3%	8	6:4	5	3	9%	22	5:5	11	11
Multi-family	430 DU	6 / DU	2,580	8%	207	2:8	41	166	9%	233	7:3	163	70
Total			**2,820**		**215**		**46**	**169**		**255**		**174**	**81**

Source: City of San Diego Land Development Code – Trip Generation Manual, May 2003

Notes:
SF = Square Feet
KSF = 1,000 Square Feet
DU = Dwelling unit

As shown in Table 1, the Proposed Project would be expected to generate approximately 2,820 daily trips, including 215 (46-in / 169-out) AM peak hour trips and 255 (174-in / 81-out) PM peak hour trips.

Project Distribution

Since the Proposed Project trip generation is greater than 2,400 average daily trips, a SANDAG Series 13 Year 2020 select zone analysis (SZA) was conducted to determine the project's trip distribution patterns. However, the SZA analysis assumes a fully built out network including an improvement of Heritage Road north of Otay Mesa Road from a two-lane Collector with a continuous left-turn lane to a six-lane Primary Arterial (per Otay Mesa Community Plan). Due to the uncertainty of timing of implementation of the Heritage Road improvements, the project trip distribution patterns were modified to reflect the current transportation network. Additionally, since the Proposed Project utilizes two separate driveways, the project site was divided into three separate zones, each with different driveway utilization assumptions. The results of the select zone analysis are provided in **Attachment 2** and driveway utilization assumptions are provided in **Attachment 3**. **Figure 3** displays the project trip distribution patterns associated with the Proposed Project under all study scenarios.

Project Assignment

Based upon the project trip distribution pattern and driveway utilization assumptions, the daily and AM/PM peak hour project trips were assigned to the study area roadway network. **Figure 4** displays the assignment of project trips to the study area roadways and intersections under all study scenarios.

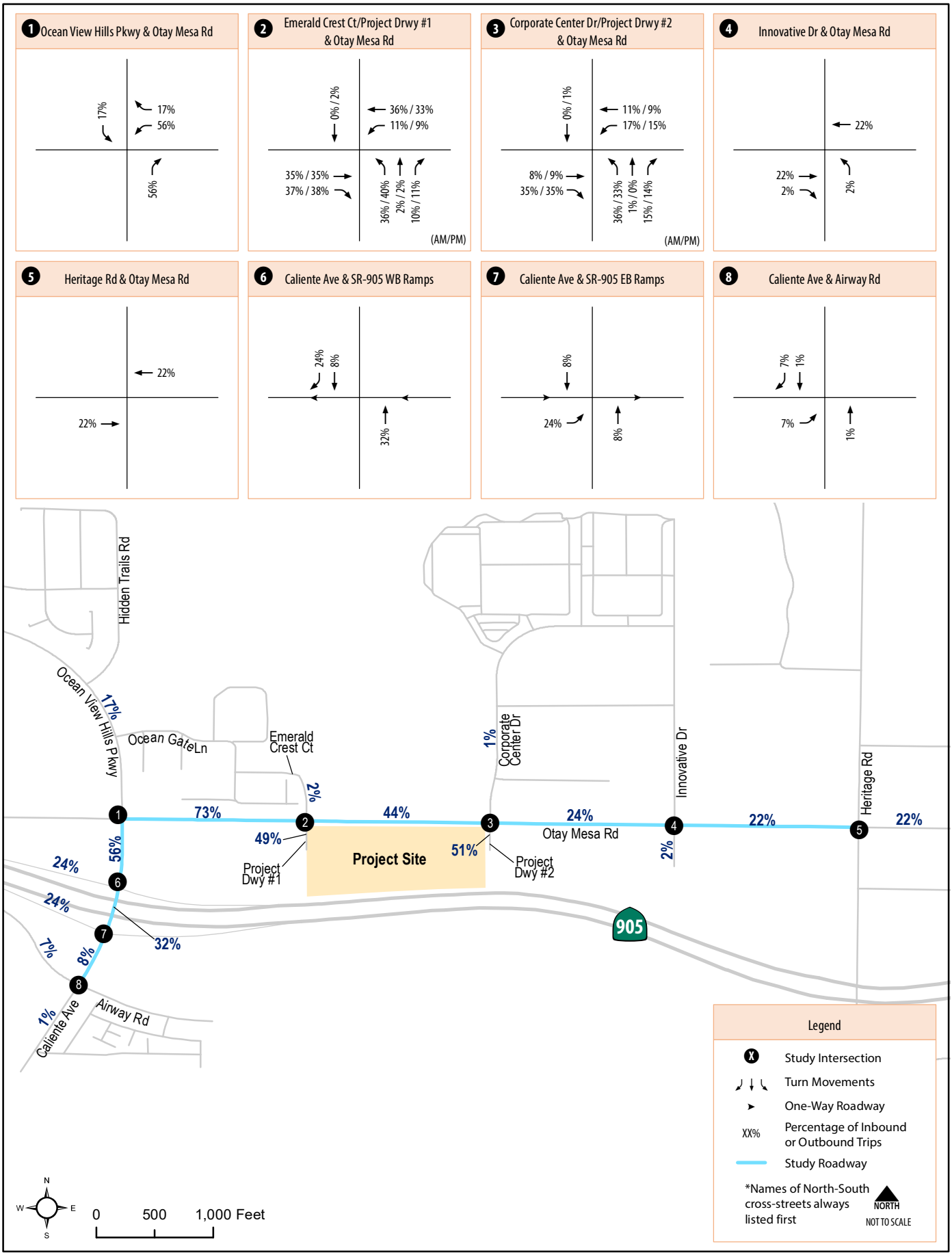

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Figure 3
Proposed Project Trip Distribution

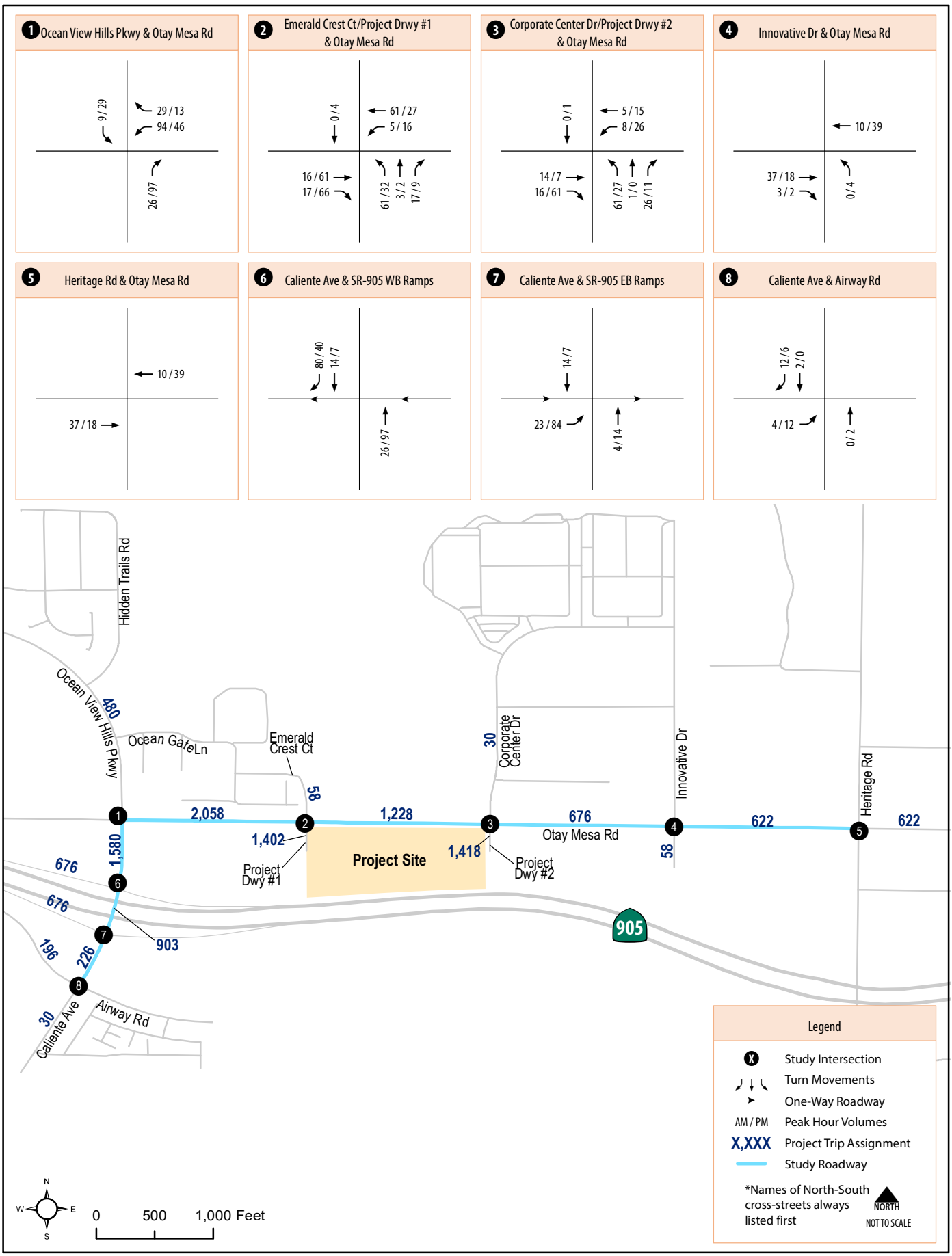

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Figure 4
Proposed Project Trip Assignment

Project Study Area

This section documents the existing project study area roadway and intersection configurations, traffic volumes, and traffic operations.

Roadway Segments

- Caliente Avenue, between Otay Mesa Road and SR-905 Westbound Ramps
- Caliente Avenue, between SR-905 Westbound Ramps and SR-905 Eastbound Ramps
- Caliente Avenue, between SR-905 Eastbound Ramps and Airway Road
- Otay Mesa Road, between Ocean View Hills Parkway and Emerald Crest Court
- Otay Mesa Road, between Emerald Crest Court and Corporate Center Drive
- Otay Mesa Road, between Corporate Center Drive and Innovative Drive
- Otay Mesa Road, between Innovative Drive and Heritage Road

Intersections

1. Ocean View Hills Parkway/Caliente Avenue & Otay Mesa Road
2. Emerald Crest Court & Otay Mesa Road
3. Corporate Center Drive & Otay Mesa Road
4. Innovative Drive & Otay Mesa Road
5. Heritage Road & Otay Mesa Road
6. Caliente Avenue & SR-905 Westbound Ramps
7. Caliente Avenue & SR-905 Eastbound Ramps
8. Caliente Avenue & Airway Road

Figure 5 displays the project study area. Note that mainline freeway segments were not analyzed because the Proposed Project is not anticipated to add more than 150 peak hour trips to any freeway segment.

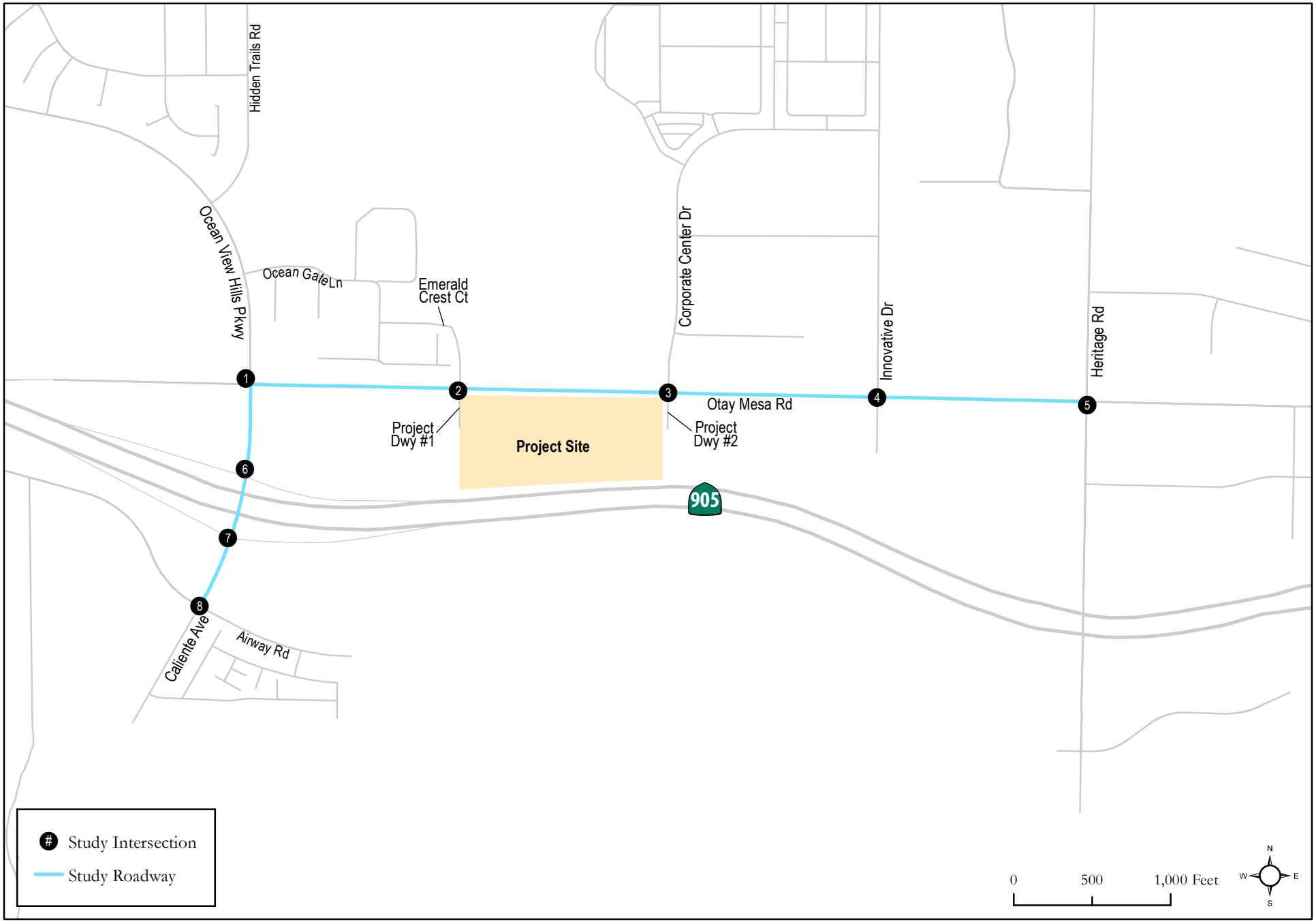

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Figure 5
Project Study Area

Existing Conditions

This section describes the study area, traffic volume information, and Level of Service (LOS) analysis results under Existing conditions.

Roadway Network

Caliente Avenue, between Otay Mesa Road and Airway Road is currently a 5-lane divided roadway with a painted median. Contiguous sidewalks and Class II bike lanes are present on both sides of the roadway. Bus Route 905 is serviced along Caliente Avenue with transit stops located at the State Route 905 eastbound off-ramp and State Route 905 westbound on-ramp. Route 905 runs in both the east and west directions between Iris Avenue Transit Center and Otay Mesa Transit Center on 15- and 30-minute headways during weekdays between 4:13 AM and 10:03 PM. MTS bus schedule is provided in **Attachment 4**. This section of the Caliente Avenue is classified as a 6-lane Primary Arterial in the Otay Mesa Community Plan. Roadway classification map from Otay Mesa Community Plan is provided in **Attachment 5**.

Otay Mesa Road, between Ocean View Hills Parkway and Heritage Road is currently a 6-lane divided roadway with k-rail and fencing (k-rail and fencing removed and improved to a raised median along segment between Ocean View Hills Parkway and Emerald Crest Court with signalization of the Emerald Crest Court and Otay Mesa Road intersection). Sidewalks exist along this segment of Otay Mesa Road except on the southside of the roadway between Emerald Crest Court and Heritage Road and on the northside between the two roadway segments (Corporate Center Drive and 580 feet west of Corporate Center Drive; Heritage Road and 500 feet west of Heritage Road). Buffered Class II bike lanes exist between Corporate Center Drive and Heritage Road. Bus Route 905 is serviced along Otay Mesa Road with transit stops located approximately 465 feet east of the Corporate Center Drive and Otay Mesa Road intersection. Route 905 runs in both the east and west directions between Iris Avenue Transit Center and Otay Mesa Transit Center on 15- and 30-minute headways during weekdays between 4:13 AM and 10:03 PM. This section of Otay Mesa Road is classified as a 6-lane Primary Arterial in the Otay Mesa Community Plan.

Figure 6 displays roadway segment cross-sections and intersection geometrics under Existing conditions. Existing signal timing plans are provided in **Attachment 6**.

Existing Roadway and Intersection Volumes

Traffic Volumes

Due to the COVID-19 pandemic, current traffic patterns do not reflect normal demand. Therefore, a count validation was conducted. Daily roadway traffic and intersection peak hour counts were collected on Wednesday, September 29, 2021. These counts were compared to historic counts for both daily roadway traffic and intersection peak hours that were collected on Thursday, January 18, 2018, respectively. After comparison of count data and discussions with the City, it was determined that the most conservative counts from 2018 and 2021 were to be utilized for both roadway segment and intersection LOS analysis, thus resulting in conservative results.

Figure 7 displays existing daily traffic volumes and intersection peak hour turning movements within the project study area. See **Attachment 7** for traffic counts and count validation.

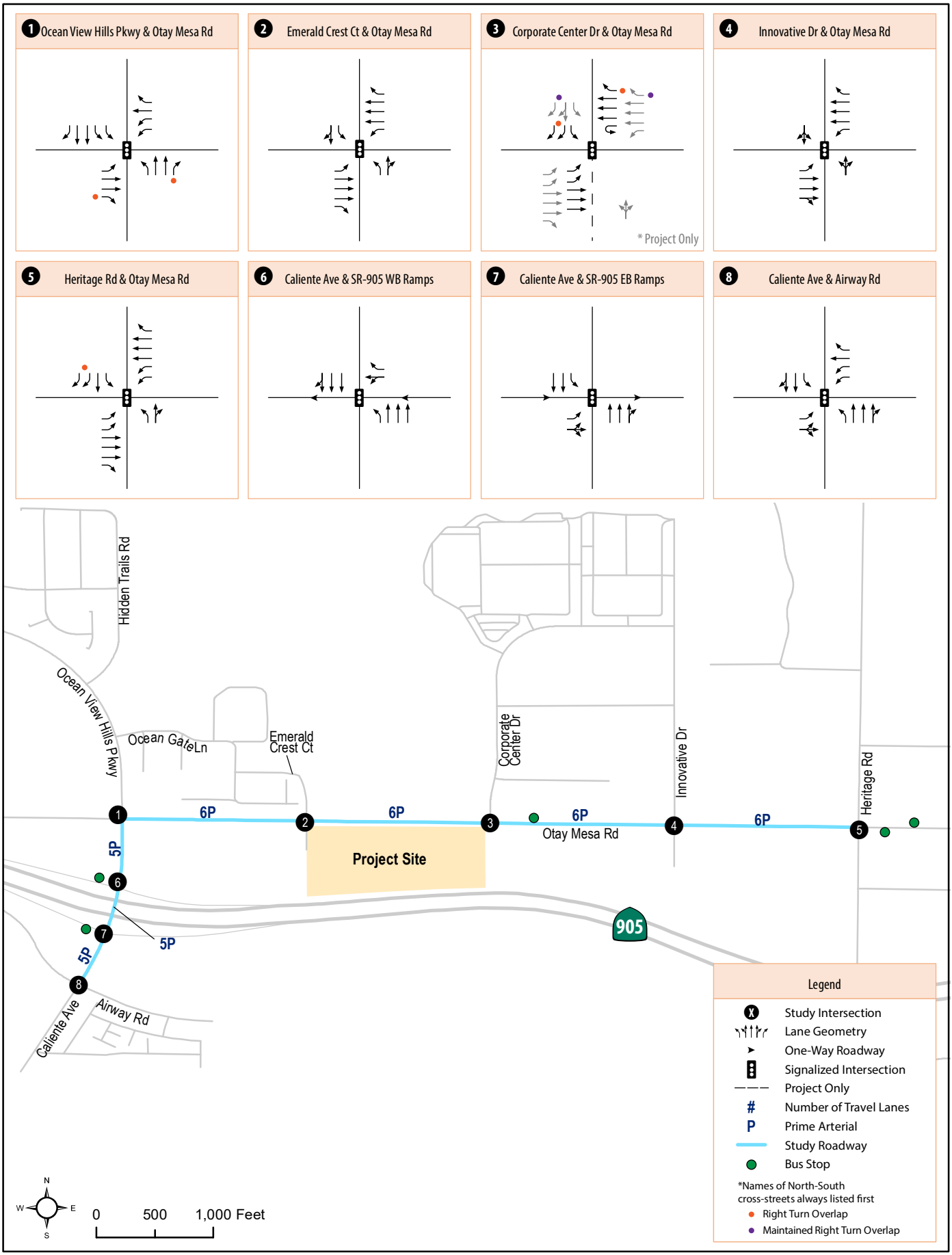

Figure 6
Roadway Classification and Intersection Geometrics
Existing Conditions

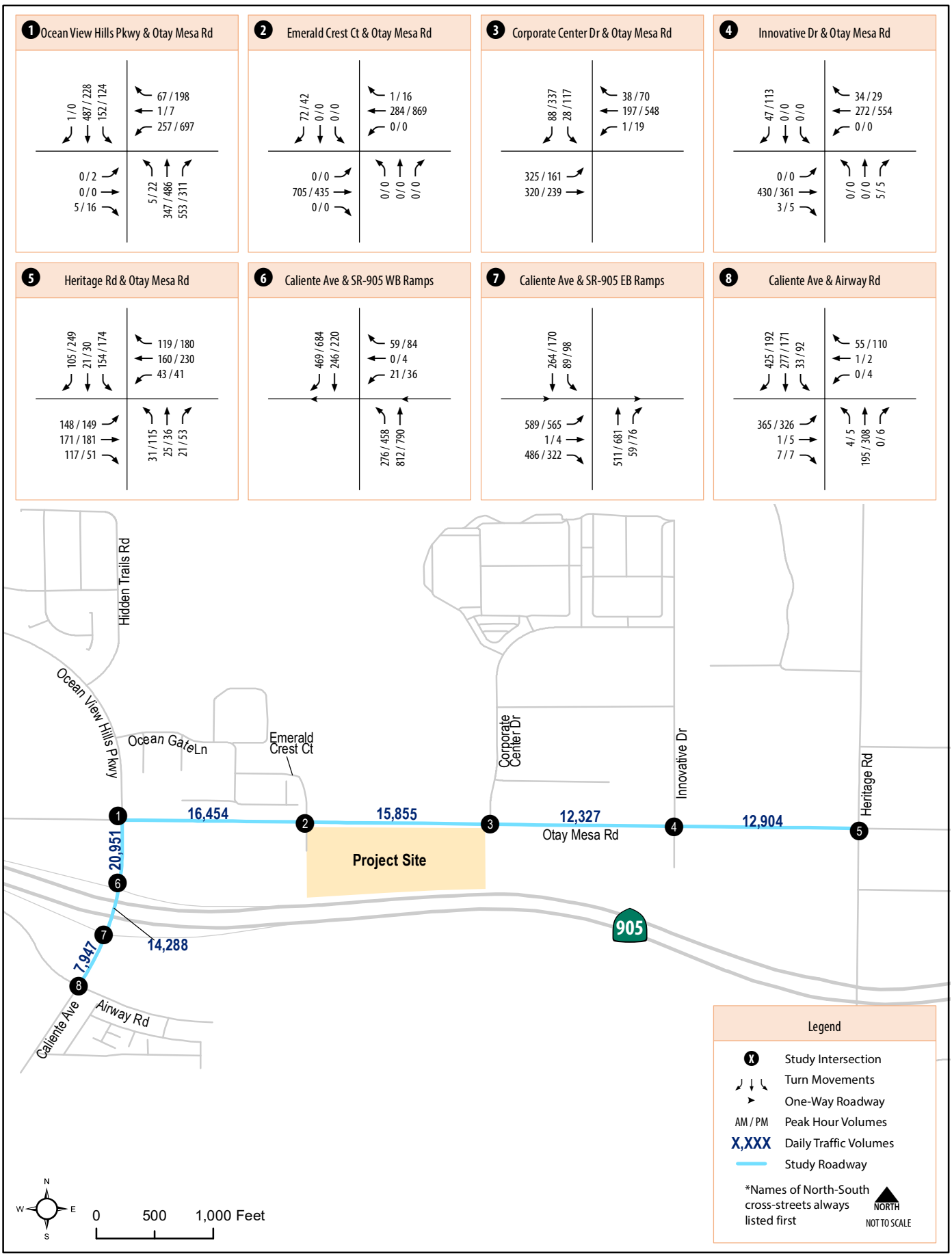

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Figure 7
Traffic Volumes
Existing Conditions

Traffic Operations Under Existing Conditions

This section documents the traffic operations under Existing conditions within the project study area. Roadway segment and intersection operations are discussed separately below. The roadway and intersection analyses were performed in accordance with the requirements of the *City of San Diego Traffic Impact Study Manual, July 1998*, the City of San Diego Significance Determination Thresholds, January 2016, and the enhanced California Environmental Quality Act (CEQA) project review process. Detailed information on roadway segment and intersection analysis methodologies, standards, and thresholds are found in **Attachment 8**.

Roadway Segment

Table 2 displays the daily roadway LOS for study roadway segments under Existing conditions.

Table 2 Roadway Segment LOS Results – Existing Conditions

Roadway	Segment	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS
Caliente Ave	Otay Mesa Rd to SR-905 WB Ramps	5-Lane Prime Arterial	50,000	20,951	0.419	B
Caliente Ave	SR-905 WB Ramps to SR-905 EB Ramps	5-Lane Prime Arterial	50,000	14,288	0.286	A
Caliente Ave	SR-905 EB Ramps to Airway Rd	5-Lane Prime Arterial	50,000	7,947	0.159	A
Otay Mesa Rd	Ocean View Hills Pkwy to Emerald Crest Ct	6-Lane Prime Arterial	60,000	16,454	0.274	A
Otay Mesa Rd	Emerald Crest Ct to Corporate Center Dr	6-Lane Prime Arterial	60,000	15,855	0.264	A
Otay Mesa Rd	Corporate Center Dr to Innovative Dr	6-Lane Prime Arterial	60,000	12,327	0.205	A
Otay Mesa Rd	Innovative Dr to Heritage Rd	6-Lane Prime Arterial	60,000	12,904	0.215	A

Source: CR Associates (2022)

Note:
V/C = Volume to Capacity Ratio.

As shown in Table 2, all study segments currently operate at LOS B or better within the study area.

Intersection

Table 3 displays the intersection LOS for the project study area intersections under Existing conditions. LOS calculation worksheets for Existing conditions are provided in **Attachment 9**.

Table 3 Intersection LOS Results – Existing Conditions

#	Intersection	Control Type	AM Peak Hour		PM Peak Hour	
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
1	Ocean View Hills Pkwy/Caliente Ave & Otay Mesa Rd	Signal	14.9	B	25.9	C
2	Emerald Crest Ct & Otay Mesa Rd	Signal	5.3	A	4.9	A
3	Corporate Center Dr & Otay Mesa Rd	Signal	5.6	A	5.5	A
4	Innovative Dr & Otay Mesa Rd	Signal	8.8	A	27.3	C
5	Heritage Rd & Otay Mesa Rd	Signal	18.7	B	20.0	B
6	Caliente Ave & SR-905 WB Ramps	Signal	12.1	B	54.4	D
7	Caliente Ave & SR-905 EB Ramps	Signal	23.9	C	34.3	C
8	Caliente Ave & Airway Rd	Signal	34.5	C	39.1	D

Source: CR Associates (2022)

Notes:
Bold letter indicates substandard LOS.

As shown in Table 3, all intersections currently operate at LOS D or better during both the AM and PM peak hours.

Existing with Project Conditions

This section describes the study area, traffic volume information, and LOS analysis results under Existing with Project conditions.

Roadway Network

The following facilities are assumed to be constructed by the Project as part of project frontage. These improvements shall be completed and operational prior to first occupancy:

Roadway Segments

- Emerald Crest Court, between Otay Mesa Road and the southern property boundary – This segment of Emerald Crest Court has been constructed by Cal Terraces PA 61 with interim frontage improvements as a 3-lane undivided roadway (2 northbound and 1 southbound lanes). This segment serves as the project frontage and will be widened as a (60 ft on 80 ft) 4-lane undivided roadway (2 northbound lanes and 2 southbound lanes).
- Corporate Center Drive, between Otay Mesa Road and the southern property boundary – This segment is proposed to be vacated via Public Right-of-Way Vacation process, extended south of Otay Mesa Road, and will be constructed as a 3-lane undivided roadway (1 northbound lane and 2 southbound lanes).

Intersection

- Emerald Crest Court & Otay Mesa Road – This intersection has been improved to a signalized intersection by Cal Terraces PA 61. Intersection lane configurations by approach are as follows:
    - Northbound – Exclusive left-turn lane and shared through-right lane
    - Southbound – Exclusive left-turn lane and shared through-right lane
    - Eastbound – Exclusive left-turn lane, three through lanes, and exclusive right-turn lane
    - Westbound – Exclusive left-turn lane, three-through lanes, and exclusive right-turn lane

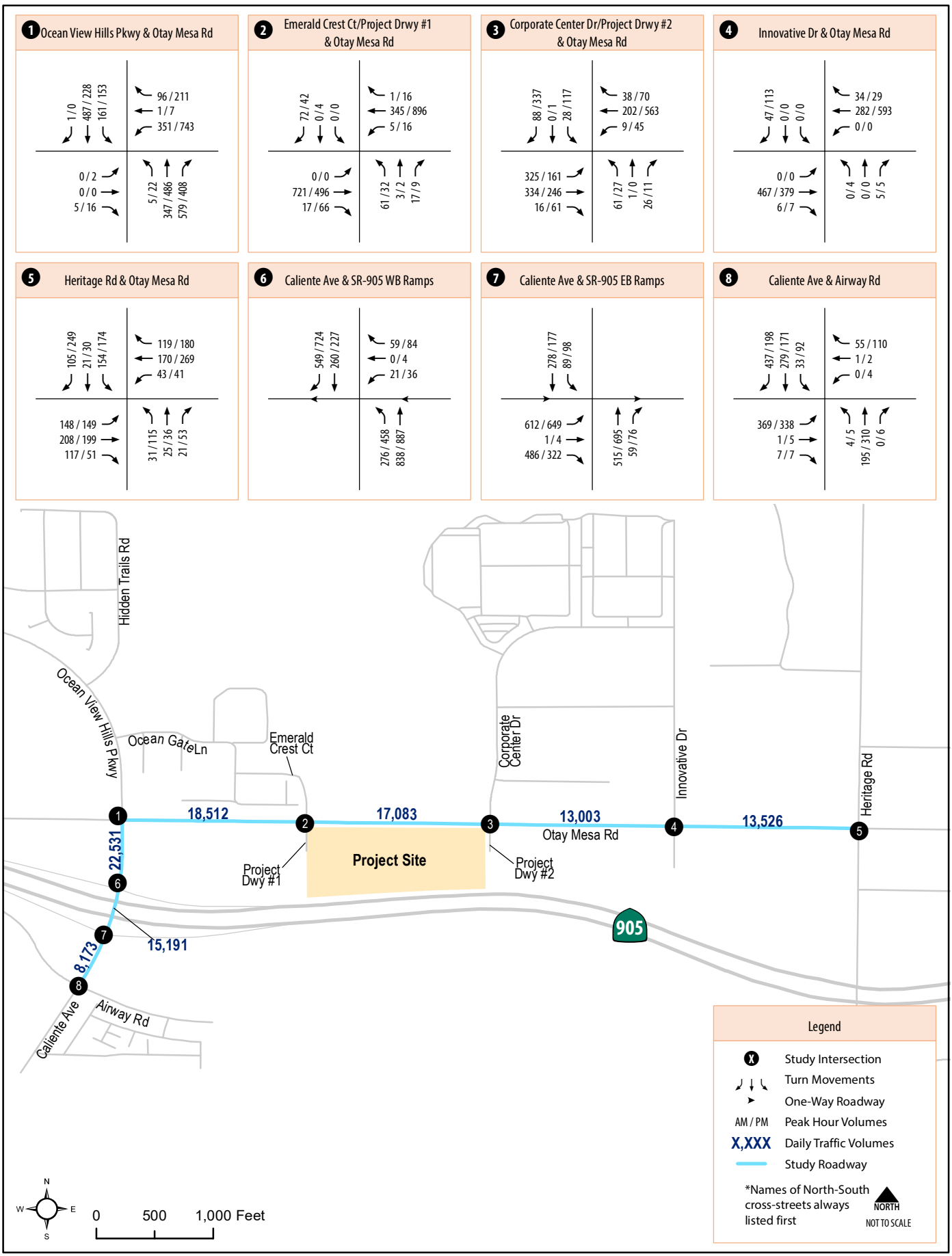
  No changes to the existing lane configuration at the intersection is proposed with the construction of the project.

  A Class II bike lane is maintained in the eastbound direction between the through lane and exclusive right-turn lane. This intersection operates with protected left-turn phasing for all approaches.

- Corporate Center Drive & Otay Mesa Road – Construction of the south leg at existing signalized intersection with a left-through-right lane configuration in the northbound direction. Additionally, a right-turn lane will be constructed in the eastbound direction for traffic entering the project site. Due to uneven intersection lane configuration (south leg will be constructed to align with the north leg), this intersection will operate with split phasing in the northbound and southbound directions.

Traffic Volumes

Existing with Project traffic volumes were derived by combining the existing traffic volumes (Figure 7) and the project trip assignment volumes displayed in (Figure 4). Existing with Project daily roadway and intersection volumes are displayed in **Figure 8**.


1 Ocean View Hills Pkwy & Otay Mesa Rd
1 / 0
487 / 228
161 / 153
96 / 211
1 / 7
351 / 743
0 / 2
0 / 0
5 / 16
5 / 22
347 / 486
579 / 408
2 Emerald Crest Ct/Project Drwy #1 & Otay Mesa Rd
72 / 42
0 / 4
0 / 0
1 / 16
345 / 896
5 / 16
0 / 0
721 / 496
17 / 66
61 / 32
3 / 2
17 / 9
3 Corporate Center Dr/Project Drwy #2 & Otay Mesa Rd
88 / 337
0 / 1
28 / 117
38 / 70
202 / 563
9 / 45
325 / 161
334 / 246
16 / 61
61 / 27
1 / 0
26 / 11
4 Innovative Dr & Otay Mesa Rd
47 / 113
0 / 0
0 / 0
34 / 29
282 / 593
0 / 0
0 / 0
467 / 379
6 / 7
0 / 4
0 / 0
5 / 5
5 Heritage Rd & Otay Mesa Rd
105 / 249
21 / 30
154 / 174
119 / 180
170 / 269
43 / 41
148 / 149
208 / 199
117 / 51
31 / 115
25 / 36
21 / 53
6 Caliente Ave & SR-905 WB Ramps
549 / 724
260 / 227
59 / 84
0 / 4
21 / 36
276 / 458
838 / 887
7 Caliente Ave & SR-905 EB Ramps
278 / 177
89 / 98
612 / 649
1 / 4
486 / 322
515 / 695
59 / 76
8 Caliente Ave & Airway Rd
437 / 198
279 / 171
33 / 92
55 / 110
1 / 2
0 / 4
369 / 338
1 / 5
7 / 7
4 / 5
195 / 310
0 / 6
Hidden Trails Rd
Ocean View Hills Pkwy
Ocean Gate Ln
Emerald Crest Ct
Corporate Center Dr
Innovative Dr
Heritage Rd
18,512
17,083
13,003
Otay Mesa Rd
13,526
22,531
Project Dwy #1
Project Site
Project Dwy #2
905
15,191
8,173
Caliente Ave
Airway Rd
Legend
Study Intersection
Turn Movements
One-Way Roadway
AM / PM
Peak Hour Volumes
X,XXX
Daily Traffic Volumes
Study Roadway
*Names of North-South cross-streets always listed first
NORTH
NOT TO SCALE
N
W
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S
0
500
1,000 Feet

Traffic Operations Under Existing with Project Conditions

This section documents the traffic operations under Existing with Project conditions within the project study area. Roadway segment and intersection operations are discussed separately below.

Roadway Segment

Table 4 displays the daily roadway LOS for study roadway segments under Existing with Project conditions.

Table 4 Roadway Segment LOS Results – Existing with Project Conditions

Roadway	Segment	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS	V/C w/o Project	LOS w/o Project	ΔV/C	SI?
Caliente Ave	Otay Mesa Rd to SR-905 WB Ramps	5-Lane Prime Arterial	50,000	22,531	0.451	B	0.419	B	0.032	N
Caliente Ave	SR-905 WB Ramps to SR-905 EB Ramps	5-Lane Prime Arterial	50,000	15,191	0.304	A	0.286	A	0.018	N
Caliente Ave	SR-905 EB Ramps to Airway Rd	5-Lane Prime Arterial	50,000	8,173	0.163	A	0.159	A	0.004	N
Otay Mesa Rd	Ocean View Hills Pkwy to Emerald Crest Ct	6-Lane Prime Arterial	60,000	18,512	0.309	A	0.274	A	0.035	N
Otay Mesa Rd	Emerald Crest Ct to Corporate Center Dr	6-Lane Prime Arterial	60,000	17,083	0.285	A	0.264	A	0.021	N
Otay Mesa Rd	Corporate Center Dr to Innovative Dr	6-Lane Prime Arterial	60,000	13,003	0.217	A	0.205	A	0.012	N
Otay Mesa Rd	Innovative Dr to Heritage Rd	6-Lane Prime Arterial	60,000	13,526	0.225	A	0.215	A	0.010	N

Source: CR Associates (2022)

Notes:
V/C = Volume to Capacity Ratio.
SI? = Significant Impact?

As shown in Table 4, all of the study roadway segments would continue to operate at LOS B or better within the study area, with the implementation of the Proposed Project. Therefore, no roadway segments are anticipated to be significantly impacted by the Proposed Project.

Intersection

Table 5 displays the intersection LOS for the intersections under Existing with Project conditions. LOS calculation worksheets for Existing with Project conditions are provided in **Attachment 10**.

Table 5 Intersection LOS Results – Existing with Project Conditions

#	Intersection	Control Type	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec) AM/PM	SI?
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS				
1	Ocean View Hills Pkwy/Caliente Ave & Otay Mesa Rd	Signal	16.5	B	27.9	C	14.9 / 25.9	B / C	1.6 / 2.0	N
2	Emerald Crest Ct & Otay Mesa Rd	Signal	10.4	B	9.2	A	5.3 / 4.9	A / A	5.1 / 4.3	N
3	Corporate Center Dr & Otay Mesa Rd	Signal	16.2	B	15.9	B	5.6 / 5.5	A / A	10.6 / 10.4	N
4	Innovative Dr & Otay Mesa Rd	Signal	8.6	A	27.6	C	8.8 / 27.3	A / C	-0.2 / 0.3	N
5	Heritage Rd & Otay Mesa Rd	Signal	18.4	B	21.6	C	18.7 / 20.0	B / B	-0.3 / 1.6	N
6	Caliente Ave & SR-905 WB Ramps	Signal	14.9	B	54.6	D	12.1 / 54.4	B / D	2.8 / 0.2	N
7	Caliente Ave & SR-905 EB Ramps	Signal	24.6	C	40.3	D	23.9 / 34.3	C / C	0.7 / 6.0	N
8	Caliente Ave & Airway Rd	Signal	35.8	D	39.3	D	34.5 / 39.1	D / D	1.3 / 0.2	N

Source: CR Associates (2022)

Notes:
Bold letter indicates substandard LOS.
SI? = Significant Impact?

As shown in Table 5 under Existing with Project conditions, the project study area intersections are projected to operate at LOS D or better during both the AM and PM peak hours, with the implementation of the Proposed Project.

Near-Term Year (Opening Day) 2027 Conditions

This section describes the study area, traffic volume information, and LOS analysis results under Near-Term Year (Opening Day) 2027 conditions.

Description of Cumulative Projects

Given the close proximity of the Proposed Project to the Otay Mesa Central Village Specific Plan, the same cumulative projects (Year 2027) utilized in the *Otay Mesa Lumina II Traffic Analysis Memorandum*, January 2021, as well as Otay Mesa Lumina II, were included for the analysis of the Proposed Project.

Table 6 displays trip generation for all cumulative projects included for analysis. Trip distribution and trip assignment for the cumulative projects was obtained from the Otay Mesa Lumina II Traffic Analysis Memorandum, January 2021 and provided in **Attachment 11**.

Table 6 Cumulative Projects Trip Generation

Cumulative Project	Land Use	Daily Trips	AM Peak Hour (In / Out)	PM Peak Hour (In / Out)
1. 7-Eleven – Otay Mesa Road / Ocean View Hills Parkway (PTS#540084)	Convenience Store	1,800	144 (72-in / 72-out)	144 (72-in / 72-out)
2. Azul Playa Del Sol/Luna (California Terraces PA 6)	Residential	4,440	356 (71-in / 285-out)	400 (280-in / 120-out)
3. Candlelight (PTS#40329)[1]	Residential	2,850	228 (46-in / 182-out)	257 (180-in / 77-out)
4. Southview (PTS#370044)	Residential	1,662	133 (27-in / 106-out)	299 (105-in / 194-out)
5. Southview East (PTS#371807)	Residential	816	65 (13-in / 52-out)	220 (51-in / 169-out)
6. Southwind (PTS#412529)	Residential	800	64 (13-in / 51-out)	80 (56-in / 24-out)
7. Arco (PTS#5770)	Gas Station	60	4 (2-in / 2-out)	4 (2-in / 2-out)
8. Marijuana Production Facility (PTS#585510)	Marijuana Facility	346	69 (62-in / 7-out)	69 (14-in / 55-out)
9. California Terraces PA 61 (PTS#605191)[2]	Mixed-use Residential / Commercial	4,716	252 (101-in / 151-out)	486 (271-in / 215-out)
10. Cross Border Facility (Full Buildout) (PTS#473500)	Cross Border Facility	46,700	2,313 (1,505-in / 808-out)	2,547 (1,115-in / 1,431-out)
11. Metro Airpark Site Phase 1 & 2[3] (PTS#559378 & PTS#664354)	Airport / Retail	8,602	951 (850-in /101-out)	936 (115-in / 821-out)
12. Plaza La Media (Full Buildout) (PTS#334235)	Commercial / Retail	8,660	310 (183-in / 127-out)	812 (407-in / 405-out)
13. Sunroad Otay Mesa (Phase 1 and Phase 2) (PTS#538140)	Warehouse	4,225	633 (444-in / 189-out)	676 (270-in / 406-out)
14. Otay Mesa Lumina[4] (PTS#555609)	Mixed-Use Residential / Commercial	15,581	1,214 (390-in / 824-out)	1,532 (944-in / 588-out)
15. Otay Mesa Lumina III[5] (PTS#651806)	Residential	200	16 (3-in / 13-out)	20 (14-in / 6-out)

Table 6 Cumulative Projects Trip Generation

Cumulative Project	Land Use	Daily Trips	AM Peak Hour (In / Out)	PM Peak Hour (In / Out)
16. Otay Mesa Floreo[6] (PTS#620164)	Mixed-Use Residential / Commercial	6,275	460 (103-in / 357-out)	570 (382-in / 188-out)
17. Southwest Village[7,8] (PTS#614791)	Mixed-Use Residential / Commercial	6,400	512 (102-in / 410-out)	640 (448-in / 192-out)
18. Plaza La Media South[9] (PTS#632813)	Warehouse	2,186	328 (230-in / 98-out)	350 (139-in / 211-out)
19. Warehouse Distribution Center[10] (PTS#665589)	Warehouse / Office	1,297	195 (140-in / 55-out)	206 (77-in / 129-out)
20. Otay Mesa Lumina II[11] (PTS#625830)	Residential	792	64 (13-in / 51-out)	72 (50-in / 22-out)
21. Beyer Park[12]	Public Park	1,585	64 (38-in / 26-out)	127 (70-in / 57-out)
22. Festival (PTS#627316)[12]	Commercial	2,310	93 (56-in / 37-out)	185 (93-in / 92-out)
	Cumulative Total	**122,303**	**8,468 (4,464-in / 4,004-out)**	**10,632 (5,155-in / 5,476-out)**

Source: CR Associates (2022)

Notes:
[1]Candlelight is currently in review under PTS#691625 which is a decrease in dwelling units from 475 dwelling units to 445 dwelling units. Analysis is provided with assumption of 475 dwelling units under PTS#40329 to be more conservative.
[2]An amendment to Lot 1 of California Terraces 61 is currently in review under PTS# 690358; to remove the previously approved 45,000 SF of retail use and propose 79 multi-family dwelling units, for a total of 282 multi-family dwelling units for the entire site. However, the analysis assumes the original project PTS# 605191 consisting of 267 multi-family dwelling units and 45,000 SF of retail use as a conservative approach.
[3]Metro Airpark Site SCR has been approved under PTS#664354.
[4] Trip Generation obtained from Otay Mesa Lumina TIS prepared by CR Associates, February 20, 2019.
[5] Trip Generation obtained from Otay Mesa Lumina III TIS prepared by CR Associates, June 17, 2021.
[6] Trip Generation obtained from the Draft Otay Mesa Floreo TIS prepared by CR Associates, June 6, 2019. (under review).
[7] Trip Generation obtained from City of San Diego Land Development Code – Trip Generation Manual, May 2003.
[8] Assumes partial development with approximately 800 dwelling units completed by 2027 per information received from LOS Engineering as of February 2022.
[9] Trip Generation obtained from Plaza La Media South Traffic Sensitivity Analysis (TSA) prepared by Kimley-Horn Associates, Inc. February 2020. (under review).It is not anticipated that project trips from Plaza La Media South will be added to the project study area.
[10] Trip Generation obtained from City of San Diego DSD staff.
[11] Trip Generation obtained from Otay Mesa Lumina II TIS prepared by CR Associates, January 14, 2021.
[12] It is not anticipated that project trips from Beyer Park or Festival will be added to the project study area.

Figure 9 displays cumulative project's locations and **Figure 10** displays cumulative project trip assignment.

Near-Term Year (Opening Day) 2027 Roadway and Intersection Volumes

Roadway Network

The roadway network was assumed to be identical to the Existing conditions network as shown in Figure 6.

Traffic Volumes

Near-Term Year (Opening Day) 2027 traffic volumes were derived by combining the existing traffic volumes (displayed in Figure 7), cumulative project trip assignment displayed in Figure 10. **Figure 11** displays Near-Term Year (Opening Day) 2027 traffic volumes.

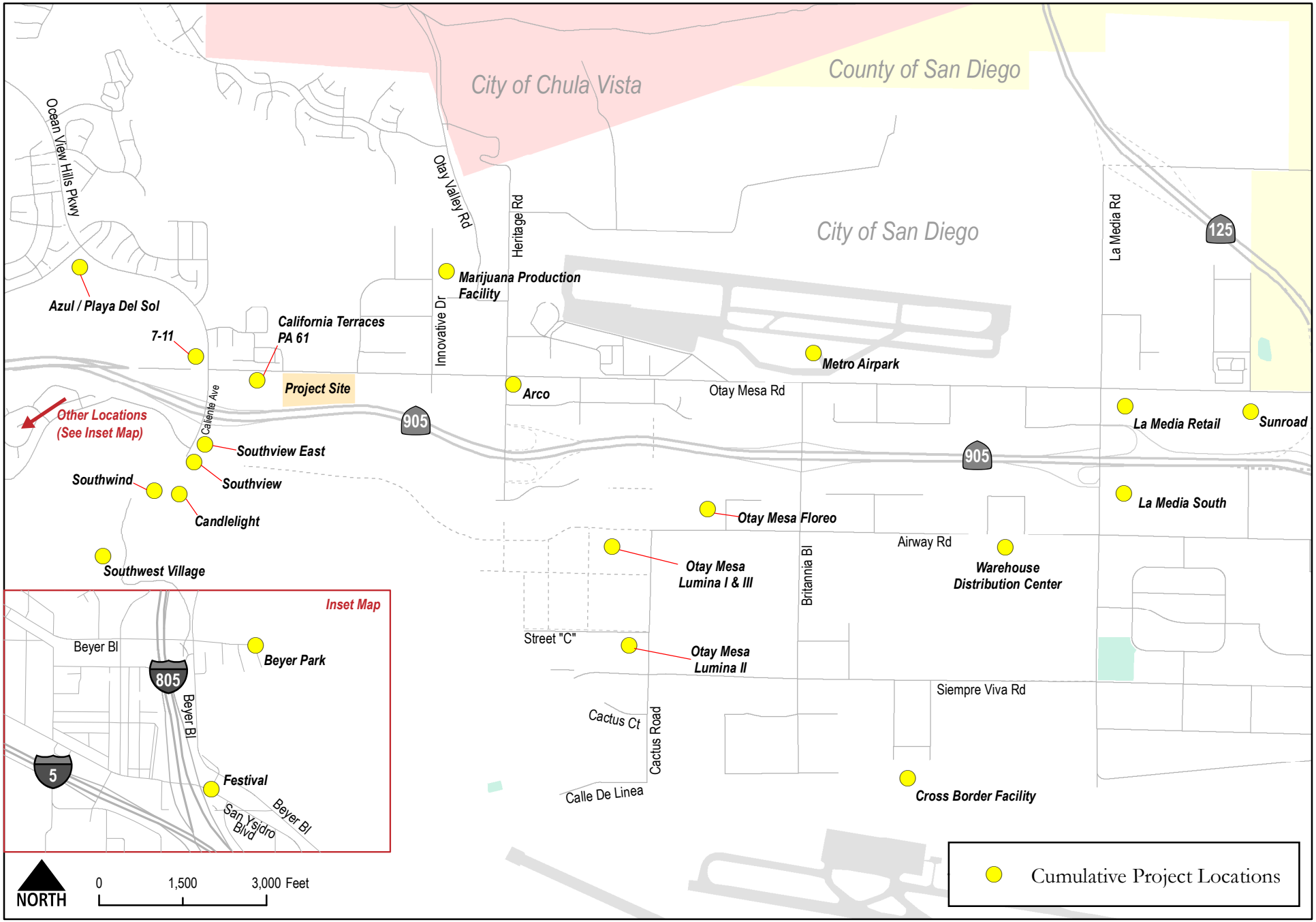

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Figure 9

Cumulative Project Locations

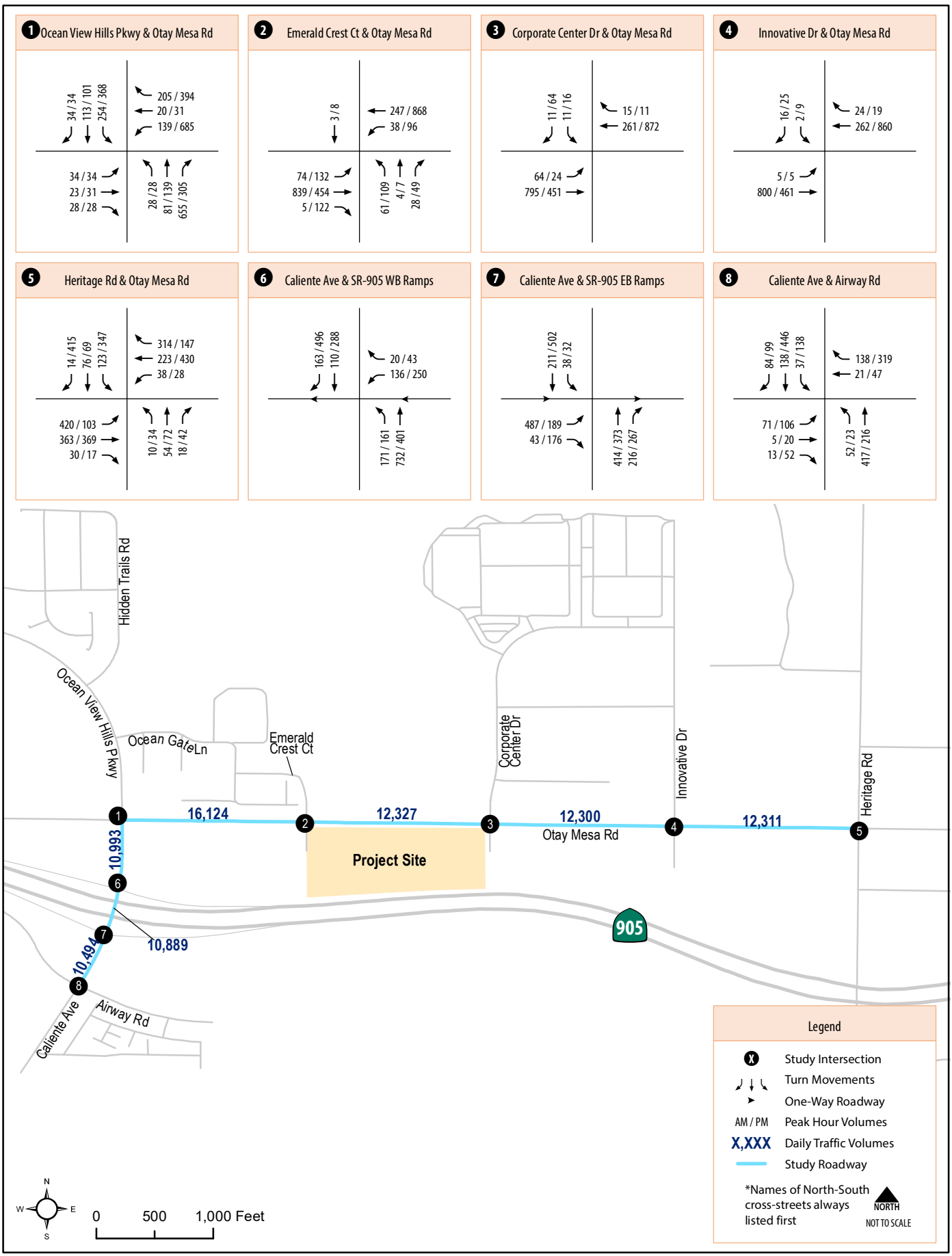

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Figure 10
Cumulative Projects Trip Assignment

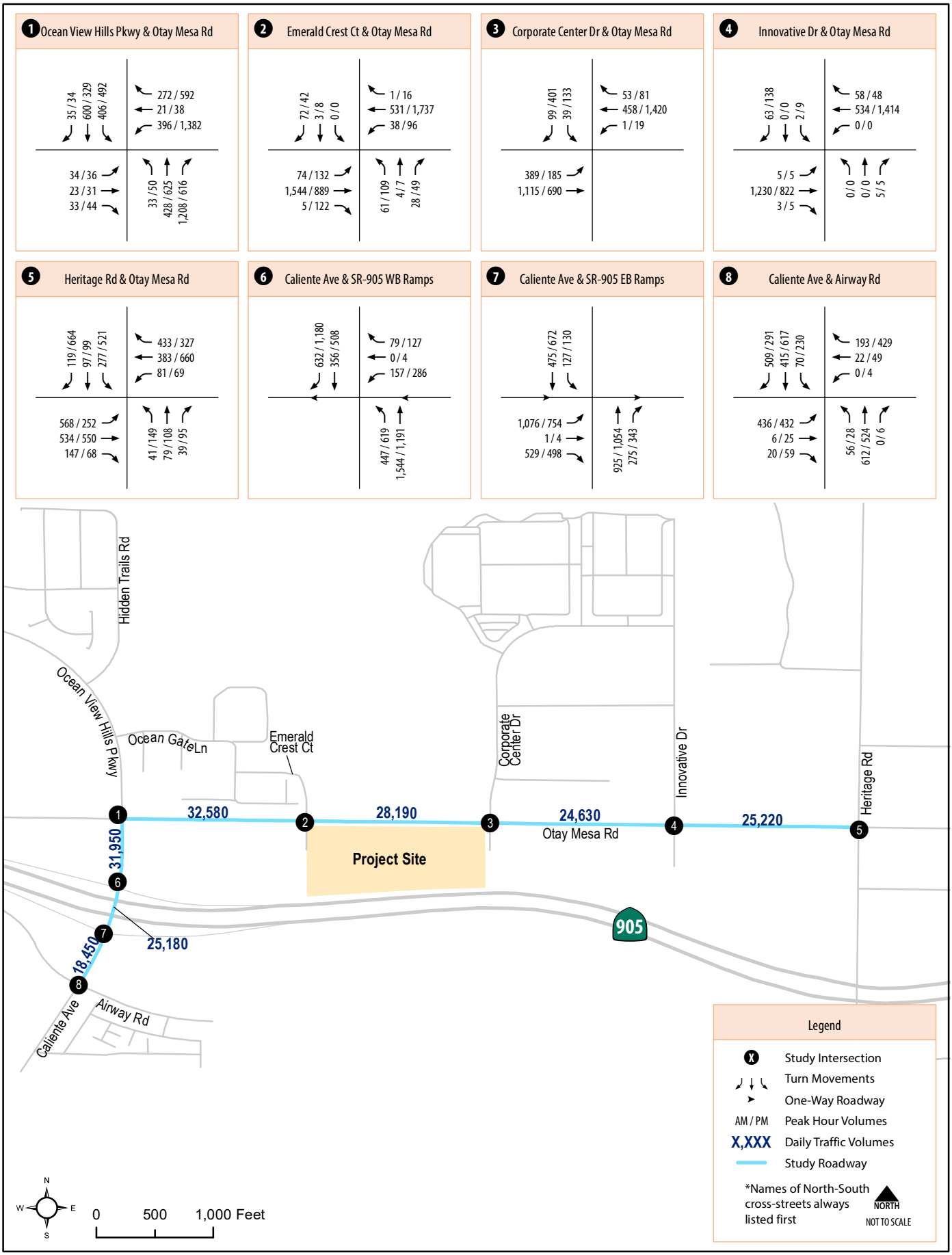

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Figure 11
Traffic Volumes
Near-Term Year (Opening Day) 2027 Conditions

Traffic Operations Under Near-Term Year (Opening Day) 2027 Conditions

This section documents the traffic operations under Near-Term Year (Opening Day) 2027 conditions within the project study area. Roadway segment and intersection operations are discussed separately below.

Roadway Segment

Table 7 displays the daily roadway LOS for study roadway segments under Near-Term Year (Opening Day) 2027 conditions.

Table 7 Roadway Segment LOS Results – Near-Term Year (Opening Day) 2027 Conditions

Roadway	Segment	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS
Caliente Ave	Otay Mesa Rd to SR-905 WB Ramps	5-Lane Prime Arterial	50,000	31,950	0.639	C
Caliente Ave	SR-905 WB Ramps to SR-905 EB Ramps	5-Lane Prime Arterial	50,000	25,180	0.504	B
Caliente Ave	SR-905 EB Ramps to Airway Rd	5-Lane Prime Arterial	50,000	18,450	0.369	A
Otay Mesa Rd	Ocean View Hills Pkwy to Emerald Crest Ct	6-Lane Prime Arterial	60,000	32,580	0.543	B
Otay Mesa Rd	Emerald Crest Ct to Corporate Center Dr	6-Lane Prime Arterial	60,000	28,190	0.470	B
Otay Mesa Rd	Corporate Center Dr to Innovative Dr	6-Lane Prime Arterial	60,000	24,630	0.411	A
Otay Mesa Rd	Innovative Dr to Heritage Rd	6-Lane Prime Arterial	60,000	25,220	0.420	B

Source: CR Associates (2022)

Note:
V/C = Volume to Capacity Ratio

As shown in Table 7, all of the project study area roadway segments are projected to operate at LOS C or better under Near-Term Year 2027 conditions.

Intersection

Table 8 displays the intersection LOS for the project study area intersections under Near-Term Year (Opening Day) 2027 conditions. LOS calculation worksheets for Near-Term Year (Opening Day) 2027 conditions are provided in **Attachment 12.**

Table 8 Intersection LOS Results – Near-Term Year (Opening Day) 2027 Conditions

#	Intersection	Control Type	AM Peak Hour Avg. Delay (sec)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec)	PM Peak Hour LOS
1	Ocean View Hills Pkwy/Caliente Ave & Otay Mesa Rd	Signal	118.6	**F**	111.5	**F**
2	Emerald Crest Ct & Otay Mesa Rd	Signal	14.2	B	18.3	B
3	Corporate Center Dr & Otay Mesa Rd	Signal	5.0	A	5.1	A
4	Innovative Dr & Otay Mesa Rd	Signal	8.9	A	22.9	C
5	Heritage Rd & Otay Mesa Rd	Signal	62.7	**E**	67.5	**E**
6	Caliente Ave & SR-905 WB Ramps	Signal	35.2	D	216.0	**F**
7	Caliente Ave & SR-905 EB Ramps	Signal	102.1	**F**	136.3	**F**
8	Caliente Ave & Airway Rd	Signal	85.3	**F**	210.0	**F**

Source: CR Associates (2022)

Notes:
Bold letter indicates substandard LOS

As shown in Table 8, the project study area intersections are projected to operate at LOS D or better during both the AM and PM peak hour under Near-Term Year 2027 conditions, except for the following five (5) intersections:

1. Ocean View Hills Parkway / Caliente Avenue & Otay Mesa Road – LOS F during both the AM and PM peak hours;
5. Heritage Road & Otay Mesa Road – LOS E during both the AM and PM peak hours;
6. Caliente Avenue & SR-905 westbound ramps - LOS F during the PM peak hour;
7. Caliente Avenue & SR-905 eastbound ramps - LOS F during both the AM and PM peak hours; and
8. Caliente Avenue & Airway Road – LOS F during both the AM and PM peak hours.

Near-Term Year (Opening Day) 2027 with Project Conditions

This section describes the study area, traffic volume information, and LOS analysis results under Near-Term Year (Opening Day) 2027 with Project conditions.

Roadway Network

The roadway network was assumed to be identical to Existing with Project conditions.

Traffic Volumes

Near-Term Year (Opening Day) 2027 with Project traffic volumes were derived by combining the Near-Term Year (Opening Day) 2027 traffic volumes (Figure 11) and the project trip assignment volumes displayed in (Figure 4). Near-Term Year (Opening Day) 2027 with Project daily roadway and intersection volumes are displayed in **Figure 12**.

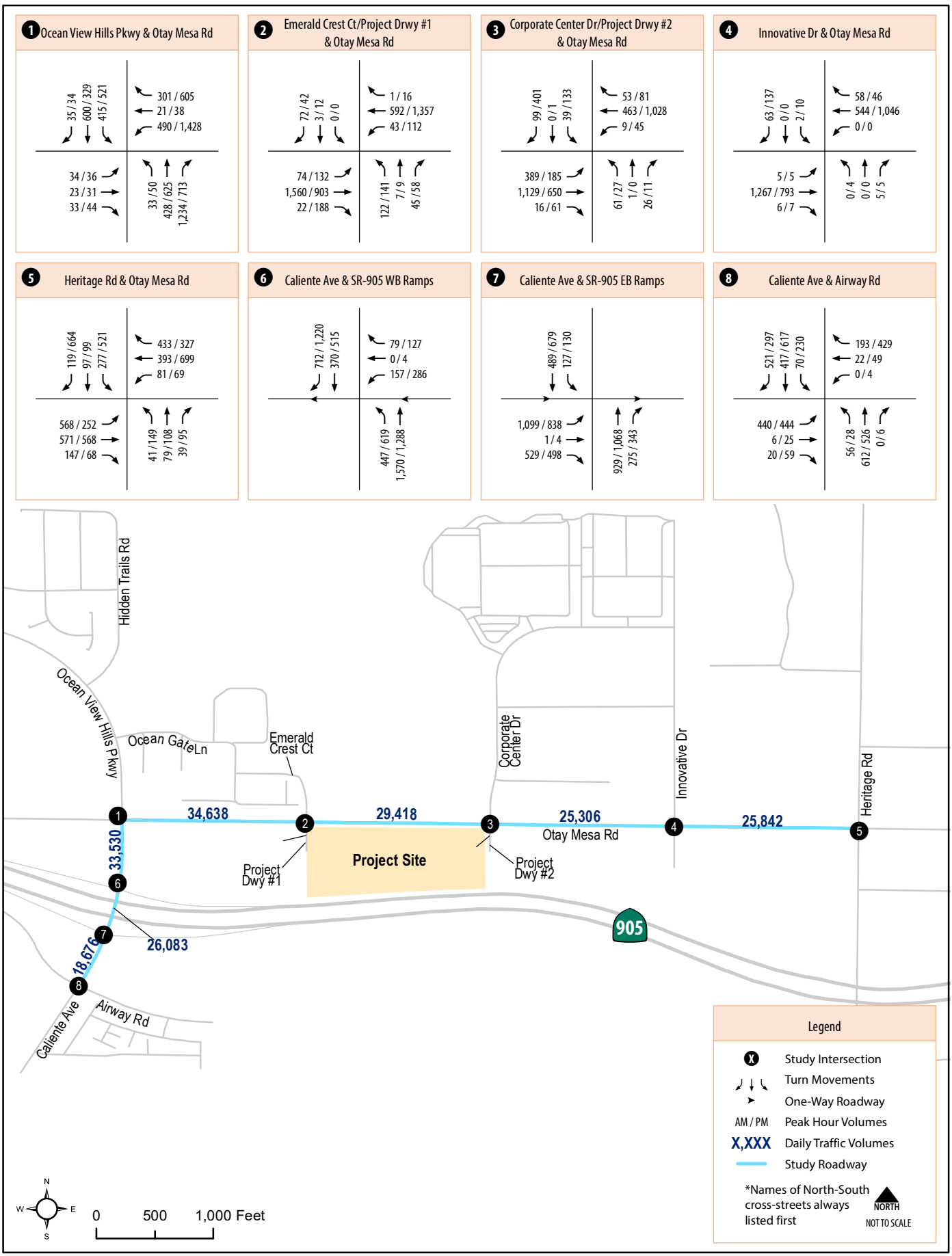

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Figure 12
Traffic Volumes
Near-Term Year (Opening Day) 2027 with Project Conditions

Traffic Operations Under Near-Term Year (Opening Day) 2027 with Project Conditions

This section documents the traffic operations under Near-Term Year (Opening Day) 2027 with Project conditions within the study area. Roadway segment and intersection operations are discussed separately below.

Roadway Segment

Table 9 displays the daily roadway LOS for study roadway segments under Near-Term Year (Opening Day) 2027 with Project conditions.

Table 9 Roadway Segment LOS Results – Near-Term Year (Opening Day) 2027 with Project Conditions

Roadway	Segment	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS	V/C w/o Project	LOS w/o Project	ΔV/C	SI?
Caliente Ave	Otay Mesa Rd to SR-905 WB Ramps	5-Lane Prime Arterial	50,000	33,530	0.671	C	0.639	C	0.032	N
Caliente Ave	SR-905 WB Ramps to SR-905 EB Ramps	5-Lane Prime Arterial	50,000	26,083	0.522	B	0.504	B	0.018	N
Caliente Ave	SR-905 EB Ramps to Airway Rd	5-Lane Prime Arterial	50,000	18,676	0.374	A	0.369	A	0.005	N
Otay Mesa Rd	Ocean View Hills Pkwy to Emerald Crest Ct	6-Lane Prime Arterial	60,000	34,638	0.577	B	0.543	B	0.034	N
Otay Mesa Rd	Emerald Crest Ct to Corporate Center Dr	6-Lane Prime Arterial	60,000	29,418	0.490	B	0.470	B	0.020	N
Otay Mesa Rd	Corporate Center Dr to Innovative Dr	6-Lane Prime Arterial	60,000	25,306	0.422	B	0.411	A	0.011	N
Otay Mesa Rd	Innovative Dr to Heritage Rd	6-Lane Prime Arterial	60,000	25,842	0.431	B	0.420	B	0.010	N

Source: CR Associates (2022)

Notes:
V/C = Volume to Capacity Ratio.
SI? = Significant Impact?

As shown in Table 9, all of the project study area roadway segments are projected to operate at LOS C or better with implementation of the Proposed Project. Therefore, no roadway segments are anticipated to be significantly impacted by the Proposed Project.

Intersection

Table 10 displays the intersection LOS for the intersections under Near-Term Year (Opening Day) 2027 with Project conditions. LOS calculation worksheets for Near-Term Year (Opening Day) 2027 with Project conditions are provided in **Attachment 13**.

Table 10 Intersection LOS Results – Near-Term Year (Opening Day) 2027 with Project Conditions

#	Intersection	Control Type	AM Peak Hour		PM Peak Hour		Delay w/o Project (sec) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec) AM/PM	SI?
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS				
1	Ocean View Hills Pkwy/Caliente Ave & Otay Mesa Rd	Signal	118.9	**F**	112.0	**F**	118.6 / 111.5	**F / F**	0.3 / 0.5	N
2	Emerald Crest Ct & Otay Mesa Rd	Signal	18.7	B	18.5	B	14.2 / 18.3	B / B	4.5 / 0.2	N
3	Corporate Center Dr & Otay Mesa Rd	Signal	20.2	C	17.6	B	5.0 / 5.1	A / A	15.2 / 12.5	N
4	Innovative Dr & Otay Mesa Rd	Signal	8.9	A	25.1	C	8.9 / 22.9	A / C	0.0 / 2.2	N
5	Heritage Rd & Otay Mesa Rd	Signal	63.7	**E**	68.3	**E**	62.7 / 67.5	**E / E**	1.0 / 0.8	N
6	Caliente Ave & SR-905 WB Ramps	Signal	42.8	D	216.4	**F**	35.2 / 216.0	D / **F**	7.6 / 0.4	N
7	Caliente Ave & SR-905 EB Ramps	Signal	102.4	**F**	137.1	**F**	102.1 / 136.3	**F / F**	0.3 / 0.8	N
8	Caliente Ave & Airway Rd	Signal	86.0	**F**	210.7	**F**	85.3 / 210.0	**F / F**	0.7 / 0.7	N

Source: CR Associates (2022)

Notes:
Bold letter indicates substandard LOS.
SI? = Significant Impact?

As shown in Table 10, the project study area intersections are projected to operate at LOS D or better during both the AM and PM peak hour, with the implementation of the Proposed Project, except for the following five (5) intersections:

1. Ocean View Hills Parkway / Caliente Avenue & Otay Mesa Road –LOS F during both the AM and PM peak hours; The trips associated with the Proposed Project would increase delay at this intersection by 0.3 seconds in the AM peak hour and 0.5 seconds in the PM peak hour, which does not surpass the 1-second threshold for intersections operating at LOS F. Therefore, this intersection is <u>not</u> anticipated to be significantly impacted by the Proposed Project.

5. Heritage Road & Otay Mesa Road – LOS E during both the AM and PM peak hours; The trips associated with the Proposed Project would increase delay at this intersection by 1.0 seconds in the AM peak hour and 0.8 seconds in the PM peak hour, which does not surpass the 2-second threshold for intersections operating at LOS E. Therefore, this intersection is <u>not</u> anticipated to be significantly impacted by the Proposed Project.

6. Caliente Avenue & SR-905 westbound ramps - LOS F during the PM peak hour; The trips associated with the Proposed Project would increase delay at this intersection by 0.4 in the PM peak hour, which does not surpass the 1-second significant impact threshold for intersections operating at LOS F. Therefore, this intersection is not anticipated to be significantly impacted by the Proposed Project.

7. Caliente Avenue & SR-905 eastbound ramps – LOS F during both the AM and PM peak hours; The trips associated with the Proposed Project would increase delay at this intersection by 0.3 seconds in the AM peak hour and 0.8 seconds in the PM peak hour, which does not surpass the 1-second significant impact threshold for intersections operating at LOS F. Therefore, this intersection is not anticipated to be significantly impacted by the Proposed Project.

8. Caliente Avenue & Airway Road – LOS F during both the AM and PM peak hours; The trips associated with the Proposed Project would increase delay at this intersection by 0.7 seconds in the AM peak hour and 0.7 seconds in the PM peak hour, which does not surpass the 1-second significant threshold for intersections operating at LOS F. Therefore, this intersection is not anticipated to be significantly impacted by the Proposed Project.

Horizon Year 2062 Conditions

This section describes the study area, traffic volume information, and LOS analysis results under Horizon Year 2062 conditions.

Roadway Network

The roadway network was assumed to be identical to the Existing conditions network as shown in Figure 6.

Horizon Year 2062 Conditions Roadway and Intersection Volumes

Traffic Volumes

Forecasted Horizon Year 2062 ADT were developed by determining growth per year observed in the SANDAG Series 14 model and applying growth per year to existing counts for study roadway segments.

Horizon Year 2062 intersection peak hour turning movement volumes were developed by utilizing the National Cooperative Highway Research Program (NCHRP) Report 255 methodology for estimating intersection turning movements. This methodology describes the use of growth factors, based on the comparison of existing ADT and estimated Horizon Year 2062 ADT, which are applied to existing peak hour intersection approach and departure volumes. Manual adjustments were also made to ensure that traffic volumes among adjacent intersections were reasonably balanced.

Detailed calculations are provided in **Attachment 14**. **Figure 13** displays Horizon Year 2062 traffic volumes.

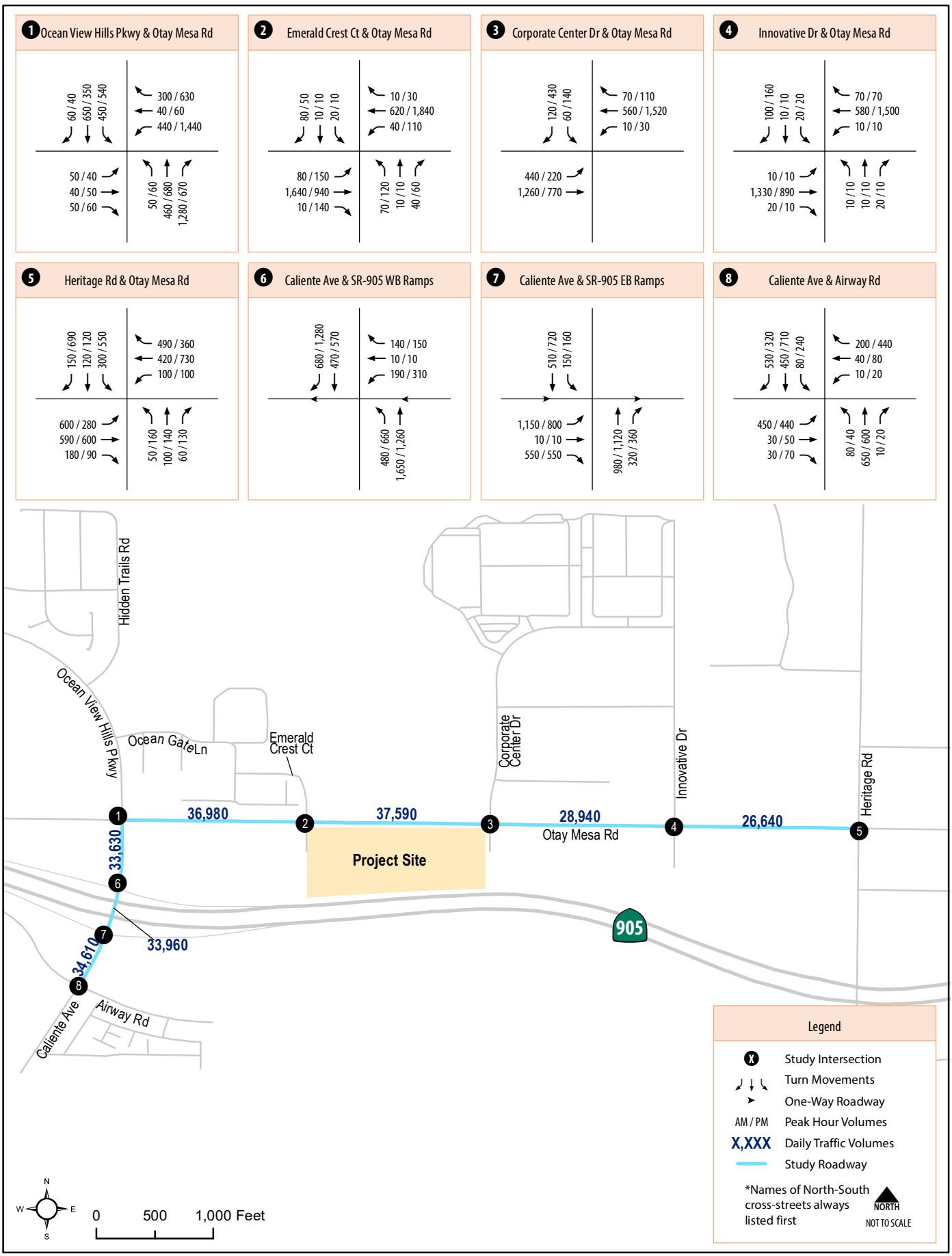

Figure 13
Traffic Volumes
Horizon Year 2062 Conditions

Traffic Operations Under Horizon Year 2062 Conditions

This section documents the traffic operations under Horizon Year 2062 conditions within the study area. Roadway segment and intersection operations are discussed separately below.

Roadway Segment

Table 11 displays the daily roadway LOS for study roadway segments under Horizon Year 2062 conditions.

Table 11 Roadway Segment LOS Results – Horizon Year 2062 Conditions

Roadway	Segment	Classification Designation	Capacity (LOS E)	ADT	V/C	LOS
Caliente Ave	Otay Mesa Rd to SR-905 WB Ramps	5-Lane Prime Arterial	50,000	33,630	0.673	C
Caliente Ave	SR-905 WB Ramps to SR-906 EB Ramps	5-Lane Prime Arterial	50,000	33,960	0.679	C
Caliente Ave	SR-905 EB Ramps to Airway Rd	5-Lane Prime Arterial	50,000	34,610	0.692	C
Otay Mesa Rd	Ocean View Hills Pkwy to Emerald Crest Ct	6-Lane Prime Arterial	60,000	36,980	0.616	C
Otay Mesa Rd	Emerald Crest Ct to Corporate Center Dr	6-Lane Prime Arterial	60,000	37,590	0.627	C
Otay Mesa Rd	Corporate Center Dr to Innovative Dr	6-Lane Prime Arterial	60,000	28,940	0.482	B
Otay Mesa Rd	Innovative Dr to Heritage Rd	6-Lane Prime Arterial	60,000	26,640	0.444	B

Source: CR Associates (2022)

Notes:
V/C = Volume to Capacity Ratio.

As shown in Table 11, all of the project study area roadway segments are projected to operate at LOS C or better under Horizon Year 2062 conditions.

Intersection

Table 12 displays the intersection LOS for the project study area intersections under Horizon Year 2062 conditions. LOS calculation worksheets for Horizon Year 2062 conditions are provided in **Attachment 15**.

Table 12 Intersection LOS Results – Horizon Year 2062 Conditions

#	Intersection	Control Type	AM Peak Hour		PM Peak Hour	
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
1	Ocean View Hills Pkwy/Caliente Ave & Otay Mesa Rd	Signal	78.6	**E**	72.9	**E**
2	Emerald Crest Ct & Otay Mesa Rd	Signal	14.3	B	20.3	C
3	Corporate Center Dr & Otay Mesa Rd	Signal	5.2	A	5.3	A
4	Innovative Dr & Otay Mesa Rd	Signal	15.3	B	16.4	B
5	Heritage Rd & Otay Mesa Rd	Signal	56.2	**E**	68.1	**E**
6	Caliente Ave & SR-905 WB Ramps	Signal	34.8	D	232.7	**F**
7	Caliente Ave & SR-905 EB Ramps	Signal	81.1	**F**	69.9	**E**
8	Caliente Ave & Airway Rd	Signal	49.7	D	71.3	**E**

Source: CR Associates (2022)

Notes:
Bold letter indicates substandard LOS.

As shown in Table 12, the project study area intersections are projected to operate at LOS D or better during both the AM and PM peak hour under Horizon Year 2062 conditions, except for the following five (5) intersections:

1. Ocean View Hills Pkwy/Caliente Ave & Otay Mesa Rd – LOS E during both the AM and PM peak hours;
5. Heritage Road & Otay Mesa Road – LOS E during both the AM and PM peak hours;
6. Caliente Ave & SR-905 WB Ramps – LOS F during the PM peak hour;
7. Caliente Ave & SR-905 EB Ramps – LOS F during both the AM peak hour and LOS E during the PM peak hour; and
8. Caliente Ave & Airway Rd – LOS E during the PM peak hour.

Horizon Year 2062 with Project Conditions

This section describes the study area, traffic volume information, and LOS analysis results under Horizon Year 2062 with Project conditions.

Roadway Network

The roadway network was assumed to be identical to Existing with Project conditions.

Traffic Volumes

Horizon Year 2062 with Project traffic volumes were derived by combining the Horizon Year 2062 traffic volumes (Figure 13) and the project trip assignment volumes displayed in (Figure 4). Horizon Year 2062 with Project daily roadway and intersection volumes are displayed in **Figure 14**.

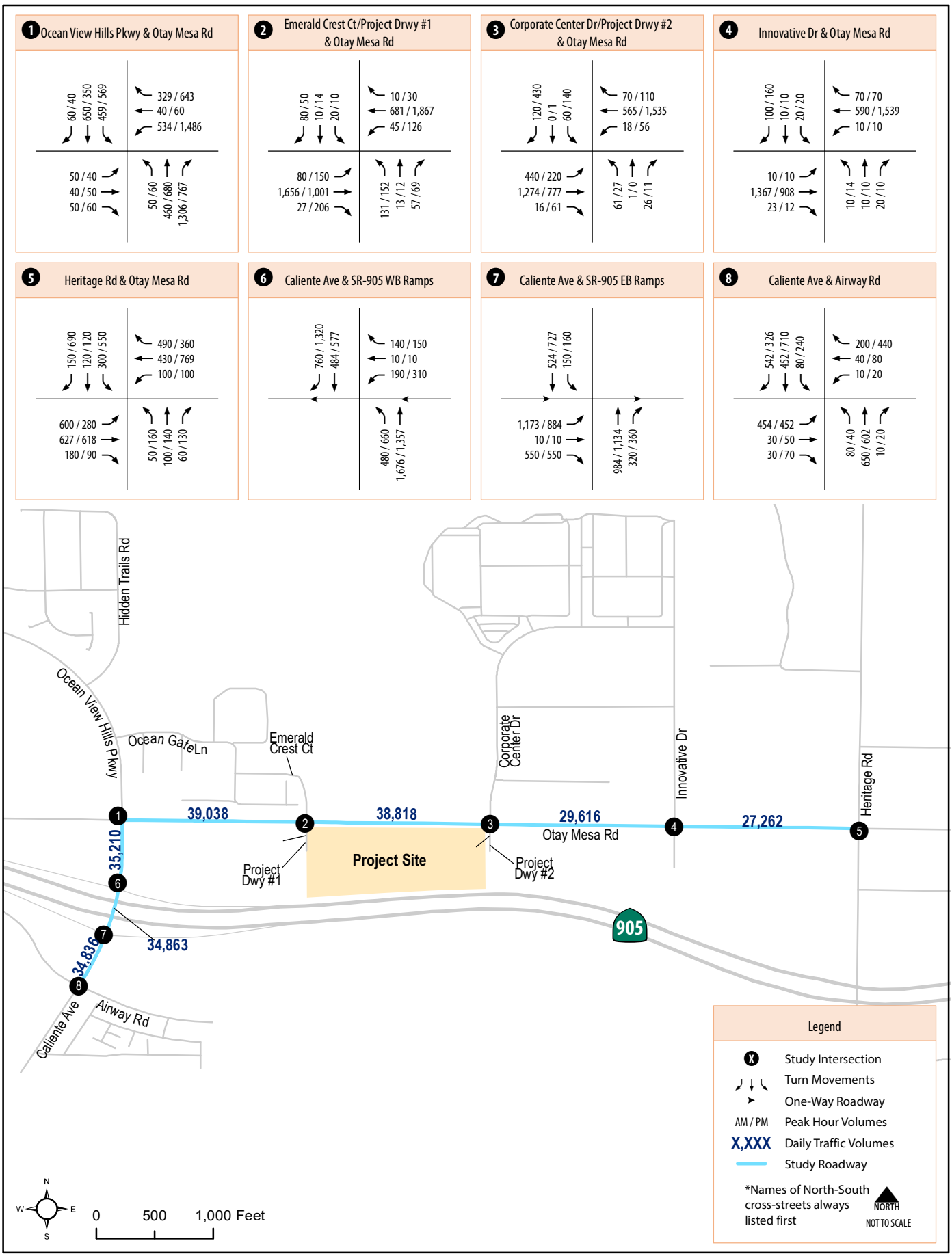

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Figure 14
Traffic Volumes
Horizon Year 2062 with Project Conditions

Traffic Operations Under Horizon Year 2062 with Project Conditions

This section documents the traffic operations under Horizon Year 2062 with Project conditions within the project study area. Roadway segment and intersection operations are discussed separately below.

Roadway Segments

Table 13 displays the daily roadway LOS for study roadway segments under Horizon Year 2062 with Project conditions.

Table 13 Roadway Segment LOS Results – Horizon Year 2062 with Project Conditions

Roadway	Segment	Classification Designation	Capacity (LOS E)	ADT	V/C	LOS	V/C w/o Project	LOS w/o Project	ΔV/C	SI?
Caliente Ave	Otay Mesa Rd to SR-905 WB Ramps	5-Lane Prime Arterial	50,000	35,210	0.704	C	0.673	C	0.031	N
Caliente Ave	SR-905 WB Ramps to SR-906 EB Ramps	5-Lane Prime Arterial	50,000	34,863	0.697	C	0.679	C	0.018	N
Caliente Ave	SR-905 EB Ramps to Airway Rd	5-Lane Prime Arterial	50,000	34,836	0.697	C	0.692	C	0.005	N
Otay Mesa Rd	Ocean View Hills Pkwy to Emerald Crest Ct	6-Lane Prime Arterial	60,000	39,038	0.651	C	0.616	C	0.035	N
Otay Mesa Rd	Emerald Crest Ct to Corporate Center Dr	6-Lane Prime Arterial	60,000	38,818	0.647	C	0.627	C	0.020	N
Otay Mesa Rd	Corporate Center Dr to Innovative Dr	6-Lane Prime Arterial	60,000	29,616	0.494	B	0.482	B	0.012	N
Otay Mesa Rd	Innovative Dr to Heritage Rd	6-Lane Prime Arterial	60,000	27,262	0.454	B	0.444	B	0.010	N

Source: CR Associates (2022)

Notes:
Bold letter indicates substandard LOS.
V/C = Volume to Capacity Ratio.
SI? = Significant Impact?

As shown in Table 13, all of the project study area roadway segments are projected to operate at LOS C or better with implementation of the Proposed Project. Therefore, no roadway segments are anticipated to be significantly impacted by the Proposed Project.

Intersections

Table 14 displays the intersection LOS for the intersections under Horizon Year 2062 with Project conditions. LOS calculation worksheets for Horizon Year 2062 with Project conditions are provided in **Attachment 16**.

Table 14 Intersection LOS Results – Horizon Year 2062 with Project Conditions

#	Intersection	Control Type	AM Peak Hour Avg. Delay (sec)	AM Peak Hour LOS	PM Peak Hour Avg. Delay (sec)	PM Peak Hour LOS	Delay w/o Project (sec) AM/PM	LOS w/o Project AM/PM	Change in Delay (sec) AM/PM	SI?
1	Ocean View Hills Pkwy/Caliente Ave & Otay Mesa Rd	Signal	79.0	**E**	73.7	**E**	78.6 / 72.9	**E** / **E**	0.4 / 0.8	N
2	Emerald Crest Ct & Otay Mesa Rd	Signal	16.9	B	22.6	C	14.3 / 20.3	B / C	2.6 / 2.3	N
3	Corporate Center Dr & Otay Mesa Rd	Signal	21.1	C	17.7	B	5.2 / 5.3	A / A	15.9 / 12.4	N
4	Innovative Dr & Otay Mesa Rd	Signal	15.3	B	16.7	B	15.3 / 16.4	B / B	0.0 / 0.3	N
5	Heritage Rd & Otay Mesa Rd	Signal	57.2	**E**	69.0	**E**	56.2 / 68.1	**E** / **E**	1.0 / 0.9	N
6	Caliente Ave & SR-905 WB Ramps	Signal	40.8	D	233.5	**F**	34.8 / 232.7	C / **F**	6.0 / 0.8	N
7	Caliente Ave & SR-905 EB Ramps	Signal	81.6	**F**	70.3	**E**	81.1 / 69.9	**F** / **E**	0.5 / 0.4	N
8	Caliente Ave & Airway Rd	Signal	50.6	D	72.1	**E**	49.7 / 71.3	D / **E**	0.9 / 0.8	N

Source: CR Associates (2022)

Notes:
Bold letter indicates substandard LOS.
SI? = Significant Impact?

As shown in Table 14, the project study area intersections are projected to operate at LOS D or better during both the AM and PM peak hour, with the implementation of the Proposed Project, except for the following five (5) intersections:

1. Ocean View Hills Parkway / Caliente Avenue & Otay Mesa Road – LOS E during both the AM and PM peak hours; The trips associated with the Proposed Project would increase delay at this intersection by 0.4 seconds in the AM peak hour and 0.8 seconds in the PM peak hour, which does not surpass the 2-second significant impact threshold for intersections operating at LOS E. Therefore, this intersection is not anticipated to be significantly impacted by the Proposed Project.

5. Heritage Road & Otay Mesa Road – LOS E during both the AM and PM peak hours; The trips associated with the Proposed Project would increase delay at this intersection by 1.0 seconds in the AM peak hour and 0.9 seconds in the PM peak hour, which does not surpass the 2-second threshold for intersections operating at LOS E. Therefore, this intersection is not anticipated to be significantly impacted by the Proposed Project.

6. Caliente Avenue & SR-905 westbound ramps – LOS F during the PM peak hour; The trips associated with the Proposed Project would increase delay at this intersection by 0.8 seconds in the PM peak hour, which does not surpass the 1-second significant impact threshold for intersections operating at LOS F. Therefore, this intersection is not anticipated to be significantly impacted by the Proposed Project.
7. Caliente Avenue & SR-905 eastbound ramps – LOS F during the AM peak hour and LOS E during the PM peak hour; The trips associated with the Proposed Project would increase delay at this intersection by 0.5 seconds in the AM peak hour and 0.4 seconds in the PM peak hour, which do not surpass the 1-second and 2-second significant impact threshold for intersections operating at LOS F and LOS E, respectively. Therefore, this intersection is not anticipated to be significantly impacted by the Proposed Project.
8. Caliente Avenue & Airway Road – LOS E during the PM peak hour; The trips associated with the Proposed Project would increase delay at this intersection by 0.8 seconds in the PM peak hour, which does not surpass the 1-second significant impact threshold for intersections operating at LOS E. Therefore, this intersection is not anticipated to be significantly impacted by the Proposed Project

Queue Analysis

A queue analysis was conducted at gates providing access to the project parking lots, the intersections immediately fronting the Proposed Project, and freeway off-ramps where project trips are added. Queue analysis is used to determine if extensive queues could form at parking lot gates or on the project's fronting roadway that would impede driveway operations or if the queue would spill back onto the freeway main line.

Table 15 shows the 95th percentile queue results determine using Trafficware SimTraffic software. SimTraffic queue results are provided in Attachment 17.

As shown in Table 15, the vehicle queues for turning movements are expected to fit within storage with implementation of the Proposed Project.

Table 15 Intersection Queuing Analysis

Intersection	Movement	Storage (ft)[1]	95th Percentile Queue (ft)[1]											
			Existing		Existing w/ Project		Near-Term		Near-Term w/ Project		Horizon Year 2062		Horizon Year 2062 w/ Project	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Caliente Ave & SR-905 EB Ramps[2]	EBL	1,200	1,075	425	1,150	525	1,075	1,100	1,075	1,100	1,075	1,100	1,075	1,075
Emerald Crest Ct & Otay Mesa Rd	NBL	60 / 400[3]	0	0	100	75	75	125	125	100	100	125	125	125
	WBL	650	0	0	25	50	75	150	75	125	75	125	75	400
	EBR	185	0	0	25	50	25	50	25	75	25	75	100	100
Corporate Center Dr & Otay Mesa Rd	NLTR	190[4]	DNE		100	75	DNE		100	75	DNE		100	50
	WBL[5]	280	25	100	25	225	0	225	50	75	25	50	50	250
	EBR	560	DNE		25	25	DNE		25	50	DNE		25	50
Emerald Crest Ct & Gate at Project Drwy B	EBT	140[6]	DNE		75	75	DNE		50	50	DNE		50	75
Gate at Corporate Center Dr	SBT	190[4]	DNE		75	75	DNE		50	75	DNE		75	75

Source: CR Associates (2022)

Note:
[1] Queues are rounded to the nearest 25 feet to represent one vehicle length.
[2] Project trips only added for SR-905 eastbound off ramp and not SR-905 westbound off ramp. Therefore, only eastbound ramp analyzed for queue analysis.
[3] Existing left-turn storage pocket striped with 60 feet per interim striping plan for Cal Terraces PA 61. Left-turn storage to be built out to 400 feet with implementation of the Proposed Project.
[4] Storage length measured from gate at Corporate Center Drive to Otay Mesa Road.
[5] Turn pocket exists under existing conditions for U-Turn movements only. With implementation of the Proposed Project, this turn pocket will provide storage for project trips entering the project site.
[6] Storage length measured from gate at Project Driveway B to property line.

Recommended Mitigation Measures

This section identifies required mitigation measures for roadway and intersection facilities that are associated with the Proposed Project.

Existing with Project Conditions

Roadway Segments
No significant impacts.

Intersections
No significant impacts

Near-Term Year (Opening Day) 2027 with Project Conditions

Roadway Segments
No significant impacts.

Intersections
No significant impacts

Horizon Year 2062 with Project Conditions

Roadway Segments
No significant impacts.

Intersections
No significant impacts.

Please feel free to contact me at (619) 468-2739 with any questions and/or comments.

Sincerely,

Jonathan Sanchez, PE, TE, PTOE
Lic. No. 2957

Attachment 1 – Emerald Crest Ct and Otay Mesa Rd Striping Plan and As-Built Signal Plans

FOR CONTINUATION SEE SHEET 3

FOR CONTINUATION SEE SHEET 5

EMERALD CREST COURT (PUBLIC)

PRIVATE DRIVE 'A'

PRIVATE DRIVE 'B'

PRIVATE DRIVE 'C'

PRIVATE DRIVE 'D'

PRIVATE DRIVE 'E'

PRIVATE DRIVE 'H'

HIGHWAY 905/EXISTING CALTRANS RIGHT-OF-WAY

BLDG 2
FF=522.8
P=522.0
5 AFFORDABLE PARKING SPACES (INCL. 1 VAN ACCESSIBLE & 1 EV)

BLDG 2
FF=519.7
P=518.9

BLDG 2
FF=521.5
P=520.7
3 RETAIL PARKING SPACES (13 TOTAL INCL. 1 VAN ACCESSIBLE, 1 CARPOOL/ZERO EMISSION & 1 EV)

BLDG 2
FF=520.8
P=520.0
2
51 UNITS AFFORDABLE HOUSING COURT

P=522.8
COMMERCIAL SPACE
6,000 SF
1
8 SPACE BIKE RACK
9 RETAIL PARKING SPACES (13 TOTAL INCL. 1 VAN ACCESSIBLE, 1 CARPOOL/ZERO EMISSION & 1 EV)

BLDG 3
FF=522.0
P=521.2
4

BLDG 3
FF=520.0
P=519.2

BLDG 3
FF=521.0
P=520.2

BLDG 3
FF=519.0
P=518.2

BLDG 3
FF=518.0
P=517.2

BLDG 3
FF=517.5
P=516.7
3

BLDG 4
FF=520.0
P=519.2

BLDG 4
FF=518.6
P=517.8
5

FF=517.5
P=516.7

REMOVE EXIST. PAVEMENT, AC BERM AND REGRADE TO CROWN SECTION

PROP. PUBLIC WATER METER, ESMT & BACK FLOW PREVENTION DEVICE

VISIBILITY AREA PER SDMC DIA. 113,02SS. NO OBJECTS HIGHER THAN 24 INCHES ALLOWED WITHIN VISIBILITY AREAS

EXISTING IMPROVEMENTS PER DWG. 41595-D (VTM 21-52396) ENG. PERMIT #2345666

PROPOSED 10" REDUCED PRESSURE DETECTION ASSEMBLY - WILKINS 10" RPDA MODEL 375DA OR EQUAL/EQ

MWS L-8-8-V-UG (BMP 2)

TYPE 'B' INLET

TYPE 'A-4' CLEANOUT E=515.25

PUBLIC STORM DRAIN

RIBBON GUTTER (TYP.)

NO PARKING

NO PARKING EXIT ONLY GATE

MOTORCYCLE SPACES

PARALLEL SPACES

12'X35' LOADING

0.5'DF

1' RETAINING WALL

2' RETAINING WALL

3.3' RETAINING WALL

PROJECT BOUNDARY (TYP.)

ALL TEMPORARY AND/OR PERMANENT PROJECT GRADING OR IMPROVEMENTS ARE PROPOSED TO OCCUR WHOLLY WITHIN THE LIMITS OF THE PROJECT BOUNDARY

ENTRY & EXIT GATE

38'R CUL-DE-SAC

PROP. BACK FLOW PREVENTION DEVICE

15+78.38-0.00 MATCH EX. IMPROVEMENTS PER DWG. NO. 39191-D

SECTION A-A
SCALE: 1"=20' HORIZ/VERT

PROJECT BOUNDARY
PROP. 2.5' RET. WALL
EXIST. GRADE
PROP. GRADE
520
510

NOTE: REFER TO LANDSCAPING DEVELOPMENT PLANS FOR LANDSCAPE SCREENING TREATMENT FOR WALLS, FENCES, OR COMBINATION THEREOF FACING HWY 905/CALTRANS RIGHT-OF-WAY.

0 30 60 90
SCALE 1" =30'

PREPARED BY:
HUNSAKER & ASSOCIATES SAN DIEGO, INC
PLANNING ENGINEERING SURVEYING
9707 Waples Street
San Diego, Ca 92121
PH(858)558-4500 FX(858)558-1414

VESTING TENTATIVE MAP & SITE DEVELOPMENT PERMIT

BDM MIXED USE

CITY OF SAN DIEGO, CALIFORNIA

SHEET C4 OF C8

W.O. 3592-0002

R:\1613\&Pln\TM & SDP\Handler TM & SDP- Sht 04.dwg[]Jan-13-2022:11:02

EXISTING SIGNS (THIS SHEET ONLY)

G78-1(CA) (MOD) (905) — OM2-1H — STOP R1-1 — RIGHT LANE MUST TURN RIGHT R3-7 — R4-7 — BIKE LANE R7-9a — RIGHT TURN ONLY R41(CA)

PROPOSED SIGNS (THIS SHEET ONLY)

R9-3 — NO OUTLET W14-2

WORK TO BE DONE (THIS SHEET ONLY)

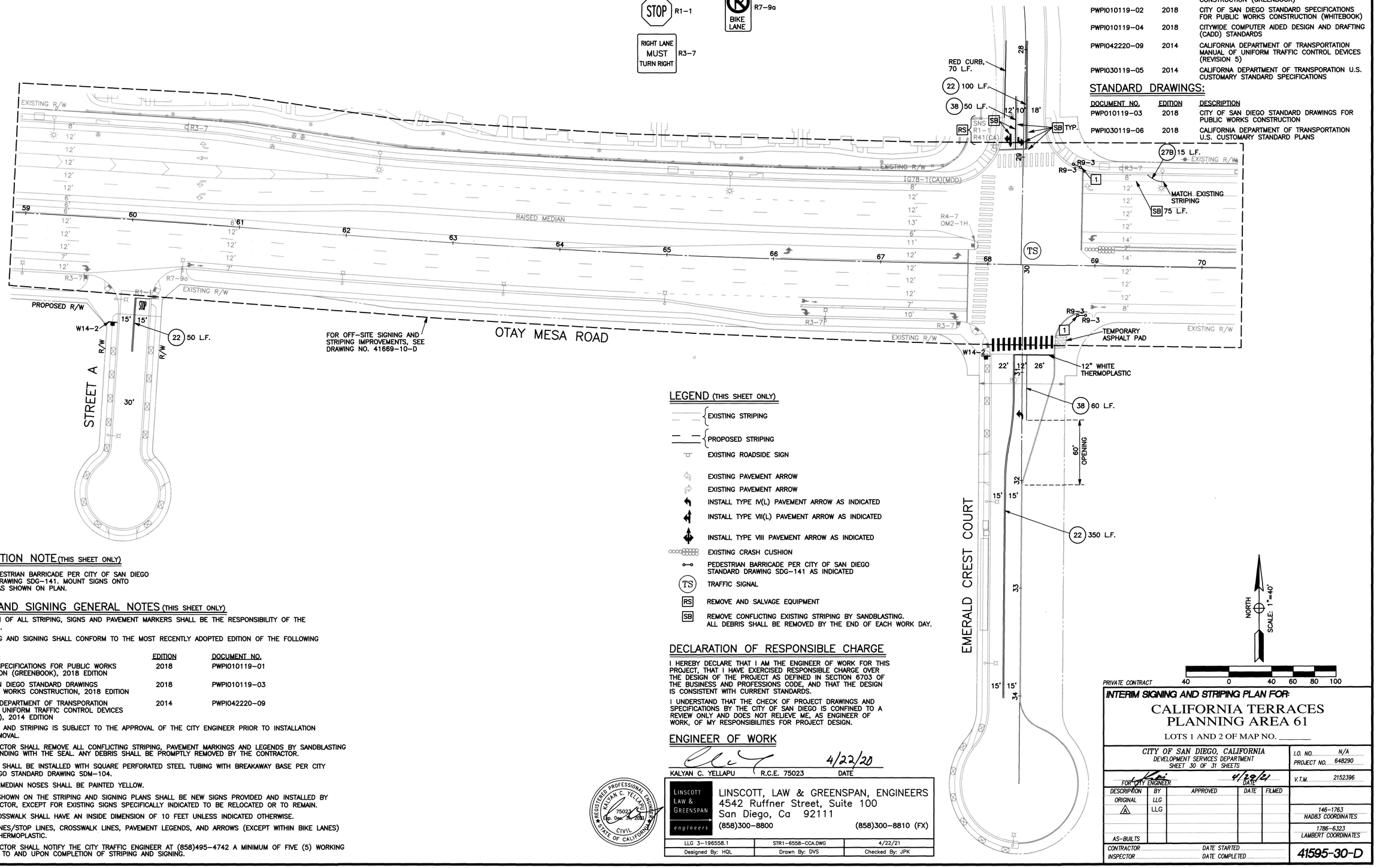
THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

STANDARD SPECIFICATIONS:

DOCUMENT NO.	EDITION	DESCRIPTION
PWPI010119-01	2018	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK)
PWPI010119-02	2018	CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (WHITEBOOK)
PWPI010119-04	2018	CITYWIDE COMPUTER AIDED DESIGN AND DRAFTING (CADD) STANDARDS
PWPI042220-09	2014	CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (REVISION 5)
PWPI030119-05	2014	CALIFORNA DEPARTMENT OF TRANSPORATION U.S. CUSTOMARY STANDARD SPECIFICATIONS

STANDARD DRAWINGS:

DOCUMENT NO.	EDITION	DESCRIPTION
PWPI010119-03	2018	CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION
PWPI030119-06	2018	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S. CUSTOMARY STANDARD PLANS



LEGEND (THIS SHEET ONLY)

- EXISTING STRIPING
- PROPOSED STRIPING
- EXISTING ROADSIDE SIGN
- EXISTING PAVEMENT ARROW
- EXISTING PAVEMENT ARROW
- INSTALL TYPE IV(L) PAVEMENT ARROW AS INDICATED
- INSTALL TYPE VII(L) PAVEMENT ARROW AS INDICATED
- INSTALL TYPE VIII PAVEMENT ARROW AS INDICATED
- EXISTING CRASH CUSHION
- PEDESTRIAN BARRICADE PER CITY OF SAN DIEGO STANDARD DRAWING SDG-141 AS INDICATED
- TS — TRAFFIC SIGNAL
- RS — REMOVE AND SALVAGE EQUIPMENT
- SB — REMOVE CONFLICTING EXISTING STRIPING BY SANDBLASTING. ALL DEBRIS SHALL BE REMOVED BY THE END OF EACH WORK DAY.

CONSTRUCTION NOTE (THIS SHEET ONLY)

1 INSTALL PEDESTRIAN BARRICADE PER CITY OF SAN DIEGO STANDARD DRAWING SDG-141. MOUNT SIGNS ONTO BARRICADE AS SHOWN ON PLAN.

STRIPING AND SIGNING GENERAL NOTES (THIS SHEET ONLY)

1. INSTALLATION OF ALL STRIPING, SIGNS AND PAVEMENT MARKERS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL STRIPING AND SIGNING SHALL CONFORM TO THE MOST RECENTLY ADOPTED EDITION OF THE FOLLOWING MANUALS:

DESCRIPTION	EDITION	DOCUMENT NO.
STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), 2018 EDITION	2018	PWPI010119-01
CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, 2018 EDITION	2018	PWPI010119-03
CALIFORNIA DEPARTMENT OF TRANSPORATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (REVISION 5), 2014 EDITION	2014	PWPI042220-09

3. ALL SIGNING AND STRIPING IS SUBJECT TO THE APPROVAL OF THE CITY ENGINEER PRIOR TO INSTALLATION AND/OR REMOVAL.
4. THE CONTRACTOR SHALL REMOVE ALL CONFLICTING STRIPING, PAVEMENT MARKINGS AND LEGENDS BY SANDBLASTING AND/OR GRINDING WITH THE SEAL. ANY DEBRIS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
5. SIGN POSTS SHALL BE INSTALLED WITH SQUARE PERFORATED STEEL TUBING WITH BREAKAWAY BASE PER CITY OF SAN DIEGO STANDARD DRAWING SDM-104.
6. ALL RAISED MEDIAN NOSES SHALL BE PAINTED YELLOW.
7. ALL SIGNS SHOWN ON THE STRIPING AND SIGNING PLANS SHALL BE NEW SIGNS PROVIDED AND INSTALLED BY THE CONTRACTOR, EXCEPT FOR EXISTING SIGNS SPECIFICALLY INDICATED TO BE RELOCATED OR TO REMAIN.
8. MARKED CROSSWALK SHALL HAVE AN INSIDE DIMENSION OF 10 FEET UNLESS INDICATED OTHERWISE.
9. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS (EXCEPT WITHIN BIKE LANES) SHALL BE THERMOPLASTIC.
10. THE CONTRACTOR SHALL NOTIFY THE CITY TRAFFIC ENGINEER AT (858)495-4742 A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO AND UPON COMPLETION OF STRIPING AND SIGNING.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

ENGINEER OF WORK

KALYAN C. YELLAPU R.C.E. 75023 — 4/22/20 DATE

REGISTERED PROFESSIONAL ENGINEER — KALYAN C. YELLAPU — 75023 — Ex. Dec. 31, 2021 — CIVIL — STATE OF CALIFORNIA

LINSCOTT LAW & GREENSPAN engineers
LINSCOTT, LAW & GREENSPAN, ENGINEERS
4542 Ruffner Street, Suite 100
San Diego, Ca 92111
(858)300-8800 (858)300-8810 (FX)

LLG 3-196558.1	STR1-6558-CCA.DWG	4/22/21
Designed By: HQL	Drawn By: DVS	Checked By: JPK

PRIVATE CONTRACT

INTERIM SIGNING AND STRIPING PLAN FOR:

CALIFORNIA TERRACES PLANNING AREA 61

LOTS 1 AND 2 OF MAP NO. _____

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 30 OF 31 SHEETS

FOR CITY ENGINEER — DATE 4/28/21

I.O. NO. N/A
PROJECT NO. 648290
V.T.M. 2152396

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	LLG			
1	LLG			
AS-BUILTS				

146-1763 NAD83 COORDINATES
1786-6323 LAMBERT COORDINATES

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

41595-30-D

NEW SHEET

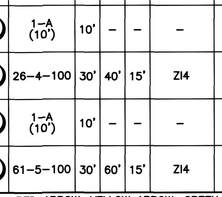
○ EQUIPMENT SCHEDULE

LOC.	STANDARD TYPE	MASTARM HT.	MASTARM SIG.	MASTARM LUM.	LUMINAIRE (LED)	PLACEMENT DIMENSIONS A.	PLACEMENT DIMENSIONS B.	SIGNAL MOUNTING AND PLACEMENT VEHICLE POLE	VEHICLE MASTARM	PEDESTRIAN SIGNAL	PEDESTRIAN PPB	PEDESTRIAN LOC.	REMARKS
Ⓐ	PPB	4'	–	–	–	32'	11'	–	–	–	ø6P ø4P	5 3	ALL NEW EQUIPMENT
Ⓑ	19–4–100	30'	30'	15'	ZI4	28'	4'	SV–1–T ø8	MAS ø3●	–	–	–	ALL NEW EQUIPMENT [3] [4]
Ⓒ	PPB	4'–7"	–	–	–	25'	12'	–	–	–	ø6P øP (FUT)	5 7	ALL NEW EQUIPMENT [5]
Ⓓ	1–A (10')	10'	–	–	–	19.5'	4'	TV–1–T ø5●	–	SP–1–T ø6P	–	–	ALL NEW EQUIPMENT
Ⓔ	29–5–100	30'	55'	15'	ZI4	STA. 68+90 40' RT.		SV–1–T ø2	MAS ø2 MAS ø2 MAS ø5●	–	øP (FUT)	7	ALL NEW EQUIPMENT [3] [5] F1=12' F2=19'
Ⓕ	1–A (10')	10'	–	–	–	0'	3'	TV–1–T ø7●	–	SP–1–T ø2P	ø2P	5	ALL NEW EQUIPMENT
Ⓖ	26–4–100	30'	40'	15'	ZI4	1'	5'	SV–1–T ø4	MAS ø4 MAS ø7●	SP–1–T ø4P	ø2P	1	ALL NEW EQUIPMENT [3] [4] F1=15'
Ⓗ	1–A (10')	10'	–	–	–	6.5'	6.5'	TV–1–T ø1●	–	SP–1–T ø2P	ø4P	3	ALL NEW EQUIPMENT
Ⓘ	61–5–100	30'	60'	15'	ZI4	29'	4'	SV–2–TB ø6 ø3●	MAS ø1● MAS ø6 MAS ø6	SP–2–T ø6P ø4P	–	–	ALL NEW EQUIPMENT [3] F1=12' F2=23'

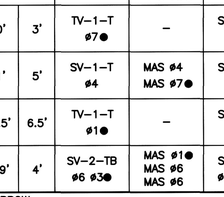
● = RED ARROW, YELLOW ARROW, GREEN ARROW

TRAFFIC SIGNAL GENERAL NOTES (THIS SHEET ONLY)

1. PULL BOXES SHALL BE NO. 6, AND CONDUIT 3" UNLESS NOTED OTHERWISE. PULL BOXES SHALL BE SPACED AT A MAXIMUM OF 200 FEET.
2. LOCATION OF ALL UNDERGROUND UTILITIES IS APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS AND VERIFY ALL CONDITIONS ON THE JOB SITE.
3. THE TRAFFIC SIGNAL CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PLAN PERMIT FROM THE CITY OF SAN DIEGO PERMIT COUNTER CENTER A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
4. ALL TRAFFIC SIGNAL POLE FOUNDATIONS SHALL HAVE A 3" CONDUIT INSTALLED TO THE ADJACENT PULL BOX AND THE CONTROLLER FOUNDATION SHALL HAVE A SPARE 3" CONDUIT INSTALLED TO THE ADJACENT NO. 6 PULL BOX FOR FUTURE USE.
5. THE TRAFFIC SIGNAL CONTRACTOR IS RESPONSIBLE FOR THE LAYOUT AND INSTALLATION OF LOOP DETECTORS, TRAFFIC STRIPING, PAVEMENT MARKINGS, PARKING REMOVAL AND TRAFFIC SIGNING AS SHOWN ON THESE PLANS.
   - 5a. THE TRAFFIC SIGNAL CONTRACTOR SHALL OBTAIN THE APPROVAL OF CITY RESIDENT ENGINEER OF THE LOOP LOCATION PRIOR TO CUTTING AND THE STRIPING, PAVEMENT MARKING, PARKING REMOVAL AND SIGN LOCATIONS PRIOR TO PAINTING AND INSTALLATION.
   - 5b. AFTER APPROVAL OF LOCATION, THE TRAFFIC SIGNAL CONTRACTOR SHALL WAIT A MINIMUM OF FIFTEEN (15) WORKING DAYS BEFORE PERMANENTLY REMOVING ANY PARKING SO THAT ADVANCE NOTICE TO ADJACENT PROPERTY OWNERS CAN BE MADE BY THE CITY.
   - 5c. THE TRAFFIC SIGNAL CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL UNNECESSARY AND CONFLICTING STRIPING AND PAVEMENT MARKINGS.
6. THE TRAFFIC SIGNAL CONTRACTOR SHALL NOT ERECT ANY SIGNAL STANDARDS MORE THAN THREE (3) WEEKS PRIOR TO SCHEDULED TRAFFIC SIGNAL TURN ON.
7. CONTRACTOR SHALL PROVIDE ALL CABLING AND CONDUCTORS NECESSARY TO PERFORM ALL FUNCTIONS SHOWN ON THIS PLAN.
8. ALL POLES, CONDUIT, PULL BOXES, STRIPING AND LOOP DETECTOR LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE ACTUAL LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND AS DIRECTED BY THE CITY OF SAN DIEGO.
9. ROUTING AND LOCATIONS OF UNDERGROUND ELECTRICAL SYSTEM IS DIAGRAMMATIC AND OF THE ENGINEER. UNDERGROUND ELECTRICAL LINES AND SUBSURFACE STRUCTURES MAY BE RELOCATED IF NECESSARY TO CLEAR OTHER EXISTING UNDERGROUND FACILITIES.
10. ALL TREES AND SHRUBS SHALL BE TRIMMED OR REMOVED AS DETERMINED BY THE CITY RESIDENT ENGINEER AS REQUIRED TO MAINTAIN SIGNAL HEAD VISIBILITY AND SIGHT DISTANCE.
11. ALL VEHICLE SIGNAL HEADS SHALL BE 12" WITH BACKPLATES.
12. ALL VEHICLE AND PEDESTRIAN INDICATIONS SHALL BE OF THE L.E.D. TYPE. ALL PEDESTRIAN INDICATORS SHALL BE SIDE BY SIDE GELCORE COUNTDOWN PER CITY OF SAN DIEGO REQUIREMENTS.
13. INSTALL TYPE "E" MODIFIED LOOP DETECTORS ON ALL FRONT LOOPS PER THE CITY OF SAN DIEGO REQUIREMENTS AS SHOWN ON THIS PLAN.
14. PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHALL BE INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS SHALL BE 16"X18" L.E.D. COUNTDOWN INDICATIONS. PEDESTRIAN PUSH BUTTONS SHALL BE 2" PER ADA REQUIREMENTS.



DETECTOR LOOP AND POLE LOCATION DETAIL
NOT TO SCALE

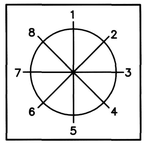


DETECTOR LOOP AND POLE LOCATION DETAIL
NOT TO SCALE

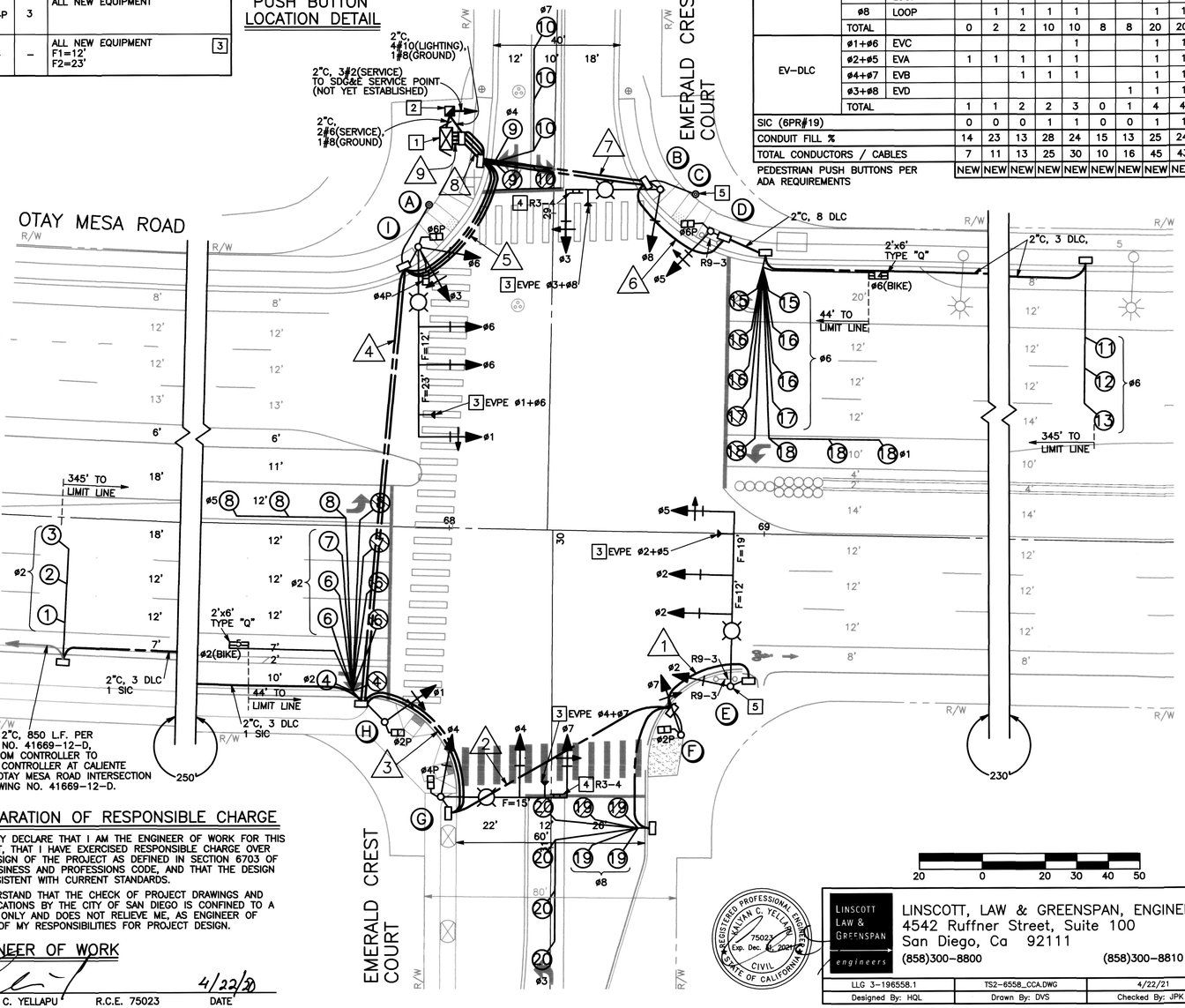
DESIGN SPEED: EMERALD CREST COURT = 25 MPH
DESIGN SPEED: OTAY MESA ROAD = 50 MPH
THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY

CONSTRUCTION NOTES (THIS SHEET ONLY)

1. FURNISH AND INSTALL TYPE 170 CONTROLLER IN MODEL 332 ANODIZED ALUMINUM CABINET. CONTROLLER UNIT SHALL BE EQUIPPED WITH ONE MODEL 412C PROGRAM MODULE, TWELVE MODEL 200 SWITCH PACKS, FOUR MODEL 204 FLASHER UNIT MODULES, TWELVE MODEL C822–F LOOP DETECTOR SENSOR UNITS, FOUR MODEL 242 ISOLATORS, TWO MODEL 752 MODULES, TWO MODEL 722 OPTICAL DETECTORS, TWO MODEL 400 MODEMS, ONE MODEL 210 MONITOR UNIT, AND ONE COMMUNICATION TERMINAL PANEL.
2. INSTALL TYPE III–BF SIGNAL AND LIGHTING SERVICE ENCLOSURE PER SDG&E REQUIREMENTS. PROVIDE 50A–1P, 120V SIGNAL METERED CIRCUIT BREAKER, 15A–1P, 120V I.I.S.N.S. METERED CIRCUIT BREAKER, AND 30A–2P, 240V LIGHTING UNMETERED CIRCUIT BREAKER. SERVICE CABINET SHALL BE FABRICATED FROM ANODIZED ALUMINUM SHEET PER CALTRANS SPECIFICATIONS. INSTALL CLARY CORPORATION SP SERIES 1000 TRAFFIC UPS OR APPROVED EQUAL. PROVIDE THE ELEC–TRONICS MODULE, POWER INTERVACE MODULE, AND BATTER SYSTEM CONSISTING OF SIX OUTPOST OPB–1241 BATTERIES.
3. INSTALL SINGLE CHANNEL VEHICLE PRE–EMPTION DETECTOR EQUIPMENT (E.V.P.E.) PER CITY OF SAN DIEGO REQUIREMENTS.
4. INSTALL MAST ARM MOUNTED SIGN PER SIGN MOUNTING DETAILS "DETAIL U". CALTRANS STANDARD PLAN ES–7N. SIGN TYPE AS NOTED ON PLAN.
5. CONTRACTOR SHALL DE–ACTIVATE PEDESTRIAN PUSH BUTTON IN ANTICIPATION OF FUTURE USE.



PUSH BUTTON LOCATION DETAIL



DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

ENGINEER OF WORK

KALYAN C. YELLAPU R.C.E. 75023 DATE 4/22/21

△ CONDUCTOR SCHEDULE

AWG SIZE OR CABLE TYPE	PHASE	POLE OR CIRCUIT	CONDUIT SIZE/RUN 1–3" ⚠1	1–3" ⚠2	2–3" ⚠3	2–3" ⚠4	3–3" ⚠5	1–3" ⚠6	2–3" ⚠7	4–3" ⚠8	4–3" ⚠9
NO.14 CABLES CONDUCTOR 3		POLE – Ⓐ					2			2	2
		POLE – Ⓑ							1	1	1
		POLE – Ⓒ						2	2	2	2
		POLE – Ⓓ						1	1	1	1
CONDUCTOR 12 CONDUCTOR	1	POLE – Ⓔ	2	2	2	2	2	2		1	2
	2	POLE – Ⓕ	1	1	1	1	1	1		1	1
	3	POLE – Ⓖ			1	1	1	1		1	1
		POLE – Ⓗ				1	1	1		1	1
		POLE – Ⓘ					2			2	2
TOTAL CABLES – 3 CON / 12 CON			1 2	2 3	3 4	5	6 7	0 1	2	8 9	8 9
10	LUMINAIRES		2	2	2	2	2	0	2	2	0
8	GROUND		1	1	1	1	1	1	1	1	1
TYPE "B" DLC	ø1	LOOP						1	1	1	1
	ø2	LOOP				7	7			7	7
	ø3	LOOP		1	1	1	1			1	1
	ø4	LOOP								1	1
	ø5	LOOP				1	1			1	1
	ø6	LOOP						7	7	7	7
	ø7	LOOP								1	1
	ø8	LOOP		1	1	1	1			1	1
	TOTAL		0	2	2	10	10	8	8	20	20
EV–DLC	ø1+ø6	EVC					1			1	1
	ø2+ø5	EVA	1	1	1	1	1			1	1
	ø4+ø7	EVB			1	1	1			1	1
	ø3+ø8	EVD						1	1	1	1
	TOTAL		1	1	2	2	3	0	1	4	4
SIC (6PR#19)			0	0	0	1	1	0	0	1	1
CONDUIT FILL %			14	23	13	28	24	15	13	25	24
TOTAL CONDUCTORS / CABLES			7	11	13	25	30	10	16	45	43
PEDESTRIAN PUSH BUTTONS PER ADA REQUIREMENTS			NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW

WORK TO BE DONE (THIS SHEET ONLY)

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

STANDARD SPECIFICATIONS:

DOCUMENT NO.	EDITION	DESCRIPTION
PWPI010119–01	2018	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK)
PWPI010119–02	2018	CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (WHITEBOOK)
PWPI010119–04	2018	CITYWIDE COMPUTER AIDED DESIGN AND DRAFTING (CADD) STANDARDS
PWPI042220–09	2014	CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (REVISION 4)
PWPI030119–05	2014	CALIFORNA DEPARTMENT OF TRANSPORATION U.S. CUSTOMARY STANDARD SPECIFICATIONS

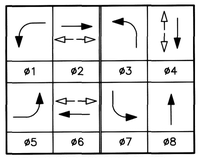
STANDARD DRAWINGS:

DOCUMENT NO.	EDITION	DESCRIPTION
PWP010119–03	2018	CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION
PWPI030119–06	2018	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S. CUSTOMARY STANDARD PLANS

SPECIAL NOTE:

CONTRACTOR MUST NOTIFY THE BELOW LISTED AGENCY AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF EXCAVATION:

UNDERGROUND SERVICE ALERT (USA) 1–800–422–4133



FLASHING OPERATION SHALL BE RED IN ALL RED.

PROPOSED PHASE DIAGRAM

DETECTOR ASSIGNMENTS

DETECTOR NUMBER	PHASE	SLOT NUMBER	FIELD TERMINALS
1	ø2	I2U	T2–5 & 6
2	ø2	I2L	T2–7 & 8
3	ø2	I3U	T2–9 & 10
4	ø2	I3L	T2–11 & 12
5	ø2B	I4U	T4–1 & 2
6	ø2	I4L	T4–3 & 4
7	ø2	I9U	T6–9 & 10
8	ø5	J1U	T3–1 & 2
9	ø4	I6U	T4–9 & 10
10	ø7	J5U	T5–5 & 6
11	ø6	J2U	T3–5 & 6
12	ø6	J2L	T3–7 & 8
13	ø6	J3U	T3–9 & 10
14	ø6B	J3L	T3–11 & 12
15	ø6	J4U	T5–1 & 2
16	ø6	J4L	T5–3 & 4
17	ø6	J9U	T7–9 & 10
18	ø1	I1U	T2–1 & 2
19	ø8	J6U	T5–9 & 10
20	ø3	I5U	T4–5 & 6
2P	ø2P	I12U	T8–4 & COM6
4P	ø4P	I12L	T8–5 & COM6
6P	ø6P	I13U	T8–7 & COM9
EVC	ø1+ø6	J12L	T9–5 & COM6
EVA	ø2+ø5	J12U	T9–4 & COM6
EVB	ø4+ø7	J13U	T9–7 & COM9
EVD	ø3+ø8	J13L	T9–8 & COM9
FLASH	–	I14U	T8–10 & COM12

SIGNS THIS SHEET

MAST ARM MOUNTED SIGNS [4]

POLES Ⓑ & Ⓒ

PRIVATE CONTRACT

INTERIM TRAFFIC SIGNAL INSTALLATION PLAN FOR:

EMERALD CREST COURT AND OTAY MESA ROAD

CITY OF SAN DIEGO, CALIFORNIA
DEVELOPMENT SERVICES DEPARTMENT
SHEET 31 OF 31 SHEETS

I.O. NO. N/A
PROJECT NO. 648290
V.T.M. 2152396

FOR CITY ENGINEER — DATE 4/22/21

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	LLG			
⚠	LLG			
AS–BUILTS				

146–1763 NAD83 COORDINATES
1786–6323 LAMBERT COORDINATES

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

41595–31–D

LINSCOTT LAW & GREENSPAN engineers
LINSCOTT, LAW & GREENSPAN, ENGINEERS
4542 Ruffner Street, Suite 100
San Diego, Ca 92111
(858)300–8800 (858)300–8810 (FX)

LLG 3–196558.1	TS2–6558_CCA.DWG	4/22/21
Designed By: HQL	Drawn By: DVS	Checked By: JPK

REGISTERED PROFESSIONAL ENGINEER — KALYAN C. YELLAPU — 75023 — Exp. Dec. 31, 2021 — CIVIL — STATE OF CALIFORNIA

NEW SHEET

Attachment 2 – Select Zone Analysis Results
Trip Distribution Adjustments

SANDAG
SR13
versiom13_3_2
Scenario ID: 1201

DBM

2020 Select Zone Run

TAZ 4916

This 2% trip assignment via select zone analysis is due to the model assumption that Heritage Road north of Otay Mesa Road has been improved from a two-lane collector with a continuous left-turn lane to a six-lane Primary Arterial per Otay Mesa Community Plan. Due to the uncertainty of timing of implementation of the Heritage Road improvements, this 2% was redirected west from the project site along Otay Mesa Road and north along Ocean View Hills Pkwy.

The remaining 16% that originally sent north along Heritage Road is redirected to the east along Otay Mesa Rd with ultimate destination to the northeast via SR-125.

Functional Classifications

- Freeway
- Prime
- Major
- Collector
- Light Collector
- Rural Collector
- Local
- Freeway Ramp
- Local Ramp
- Zone Connector

Selected Zone(s)

\# Select Zone Vol and %

\# Model Estimated ADT

Portions of this map contain information from the San Diego Association of Governments (SANDAG) Regional Information System. This product cannot be reproduced without the written permission of SANDAG.

SAN DIEGO ASSOCIATION OF GOVERNMENTS
401 B STREET, SUITE 800
SAN DIEGO, CALIFORNIA 92101 USA
(619) 699-1900
E-mail: sandag@sandag.org
Web site: www.sandag.org

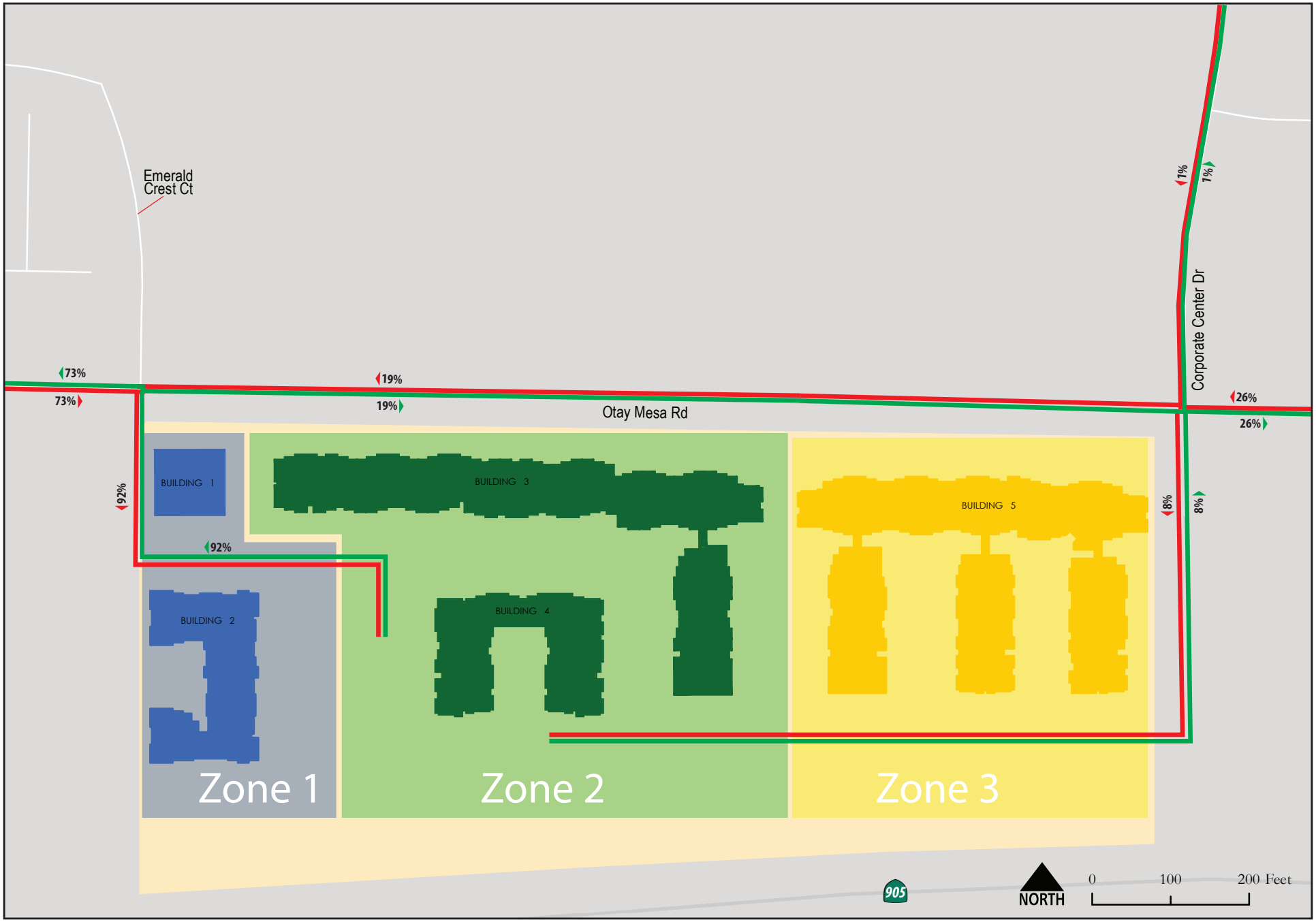
N

0 0.08 0.16 0.24
Miles

SANDAG servicebureau

Date: April 23, 2020

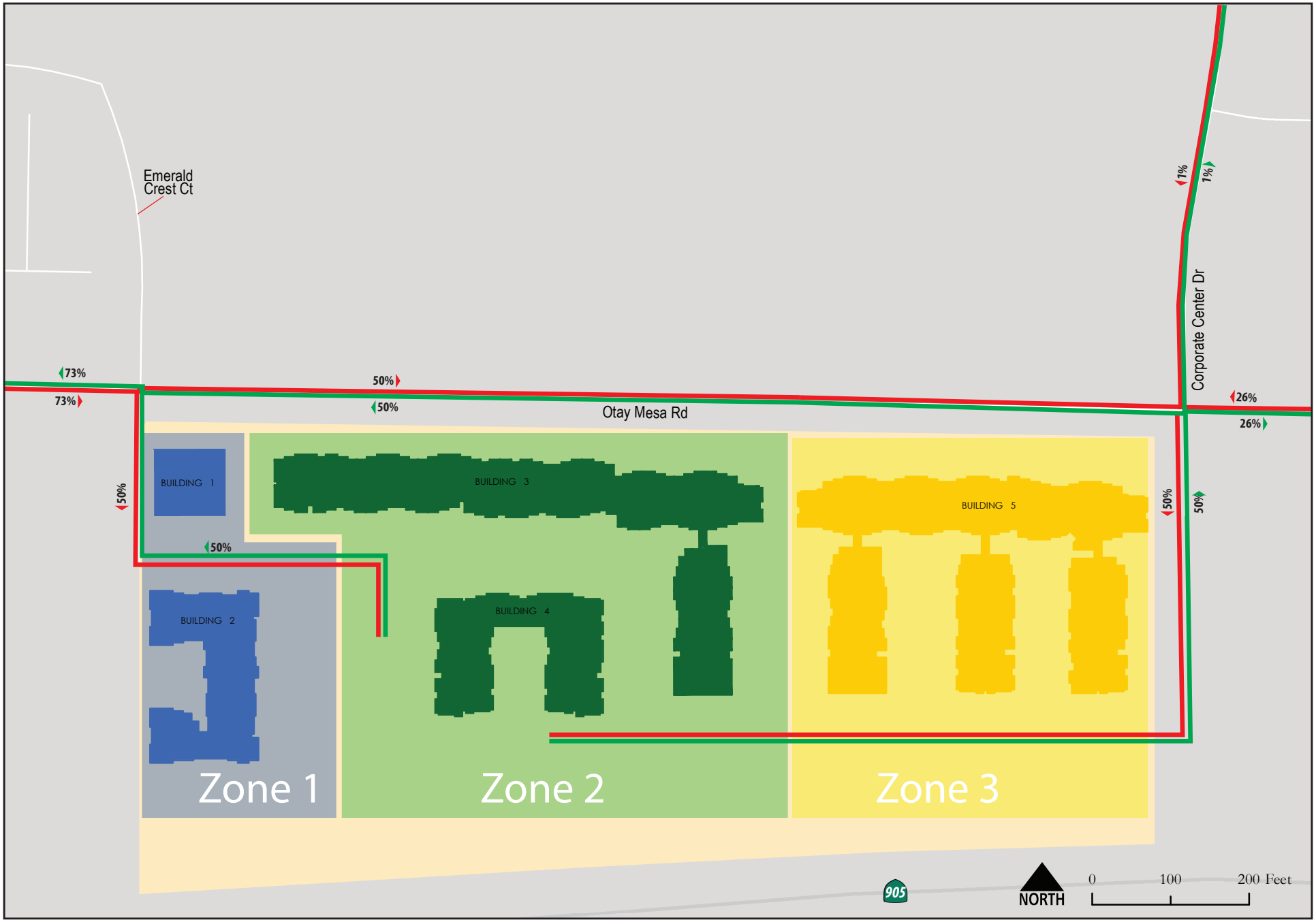
Attachment 3 – Driveway Utilization Assumptions



BDM Mixed Use

Project Trip Distribution (Zone 1)

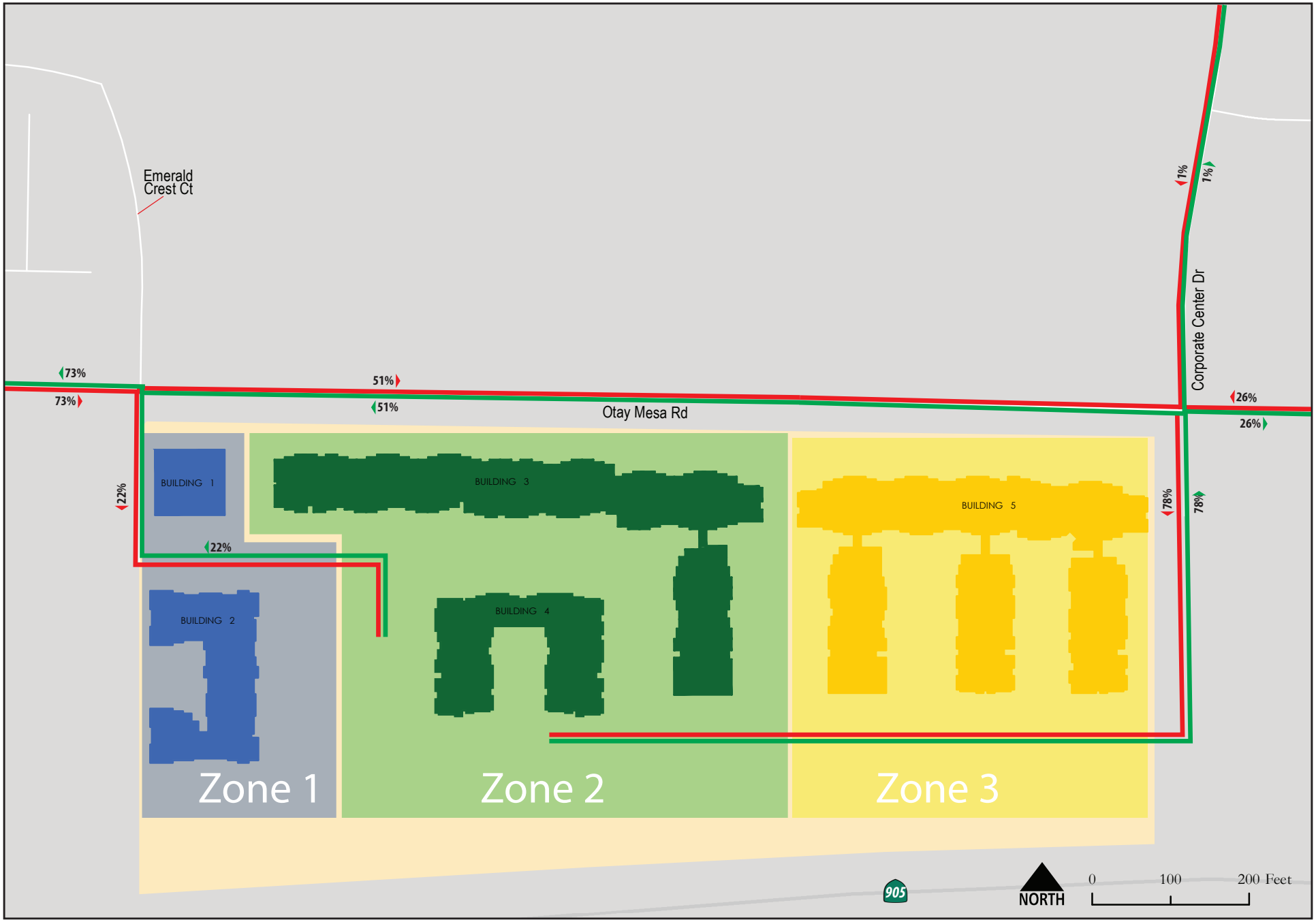
C+R



BDM Mixed Use

Project Trip Distribution (Zone 3)

C+R



BDM Mixed Use

Project Trip Distribution (Zone 3)

C+R

Attachment 4 – MTS Bus Schedule

Exact fare, please *Favor de pagar la cantidad exacta*

Fares *Tarifas*	**Adult** *Adulto*	**Senior/Disabled/ Medicare/Youth*** *Personas Mayores/con Discapacidades/Medicare/Jóvenes**
ONE-WAY FARES *Tarifas Sencillas*	**$2.50**	**$1.25**
EARNED DAY PASS *Pase del Día Ganado*	**$6.00**	**$3.00**
MONTH PASS *Pase mensual*	**$72.00**	**$23.00**

Load money into your PRONTO account to earn Day Passes and Month Passes. Tap your PRONTO card ($2) or scan your PRONTO mobile app (free) to ride. *Carga dinero a tu cuenta de PRONTO para ganar Pases del Día y Pases Mensuales. Toca tu tarjeta PRONTO ($2) o escanea tu aplicación móvil PRONTO (gratis) para viajar.*

- **One-ways with PRONTO receive free transfers for two hours. No free transfers for cash.** *Los viajes de ida con PRONTO reciben transbordes gratuitos por dos horas. No se permiten transbordes gratuitos con pagos en efectivo.*
- **Day Passes not sold in advance. Earned with PRONTO.** *Los pases diarios no se venden por adelantado. Se obtienen con PRONTO.*
- **A month pass can be purchased in advanced or earned with PRONTO. Good from first day to last day of the month.** *El Pase Mensual se puede comprar por adelantado o se obtiene mientras viaja con PRONTO. Válido desde el primer día hasta el último día del mes.*

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959. Youth Eligibility: Ages 6-18
Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959. Elegibilidad para Jóvenes: edades 6-18

For more information, visit: / *Para más información, visite:* **sdmts.com/fares**

DIRECTORY / *Directorio*

MTS Information & Trip Planning *MTS Información y planeo de viaje*	**511** **or/ó** **(619) 233-3004**
TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** **or/ó** **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 233-3004**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com.**

Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a ***sdmts.com.***

Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective NOVEMBER 21, 2021

905 **Otay Mesa – Iris Transit Center** via SR-905 / Otay Mesa Road

909 **Otay Mesa – Southwestern College Otay Mesa**

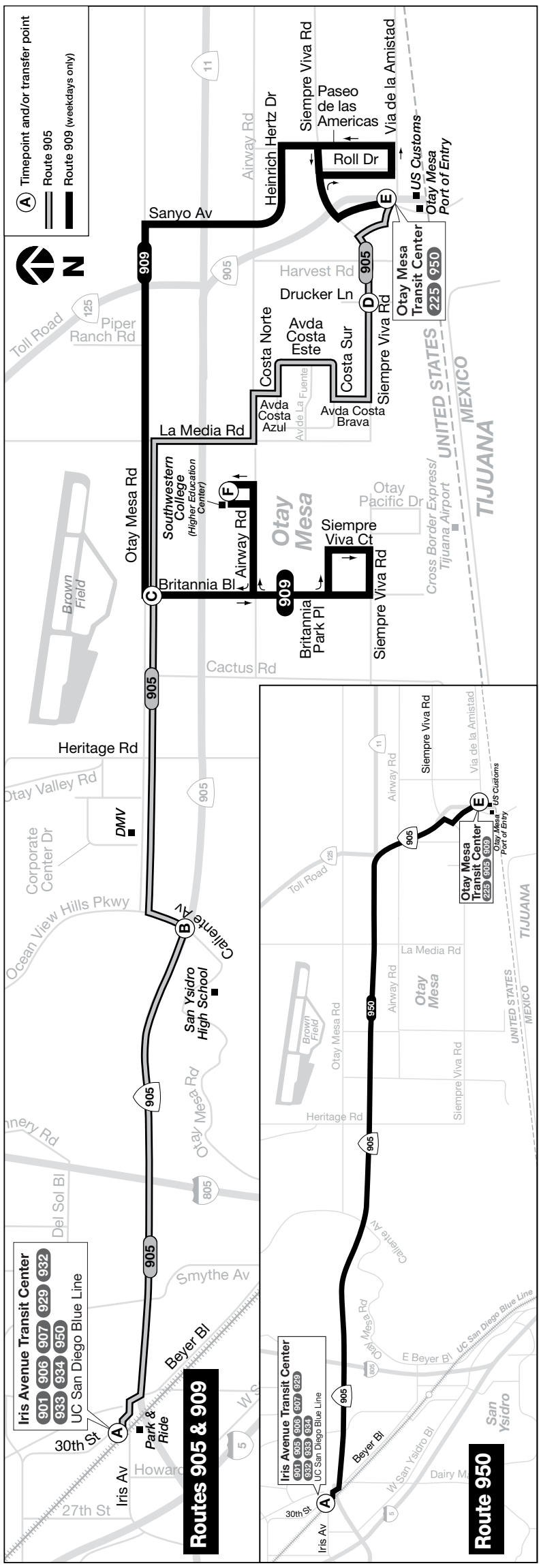
950 **Otay Mesa – Iris Transit Center Express** via SR-905

DESTINATIONS
- Brown Field
- Otay Mesa Industrial Parks
- Otay Mesa Port of Entry
- San Ysidro High School (905)
- Southwestern College Otay Mesa (909)

TROLLEY CONNECTIONS
- Iris Avenue

11/21

sdmts.com
Route Alerts, Updated Schedules, Connections & More



Alternative formats available upon request. Please call: (619) 557-4555
Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555

The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.

Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.

Route 950 – Monday through Friday / *lunes a viernes*

Otay Mesa ➡ Iris Avenue

(E) Otay Mesa Transit Center **DEPART**	(A) Iris Avenue Transit Center **ARRIVE**
4:30a	4:44a
4:45	4:59
5:00	5:14
5:12	5:26
5:24	5:38
5:36	5:50
5:48	6:02
6:00	6:14
6:12	6:26
6:24	6:38
6:36	6:50
6:48	7:02
7:00	7:14
7:12	7:26
7:24	7:38
7:36	7:50
7:48	8:02
8:04	8:18
8:24	8:38
8:44	8:58
9:04	9:18
9:24	9:38
9:44	9:58
10:15	10:29
10:45	10:59
11:15	11:29
11:45	11:59
12:15p	**12:29p**

Iris Avenue ➡ Otay Mesa

(A) Iris Avenue Transit Center **DEPART**	(E) Otay Mesa Transit Center **ARRIVE**
12:15p	**12:29p**
12:44	**12:59**
1:15	**1:29**
1:42	**1:56**
2:02	**2:16**
2:22	**2:36**
2:42	**2:56**
3:02	**3:16**
3:22	**3:36**
3:42	**3:56**
4:02	**4:16**
4:22	**4:36**
4:42	**4:56**
5:02	**5:16**
5:22	**5:36**
5:42	**5:56**
6:02	**6:16**
6:22	**6:36**
6:42	**6:56**
7:02	**7:16**
7:23	**7:37**
7:53	**8:07**
8:23	**8:37**

Route 950 – Saturday / *sábado*

Otay Mesa ➡ Iris Avenue

(E) Otay Mesa Transit Center **DEPART**	(A) Iris Avenue Transit Center **ARRIVE**
4:54a	5:08a
5:14	5:28
5:34	5:48
5:54	6:08
6:14	6:28
6:34	6:48
6:54	7:08
7:14	7:28
7:34	7:48
7:54	8:08
8:15	8:29
8:45	8:59
9:15	9:29
9:45	9:59
10:15	10:29
10:53	11:07
11:53	**12:07p**

Iris Avenue ➡ Otay Mesa

(A) Iris Avenue Transit Center **DEPART**	(E) Otay Mesa Transit Center **ARRIVE**
12:23p	**12:37p**
1:06	**1:20**
1:36	**1:50**
2:06	**2:20**
2:23	**2:37**
2:43	**2:57**
3:03	**3:17**
3:23	**3:37**
3:43	**3:57**
4:03	**4:17**
4:23	**4:37**
4:44	**4:58**
5:06	**5:20**
5:28	**5:42**
5:51	**6:05**
6:15	**6:29**
6:45	**6:59**
7:23	**7:37**

Route 950 – Sunday / *domingo*

Otay Mesa ➡ Iris Avenue

(E) Otay Mesa Transit Center **DEPART**	(A) Iris Avenue Transit Center **ARRIVE**
5:15a	5:29a
5:45	5:59
6:15	6:29
6:45	6:59
7:15	7:29
7:45	7:59
8:15	8:29
8:45	8:59
9:15	9:29
10:00	10:14
11:00	11:14
12:00p	**12:14p**

Iris Avenue ➡ Otay Mesa

(A) Iris Avenue Transit Center **DEPART**	(E) Otay Mesa Transit Center **ARRIVE**
12:23p	**12:37p**
1:23	**1:37**
2:08	**2:22**
2:38	**2:52**
3:08	**3:22**
3:38	**3:52**
4:08	**4:22**
4:38	**4:52**
5:08	**5:22**
5:38	**5:52**
6:23	**6:37**
7:23	**7:37**

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

>>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

Route 905 – Monday through Friday / *lunes a viernes*

Otay Mesa ➡ Iris Avenue Transit Center

Ⓔ Otay Mesa Transit Center **DEPART**	Ⓓ Siempre Viva Rd. & Drucker Lane	Ⓒ Otay Mesa Rd. & Britannia Bl.	Ⓑ SR-905 & Caliente Av.	Ⓐ Iris Avenue Transit Center **ARRIVE**
4:13a	4:16a	4:25a	4:30a	4:38a
4:48	4:51	5:00	5:05	5:13
5:23	5:26	5:35	5:40	5:48
5:57	6:00	6:09	6:14	6:22
6:30	6:33	6:43	6:49	6:58
7:03	7:06	7:16	7:22	7:31
7:33	7:36	7:46	7:52	8:01
8:03	8:06	8:16	8:22	8:31
8:33	8:36	8:46	8:52	9:01
9:00	9:03	9:13	9:19	9:28
9:30	9:33	9:43	9:49	9:58
10:00	10:03	10:13	10:19	10:28
10:30	10:33	10:43	10:49	10:58
11:00	11:03	11:13	11:19	11:28
11:30	11:33	11:43	11:49	11:58
12:00p	**12:03p**	**12:13p**	**12:19p**	**12:28p**
12:30	**12:33**	**12:43**	**12:49**	**12:58**
12:55	**12:58**	**1:08**	**1:14**	**1:23**
1:23	**1:27**	**1:37**	**1:44**	**1:53**
1:53	**1:57**	**2:07**	**2:14**	**2:23**
2:15	**2:19**	**2:29**	**2:36**	**2:45**
2:30	**2:34**	**2:44**	**2:51**	**3:00**
2:45	**2:49**	**2:59**	**3:06**	**3:15**
2:59	**3:03**	**3:13**	**3:20**	**3:29**
3:13	**3:17**	**3:27**	**3:34**	**3:43**
–	**–**	**–**	**P 3:44**	**3:53**
3:30	**3:34**	**3:44**	**3:51**	**4:00**
–	**–**	**–**	**P 3:58**	**4:07**
3:44	**3:48**	**3:58**	**4:05**	**4:14**
–	**–**	**–**	**P 4:13**	**4:22**
3:59	**4:03**	**4:13**	**4:20**	**4:29**
4:14	**4:18**	**4:28**	**4:35**	**4:44**
4:31	**4:35**	**4:45**	**4:52**	**5:01**
4:47	**4:51**	**5:01**	**5:08**	**5:17**
5:02	**5:06**	**5:16**	**5:23**	**5:32**
5:18	**5:22**	**5:32**	**5:39**	**5:48**
5:45	**5:49**	**5:59**	**6:06**	**6:15**
6:18	**6:21**	**6:30**	**6:37**	**6:46**
6:55	**6:58**	**7:07**	**7:14**	**7:23**
7:33	**7:36**	**7:45**	**7:52**	**8:01**
8:04	**8:07**	**8:16**	**8:22**	**8:30**

P = Trip operates when San Ysidro High School is in session & classes end at regular bell schedule (3:35PM).
Este viaje opera durante los días escolares de San Ysidro High School y cuando las clases terminan en horario regular (3:35PM).

Iris Avenue Transit Center ➡ Otay Mesa

Ⓐ Iris Avenue Transit Center **DEPART**	Ⓑ SR-905 & Caliente Av.	Ⓒ Otay Mesa Rd. & Britannia Bl.	Ⓓ Siempre Viva Rd. & Drucker Lane	Ⓔ Otay Mesa Transit Center **ARRIVE**
4:53a	4:59a	5:04a	5:14a	5:18a
5:23	5:29	5:34	5:44	5:48
5:54	6:00	6:05	6:15	6:19
6:09	6:16	6:21	6:32	6:37
6:28	6:35	6:40	6:51	6:56
6:43	6:50	6:55	7:06	7:11
6:59	7:06	7:11	7:22	7:27
7:14	7:21	7:26	7:37	7:42
7:30	7:37	7:42	7:53	7:58
T 7:38	7:45	–	–	–
7:44	7:51	7:56	8:07	8:12
T 7:53	8:00	–	–	–
7:59	8:06	8:11	8:22	8:27
T 8:08	8:15	–	–	–
8:15	8:22	8:27	8:38	8:43
T 8:23	8:30	–	–	–
8:30	8:37	8:42	8:53	8:58
8:46	8:53	8:58	9:09	9:14
9:08	9:15	9:20	9:31	9:36
9:38	9:45	9:50	10:01	10:06
10:08	10:15	10:20	10:31	10:36
10:38	10:45	10:50	11:01	11:06
11:08	11:15	11:20	11:31	11:36
11:38	11:45	11:50	**12:01p**	**12:06p**
12:08p	**12:15p**	**12:20p**	**12:31**	**12:36**
12:38	**12:45**	**12:50**	**1:01**	**1:06**
1:08	**1:15**	**1:20**	**1:31**	**1:36**
1:38	**1:45**	**1:51**	**2:03**	**2:08**
2:07	**2:14**	**2:20**	**2:32**	**2:37**
2:31	**2:38**	**2:44**	**2:56**	**3:01**
3:01	**3:08**	**3:14**	**3:26**	**3:31**
3:31	**3:38**	**3:44**	**3:56**	**4:01**
4:07	**4:14**	**4:20**	**4:32**	**4:37**
4:38	**4:45**	**4:51**	**5:03**	**5:08**
5:08	**5:15**	**5:20**	**5:31**	**5:36**
5:38	**5:45**	**5:50**	**6:01**	**6:06**
6:08	**6:15**	**6:20**	**6:31**	**6:36**
6:34	**6:41**	**6:46**	**6:57**	**7:02**
7:00	**7:07**	**7:12**	**7:23**	**7:28**
7:30	**7:37**	**7:42**	**7:53**	**7:58**
8:01	**8:07**	**8:12**	**8:22**	**8:26**
8:37	**8:43**	**8:48**	**8:58**	**9:02**
9:08	**9:14**	**9:19**	**9:29**	**9:33**
9:38	**9:44**	**9:49**	**9:59**	**10:03**

T = Trip operates when San Ysidro High School is in session & classes begin at regular bell schedule (8:30AM).
Este viaje opera durante los días escolares de San Ysidro High School y cuando las clases comienzan en horario regular (8:30AM).

Route 905 – Saturday / *sábado*

Otay Mesa ➡ Iris Avenue Transit Center

Ⓔ Otay Mesa Transit Center **DEPART**	Ⓓ Siempre Viva Rd. & Drucker Lane	Ⓒ Otay Mesa Rd. & Britannia Bl.	Ⓑ SR-905 & Caliente Av.	Ⓐ Iris Avenue Transit Center **ARRIVE**
5:16a	5:19a	5:28a	5:32a	5:38a
6:15	6:18	6:27	6:31	6:37
7:15	7:18	7:27	7:31	7:37
8:15	8:18	8:27	8:31	8:37
9:15	9:18	9:27	9:31	9:37
10:15	10:18	10:27	10:31	10:37
11:14	11:17	11:27	11:32	11:38
12:14p	**12:17p**	**12:27p**	**12:32p**	**12:38p**
1:14	**1:17**	**1:27**	**1:32**	**1:38**
2:14	**2:17**	**2:27**	**2:32**	**2:38**
3:14	**3:17**	**3:27**	**3:32**	**3:38**
4:14	**4:17**	**4:27**	**4:32**	**4:38**
5:14	**5:17**	**5:27**	**5:32**	**5:38**
6:15	**6:18**	**6:27**	**6:31**	**6:37**
7:15	**7:18**	**7:27**	**7:31**	**7:37**
8:15	**8:18**	**8:27**	**8:31**	**8:37**

Iris Avenue Transit Center ➡ Otay Mesa

Ⓐ Iris Avenue Transit Center **DEPART**	Ⓑ SR-905 & Caliente Av.	Ⓒ Otay Mesa Rd. & Britannia Bl.	Ⓓ Siempre Viva Rd. & Drucker Lane	Ⓔ Otay Mesa Transit Center **ARRIVE**
5:45a	5:51a	5:56a	6:04a	6:07a
6:44	6:50	6:55	7:04	7:08
7:44	7:50	7:55	8:04	8:08
8:44	8:50	8:55	9:04	9:08
9:44	9:50	9:55	10:04	10:08
10:44	10:50	10:55	11:04	11:08
11:44	11:50	11:55	**12:04p**	**12:08p**
12:44p	**12:50p**	**12:55p**	**1:04**	**1:08**
1:44	**1:50**	**1:55**	**2:04**	**2:08**
2:44	**2:50**	**2:55**	**3:04**	**3:08**
3:44	**3:50**	**3:55**	**4:04**	**4:08**
4:44	**4:50**	**4:55**	**5:04**	**5:08**
5:44	**5:50**	**5:55**	**6:04**	**6:08**
6:44	**6:50**	**6:55**	**7:04**	**7:08**
7:44	**7:50**	**7:55**	**8:04**	**8:08**
8:44	**8:50**	**8:55**	**9:03**	**9:06**

Route 905 – Sunday / *domingo*

Otay Mesa ➡ Iris Avenue Transit Center

Ⓔ Otay Mesa Transit Center **DEPART**	Ⓓ Siempre Viva Rd. & Drucker Lane	Ⓒ Otay Mesa Rd. & Britannia Bl.	Ⓑ SR-905 & Caliente Av.	Ⓐ Iris Avenue Transit Center **ARRIVE**
5:30a	5:33a	5:42a	5:46a	5:52a
6:30	6:33	6:42	6:46	6:52
7:30	7:33	7:42	7:46	7:52
8:30	8:33	8:42	8:46	8:52
9:30	9:33	9:42	9:46	9:52
10:30	10:33	10:42	10:46	10:52
11:29	11:32	11:42	11:47	11:53
12:29p	**12:32p**	**12:42p**	**12:47p**	**12:53p**
1:29	**1:32**	**1:42**	**1:47**	**1:53**
2:29	**2:32**	**2:42**	**2:47**	**2:53**
3:29	**3:32**	**3:42**	**3:47**	**3:53**
4:29	**4:32**	**4:42**	**4:47**	**4:53**
5:29	**5:32**	**5:42**	**5:47**	**5:53**
6:30	**6:33**	**6:42**	**6:46**	**6:52**
7:30	**7:33**	**7:42**	**7:46**	**7:52**
8:30	**8:33**	**8:42**	**8:46**	**8:52**

Iris Avenue Transit Center ➡ Otay Mesa

Ⓐ Iris Avenue Transit Center **DEPART**	Ⓑ SR-905 & Caliente Av.	Ⓒ Otay Mesa Rd. & Britannia Bl.	Ⓓ Siempre Viva Rd. & Drucker Lane	Ⓔ Otay Mesa Transit Center **ARRIVE**
6:00a	6:06a	6:12a	6:20a	6:24a
6:59	7:05	7:10	7:19	7:23
7:59	8:05	8:10	8:19	8:23
8:59	9:05	9:10	9:19	9:23
9:59	10:05	10:10	10:19	10:23
10:59	11:05	11:10	11:19	11:23
11:59	**12:05p**	**12:10p**	**12:19p**	**12:23p**
12:59p	**1:05**	**1:10**	**1:19**	**1:23**
1:59	**2:05**	**2:10**	**2:19**	**2:23**
2:59	**3:05**	**3:10**	**3:19**	**3:23**
3:59	**4:05**	**4:10**	**4:19**	**4:23**
4:59	**5:05**	**5:10**	**5:19**	**5:23**
5:59	**6:05**	**6:10**	**6:19**	**6:23**
6:59	**7:05**	**7:10**	**7:19**	**7:23**
7:59	**8:05**	**8:10**	**8:19**	**8:23**

Route 909 – Monday through Friday / *lunes a viernes*

Otay Mesa ➡ Southwestern College Otay Mesa

Ⓔ Otay Mesa Transit Center **DEPART**	Ⓒ Otay Mesa Rd. & Britannia Bl.	Ⓕ Southwestern College Otay Mesa **ARRIVE**
4:59a	5:11a	5:21a
6:01	6:13	6:23
7:06	7:19	7:30
8:09	8:22	8:33
9:10	9:23	9:34
10:10	10:23	10:34
11:10	11:23	11:34
12:10p	**12:23p**	**12:34p**
1:15	**1:28**	**1:39**
2:10	**2:23**	**2:34**
3:10	**3:23**	**3:34**
4:10	**4:23**	**4:34**
4:58	**5:11**	**5:22**
5:56	**6:08**	**6:18**
7:08	**7:20**	**7:30**

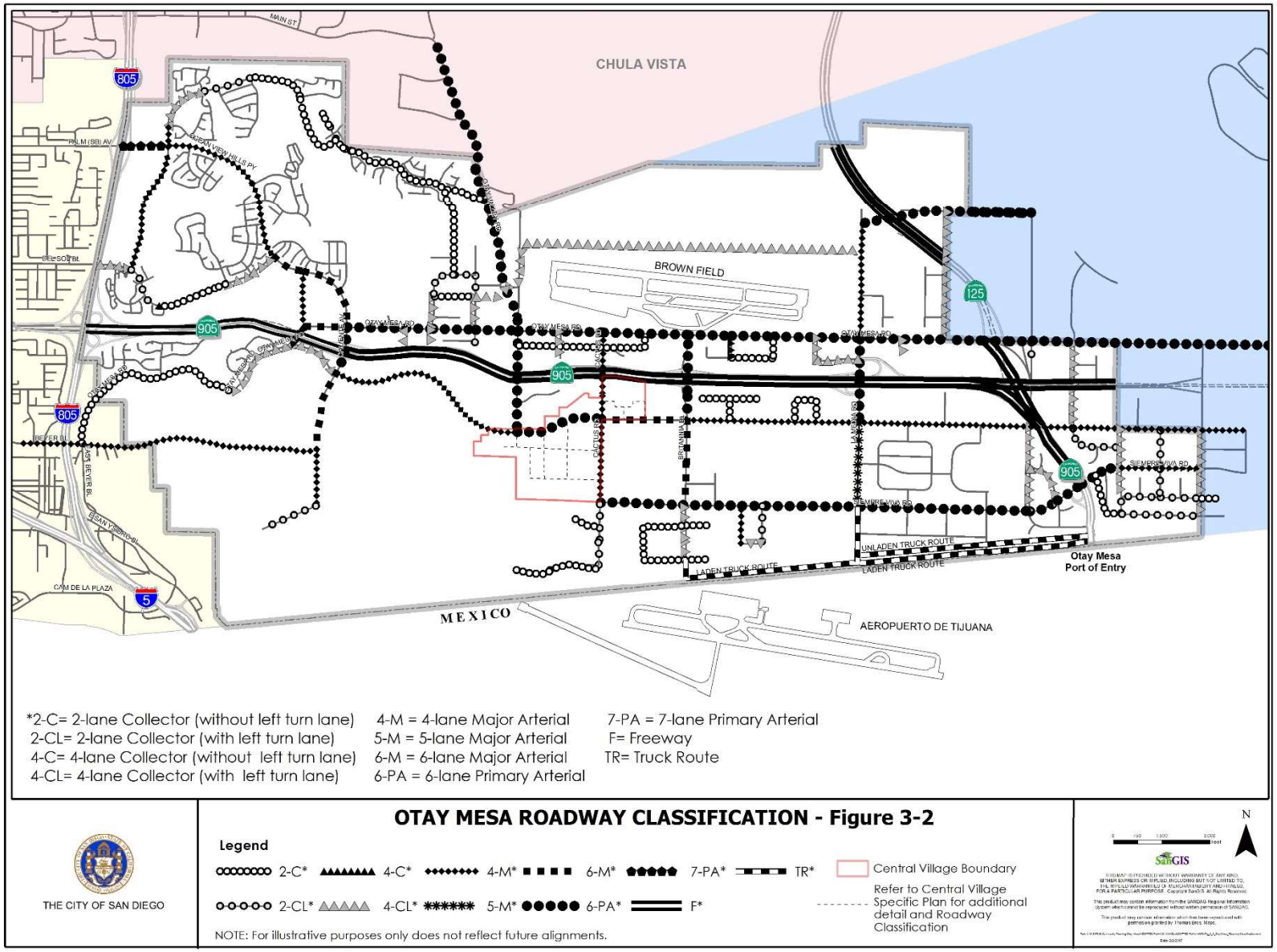
Southwestern College Otay Mesa ➡ Otay Mesa

Ⓕ Southwestern College Otay Mesa **DEPART**	Ⓒ Otay Mesa Rd. & Britannia Bl.	Ⓔ Otay Mesa Transit Center **ARRIVE**
5:24a	5:28a	5:39a
6:26	6:30	6:41
7:33	7:38	7:50
8:36	8:41	8:53
9:35	9:40	9:52
10:35	10:40	10:52
11:35	11:40	11:52
12:35p	**12:40p**	**12:52p**
1:42	**1:47**	**1:59**
2:35	**2:40**	**2:52**
3:37	**3:42**	**3:54**
4:35	**4:40**	**4:52**
5:23	**5:28**	**5:40**
6:21	**6:26**	**6:38**
7:33	**7:37**	**7:48**

Route 909 does not operate on weekends or on the following holidays and observed holidays
La ruta 909 no ofrece servicio durante el fin de semana ó durante los siguientes días festivos y feriados observados

>>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

Attachment 5 – Roadway Classification Map
Otay Mesa Community Plan


CHULA VISTA
BROWN FIELD
MEXICO
AEROPUERTO DE TIJUANA
Otay Mesa
Port of Entry
LADEN TRUCK ROUTE
UNLADEN TRUCK ROUTE
OTAY MESA RD
SIEMPRE VIVA RD
805
905
125
5
*2-C= 2-lane Collector (without left turn lane)
2-CL= 2-lane Collector (with left turn lane)
4-C= 4-lane Collector (without left turn lane)
4-CL= 4-lane Collector (with left turn lane)
4-M = 4-lane Major Arterial
5-M = 5-lane Major Arterial
6-M = 6-lane Major Arterial
6-PA = 6-lane Primary Arterial
7-PA = 7-lane Primary Arterial
F= Freeway
TR= Truck Route
THE CITY OF SAN DIEGO
OTAY MESA ROADWAY CLASSIFICATION - Figure 3-2
Legend
2-C* 4-C* 4-M* 6-M* 7-PA* TR*
2-CL* 4-CL* 5-M* 6-PA* F*
Central Village Boundary
Refer to Central Village Specific Plan for additional detail and Roadway Classification
NOTE: For illustrative purposes only does not reflect future alignments.
N
SanGIS

Attachment 6 - Existing Signal Timing Plans

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: **Ocean View Hills Pkwy/Caliente Rd** Last Database Change:
E/W Street Name: **Otay Mesa Rd**

sent to Street Div. 7/13/17

Change Record		
Timing Sheet By	Approved By	Date
MB	M25	

Free Lag <C/1+F+0> _2_4_6_8

Notes: ***Phase 4&5 overlap is hard wired.***
Phase 2&3 overlap is hard wired.

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number		<C/0+0+0>
Zone Number		<C/0+0+1>
Area Number		<C/0+0+2>
Area Address		<C/0+0+3>
QuicNet Channel		(QuicNet)

Communication Addresses

Manual Plan	14	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

	CALIENTE			OTAY MESA		OCEAN VIEW		OTAY MESA	
	Phase								
Column Numbers ---->	1	2	3	4	5	6	7	8	Row
	N			2+3		4+5			
0	Ped Walk				7		7		7
1	Ped FDW				41		40		39
2	Min Green	4	7	4	7	4	7	4	7
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	4.9	2.0	3.7	2.0	6.3	2.0	4.9
6	Max Gap	2.0	4.9	2.0	3.7	2.0	6.3	2.0	4.9
7	Min Gap	2.0	0.2	2.0	0.2	2.0	0.2	2.0	0.2
8	Max Limit	30	60	30	40	30	60	30	40
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW				1		1		1
C	Cond Serv Check								
D	Reduce Every		0.6		0.9		0.5		0.6
E	Yellow Change	3.4	3.9	3.4	3.9	3.4	4.7	3.4	5.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

	F	Row
Permit	12345678	0
Red Lock		1
Yellow Lock		2
Min Recall		3
Ped Recall		4
View Set Peds	___4_6_8	5
Rest In Walk		6
Red Rest		7
Dual Entry		8
Max Recall		9
Soft Recall	_2___6__	A
Max 2		B
Cond. Service		C
Man Cntrl Calls		D
Yellow Start	_2___6__	E
First Phases	___4___8	F

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: CALIENTE RD/OCEAN VIEW HILLS PKWY @ OTAY MESA RD

Row	Column Numbers ----> / Overlap Name ---->	Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	- - -	4
RR-2 *	- - -	5
SE-1	0	6
SE-2	0	7
		8
		9
		A
		B
		C
		D
		E
		F

Preempt Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 34
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	12345678
Simultaneous Gap Term	
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

	2	Row
		0
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8
		9
		A
		B
		C
		D
		E
		F

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: CALIENTE RD/OCEAN VIEW HILLS PKWY @ OTAY MESA RD

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7_	2	123		
1	6J2U	40	45_7_	6	123		1.8
2	4I6U	41	45_7_	4	123		1.8
3		42	45_7_	8	123		
4	2I2L	43	45_7_	2	123		1.8
5		44	45_7_	6	123		
6	4I6L	45	45_7_	4	123		1.8
7	8J6L	46	45_7_	8	123		1.8
8		47	67	2	123		
9		48	67	6	123		
A		49	67	4	123		
B	8J8	50	45_7_	8	123	10.0	
C		55	45_7_	5	123		
D		56	45_7_	1	123		
E		57	45_7_	7	123		
F		58	45_7_	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123		
1		60	45_7_	1	123		
2		61	45_7_	7	123		
3		62	45_7_	3	123		
4		63	45_7_	2	123		
5		64	45_7_	6	123		
6		65	45_7_	4	123		
7		66	45_7_	8	123		
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C		76	45_7_	2	123		
D		77	45_7_	6	123		
E		78	45_7_	4	123		
F		79	45_7_	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	Ped / Phase / Overlap								
Column Numbers ---->	1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: CALIENTE RD/OCEAN VIEW HILLS PKWY @ OTAY MESA RD

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits

TOD Function <7/0.1+Row> <E/27+4+Row>

Day	Year	Month	Holiday Type

Holiday Dates <8/1.1+Row>
(Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row>
(Bank 1)

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <C+0+9=1.2>
(Bank 2)

Month Select: October = A, November = B, Decmber = C

INTERSECTION: CALIENTE RD/OCEAN VIEW HILLS PKWY @ OTAY MESA RD

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length										0
1	Phase 1 - ForceOff										1
2	Phase 2 - ForceOff										2
3	Phase 3 - ForceOff										3
4	Phase 4 - ForceOff										4
5	Phase 5 - ForceOff										5
6	Phase 6 - ForceOff										6
7	Phase 7 - ForceOff										7
8	Phase 8 - ForceOff										8
9	Ring Offset										9
A	Offset 1										A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End										D
E	Hold Release										E
F	Reserved										F

Coordination - Bank 1 <C/1+Plan+Row>

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync		2
3	Plan 3 - Sync		3
4	Plan 4 - Sync		4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync		7
8	Plan 8 - Sync		8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C/1+E+Row>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment										0
1	Perm 2 - Start										1
2	Perm 2 - End										2
3	Perm 3 - Start										3
4	Perm 3 - End										4
5	Reservice Time										5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase										A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C/2+Plan+Row>

Row		F	Row
0	Free Lag		0
1	Plan 1 - Lag		1
2	Plan 2 - Lag		2
3	Plan 3 - Lag		3
4	Plan 4 - Lag		4
5	Plan 5 - Lag		5
6	Plan 6 - Lag		6
7	Plan 7 - Lag		7
8	Plan 8 - Lag		8
9	Plan 9 - Lag		9
A	External Lag		A
B	Lag Hold		B
C			C
D			D
E			E
F			F

Lag Phases <C/1+F+Row>

Coordination Timing By:
Date:

INTERSECTION: CALIENTE RD/OCEAN VIEW HILLS PKWY @ OTAY MESA RD

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term 0	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: **EMERALD CREST COURT** Last Database Change: 12/30/2021
E/W Street Name: **OTAY MESA ROAD**

Change Record		
Timing Sheet By	Approved By	Date
SI	*gmcv*	

Free Lag <C/1+F+0> _2_4_6_8

Notes: ***41595-31-D***

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	**1**	<C/0+0+0>
Zone Number	**1**	<C/0+0+1>
Area Number	**7**	<C/0+0+2>
Area Address	**72**	<C/0+0+3>
QuicNet Channel		(QuicNet)

Communication Addresses

Manual Plan	**14**	<C/0+A+1>
Manual Offset	**0**	<C/0+B+1>

Manual Selection

Flash Start	**0**	<F/1+0+E>
Red Revert	**5.0**	<F/1+0+F>
All Red Start	**0.0**	<F/1+C+0>
FYA Red Revert	**0.0**	<F/1+0+5>
OVLP CHG Red	**0.0**	<F/1+0+3>

Start / Revert Times

Exclusive Walk	**0**	<F/1+0+0>
Exclusive FDW	**0**	<F/1+0+1>
All Red Clear	**0.0**	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Phase Timing - Bank 1 <F/1+Phase+Row>

		OTAY MESA ROAD		EMERALD CREST CT		OTAY MESA ROAD		EMERALD CREST CT	
		Phase							
	Column Numbers ---->	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Row	N								
0	Ped Walk		**7**		**7**		**7**		
1	Ped FDW		**13**		**36**		**11**		
2	Min Green	**4**	**10**	**4**	**4**	**4**	**10**	**4**	**4**
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	**2.0**	**4.3**	**2.0**	**2.0**	**2.0**	**4.3**	**2.0**	**2.0**
6	Max Gap	**2.0**	**4.3**	**2.0**	**2.0**	**2.0**	**4.3**	**2.0**	**2.0**
7	Min Gap	**2.0**	**0.2**	**2.0**	**2.0**	**2.0**	**0.2**	**2.0**	**2.0**
8	Max Limit	**30**	**60**	**30**	**40**	**30**	**60**	**30**	**40**
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every		**0.7**				**0.7**		
E	Yellow Change	**3.4**	**5.0**	**3.4**	**3.9**	**3.4**	**5.0**	**3.4**	**3.9**
F	Red Clear	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**

Alternate Timing <F/1+Column+Phase>

	9	**A**	**B**	**C**	**D**
	- - -	- - -	- - -	- - -	- - -
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Preempt Timing <F/1+E+Row>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	**0**
EV-A Clear	**0**
EV-B Delay	**0**
EV-B Clear	**0**
EV-C Delay	**0**
EV-C Clear	**0**
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Phase Functions <F/1+F+Row>

Row		**F**
0	Permit	**12345678**
1	Red Lock	
2	Yellow Lock	
3	Min Recall	_2___6__
4	Ped Recall	
5	*View Set Peds*	
6	Rest In Walk	
7	Red Rest	
8	Dual Entry	
9	Max Recall	
A	Soft Recall	
B	Max 2	
C	Cond. Service	
D	Man Cntrl Calls	
E	Yellow Start	_2___6__
F	First Phases	___4___8

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: EMERALD CREST COURT AND OTAY MESA ROAD

		Overlap							
	Column Numbers ---->	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Row	*Overlap Name ---->*								
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

	C	Row
EV-A	**0**	**0**
EV-B	**0**	**1**
EV-C	**0**	**2**
EV-D	**0**	**3**
RR-1 *	**- - -**	**4**
RR-2 *	**- - -**	**5**
SE-1	**0**	**6**
SE-2	**0**	**7**

Preempt Priority
<E/125+C+Row>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	*Column Numbers ---->*	**E**
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	**_2__5___**
B	EV-B Phases	**___4__7_**
C	EV-C Phases	**1____6__**
D	EV-D Phases	**__3____8**
E	Extra 1 Config. Bits	**1_345___**
F	IC Select (Interconnect)	**_2_____**

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	**12345678**
Ped for 2P Output	**_2_____**
Ped for 6P Output	**_____6__**
Ped for 4P Output	**___4____**
Ped for 8P Output	**_____8**
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	**__3_____**

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	**12345678**
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	**12345678**
Start-up Ped Calls	**12345678**

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

	2	Row
Phase 1	**10**	**1**
Phase 2	**10**	**2**
Phase 3	**10**	**3**
Phase 4	**10**	**4**
Phase 5	**10**	**5**
Phase 6	**10**	**6**
Phase 7	**10**	**7**
Phase 8	**10**	**8**

Coordination Transition Minimums
<C/5+2+Row>

INTERSECTION: EMERALD CREST COURT AND OTAY MESA ROAD

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	**2I2U - ADV**	39	___45_7_	_2_____	123____8		**1.8**
1	**6J2U - ADV**	40	___45_7_	_____6__	123____8		**1.8**
2	**4I6U - LIMIT**	41	___45_7_	___4____	123____8		
3	**8J6U - LIMIT**	42	___45_7_	_______8	123____8		
4	**2I2L - ADV**	43	___45_7_	_2_____	123____8		**1.8**
5	**6J2L - ADV**	44	___45_7_	_____6__	123____8		**1.8**
6	4I6L	45	___45_7_	___4____	123_____		
7	8J6L	46	___45_7_	_______8	123_____		
8	**2I4 - LIMIT**	47	_____67_	_2_____	123____8		
9	**6J4 - LIMIT**	48	_____67_	_____6__	123____8		
A	4I8	49	_____67_	___4____	123_____		
B	8J8	50	_____67_	_______8	123_____		
C	**5J1U- LIMIT**	55	___45_7_	____5___	123____8		
D	**1I1U - LIMIT**	56	___45_7_	1_______	123____8		
E	**7J5 - LIMIT**	57	___45_7_	_____7_	123____8		
F	**3I5 - LIMIT**	58	___45_7_	__3_____	123____8		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	5J9U	59	___45_7_	____5___	123_____		
1	1I9U	60	___45_7_	1_______	123_____		
2	7J9L	61	___45_7_	_____7_			
3	3I9L	62	___45_7_	__3_____	123_____		
4	**2I3U - LIMIT**	63	___45_7_	_2_____	123____8		
5	**6J3U - ADV**	64	___45_7_	_____6__	123____8		**1.8**
6	4I7U	65	___45_7_	___4____	123_____		
7	8J7U	66	___45_7_	_______8	123_____		
8	2 PPB	67	_2_____	_2_____	123_____		
9	6 PPB	68	_2_____	_____6__	123_____		
A	4 PPB	69	_2_____	___4____	123_____		
B	8 PPB	70	_2_____	_______8	123_____		
C	**2I3L - BIKE**	76	___45_7_	_2_____	123_____		**2.0**
D	**6J3L - BIKE**	77	___45_7_	_____6__	123_____		**2.0**
E	4I7L	78	___45_7_	___4____	123_____		
F	8J7L	79	___45_7_	_______8	123_____		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	Ped / Phase / Overlap								
Column Numbers ---->	1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	**30**	**<E/125+D+0>**

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	**60**	<D/0+0+1>
Max ON (minutes)	**5**	<D/0+0+2>
Chatter Fail Time	**0**	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	**0**	8
Ext. Timer	**0**	9
DELAY-A	**0**	A
DELAY-B	**0**	B
DELAY-C	**0**	C
DELAY-D	**0**	D
DELAY-E	**0**	E
DELAY-F	**0**	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: EMERALD CREST COURT AND OTAY MESA ROAD

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits

TOD Function **<7/0.1+Row>** **<E/27+4+Row>**

Day	Year	Month	Holiday Type

Holiday Dates <8/1.1+Row>
(Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row>
(Bank 1)

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <C+0+9=1.2>
(Bank 2)

Month Select: October = A, November = B, Decmber = C

INTERSECTION: EMERALD CREST COURT AND OTAY MESA ROAD

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

		Plan								
	Column Numbers ---->	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Row	*Plan Name ---->*									
0	Cycle Length									
1	Phase 1 - ForceOff									
2	Phase 2 - ForceOff									
3	Phase 3 - ForceOff									
4	Phase 4 - ForceOff									
5	Phase 5 - ForceOff									
6	Phase 6 - ForceOff									
7	Phase 7 - ForceOff									
8	Phase 8 - ForceOff									
9	Ring Offset									
A	Offset 1									
B	Offset 2									
C	Offset 3									
D	Perm 1 - End									
E	Hold Release									
F	Reserved									

Coordination - Bank 1 <C/1+Plan+Row>

Row	**E**	Row
0		**0**
1	Plan 1 - Sync	**1**
2	Plan 2 - Sync	**2**
3	Plan 3 - Sync	**3**
4	Plan 4 - Sync	**4**
5	Plan 5 - Sync	**5**
6	Plan 6 - Sync	**6**
7	Plan 7 - Sync	**7**
8	Plan 8 - Sync	**8**
9	Plan 9 - Sync	**9**
A	NEMA Sync	**A**
B	NEMA Hold	**B**
C		**C**
D		**D**
E	Coord Extra	**E**
F		**F**

Sync Phases <C/1+E+Row>

Row											Row
0	Ped Adjustment										**0**
1	Perm 2 - Start										**1**
2	Perm 2 - End										**2**
3	Perm 3 - Start										**3**
4	Perm 3 - End										**4**
5	Reservice Time										**5**
6	Reservice Phases										**6**
7											**7**
8	Pretimed Phases										**8**
9	Max Recall										**9**
A	Perm 1 Veh Phase										**A**
B	Perm 1 Ped Phase										**B**
C	Perm 2 Veh Phase										**C**
D	Perm 2 Ped Phase										**D**
E	Perm 3 Veh Phase										**E**
F	Perm 3 Ped Phase										**F**

Coordination - Bank 2 <C/2+Plan+Row>

Row	**F**	Row
0	Free Lag	**0**
1	Plan 1 - Lag	**1**
2	Plan 2 - Lag	**2**
3	Plan 3 - Lag	**3**
4	Plan 4 - Lag	**4**
5	Plan 5 - Lag	**5**
6	Plan 6 - Lag	**6**
7	Plan 7 - Lag	**7**
8	Plan 8 - Lag	**8**
9	Plan 9 - Lag	**9**
A	External Lag	**A**
B	Lag Hold	**B**
C		**C**
D		**D**
E		**E**
F		**F**

Lag Phases <C/1+F+Row>

Coordination Timing By: M2S
Date: 5/14/2013

INTERSECTION: EMERALD CREST COURT AND OTAY MESA ROAD

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4		EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: EMERALD CREST COURT AND OTAY MESA ROAD

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	**0.3**	<C/5+1+9>

TBC Transition

Hawk Select	**0**	<F/1+0+4>

Hawk Select 200 = Mid-Block, 201 = Hawk

Address	**0**	<C/1+0+6>
Select Parity	**0**	<C/1+0+5>

AB3418 Comm 2 0 = No Parity, 1 = Even

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	**3**	<C/5+2+A>
Begin Week	**2**	<C/5+2+B>
End Month	**11**	<C/5+2+C>
End Week	**1**	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	**0.0**	<F/1+C+E>
Phase Number	**0**	<F/1+C+F>

Advance Warning Beacon - Sign 1

Row		1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Time B4 Yellow	**0.0**	<F/1+D+E>
Phase Number	**0**	<F/1+D+F>

Advance Warning Beacon - Sign 2

Offset Time	**0**	<C/5+2+E>
Max Cycle Time	**20**	<C/5+2+F>

Yellow Yield Coordination

	12345678	
Omit Alarm	**#NAME?**	

Local Alarm Disable <C/5+F+0>

IEN Status	**1**	<C/5+1+B>
Synch Time	**0.0**	<C/5+1+C>

Other Parameters

INTERSECTION: EMERALD CREST COURT AND OTAY MESA ROAD

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:
RR clear for phase 6 with post-preempt recovery to phase 8

2 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:
RR clear for phase 8 with post-preempt recovery to phase 8

2 <E/28+5+F>
Limited Service Interval

INTERSECTION: EMERALD CREST COURT AND OTAY MESA ROAD

Min Time (seconds)	4	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	255	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Pri. Channel	#NAME?	<E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Row		
C	Bus Headway	0
D	Bus Delay	0
E	Max Early Grn	0
F	Max Grn Ext.	0

Priority Parameters
<F/1 +A+Row>

Row	Time	Headway	Direction	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Headway Schedule <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: CORPORATE CENTER DR @ OTAY MESA RD

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: **Corporate Center Dr**
E/W Street Name: **Otay Mesa Rd**

Last Database Change:

Sent to Street Div 7/13/17

Change Record		
Timing Sheet By	Approved By	Date
MB	M25	

Notes: ***Phase 4&5 overlap is hard wired.***
Phase 4&6 overlap is hard wired.

Free Lag <C/1+F+0>: _2_4_6_8

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number		<C/0+0+0>
Zone Number		<C/0+0+1>
Area Number		<C/0+0+2>
Area Address		<C/0+0+3>
QuicNet Channel		(QuicNet)

Communication Addresses

Manual Plan	14	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

	OTAY MESA	CORPORATE CTR		OTAY MESA	CORPORATE CTR			
	Phase							
Column Numbers ---->	1	2	3	4	5	6	7	8
Row	N			6+4	4+5			
0	Ped Walk						7		7
1	Ped FDW						28		37
2	Min Green	4	10		7	7	10		4
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	4.3		2.0	2.0	4.8		0.0
6	Max Gap	2.0	4.3		2.0	2.0	4.8		0.0
7	Min Gap	2.0	0.2		2.0	2.0	0.2		0.0
8	Max Limit	30	60		40	30	60		0
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW						1		1
C	Cond Serv Check								
D	Reduce Every		0.7				0.7		
E	Yellow Change	3.4	5.0		3.9	3.4	5.0		3.9
F	Red Clear	1.0	1.0		1.0	1.0	1.0		0.0

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	
EV-D Clear	
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

	F	Row
Permit	12_456_8	0
Red Lock		1
Yellow Lock		2
Min Recall		3
Ped Recall		4
View Set Peds	6_8	5
Rest In Walk		6
Red Rest		7
Dual Entry		8
Max Recall		9
Soft Recall	2 6	A
Max 2		B
Cond. Service		C
Man Cntrl Calls	12345678	D
Yellow Start	2 6	E
First Phases	4 8	F

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: CORPORATE CENTER DR @ OTAY MESA RD

Row	Column Numbers ----> / Overlap Name ---->	Overlap 1	2	3	4	5	6	7	8
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C	Row
0	EV-A	0	0
1	EV-B	0	1
2	EV-C	0	2
3	EV-D	0	3
4	RR-1 *	- - -	4
5	RR-2 *	- - -	5
6	SE-1	0	6
7	SE-2	0	7

Preempt Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	6
D	EV-D Phases	
E	Extra 1 Config. Bits	1 34
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2	Row
0			0
1	Phase 1	10	1
2	Phase 2	10	2
3	Phase 3	10	3
4	Phase 4	10	4
5	Phase 5	10	5
6	Phase 6	10	6
7	Phase 7	10	7
8	Phase 8	10	8
9			9
A			A
B			B
C			C
D			D
E			E
F			F

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: CORPORATE CENTER DR @ OTAY MESA RD

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U	39	45_7_	2	123		1.8
1	6J2U	40	45_7_	6	123		1.8
2		41	45_7_	4	123		
3		42	45_7_	8	123		
4		43	45_7_	2	123		
5		44	45_7_	6	123		
6		45	45_7_	4	123		
7		46	45_7_	8	123		
8		47	67_	2	123		
9		48	67_	6	123		
A		49	67_	4	123		
B		50	67_	8	123		
C		55	45_7_	5	123		
D		56	45_7_	1	123		
E		57	45_7_	7	123		
F		58	45_7_	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123		
1		60	45_7_	1	123		
2		61	45_7_	7	123		
3		62	45_7_	3	123		
4		63	45_7_	2	123		
5		64	45_7_	6	123		
6		65	45_7_	4	123		
7		66	45_7_	8	123		
8		67	2_____	2	123		
9		68	2_____	6	123		
A		69	2_____	4	123		
B		70	2_____	8	123		
C		76	45_7_	2	123		
D		77	45_7_	6	123		
E		78	45_7_	4	123		
F		79	45_7_	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ---->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

INTERSECTION: CORPORATE CENTER DR @ OTAY MESA RD

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct	Day of Week	Column 4 Phases/Bits

TOD Function <7/0.1+Row> <E/27+4+Row>

Day	Year	Month	Holiday Type

Holiday Dates <8/1.1+Row>
(Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row>
(Bank 1)

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct	Holiday Type	Column 4 Phases/Bits

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <C+0+9=1.2>
(Bank 2)

Month Select: October = A, November = B, December = C

INTERSECTION: CORPORATE CENTER DR @ OTAY MESA RD

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length										0
1	Phase 1 - ForceOff										1
2	Phase 2 - ForceOff										2
3	Phase 3 - ForceOff										3
4	Phase 4 - ForceOff										4
5	Phase 5 - ForceOff										5
6	Phase 6 - ForceOff										6
7	Phase 7 - ForceOff										7
8	Phase 8 - ForceOff										8
9	Ring Offset										9
A	Offset 1										A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End										D
E	Hold Release										E
F	Reserved										F

Coordination - Bank 1 <C/1+Plan+Row>

Row	E	Row
		0
Plan 1 - Sync		1
Plan 2 - Sync		2
Plan 3 - Sync		3
Plan 4 - Sync		4
Plan 5 - Sync		5
Plan 6 - Sync		6
Plan 7 - Sync		7
Plan 8 - Sync		8
Plan 9 - Sync		9
NEMA Sync		A
NEMA Hold		B
		C
		D
Coord Extra		E
		F

Sync Phases <C/1+E+Row>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment										0
1	Perm 2 - Start										1
2	Perm 2 - End										2
3	Perm 3 - Start										3
4	Perm 3 - End										4
5	Reservice Time										5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase										A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C/2+Plan+Row>

Row	F	Row
Free Lag		0
Plan 1 - Lag		1
Plan 2 - Lag		2
Plan 3 - Lag		3
Plan 4 - Lag		4
Plan 5 - Lag		5
Plan 6 - Lag		6
Plan 7 - Lag		7
Plan 8 - Lag		8
Plan 9 - Lag		9
External Lag		A
Lag Hold		B
		C
		D
		E
		F

Lag Phases <C/1+F+Row>

Coordination Timing By:
Date:

INTERSECTION: CORPORATE CENTER DR @ OTAY MESA RD

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F		Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term	0	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A	71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B	72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C	73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D	74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1	51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2	52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1		7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2		8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag		9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)		A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)		B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)		C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)		D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)		E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)		F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: Otay Mesa Rd @ Innovative Dr

223 Program

Group Assignment:
Field Master Assignment:
N/S Street Name: **Innovative Dr**
E/W Street Name **Otay Mesa Rd**
Last Database Change:
System Ref. Number:

N

		Otay Mesa Rd	Otay Mesa Rd			Otay Mesa Rd	Otay Mesa Rd	Innovative Dr	Innovative Dr				
	Column # ---->	Phase											
Row	Phase # ---->	1	2	3	4	5	6	7	8		E		F
0	Ped Walk		7		7					RR-1 Delay		Permit	1234_678
1	Ped FDW		35		33					RR-1 Clear		Red Lock	
2	Min Green	4	10	1	4		10	7	10	EV-A Delay	0	Yellow Lock	
3	Type 3 Limit									EV-A Clear	0	Min Recall	_2___6__
4	Add/Veh									EV-B Delay	0	Ped Recall	
5	Veh Extn	2.0	4.0	1.0	0.0		3.7	1.0	3.8	EV-B Clear	0	Peds (View)	_2_4____
6	Max Gap	2.0	4.0	1.0	0.0		3.7	1.0	3.8	EV-C Delay	0	Rest In Walk	
7	Min Gap	2.0	0.2	1.0	0.0		0.2	1.0	0.2	EV-C Clear	0	Red Rest	
8	Max Limit	45	60	0	0		60	0	60	EV-D Delay	0	Dbl Entry	
9	Max Limit 2									EV-D Clear	0	Max Recall	
A	Bus Adv									RR-2 Delay		Soft Recall	
B	Call to Phs				7				3	RR-2 Clear		Max 2	
C	Reduce By		0.1				0.1		0.1	View EV Delay	---	Cond Serv	
D	Every		0.8				0.9		0.8	View EV Clear	---	Ped Lock	12345678
E	Yellow	3.4	5.2	3.0	3.0		5.0	3.0	4.3	View RR Delay	---	Yellow Start	_2___6__
F	Red Clear	1.0	1.0	1.0	1.0		1.0	1.0	1.0	View RR Clear	---	1st Phases	___4__7_

Phase Timing - Bank 1 <F Page>
F + Phase + Row

Preempt Timing
F + E + Row

Phase Functions <F Page>
F + F + Row

Overlap Timing

	Row	9 Green Clear	C Yellow Change	D Red Clear	0 Load-Switch #
Overlap A	A				
Overlap B	B				
Overlap C	C				
Overlap D	D				

<F Page>
F + COLOR +

<D Page>
D + 0 + OVERLAP

Max Initial	0	F + 0 + E
Red Revert	5.0	F + 0 + F
All Red Start	0.0	F + C + O

Start / Revert Times

Drop Number	5	C + 0 + 0
Zone Number	5	C + 0 + 1
Area Number	4	C + 0 + 2
Area Address	120	C + 0 + 3
QuicNet Channel	COM50	(QuicNet)

Communication Addresses

C + F + O	F	Row
Free Lag	_23__6_8	0

Lag Phases <C Page>

Manual Plan	0	C + A + 1
Manual Offset	0	C + B + 1

Manual Selection

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Downtime Flash	255	(minutes)

Downtime Before Auto Manual Flash
F + 0 +8

Disable Ports	234

Disable Communication Ports
D + D + 9

Timing Sheet By: VV
Approved By: JV
Drawing Number: 41364-10-D
Timing Implemented On: 8/5/2020

Row	Time	Function	Day of Week	Column F Phases/Bits
0	00 : 01	E	1234567	1
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Function <D Page>

7 + ROW D + F + ROW

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 2 - Phase Bank 2
Bit 3 - Phase Bank 3
Bit 4 - Disable Detector OFF Monitor
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 4

Row		F
0		
1	RR Overlap A - Phases	
2	RR Overlap B - Phases	
3	RR Overlap C - Phases	
4	RR Overlap D - Phases	
5	Ped 2P	2
6	Ped 6P	
7	Ped 4P	4
8	Ped 8P	
9	Yellow Flash Phases	
A	Overlap A - Phases	1
B	Overlap B - Phases	8
C	Overlap C - Phases	
D	Overlap D - Phases	
E	Restricted Phases	
F	Assign 5 Outputs	1

Configuration <E Page>

E + F + ROW

Day of Week

1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday
6 = Friday
7 = Saturday

Assign 5 Outputs
1 = Right Turn Overlap
2 = TOD Outputs
3 = EV Beacon - Steady
4 = EV Beacon - Flashing
5 = Special Event Outputs
6 = Phase 3 & 7 Ped
7 = Advanced Warning Sign
8 =

Row		E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Overlap A - Green Omit	8
6	Overlap B - Green Omit	2
7	Overlap C - Green Omit	
8	Overlap D - Green Omit	
9	Overlap Yellow Flash	
A	EV-A Phases	2
B	EV-B Phases	
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 34
F	IC Select (Interconnect)	2

Configuration

For access, set F + 9 + E = 1 E + E + ROW

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = EV Advance
5 = Remote Download
6 = Special Event
7 = Pretimed Operation
8 = Split Ring Operation

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Time and Date
8-0 Hour, Minute, Day-of-Week
8-1 Day-of-Month, Year, Month
8-F Seconds

Disable Parity	0	D+B+0

Dial-Up Telephone Communications
(If set to a non-zero value, parity will be disabled)

Program Information
C + C + 0 = program
C + C + F = version

Remote Download
C + 0 + 4 = 1 -255
w/ E + E + E bit 5 on

Row	1 Delay	3 Carry-over	Detector Name	332 Input File	Detector Number
0				1I1	14
1		**1.8**		2I2U	1
2				2I2L	5
3				2I3U	21
4				2I3L	25
5				2I4	9
6				3I5	16
7				4I6U	3
8				4I6L	7
9				4I7U	23
A				4I7L	27
B				4I8	11
C				1I9U	18
D				3I9L	20
E	- - -	- - -	- - -	- - -	- - -
F	- - -	- - -	- - -	- - -	- - -

Row	2 Delay	4 Carry-over	Detector Name	332 Input File	Detector Number
0				5J1	13
1		**1.8**		6J2U	2
2				6J2L	6
3				6J3U	22
4				6J3L	26
5				6J4	10
6				7J5	15
7		**1.8**		8J6U	4
8		**1.8**		8J6L	8
9				8J7U	24
A				8J7L	28
B				8J8	12
C				5J9U	17
D				7J9L	19
E	- - -	- - -	- - -	- - -	- - -
F	- - -	- - -	- - -	- - -	- - -

Detector Delay & Carryover <D Page>

D + X (across) + ROW

Row	Detector Numbers	E
A	1 2 3 4 5 6 7 8	**12345678**
B	9 10 11 12 -- -- -- --	**1234**
C	13 14 15 16 17 18 19 20	**12345678**
D	-- -- -- -- 21 22 23 24	**5678**
E	-- -- -- -- -- -- -- --	**1234**
F	-- 25 26 27 28 -- -- --	**2345**

Active Detectors <D Page>

Row		0 Detector #
0		
1	System Det. # 1	**0**
2	System Det. # 2	**0**
3	System Det. # 3	**0**
4	System Det. # 4	**0**
5	System Det. # 5	**0**
6	System Det. # 6	**0**
7	System Det. # 7	**0**
8	System Det. # 8	**0**

System Detectors <D Page>

Max ON (min)	**5**	D+A+E
Max OFF (min)	**60**	D+A+F

Detector Failure Monitor

Phase Number	**0**	F+C+1
Time Before Yellow	**0.0**	F+C+3

Advance Warning Beacon - Sign 1

Phase Number	**0**	F+D+1
Time Before Yellow	**0.0**	F+D+3

Advance Warning Beacon - Sign 2

Long Failure	**0.5**	F+0+6
Short Failure	**0.5**	F+0+7

Power Cycle Correction (Default = 0.5)

INTERSECTION: Otay Mesa Rd @ Innovative Dr

223 Program

		Plan								
	Column # ---->	1	2	3	4	5	6	7	8	9
Row	Plan Name ---->									
0	Cycle Length				130	128	130			
1	Phase 1 - ForceOff				86	81	30			
2	Phase 2 - ForceOff				0	0	0			
3	Phase 3 - ForceOff				50	50	84			
4	Phase 4 - ForceOff				46	46	80			
5	Phase 5 - ForceOff									
6	Phase 6 - ForceOff				0	0	0			
7	Phase 7 - ForceOff				10	10	40			
8	Phase 8 - ForceOff				46	46	80			
9	Ring Offset									
A	Offset A				30	70	7			
B	Offset B									
C	Offset C									
D	Permissive				13	13	13			
E	Hold Release				255	255	255			
F	Ped Shift				0	0	0			

Coordination **<C Page>**

C + Plan + ROW

Coordination Timing By:

Implemented On:

FOR OBSERVATION ONLY

Master Plan	C + A + 2
Current Plan	C + A + 3
Next Plan	C + A + 4
T.O.D. Plan	C + A + 5
Master Cycle	C + A + 0
Ring A Cycle	C + B + 0
Ring B Cycle	C + D + 0
Min Cycle	C + A + E
Max Cycle	C + B + E

Row	Time	Plan	Offset	Day of Week
0	06 : 30	4	A	_23456_
1	10 : 00	5	A	_23456_
2	13 : 00	6	A	_23456_
3	18 : 30	E	A	1234567
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination

<9 Key with C+0+9=1>

	E	Row		F
		0	Free Lag	
Plan 1		1	Plan 1 - Lag	
Plan 2		2	Plan 2 - Lag	
Plan 3		3	Plan 3 - Lag	
Plan 4	_2___6__	4	Plan 4 - Lag	_23__6_8
Plan 5	_2___6__	5	Plan 5 - Lag	_23__6_8
Plan 6	_2___6__	6	Plan 6 - Lag	1_3__6_8
Plan 7		7	Plan 7 - Lag	
Plan 8		8	Plan 8 - Lag	
Plan 9		9	Plan 9 - Lag	
Coord Ped*		A	Coord Max *	
NEMA Hold		B	Coord Lag *	
		C		
		D		
		E		
		F		

Sync Phases

C + E + FUNCTION #

Lag Phases <C Page>

C + F + FUNCTION #

Plan Select
1 thru 9 = Coordination
Plan 1 thru 9
14 or E = Free
15 or F = Flash

Transition Type	0

TBC Transition
C + D + D

Transition Type
0 = Shortway
Non-zero = Lengthen

INTERSECTION: HERITAGE RD @ OTAY MESA RD

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street Name: **Heritage Rd**
E/W Street Name: **Otay Mesa Rd**

Last Database Change:

Sent to Street Div 7/13/17

Change Record		
Timing Sheet By	Approved By	Date
MB	MJS	

Notes: ***Phase 4&5 overlap is hard wired***

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Free Lag <C/1+F+0> _2_4_6_8

Drop Number		<C/0+0+0>
Zone Number		<C/0+0+1>
Area Number		<C/0+0+2>
Area Address		<C/0+0+3>
QuicNet Channel		(QuicNet)

Communication Addresses

Manual Plan	14	<C/0+A+1>
Manual Offset	0	<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	5.0	<F/1+0+F>
All Red Start	0.0	<F/1+C+0>
FYA Red Revert	0.0	<F/1+0+5>
OVLP CHG Red	0.0	<F/1+0+3>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

		OTAY MESA		HERITAGE		OTAY MESA		HERITAGE	
		Phase							
Row	Column Numbers --->	1	2	3	4	5 (4+6)	6	7	8
0	Ped Walk		7				7		7
1	Ped FDW		23				29		42
2	Min Green	4	10	4	7	4	10	4	7
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	4.3	2.0	2.0	2.0	4.4	2.0	5.0
6	Max Gap	2.0	4.3	2.0	2.0	2.0	4.4	2.0	5.0
7	Min Gap	2.0	0.2	2.0	2.0	2.0	0.2	2.0	0.2
8	Max Limit	30	60	30	40	30	60	30	40
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1				1		1
C	Cond Serv Check								
D	Reduce Every		0.7				0.7		0.6
E	Yellow Change	3.4	5.0	3.4	3.9	3.4	5.0	3.4	3.9
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 1 <F/1+Phase+Row>

	9	A	B	C	D
	---	---	---	---	---
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <F/1+Column+Phase>

	E
RR-1 Delay	
RR-1 Clear	
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	
RR-2 Clear	
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing <F/1+E+Row>

	F	Row
Permit	12345678	0
Red Lock		1
Yellow Lock		2
Min Recall		3
Ped Recall		4
View Set Peds	_2___6_8	5
Rest In Walk		6
Red Rest		7
Dual Entry		8
Max Recall		9
Soft Recall	_2___6__	A
Max 2		B
Cond. Service		C
Man Cntrl Calls	12345678	D
Yellow Start	_2___6__	E
First Phases	___4___8	F

Phase Functions <F/1+F+Row>

How to Set Page Access Code: F/1 -- C + 0 + F = 1

INTERSECTION: HERITAGE RD @ OTAY MESA RD

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name ---->								
0	Load Switch Number								
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8	Overlap Recall								
9	Queue Jump Phase								
A	Queue Jump Time								
B	Minimum Green								
C	Maximum Green								
D	Green Clear								
E	Yellow Change								
F	Red Clear								

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	---
5	RR-2 *	---
6	SE-1	0
7	SE-2	0
8		
9		
A		
B		
C		
D		
E		
F		

Preempt Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 34
F	IC Select (Interconnect)	2

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2
0		
1	Phase 1	10
2	Phase 2	10
3	Phase 3	10
4	Phase 4	10
5	Phase 5	10
6	Phase 6	10
7	Phase 7	10
8	Phase 8	10
9		
A		
B		
C		
D		
E		
F		

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: HERITAGE RD @ OTAY MESA RD

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7_	2	123		
1		40	45_7_	6	123		
2		41	45_7_	4	123		
3		42	45_7_	8	123		
4		43	45_7_	2	123		
5		44	45_7_	6	123		
6		45	45_7_	4	123		
7		46	45_7_	8	123		
8	2I4	47	45_7_	2	123		1.8
9	6J4	48	45_7_	6	123		1.8
A		49	67	4	123		
B	8J8	50	45_7_	8	123		1.8
C		55	45_7_	5	123		
D		56	45_7_	1	123		
E		57	45_7_	7	123		
F		58	45_7_	3	123		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123		
1		60	45_7_	1	123		
2		61	45_7_	7	123		
3		62	45_7_	3	123		
4		63	45_7_	2	123		
5		64	45_7_	6	123		
6		65	45_7_	4	123		
7		66	45_7_	8	123		
8		67	2	2	123		
9		68	2	6	123		
A		69	2	4	123		
B		70	2	8	123		
C		76	45_7_	2	123		
D		77	45_7_	6	123		
E		78	45_7_	4	123		
F		79	45_7_	8	123		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	Ped / Phase / Overlap								
Column Numbers ---->	1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>
Chatter Fail Time	0	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	0	8
Ext. Timer	0	9
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<D/0+B+Row> (seconds)

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits

TOD Function **<7/0.1+Row>** **<E/27+4+Row>**

Day	Year	Month	Holiday Type

Holiday Dates <8/1.1+Row>
(Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row>
(Bank 1)

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <C+0+9=1.2>
(Bank 2)

Month Select: October = A, November = B, Decmber = C

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

INTERSECTION: HERITAGE RD @ OTAY MESA RD

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
0	Plan Name ---->										0
1	Cycle Length										1
2	Phase 1 - ForceOff										2
3	Phase 2 - ForceOff										3
4	Phase 3 - ForceOff										4
5	Phase 4 - ForceOff										5
6	Phase 5 - ForceOff										6
7	Phase 6 - ForceOff										7
8	Phase 7 - ForceOff										8
9	Phase 8 - ForceOff										9
A	Ring Offset										A
B	Offset 1										B
C	Offset 2										C
D	Offset 3										D
E	Perm 1 - End										E
F	Hold Release										F
	Reserved										

Coordination - Bank 1 <C/1+Plan+Row>

Row	E	Row
0		0
1	Plan 1 - Sync	1
2	Plan 2 - Sync	2
3	Plan 3 - Sync	3
4	Plan 4 - Sync	4
5	Plan 5 - Sync	5
6	Plan 6 - Sync	6
7	Plan 7 - Sync	7
8	Plan 8 - Sync	8
9	Plan 9 - Sync	9
A	NEMA Sync	A
B	NEMA Hold	B
C		C
D		D
E	Coord Extra	E
F		F

Sync Phases <C/1+E+Row>

Row		Row
0	Ped Adjustment	0
1	Perm 2 - Start	1
2	Perm 2 - End	2
3	Perm 3 - Start	3
4	Perm 3 - End	4
5	Reservice Time	5
6	Reservice Phases	6
7		7
8	Pretimed Phases	8
9	Max Recall	9
A	Perm 1 Veh Phase	A
B	Perm 1 Ped Phase	B
C	Perm 2 Veh Phase	C
D	Perm 2 Ped Phase	D
E	Perm 3 Veh Phase	E
F	Perm 3 Ped Phase	F

Coordination - Bank 2 <C/2+Plan+Row>

Row	F	Row
0	Free Lag	0
1	Plan 1 - Lag	1
2	Plan 2 - Lag	2
3	Plan 3 - Lag	3
4	Plan 4 - Lag	4
5	Plan 5 - Lag	5
6	Plan 6 - Lag	6
7	Plan 7 - Lag	7
8	Plan 8 - Lag	8
9	Plan 9 - Lag	9
A	External Lag	A
B	Lag Hold	B
C		C
D		D
E		E
F		F

Lag Phases <C/1+F+Row>

Coordination Timing By:
Date:

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term 0	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	NAND-3 (b)	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

LOCATION: **905 WB @ Caliente Ave**

CALTRANS C8 Version 3 5/19/16 PAGE 1

F PAGE

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9
0	WALK	1	**7**	1	1	**1**	**7**	1	**1**	CLK RST
1	DONT WALK	1	**14**	1	1	**1**	**18**	1	**1**	
2	MIN GREEN	1	**7**	1	1	**5**	**7**	1	**5**	
3	TYPE 3 DET	0	**0**	0	0	**0**	**0**	0	**0**	
4	ADD/VEH	0.0	**0.0**	0.0	0.0	**0.0**	**0.0**	0.0	**0.0**	
5	PASSAGE	0.9	**3.0**	0.9	0.9	**3.0**	**3.0**	0.9	**3.0**	
6	MAX GAP	0.9	**3.0**	0.9	0.9	**3.0**	**3.0**	0.9	**3.0**	
7	MIN GAP	0.9	**3.0**	0.9	0.9	**3.0**	**3.0**	0.9	**3.0**	
8	MAX EXT	9	**30**	9	9	**25**	**30**	9	**30**	
9	MAX 2					**45**				YR
A	MAX 3									MO
B										DAY
C	REDUCE BY	0.0	**0.0**	0.0	0.0	**0.0**	**0.0**	0.0	**0.0**	DOW
D	EVERY	1.0	**1.0**	1.0	1.0	**1.0**	**1.0**	1.0	**1.0**	HR
E	YELLOW	3.0	**4.8**	3.0	3.0	**3.7**	**4.8**	3.0	**4.1**	MIN
F	RED	0.0	**1.0**	0.0	0.0	**1.0**	**1.0**	0.0	**1.0**	SEC
3.5'	PED XING FT		**50'**				**50'**			
	BIKE XING FT		**57'**				**81'**			

PRE-EMPTION E	
EV SEL	**0**
RR1 CLR	**15**
EVA DLY	**0**
EVA CLR	**5**
EVB DLY	**0**
EVB CLR	**5**
EVC DLY	**0**
EVC CLR	**5**
EVD DLY	**0**
EVD CLR	**5**
MAX EV	**255**
RR2 CLR	**15**

F FLAGS	1	2	3	4	5	6	7	8	
PERMIT		**2**			**5**	**6**		**8**	0
RED LOCK									1
YEL LOCK									2
V RECALL		**2**				**6**			3
P RECALL									4
PED PHASES		**2**				**6**			5
RT OLA									6
RT OLB									7
DBL ENTRY									8
MAX 2 PHASES					**5**				9
LAG PHASES	**READ ONLY**								A
RED REST									B
RST-IN-WALK									C
MAX 3 PHASES									D
YEL START UP		**2**				**6**			E
FIRST PHASE								**8**	F
	1	2	3	4	5	6	7	8	

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	**30**
FOF	**5**
FCO	**3**
FC1	**3**
FC2	**10**
FCA	**0.0**
FCB	**0.0**
FCC	**0.0**
FCD	**0.0**
FDO TB SELECT	**1**
FD3 PED SELECT	**0**
FD4 7 WIRE	**0**
FD5 PERMISSIVE	**0**
FD8 OS SEEKING	**1**
CO5 FLASH TYPE	**1**
CC2 DOWNLOAD	**1**

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

Do not reproduce

		CONTROL PLANS									Y-COORD			LAG PHASE		FLAGS									
		1	2	3	4	5	6	7	8	9		C	D	E		F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH															LAG FZ FREE		**2**		**4**		**6**		**8**	0
1	FZ1 GRN FCTR													GAPOUT CP1		LAG FZ CP 1									1
2														GAPOUT CP2		LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3		LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4		LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5		LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6		LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7		LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8		LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9		LAG FZ CP 9									9
A	OFFSET A										OFFSET					LAG C COORD									A
B	OFFSET B															LAG D COORD									B
C	OFFSET C															COORD FAZES		**2**				**6**			C
D	FZ 3 EXT																								D
E	FZ 7 EXT																								E
F	OFFSET INTRPT																								F
																	1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

System Master:
EB @ Caliente Ave

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8	*lcl*	

LOCATION	OFF	ON
1		
2		***2***
3		
4		
5		
6		
7		
8		

COO = **2**

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

Do not reproduce

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		2							5
6										6 PED						6			6
7										4 PED				4					7
8										8 PED								8	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E
MINUTE = D-B-E
DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)
RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F
MINUTE = D-B-F
DAY = D-C-F

D-E-E = C8 VERSION NUMBER
D-E-F = LITHIUM BATTERY CONDITION
84 = BAD
85 = GOOD

Do not reproduce

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	**07**	**30**	**2**	**ON**		**2**	**3**	**4**	**5**	**6**	
1	**09**	**30**	**2**	**OFF**		**2**	**3**	**4**	**5**	**6**	
2	**15**	**30**	**2**	**ON**		**2**	**3**	**4**	**5**	**6**	
3	**18**	**00**	**2**	**OFF**		**2**	**3**	**4**	**5**	**6**	
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

ACTIVITY CODE

1 TYPE OF MAX TERMINATION
2 MAX 2
3 MAX 3
4 COND SERV (1ST SELECT)
5 COND SERV (2ND SELECT)
6 ENERGIZE AUX OUTPUT-RED
7 ENERGIZE AUX OUTPUT-GREEN

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

8 ENERGIZE AUX OUTPUT-YELLOW
9 TIME OF DAY MAX RECALL (1ST SELECT)
A TRAFFIC ACT. MAX 2 OPERATION
B TIME OF DAY MAX RECALL (2ND SELECT)
C YELLOW YIELD COORDINATION
D YELLOW YIELD COORDINATION
E TIME OF DAY FREE OPERATION
F FLASHING OPERATION

9 PAGE CO9 = 2

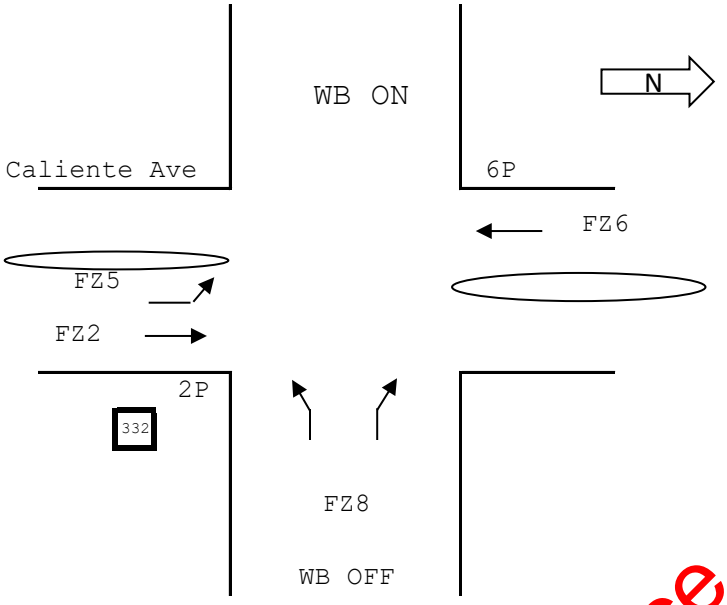
CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

Do not reproduce

6/4/14

LOCATION: 905 WB @ Caliente Ave

CONFLICT MONITOR PROGRAM



Do not reproduce

	INTERVAL	PHASE TIMING 1	2	3	4	5	6	7	8	9	PRE-EMPTION E		F FLAGS	1	2	3	4	5	6	7	8	
0	WALK	**1**	**7**	1	**1**	1	**7**	1	1	CLK RST	EV SEL	**0**	PERMIT	**1**	**2**		**4**		**6**			0
1	DONT WALK	**1**	**14**	1	**1**	1	**14**	1	1		RR1 CLR	**15**	RED LOCK									1
2	MIN GREEN	**5**	**7**	1	**5**	1	**7**	1	1		EVA DLY	**0**	YEL LOCK									2
3	TYPE 3 DET	**0**	**0**	0	**0**	0	**0**	0	0		EVA CLR	**5**	V RECALL		**2**				**6**			3
4	ADD/VEH	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**	0.0	0.0		EVB DLY	**0**	P RECALL									4
5	PASSAGE	**2.0**	**3.0**	0.9	**3.0**	0.9	**3.0**	0.9	0.9		EVB CLR	**5**	PED PHASES		**2**				**6**			5
6	MAX GAP	**2.0**	**3.0**	0.9	**3.0**	0.9	**3.0**	0.9	0.9		EVC DLY	**0**	RT OLA									6
7	MIN GAP	**2.0**	**3.0**	0.9	**3.0**	0.9	**3.0**	0.9	0.9		EVC CLR	**5**	RT OLB									7
8	MAX EXT	**15**	**30**	9	**30**	9	**30**	9	9		EVD DLY	**0**	DBL ENTRY									8
9	MAX 2				**45**					YR	EVD CLR	**5**	MAX 2 PHASES				**4**					9
A	MAX 3				**25**					MO	MAX EV	**255**	LAG PHASES	**READ ONLY**								A
B										DAY	RR2 CLR	**15**	RED REST									B
C	REDUCE BY	**0.0**	**0.0**	0.0	**0.0**	0.0	**0.0**	0.0	0.0	DOW			RST-IN-WALK									C
D	EVERY	**1.0**	**1.0**	1.0	**1.0**	1.0	**1.0**	1.0	1.0	HR			MAX 3 PHASES				**4**					D
E	YELLOW	**3.7**	**4.8**	3.0	**4.1**	3.0	**4.8**	3.0	3.0	MIN			YEL START UP		**2**				**6**			E
F	RED	**1.0**	**1.0**	0.0	**1.0**	0.0	**1.0**	0.0	0.0	SEC			FIRST PHASE				**4**					F
3.5'	PED XING FT		**48'**				**48'**							1	2	3	4	5	6	7	8	
	BIKE XING FT		**67'**				**60'**															

FOC LONG FAILURE	
FOD SHORT FAILURE	
FOE	**30**
FOF	**5**
FCO	**3**
FC1	**3**
FC2	**10**
FCA	**0.0**
FCB	**0.0**
FCC	**0.0**
FCD	**0.0**
FDO TB SELECT	**1**
FD3 PED SELECT	**0**
FD4 7 WIRE	**0**
FD5 PERMISSIVE	**0**
FD8 OS SEEKING	**1**
CO5 FLASH TYPE	**1**
CC2 DOWNLOAD	**1**

ENTRIES IN THESE LOCATIONS CAN BE CHANGED IN CC1 FLASH ONLY

Do not reproduce

		CONTROL PLANS									Y-COORD			LAG PHASE	FLAGS								
		1	2	3	4	5	6	7	8	9		C	D	E	F	1	2	3	4	5	6	7	8	
0	CYCLE LENGTH														LAG FZ FREE		**2**		**4**		**6**		**8**	0
1	FZ1 GRN FCTR													GAPOUT CP1	LAG FZ CP 1									1
2														GAPOUT CP2	LAG FZ CP 2									2
3	FZ3 GRN FCTR													GAPOUT CP3	LAG FZ CP 3									3
4	FZ4 GRN FCTR										PERM TIME			GAPOUT CP4	LAG FZ CP 4									4
5	FZ5 GRN FCTR										LAG OFFSET			GAPOUT CP5	LAG FZ CP 5									5
6											FORCE OFF			GAPOUT CP6	LAG FZ CP 6									6
7	FZ7 GRN FCTR										LONG GRN			GAPOUT CP7	LAG FZ CP 7									7
8	FZ8 GRN FCTR										NO GREEN			GAPOUT CP8	LAG FZ CP 8									8
9	MULTI CYCLE													GAPOUT CP9	LAG FZ CP 9									9
A	OFFSET A										OFFSET				LAG C COORD									A
B	OFFSET B														LAG D COORD									B
C	OFFSET C														COORD FAZES		**2**				**6**			C
D	FZ 3 EXT																							D
E	FZ 7 EXT																							E
F	OFFSET INTRPT																							F
																1	2	3	4	5	6	7	8	

CO1 MANUAL CP
CO2 MASTER CP
CO3 CURRENT CP
CO4 LAST CP
CO7 TRNSMT CP
COD MANUAL OFFSET
CAO LOCAL CYCLE TIMER
CBO MASTER CYCLE TIMER
CAA LOCAL OFFSET
CBA MASTER OFFSET

System Master:
EB @ Caliente Ave

FEATURE	OFF	ON
1		
2		
3		
4		
5		
6		
7		
8	*lcl*	

LOCATION	OFF	ON
1		***1***
2		
3		
4		
5		
6		
7		
8		

COO = **1**

CCB/CDB OFFSET TIMER
CCC/CDC LAG GREEN TIMER
CCD/CDD FORCE OFF TIMER
CCE/CDE LONG GREEN TIMER
CCF/CDF NO GREEN TIMER

Do not reproduce

D PAGE

	D	FLAGS								E	FLAGS								F	FLAGS							
	MAX	1	2	3	4	5	6	7	8	MIN	1	2	3	4	5	6	7	8	PED	1	2	3	4	5	6	7	8
0	RCL									RCL									RCL								
1	CP 1									CP 1									CP 1								
2	CP 2									CP 2									CP 2								
3	CP 3									CP 3									CP 3								
4	CP 4									CP 4									CP 4								
5	CP 5									CP 5									CP 5								
6	CP 6									CP 6									CP 6								
7	CP 7									CP 7									CP 7								
8	CP 8									CP 8									CP 8								
9	CP 9									CP 9									CP 9								
A																			RCL 1								
B																			RCL 2								
C																											
D																											
E																											
F																											
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8

E PAGE

	E	FLAGS								F	FLAGS								
	FUNCTION	1	2	3	4	5	6	7	8	FUNCTION	1	2	3	4	5	6	7	8	
0										CODE 4									0
1										CODE 5									1
2										C-RECALL									2
3										D-RECALL									3
4										EXCLUSIVE									4
5										2 PED		2							5
6										6 PED						6			6
7										4 PED				4					7
8										8 PED								8	8
9																			9
A	OLA NOT									OLA ON									A
B	OLB NOT									OLB ON									B
C	OLC NOT									OLC ON									C
D	OLD NOT									OLD ON									D
E																			E
F																			F
		1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	

LAST POWER FAILURE REGISTER

HOUR = D-A-E
MINUTE = D-B-E
DAY = D-C-E

RCL 1 = TIME OF DAY MAX RECALL (1ST SELECT) PHASES
(CALL ACTIVE LIGHTS)
RCL 2 = TIME OF DAY MAX RECALL (2ND SELECT) PHASES
(CALL ACTIVE LIGHTS)

LAST FLASH TIME REGISTER

HOUR = D-A-F
MINUTE = D-B-F
DAY = D-C-F

D-E-E = C8 VERSION NUMBER
D-E-F = LITHIUM BATTERY CONDITION
84 = BAD
85 = GOOD

Do not reproduce

7 PAGE

TIME OF DAY ACTIVITY TABLE											
7+EVENT+HR+MIN+ACT+"E"+ON/OFF+DOW LTS											
	HR	MIN	ACT	ON/ OFF	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0	**07**	**30**	**2**	**ON**		**2**	**3**	**4**	**5**	**6**	
1	**09**	**30**	**2**	**OFF**		**2**	**3**	**4**	**5**	**6**	
2	**16**	**00**	**3**	**ON**		**2**	**3**	**4**	**5**	**6**	
3	**17**	**00**	**3**	**OFF**		**2**	**3**	**4**	**5**	**6**	
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE C09 = 0 or 1

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

9 PAGE CO9 = 2

CONTROL PLAN TIME OF DAY											
9+EVENT+HR+MIN+CP+OS+E+DOW											
	HR	MIN	CP	OS	S 1	M 2	T 3	W 4	T 5	F 6	S 7
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
A											
B											
C											
D											
E											
F											

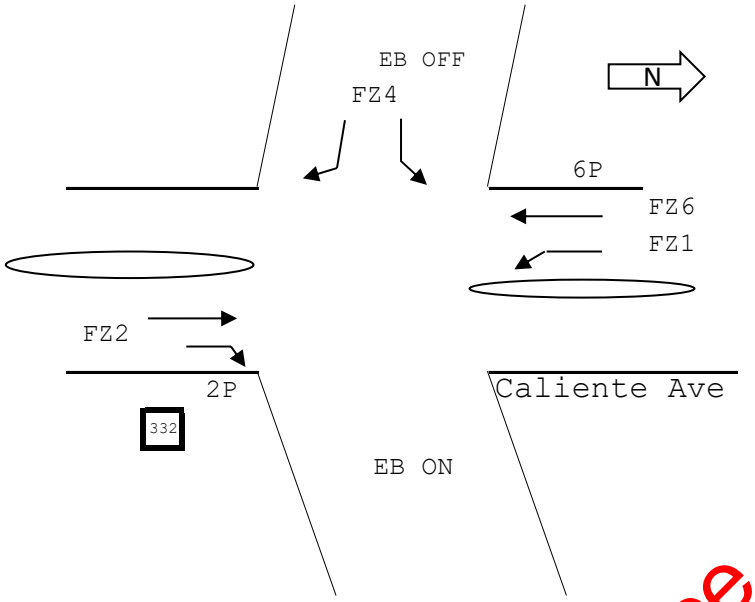
ACTIVITY CODE

1 TYPE OF MAX TERMINATION
2 MAX 2
3 MAX 3
4 COND SERV (1ST SELECT)
5 COND SERV (2ND SELECT)
6 ENERGIZE AUX OUTPUT-RED
7 ENERGIZE AUX OUTPUT-GREEN
8 ENERGIZE AUX OUTPUT-YELLOW
9 TIME OF DAY MAX RECALL (1ST SELECT)
A TRAFFIC ACT. MAX 2 OPERATION
B TIME OF DAY MAX RECALL (2ND SELECT)
C YELLOW YIELD COORDINATION
D YELLOW YIELD COORDINATION
E TIME OF DAY FREE OPERATION
F FLASHING OPERATION

Do not reproduce

LOCATION: 905 EB @ Caliente Ave

CONFLICT MONITOR PROGRAM



Do not reproduce

INTERSECTION: Airway Rd & Caliente Av

233 Program

Group Assignment:
Field Master Assignment:
System Reference Number:

N/S Street: **Caliente Av**
E/W Street: **Airway Rd/San Virgilio**

Last Database Change:

Timing sheets by: **VV**
Approved by:
Timing implemented on:

N

		Caliente Av				Caliente Av		Airway Rd	San Virgilio
		Phase							
	Phase Numbers---->	1	2	3	4	5	6	7	8
Row									
0	Ped Walk		7				7	7	7
1	Ped FDW		26				14	30	28
2	Min Green	4	10			4	10	7	7
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension	2.0	3.8			2.0	3.8	2.3	3.3
6	Max Gap	2.0	3.8			2.0	3.8	2.3	3.3
7	Min Gap	2.0	0.2			2.0	0.2	0.2	0.2
8	Max Limit	30	60			30	60	40	40
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW		1				1	1	1
C	Cond Serv Check								
D	Reduce Every		0.8				0.8	1.4	1.0
E	Yellow Change	3.4	3.9			3.4	3.9	3.4	3.9
F	Red Clear	1.0	1.0			1.0	1.0	1.0	1.0

Phase Timing - Bank 1 **<F/1+Phase+Row>**

Row		E
	RR-1 Delay	
	RR-1 Clear	
	EV-A Delay	0
	EV-A Clear	0
	EV-B Delay	0
	EV-B Clear	0
	EV-C Delay	0
	EV-C Clear	0
	EV-D Delay	0
	EV-D Clear	0
	RR-2 Delay	
	RR-2 Clear	
	View EV Delay	- - -
	View EV Clear	- - -
	View RR Delay	- - -
	View RR Clear	- - -

Preempt Timing **<F/1+E+Row>**

Row		F
0	Permit	12__5678
1	Red Lock	
2	Yellow Lock	
3	Min Recall	_2___6__
4	Ped Recall	
5	*View Set Peds*	_2___678
6	Rest In Walk	
7	Red Rest	
8	Double Entry	
9	Max Recall	
A	Soft Recall	
B	Max 2	
C	Cond. Service	
D	Man Cntrl Calls	
E	Yellow Start	_2___6__
F	First Phases	_____7_

Phase Functions **<F/1+F+Row>**

Current Calculated Cycle Length: C/0 + B + F

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing **<F/1+Column+Phase>**

Drop Number		**<C/0+0+0>**
Zone Number		**<C/0+0+1>**
Area Number		**<C/0+0+2>**
Area Address		**<C/0+0+3>**
QuicNet Channel		(QuicNet)

Communication Addresses

Flash Start	0	**<F/1+0+E>**
Red Revert	5.0	**<F/1+0+F>**
All Red Start	0.0	**<F/1+C+0>**
FYA Red Rev	0.0	**<F/1+0+5>**
OVLP CHG R	0.0	**<F/1+0+3>**

Start / Revert Times

(Outputs specified in Assignable Outputs at E/127+A+E & F)

Exclusive Walk	0	**<F/1+0+0>**
Exclusive FDW	0	**<F/1+0+1>**
All Red Clear	0.0	**<F/1+0+2>**

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Exclusive Ped Phase

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Manual Plan	14	**<C/0+A+1>**
Manual Offset	0	**<C/0+B+1>**

Manual Selection

Free Lag	_2___67_	**<C/1+F+0>**

How to Set Page Access Code:
F/1 -- C + 0 + F = 1
F + 9 + E = 1

Notes: 41669-16-D

INTERSECTION: Airway Rd & Caliente Av

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8	Row
	Overlap Name ----->									
0	Load Switch Number									0
1	Veh Set 1 - Phases									1
2	Veh Set 2 - Phases									2
3	Veh Set 3 - Phases									3
4	Neg Veh Phases									4
5	Neg Ped Phases									5
6	Green Omit Phases									6
7	Green Clear Omit Phs.									7
8	Overlap Recall									8
9	Queue Jump Phase									9
A	Queue Jump Time									A
B	Minimum Green									B
C	Maximum Green									C
D	Green Clear									D
E	Yellow Change									E
F	Red Clear									F

Overlap Assignments <E/29+Column+Row>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = Reserved
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 = Manual Hold in FDW
7 = Allow QuicNet PE
8 = Flash Grn B4 Yellow

Row		C	Row
	EV-A	0	0
	EV-B	0	1
	EV-C	0	2
	EV-D	0	3
	RR-1 *	- - -	4
	RR-2 *	- - -	5
	SE-1	0	6
	SE-2	0	7

Preempt Priority <E/125+C+Row>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E	Row
0	Exclusive Phases		0
1	RR-1 Clear Phases		1
2	RR-2 Clear Phases		2
3	RR-2 Limited Service		3
4	Prot / Perm Phases		4
5	Flash to PE Circuits		5
6	Flash Entry Phases		6
7	Disable Yellow Range		7
8	Disable Ovp Yel Range		8
9	Overlap Yellow Flash		9
A	EV-A Phases	_2__5___	A
B	EV-B Phases	_____7_	B
C	EV-C Phases	1____6__	C
D	EV-D Phases	_____8	D
E	Extra 1 Config. Bits	1_345___	E
F	IC Select (Interconnect)	_2_____	F

Configuration <E/125+E+Row>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	_2_____
Ped for 6P Output	_____6__
Ped for 4P Output	_____7_
Ped for 8P Output	_____8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	__3_____

Configuration <E/125+F+Row>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	_2___67_

Specials <F/2+F+Row>

Flash to PE & PE Non-Lock
1 = EV A
2 = EV B
3 = EV C
4 = EV D
5 = RR 1
6 = RR 2
7 = SE 1
8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 =
5 =
6 = Simplex Master
7 =
8 = Offset Interrupter

Row		2	Row
	Phase 1	0	1
	Phase 2	0	2
	Phase 3	0	3
	Phase 4	0	4
	Phase 5	0	5
	Phase 6	0	6
	Phase 7	0	7
	Phase 8	0	8

Coordination Transition Minimums <C/5+2+Row>

INTERSECTION: Airway Rd & Caliente Av

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	2I2U	39	___45_7_	_2_____	123_____		**1.8**
1	6J2U	40	___45_7_	_____6__	123_____		**1.8**
2	4I6U	41	___45_7_	___4____	123_____		
3	8J6U	42	___45_7_	_______8	123_____		**1.8**
4	2I2L	43	___45_7_	_2_____	123_____		**1.8**
5	6J2L	44	___45_7_	_____6__	123_____		**1.8**
6	4I6L	45	___45_7_	___4____	123_____		
7	8J6L	46	___45_7_	_______8	123_____		
8	2I4	47	___45_7_	_2_____	123_____		
9	6J4	48	___45_7_	_____6__	123_____		
A	4I8	49	_____67_	___4____	123_____		
B	8J8	50	_____67_	_______8	123_____		
C	5J1U	55	___45_7_	____5___	123_____		
D	1I1U	56	___45_7_	1_____	123_____		
E	7J5	57	___45_7_	_____7_	123_____		**1.8**
F	3I5	58	___45_7_	__3_____	123_____		

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0	5J9U	59	___45_7_	____5___	123_____		
1	1I9U	60	___45_7_	1_____	123_____		
2	7J9L	61	___45_7_	_____7_	123_____		
3	3I9L	62	___45_7_	__3_____	123_____		
4	2I3U	63	___45_7_	_2_____	123_____		**1.8**
5	6J3U	64	___45_7_	_____6__	123_____		**2.0**
6	4I7U	65	___45_7_	___4____	123_____		
7	8J7U	66	___45_7_	_______8	123_____		**2.0**
8	2 PPB	67	_2_____	_2_____	123_____		
9	6 PPB	68	_2_____	_____6__	123_____		
A	4 PPB	69	_2_____	_____**7**_	123_____		
B	8 PPB	70	_2_____	_______8	123_____		
C	2I3L	76	___45_7_	_2_____	123_____		**2.0**
D	6J3L	77	___45_7_	_____6__	123_____		
E	4I7L	78	___45_7_	___4____	123_____		
F	8J7L	79	___45_7_	_______8	123_____		

Detector Assignments <E/126+Column+Row> **<D/0+Column+Row>**

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 = Overlap
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	Ped / Phase / Overlap								
Column Numbers ---->	1	2	3	4	5	6	7	8	Row
Walk									0
Don't Walk									1
Phase Green									2
Phase Yellow									3
Phase Red									4
Overlap Green									5
Overlap Yellow									6
Overlap Red									7

Redirect Phase Outputs <E/127+Column+Row>

Cabinet Type	**0**	**<E/125+D+0>**

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	**20**	<D/0+0+1>
Max ON (minutes)	**60**	<D/0+0+2>
Chatter Fail Time	**0**	<D/0+0+4>

Detector Failure Monitor

	B	Row
One-Shot	**0**	8
Ext. Timer	**0**	9
DELAY-A	**0**	A
DELAY-B	**0**	B
DELAY-C	**0**	C
DELAY-D	**0**	D
DELAY-E	**0**	E
DELAY-F	**0**	F

Delay Logic Times
<D/0+B+Row> **(seconds)**

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	One-Shot Timer	Latch 1 Set	NOT-3	Max 2	Pretimed	Set Monday	Dial 2 (7-Wire)	Sim Term 0	0
1	AND-5 (a)	Latch 1 Reset	NOT-4	Reserved	Plan 1	Ext. Perm 1	Dial 3 (7-Wire)	EV-A 71	1
2	AND-5 (b)	Latch 2 Set	OR-4 (a)	Reserved	Plan 2	Ext. Perm 2	Offset 1 (7-Wire)	EV-B 72	2
3	AND-6 (a)	Latch 2 Reset	OR-4 (b)	Reserved	Plan 3	Gate Down	Offset 2 (7-Wire)	EV-C 73	3
4	AND-6 (b)	NAND-3 (a)	OR-5 (a)	Reserved	Plan 4	Set Clock	Offset 3 (7-Wire)	EV-D 74	4
5	Reserved	`	OR-5 (b)	Reserved	Plan 5	Stop Time 82	Free (7-Wire)	RR-1 51	5
6	Reserved	NAND-4 (a)	OR-6 (a)	Reserved	Plan 6	Flash Sense 81	Flash (7-Wire)	RR-2 52	6
7	Reserved	NAND-4 (b)	OR-6 (b)	Reserved	Plan 7	Manual Enable	Excl. Ped Omit	Spec. Event 1	7
8	Spec. Funct. 1	OR-7 (a)	EXTMR	Reserved	Plan 8	Man. Advance	NOT-1	Spec. Event 2	8
9	Spec. Funct. 2	OR-7 (b)	Reserved	Max Inhibit (nema)	Plan 9	External Alarm	NOT-2	External Lag	9
A	Spec. Funct. 3	OR-7 (c)	AND-4 (a)	Force A (nema)	DELAY-A	Phase Bank 2	OR-1 (a)	AND-1 (a)	A
B	Spec. Funct. 4	OR-7 (d)	AND-4 (b)	Force B (nema)	DELAY-B	Phase Bank 3	OR-1 (b)	AND-1 (b)	B
C	Reserved	OR-8 (a)	NAND-1 (a)	C.N.A. (nema)	DELAY-C	Overlap Set 2	OR-2 (a)	AND-2 (a)	C
D	Reserved	OR-8 (b)	NAND-1 (b)	Hold (nema)	DELAY-D	Overlap Set 3	OR-2 (b)	AND-2 (b)	D
E	Reserved	OR-8 (c)	NAND-2 (a)	Max Recall	DELAY-E	Detector Set 2	OR-3 (a)	AND-3 (a)	E
F	Reserved	OR-8 (d)	NAND-2 (b)	Min Recall	DELAY-F	Detector Set 3	OR-3 (b)	AND-3 (b)	F

Assignable Inputs <E/126+Column+Row>

Row	Column 8	Column 9	Column A	Column B	Column C	Column D	Column E	Column F	Row
0	Reserved	Phase ON - 1	Preempt Fail	Flasher 0	Free	NOT-1	TOD Out 1	Dial 2 (7-Wire)	0
1	Reserved	Phase ON - 2	Sp Evnt Out 1	Flasher 1	Plan 1	OR-1	TOD Out 2	Dial 3 (7-Wire)	1
2	Reserved	Phase ON - 3	Sp Evnt Out 2	Fast Flasher	Plan 2	OR-2	TOD Out 3	Offset 1 (7-Wire)	2
3	Reserved	Phase ON - 4	Sp Evnt Out 3	EXTMR	Plan 3	OR-3	TOD Out 4	Offset 2 (7-Wire)	3
4	Reserved	Phase ON - 5	Sp Evnt Out 4	One-Shot Timer	Plan 4	AND-1	TOD Out 5	Offset 3 (7-Wire)	4
5	Reserved	Phase ON - 6	Sp Evnt Out 5	Reserved	Plan 5	AND-2	TOD Out 6	Free (7-Wire)	5
6	Reserved	Phase ON - 7	Sp Evnt Out 6	Latch 1	Plan 6	AND-3	TOD Out 7	Flash (7-Wire)	6
7	Reserved	Phase ON - 8	Sp Evnt Out 7	Latch 2	Plan 7	NOT-2	TOD Out 8	Preempt	7
8	Flh Yell Arrow 1	Ph. Check - 1	Sp Evnt Out 8	NOT-3	Plan 8	EV-A	Adv. Warn - 1	Low Priority A	8
9	Green 1	Ph. Check - 2	Coord On	NOT-4	Plan 9	EV-B	Adv. Warn - 2	Low Priority B	9
A	Flh Yell Arrow 3	Ph. Check - 3	Detector Fail	OR-4	Spec. Funct. 3	EV-C	DELAY-A	Low Priority C	A
B	Green 3	Ph. Check - 4	Spec. Funct. 1	OR-5	Spec. Funct. 4	EV-D	DELAY-B	Low Priority D	B
C	Flh Yell Arrow 5	Ph. Check - 5	Spec. Funct. 2	OR-6	NAND-3	RR-1	DELAY-C	AND-5	C
D	Green 5	Ph. Check - 6	Central Control	AND-4	NAND-4	RR-2	DELAY-D	AND-6	D
E	Flh Yell Arrow 7	Ph. Check - 7	Excl. Ped DW	NAND-1	OR-7	Spec. Event 1	DELAY-E	Reserved	E
F	Green 7	Ph. Check - 8	Excl. Ped WK	NAND-2	OR-8	Spec. Event 2	DELAY-F	Reserved	F

Assignable Outputs <E/127+Column+Row>

INTERSECTION: Airway Rd & Caliente Av

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ----> / Plan Name ---->	Plan 1	2	3	4	5	6	7	8	9	Row
0	Cycle Length										0
1	Phase 1 - ForceOff										1
2	Phase 2 - ForceOff										2
3	Phase 3 - ForceOff										3
4	Phase 4 - ForceOff										4
5	Phase 5 - ForceOff										5
6	Phase 6 - ForceOff										6
7	Phase 7 - ForceOff										7
8	Phase 8 - ForceOff										8
9	Ring Offset										9
A	Offset 1										A
B	Offset 2										B
C	Offset 3										C
D	Perm 1 - End										D
E	Hold Release										E
F	Reserved										F

Coordination - Bank 1 <C/1+Plan+Row>

Row		E	Row
0			0
1	Plan 1 - Sync		1
2	Plan 2 - Sync		2
3	Plan 3 - Sync		3
4	Plan 4 - Sync		4
5	Plan 5 - Sync		5
6	Plan 6 - Sync		6
7	Plan 7 - Sync		7
8	Plan 8 - Sync		8
9	Plan 9 - Sync		9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C/1+E+Row>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment										0
1	Perm 2 - Start										1
2	Perm 2 - End										2
3	Perm 3 - Start										3
4	Perm 3 - End										4
5	Reservice Time										5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase										A
B	Perm 1 Ped Phase										B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C/2+Plan+Row>

Row		F	Row
0	Free Lag		0
1	Plan 1 - Lag		1
2	Plan 2 - Lag		2
3	Plan 3 - Lag		3
4	Plan 4 - Lag		4
5	Plan 5 - Lag		5
6	Plan 6 - Lag		6
7	Plan 7 - Lag		7
8	Plan 8 - Lag		8
9	Plan 9 - Lag		9
A	External Lag		A
B	Lag Hold		B
C			C
D			D
E			E
F			F

Lag Phases <C/1+F+Row>

Coordination Timing By:
Date:

INTERSECTION: Airway Rd & Caliente Av

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	**0.3**	<C/5+1+9>

TBC Transition

Hawk Select	**0**	<F/1+0+4>

Hawk Select 200 = Mid-Block, 201 = Hawk

Address	**0**	<C/1+0+6>
Select Parity	**0**	<C/1+0+5>

AB3418 Comm 2 0 = No Parity, 1 = Even

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	**3**	<C/5+2+A>
Begin Week	**2**	<C/5+2+B>
End Month	**11**	<C/5+2+C>
End Week	**1**	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	**0.0**	<F/1+C+E>
Phase Number	**0**	<F/1+C+F>

Advance Warning Beacon - Sign 1

Row		1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1					
Phase 2					
Phase 3					
Phase 4					
Phase 5					
Phase 6					
Phase 7					
Phase 8					
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Time B4 Yellow	**0.0**	<F/1+D+E>
Phase Number	**0**	<F/1+D+F>

Advance Warning Beacon - Sign 2

Offset Time	**0**	<C/5+2+E>
Max Cycle Time	**20**	<C/5+2+F>

Yellow Yield Coordination

12345678

Omit Alarm	**#NAME?**

Local Alarm Disable <C/5+F+0>

IEN Status	**1**	<C/5+1+B>
Synch Time	**0.0**	<C/5+1+C>

Other Parameters

INTERSECTION: Airway Rd & Caliente Av

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <9/0.1+Row>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits

TOD Function **<7/0.1+Row>** **<E/27+4+Row>**

Day	Year	Month	Holiday Type

Holiday Dates <8/1.1+Row>
(Bank 1)

Time	Plan	Offset	Holiday Type

Holiday Events <9/1.1+Row>
(Bank 1)

T.O.D. Functions
0 = Permitted Phases
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 6 - FYA Inhibit
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Row	Time	Plan	Offset	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type

Holiday Events <C+0+9=1.2>
(Bank 2)

Month Select: October = A, November = B, Decmber = C

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

<E/27+5+F>

Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
A										
B										
C										
D										
E										
F										

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

<E/28+5+F>

Limited Service Interval

INTERSECTION: Airway Rd & Caliente Av

Min Time (seconds)	4	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	255	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts

(Does Not Apply To Railroad Preempt)

Low Pri. Channel	#NAME?	<E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Row		
C	Bus Headway	0
D	Bus Delay	0
E	Max Early Grn	0
F	Max Grn Ext.	0

Priority Parameters

<F/1 +A+Row>

Row	Time	Headway	Direction	Day of Week
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
A				
B				
C				
D				
E				
F				

Headway Schedule <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

Attachment 7 – Existing Traffic Counts and Count Validation

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

City of San Diego
Ocean View Hills Parkway
B/ Hidden Trails Road - Otay Mesa Road

File Name 005
Site Code: 143-18041
24 Hour Directional Volume Count

Date:	Northbound				Southbound					
1/18/2018	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	13	75			11	62				
12:15	8	85			3	76				
12:30	5	66			5	62				
12:45	6	67	32	293	1	78	20	278	52	571
1:00	6	71			5	68				
1:15	2	82			1	70				
1:30	4	90			5	82				
1:45	2	93	14	336	5	66	16	286	30	622
2:00	12	124			1	67				
2:15	2	119			2	127				
2:30	4	133			4	105				
2:45	8	135	26	511	7	106	14	405	40	916
3:00	7	108			2	182				
3:15	6	104			5	125				
3:30	1	104			4	81				
3:45	7	125	21	441	11	106	22	494	43	935
4:00	4	135			5	116				
4:15	13	227			5	116				
4:30	12	167			14	86				
4:45	12	129	41	658	19	88	43	406	84	1064
5:00	19	134			18	73				
5:15	26	131			40	83				
5:30	26	125			39	67				
5:45	33	138	104	528	43	100	140	323	244	851
6:00	43	119			43	80				
6:15	47	99			48	85				
6:30	56	93			47	68				
6:45	64	77	210	388	72	53	210	286	420	674
7:00	72	76			82	44				
7:15	79	66			95	46				
7:30	160	60			135	46				
7:45	116	56	427	258	200	49	512	185	939	443
8:00	190	55			153	42				
8:15	105	47			160	37				
8:30	67	49			121	36				
8:45	88	41	450	192	164	33	598	148	1048	340
9:00	117	33			114	33				
9:15	61	39			57	26				
9:30	75	38			64	30				
9:45	56	28	309	138	63	30	298	119	607	257
10:00	55	40			54	17				
10:15	55	31			57	26				
10:30	47	26			56	14				
10:45	73	24	230	121	36	13	203	70	433	191
11:00	66	13			55	12				
11:15	69	13			63	10				
11:30	63	9			56	6				
11:45	58	27	256	62	73	8	247	36	503	98
Totals	2120	3926			2323	3036				
Combined Totals		6046				5359				
ADT										11405
AM Peak Hour	730	AM			730	AM				
Volume	571				648					
P.H.F.	0.751				0.810					
PM Peak Hour		400	PM			215	PM			
Volume		658				520				
P.H.F.		0.725				0.714				
Percentage	35.1%	64.9%			43.3%	56.7%				

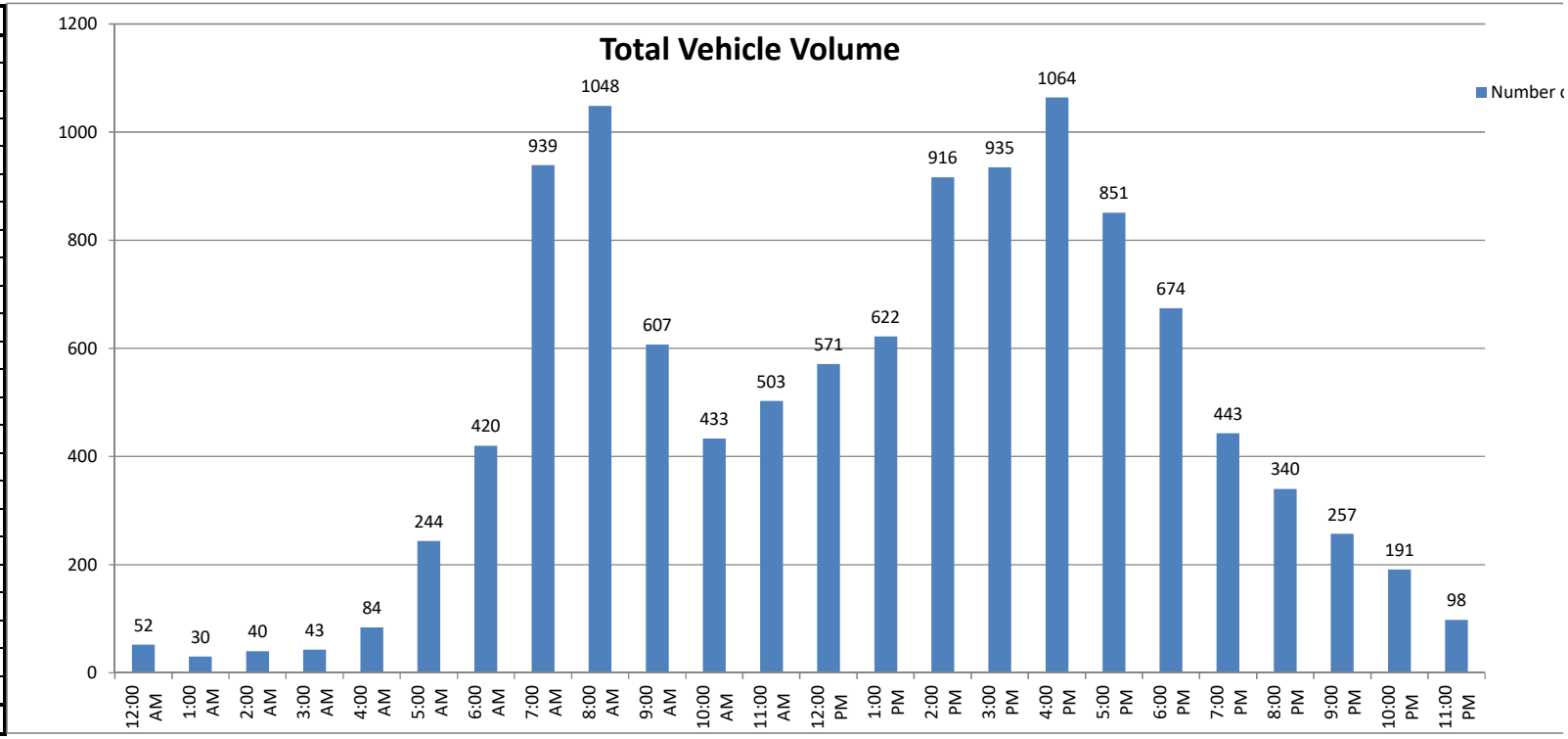
Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

24 Hour Volume Plot

Ocean View Hills Parkway
B/ Hidden Trails Road - Otay Mesa Road

1/18/2018

Start Time	1/18/2018
12:00 AM	52
1:00 AM	30
2:00 AM	40
3:00 AM	43
4:00 AM	84
5:00 AM	244
6:00 AM	420
7:00 AM	939
8:00 AM	1048
9:00 AM	607
10:00 AM	433
11:00 AM	503
12:00 PM	571
1:00 PM	622
2:00 PM	916
3:00 PM	935
4:00 PM	1064
5:00 PM	851
6:00 PM	674
7:00 PM	443
8:00 PM	340
9:00 PM	257
10:00 PM	191
11:00 PM	98
Total	11405



Volumes represent the combined totals for both directions

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

City of San Diego
Caliente Avenue
B/ Otay Mesa Road - Interstate 805 Westbound

File Name 006
Site Code: 143-18041
24 Hour Directional Volume Count

Date:	Northbound				Southbound					
1/18/2018	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	16	149			23	173				
12:15	15	151			13	178				
12:30	9	168			13	159				
12:45	9	162	49	630	11	181	60	691	109	1321
1:00	11	198			6	154				
1:15	12	180			2	173				
1:30	6	174			12	179				
1:45	11	212	40	764	9	162	29	668	69	1432
2:00	24	186			14	222				
2:15	12	190			8	208				
2:30	11	181			4	215				
2:45	22	194	69	751	12	260	38	905	107	1656
3:00	13	204			7	253				
3:15	8	209			23	230				
3:30	16	180			15	286				
3:45	17	176	54	769	14	219	59	988	113	1757
4:00	17	216			26	220				
4:15	23	309			34	250				
4:30	20	204			33	225				
4:45	41	160	101	889	47	233	140	928	241	1817
5:00	31	164			62	264				
5:15	40	140			80	212				
5:30	59	147			92	201				
5:45	72	142	202	593	84	198	318	875	520	1468
6:00	67	145			86	169				
6:15	94	136			92	125				
6:30	102	98			105	107				
6:45	192	87	455	466	117	61	400	462	855	928
7:00	115	92			130	82				
7:15	175	82			155	86				
7:30	238	84			221	71				
7:45	266	90	794	348	188	74	694	313	1488	661
8:00	247	73			183	64				
8:15	174	80			158	59				
8:30	185	57			195	66				
8:45	206	55	812	265	206	50	742	239	1554	504
9:00	155	84			163	41				
9:15	138	44			133	55				
9:30	132	50			141	37				
9:45	140	46	565	224	140	28	577	161	1142	385
10:00	128	41			150	50				
10:15	132	41			121	31				
10:30	150	45			139	32				
10:45	119	19	529	146	141	15	551	128	1080	274
11:00	143	25			161	11				
11:15	160	24			160	8				
11:30	166	22			178	10				
11:45	165	41	634	112	182	14	681	43	1315	155
Totals	4304	5957			4289	6401				
Combined Totals		10261				10690				
ADT										20951
AM Peak Hour	715	AM			730	AM				
Volume	926				750					
P.H.F.	0.870				0.848					
PM Peak Hour		345	PM			245	PM			
Volume		905				1029				
P.H.F.		0.732				0.899				
Percentage	41.9%	58.1%			40.1%	59.9%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

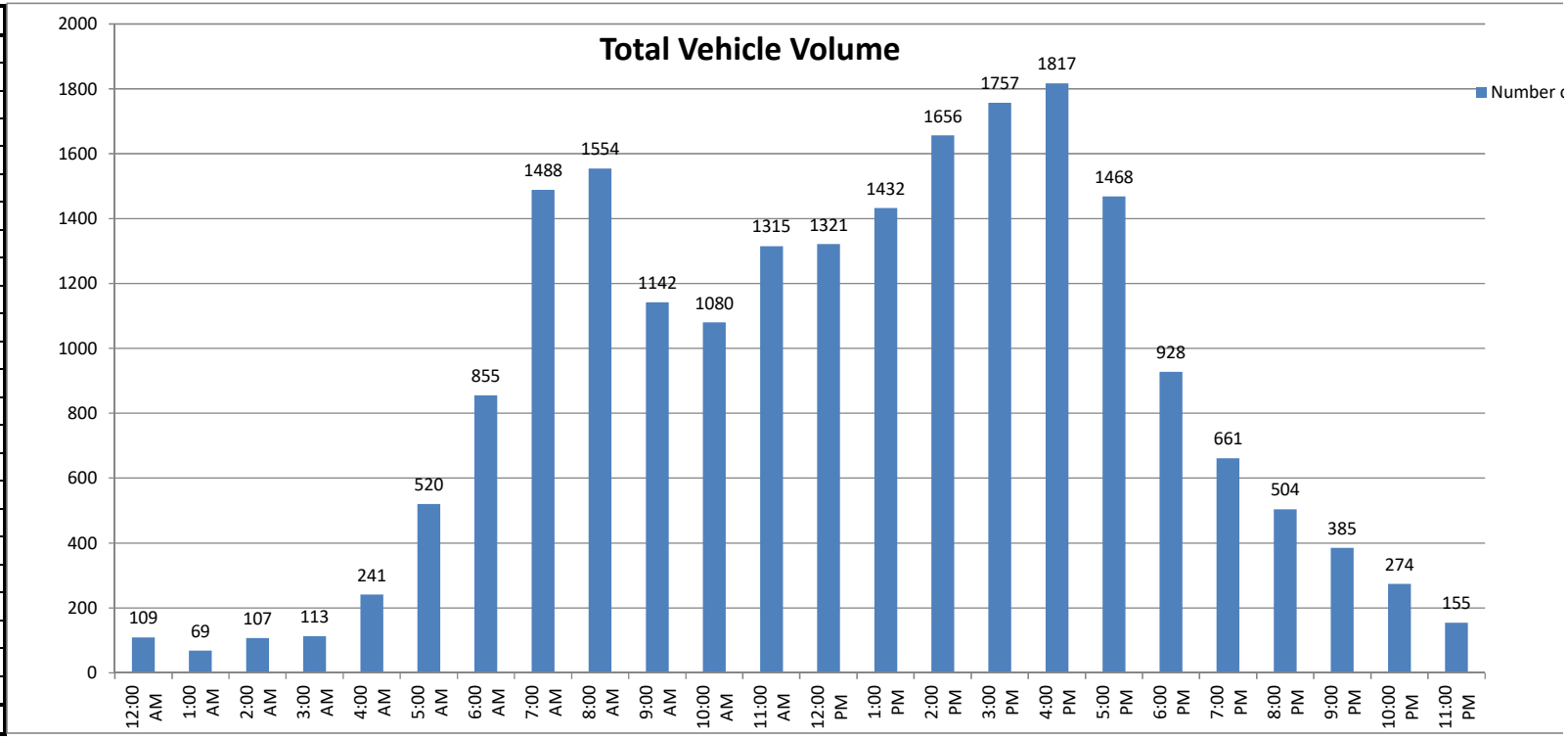
24 Hour Volume Plot

Caliente Avenue

B/ Otay Mesa Road - Interstate 805 Westbound

1/18/2018

Start Time	1/18/2018
12:00 AM	109
1:00 AM	69
2:00 AM	107
3:00 AM	113
4:00 AM	241
5:00 AM	520
6:00 AM	855
7:00 AM	1488
8:00 AM	1554
9:00 AM	1142
10:00 AM	1080
11:00 AM	1315
12:00 PM	1321
1:00 PM	1432
2:00 PM	1656
3:00 PM	1757
4:00 PM	1817
5:00 PM	1468
6:00 PM	928
7:00 PM	661
8:00 PM	504
9:00 PM	385
10:00 PM	274
11:00 PM	155
Total	20951



Volumes represent the combined totals for both directions

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

City of San Diego
Caliente Avenue
B/ Interstate 905 Westbound - Interstate 905 Eastbound

File Name 007
Site Code: 143-18041
24 Hour Directional Volume Count

Date:	Northbound				Southbound					
1/18/2018	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	18	149			1	27				
12:15	12	162			5	36				
12:30	10	169			0	34				
12:45	10	148	50	628	3	38	9	135	59	763
1:00	13	209			1	26				
1:15	9	175			0	44				
1:30	9	199			0	28				
1:45	8	208	39	791	0	27	1	125	40	916
2:00	24	196			1	52				
2:15	12	194			3	42				
2:30	11	181			1	36				
2:45	19	216	66	787	1	56	6	186	72	973
3:00	16	210			2	60				
3:15	7	220			2	71				
3:30	13	207			1	62				
3:45	18	214	54	851	3	71	8	264	62	1115
4:00	19	341			1	97				
4:15	24	418			3	57				
4:30	33	287			1	40				
4:45	48	192	124	1238	4	62	9	256	133	1494
5:00	45	175			7	41				
5:15	62	176			3	33				
5:30	63	148			8	39				
5:45	92	177	262	676	12	53	30	166	292	842
6:00	84	173			5	41				
6:15	113	178			15	33				
6:30	117	122			18	25				
6:45	216	112	530	585	31	15	69	114	599	699
7:00	156	100			17	17				
7:15	214	111			35	23				
7:30	259	88			64	19				
7:45	318	98	947	397	79	15	195	74	1142	471
8:00	293	80			58	12				
8:15	225	75			66	10				
8:30	276	57			93	18				
8:45	300	65	1094	277	138	12	355	52	1449	329
9:00	248	82			40	12				
9:15	155	56			30	12				
9:30	152	52			24	13				
9:45	144	41	699	231	19	4	113	41	812	272
10:00	128	36			21	13				
10:15	147	48			24	16				
10:30	151	42			24	7				
10:45	135	20	561	146	21	2	90	38	651	184
11:00	162	27			34	5				
11:15	154	22			36	3				
11:30	167	21			45	1				
11:45	172	34	655	104	32	4	147	13	802	117
Totals	5081	6711			1032	1464				
Combined Totals		11792				2496				
ADT										14288
AM Peak Hour	745	AM			800	AM				
Volume	1112				355					
P.H.F.	0.874				0.643					
PM Peak Hour		345	PM			315	PM			
Volume		1260				301				
P.H.F.		0.754				0.776				
Percentage	43.1%	56.9%			41.3%	58.7%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

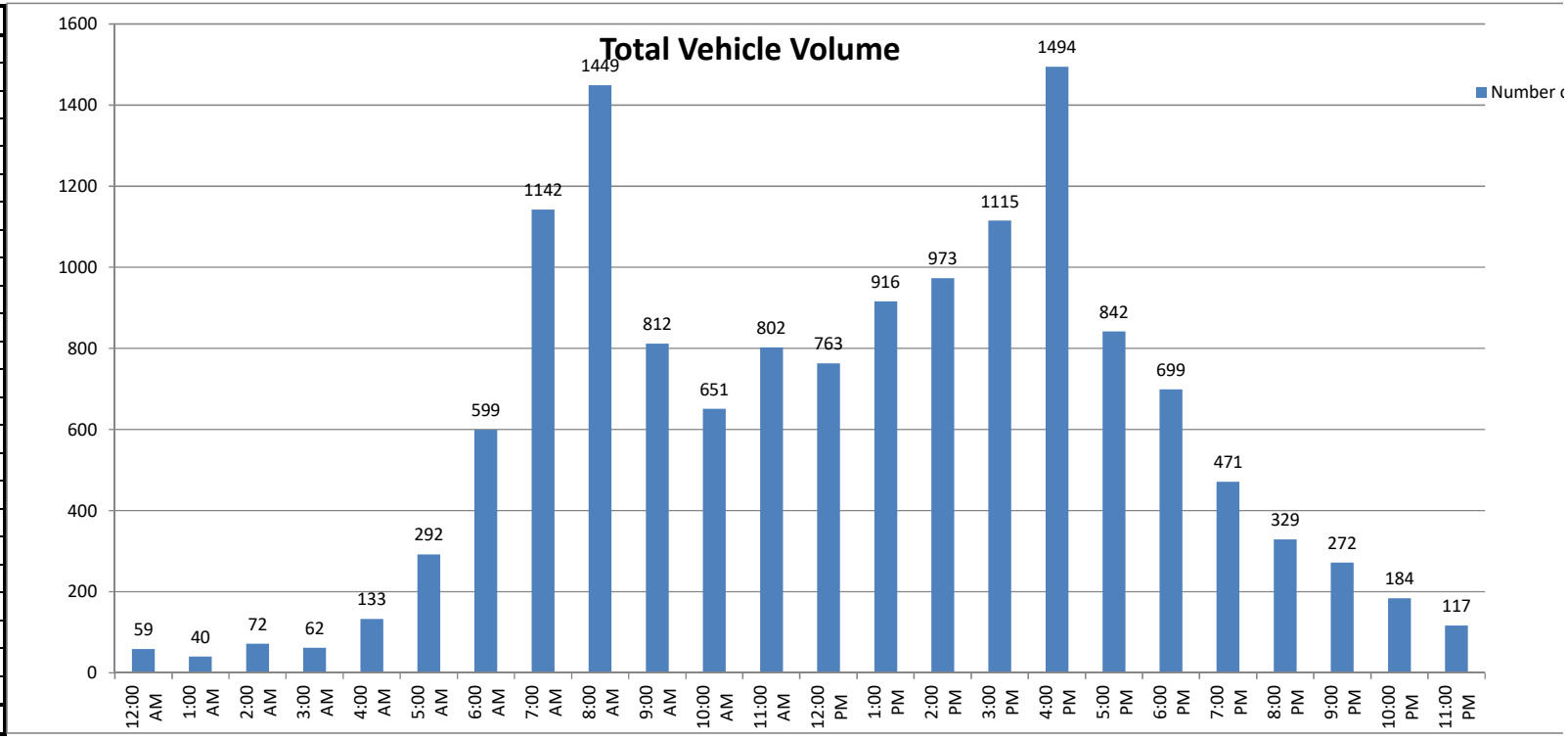
24 Hour Volume Plot

Caliente Avenue

B/ Interstate 905 Westbound - Interstate 905 Eastbound

1/18/2018

Start Time	1/18/2018
12:00 AM	59
1:00 AM	40
2:00 AM	72
3:00 AM	62
4:00 AM	133
5:00 AM	292
6:00 AM	599
7:00 AM	1142
8:00 AM	1449
9:00 AM	812
10:00 AM	651
11:00 AM	802
12:00 PM	763
1:00 PM	916
2:00 PM	973
3:00 PM	1115
4:00 PM	1494
5:00 PM	842
6:00 PM	699
7:00 PM	471
8:00 PM	329
9:00 PM	272
10:00 PM	184
11:00 PM	117
Total	14288



Volumes represent the combined totals for both directions

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

City of San Diego
Otay Mesa Road
B/ Ocean View Hills Parkway - Emerald Crest Court

File Name 009
Site Code: 143-18041
24 Hour Directional Volume Count

Date:	Eastbound				Westbound					
1/18/2018	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	14	135			15	185				
12:15	9	124			26	167				
12:30	10	150			13	159				
12:45	1	152	34	561	15	144	69	655	103	1216
1:00	7	149			4	165				
1:15	11	172			6	153				
1:30	6	160			6	177				
1:45	8	124	32	605	9	151	25	646	57	1251
2:00	8	165			18	187				
2:15	13	134			12	167				
2:30	9	126			7	181				
2:45	7	144	37	569	5	187	42	722	79	1291
3:00	20	128			12	207				
3:15	11	166			14	193				
3:30	6	163			13	244				
3:45	19	117	56	574	16	228	55	872	111	1446
4:00	13	126			14	210				
4:15	17	127			34	179				
4:30	21	114			24	221				
4:45	29	107	80	474	28	216	100	826	180	1300
5:00	21	87			39	265				
5:15	33	82			42	254				
5:30	37	69			55	211				
5:45	62	61	153	299	53	179	189	909	342	1208
6:00	64	67			62	136				
6:15	65	59			61	128				
6:30	75	69			63	116				
6:45	109	38	313	233	69	64	255	444	568	677
7:00	153	49			67	74				
7:15	94	36			96	85				
7:30	122	40			71	62				
7:45	176	53	545	178	87	67	321	288	866	466
8:00	210	40			79	63				
8:15	168	38			102	51				
8:30	150	38			94	57				
8:45	132	31	660	147	108	49	383	220	1043	367
9:00	136	26			98	43				
9:15	129	41			146	40				
9:30	131	25			129	36				
9:45	124	32	520	124	136	32	509	151	1029	275
10:00	124	19			134	36				
10:15	123	21			135	32				
10:30	143	24			118	25				
10:45	124	11	514	75	140	28	527	121	1041	196
11:00	110	13			131	13				
11:15	126	7			152	6				
11:30	143	16			156	6				
11:45	145	15	524	51	165	14	604	39	1128	90
Totals	3468	3890			3079	5893				
Combined Totals		7358				8972				
ADT										16330
AM Peak Hour	745	AM			1100	AM				
Volume	704				604					
P.H.F.	0.838				0.915					
PM Peak Hour		1245	PM			430	PM			
Volume		633				956				
P.H.F.		0.920				0.902				
Percentage	47.1%	52.9%			34.3%	65.7%				

Phone: 951-268-6268 counts@countsunlimited.com Phone: 951-268-6268

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

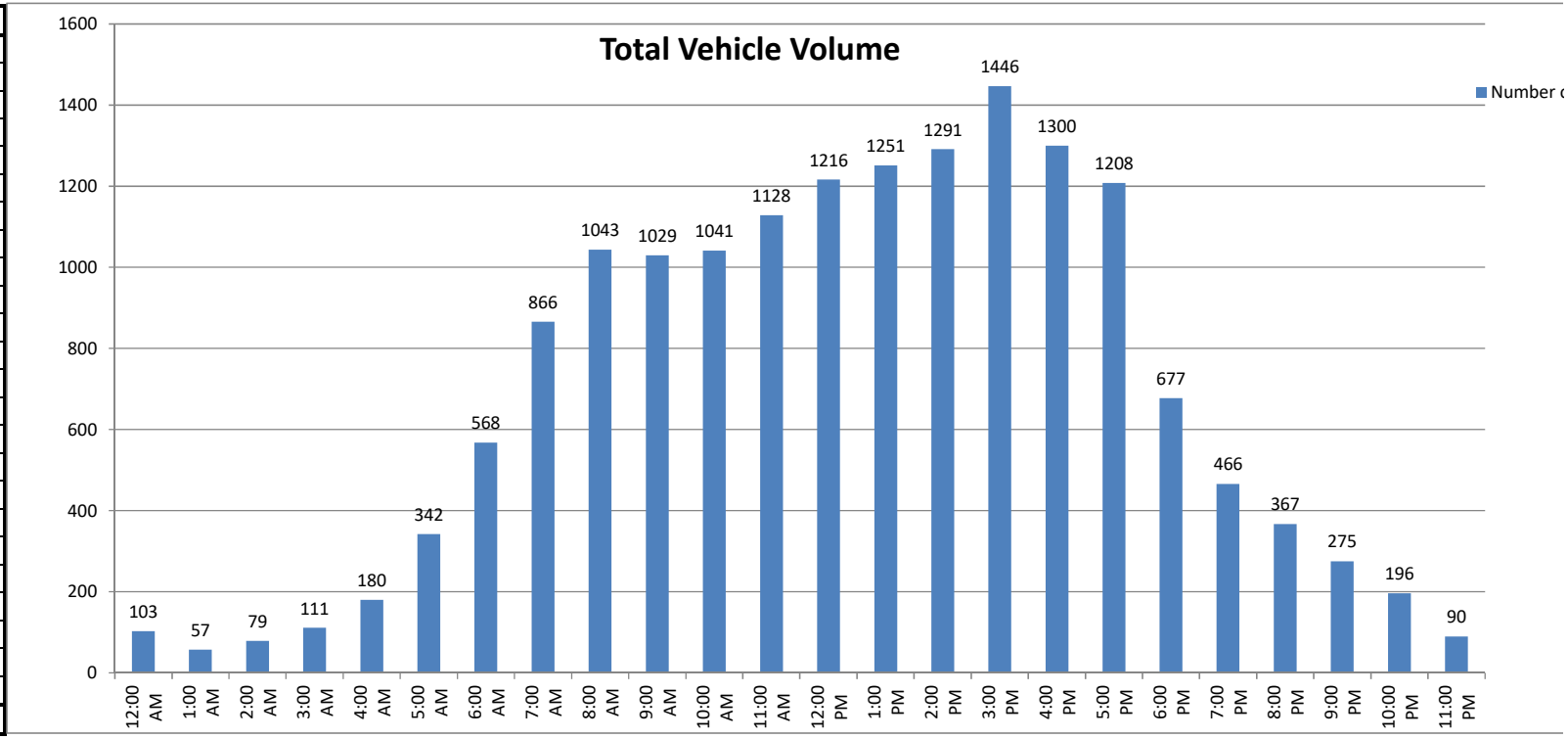
24 Hour Volume Plot

Otay Mesa Road

B/ Ocean View Hills Parkway - Emerald Crest Court

1/18/2018

Start Time	1/18/2018
12:00 AM	103
1:00 AM	57
2:00 AM	79
3:00 AM	111
4:00 AM	180
5:00 AM	342
6:00 AM	568
7:00 AM	866
8:00 AM	1043
9:00 AM	1029
10:00 AM	1041
11:00 AM	1128
12:00 PM	1216
1:00 PM	1251
2:00 PM	1291
3:00 PM	1446
4:00 PM	1300
5:00 PM	1208
6:00 PM	677
7:00 PM	466
8:00 PM	367
9:00 PM	275
10:00 PM	196
11:00 PM	90
Total	16330



Volumes represent the combined totals for both directions

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

City of San Diego
Otay Mesa Road
B/ Emerald Crest Court - Corporate Center Drive

File Name 010
Site Code: 143-18041
24 Hour Directional Volume Count

Date:	Eastbound				Westbound					
1/18/2018	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	13	126			13	177				
12:15	10	129			25	157				
12:30	7	150			14	147				
12:45	1	151	31	556	14	146	66	627	97	1183
1:00	8	162			5	162				
1:15	11	164			4	144				
1:30	7	159			7	176				
1:45	8	133	34	618	9	156	25	638	59	1256
2:00	7	164			19	173				
2:15	15	130			12	172				
2:30	9	132			5	166				
2:45	17	148	48	574	4	192	40	703	88	1277
3:00	8	140			11	194				
3:15	10	166			15	181				
3:30	8	155			13	261				
3:45	18	112	44	573	10	200	49	836	93	1409
4:00	15	131			14	214				
4:15	19	130			33	187				
4:30	20	111			19	195				
4:45	27	112	81	484	23	216	89	812	170	1296
5:00	19	83			31	269				
5:15	41	81			23	236				
5:30	33	70			36	196				
5:45	71	60	164	294	40	169	130	870	294	1164
6:00	67	65			47	127				
6:15	56	63			43	119				
6:30	87	66			51	115				
6:45	124	38	334	232	47	61	188	422	522	654
7:00	140	49			60	70				
7:15	97	34			66	75				
7:30	137	40			65	50				
7:45	183	57	557	180	62	66	253	261	810	441
8:00	206	36			74	60				
8:15	173	39			93	53				
8:30	156	37			77	43				
8:45	125	32	660	144	90	51	334	207	994	351
9:00	137	29			111	38				
9:15	136	38			133	31				
9:30	126	24			112	36				
9:45	138	38	537	129	126	32	482	137	1019	266
10:00	108	13			138	34				
10:15	130	21			112	34				
10:30	142	26			121	22				
10:45	120	7	500	67	132	23	503	113	1003	180
11:00	114	14			139	10				
11:15	124	7			147	5				
11:30	149	15			157	7				
11:45	145	18	532	54	162	16	605	38	1137	92
Totals	3522	3905			2764	5664				
Combined Totals		7427				8428				
ADT										15855
AM Peak Hour	745	AM			1100	AM				
Volume	718				605					
P.H.F.	0.871				0.934					
PM Peak Hour		1245	PM			445	PM			
Volume		636				917				
P.H.F.		0.970				0.852				
Percentage	47.4%	52.6%			32.8%	67.2%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

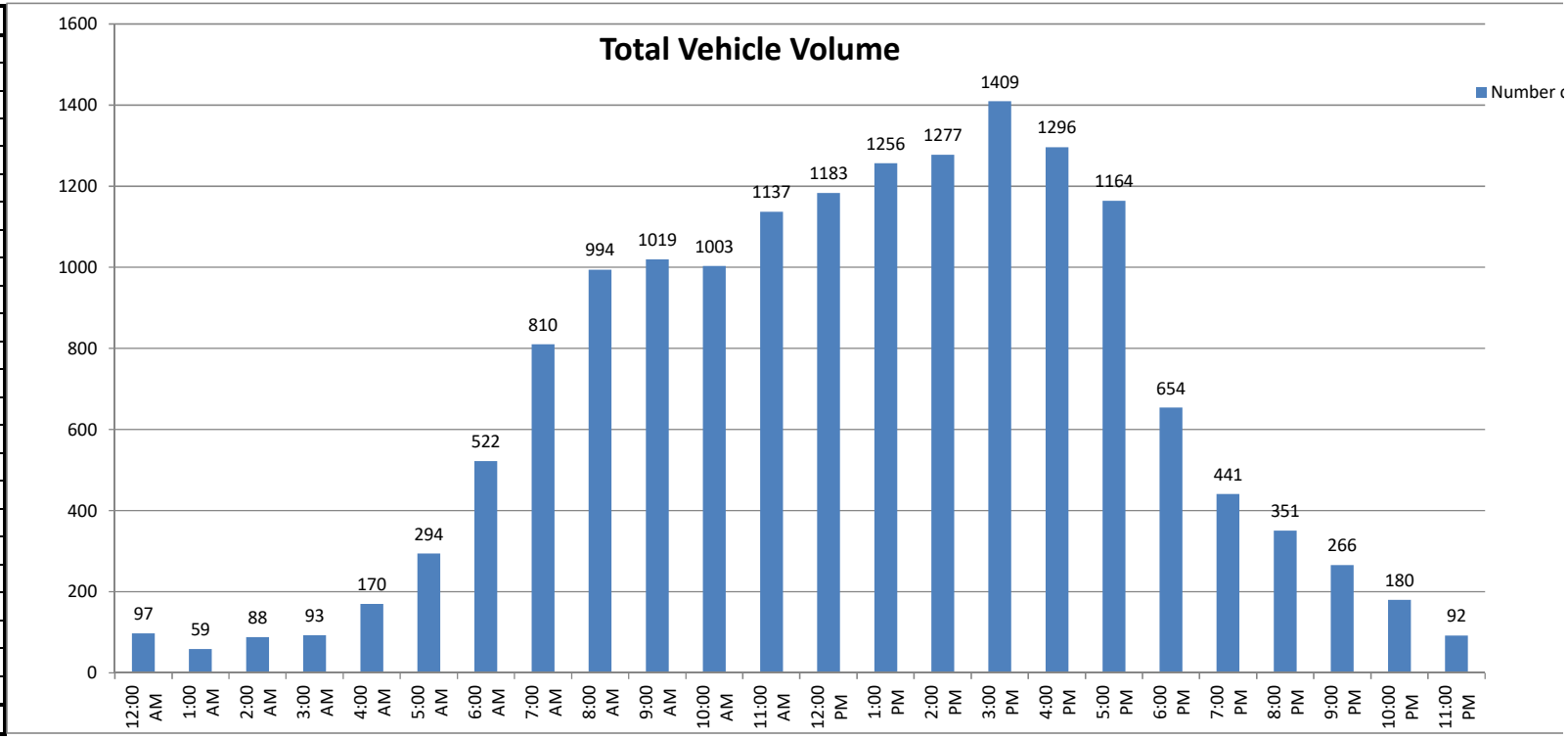
24 Hour Volume Plot

Otay Mesa Road

B/ Emerald Crest Court - Corporate Center Drive

1/18/2018

Start Time	1/18/2018
12:00 AM	97
1:00 AM	59
2:00 AM	88
3:00 AM	93
4:00 AM	170
5:00 AM	294
6:00 AM	522
7:00 AM	810
8:00 AM	994
9:00 AM	1019
10:00 AM	1003
11:00 AM	1137
12:00 PM	1183
1:00 PM	1256
2:00 PM	1277
3:00 PM	1409
4:00 PM	1296
5:00 PM	1164
6:00 PM	654
7:00 PM	441
8:00 PM	351
9:00 PM	266
10:00 PM	180
11:00 PM	92
Total	15855



Volumes represent the combined totals for both directions

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

City of San Diego
Otay Mesa Road
B/ Corporate Center Drive - Heritage Road

File Name 011
Site Code: 143-18041
24 Hour Directional Volume Count

Date:	Eastbound				Westbound					
1/18/2018	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	7	72			7	119				
12:15	10	76			12	112				
12:30	2	92			10	106				
12:45	3	110	22	350	6	116	35	453	57	803
1:00	9	90			3	107				
1:15	7	98			6	121				
1:30	4	107			10	132				
1:45	8	90	28	385	10	116	29	476	57	861
2:00	8	90			14	121				
2:15	11	105			6	113				
2:30	6	85			6	118				
2:45	13	94	38	374	6	152	32	504	70	878
3:00	9	93			9	131				
3:15	3	92			9	120				
3:30	14	85			12	139				
3:45	13	72	39	342	10	129	40	519	79	861
4:00	10	69			17	129				
4:15	11	91			22	143				
4:30	12	85			21	151				
4:45	15	72	48	317	11	142	71	565	119	882
5:00	15	69			24	177				
5:15	21	62			33	156				
5:30	22	50			30	119				
5:45	39	39	97	220	40	99	127	551	224	771
6:00	28	47			38	93				
6:15	40	40			32	81				
6:30	44	44			46	59				
6:45	63	27	175	158	50	45	166	278	341	436
7:00	53	39			54	65				
7:15	53	26			47	55				
7:30	60	37			63	41				
7:45	86	27	252	129	64	51	228	212	480	341
8:00	87	19			65	45				
8:15	74	33			45	35				
8:30	82	17			71	30				
8:45	72	23	315	92	66	33	247	143	562	235
9:00	87	26			91	26				
9:15	83	17			70	30				
9:30	77	25			77	26				
9:45	56	23	303	91	92	15	330	97	633	188
10:00	66	9			93	37				
10:15	87	15			86	23				
10:30	74	15			86	23				
10:45	77	5	304	44	97	10	362	93	666	137
11:00	61	5			90	8				
11:15	83	6			103	3				
11:30	107	11			102	8				
11:45	83	11	334	33	126	11	421	30	755	63
Totals	1955	2535			2088	3921				
Combined Totals		4490				6009				
ADT										10499
AM Peak Hour	1100	AM			1100	AM				
Volume	334				421					
P.H.F.	0.780				0.835					
PM Peak Hour		1245	PM			430	PM			
Volume		405				626				
P.H.F.		0.920				0.884				
Percentage	43.5%	56.5%			34.7%	65.3%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

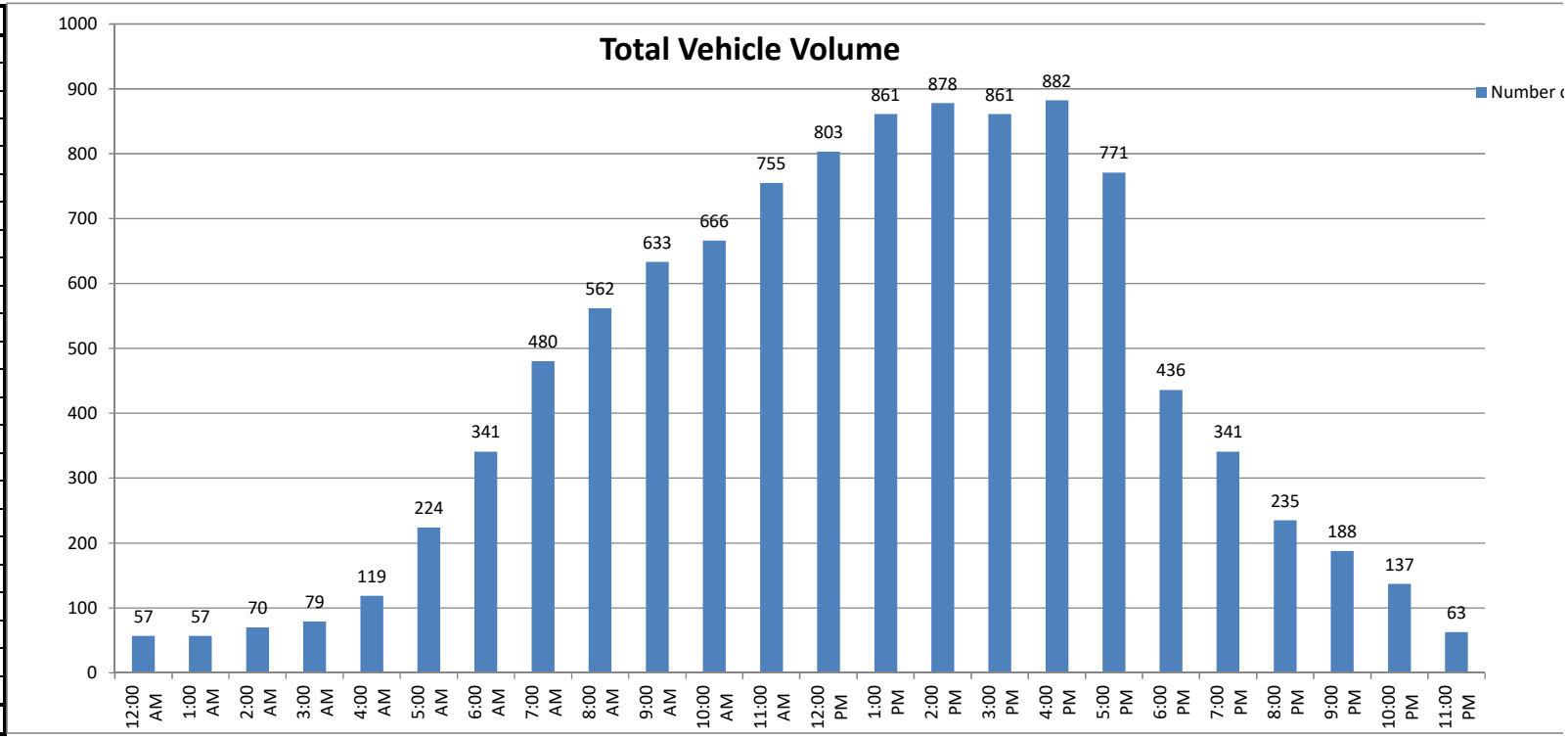
24 Hour Volume Plot

Otay Mesa Road

B/ Corporate Center Drive - Heritage Road

1/18/2018

Start Time	1/18/2018
12:00 AM	57
1:00 AM	57
2:00 AM	70
3:00 AM	79
4:00 AM	119
5:00 AM	224
6:00 AM	341
7:00 AM	480
8:00 AM	562
9:00 AM	633
10:00 AM	666
11:00 AM	755
12:00 PM	803
1:00 PM	861
2:00 PM	878
3:00 PM	861
4:00 PM	882
5:00 PM	771
6:00 PM	436
7:00 PM	341
8:00 PM	235
9:00 PM	188
10:00 PM	137
11:00 PM	63
Total	10499



Volumes represent the combined totals for both directions

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Ocean View Hills Parkway
E/W: Otay Mesa Road

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **7:30AM to 8:30 AM**

Vehicle Counts

	Ocean View Hills Parkway Northbound			Ocean View Hills Parkway Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	3	40	94	18	69	0	0	0	0	57	0	15	296
7:15 AM	0	53	92	28	88	1	1	0	0	70	0	12	345
7:30 AM	4	100	111	24	132	0	0	0	0	60	0	17	448
7:45 AM	0	73	155	39	137	0	0	0	2	64	1	16	487
8:00 AM	0	121	152	44	105	0	0	0	3	63	0	21	509
8:15 AM	1	53	135	45	113	1	0	0	0	70	0	13	431
8:30 AM	2	49	107	35	90	0	0	0	1	66	0	19	369
8:45 AM	6	64	104	31	131	0	0	1	5	79	1	21	443
TOTAL VOLUMES:	16	553	950	264	865	2	1	1	11	529	2	134	3328

AM Peak Hr Begins at: 730 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	5	347	553	152	487	1	0	0	5	257	1	67	1875

PEAK HR FACTOR:	0.829	0.909	0.417	0.967	0.921

Bicycle Counts

	Ocean View Hills Parkway Northbound			Ocean View Hills Parkway Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	1	2
8:45 AM	0	1	0	0	1	1	0	0	0	0	0	1	4
TOTAL VOLUMES:	0	1	1	0	4	1	0	0	0	0	0	3	10

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	1	0	1	0	0	0	0	0	0	1	3

Pedestrian Counts

	Ocean View Hills Parkway North Leg	Ocean View Hills Parkway South Leg	Otay Mesa Road East Leg	Otay Mesa Road West Leg	TOTAL
7:00 AM	0	0	0	3	3
7:15 AM	0	0	0	2	2
7:30 AM	3	0	0	6	9
7:45 AM	1	0	0	1	2
8:00 AM	0	0	0	2	2
8:15 AM	3	0	0	6	9
8:30 AM	4	0	0	17	21
8:45 AM	2	0	0	14	16
TOTAL VOLUMES:	13	0	0	51	64

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	7	0	0	15	22

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Ocean View Hills Parkway
E/W: Otay Mesa Road

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **4:15 PM to 5:15 PM**

Vehicle Counts

	Ocean View Hills Parkway Northbound			Ocean View Hills Parkway Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	1	102	95	28	86	0	0	0	1	140	0	52	505
4:15 PM	13	188	89	38	64	0	2	0	5	144	1	40	584
4:30 PM	9	127	80	23	61	0	0	0	8	159	3	44	514
4:45 PM	0	79	83	30	53	0	0	0	0	177	0	55	477
5:00 PM	0	92	59	33	50	0	0	0	3	217	3	59	516
5:15 PM	2	85	61	23	43	0	0	0	4	174	2	51	445
5:30 PM	0	84	49	35	39	0	0	0	3	141	0	51	402
5:45 PM	2	94	45	20	68	0	0	0	1	133	1	35	399
TOTAL VOLUMES:	27	851	561	230	464	0	2	0	25	1285	10	387	3842

PM Peak Hr Begins at: 415 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	22	486	311	124	228	0	2	0	16	697	7	198	2091

PEAK HR FACTOR:	0.706	0.863	0.563	0.808	0.895

Bicycle Counts

	Ocean View Hills Parkway Northbound			Ocean View Hills Parkway Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	0	0	0	0	0	0	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	2	0	0	0	0	0	0	0	0	0	1	4

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	2	0	0	0	0	0	0	0	0	0	0	2

Pedestrian Counts

	Ocean View Hills Parkway North Leg	Ocean View Hills Parkway South Leg	Otay Mesa Road East Leg	Otay Mesa Road West Leg	TOTAL
4:00 PM	2	1	0	8	11
4:15 PM	22	0	0	50	72
4:30 PM	1	0	0	8	9
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	3	3
5:15 PM	0	0	0	0	0
5:30 PM	2	0	0	5	7
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	28	1	0	74	103

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	24	0	0	61	85

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Emerald Crest
E/W: Otay Mesa Road

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **7:00AM to 8:00 AM**

Vehicle Counts

	Emerald Crest Northbound			Emerald Crest Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	0	16	0	0	0	0	0	1	17
7:15 AM	0	0	0	0	0	19	0	0	0	0	0	0	19
7:30 AM	0	0	0	0	0	17	0	0	0	0	0	0	17
7:45 AM	0	0	0	0	0	20	0	0	0	0	0	0	20
8:00 AM	0	0	0	0	0	11	0	0	0	0	0	2	13
8:15 AM	0	0	0	0	0	8	0	0	0	0	0	0	8
8:30 AM	0	0	0	0	0	8	0	0	0	0	0	0	8
8:45 AM	0	0	0	0	0	13	0	0	0	0	0	2	15
TOTAL VOLUMES:	0	0	0	0	0	112	0	0	0	0	0	5	117

AM Peak Hr Begins at: 700 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	72	0	0	0	0	0	1	73

PEAK HR FACTOR:	0.000	0.900	0.000	0.250	0.913

Bicycle Counts

	Emerald Crest Northbound			Emerald Crest Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	4	0	4
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	4	0	5

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

Pedestrian Counts

	Emerald Crest North Leg	Emerald Crest South Leg	Otay Mesa Road East Leg	Otay Mesa Road West Leg	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	0	0	0	0

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Emerald Crest
E/W: Otay Mesa Road

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **4:30 PM to 5:30 PM**

Vehicle Counts

	Emerald Crest Northbound			Emerald Crest Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	0	0	0	12	0	0	0	0	0	3	15
4:15 PM	0	0	0	0	0	4	0	0	0	0	0	3	7
4:30 PM	0	0	0	0	0	13	0	0	0	0	0	3	16
4:45 PM	0	0	0	0	0	13	0	0	0	0	0	2	15
5:00 PM	0	0	0	0	0	7	0	0	0	0	0	9	16
5:15 PM	0	0	0	0	0	9	0	0	0	0	0	2	11
5:30 PM	0	0	0	0	0	9	0	0	0	0	0	4	13
5:45 PM	0	0	0	0	0	9	0	0	0	0	0	4	13
TOTAL VOLUMES:	0	0	0	0	0	76	0	0	0	0	0	30	106

PM Peak Hr Begins at: 430 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	42	0	0	0	0	0	16	58

PEAK HR FACTOR:	0.000	0.808	0.000	0.444	0.906

Bicycle Counts

	Emerald Crest Northbound			Emerald Crest Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	2	0	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

Pedestrian Counts

	Emerald Crest North Leg	Emerald Crest South Leg	Otay Mesa Road East Leg	Otay Mesa Road West Leg	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	0	0	0	0

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Corporate Center Drive
E/W: Otay Mesa Road

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **7:45 AM to 8:45 AM**

Vehicle Counts

	Corporate Center Drive Northbound			Corporate Center Drive Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	4	0	13	56	55	0	0	46	5	179
7:15 AM	0	0	0	2	0	6	54	55	0	0	48	2	167
7:30 AM	0	0	0	1	0	10	71	69	0	0	54	8	213
7:45 AM	0	0	0	2	0	12	91	87	0	0	50	17	259
8:00 AM	0	0	0	7	0	22	103	87	0	0	51	11	281
8:15 AM	0	0	0	6	0	26	71	73	0	1	45	4	226
8:30 AM	0	0	0	13	0	28	60	73	0	0	51	6	231
8:45 AM	0	0	0	7	0	23	45	76	0	1	69	18	239
TOTAL VOLUMES:	0	0	0	42	0	140	551	575	0	2	414	71	1795

AM Peak Hr Begins at: 745 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	28	0	88	325	320	0	1	197	38	997

PEAK HR FACTOR:	0.000	0.707	0.849	0.881	0.887

Bicycle Counts

	Corporate Center Drive Northbound			Corporate Center Drive Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	3
TOTAL VOLUMES:	0	0	0	0	0	1	1	0	0	0	3	0	5

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	1	0	0	0	0	0	0	1

Pedestrian Counts

	Corporate Center Drive North Leg	Corporate Center Drive South Leg	Otay Mesa Road East Leg	Otay Mesa Road West Leg	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	1	0	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	1	0	1
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	2	0	1	0	3

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	1	0	0	0	1

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Corporate Center Drive
E/W: Otay Mesa Road

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **4:15 PM to 5:15 PM**

Vehicle Counts

	Corporate Center Drive Northbound			Corporate Center Drive Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	0	22	0	75	52	70	0	2	120	24	365
4:15 PM	0	0	0	33	0	80	49	72	0	4	113	21	372
4:30 PM	0	0	0	31	0	70	39	71	0	5	128	22	366
4:45 PM	0	0	0	27	0	61	46	48	0	5	136	11	334
5:00 PM	0	0	0	26	0	126	27	48	0	5	171	16	419
5:15 PM	0	0	0	13	0	51	27	61	0	1	148	9	310
5:30 PM	0	0	0	15	0	56	18	46	0	0	116	3	254
5:45 PM	0	0	0	8	0	51	26	31	0	2	96	3	217
TOTAL VOLUMES:	0	0	0	175	0	570	284	447	0	24	1028	109	2637

PM Peak Hr Begins at: 415 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	117	0	337	161	239	0	19	548	70	1491

PEAK HR FACTOR:	0.000	0.747	0.826	0.829	0.890

Bicycle Counts

	Corporate Center Drive Northbound			Corporate Center Drive Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Counts

	Corporate Center Drive North Leg	Corporate Center Drive South Leg	Otay Mesa Road East Leg	Otay Mesa Road West Leg	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	1	0	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	0	0	0	0

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Innovative Drive
E/W: Otay Mesa Road

Date: 9/11/18
Day: TUESDAY
Project # 143-18999

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **7:45 AM to 8:45 AM**

Vehicle Counts

	Innovative Drive Northbound			Innovative Drive Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	0	23	0	62	1	0	49	9	144
7:15 AM	0	0	0	0	0	17	0	59	0	0	58	9	143
7:30 AM	0	0	2	0	0	17	0	55	0	0	48	4	126
7:45 AM	0	0	0	0	0	15	0	127	0	0	45	8	195
8:00 AM	0	0	0	0	0	18	0	102	1	0	72	7	200
8:15 AM	0	0	2	0	0	6	0	98	2	0	83	7	198
8:30 AM	0	0	3	0	0	8	0	103	0	0	72	12	198
8:45 AM	0	0	2	0	0	10	0	98	3	0	66	3	182
TOTAL VOLUMES:	0	0	9	0	0	114	0	704	7	0	493	59	1386

AM Peak Hr Begins at: 745 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	5	0	0	47	0	430	3	0	272	34	791

PEAK HR FACTOR:	0.417	0.653	0.852	0.850	0.989

Bicycle Counts

	Innovative Drive Northbound			Innovative Drive Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	1	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	2	0	0	1	2	5

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	0	0	1	0	0	1	2	4

Pedestrian Counts

	Innovative Drive North Leg	Innovative Drive South Leg	Otay Mesa Road East Leg	Otay Mesa Road West Leg	TOTAL
7:00 AM	3	0	0	0	3
7:15 AM	8	0	0	0	8
7:30 AM	1	0	0	0	1
7:45 AM	2	0	0	0	2
8:00 AM	0	0	0	0	0
8:15 AM	4	0	0	0	4
8:30 AM	2	0	0	0	2
8:45 AM	3	0	0	0	3
TOTAL VOLUMES:	23	0	0	0	23

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	8	0	0	0	8

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Innovative Drive
E/W: Otay Mesa Road

Date: 9/11/18
Day: TUESDAY
Project # 143-18999

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **4:30 PM to 5:30 PM**

Vehicle Counts

	Innovative Drive Northbound			Innovative Drive Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	2	0	0	28	0	99	1	0	142	12	284
4:15 PM	0	0	1	0	0	23	0	101	1	0	116	11	253
4:30 PM	0	0	1	0	0	23	0	95	4	0	134	7	264
4:45 PM	0	0	2	0	0	19	0	89	1	0	112	11	234
5:00 PM	0	0	1	0	0	39	0	91	0	0	151	5	287
5:15 PM	0	0	1	0	0	32	0	86	0	0	157	6	282
5:30 PM	0	0	0	0	0	19	0	63	1	0	115	1	199
5:45 PM	0	0	1	0	0	8	0	58	0	0	116	4	187
TOTAL VOLUMES:	0	0	9	0	0	191	0	682	8	0	1043	57	1990

PM Peak Hr Begins at: 430 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	5	0	0	113	0	361	5	0	554	29	1067

PEAK HR FACTOR:	0.625	0.724	0.924	0.894	0.929

Bicycle Counts

	Innovative Drive Northbound			Innovative Drive Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
TOTAL VOLUMES:	0	0	0	1	0	0	0	3	0	0	5	0	9

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	1	0	0	0	1	0	0	1	0	3

Pedestrian Counts

	Innovative Drive North Leg	Innovative Drive South Leg	Otay Mesa Road East Leg	Otay Mesa Road West Leg	TOTAL
4:00 PM	3	0	0	0	3
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	1	0	0	0	1
5:15 PM	2	0	0	0	2
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	7	0	0	0	7

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	3	0	0	0	3

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Heritage Road
E/W: Otay Mesa Road

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **8:00AM to 9:00 AM**

Vehicle Counts

	Heritage Road Northbound			Heritage Road Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	8	24	11	16	24	19	12	5	6	24	4	13	166
7:15 AM	9	26	16	16	21	22	6	4	5	12	8	13	158
7:30 AM	9	26	37	18	19	25	12	6	4	22	2	13	193
7:45 AM	9	38	34	29	31	38	16	4	4	27	6	12	248
8:00 AM	11	31	32	24	26	43	15	5	4	21	5	14	231
8:15 AM	9	26	21	35	34	19	12	11	15	22	7	10	221
8:30 AM	10	44	31	26	32	23	9	7	8	22	5	14	231
8:45 AM	7	36	32	41	26	20	18	10	11	21	6	25	253
TOTAL VOLUMES:	72	251	214	205	213	209	100	52	57	171	43	114	1701

AM Peak Hr Begins at: 800 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	37	137	116	126	118	105	54	33	38	86	23	63	936

PEAK HR FACTOR:	0.853	0.938	0.801	0.827	0.925

Bicycle Counts

	Heritage Road Northbound			Heritage Road Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	1	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	2
7:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	3	0	0	0	0	0	0	0	0	0	0	3
TOTAL VOLUMES:	0	3	1	0	0	0	0	2	0	1	0	2	9

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	3	0	0	0	0	0	0	0	0	0	0	3

Pedestrian Counts

	Heritage Road North Leg	Heritage Road South Leg	Otay Mesa Road East Leg	Otay Mesa Road West Leg	TOTAL
7:00 AM	0	6	0	0	6
7:15 AM	0	4	0	0	4
7:30 AM	0	2	0	0	2
7:45 AM	0	5	0	0	5
8:00 AM	0	1	0	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	4	0	0	4
8:45 AM	0	2	0	0	2
TOTAL VOLUMES:	0	24	0	0	24

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	7	0	0	7

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Heritage Road
E/W: Otay Mesa Road

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **4:15 PM to 5:15 PM**

Vehicle Counts

	Heritage Road Northbound			Heritage Road Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	10	54	39	42	40	18	26	8	13	51	11	56	368
4:15 PM	8	60	49	27	51	21	32	6	13	40	12	44	363
4:30 PM	2	61	31	38	56	11	37	15	10	47	20	52	380
4:45 PM	4	53	37	26	31	13	20	8	9	37	10	61	309
5:00 PM	10	72	38	25	45	22	34	4	11	73	14	66	414
5:15 PM	5	43	28	18	28	23	32	13	16	49	16	70	341
5:30 PM	12	42	27	16	34	10	32	9	6	31	13	43	275
5:45 PM	5	30	17	12	22	13	24	5	10	27	7	39	211
TOTAL VOLUMES:	56	415	266	204	307	131	237	68	88	355	103	431	2661

PM Peak Hr Begins at: 415 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	24	246	155	116	183	67	123	33	43	197	56	223	1466

PEAK HR FACTOR:	0.885	0.871	0.802	0.778	0.885

Bicycle Counts

	Heritage Road Northbound			Heritage Road Southbound			Otay Mesa Road Eastbound			Otay Mesa Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	1	0	0	0	0	1	0	1	0	0	4

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	1	0	0	0	0	0	0	1	0	0	2

Pedestrian Counts

	Heritage Road North Leg	Heritage Road South Leg	Otay Mesa Road East Leg	Otay Mesa Road West Leg	TOTAL
4:00 PM	0	3	0	0	3
4:15 PM	0	2	0	0	2
4:30 PM	1	1	0	1	3
4:45 PM	0	3	0	0	3
5:00 PM	1	5	0	1	7
5:15 PM	0	5	0	0	5
5:30 PM	0	2	0	0	2
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	2	22	0	2	26

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	2	11	0	2	15

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Caliente Avenue
E/W: I-905 WB Ramps

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **7:30AM to 8:30 AM**

Vehicle Counts

	Caliente Avenue Northbound			Caliente Avenue Southbound			I-905 WB Ramps Eastbound			I-905 WB Ramps Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	46	112	0	0	17	89	0	0	0	0	0	8	272
7:15 AM	40	161	0	0	25	125	0	0	0	6	0	11	368
7:30 AM	60	201	0	0	62	137	0	0	0	3	0	12	475
7:45 AM	88	212	0	0	67	122	0	0	0	7	0	19	515
8:00 AM	52	241	0	0	52	113	0	0	0	6	0	14	478
8:15 AM	76	158	0	0	65	97	0	0	0	5	0	14	415
8:30 AM	96	150	0	0	83	86	0	0	0	6	0	7	428
8:45 AM	127	178	0	0	115	98	0	0	0	18	0	9	545
TOTAL VOLUMES:	585	1413	0	0	486	867	0	0	0	51	0	94	3496

AM Peak Hr Begins at: 730 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	276	812	0	0	246	469	0	0	0	21	0	59	1883

PEAK HR FACTOR:	0.907	0.898	0.000	0.769	0.914

Bicycle Counts

	Caliente Avenue Northbound			Caliente Avenue Southbound			I-905 WB Ramps Eastbound			I-905 WB Ramps Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	1	0	0	2	0	0	0	0	0	0	0	3
TOTAL VOLUMES:	0	2	0	0	4	0	0	0	0	0	0	0	6

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Counts

	Caliente Avenue North Leg	Caliente Avenue South Leg	I-905 WB Ramps East Leg	I-905 WB Ramps West Leg	TOTAL
7:00 AM	0	0	0	3	3
7:15 AM	0	0	0	7	7
7:30 AM	0	0	0	14	14
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	21	21
8:15 AM	0	0	0	26	26
8:30 AM	0	0	0	32	32
8:45 AM	0	0	0	18	18
TOTAL VOLUMES:	0	0	0	121	121

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	0	0	61	61

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Caliente Avenue
E/W: I-905 WB Ramps

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **4:00 PM to 5:00 PM**

Vehicle Counts

	Caliente Avenue Northbound			Caliente Avenue Southbound			I-905 WB Ramps Eastbound			I-905 WB Ramps Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	124	194	0	0	79	135	0	0	0	14	1	16	563
4:15 PM	156	274	0	0	53	178	0	0	0	5	1	16	683
4:30 PM	120	184	0	0	36	189	0	0	0	8	2	28	567
4:45 PM	58	138	0	0	52	182	0	0	0	9	0	24	463
5:00 PM	54	123	0	0	38	221	0	0	0	6	1	21	464
5:15 PM	39	130	0	0	29	192	0	0	0	4	0	19	413
5:30 PM	37	118	0	0	29	159	0	0	0	9	0	18	370
5:45 PM	49	116	0	0	42	141	0	0	0	6	0	14	368
TOTAL VOLUMES:	637	1277	0	0	358	1397	0	0	0	61	5	156	3891

PM Peak Hr Begins at: 400 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	458	790	0	0	220	684	0	0	0	36	4	84	2276

PEAK HR FACTOR:	0.726	0.966	0.000	0.816	0.833

Bicycle Counts

	Caliente Avenue Northbound			Caliente Avenue Southbound			I-905 WB Ramps Eastbound			I-905 WB Ramps Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	2	0	0	1	0	0	0	0	0	0	0	4

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

Pedestrian Counts

	Caliente Avenue North Leg	Caliente Avenue South Leg	I-905 WB Ramps East Leg	I-905 WB Ramps West Leg	TOTAL
4:00 PM	0	0	1	91	92
4:15 PM	0	0	0	57	57
4:30 PM	0	0	0	6	6
4:45 PM	0	0	0	14	14
5:00 PM	0	0	0	5	5
5:15 PM	0	0	0	2	2
5:30 PM	0	0	0	9	9
5:45 PM	0	0	0	1	1
TOTAL VOLUMES:	0	0	1	185	186

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	0	1	168	169

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Caliente Avenue
E/W: I-905 EB Ramps

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **8:00AM to 9:00 AM**

Vehicle Counts

	Caliente Avenue Northbound			Caliente Avenue Southbound			I-905 EB Ramps Eastbound			I-905 EB Ramps Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	48	5	15	14	0	125	0	22	0	0	0	229
7:15 AM	0	55	6	16	10	0	135	0	25	0	0	0	247
7:30 AM	0	81	12	15	21	0	171	0	42	0	0	0	342
7:45 AM	0	89	13	45	48	0	179	0	98	0	0	0	472
8:00 AM	0	132	16	23	40	0	197	0	87	0	0	0	495
8:15 AM	0	83	13	33	47	0	162	1	77	0	0	0	416
8:30 AM	0	112	14	10	52	0	133	0	157	0	0	0	478
8:45 AM	0	184	16	23	125	0	97	0	165	0	0	0	610
TOTAL VOLUMES:	0	784	95	180	357	0	1199	1	673	0	0	0	3289

AM Peak Hr Begins at: 800 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	511	59	89	264	0	589	1	486	0	0	0	1999

PEAK HR FACTOR:	0.713	0.596	0.928	0.000	0.819

Bicycle Counts

	Caliente Avenue Northbound			Caliente Avenue Southbound			I-905 EB Ramps Eastbound			I-905 EB Ramps Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
TOTAL VOLUMES:	0	2	0	0	3	0	0	0	0	0	0	0	5

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	1	0	0	2	0	0	0	0	0	0	0	3

Pedestrian Counts

	Caliente Avenue North Leg	Caliente Avenue South Leg	I-905 EB Ramps East Leg	I-905 EB Ramps West Leg	TOTAL
7:00 AM	0	0	0	7	7
7:15 AM	0	0	0	7	7
7:30 AM	0	0	0	10	10
7:45 AM	0	0	0	4	4
8:00 AM	0	0	0	15	15
8:15 AM	0	0	0	20	20
8:30 AM	0	0	0	14	14
8:45 AM	0	0	0	33	33
TOTAL VOLUMES:	0	0	0	110	110

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	0	0	82	82

PO Box 1178
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951-268-6268

Location: San Diego
N/S: Caliente Avenue
E/W: I-905 EB Ramps

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **4:00 PM to 5:00 PM**

Vehicle Counts

	Caliente Avenue Northbound			Caliente Avenue Southbound			I-905 EB Ramps Eastbound			I-905 EB Ramps Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	159	11	24	67	0	148	2	126	0	0	0	537
4:15 PM	0	288	43	21	49	0	151	1	96	0	0	0	649
4:30 PM	0	155	16	23	30	0	152	1	52	0	0	0	429
4:45 PM	0	79	6	30	24	0	114	0	48	0	0	0	301
5:00 PM	0	65	3	25	25	0	130	0	45	0	0	0	293
5:15 PM	0	47	3	15	24	0	115	0	45	0	0	0	249
5:30 PM	0	47	2	13	16	0	113	0	50	0	0	0	241
5:45 PM	0	65	3	18	36	0	100	0	68	0	0	0	290
TOTAL VOLUMES:	0	905	87	169	271	0	1023	4	530	0	0	0	2989

PM Peak Hr Begins at: 400 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	681	76	98	170	0	565	4	322	0	0	0	1916

PEAK HR FACTOR:	0.572	0.736	0.807	0.000	0.738

Bicycle Counts

	Caliente Avenue Northbound			Caliente Avenue Southbound			I-905 EB Ramps Eastbound			I-905 EB Ramps Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	0	0	0	0	0	0	0	0	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Counts

	Caliente Avenue North Leg	Caliente Avenue South Leg	I-905 EB Ramps East Leg	I-905 EB Ramps West Leg	TOTAL
4:00 PM	0	0	0	76	76
4:15 PM	0	0	1	93	94
4:30 PM	0	0	0	5	5
4:45 PM	0	0	0	13	13
5:00 PM	0	0	0	7	7
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	12	12
5:45 PM	0	0	0	3	3
TOTAL VOLUMES:	0	0	1	209	210

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	0	1	187	188

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Caliente Avenue
E/W: Airway Road

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **7:00 AM to 9:00 AM**
Peak Hour: **8:00AM to 9:00 AM**

Vehicle Counts

	Caliente Avenue Northbound			Caliente Avenue Southbound			Airway Road Eastbound			Airway Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	2	0	14	5	18	38	0	1	0	0	18	96
7:15 AM	0	2	1	4	7	26	46	1	0	0	1	19	107
7:30 AM	1	10	0	6	15	46	60	0	1	0	0	23	162
7:45 AM	2	33	1	13	55	97	81	2	2	2	0	14	302
8:00 AM	1	31	0	11	42	71	68	0	1	0	0	18	243
8:15 AM	0	32	0	7	46	71	65	0	2	0	0	12	235
8:30 AM	0	41	0	5	71	140	112	0	2	0	1	13	385
8:45 AM	3	91	0	10	118	143	120	1	2	0	0	12	500
TOTAL VOLUMES:	7	242	2	70	359	612	590	4	11	2	2	129	2030

AM Peak Hr Begins at: 800 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	4	195	0	33	277	425	365	1	7	0	1	55	1363

PEAK HR FACTOR:	0.529	0.678	0.758	0.778	0.682

Bicycle Counts

	Caliente Avenue Northbound			Caliente Avenue Southbound			Airway Road Eastbound			Airway Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	1	1	0	0	0	0	0	0	3
TOTAL VOLUMES:	0	1	0	0	2	1	1	0	0	0	0	0	5

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	1	0	0	1	1	0	0	0	0	0	0	3

Pedestrian Counts

	Caliente Avenue North Leg	Caliente Avenue South Leg	Airway Road East Leg	Airway Road West Leg	TOTAL
7:00 AM	0	1	0	2	3
7:15 AM	0	1	0	27	28
7:30 AM	1	2	1	8	12
7:45 AM	0	2	0	23	25
8:00 AM	0	1	0	46	47
8:15 AM	0	1	0	38	39
8:30 AM	0	1	0	29	30
8:45 AM	0	7	0	38	45
TOTAL VOLUMES:	1	16	1	211	229

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	10	0	151	161

PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: Caliente Avenue
E/W: Airway Road

Date: 1/18/18
Day: THURSDAY
Project # 143-18041

TURNING MOVEMENT COUNT

Count Period: **4:00 PM to 6:00 PM**
Peak Hour: **4:00 PM to 5:00 PM**

Vehicle Counts

	Caliente Avenue Northbound			Caliente Avenue Southbound			Airway Road Eastbound			Airway Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	89	4	41	90	60	65	2	2	2	1	51	407
4:15 PM	3	158	2	21	55	39	115	2	3	1	1	34	434
4:30 PM	2	44	0	14	14	44	99	1	1	0	0	7	226
4:45 PM	0	17	0	16	12	49	47	0	1	1	0	18	161
5:00 PM	1	11	1	23	5	42	44	0	0	0	0	13	140
5:15 PM	2	9	0	16	7	43	39	1	1	0	0	5	123
5:30 PM	0	4	0	18	1	57	31	1	0	1	1	8	122
5:45 PM	0	6	0	25	4	76	58	0	1	0	1	10	181
TOTAL VOLUMES:	8	338	7	174	188	410	498	7	9	5	4	146	1794

PM Peak Hr Begins at: 400 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	5	308	6	92	171	192	326	5	7	4	2	110	1228

PEAK HR FACTOR:	0.489	0.596	0.704	0.537	0.707

Bicycle Counts

	Caliente Avenue Northbound			Caliente Avenue Southbound			Airway Road Eastbound			Airway Road Westbound			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	1	0	0	0	0	0	1

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Counts

	Caliente Avenue North Leg	Caliente Avenue South Leg	Airway Road East Leg	Airway Road West Leg	TOTAL
4:00 PM	1	92	20	132	245
4:15 PM	1	8	1	27	37
4:30 PM	0	7	0	12	19
4:45 PM	0	1	0	5	6
5:00 PM	0	4	2	3	9
5:15 PM	0	0	0	1	1
5:30 PM	0	1	0	3	4
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	2	113	23	183	321

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	2	108	21	176	307

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

City of San Diego
Caliente Avenue
B/ Interstate 905 Eastbound - Airway Road

File Name 008
Site Code: 143-18041
24 Hour Directional Volume Count

Date:	Northbound				Southbound					
1/18/2018	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	1	27			5	30				
12:15	2	45			2	33				
12:30	1	26			2	27				
12:45	2	25	6	123	1	32	10	122	16	245
1:00	1	45			4	33				
1:15	1	41			3	49				
1:30	1	46			0	33				
1:45	0	52	3	184	0	41	7	156	10	340
2:00	0	46			1	53				
2:15	1	63			3	39				
2:30	2	40			1	51				
2:45	0	56	3	205	0	56	5	199	8	404
3:00	1	46			3	72				
3:15	2	54			3	81				
3:30	1	62			1	101				
3:45	1	74	5	236	2	165	9	419	14	655
4:00	4	221			0	188				
4:15	8	294			2	111				
4:30	17	157			1	72				
4:45	13	82	42	754	1	76	4	447	46	1201
5:00	26	67			4	66				
5:15	25	55			4	66				
5:30	22	45			4	74				
5:45	31	73	104	240	7	104	19	310	123	550
6:00	35	75			13	98				
6:15	31	78			11	63				
6:30	41	44			30	50				
6:45	46	41	153	238	31	38	85	249	238	487
7:00	58	25			34	38				
7:15	73	39			37	32				
7:30	93	27			71	38				
7:45	130	20	354	111	162	33	304	141	658	252
8:00	116	16			125	23				
8:15	109	13			128	23				
8:30	165	14			223	23				
8:45	232	7	622	50	224	29	700	98	1322	148
9:00	148	13			109	16				
9:15	49	7			44	27				
9:30	43	13			22	21				
9:45	30	4	270	37	36	9	211	73	481	110
10:00	34	3			18	12				
10:15	31	13			30	19				
10:30	31	5			27	12				
10:45	37	3	133	24	30	5	105	48	238	72
11:00	42	7			34	6				
11:15	32	0			34	10				
11:30	33	4			35	6				
11:45	43	0	150	11	34	9	137	31	287	42
Totals	1845	2213			1596	2293				
Combined Totals		4058				3889				
ADT										7947
AM Peak Hour	815	AM			800	AM				
Volume	654				700					
P.H.F.	0.705				0.781					
PM Peak Hour		400	PM			330	PM			
Volume		754				565				
P.H.F.		0.641				0.751				
Percentage	45.5%	54.5%			41.0%	59.0%				

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878

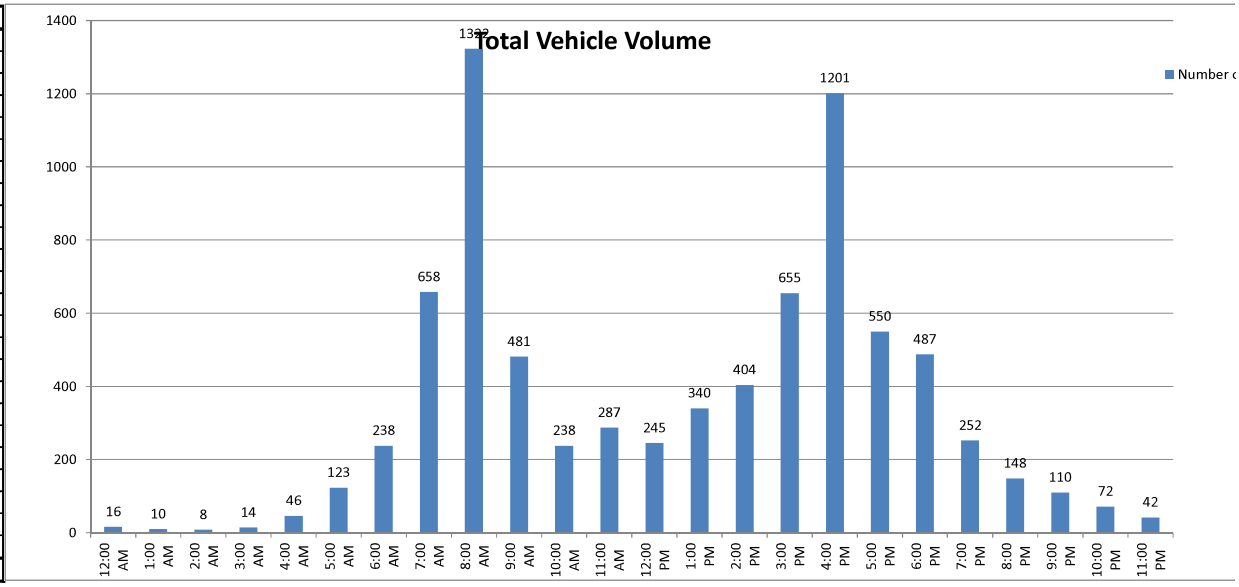
24 Hour Volume Plot

Caliente Avenue

B/ Interstate 905 Eastbound - Airway Road

1/18/2018

Start Time	1/18/2018
12:00 AM	16
1:00 AM	10
2:00 AM	8
3:00 AM	14
4:00 AM	46
5:00 AM	123
6:00 AM	238
7:00 AM	658
8:00 AM	1322
9:00 AM	481
10:00 AM	238
11:00 AM	287
12:00 PM	245
1:00 PM	340
2:00 PM	404
3:00 PM	655
4:00 PM	1201
5:00 PM	550
6:00 PM	487
7:00 PM	252
8:00 PM	148
9:00 PM	110
10:00 PM	72
11:00 PM	42
Total	7947



Volumes represent the combined totals for both directions

WEDMESDAY - SEPTEMBER 29, 2021 AREA: OTEY MESA PROJECT: ETD2101001-01

Ocean View Hills Parkway – between Hidden Trails Road and Otay Mesa Road

AM	NB		SB		EB	WB		PM	NB		SB		EB	WB	
00:00	15		16					12:00	94		57				
00:15	22		7					12:15	81		66				
00:30	12		3					12:30	74		65				
00:45	13	62	5	31			93	12:45	63	312	57	245			557
01:00	9		4					13:00	80		75				
01:15	7		4					13:15	87		61				
01:30	10		7					13:30	63		85				
01:45	5	31	1	16			47	13:45	90	320	58	279			599
02:00	9		6					14:00	93		77				
02:15	7		3					14:15	81		77				
02:30	6		5					14:30	121		86				
02:45	7	29	3	17			46	14:45	99	394	82	322			716
03:00	10		6					15:00	105		49				
03:15	7		6					15:15	135		59				
03:30	9		6					15:30	156		81				
03:45	3	29	10	28			57	15:45	135	531	68	257			788
04:00	4		9					16:00	144		72				
04:15	4		14					16:15	96		70				
04:30	6		7					16:30	121		66				
04:45	7	21	15	45			66	16:45	122	483	58	266			749
05:00	9		20					17:00	139		71				
05:15	10		35					17:15	136		75				
05:30	16		34					17:30	128		71				
05:45	8	43	42	131			174	17:45	117	520	67	284			804
06:00	17		41					18:00	111		71				
06:15	20		46					18:15	110		70				
06:30	23		64					18:30	106		67				
06:45	26	86	53	204			290	18:45	82	409	63	271			680
07:00	39		55					19:00	93		47				
07:15	34		61					19:15	83		50				
07:30	38		90					19:30	67		72				
07:45	42	153	81	287			440	19:45	75	318	63	232			550
08:00	33		50					20:00	66		38				
08:15	44		51					20:15	71		36				
08:30	54		60					20:30	66		50				
08:45	52	183	63	224			407	20:45	58	261	24	148			409
09:00	41		64					21:00	52		31				
09:15	43		54					21:15	60		30				
09:30	48		66					21:30	36		26				
09:45	58	190	62	246			436	21:45	54	202	17	104			306
10:00	57		49					22:00	39		32				
10:15	55		57					22:15	34		22				
10:30	59		55					22:30	26		17				
10:45	68	239	49	210			449	22:45	24	123	14	85			208
11:00	75		64					23:00	21		12				
11:15	71		67					23:15	25		7				
11:30	79		68					23:30	18		9				
11:45	73	298	73	272			570	23:45	20	84	10	38			122
Total Vol.		1364		1711			**3075**			3957		2531			**6488**

Daily Totals

NB	SB	EB	WB	**Combined**
5321	4242			**9563**

	AM			**PM**		
Split %	44.4%	55.6%	**32.2%**	61.0%	39.0%	**67.8%**
Peak Hour	11:30	07:00	**11:30**	15:15	14:00	**15:15**
Volume	327	287	**591**	570	322	**850**
P.H.F.	0.87	0.80	**0.98**	0.90	0.94	**0.90**

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

WEDMESDAY - SEPTEMBER 29, 2021 AREA: OTEY MESA PROJECT: ETD2101001-01

Caliente Road – between Otay Mesa Road and SR-905 WB Ramp

AM	NB		SB		EB	WB		PM	NB		SB		EB	WB	
00:00	23		19					12:00	144		162				
00:15	31		15					12:15	158		171				
00:30	14		7					12:30	140		173				
00:45	21	89	5	46			135	12:45	152	594	173	679			1273
01:00	17		14					13:00	167		161				
01:15	13		14					13:15	143		173				
01:30	20		10					13:30	159		192				
01:45	13	63	7	45			108	13:45	163	632	178	704			1336
02:00	18		7					14:00	130		204				
02:15	14		10					14:15	172		192				
02:30	15		19					14:30	183		206				
02:45	14	61	10	46			107	14:45	175	660	182	784			1444
03:00	17		12					15:00	196		193				
03:15	21		30					15:15	160		196				
03:30	19		16					15:30	176		262				
03:45	16	73	22	80			153	15:45	167	699	174	825			1524
04:00	16		18					16:00	198		213				
04:15	13		35					16:15	156		230				
04:30	26		22					16:30	171		203				
04:45	31	86	40	115			201	16:45	164	689	199	845			1534
05:00	33		43					17:00	161		291				
05:15	41		78					17:15	155		201				
05:30	46		76					17:30	152		188				
05:45	62	182	97	294			476	17:45	141	609	167	847			1456
06:00	66		88					18:00	124		161				
06:15	66		103					18:15	133		166				
06:30	83		130					18:30	112		127				
06:45	124	339	99	420			759	18:45	103	472	129	583			1055
07:00	140		122					19:00	99		110				
07:15	126		124					19:15	86		99				
07:30	139		136					19:30	78		117				
07:45	172	577	119	501			1078	19:45	79	342	101	427			769
08:00	140		97					20:00	58		71				
08:15	132		110					20:15	66		59				
08:30	136		137					20:30	74		65				
08:45	157	565	117	461			1026	20:45	60	258	51	246			504
09:00	175		150					21:00	52		50				
09:15	160		129					21:15	56		36				
09:30	128		126					21:30	38		35				
09:45	172	635	129	534			1169	21:45	42	188	24	145			333
10:00	146		148					22:00	39		31				
10:15	118		157					22:15	43		36				
10:30	147		137					22:30	31		38				
10:45	144	555	135	577			1132	22:45	39	152	34	139			291
11:00	140		168					23:00	25		16				
11:15	148		168					23:15	24		8				
11:30	188		119					23:30	21		15				
11:45	156	632	160	615			1247	23:45	28	98	23	62			160
Total Vol.		3857		3734			**7591**			5393		6286			**11679**

Daily Totals

NB	SB	EB	WB	**Combined**
9250	10020			**19270**

	AM			**PM**		
Split %	50.8%	49.2%	**39.4%**	46.2%	53.8%	**60.6%**
Peak Hour	11:30	11:45	**11:45**	14:15	16:15	**15:30**
Volume	646	666	**1264**	726	923	**1576**
P.H.F.	0.86	0.96	**0.96**	0.96	0.79	**0.90**

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

WEDMESDAY - SEPTEMBER 29, 2021 AREA: OTEY MESA PROJECT: ETD2101001-01

Caliente Road – between SR-905 WB Ramp and SR-905 EB Ramp

AM	NB		SB		EB	WB		PM	NB		SB		EB	WB	
00:00	16		5					12:00	179		20				
00:15	28		2					12:15	158		43				
00:30	18		4					12:30	162		40				
00:45	21	83	1	12			95	12:45	160	659	47	150			809
01:00	13		1					13:00	173		54				
01:15	17		3					13:15	175		42				
01:30	16		1					13:30	157		54				
01:45	14	60	3	8			68	13:45	175	680	43	193			873
02:00	16		1					14:00	169		48				
02:15	18		3					14:15	167		63				
02:30	11		2					14:30	183		52				
02:45	13	58	5	11			69	14:45	180	699	53	216			915
03:00	15		8					15:00	198		60				
03:15	24		6					15:15	203		58				
03:30	24		2					15:30	186		67				
03:45	22	85	4	20			105	15:45	202	789	65	250			1039
04:00	22		1					16:00	216		65				
04:15	17		6					16:15	172		81				
04:30	28		5					16:30	172		44				
04:45	43	110	4	16			126	16:45	170	730	57	247			977
05:00	53		5					17:00	154		71				
05:15	58		10					17:15	150		57				
05:30	56		17					17:30	162		53				
05:45	115	282	21	53			335	17:45	149	615	51	232			847
06:00	100		6					18:00	148		36				
06:15	118		24					18:15	138		57				
06:30	134		19					18:30	127		42				
06:45	190	542	15	64			606	18:45	132	545	35	170			715
07:00	178		25					19:00	121		30				
07:15	158		28					19:15	117		23				
07:30	165		40					19:30	102		34				
07:45	222	723	52	145			868	19:45	63	403	40	127			530
08:00	161		27					20:00	72		35				
08:15	155		25					20:15	80		26				
08:30	149		27					20:30	70		25				
08:45	176	641	31	110			751	20:45	55	277	25	111			388
09:00	170		48					21:00	66		24				
09:15	142		34					21:15	54		16				
09:30	156		38					21:30	38		13				
09:45	150	618	30	150			768	21:45	38	196	11	64			260
10:00	144		25					22:00	35		16				
10:15	130		31					22:15	32		10				
10:30	139		21					22:30	28		13				
10:45	153	566	28	105			671	22:45	23	118	13	52			170
11:00	147		43					23:00	16		3				
11:15	149		35					23:15	20		0				
11:30	145		25					23:30	16		6				
11:45	163	604	30	133			737	23:45	21	73	8	17			90
Total Vol.		4372		827			**5199**			5784		1829			**7613**

Daily Totals

NB	SB	EB	WB	**Combined**
10156	2656			**12812**

	AM			**PM**		
Split %	84.1%	15.9%	**40.6%**	76.0%	24.0%	**59.4%**
Peak Hour	07:00	08:45	**07:00**	15:15	15:30	**15:15**
Volume	723	151	**868**	807	278	**1062**
P.H.F.	0.81	0.79	**0.79**	0.98	0.86	**0.94**

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 09/29/21 WEDNESDAY **AREA:** OTAY MESA

JOB #: ETD21-1001-01 **LOCATION:** OTAY MESA RD - CALLENTE TO EMERALD CREST

AM	EASTBOUND							WESTBOUND							PM	EASTBOUND							WESTBOUND						
TIME	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL
0:00	11			1			12	12						12	12:00	145	11	1	2			159	168	12	1	8			189
0:15	14		1				15	12	1					13	12:15	143	5	2	4			154	174	7	2	2	1		186
0:30	8						8	6		1				7	12:30	124	7	1	4			136	158	9	6	7			180
0:45	13						13	11						11	12:45	134	7	3	4		2	150	148	3	3	5	1		160
1:00	12						12	14		2				16	13:00	140	5	1	4			150	150	7	1	6			164
1:15	11						11	14		2				16	13:15	135	5	3	4		1	148	176	4	1	10	1		192
1:30	16						16	13						13	13:30	124	8		3			135	132	14		6			152
1:45	11			1			12	8	1					9	13:45	136	3		7	1	2	149	171	5	2	5			183
2:00	11			2			13	4	1		1			6	14:00	131	4	1	4		2	142	203	8	2	6			219
2:15	12						12	10						10	14:15	128	6				1	135	158	6	1	7			172
2:30	11						11	13		1	1			15	14:30	116	2		3		1	122	164	11	1	2	1		179
2:45	9						9	9						9	14:45	146	4	2	2		1	155	152	11	1	6		2	172
3:00	12						12	12		3	3	2		20	15:00	128	6				1	135	214	9	1	2	1		227
3:15	19						19	20		2				22	15:15	143	6		1		1	151	217	10		2		1	230
3:30	15						15	12	1	1	2			16	15:30	134	4	3	4		1	146	264	9		5	1		279
3:45	20						20	11	1					12	15:45	135	3	2	4			144	185	12	1	7		1	206
4:00	17						17	9		3				12	16:00	126	4				1	131	195	8		3			206
4:15	9		2	2		1	14	11	2	2	3			18	16:15	97	5	1	4		1	108	203	4		4			211
4:30	19		4	1			24	12	2		1			15	16:30	110	5		1		1	117	197	5		1			203
4:45	21		3	5		2	31	7	2	1	5		1	16	16:45	82	3		1		1	87	194	6	1	3			204
5:00	26	4	1	4			35	13	5		1			19	17:00	64	1	2	3		1	71	280	4	1	1			286
5:15	30	2	3	3		1	39	27	1	2	2		1	33	17:15	75	2	1	1			79	160	4	1				165
5:30	27	5	1	8			41	25	3	3	2			33	17:30	72	4		2		2	80	167	1	3				171
5:45	74			6		2	82	16	2	4	2		1	25	17:45	85	1		1			87	158	6	3	4			171
6:00	57	3	3	1			64	32	3	2	2		1	40	18:00	80	2		2		1	85	162	4	1	3			170
6:15	63	4		6		1	74	28	3	5	4		1	41	18:15	63	1		1			65	125	3	1	3		1	133
6:30	75	5	4	3			87	46	1	2	3		2	54	18:30	61			1		1	63	123	2		3			128
6:45	122	5	6	7		1	141	40	4	4	2		1	51	18:45	65			1			66	98			4		1	103
7:00	108	9	5	2	1	1	126	44	6	6	4	1	1	62	19:00	52			2		1	55	95	2	1	1		1	100
7:15	103	6	3	4			116	50	3	4	7			64	19:15	56			1			57	93	2		1			96
7:30	127	4	3	3		1	138	49	4	2	8		1	64	19:30	50			3			53	95	1					96
7:45	163	9	4	6		1	183	63	4	2	7			76	19:45	39	4		4			47	79	2		3			84
8:00	121	4	2	9			136	45	7	4	5		1	62	20:00	33						33	64			3			67
8:15	118	6	2	6		1	133	66	7	4	8		1	86	20:15	25						25	53			1			54
8:30	122	9	5	2		1	139	92	7	4	3		1	107	20:30	37						37	41			2			43
8:45	134	6	6	2		1	149	83	3	2	5			93	20:45	27						27	37	1		1			39
9:00	142	7	7	4			160	103	3	6	6		1	119	21:00	20	1	1				22	37	2		1			40
9:15	134	4	4	4		1	147	104	4	5	7			120	21:15	23						23	29	2					31
9:30	113	4	4	3			124	88	9	3	8			108	21:30	22	1					23	20			1			21
9:45	133	5	5	2			145	121	3	3	6			133	21:45	17						17	28			1			29
10:00	106	7	5	5			123	118	2	2	10		1	133	22:00	18	1		1			20	23	1		1			25
10:15	101	9	1	1		1	113	125	5	5	2			137	22:15	23						23	27						27
10:30	114	9	4	4			131	117	9	4	7			137	22:30	19			1			20	28						28
10:45	114	5	3	3		2	127	122	5	1	6		1	135	22:45	8			3			11	23	1					24
11:00	118	7		2			127	164	6	3	5			178	23:00	12						12	12						12
11:15	125	6		2		1	134	153	6	3	8		1	171	23:15	10						10	11						11
11:30	139	11		11		1	162	131	11	2	6		1	151	23:30	10						10	14	1					15
11:45	134	3					137	147	7	1	6			161	23:45	12			1			13	12			1			13
TOTAL	3,214	158	91	125	1	20	3,609	2,432	144	106	158	3	18	2,861	TOTAL	3,635	121	24	84	1	23	3,888	5,717	199	35	132	6	7	6,096
				AM PEAK HOUR			8:30 AM				AM PEAK HOUR			11:00 AM					PM PEAK HOUR			12:00 PM				PM PEAK HOUR			3:00 PM
				AM PEAK VOLUME			595				AM PEAK VOLUME			661					PM PEAK VOLUME			599				PM PEAK VOLUME			942

CLASS 1	CLASS 4
CLASS 2	CLASS 5
CLASS 3	CLASS 6

DAILY TOTAL	6,849	279	115	209	2	43	7,497	8,149	343	141	290	9	25	8,957
% OF TOTAL	91.4%	3.7%	1.5%	2.8%	0.0%	0.6%	100.0%	91.0%	3.8%	1.6%	3.2%	0.1%	0.3%	100.0%

WEDMESDAY - SEPTEMBER 29, 2021 AREA: OTEY MESA PROJECT: ETD2101001-01

Otay Mesa Road – between Emerald Crest Court and Corporate Center Drive

AM	NB	SB	EB		WB			PM	NB	SB	EB		WB		
00:00			12		11			12:00			159		168		
00:15			15		12			12:15			154		165		
00:30			8		7			12:30			136		160		
00:45			13	48	10	40	88	12:45			150	599	142	635	1234
01:00			12		15			13:00			150		146		
01:15			11		15			13:15			148		171		
01:30			16		12			13:30			135		135		
01:45			12	51	8	50	101	13:45			149	582	163	615	1197
02:00			13		6			14:00			142		195		
02:15			12		9			14:15			135		153		
02:30			12		14			14:30			122		159		
02:45			9	46	8	37	83	14:45			155	554	153	660	1214
03:00			12		18			15:00			135		202		
03:15			19		20			15:15			151		204		
03:30			15		15			15:30			146		248		
03:45			20	66	11	64	130	15:45			144	576	183	837	1413
04:00			17		11			16:00			131		192		
04:15			14		16			16:15			108		198		
04:30			24		14			16:30			117		188		
04:45			31	86	15	56	142	16:45			87	443	190	768	1211
05:00			35		17			17:00			71		265		
05:15			39		30			17:15			79		154		
05:30			41		30			17:30			80		162		
05:45			82	197	23	100	297	17:45			87	317	158	739	1056
06:00			64		36			18:00			85		151		
06:15			74		37			18:15			65		118		
06:30			87		48			18:30			63		114		
06:45			141	366	46	167	533	18:45			66	279	92	475	754
07:00			126		49			19:00			55		89		
07:15			116		55			19:15			57		86		
07:30			138		52			19:30			53		86		
07:45			183	563	62	218	781	19:45			47	212	75	336	548
08:00			136		54			20:00			33		60		
08:15			133		76			20:15			25		48		
08:30			139		97			20:30			37		39		
08:45			149	557	83	310	867	20:45			27	122	35	182	304
09:00			160		106			21:00			22		36		
09:15			147		107			21:15			23		28		
09:30			124		96			21:30			23		19		
09:45			145	576	118	427	1003	21:45			17	85	26	109	194
10:00			123		118			22:00			20		23		
10:15			113		122			22:15			23		24		
10:30			131		122			22:30			20		25		
10:45			127	494	120	482	976	22:45			11	74	22	94	168
11:00			127		158			23:00			12		11		
11:15			134		152			23:15			10		10		
11:30			162		134			23:30			10		14		
11:45			137	560	143	587	1147	23:45			13	45	12	47	92
Total Vol.			3610		2538		**6148**				3888		5497		**9385**

Daily Totals

NB	SB	EB	WB	Combined
		7498	8035	**15533**

	AM			PM		
Split %	58.7%	41.3%	**39.6%**	41.4%	58.6%	**60.4%**
Peak Hour	11:30	11:45	**11:30**	12:00	16:15	**15:00**
Volume	612	636	**1222**	599	841	**1413**
P.H.F.	0.94	0.95	**0.93**	0.94	0.79	**0.90**

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

WEDMESDAY - SEPTEMBER 29, 2021 AREA: OTEY MESA PROJECT: ETD2101001-01

Otay Mesa Road – between Corporate Center Drive and Innovative Drive

AM	NB	SB	EB		WB			PM	NB	SB	EB		WB		
00:00			11		10			12:00			121		127		
00:15			11		9			12:15			115		136		
00:30			6		6			12:30			107		136		
00:45			9	37	9	34	71	12:45			93	436	111	510	946
01:00			8		3			13:00			117		118		
01:15			6		9			13:15			120		146		
01:30			14		12			13:30			111		111		
01:45			11	39	10	34	73	13:45			122	470	141	516	986
02:00			8		6			14:00			104		161		
02:15			10		8			14:15			101		131		
02:30			7		10			14:30			79		130		
02:45			7	32	12	36	68	14:45			119	403	124	546	949
03:00			10		18			15:00			107		147		
03:15			18		18			15:15			116		144		
03:30			8		14			15:30			134		150		
03:45			14	50	10	60	110	15:45			123	480	143	584	1064
04:00			11		8			16:00			116		148		
04:15			9		18			16:15			96		134		
04:30			14		10			16:30			92		132		
04:45			16	50	15	51	101	16:45			78	382	136	550	932
05:00			26		15			17:00			78		177		
05:15			28		30			17:15			77		134		
05:30			29		27			17:30			69		119		
05:45			49	132	16	88	220	17:45			71	295	115	545	840
06:00			46		31			18:00			80		125		
06:15			44		40			18:15			69		109		
06:30			61		43			18:30			51		104		
06:45			81	232	45	159	391	18:45			63	263	83	421	684
07:00			76		40			19:00			50		73		
07:15			70		64			19:15			50		71		
07:30			89		58			19:30			43		70		
07:45			128	363	47	209	572	19:45			37	180	64	278	458
08:00			99		49			20:00			29		48		
08:15			92		71			20:15			25		39		
08:30			113		98			20:30			31		30		
08:45			107	411	73	291	702	20:45			19	104	31	148	252
09:00			120		89			21:00			18		28		
09:15			111		76			21:15			23		25		
09:30			112		79			21:30			22		19		
09:45			114	457	99	343	800	21:45			15	78	24	96	174
10:00			81		92			22:00			19		22		
10:15			90		107			22:15			21		22		
10:30			106		109			22:30			19		21		
10:45			108	385	113	421	806	22:45			8	67	22	87	154
11:00			99		110			23:00			12		10		
11:15			109		135			23:15			9		8		
11:30			126		98			23:30			7		7		
11:45			98	432	125	468	900	23:45			9	37	12	37	74
Total Vol.				2620		2194	**4814**					3195		4318	**7513**

Daily Totals

NB	SB	EB	WB	**Combined**
		5815	6512	**12327**

	AM			**PM**		
Split %	54.4%	45.6%	**39.1%**	42.5%	57.5%	**60.9%**
Peak Hour	11:30	11:45	**11:45**	15:15	15:15	**15:15**
Volume	460	524	**965**	489	585	**1074**
P.H.F.	0.91	0.96	**0.96**	0.91	0.98	**0.95**

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 09/29/21 WEDNESDAY **AREA:** OTAY MESA
JOB #: ETD21-1001-01 **LOCATION:** OTAY MESA RD - INNOTIVE TO HERITGAGE

AM	EASTBOUND							WESTBOUND						
TIME	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL
0:00	11						11	9	1					10
0:15	9			1			10	7			1			8
0:30	9						9	3		1				4
0:45	8						8	8			1			9
1:00	8						8	3						3
1:15	6			1			7	11	1					12
1:30	15						15	11	1					12
1:45	8	2					10	12	2					14
2:00	7						7	6	1					7
2:15	9		1				10	7			1			8
2:30	6			1			7	11			1			12
2:45	4	1		2			7	15	1					16
3:00	11						11	19	1					20
3:15	12	1		2			15	20						20
3:30	7	1		1			9	12	1					13
3:45	10	1		1	1		13	11	1		1			13
4:00	7	1		1		1	10	10		1				11
4:15	7		1	1		1	10	20						20
4:30	11		1				12	7		1	1			9
4:45	12		1			2	15	16	1		2			19
5:00	17	2	1	2			22	14		2	1		1	18
5:15	16	1		3			20	30	2					32
5:30	31		1	2		1	35	29		2	2			33
5:45	45		1	2			48	16	2	4	1			23
6:00	35	1	1	2		1	40	31			1		1	33
6:15	31	2	2	5			40	43	2		3		1	49
6:30	54	1	2	2			59	37	4	1	2		1	45
6:45	63	2	3	3		1	72	46	1	1	3		1	52
7:00	54	9	3	3			69	42	5		5		1	53
7:15	53	5	2	5			65	67	2	5	1			75
7:30	75	5	4	3			87	57	5	2	3		1	68
7:45	107	10	1	2		1	121	30	13	8	6			57
8:00	85	8	5	2			100	52	7	3	2			64
8:15	84	5	5	3		1	98	74	6	2	3		1	86
8:30	82	15	7	5			109	85	8	5	5			103
8:45	74	15	2	5		1	97	65	9	5	5		1	85
9:00	102	5	6	5			118	79	8	5	5			97
9:15	103	11	2	6		1	123	68	11	4	6		1	90
9:30	98	9	3	5			115	67	10	7	5			89
9:45	87	7	4	7		1	106	99	5	4	7		1	116
10:00	79	7	1	5			92	74	8	3	5			90
10:15	78	11	3	5		2	99	91	8	9	5		2	115
10:30	81	14	6	3			104	119	7	1	3			130
10:45	106	11	5	7		1	130	103	10	5	6		1	125
11:00	101	4	3	6			114	89	15	5	6			115
11:15	115						115	125						125
11:30	127						127	99						99
11:45	81	12	2	9		2	106	117	14	3	2		1	137
TOTAL	2,241	179	79	118	1	17	2,635	2,066	173	89	101	0	15	2,444
				AM PEAK HOUR			10:45 AM				AM PEAK HOUR			10:30 AM
				AM PEAK VOLUME			486				AM PEAK VOLUME			495

PM	EASTBOUND							WESTBOUND						
Time	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL
12:00	97	11	9	9	1	1	128	124	13	5	5	1	1	149
12:15	97	11	5	5			118	127	9	2	8			146
12:30	90	8	5	5		1	109	118	11	2	7			138
12:45	92	9	2	3		1	107	94	12	5	7	1	1	120
13:00	92	5	6	8		1	112	103	10	3	6		1	123
13:15	104	12	4	2			122	121	11	7	9			148
13:30	92	11	1	5		1	110	98	13	1	7		1	120
13:45	100	13	6	9		1	129	147	6	3	6		1	163
14:00	83	12	4	10		1	110	156	13	5	10		1	185
14:15	91	10	4	4		3	112	118	9	3	4		1	135
14:30	58	10	2	9		2	81	102	17	6	9		1	135
14:45	113	9	2	7		1	132	95	15	3	7		1	121
15:00	96	10		6	1	2	115	137	12	4	6		2	161
15:15	90	13	5	10		1	119	126	13	5	10		1	155
15:30	121	10		12		1	144	124	14	3	12		3	156
15:45	113	13	2	8		1	137	136	17	3	8			164
16:00	95	14	1	5		2	117	128	15	4	8		1	156
16:15	91	8	1	5		2	107	118	17	2	5	1		143
16:30	81	4	6	4			95	124	11	2	8			145
16:45	70	7	1	5		3	86	131	6	3	3		1	144
17:00	78	7	3	3	1	1	93	165	8	3	2		1	179
17:15	65	5	2	5		2	79	121	5	2	7			135
17:30	59	9	1			2	71	108	2	1	5			116
17:45	55	9	2	3		1	70	100	3	4	6		1	114
18:00	72	5	1				78	112	3	1	4		1	121
18:15	61	4	1				66	98	3	1	4			106
18:30	48	3	2			1	54	91	4	2	5		2	104
18:45	62	1					63	78	1	1	1			81
19:00	56	2		1		1	60	62	2	1	3			68
19:15	38	1		5			44	61	3	1	2			67
19:30	29	4		5			38	59	2	2	3			66
19:45	33	1		1			35	54	1		2			57
20:00	28						28	48						48
20:15	22	1					23	39	1					40
20:30	33						33	32						32
20:45	21						21	29						29
21:00	13	2		1			16	30						30
21:15	17	1	2	1			21	22	1					23
21:30	21						21	21	1					22
21:45	14						14	22		1				23
22:00	19						19	21			1			22
22:15	17	2		1			20	22			1			23
22:30	19						19	22			2			24
22:45	6			1			7	22						22
23:00	11			1			12	15						15
23:15	9						9	10						10
23:30	6						6	7						7
23:45	12						12	12						12
TOTAL	2,790	257	80	159	3	33	3,322	3,910	284	91	193	3	22	4,503
				PM PEAK HOUR			3:15 PM				PM PEAK HOUR			3:00 PM
				PM PEAK VOLUME			517				PM PEAK VOLUME			636

CLASS 1	CLASS 4
CLASS 2	CLASS 5
CLASS 3	CLASS 6

DAILY TOTAL	5,031	436	159	277	4	50	5,957	5,976	457	180	294	3	37	6,947
% OF TOTAL	84.5%	7.3%	2.7%	4.6%	0.1%	0.8%	100.0%	86.0%	6.6%	2.6%	4.2%	0.0%	0.5%	100.0%

WEDMESDAY - SEPTEMBER 29, 2021 AREA: OTEY MESA PROJECT: ETD2101001-01

Heritage Road – north of Otay Mesa Road

AM	NB		SB	EB	WB		PM	NB		SB	EB	WB	
00:00	3		2				12:00	104		90			
00:15	5		1				12:15	104		98			
00:30	2		0				12:30	113		106			
00:45	3	13	1	4		17	12:45	111	432	118	412		844
01:00	1		2				13:00	101		97			
01:15	2		0				13:15	98		118			
01:30	3		4				13:30	97		115			
01:45	2	8	2	8		16	13:45	113	409	108	438		847
02:00	4		1				14:00	99		140			
02:15	4		1				14:15	101		112			
02:30	4		1				14:30	102		97			
02:45	6	18	3	6		24	14:45	107	409	97	446		855
03:00	11		1				15:00	113		117			
03:15	11		3				15:15	110		125			
03:30	6		2				15:30	116		98			
03:45	5	33	5	11		44	15:45	95	434	95	435		869
04:00	10		7				16:00	104		102			
04:15	6		3				16:15	99		99			
04:30	14		11				16:30	79		107			
04:45	16	46	13	34		80	16:45	97	379	86	394		773
05:00	15		13				17:00	105		130			
05:15	13		24				17:15	85		91			
05:30	25		49				17:30	56		95			
05:45	24	77	33	119		196	17:45	60	306	72	388		694
06:00	25		33				18:00	62		87			
06:15	25		44				18:15	73		61			
06:30	36		32				18:30	50		55			
06:45	42	128	62	171		299	18:45	37	222	54	257		479
07:00	41		49				19:00	39		42			
07:15	50		59				19:15	30		32			
07:30	59		61				19:30	24		38			
07:45	75	225	73	242		467	19:45	23	116	27	139		255
08:00	75		68				20:00	22		19			
08:15	77		66				20:15	20		20			
08:30	90		68				20:30	16		13			
08:45	82	324	64	266		590	20:45	18	76	8	60		136
09:00	78		77				21:00	15		14			
09:15	98		77				21:15	13		21			
09:30	82		74				21:30	7		13			
09:45	92	350	95	323		673	21:45	9	44	9	57		101
10:00	99		86				22:00	14		11			
10:15	75		87				22:15	11		8			
10:30	85		98				22:30	6		9			
10:45	103	362	96	367		729	22:45	8	39	7	35		74
11:00	93		71				23:00	5		6			
11:15	105		110				23:15	7		4			
11:30	90		104				23:30	8		3			
11:45	116	404	100	385		789	23:45	6	26	8	21		47
Total Vol.		1988		1936		**3924**			2892		3082		**5974**

Daily Totals

NB	SB	EB	WB	**Combined**
4880	5018			**9898**

	AM			**PM**		
Split %	50.7%	49.3%	**39.6%**	48.4%	51.6%	**60.4%**
Peak Hour	11:45	11:15	**11:45**	14:45	13:15	**13:15**
Volume	437	404	**831**	446	481	**888**
P.H.F.	0.94	0.92	**0.95**	0.97	0.86	**0.93**

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE:	LOCATION:	OTAY MESA	PROJECT #:	ETD21-1001-01
9/29/21	NORTH & SOUTH:	Ocean View Hills Parkway	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Otay Mesa Road	CONTROL:	SIGNAL

NOTES:

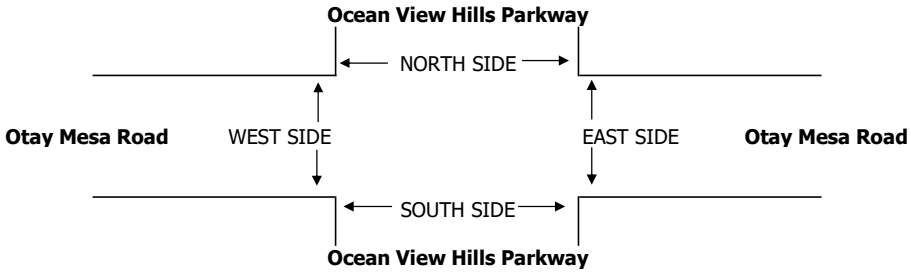
INCLUDES BIKE & PED

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Ocean View Hills Parkway			SOUTHBOUND Ocean View Hills Parkway			EASTBOUND Otay Mesa Road			WESTBOUND Otay Mesa Road			
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
AM	7:00 AM	17	23	103	18	33	3	0	3	27	46	2	16	291
	7:15 AM	3	22	93	18	35	0	0	1	26	54	5	10	267
	7:30 AM	7	22	98	30	63	0	0	3	20	48	1	12	304
	7:45 AM	4	25	151	20	51	0	0	4	14	55	4	14	342
	8:00 AM	9	18	110	25	35	0	0	2	6	50	4	14	273
	8:15 AM	3	23	108	25	26	0	1	2	19	56	2	20	285
	8:30 AM	2	26	106	21	34	2	0	2	14	78	7	22	314
	8:45 AM	27	27	114	23	44	0	1	4	11	60	4	20	335
	VOLUMES	72	186	883	180	321	5	2	21	137	447	29	128	2,411
	APPROACH %	6%	16%	77%	36%	63%	1%	1%	13%	86%	74%	5%	21%	
	APP/DEPART	1,141	/	316	506	/	905	160	/	1,084	604	/	106	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	18	92	475	91	146	2	1	10	53	239	17	70	1,214
	APPROACH %	3%	16%	81%	38%	61%	1%	2%	16%	83%	73%	5%	21%	
	PEAK HR FACTOR		0.813			0.842			0.727			0.762		0.887
	APP/DEPART	585	/	163	239	/	438	64	/	576	326	/	37	0
PM	4:00 PM	14	86	102	21	43	1	0	2	9	141	5	56	480
	4:15 PM	13	57	86	19	51	0	1	2	11	165	3	39	447
	4:30 PM	11	74	88	23	39	0	1	2	12	144	4	43	441
	4:45 PM	13	73	66	17	42	1	0	3	8	157	1	42	423
	5:00 PM	11	88	59	14	54	1	1	2	10	223	9	42	514
	5:15 PM	17	88	53	22	48	0	1	1	15	125	0	50	420
	5:30 PM	13	84	59	16	50	2	0	3	13	127	6	30	403
	5:45 PM	9	72	58	24	41	4	2	1	11	114	4	37	377
	VOLUMES	101	622	571	156	368	9	6	16	89	1,196	32	339	3,505
	APPROACH %	8%	48%	44%	29%	69%	2%	5%	14%	80%	76%	2%	22%	
	APP/DEPART	1,294	/	967	533	/	1,653	111	/	743	1,567	/	142	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	48	292	299	73	186	2	3	9	41	689	17	166	1,825
	APPROACH %	8%	46%	47%	28%	71%	1%	6%	17%	77%	79%	2%	19%	
	PEAK HR FACTOR		0.923			0.932			0.883			0.796		0.888
	APP/DEPART	639	/	461	261	/	916	53	/	381	872	/	67	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
AM					0
	1	1		1	3
		1		1	2
				2	2
	1				1
		1		4	5
					0
				5	5
	2	3	0	13	18
PM	1	2			3
		1			1
		1			1
		1			1
		1		3	4
		1			1
		1		4	5
		3			3
	1	11	0	7	19



PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7:00 AM				1	1
7:15 AM					0
7:30 AM	1				1
7:45 AM	1			1	2
8:00 AM	1			1	2
8:15 AM				3	3
8:30 AM		1	1		2
8:45 AM					0
TOTAL	3	1	1	6	11
4:00 PM		1		1	2
4:15 PM	2			2	4
4:30 PM	1	4		5	10
4:45 PM				2	2
5:00 PM				2	2
5:15 PM				1	1
5:30 PM					0
5:45 PM					0
TOTAL	3	5	0	13	21

PEDESTRIAN ACTIVATIONS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
					0
					0
					0
					0
					0
					0
					0
					0
					0
TOTAL	0	0	0	0	0
					0
					0
					0
					0
					0
					0
					0
					0
TOTAL	0	0	0	0	0

BICYCLE CROSSINGS

	NS	SS	ES	WS	TOTAL
					0
					0
					0
					0
					0
					0
					0
					0
TOTAL	0	0	0	0	0
	1				1
					0
					0
				1	1
					0
	1				1
					0
					0
TOTAL	2	0	0	1	3

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE:	LOCATION:	OTAY MESA	PROJECT #:	ETD21-1001-01
9/29/21	NORTH & SOUTH:	Emerald Crest Court	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Otay Mesa Road	CONTROL:	SIGNAL

NOTES:

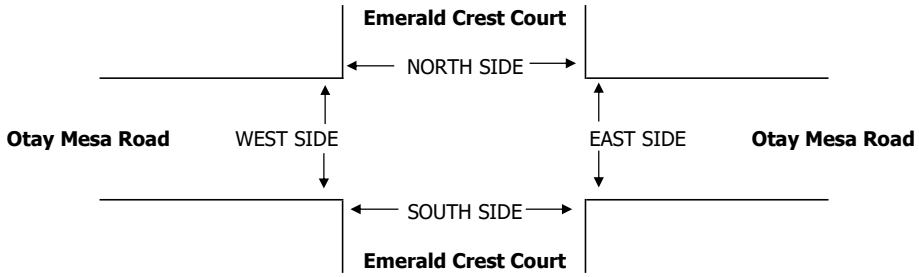
INCLUDES BIKE & PED

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Emerald Crest Court			SOUTHBOUND Emerald Crest Court			EASTBOUND Otay Mesa Road			WESTBOUND Otay Mesa Road			
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
AM	7:00 AM						18		124			51	2	195
	7:15 AM						17		112			50	2	181
	7:30 AM						17		132			53	1	203
	7:45 AM						22		182			62	2	268
	8:00 AM						16		133			49	1	199
	8:15 AM						11		133			77	0	221
	8:30 AM						11		136			95	0	242
	8:45 AM						12		145			82	2	241
	VOLUMES	0	0	0	0	0	124	0	1,097	0	0	519	10	1,750
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	98%	2%	
	APP/DEPART	0	/	10	124	/	0	1,097	/	1,097	529	/	643	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	0	0	0	0	0	60	0	584	0	0	283	3	930
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	99%	1%	
	PEAK HR FACTOR		0.000			0.682			0.802			0.753		0.868
	APP/DEPART	0	/	3	60	/	0	584	/	584	286	/	343	0
PM	4:00 PM						9		128			187	4	328
	4:15 PM						3		109			197	4	313
	4:30 PM						10		115			186	3	314
	4:45 PM						15		86			180	5	286
	5:00 PM						13		73			261	7	354
	5:15 PM						11		78			147	5	241
	5:30 PM						4		79			157	6	246
	5:45 PM						9		84			155	6	254
	VOLUMES	0	0	0	0	0	74	0	752	0	0	1,470	40	2,336
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	97%	3%	
	APP/DEPART	0	/	40	74	/	0	752	/	752	1,510	/	1,544	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	0	0	0	0	0	41	0	383	0	0	824	19	1,267
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	98%	2%	
	PEAK HR FACTOR		0.000			0.683			0.833			0.786		0.895
	APP/DEPART	0	/	19	41	/	0	383	/	383	843	/	865	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM			1		1
8:45 AM					0
VOLUMES	0	0	1	0	1
4:00 PM					0
4:15 PM		1			1
4:30 PM					0
4:45 PM		1			1
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM		1			1
VOLUMES	0	3	0	0	3



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM					0					0					0
	7:15 AM					0					0					0
	7:30 AM					0					0					0
	7:45 AM					0					0					0
	8:00 AM	2				2					0					0
	8:15 AM					0					0					0
	8:30 AM	1				1					0					0
	8:45 AM					0					0					0
	TOTAL	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	1				1					0					0
	4:15 PM					0					0					0
	4:30 PM	1				1					0	1				1
	4:45 PM					0					0	1				1
	5:00 PM					0					0					0
	5:15 PM					0					0	1	1			2
	5:30 PM					0					0					0
	5:45 PM					0					0	1	2			3
	TOTAL	2	0	0	0	2	0	0	0	0	0	4	3	0	0	7

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

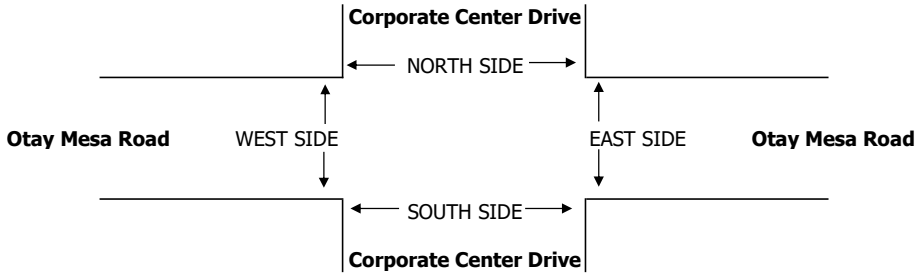
DATE:	LOCATION:	OTAY MESA	PROJECT #:	ETD21-1001-01
9/29/21	NORTH & SOUTH:	Corporate Center Drive	LOCATION #:	5
WEDNESDAY	EAST & WEST:	Otay Mesa Road	CONTROL:	SIGNAL

NOTES:

INCLUDES BIKE & PED

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Corporate Center Drive			SOUTHBOUND Corporate Center Drive			EASTBOUND Otay Mesa Road			WESTBOUND Otay Mesa Road				U-TURNS				
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	0	0	0	0	0	4	46	77	0	0	39	2	168			1		1
	7:15 AM	0	0	0	0	0	5	38	70	0	0	45	9	167			1		1
	7:30 AM	0	0	0	2	0	6	40	86	0	0	45	12	191			2		2
	7:45 AM	0	0	0	4	0	12	56	130	0	0	44	2	248					0
	8:00 AM	0	0	0	3	0	9	38	90	0	0	44	4	188					0
	8:15 AM	0	0	0	5	0	13	38	87	0	0	54	15	212			2	1	3
	8:30 AM	0	0	0	6	0	14	40	102	0	0	84	15	261					0
	8:45 AM	0	0	0	9	0	22	43	96	0	0	53	15	238			1		1
	VOLUMES	0	0	0	29	0	85	339	738	0	0	408	74	1,673	0	0	7	1	8
	APPROACH %	0%	0%	0%	25%	0%	75%	31%	69%	0%	0%	85%	15%						
	APP/DEPART	0	/	413	114	/	0	1,077	/	767	482	/	493	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	0	0	18	0	48	172	409	0	0	226	36	909					
	APPROACH %	0%	0%	0%	27%	0%	73%	30%	70%	0%	0%	86%	14%						
	PEAK HR FACTOR		0.000			0.825			0.781			0.662		0.871					
	APP/DEPART	0	/	208	66	/	0	581	/	427	262	/	274	0					
PM	4:00 PM	0	0	0	21	0	61	42	86	0	0	139	14	363			2	1	3
	4:15 PM	0	0	0	21	0	66	33	78	0	0	122	9	329			1		1
	4:30 PM	0	0	0	14	0	75	35	79	0	0	118	13	334			2		2
	4:45 PM	0	0	0	19	0	66	19	64	0	0	131	4	303			2		2
	5:00 PM	0	0	0	19	0	91	14	56	0	0	171	9	360					0
	5:15 PM	0	0	0	17	0	34	16	60	0	0	129	9	265			4		4
	5:30 PM	0	0	0	5	0	34	17	59	0	0	116	4	235					0
	5:45 PM	0	0	0	6	0	41	16	66	0	0	110	4	243					0
	VOLUMES	0	0	0	122	0	468	192	548	0	0	1,036	66	2,432	0	0	11	1	12
	APPROACH %	0%	0%	0%	21%	0%	79%	26%	74%	0%	0%	94%	6%						
	APP/DEPART	0	/	258	590	/	0	740	/	670	1,102	/	1,504	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	75	0	268	129	307	0	0	510	40	1,329					
	APPROACH %	0%	0%	0%	22%	0%	78%	30%	70%	0%	0%	93%	7%						
	PEAK HR FACTOR		0.000			0.963			0.852			0.899		0.915					
	APP/DEPART	0	/	169	343	/	0	436	/	382	550	/	778	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM					0					0					0
	7:15 AM	1				1					0					0
	7:30 AM					0					0					0
	7:45 AM	1				1					0					0
	8:00 AM					0					0					0
	8:15 AM					0					0					0
	8:30 AM					0					0					0
	8:45 AM	1				1					0					0
	TOTAL	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM					0					0					0
	4:15 PM	2				2					0					0
	4:30 PM					0					0	1				1
	4:45 PM					0					0					0
	5:00 PM					0					0					0
	5:15 PM					0					0	2				2
	5:30 PM					0					0	1				1
	5:45 PM					0					0					0
	TOTAL	2	0	0	0	2	0	0	0	0	0	4	0	0	0	4

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

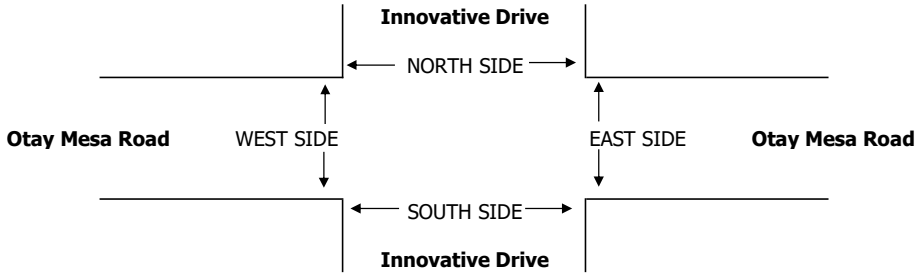
DATE:	LOCATION:	OTAY MESA	PROJECT #:	ETD21-1001-01
9/29/21	NORTH & SOUTH:	Innovative Drive	LOCATION #:	6
WEDNESDAY	EAST & WEST:	Otay Mesa Road	CONTROL:	SIGNAL

NOTES:

INCLUDES BIKE & PED

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Innovative Drive			SOUTHBOUND Innovative Drive			EASTBOUND Otay Mesa Road			WESTBOUND Otay Mesa Road				U-TURNS				
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	0	0	2	4	0	1	4	55	3	1	40	12	122					0
	7:15 AM	0	0	3	3	0	0	4	78	1	2	56	10	157					0
	7:30 AM	0	0	3	5	0	0	4	72	1	0	59	8	152					0
	7:45 AM	0	0	4	2	0	0	6	118	2	2	43	11	188					0
	8:00 AM	0	0	0	7	0	0	4	90	1	2	50	13	167				1	1
	8:15 AM	1	0	1	7	0	3	1	90	3	1	72	10	189				1	1
	8:30 AM	1	0	0	5	0	2	10	90	1	1	94	11	215				1	1
	8:45 AM	1	0	1	6	1	1	10	89	1	1	66	14	191					0
	VOLUMES	3	0	14	39	1	7	43	682	13	10	480	89	1,381	0	0	0	3	3
	APPROACH %	18%	0%	82%	83%	2%	15%	6%	92%	2%	2%	83%	15%						
	APP/DEPART	17	/	132	47	/	24	738	/	735	579	/	490	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	3	0	2	25	1	6	25	359	6	5	282	48	762					
	APPROACH %	60%	0%	40%	78%	3%	19%	6%	92%	2%	1%	84%	14%						
	PEAK HR FACTOR		0.625			0.800			0.965			0.790		0.886					
	APP/DEPART	5	/	73	32	/	12	390	/	386	335	/	291	0					
PM	4:00 PM	0		1	13	0	3	10	98	1	1	143	17	287			1		1
	4:15 PM	0		1	18	0	12	4	85	0	0	129	18	267					0
	4:30 PM	0		0	17	0	12	9	80	1	3	117	21	260					0
	4:45 PM	2		0	13	0	7	0	73	3	12	131	11	252					0
	5:00 PM	0		1	16	0	16	0	77	1	0	164	7	282					0
	5:15 PM	1		1	12	0	7	4	67	1	1	127	10	231					0
	5:30 PM	0		0	6	0	7	4	62	2	0	110	4	195			1		1
	5:45 PM	3		2	5	0	4	7	62	1	0	113	4	201					0
	VOLUMES	6	0	6	100	0	68	38	604	10	17	1,034	92	1,975	0	0	2	0	2
	APPROACH %	50%	0%	50%	60%	0%	40%	6%	93%	2%	1%	90%	8%						
	APP/DEPART	12	/	130	168	/	27	652	/	710	1,143	/	1,108	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	2	0	2	61	0	34	23	336	5	16	520	67	1,066					
	APPROACH %	50%	0%	50%	64%	0%	36%	6%	92%	1%	3%	86%	11%						
	PEAK HR FACTOR		0.500			0.792			0.835			0.936		0.929					
	APP/DEPART	4	/	90	95	/	21	364	/	399	603	/	556	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM					0					0		1			1
	7:15 AM	1				1					0					0
	7:30 AM	2				2					0		2			2
	7:45 AM	2				2					0					0
	8:00 AM					0					0					0
	8:15 AM					0					0					0
	8:30 AM					0					0					0
	8:45 AM	1				1					0		1			1
	TOTAL	6	0	0	0	6	0	0	0	0	0	0	4	0	0	4
PM	4:00 PM		1		1	2					0					0
	4:15 PM					0					0					0
	4:30 PM					0					0					0
	4:45 PM					0					0					0
	5:00 PM					0					0	1	1			2
	5:15 PM					0					0	2	1			3
	5:30 PM					0					0		1			1
	5:45 PM			1		1					0			1		1
	TOTAL	0	1	1	1	3	0	0	0	0	0	3	3	1	0	7

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE:	LOCATION:	OTAY MESA	PROJECT #:	ETD21-1001-01
9/29/21	NORTH & SOUTH:	Heritage Road	LOCATION #:	7
WEDNESDAY	EAST & WEST:	Otay Mesa Road	CONTROL:	SIGNAL

NOTES:

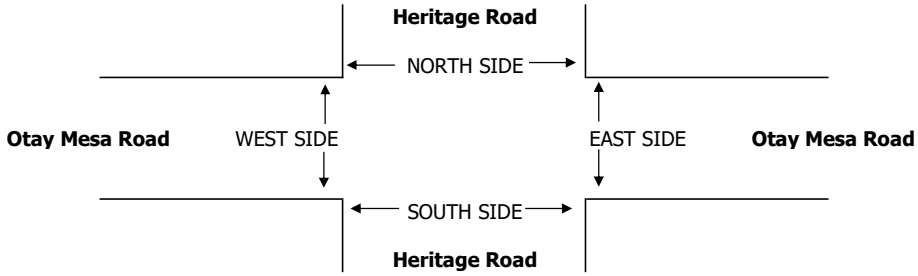
INCLUDES BIKE & PED

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Heritage Road			SOUTHBOUND Heritage Road			EASTBOUND Otay Mesa Road			WESTBOUND Otay Mesa Road			
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
AM	7:00 AM	8	2	3	31	3	17	21	27	24	6	27	19	188
AM	7:15 AM	13	4	3	29	6	22	15	31	28	9	32	24	216
AM	7:30 AM	10	7	3	39	4	24	22	32	28	7	31	21	228
AM	7:45 AM	8	4	1	38	6	20	38	53	41	13	27	26	275
AM	8:00 AM	5	7	9	46	6	24	33	38	30	10	40	28	276
AM	8:15 AM	8	9	9	34	8	27	38	31	28	12	44	28	276
AM	8:30 AM	10	5	2	36	1	34	39	49	18	8	49	37	288
AM	8:45 AM	20	10	2	37	4	29	32	36	21	5	24	34	254
AM	VOLUMES	82	48	32	290	38	197	238	297	218	70	274	217	2,001
AM	APPROACH %	51%	30%	20%	55%	7%	38%	32%	39%	29%	12%	49%	39%	
AM	APP/DEPART	162	/	503	525	/	326	753	/	619	561	/	553	0
AM	BEGIN PEAK HR		7:45 AM											
AM	VOLUMES	31	25	21	154	21	105	148	171	117	43	160	119	1,115
AM	APPROACH %	40%	32%	27%	55%	8%	38%	34%	39%	27%	13%	50%	37%	
AM	PEAK HR FACTOR		0.740			0.921			0.826			0.856		0.968
AM	APP/DEPART	77	/	292	280	/	181	436	/	346	322	/	296	0
PM	4:00 PM	40	6	12	28	9	52	45	59	17	9	68	45	390
PM	4:15 PM	28	9	10	43	10	52	45	46	13	9	62	43	370
PM	4:30 PM	24	11	18	47	10	60	36	51	14	12	47	42	372
PM	4:45 PM	27	10	12	34	5	55	33	38	12	7	61	45	339
PM	5:00 PM	36	6	13	50	5	82	35	46	12	13	60	50	408
PM	5:15 PM	23	9	12	40	15	54	23	31	10	6	51	45	319
PM	5:30 PM	23	5	2	36	7	52	29	38	10	4	40	27	273
PM	5:45 PM	23	6	8	34	8	34	26	34	6	5	53	27	264
PM	VOLUMES	224	62	87	312	69	441	272	343	94	65	442	324	2,735
PM	APPROACH %	60%	17%	23%	38%	8%	54%	38%	48%	13%	8%	53%	39%	
PM	APP/DEPART	373	/	658	822	/	228	709	/	742	831	/	1,107	0
PM	BEGIN PEAK HR		4:15 PM											
PM	VOLUMES	115	36	53	174	30	249	149	181	51	41	230	180	1,489
PM	APPROACH %	56%	18%	26%	38%	7%	55%	39%	48%	13%	9%	51%	40%	
PM	PEAK HR FACTOR		0.927			0.827			0.916			0.917		0.912
PM	APP/DEPART	204	/	365	453	/	122	381	/	408	451	/	594	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
			1	1
	1			1
				0
				0
			2	2
				0
				0
0	1	0	3	4
				0
				0
			1	1
				0
				0
			2	2
				0
			1	1
0	0	0	4	4



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM		1	2		3					0		1			1
AM	7:15 AM			2	1	3					0					0
AM	7:30 AM	2		3		5					0					0
AM	7:45 AM	1		3		4					0					0
AM	8:00 AM	1		2		3					0					0
AM	8:15 AM	2		1		3					0	1		2		3
AM	8:30 AM					0					0		1			1
AM	8:45 AM					0					0		1			1
AM	TOTAL	6	1	13	1	21	0	0	0	0	0	1	3	2	0	6
PM	4:00 PM					0					0					0
PM	4:15 PM		1	2		3					0					0
PM	4:30 PM	4		3		7					0		2			2
PM	4:45 PM	1		2		3					0	1	1	1		3
PM	5:00 PM			1		1					0					0
PM	5:15 PM			3		3					0	1				1
PM	5:30 PM			2		2					0	1		1		2
PM	5:45 PM					0					0		3			3
PM	TOTAL	5	1	13	0	19	0	0	0	0	0	3	6	2	0	11

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE:	LOCATION:	OTAY MESA	PROJECT #:	ETD21-1001-01
9/29/21	NORTH & SOUTH:	Caliente Avenue	LOCATION #:	2
WEDNESDAY	EAST & WEST:	SR-905 WB Ramps	CONTROL:	SIGNAL

NOTES:

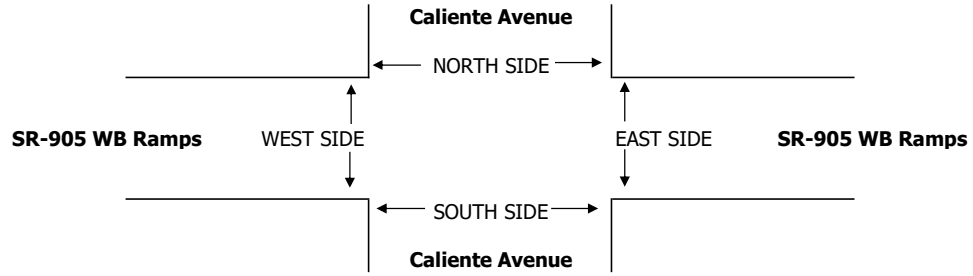
INCLUDES BIKE & PED

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Caliente Avenue			SOUTHBOUND Caliente Avenue			EASTBOUND SR-905 WB Ramps			WESTBOUND SR-905 WB Ramps			
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
AM	7:00 AM	48	131	0	0	13	49	0	0	0	4	1	12	258
	7:15 AM	42	114	0	0	21	98	0	0	0	2	0	10	287
	7:30 AM	45	117	0	0	44	93	0	0	0	0	0	7	306
	7:45 AM	47	172	0	0	43	77	0	0	0	3	0	10	352
	8:00 AM	28	133	0	0	28	60	0	0	0	1	0	4	254
	8:15 AM	30	125	0	0	20	85	0	0	0	6	0	5	271
	8:30 AM	28	124	0	0	22	103	0	0	0	2	0	14	293
	8:45 AM	36	136	0	0	31	87	0	0	0	1	1	9	301
	VOLUMES	304	1,052	0	0	222	652	0	0	0	19	2	71	2,322
	APPROACH %	22%	78%	0%	0%	25%	75%	0%	0%	0%	21%	2%	77%	
	APP/DEPART	1,356	/	1,123	874	/	241	0	/	0	92	/	958	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	182	534	0	0	121	317	0	0	0	9	1	39	1,203
	APPROACH %	25%	75%	0%	0%	28%	72%	0%	0%	0%	18%	2%	80%	
	PEAK HR FACTOR		0.817			0.799			0.000			0.721		0.854
	APP/DEPART	716	/	573	438	/	130	0	/	0	49	/	500	0
PM	4:00 PM	29	185	0	0	50	156	0	0	0	17	1	19	457
	4:15 PM	41	130	0	0	61	171	0	0	0	12	0	24	439
	4:30 PM	30	155	0	0	38	159	0	0	0	12	1	25	420
	4:45 PM	37	133	0	0	51	157	0	0	0	10	0	11	399
	5:00 PM	25	136	0	0	58	228	0	0	0	11	0	16	474
	5:15 PM	28	135	0	0	44	156	0	0	0	10	0	17	390
	5:30 PM	34	143	0	0	41	149	0	0	0	6	0	18	391
	5:45 PM	29	124	0	0	42	127	0	0	0	6	2	12	342
	VOLUMES	253	1,141	0	0	385	1,303	0	0	0	84	4	142	3,312
	APPROACH %	18%	82%	0%	0%	23%	77%	0%	0%	0%	37%	2%	62%	
	APP/DEPART	1,394	/	1,283	1,688	/	469	0	/	0	230	/	1,560	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	133	554	0	0	208	715	0	0	0	45	1	76	1,732
	APPROACH %	19%	81%	0%	0%	23%	77%	0%	0%	0%	37%	1%	62%	
	PEAK HR FACTOR		0.928			0.807			0.000			0.803		0.914
	APP/DEPART	687	/	630	923	/	253	0	/	0	122	/	849	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
0	0	0	0	0



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM					0					0					0
	7:15 AM					0					0					0
	7:30 AM					0					0					0
	7:45 AM					0					0					0
	8:00 AM					0					0					0
	8:15 AM				2	2					0					0
	8:30 AM					0					0				1	1
	8:45 AM					0					0					0
	TOTAL	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1
PM	4:00 PM					0					0				2	2
	4:15 PM					0					0				1	1
	4:30 PM					0					0					0
	4:45 PM				1	1					0					0
	5:00 PM					0					0					0
	5:15 PM					0					0					0
	5:30 PM					0					0					0
	5:45 PM					0					0					0
	TOTAL	0	0	0	1	1	0	0	0	0	0	0	0	0	3	3

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE:	LOCATION:	OTAY MESA	PROJECT #:	ETD21-1001-01
9/29/21	NORTH & SOUTH:	Caliente Avenue	LOCATION #:	3
WEDNESDAY	EAST & WEST:	SR-905 EB Ramps	CONTROL:	SIGNAL

NOTES:

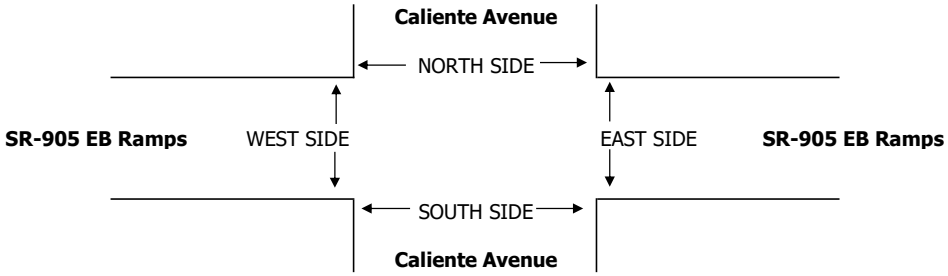
INCLUDES BIKE & PED

AM / PM / MD / OTHER / OTHER — ▲ N / ◄ W / E ► / S ▼

		NORTHBOUND Caliente Avenue			SOUTHBOUND Caliente Avenue			EASTBOUND SR-905 EB Ramps			WESTBOUND SR-905 EB Ramps			
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
AM	7:00 AM	0	62	9	18	5	0	117	3	6	0	0	0	220
	7:15 AM	0	49	12	19	4	0	98	1	8	0	0	0	191
	7:30 AM	0	56	15	26	14	0	106	0	10	0	0	0	227
	7:45 AM	0	63	16	37	15	0	151	2	13	0	0	0	297
	8:00 AM	0	40	12	17	11	0	123	1	23	0	0	0	227
	8:15 AM	0	41	5	15	11	0	117	0	16	0	0	0	205
	8:30 AM	0	50	7	15	12	0	98	0	14	0	0	0	196
	8:45 AM	0	49	11	14	15	0	130	0	27	0	0	0	246
	VOLUMES	0	410	87	161	87	0	940	7	117	0	0	0	1,809
	APPROACH %	0%	82%	18%	65%	35%	0%	88%	1%	11%	0%	0%	0%	
	APP/DEPART	497	/	1,350	248	/	204	1,064	/	255	0	/	0	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	0	200	48	95	51	0	497	3	62	0	0	0	956
	APPROACH %	0%	81%	19%	65%	35%	0%	88%	1%	11%	0%	0%	0%	
	PEAK HR FACTOR		0.785			0.702			0.846			0.000		0.805
	APP/DEPART	248	/	697	146	/	113	562	/	146	0	/	0	0
PM	4:00 PM	0	48	5	27	41	0	167	0	56	0	0	0	344
	4:15 PM	0	50	12	26	44	0	114	1	44	0	0	0	291
	4:30 PM	0	31	7	19	27	0	144	1	51	0	0	0	280
	4:45 PM	0	51	4	24	38	0	118	1	43	0	0	0	279
	5:00 PM	0	45	3	26	52	0	121	0	49	0	0	0	296
	5:15 PM	0	45	8	17	37	0	122	0	51	0	0	0	280
	5:30 PM	0	48	7	19	30	0	129	0	48	0	0	0	281
	5:45 PM	0	41	7	13	40	0	107	0	43	0	0	0	251
	VOLUMES	0	359	53	171	309	0	1,022	3	385	0	0	0	2,302
	APPROACH %	0%	87%	13%	36%	64%	0%	72%	0%	27%	0%	0%	0%	
	APP/DEPART	412	/	1,381	480	/	694	1,410	/	227	0	/	0	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	180	28	96	150	0	543	3	194	0	0	0	1,194
	APPROACH %	0%	87%	13%	39%	61%	0%	73%	0%	26%	0%	0%	0%	
	PEAK HR FACTOR		0.839			0.879			0.830			0.000		0.868
	APP/DEPART	208	/	723	246	/	344	740	/	127	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM				1	1					0		1	2		3
	7:15 AM					0					0	`		1		1
	7:30 AM				1	1					0			1		1
	7:45 AM				1	1					0			3	1	4
	8:00 AM				2	2					0			1	2	3
	8:15 AM			3	1	4					0					0
	8:30 AM				2	2					0				1	1
	8:45 AM				3	3					0				1	1
	TOTAL	0	0	3	11	14	0	0	0	0	0	0	1	8	5	14
PM	4:00 PM				3	3					0					0
	4:15 PM					0					0				1	1
	4:30 PM			3	1	4					0					0
	4:45 PM				2	2					0				1	1
	5:00 PM				1	1					0			2	1	3
	5:15 PM				1	1					0					0
	5:30 PM					0					0					0
	5:45 PM					0					0		1	3		4
	TOTAL	0	0	3	8	11	0	0	0	0	0	0	1	5	3	9

ROADWAY ADT COUNT VALIDATION

Roadway Segment	Segment	2018 Counts	2021 ADT	2018 vs 2021	% of 2021
Ocean View Hills Pkwy	North of Otay Mesa Rd	11405	9563	1842	19.3%
Caliente Ave	Otay Mesa Rd to SR-905 WB	20951	19270	1681	8.7%
Caliente Ave	SR-905 WB to SR-905 EB	14288	12812	1476	11.5%
Heritage Rd	North of Otay Mesa Rd	-	9898	-	-
Otay Mesa Rd	Ocean View Hills Pkwy to Emerald Crest Ct	16330	16454	-124	-0.8%
Otay Mesa Rd	Emerald Crest Ct to Corporate Center Dr	15855	15533	322	2.1%
Otay Mesa Rd	Corporate Center Dr to Innovative Dr	10499	12327	-1828	-14.8%
Otay Mesa Rd	Innovative Dr to Heritage Rd	10499	12904	-2405	-18.6%
Overall		99827	98863	964	1.0%

Existing 2021 AM Counts

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
1	18	92	475	91	146	2	1	10	53	239	17	70	1214
2	0	0	0	0	0	60	0	584	0	0	283	3	930
3	0	0	0	18	0	48	172	409	0	0	226	36	909
4	3	0	2	25	1	6	25	359	6	5	282	48	762
5	31	25	21	154	21	105	148	171	117	43	160	119	1115
6	182	534	0	0	121	317	0	0	0	9	1	39	1203
7	0	200	48	95	51	0	497	3	62	0	0	0	956

Existing 2018 AM Counts

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
1	5	347	553	152	487	1			5	257	1	67	1875
2						72		705			284	1	1062
3				28		88	325	320		1	197	38	997
4			5			47		430	3		272	34	791
5	37	137	116	126	118	105	54	33	38	86	23	63	936
6	276	812			246	469				21		59	1883
7		511	59	89	264		589	1	486				1999

AM Count Comparison (2021-2018)

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
1	13	-255	-78	-61	-341	1	1	10	48	-18	16	3	-661
2	0	0	0	0	0	-12	0	-121	0	0	-1	2	-132
3	0	0	0	-10	0	-40	-153	89	0	-1	29	-2	-88
4	3	0	-3	25	1	-41	25	-71	3	5	10	14	-29
5	-6	-112	-95	28	-97	0	94	138	79	-43	137	56	179
6	-94	-278	0	0	-125	-152	0	0	0	-12	1	-20	-680
7	0	-311	-11	6	-213	0	-92	2	-424	0	0	0	-1043

Existing 2021 PM Counts

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
1	48	292	299	73	186	2	3	9	41	689	17	166	1825
2	0	0	0	0	0	41	0	383	0	0	824	19	1267
3	0	0	0	75	0	268	129	307	0	0	510	40	1329
4	2	0	2	61	0	34	23	336	5	16	520	67	1066
5	115	36	53	174	30	249	149	181	51	41	230	180	1489
6	133	554	0	0	208	715	0	0	0	45	1	76	1732
7	0	180	28	96	150	0	543	3	194	0	0	0	1194

Existing 2018 PM Counts

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
1	22	486	311	124	228		2		16	697	7	198	2091
2						42		435			869	16	1362
3				117		337	161	239		19	548	70	1491
4			5			113		361	5		554	29	1067
5	24	246	155	116	183	67	123	33	43	197	56	223	1466
6	458	790			220	684				36	4	84	2276
7		681	76	98	170		565	4	322				1916

PM Count Comparison (2021-2018)

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
1	26	-194	-12	-51	-42	2	1	9	25	-8	10	-32	-266
2	0	0	0	0	0	-1	0	-52	0	0	-45	3	-95
3	0	0	0	-42	0	-69	-32	68	0	-19	-38	-30	-162
4	2	0	-3	61	0	-79	23	-25	0	16	-34	38	-1
5	91	-210	-102	58	-153	182	26	148	8	-156	174	-43	23
6	-325	-236	0	0	-12	31	0	0	0	9	-3	-8	-544
7	0	-501	-48	-2	-20	0	-22	-1	-128	0	0	0	-722

Attachment 8 – Analysis Methodology

TRAFFIC IMPACT STUDY MANUAL

JULY
1998

City of San Diego

TRAFFIC IMPACT STUDY MANUAL

FINAL

JULY 1998

This information, document, or portions thereof, will be made available in alternative formats

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

PREFACE

This manual was prepared and updated by the City's Transportation Development Section of the Land Development Review Division of the Development Services Center. Procedures addressed in this manual include:

- Procedure for determining the type of traffic impact study needed: computerized or non-computerized

- Requirements for performing traffic impact studies

The manual was originally prepared to replace Department Instructions formulated in 1987 regarding traffic impact study procedures. These instructions had become obsolete in many areas and had been replaced by unwritten practices that reflected changing legislation, updated analysis techniques and new staff with varying perspectives. This led to a sense of confusion among consultants. A meeting was held in November 1992 to solicit feedback from traffic consultants on City procedures and reviews. The lack of predictability was a universal complaint. It had become common for study preparers to throw together an incomplete draft study simply to determine staff requirements for their particular study. The City embarked on an organization-wide effort to improve the development review process. As part of this effort, Transportation Development Section staff began to rewrite the above mentioned Department Instructions. All area traffic consultants were invited to serve on a task force to provide input and direction to staff on the traffic impact study process. It was decided that the Department Instructions would be replaced with a Traffic Impact Study Manual that would be more user friendly and easily updated to reflect new methodologies and practices. The original Traffic Impact Study Manual was produced in August 1993.

Equally important to the clearly defined process is an aggressive commitment from the reviewers (the Transportation Development Section) to embrace a partnership with the landowner/developer and the preparer (traffic consultant) to produce a high quality document that adequately serves the needs of all parties. This will also enable the review process to be completed in an expeditious manner.

This 1998 update reflects revisions to the City's land development code and improvements in capacity analysis techniques and increases consistency with the City's overall California Environmental Quality Act (CEQA) review process.

1. INTRODUCTION

This manual describes the key elements required for preparing and reviewing traffic impact studies for new and expanding land developments in San Diego. Not all analysis described in this report will have application to each particular study. Applicable analysis will be determined by the Transportation Development Section staff, in consultation with the traffic study preparer. These procedures indicated in this text are not intended to cover every conceivable situation. New procedures and analysis techniques may be needed to evaluate unique situations.

Need and Purpose

The primary purpose of this manual is to provide guidance to consultants on how to prepare traffic impact studies in San Diego. It is intended to ensure consistency among consultants, predictability to the preparer, consistency among reviewers and conformance with all applicable City and state regulations. Every attempt was made to ensure consistency with national practices prescribed in TRAFFIC ACCESS AND IMPACT STUDIES FOR SITE DEVELOPMENT, Institute of Transportation Engineers, 1991 and current local practices. This manual generally memorializes current practices. Traffic Impact Studies are intended to identify the transportation impacts of proposed development projects and to determine the need for any improvements to the adjacent and nearby road system to maintain a satisfactory level of service, safety and the appropriate access provisions for a proposed development.

Review Process

Objectives

Ideally, the review process should be iterative and should begin when the development's planning is initiated, not after a development has been planned and a traffic study completed. This will ensure that City guidelines and requirements are met while allowing the landowner/developer's goals to be accomplished. It is recommended that the developer, study preparer and staff reviewer meet at the earliest possible point in the study process.

Who Should Prepare Traffic Impact Studies?

Traffic impact studies shall be prepared under the supervision of a qualified and experienced Traffic Engineer who has specific training and experience in traffic related to preparing traffic studies for existing or proposed developments. The ability to forecast and analyze traffic needs for both developments and roadway systems is essential. All traffic impact studies shall be stamped by a California Registered Traffic Engineer.

Who Should Review Traffic Impact Studies?

Traffic impact study reviews should be conducted or directed by properly trained transportation engineers, under supervision of a California Registered Traffic Engineer. In some cases, staff from other jurisdictions (cities, county, SANDAG, Caltrans or MTDB) should be included in the review process. Reviewers should have an understanding of the development process and an understanding of City transportation policies and practices. Reviewers should be competent and confident to be able to apply sound engineering judgement in the scoping and review of traffic impact studies. Reviewers should be open minded to be able to seek solutions to landowner/developer desires while ensuring that City standards and objectives are met.

Standard Review Times

The following standards have been set to ensure that traffic impact studies are reviewed quickly. The City's goal is to complete 90 percent of all studies at or before the review times shown.

Standard City Review Times

TYPE OF STUDY	**REVIEW TIME** (Working Days)
Traffic Study Screen Check	5 days
Small Traffic Studies	
a. First Submittal	15 days
b. Second and Third Submittals	10 days
Large Traffic Studies	
a. First and Second Submittals	20 days
b. Third Submittals	15 days
Complex Traffic Studies	
a. First Submittal	30 days
b. Second Submittal	20 days
c. Third Submittal	15 days

Ethics and Objectivity

Although study preparers and reviewers will sometimes have different objectives and perspectives, all parties involved in the process should adhere to established engineering ethics and conduct all analysis and review objectively and professionally.

2. INITIATING TRAFFIC IMPACT STUDIES

Warrants for a Traffic Impact Study

The need for a traffic impact study is based on estimated daily trip generation and conformance with the community plan land use and transportation element. This determination is usually made by the Transportation Development Section staff during the project scoping stages. **Figure 1** should be used to determine if a traffic impact study is needed and to determine the type of study required. In general, traffic impact studies may be required for developments that do not conform to the community plan and generate more than 500 daily trip ends. The threshold is 1,000 daily trip ends if a project conforms to the community plan. See page 4, **Figure 1** Flow Chart.

Extent of the Study

While the need for a traffic impact study is usually determined by City staff, the extent of a study should be shared by the preparer and reviewer of the study. **Figure 1** provides some guidance on the type of study, manual versus computerized. Computerized forecasts or select zone assignments are usually required for developments that generate more than 2,400 daily trip ends, per Congestion Management Program requirements. However, many projects and area specific details cannot be adequately addressed with a generalized flow chart. The following study details should be worked out between the preparer and the reviewer in a presubmittal conference:

- Which components of a full traffic impact study are needed to address issues associated with the site, proposed development, and the nearby transportation system?

- How will trip generation be determined? If rates other than City standard rates are proposed, staff concurrence must be obtained. Will pass-by reductions be applied?

- How large will the study area be?

- How should adjacent developments be considered in the study?

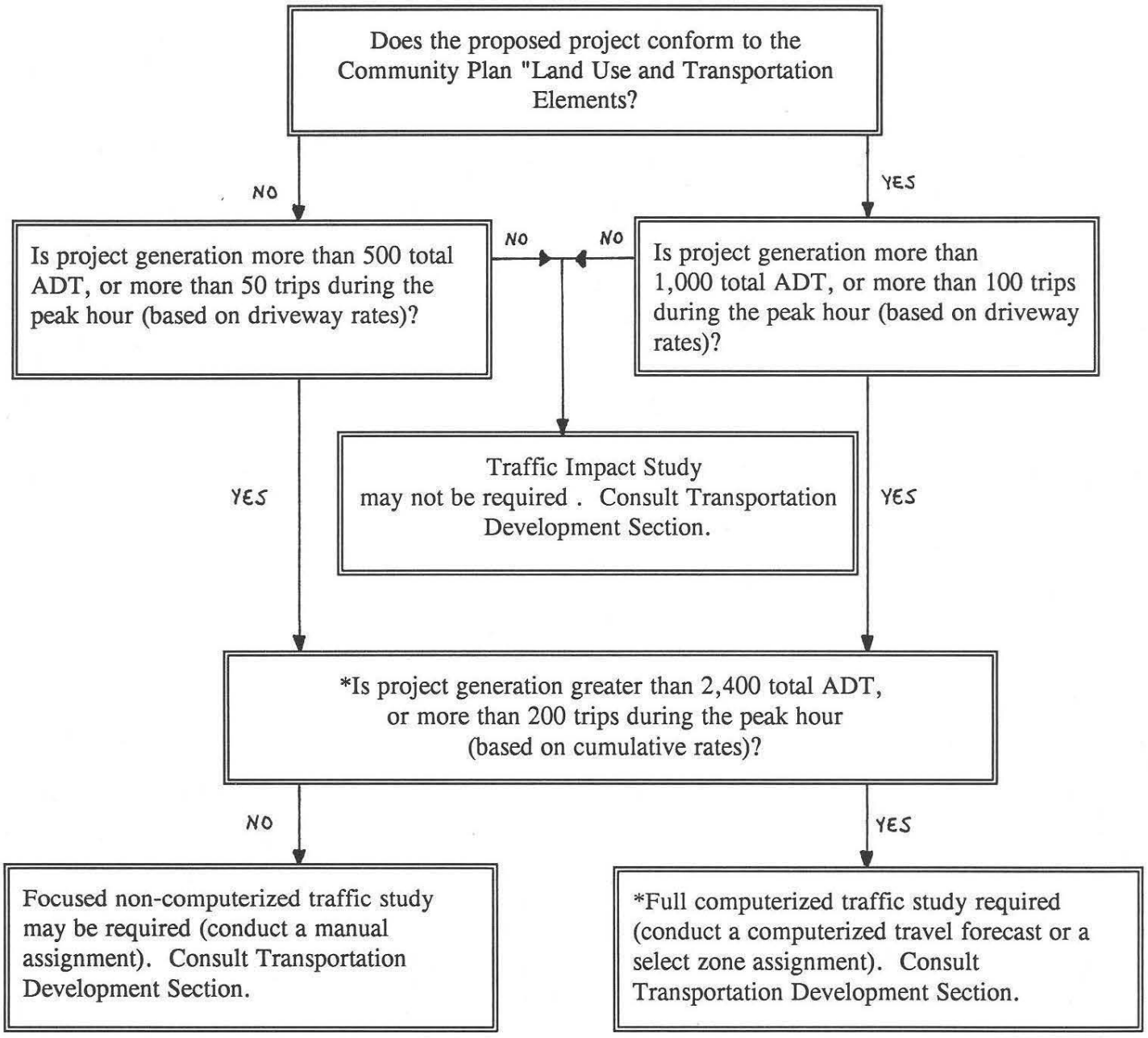
- How should future traffic volumes be determined? Should an adopted community plan forecast be used, should a regional or subregional forecast be used, should growth factors apply, or should a new modeling effort be undertaken?

Figure 1 - Traffic Impact Study Requirement Flow Chart

FIGURE 1

October 1997

TRAFFIC IMPACT STUDY
REQUIREMENT FLOW CHART



*To conform with the 1991 Congestion Management Program Enhanced California Environmental Quality Act (CEQA) review process for traffic analysis.

- How should planned or programmed transportation improvements be accounted for?

- Should the various stages of multi-planned developments be analyzed individually? If so, what horizon years should be used?

- Which trip distribution and assignment methods should be used?

- Which roadway sections and which intersections should be analyzed?

- Which capacity analysis technique should be used?

- Are other analyses needed, such as accident analyses, sight distance analyses, weaving analyses, gap analyses and queuing analyses?

In situations where Caltrans or another agency will review the study, staff from these agencies should be included in the presubmittal conference. This will foster improved coordination and reduce the potential for revisions to the study.

Study Area

The contents and extent of a traffic impact study depend on the location and size of the proposed development and the conditions prevailing the surrounding area. Larger developments proposed in congested areas obviously require a more extensive traffic impact study. Smaller sites may require only minimal analysis. An inappropriately large analysis area will unnecessarily increase costs and time to the developer, the study preparer and the reviewer. In addition, large volumes of meaningless analysis can obscure the real issues that need to be addressed. At a minimum, any traffic impact study must address site access and adjacent intersections, plus the first major signalized intersection in each direction from the site. Beyond this minimum requirement, all known congested or potentially congested locations that may be impacted by the proposed development should be studied. The following methodology based on Average Daily Traffic (ADT), project trip distribution and generalized daily roadway capacity has been prepared to offer some predictability to consultants bidding for jobs and to determine an initial study area to discuss with City staff. Knowledge of the area and judgement may cause the study area to be either expanded or contracted.

Procedure for Determining Initial Study Area

1. Calculate project trip generation based on driveway trip rates and standard City trip generation rates.

2. Determine an approximate project trip distribution and assign the project's ADT to the surrounding street system.

3. Obtain existing configurations and future street classifications for all facilities likely to have site traffic assigned to them.

4. Obtain existing and future ADT for the above mentioned streets.

5. Use the following levels of significance to determine if the project will add enough traffic to street segments for short-term and future conditions to warrant studying this location.

TABLE 1

LEVEL OF SERVICE WITH SITE TRAFFIC	ALLOWABLE INCREASE IN V/C* RATIO WITH SITE TRAFFIC ADDED
A	0.10
B	0.06
C	0.04
D	0.02
E	0.02
F	0.02

* Capacity at level of service E (see **Table 2**) should be used for calculating the volume to capacity ratio.

6. Using **Table 2**, determine the short-term and future level-of-service with and without site traffic, for each link.

In addition, the 1993 Guidelines for Congestion Management Program (CMP) Transportation Impact Reports (TIR) states the following for the study area:

The geographic area examined in the TIR must include the following as a minimum:

- All Regionally Significant Arterial system segments and intersections, including freeway on/off ramp intersections, where the proposed project will add 50 or more peak hour trips in either direction to adjacent street traffic.

- Mainline freeway locations where the project will add 150 or more peak hour trips in either direction.

Staff Consultation

It is critical that the study preparer discuss the project with the reviewing agency's staff engineer at an early stage in the planning process. An understanding as to the level of detail and the assumptions required for the analysis can be determined at this time. While a presubmittal conference is highly encouraged, it will not be a requirement for submitting work to the City. For straightforward studies prepared by consultants familiar with City procedures, a phone call followed by a fax verifying key assumptions may suffice.

Screen Check Procedures

As part of the first draft of a traffic impact study, the preparer must ensure that all required elements have been included. This procedure was implemented to reduce the number of submittals and to encourage earlier dialogue between the reviewer and preparer. The reviewer will check the study for completeness and return all incomplete submittals within five working days of receipt. **Appendix 1** contains the screen check list which the preparer must complete and submit along with the first draft of every traffic impact study. The screen check list should also be used during presubmittal conferences to determine which elements are not required for the proposed study.

Traffic studies shall not be resubmitted until all staff comments have been incorporated. Consultants are encouraged to contact the reviewer to seek clarification, if needed, on comments made to the traffic study. All comments and conditions are subject to appeal or modification.

TABLE 2
Roadway Classifications, Levels of Service (LOS)
and Average Daily Traffic (ADT)

			LEVEL OF SERVICE				
STREET CLASSIFICATION	LANES	CROSS SECTIONS	A	B	C	D	E
Freeway	8 lanes		60,000	84,000	120,000	140,000	150,000
Freeway	6 lanes		45,000	63,000	90,000	110,000	120,000
Freeway	4 lanes		30,000	42,000	60,000	70,000	80,000
Expressway	6 lanes	102/122	30,000	42,000	60,000	70,000	80,000
Primary Arterial	6 lanes	102/122	25,000	35,000	50,000	55,000	60,000
Major Arterial	6 lanes	102/122	20,000	28,000	40,000	45,000	50,000
Major Arterial	4 lanes	78/98	15,000	21,000	30,000	35,000	40,000
Collector	4 lanes	72/92	10,000	14,000	20,000	25,000	30,000
Collector (no center lane) continuous left-turn lane)	4 lanes 2 lanes	64/84 50/70	5,000	7,000	10,000	13,000	15,000
Collector (no fronting property)	2 lanes	40/60	4,000	5,500	7,500	9,000	10,000
Collector (commercial-industrial fronting)	2 lanes	50/70	2,500	3,500	5,000	6,500	8,000
Collector (multifamily)	2 lanes	40/60	2,500	3,500	5,000	6,500	8,000
Sub-Collector (single-family)	2 lanes	36/56	—	—	2,200	—	—

LEGEND:

XXX/XXX = Curb to curb width (feet)/right-of-way width (feet): based on the City of San Diego Street Design. Manual

XX/XXX= Approximate recommended ADT based on the City of San Diego Street Design Manual.

NOTES:

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

2. 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.

3. CONTENT AND FRAMEWORK

This chapter discusses the selection of horizon years, time periods to be analyzed and study data needs.

Selection of Horizon Years

The following scenarios should be evaluated in each traffic impact study:

- Existing Conditions
- Existing Conditions with Approved Projects (when applicable)
- Existing Conditions with Approved Projects and Site Traffic
- Buildout Community Plan Conditions
- Buildout Community Plan with Additional Site Traffic
  (if project deviates from the Community Plan)
- Cumulative Analysis Due to Precedence Setting
  (if a land use change will likely encourage other property owners to seek similar land use changes)

Project Phasing

If the project is a large multi-phased development in which several stages of development activity are planned, a number of horizon years may be needed to coincide with each major stage of development or increment of area transportation system improvements. Smaller developments may need to phase themselves to transportation improvements that others are providing, yet are crucial to their accessibility.

Peak Traffic Hours

In general, the traditional morning and afternoon peak hour of the street system should be evaluated in each impact study. The peaking of the adjacent street system can usually be determined by reviewing traffic count data. The time periods that provide the highest cumulative directional traffic demands should be used to assess the impact of site traffic on the adjacent street system and to define the roadway configurations and traffic control measure changes needed in the study area.

In rare cases, weekend and other typically off-peak traffic periods should be studied. These situations may occur with large retail uses, recreational uses, stadiums and theme parks.

Background Study Area Data

All pertinent transportation system and land development information, both short- and long-range, prepared in the last five years or considered to be current by the Transportation Development Section should be reviewed. Any development that has been approved but not yet occupied should be considered for use as background traffic. Average daily traffic counts and peak hour turning movements can frequently be obtained through the City's Traffic Safety Information and Research Section in the Traffic Engineering Division.

The count data used in traffic impact studies should be no more than two years old. If recent traffic data is not available from the City, current counts must be made by the consultant.

Field Reconnaissance and Data Collection

The assembly of available data should be accompanied by a detailed reconnaissance of the project site, area roadways and the surrounding vicinity. Current data should also be collected as necessary to supplement that information already available. These data frequently include some or all of the following:

- Peak period turning movement counts
- Machine counts
- Primary traffic control devices
- Signal timing and phasing
- Roadway configurations, geometric features and intersection lane configurations
- Parking regulations and usage
- Driveways serving sites across from or adjacent to the site
- Transit stops
- Adjacent land uses

4. NON-SITE TRAFFIC

Estimates of non-site traffic are required to complete an analysis of horizon year conditions. These estimates characterize the base conditions (without site traffic). There are a number of methods for developing non-site traffic; the appropriate method depends largely on the availability of data.

Build-up Method Using Specific Developments

This method is used when other projects in the area have been approved, but are not yet occupied. This concept consists of projecting peak hour traffic to be generated by approved developments in the study area, and assigning it to the projected street system. This method is used for the "Existing Conditions with Approved Projects" scenario. A list of "other" projects can be obtained from the City's Transportation Development Section.

Community Plan, Regional or Subregional Modeled Volumes

The adopted community plan should be used for 20-year or buildout area wide conditions, when reliable information exists. Often times, this information is out-dated and its use would render unreasonable results. In these cases, regional or subregional models conducted by SANDAG should be reviewed for appropriateness.

When justified, and particularly in the case of very large developments or new community plans, a transportation model should be run, with and without the new development to show the net impacts on all parts of the area's transportation system.

Trends or Growth Rates

Trends or growth rates should be used only in situations where a transportation model does not exist, no new major transportation facilities are planned for the area, and the area's growth rate has been stable. Average daily traffic volumes from the past five to ten years should be used to develop these growth rates. If other major new developments are expected in the area, a combination of the growth rate and build-up method should be considered.

Cumulative Analysis Due to Precedence Setting

Often times, a land use change on one property may have the effect of encouraging other property owners to ask for the same zoning or intensification, particularly if the change has an appreciable impact on property values.

The Transportation Development Section in consultation with other City staff, decides if a cumulative analysis should be conducted and which properties should be included in the analysis. The Transportation Development Section in consultation with the traffic consultant will decide the appropriate methodology for developing these non-site traffic volumes.

5. SITE TRAFFIC GENERATION

One of the most critical elements of the traffic impact study is estimating the amount of traffic to be generated by a proposed development. This is usually done by using trip generation rates or equations.

Rates are commonly expressed in trips per unit of development. Equations provide a direct estimate of trips based upon development units being multiplied in a mathematical relationship. Trips are defined as a single or one-directional travel movement with either an origin or destination of the trip inside the study site. The outcome of the entire traffic impact study can depend solely on the question of appropriate trip generation estimates. Trip generation estimates must be determined carefully and must be defensible using a combination of available data and professional judgement.

General Procedure

The following basic steps should be followed in determining the appropriate trip generation estimates:

- Check the City of San Diego's Trip Generation Manual for trip generation rates of similar land use types. If rates other than those included in this manual are proposed, the consultant should obtain concurrence from the study reviewer prior to submitting a study.

- If City data does not exist, check for appropriate SANDAG data or national data, typically contained in SANDAG's “Traffic Generators” publication or the ITE Trip Generation Manual or ITE Journal articles.

- If local or sufficient national data do not exist, conduct trip generation studies at sites with characteristics similar to those of the proposed development.

- Determine any adjustments that may be applied to trip rates to account for specific characteristics of the development in question (high transit usage or true mixed-used developments).

- Select the most appropriate and defensible trip generation rate or equations and document the basis for selection if the rates vary from standard City rates.

Special or Unusual Generators

Some unique land uses have never been studied for trip generation characteristics. In these cases, it may be necessary to conduct a trip generation study on a similar use to

determine the appropriate trip generation rate for that use. In some instances, it may be acceptable to assume a trip rate, based on comparisons to other uses. In either case, the Transportation Development Section should be consulted.

Driveway Volumes Versus Traffic Added to the Adjacent Streets

It is usually assumed that all trips entering and exiting a new development are new trips that were not made to or through the area prior to the development being completed. However, a portion of these trips may be "captured" from trips already being made to other existing developments on the adjacent street system. Any commercial real estate agent will confirm that the three most important factors in a successful retail business are location, location and location. This phenomenon has been verified by limited studies of commercial sites. The City's Trip Generation Manual has recommended a percentage reduction in driveway trip generation rates for numerous retail uses. These recommendations are based on local and national trip generation studies, as well as SANDAGS's Travel Behavior Study conducted in 1985. The pass-by reduction includes true pass-by trips that were on an adjacent street and a portion of the linked trips that were diverted off a nearby route. The report must clearly indicate the new trips and the pass-by trips for the site. All site access points should be evaluated using the higher driveway rates, whereas far off intersections will be evaluated using the reductions for pass-by trips. The next chapter provides guidance on how to distribute and assign pass-by trips.

Refer to the City's "Trip Generation Manual" for driveway and cumulative trip rates for various land uses.

Adjustments for Developments Near Transit Stations

Most trip generation data are from suburban locations where little or no public transportation exists. Since San Diego has an expanding mass transit system, with opportunities for land use/transit interaction, adjustments to the standard trip generation rates may be necessary. The following trip rate reductions are allowable for development planned within a walking distance of 1,500 feet from a transit station:

TABLE 3
Recommended Trip Reductions at Transit Stations

LAND USE TYPE	DAILY	A.M. PEAK	P.M. PEAK
Residential	5%	9%	6%
Industrial	5%	6.5%	5.5%
Commercial Office	3%	5.5%	2%
Commercial Retail	N/A	N/A	N/A

Adjustments for Mixed-Use Developments

Most of the trip generation rate data available have been developed from measurements at isolated single-use developments. When uses are combined, simply adding the single-use estimates together can result in a total trip generation estimate that is too great for the site. The following trip generation rate reductions are allowable for mixed-use projects:

TABLE 4
Recommended Trip Reductions for Mixed-Use Developments
Which Include Commercial Retail

LAND USE TYPE	DAILY	A.M. PEAK	P.M. PEAK
Residential	10%	8%	10%
Industrial	4%	5%	5%
Commercial Office	3%	5%	4%
Commercial Retail	*	*	*

Source: Kris Berg - Kimley Horn

NOTES:

* The commercial retail reduction equals the sum of the total mixed-use reduction in residential, industrial and commercial office.

- These reductions apply to commercial retail of a minimum of 100,000 square feet which is predominantly neighborhood-oriented.

6. SITE TRAFFIC DISTRIBUTION AND ASSIGNMENT

Traffic expected to be generated by a development project must be distributed and assigned to the roadway system so that the impacts of the proposed project on roadway links and intersections within the study area can be analyzed. The trip distribution step produces estimates of trip origins and destinations. The assignment step produces estimates of the amount of site traffic that will use each access route between origins and destinations.

Trip Distribution

One way to determine a trip distribution for a site is to use data from a computerized travel forecast model. SANDAG, the regional planning agency for San Diego County, maintains a regional travel forecast computer model to project future traffic volumes. The City also prepares "community plan" level forecast models. The City models usually provide a more detailed street system than does SANDAG's latest regional model. Raw modeled results should never be directly applied. A thorough review for reasonableness should first be undertaken.

Frequently, computerized travel forecast model data are not available or may not be up to date. In these cases, manual estimates based on traffic volumes, experience, judgement, and knowledge of the area are appropriate. Previous traffic impact studies conducted for other projects in the area should also be considered in estimating trip distributions.

Regardless of the trip distribution methodology used, it is crucial that the traffic consultant and the reviewer of the study agree on the proper distribution prior to the preparation of detailed analysis to avoid having to rework the analysis.

Trip Assignment

Trip assignment should be made considering logical routings, available capacities, left turns at critical intersections, and projected (and perceived) minimum travel times. Multiple paths should often be assigned between origins and destinations to achieve realistic estimates, rather than assigning all trips to the route with the shortest travel time.

The assignment should reflect the horizon year(s) and should consider land use and road improvements at that time. Assignments may vary between morning and afternoon peaks. The assignment should be carried out through external site access points and, in larger projects, the internal roadways.

Assignments may be performed manually or by a computer model. For large sites, with large study areas, it may be advantageous to use a computer model to assign site traffic. This allows some matching of trip origins and destinations within the study area, rather than assigning all site trips externally.

Pass-by Trips

As mentioned in the previous chapter, trip generation analysis yields the number of vehicle trips that a site is expected to generate at its driveways, and retail sites don't add as much traffic to the community street system since a portion of their trips are simply diverted from vehicle trips already on the roadway system. If a reduction for pass-by trips is to be applied, the cumulative trip generation rates identified in the City's Trip Generation Manual should be used as follows:

- For the peak hour being analyzed, determine the percentage of pass-by trips. Split the total trip generation into new trips and pass-by trips.

- In addition to estimating normal trip distribution (for new trips), also estimate the distribution for pass-by trips (giving strong consideration to the commuting work trip).

- Perform two separate trip assignments, based on the two trip distributions. Pass-by assignment percentages should not automatically be applied to two-way traffic since an outbound pass-by trip may use a different route than an inbound pass-by trip. Also, the pass-by procedure implies subtracting trips from some existing movements and assigning to other movements. Care must be taken not to subtract a relatively large movement from a low volume facility. For this reason, the pass-by reduction on any given facility shall be no more than ten percent of the volume on that facility. It would be unreasonable to assume that more than one out of ten drivers would divert to a site on a daily basis.

- Combine the results of the "new trips" and "pass-by" assignments.

Congestion Management Program Procedures

The Congestion Management Program (CMP) requires that a regional travel forecast model be used to assign site traffic to the CMP roadway system. This applies to all developments generating more than 2,400 daily trips or 200 pm peak hour trips. For these developments, it is necessary to perform a select zone traffic assignment for site traffic to identify the project's impact on the CMP roadway system.

7. ANALYSIS

This chapter describes the analytical techniques used to derive the study findings, conclusions, and recommendations. This recognizes current methodologies. However, other techniques may be considered once they are developed or unique problems are encountered. This chapter attempts to provide guidance on the proper analysis technique to be applied; it does not attempt to document any particular analysis technique or preclude the use of any technique not specifically mentioned. Analysis techniques should be discussed by the preparer and reviewer of the traffic impact study prior to beginning the study.

Total Traffic Estimate

For each analysis period being studied, a projected total traffic volume must be estimated for each segment of roadway system being analyzed.

Identification of Impacts and Deficiencies

Acceptable Level of Service

The standard used to evaluate traffic operating conditions of the transportation system is referred to as level of service. This is a qualitative assessment of the quantative effect of factors such as speed, volume of traffic, geometric features, traffic interruptions, delays and freedom to maneuver. The acceptable level of service standard for roadways and intersections in San Diego is level of service D. However, for undeveloped locations, the goal is to achieve a level of service C.

Levels of Significance

To determine if a project contributes enough traffic to a transportation facility to consider mitigation measures, a level of significance threshold is used. **Table 5** identifies the levels of significance for several analysis techniques at varying levels of service. If the project causes a change greater than the level shown, the developer is considered to be responsible for all or part of the improvements required to mitigate the site traffic to the level previously held on the facility prior to the project's traffic impacts.

Signalized Intersection Analysis

The measure of effectiveness for signalized intersections is average stopped delay per vehicle. The current Highway Capacity Manual's signalized intersection operational methodology is the basis for determining intersection delay. The Highway Capacity Software (HCS), based on the HCM methodology, is acceptable except in cases of extreme congestion, where alternative software must be used to obtain average

seconds of delay. Alternative acceptable software includes TRAFFIX, SIGNAL 94 and NCAP. These methodologies require numerous inputs and assumptions. To ensure consistency among consultants (and City staff), the City has developed input guidelines shown in **Table 6**. These guidelines are not intended to be absolute, but any proposed deviations should first be discussed with City staff.

TABLE 5
Significant Transportation Impact Measure

LEVEL OF SERVICE WITH PROJECT	ALLOWABLE INCREASE/DECREASE DUE TO PROJECT IMPACTS*		
	INTERSECTIONS	ROADWAY SECTIONS	
	DELAY (SEC)	V/C	SPEED (MPH)
A	N/A	0.10	5
B	6	0.06	3
C	4	0.04	2
D**	2	0.02	1
E**	2	0.02	1
F**	2	0.02	1

NOTES:

* If a proposed project's impact exceed the values shown in the table, then the impacts are deemed "significant." The project applicant shall identify "feasible mitigations" to bring the facility back to the level previously held by the facility prior to the project's traffic impacts.

** The acceptable level of service standard for roadways and intersections in San Diego is level of service D. However, for undeveloped locations, the goal is to achieve a level of service C.

KEY: DELAY = Average stopped delay per vehicle measured in seconds
V/C = Volume to Capacity Ratio [capacity at level of service E should be used (Use Table 1.)]
SPEED = Arterial speed measured in miles per hour
N/A = Not Applicable

Signal Warrant Analysis

If new intersections are being created by a development or if a development adds traffic to existing unsignalized intersections, traffic signal warrant analyses must be performed. The Caltrans Traffic Manual should be consulted for procedures on conducting signal warrant analysis. Typically, the warrant based on Estimated Average Daily Traffic is used. For selected locations, the School Crossing Traffic Signal Warrant should be considered.

TABLE 6
Inputs and Assumptions for Intersection Capacity Analysis
Using the Highway Capacity Manual (HCM) Method

- Arrival Type = 3-5
- Cycle Length © = 60-120 seconds (or observed at existing locations)
- Ideal Saturation Flow Rate for HCM software = 1,900 pcphpl
- Minimum Green for each phase = 5-10 seconds
- Yellow Interval:

85% Approach Speed (mph)	*Yellow Interval (seconds)
35 or less	3.0
40	3.5
45	4.0
50	4.5
55	5.0
60	5.5

*Add 1 second for an all-red interval at all intersections.

- Minimum Heavy Vehicles = 2-4%
- Peak Hour Factor (PHF) = 0.80-0.95
- Minimum Pedestrians = 10/hour/approach

The following factors are used to convert daily volumes to peak hour volumes:

- Directional Factor (D) = 0.55-0.75
- Design Hour Factor (K) = 0.07-0.11
- Peak Hour Peak Direction = 0.05-0.08

NOTES:

1. Arrival Type 4 or 5 should be used for intersection approaches which are part of a coordinated arterial system.
2. Ideal Saturation Flow rate inputs may be higher than 1,900 pcphpl for individual movements at intersections with very high traffic volume. The use of higher saturation flow rate must be identified.
3. Level of Service F is not acceptable for intersection approaches except for side streets on an interconnected arterial system.
4. The 85% speeds can be obtained from the City's Traffic Engineering Division, Traffic Safety Information and Research Section.

When a new signal is proposed on a major arterial where a coordinated signal progression system exists or may exist, the impacts of adding a new signal on progression should be thoroughly analyzed, The software recommended for this analysis is PASSER II, Synchro or TRANSYT-7F.

Unsignalized Intersection Analysis

The measure of effectiveness for unsignalized intersections is average total delay per vehicle. Total delay is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. This methodology is described in Chapter 10 of the current Highway Capacity Manual. This methodology should be used for unsignalized intersections, yield and T-intersections.

Arterial Analysis

All arterials within the study area should be evaluated using the Daily Level of Service matrix shown in **Table 2** (shown in Chapter 2 of this manual). The results of this analysis may not accurately reflect actual peak hour operation of the street, but is intended as a guide to help determine arterial classification and sizing.

The Congestion Management Program arterials must be analyzed in greater detail. These arterials must be evaluated using the peak hour analysis contained in Chapter 11 of the current Highway Capacity Manual. This methodology uses the results of signalized intersection analyses, the arterial classification and free flow speed to calculate an average travel speed. The average travel speed is used to determine the arterial level of service. The HCS computer software may be used to determine arterial level of service.

Freeway Interchange Analysis

Since all freeways are on the Congestion Management Program system, their interchanges must be evaluated using CMP analysis techniques. All signalized intersections of freeway ramps with arterials should be evaluated using the Highway Capacity Manual signalized intersection operational method. For diamond interchanges, the timing and phasing of the two signals must be coordinated to ensure queue clearances. The software package recommended for this analysis is Passer III-90.

If ramp metering is to occur, the effects of metering should be analyzed. Inputs to this analysis are peak hour demands, flow rates, and ramp geometrics. The flow rates and ramp configurations are usually available from Caltrans. Outputs are excess demand, delay and queue length. This methodology is explained in **Appendix 2**.

8. SITE ACCESS AND OFF-SITE IMPROVEMENTS

Recommendations

During the final phase of the study, all analyses are reviewed and reassessed to best respond to the actual transportation needs of the project and the adjacent area. It is important that recommendations be made at each of the scenarios identified in Chapter 3, so that the responsibility for the improvements can be clearly established. All necessary improvements should be displayed on a study area map. A table shall be prepared identifying which improvements are needed, when they are needed and who is responsible for the improvements.

Project Phasing

In situations where an improvement is the responsibility of someone else or a joint responsibility, it may be necessary for the proposed development to be phased or for the developer to front the entire cost of an improvement(s). At the developer's option, a reimbursement district can be established. Where multiple improvements are needed, it may be advantageous to phase a development and associated improvements over time, to avoid large up front mitigation expenses. Appropriate analyses are required to permit projects to be phased.

Intersection Lane Configurations

Diagrams of typical intersection lane configurations are shown in **Appendix 4**. There are a number of lane configurations that can be used depending on the intersecting streets. Additional left-turn lanes, dual left-turn lanes and separate right-turn lanes will be based on the intersection turn volumes and level-of-service.

9. ON-SITE PLANNING AND PARKING

An integral part of an overall traffic impact study relates to basic site planning principles. Internal design will have a direct bearing on the adequacy of site access points.

Access Points

Access points should be designed with the same perspective as public streets. Site access points should be located and designed in accordance with the San Diego Regional Standard Drawings and the following guidelines:

- Driveways should align with opposing streets and driveways, if no raised center median exists on the cross street.

- If not aligned, adequate spacing should be maintained from adjacent street and driveway intersections. Distance between driveways and adjacent street intersections should be sufficient to minimize driveway blockage by queues from adjacent intersections.

- If the driveway is proposed to be signalized, it should be located to facilitate traffic progression past the site. A signal progression analysis may be required in such a situation. Curb return type access is allowed for signalized driveways.

- Access driveways should intercept traffic approaching the site as efficiently as possible; adequate inbound and outbound capacity should be provided.

- Adequate driveway capacity should be provided. The number of driveways should be compatible with site access capacity needs and should minimize adverse impacts on adjacent roads. A capacity analysis, gap check or lane adequacy check should be conducted for each driveway. Joint access should be considered where several adjacent properties have relatively short frontages or where low-volume driveways would otherwise result.

- Two-way driveways should intersect adjacent roadways at 90-degree angles, wherever possible.

- The capacity of on-site intersections should be sufficient to prevent traffic entering the site from backing up on the adjacent street.

- Traffic safety aspects of all proposed site access facilities should be reviewed to ensure adequate sight distance and other applicable factors.

- Deceleration and acceleration lanes may be required on the City street at the access driveway.

Vehicular Queuing Storage

Provision for appropriate vehicular exit queuing should be made at all access drives for a development. For small developments, parking areas and access points should be designed so drivers waiting to exit can align their vehicles perpendicular to the off-site roadway system. For large developments, queuing areas should be sufficient so that vehicles stored at exits do not block internal circulation and so that drivers enter a signalized intersection at minimum headways to achieve maximum flow rates. The queue storage just inside a parking facility should be sufficient to allow vehicles to enter the parking facility and come to a complete stop without blocking or hampering internal circulation and without causing traffic to back up on the off-site roadway.

Drive-through developments such as banks, car washes and fast food restaurants, should be provided with adequate capacity to accommodate normal peak queues.

Internal Vehicular Circulation

Internal circulation roadways should permit access between all areas in a manner which is safe, has adequate capacity, and is clearly understandable to the driver.

Service and Delivery Vehicles

Service and delivery vehicles require separate criteria for movement to and from site:

- Vehicle turning paths should be sufficient to accommodate the largest vehicles anticipated to travel on the site.

- Access points anticipated to be used by service vehicles should have turning paths sufficient to allow service to enter and exit the site without encroaching upon opposing lanes or curbed areas.

- There should be sufficient separation between external and internal circulation roads so large vehicles can be queued on entry or exit without blocking access to parking spaces or internal roadway circulation systems.

- Service vehicle routes should be as direct as possible.

- The number of loading berths provided should be sufficient to accommodate anticipated service and delivery activity.

Emergency Vehicle Access

- Entrance curb to curb widths must be 20 feet minimum.
- An emergency vehicle only access shall be restricted with a chain, gate or bollard, and properly signed to the satisfaction of the Fire Department.
- Extra aisle widths may be required adjacent to fire hydrants.
- “No Parking - Fire Lane” signs may be required on-site.

Parking

Adequate parking should be provided to meet site generated demands. On-site parking should be provided in accordance with the Transportation Development Section's recommended parking ratios shown in **Appendix 3**. Minimum parking requirements may vary where superseded by the San Diego Municipal Code. Parking should be dispersed throughout the site for convenience to destinations. The Municipal Code addresses parking lot design considerations.

Shared parking is a valid approach to the determination of total parking needs of any mixed use development. Close building proximity and efficient internal circulation systems and access drives are necessary for shared parking to be successful. **Appendix 3** also contains procedures for reducing parking requirements for mixed-use developments.

For major developments, bicycle parking should be provided at a ratio of two spaces per 100 auto parking spaces.

The location of bicycle parking and carpool or vanpool parking should be in close proximity to the building entrances.

Pedestrian, Transit and Bicycle Considerations

The overall site plans should also consider public transportation, pedestrians, and bicyclists. Appropriate public transportation facilities and shuttle bus staging areas should be accommodated adjacent to service drives and entrance areas, at key locations along circulation drives or at major pedestrian focal points along the roadway system. Pedestrian connections between these facilities, public sidewalks and the site buildings should be integrated in the overall design of the project. Proper design of pedestrian facilities can reduce the use of motor vehicles for trips within a development and between nearby developments.

APPENDIX 1

SCREEN CHECK

CITY OF SAN DIEGO
TRANSPORTATION DEVELOPMENT SECTION
TRAFFIC IMPACT STUDY
SCREEN CHECK

To be completed by City Staff:
Date Received _____
Reviewer _____
Date Screen Check ____

To be completed by consultant (including page #):
Name of Traffic Study _____
Consultant _____
Date Submitted _____

Indicate Page # in report:			Satisfactory YES	NO	NOT REQUIRED
pg. ___	1.	Table of contents, list of figures and list of tables.	☐	☐	
pg. ___	2.	Executive summary.	☐	☐	
pg. ___	3.	Map of the proposed project location	☐	☐	
	4.	General project description and background information:			
pg. ___		a. Proposed project description (acres, dwelling units....)	☐	☐	
pg. ___		b. Total trip generation of proposed project.	☐	☐	
pg. ___		c. Community plan assumption for the proposed site.	☐	☐	
pg. ___		d. Discuss how project affects the Congestion Management program.	☐	☐	
pg. ___	5.	Parking, transit and on-site circulation discussions are included.	☐	☐	
pg. ___	6.	Map of the Transportation Impact Study Area and specific intersections studied in the traffic report.	☐	☐	
pg. ___	7.	Existing Transportation Conditions:			
		a. Figure identifying roadway conditions including raised medians, median openings, separate left and right turn lanes, roadway and intersection dimensions, bike lanes, parking, number of travel lanes, posted speed, intersection controls, turn restrictions and intersection lane configurations.	☐	☐	
		b. Figure indicating the daily (ADT) and peak hour volumes.	☐	☐	
		c. Figure or table showing level of service (LOS) for intersections during peak hours and roadway sections within the study area (analysis sheets included in the appendix).	☐	☐	
	8.	Project Trip Generation:			
pg. ___		Table showing the calculated project generated daily (ADT) and the peak hour volumes.	☐	☐	
pg. ___	9.	Project Trip Distribution using the current TRANPLAN Computer Traffic Model (provide a computer plot) or manual assignment if previously approved. (Identify which method was used.)	☐	☐	
	10.	Project Traffic Assignment:			
pg. ___		a. Figure indicating the daily (ADT) and peak hour volumes.	☐	☐	
pg. ___		b. Figure showing pass-by-trip adjustments, if cumulative trip rates are used.	☐	☐	☐
	11.	Existing + Other Pending Projects:			
pg. ___		a. Figure indicating the daily (ADT) and peak hour volumes.	☐	☐	
pg. ___		b. Figure or table showing the projected LOS for intersections during peak hours and roadway sections within the study area (analysis sheets included in the appendix).	☐	☐	
pg. ___		c. Traffic signal warrant analysis for appropriate locations (signal warrants included in the appendix).	☐	☐	

		Satisfactory YES	NO	NOT REQUIRED
	12. Existing + Other Pending Projects + Project (short term cumulative):			
pg. ____	a. Figure or table showing the projected LOS for intersections during peak hours and roadway sections with the project (analysis sheets included in the appendix).	☐	☐	
pg. ____	b. Figure showing other projects that were included in the study, and the assignment of their site traffic.	☐	☐	
pg. ____	c. Traffic signal warrant analysis for appropriate locations (signal warrants in the appendix).	☐	☐	
	13. Build-out Transportation Conditions (if project conforms to the community plan):			
pg. ____	a. Build-out ADT and street classification that reflect the community plan.	☐	☐	☐
pg. ____	b. Figure or table showing the build-out LOS for intersections during peak hours and roadway sections with the project (analysis sheets included in the appendix).	☐	☐	☐
pg. ____	c. Traffic signal warrant analysis at appropriate locations (signal warrants included in the appendix).	☐	☐	☐
	14. Build-out Transportation Conditions (if project does not conform to the community plan).			
pg. ____	a. Build-out ADT and street classification as shown in the community plan.	☐	☐	☐
pg. ____	b. Build-out ADT and street classification for two scenarios: with the proposed project and with the land use assumed in the community plan.	☐	☐	☐
pg. ____	c. Figure or table showing the build-out LOS for intersections during peak hours and roadway sections for two scenarios: with the proposed project and with the land use assumed in the community plan (analysis sheets included in the appendix).	☐	☐	☐
pg. ____	d. Traffic signal warrant analysis at appropriate locations with the land use assumed in the community plan (signal warrants included in the appendix).	☐	☐	☐
pg. ____	15. A summary table showing the comparison of Existing, Existing + Other Pending Projects, Existing + Other Pending Projects + Proposed Project, and Buildout, LOS on roadway sections and intersections during peak hours.	☐	☐	
	16. Transportation Mitigation Measures.			
pg. ____	a. Table identifying the mitigations required that are the responsibility of the developer and others. A phasing plan is required if mitigations are proposed in phases.	☐	☐	
pg. ____	b. Figure showing all proposed mitigations that include: intersection lane configurations, lane widths, raised medians, median openings, roadway and intersection dimensions, right-of-way, offset, etc.	☐	☐	
pg. ____	17. The traffic study is signed by a California Registered Traffic Engineer.	☐	☐	
pg. ____	18. The Highway Capacity Manual Operational Method or other approved method is used at appropriate locations within the study area.	☐	☐	
pg. ____	19. Analysis complies with Congestion Management requirements.	☐	☐	☐
pg. ____	20. Appropriate freeway analysis is included.	☐	☐	☐
pg. ____	21. Appropriate freeway ramp metering analysis is included.	☐	☐	☐

THE TRAFFIC STUDY SCREEN CHECK FOR THE SUBJECT PROJECT IS:

_____ Approved

_____ Not approved because the following items are missing:

_____

_____

_____

_____

_____

APPENDIX 2

RAMP METER ANALYSIS

APPENDIX 2. RAMP METERING ANALYSIS

Ramp metering analysis should be performed for each horizon year scenario in which ramp metering is expected. The following table shows relevant information that should be included in the ramp meter analysis (calculations are shown in the footnotes):

LOCATION	DEMAND[1] (veh/hr)	METER RATE[2] (veh/hr)	EXCESS DEMAND[3] (veh/hr)	AVERAGE DELAY[4] (veh/hr)	AVERAGE QUEUE[5] (feet)
I-5/Carmel Mountain Road (SB/AM Peak)	985	788	197	15.0[6]	4,925
I-5/Carmel Mountain Road (SB/PM Peak)	510	1,000	0	0	0

Notes**:**

[1] DEMAND is the peak hour demand expected to use the on-ramp.

[2] METER RATE is the peak hour capacity expected to be processed through the ramp meter. This value is usually available from Caltrans.

[3] EXCESS DEMAND = (DEMAND) – (METER RATE) or zero, whichever is greater

[4] AVERAGE DELAY = $\frac{\text{EXCESS DEMAND}}{\text{METER RATE}}$ * 60 minutes/hour

[5] AVERAGE QUEUE = (EXCESS DEMAND) * 25 feet/vehicle

[6] Ramp meter delays above 15 minutes are not acceptable.

APPENDIX 3

PARKING REQUIREMENTS

Transportation Development Section
Parking Rates Used for Discretionary Review

LAND USE	RATE
RESIDENTIAL USES	
Single-family Residential	2 per dwelling
Multifamily Residential	
Resident Portion	
Studio	1.00 per dwelling unit
One bedroom	1.25 per dwelling unit
Two bedroom	1.50 per dwelling unit
Three or more bedrooms	1.75 per dwelling unit
Supplemental Portion	
General	Add 30% of resident portion*
Beach or Campus impact area	Add 50% of resident portion*
Transit Reductions*	
Transit Corridor	0.10 of supplemental
Nodal Corridor/Transfer Node	0.20 of supplemental
Transit Node	0.30 of supplemental
Transit Hub	0.60 of supplemental
Density Reductions*	
42-72 units per acre	0.10 of supplemental
73-142 units per acre	0.20 of supplemental
143 or more units per acre	0.30 of supplemental
Commercial Use Reductions*	
4% to 8.9% gross floor area	0.10 of supplemental
9% to 12.9% gross floor area	0.20 of supplemental
13% or more gross floor area	0.30 of supplemental
Common Area Portion	In planned urbanizing areas only, 20% of resident and supplemental spaces must be located in a common area

(see next page for additional land uses)

NOTES:

- These parking rates are subject to change.

* If a PDO exists, parking requirements may vary from the above rates.

OTHER LAND USES

Hotel	1 per guest room
Restaurant	
Free-standing building	1 per 60 gross sq. ft.
Combined in project	1 per 80 gross sq. ft.
Banquet Room	1 per 80 gross sq. ft.
Retail	1 per 200 gross sq. ft.
Medical Office	1 per 250 gross sq. ft.
Commercial Office	1 per 300 gross sq. ft.
Scientific Research and Development	1 per 400 gross sq. ft.
Library	
With high meeting room use	1 per 175 gross sq. ft.
Without high meeting room use	1 per 200 gross sq. ft.
Daycare Center	
Staff	1 per each adult (1 per 6 students)
Loading/unloading area	Add 1 per 12 students
Hospital	
With transit	1.75 per bed
Without transit	2 per bed
Convalescent Hospital	1 per 3 beds
Theatre	
1-3 screens	1 per 3 seats
4 or more screens	1 per 3.3 seats
Church	1 per 3 seats
Health Club	1 per 200 gross sq. ft.
Marina	1 per 3 boat slips
General Aviation Airport	
Parking in hangars/tiedowns	9 per 100 hangars/tiedowns
No parking in hangars/tiedowns	27 per 100 hangars/tiedowns
Industrial	1 per 400 gross sq. ft.
Warehousing	
Storage area	1 per 1,000 gross sq. ft.
Office area	1 per 300 gross sq. ft.

NOTES:

- These parking rates are subject to change.
- If a PDO exists, parking requirements may vary from the above rates.

§ 142.0540 Cont'd Footnote to Table 142-05G

(1) The City Engineer will determine whether a *lot* has adequate *alley* access according to accepted engineering practices.

(b) Exceeding Maximum Permitted Parking. Development proposals may exceed the maximum permitted automobile parking requirement shown in Tables 142-05D, 142-05E, and 142-05F with the approval of a Neighborhood Development Permit, subject to the following:

(1) The *applicant* must show that the proposed parking spaces are required to meet anticipated parking demand, will not encourage additional automobile trips, and will not result in adverse site design impacts; and

(2) The number of automobile parking spaces provided shall not be greater than 125 percent of the maximum that would otherwise be permitted.

(c) Varying From Minimum Parking Requirements. Development proposals may, at the applicant's option, vary from the minimum parking requirements of this division with the approval of a Transportation Demand Management (TDM) Plan and Site Development Permit decided in accordance with Process Three, subject to the following requirements.

(1) The TDM Plan shall be designed to reduce peak period automobile use with such techniques as carpooling, vanpooling, transit, bicycling, walking, telecommuting, compressed work weeks, or flextime.

(2) To compensate for a reduction in parking, the TDM Plan shall specify only those measures that would not otherwise be required by this division.

(3) In no case shall the number of automobile parking spaces provided be less than 85 percent of the minimum that would otherwise be required.

(4) The *applicant* shall show that the TDM Plan adequately mitigates the proposed reductions in automobile parking.

(5) The owner shall set aside land for a parking facility or allow for future construction or expansion of a structured parking facility that is sufficient to provide additional parking spaces equal in number to the number reduced.

(6) In the event of noncompliance with the TDM Plan, the City Manager shall require the owner to construct additional parking spaces equal in number to the spaces originally reduced.

§ 142.0545 Shared Parking Requirements

(a) Approval Criteria. In all zones except single unit residential zones, *shared parking* may be approved through a Building Permit subject to the following requirements.

(1) *Shared parking* requests shall be for two or more different land uses located adjacent or near to one another, subject to the standards in this section.

(2) All *shared parking* facilities shall be located within a 600-foot horizontal distance of the uses served.

§ 142.0545 Cont'd

(3) Parties involved in the shared use of a parking facility shall provide an agreement for the shared use in a form that is acceptable to the City Attorney.

(4) *Shared parking* facilities shall provide *signs* on the *premises* indicating the availability of the facility for patrons of the participating uses.

(5) Modifications to the *structure* in which the uses are located or changes in tenant occupancy require review by the City Manager for compliance with this section.

(b) Shared Parking Formula. *Shared parking* is based upon the variations in the number of parking spaces needed (parking demand) over the course of the day for each of the proposed uses. The hour in which the highest number of parking spaces is needed (peak parking demand) for the proposed *development*, based upon the standards in this section, determines the minimum number of required *off-street parking spaces* for the proposed *development*.

(1) The *shared parking* formula is as follows:

A, B, C	=	proposed uses to share parking spaces
PA	=	parking demand in the peak hour for Use A
PB	=	parking demand in the peak hour for Use B
PC	=	parking demand in the peak hour for Use C
HA%	=	the percentage of peak parking demand for Use A in Hour H
HB%	=	the percentage of peak parking demand for Use B in Hour H
HC%	=	the percentage of peak parking demand for Use C in Hour H
P(A, B, C)	=	peak parking demand for Uses A, B and C combined

Formula:

P(A, B, C) = (PA x HA%) + (PB x HB%) + (PC x HC%),
where H = that hour of the day (H) that maximizes P(A, B, C)

(2) Table 142-05G contains the peak parking demand for selected uses, expressed as a ratio of parking spaces to *floor* area.

(3) Table 142-05H contains the percentage of peak parking demand that selected uses generate for each hour of the day (hourly accumulation curve), in some cases separated into weekdays and Saturdays. The period during which a use is expected to generate its peak parking demand is indicated as 100 percent, and the period during which no parking demand is expected is indicated with "-".

(4) The parking demand that a use generates in a particular hour of the day is determined by multiplying the peak parking demand for the use by the percentage of peak parking demand the use generates in that hour.

(5) The parking demand of the proposed *development* in a particular hour of the day is determined by adding together the parking demand for each use in that hour.

§ 142.0545 Cont'd

(6) The minimum number of required *off-street parking spaces* for the proposed *development* is the highest hourly parking demand.

(7) Uses for which standards are not provided in Tables 142-05H and 142-05I may nevertheless provide *shared parking* with the approval of a Neighborhood Development Permit, provided that the *applicant* shows evidence that the standards used for the proposed *development* result in an accurate representation of the peak parking demand.

(c) Single Use Parking Ratios. *Shared parking* is subject to the parking ratios in Table 142-05H.

Table 142-05H
Parking Ratios for Shared Parking

Use	Peak Parking Demand (Ratio of spaces per 1,000 square feet of floor area unless otherwise noted. Floor area includes gross floor area plus below grade *floor* area and excludes floor area devoted to parking)	Transit Area[1]
Office (except medical office)		
Weekday	3.3	2.8
Saturday	0.5	0.5
Medical office		
Weekday	4.0	3.4
Saturday	0.5	0.5
Retail sales	5.0	4.3
Eating & drinking establishment	15.0	12.8
Cinema 1-3 screens 4 or more screens	1 space per 3 seats 1 space per 3.3 seats	1 space per 3 seats 1 space per 3.3 seats
Visitor accommodations	1 space per *guest room*	1 space per *guest room*
Conference room	10.0	10.0
Multiple dwelling units	(see Section 142.0525)	

Footnote for Table 142-05H

(1) *Transit Area*. The *transit area* peak parking demand applies in the *Transit Area* Overlay Zone (see Chapter 13, Article 2, Division 10).

(d) Hourly Accumulation Rates. Table 142-05I contains, for each hour of the day shown in the left column, the percentage of peak demand for each of the uses, separated in some cases into weekdays and Saturdays.

§ 142.0545
Cont'd

Table 142-05I
Representative Hourly Accumulation by Percentage of Peak Hour

Hour of Day	Office (Except Medical Office)		Medical Office		Retail Sales		Eating & Drinking establishment.		Cinema	
	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday
6 a.m.	5%	-	5%	-	-	-	15%	20%	-	-
7 a.m.	15	30%	20	20%	10%	5%	55%	35%	-	-
8 a.m.	55	50	65	40	30	30	80	55	-	-
9 a.m	90	80	90	80	50	50	65	70	-	-
10 a.m.	100	90	100	95	70	75	25	30	5%	-
11 a.m.	100	100	100	100	80	90	65	40	5	-
Noon	90	100	80	100	100	95	100	60	30	30%
1 p.m.	85	85	65	95	95	100	80	65	70	70
2 p.m.	90	75	80	85	85	100	55	60	70	70
3 p.m.	90	70	80	95	80	90	35	60	70	70
4 p.m.	85	65	80	50	75	85	30	50	70	70
5 p.m.	55	40	50	45	80	75	45	65	70	70
6 p.m.	25	35	15	45	80	65	65	85	80	80
7 p.m.	15	25	10	40	75	60	55	100	100	90
8 p.m.	5	20	5	5	60	55	55	100	100	100
9 p.m.	5	-	5	-	45	45	45	85	100	100
10 p.m.	5	-	5	-	30	35	35	75	100	100
11p.m.	-	-	-	-	15	15	15	30	80	80
Midnight	-	-	-	-	-	-	5	25	70	70

Hour of Day	Visitor Accommodations					
	Guest Room		Eating & Drinking Establishment		Conference Room	Exhibit Hall and Convention Facility
	Weekday	Saturday	Weekday	Saturday	Daily	Daily
6 a.m.	100%	90%	15%	20%	-	-
7 a.m.	95	80	55	35	--	-
8 a.m.	85	75	80	55	50%	50%
9 a.m	85	70	65	70	100	100
10 a.m.	80	60	25	30	100	100
11 a.m.	75	55	65	40	100	100
Noon	70	50	100	60	100	100
1 p.m.	70	50	80	65	100	100
2 p.m.	70	50	55	60	100	100

§ 142.0545 Cont'd

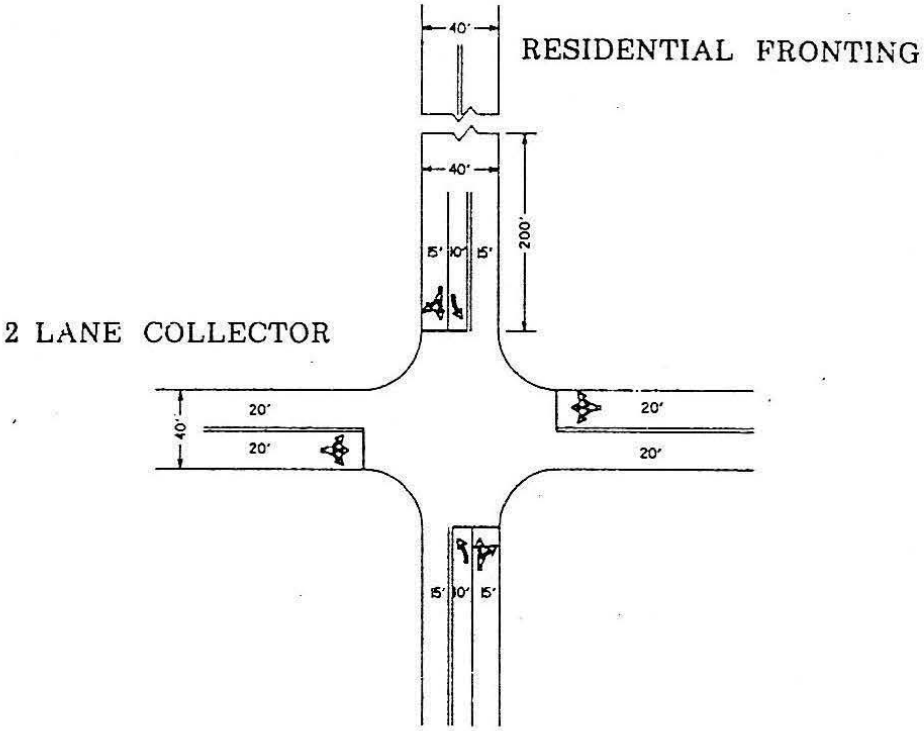
Hour of Day	Visitor Accommodations					
	Guest Room		Eating & Drinking Establishment		Conference Room	Exhibit Hall and Convention Facility
3 p.m.	60	50	40	60	100	100
4 p.m.	65	50	30	50	100	100
5 p.m.	60	60	45	65	100	100
6 p.m.	65	65	65	85	100	100
7 p.m.	75	70	55	100	100	100
8 p.m.	85	70	55	100	100	100
9 p.m.	90	75	45	85	100	100
10p.m.	90	85	35	75	50	50
11p.m.	100	95	15	30	-	-
Midnight	100	100	10	25	-	-

Hour of Day	Residential	
	Weekday	Saturday
6 a.m.	100%	100%
7 a.m.	80	100
8 a.m.	60	95
9 a.m	50	85
10 a.m.	40	80
11 a.m.	40	75
Noon	40	70
1 p.m.	35	65
2 p.m.	40	65
3 p.m.	45	65
4 p.m.	45	65
5 p.m.	50	65
6 p.m.	65	70
7 p.m.	70	75
8 p.m.	75	80
9 p.m.	85	80
10 p.m.	90	85
11 p.m.	95	90
Midnight	100	95

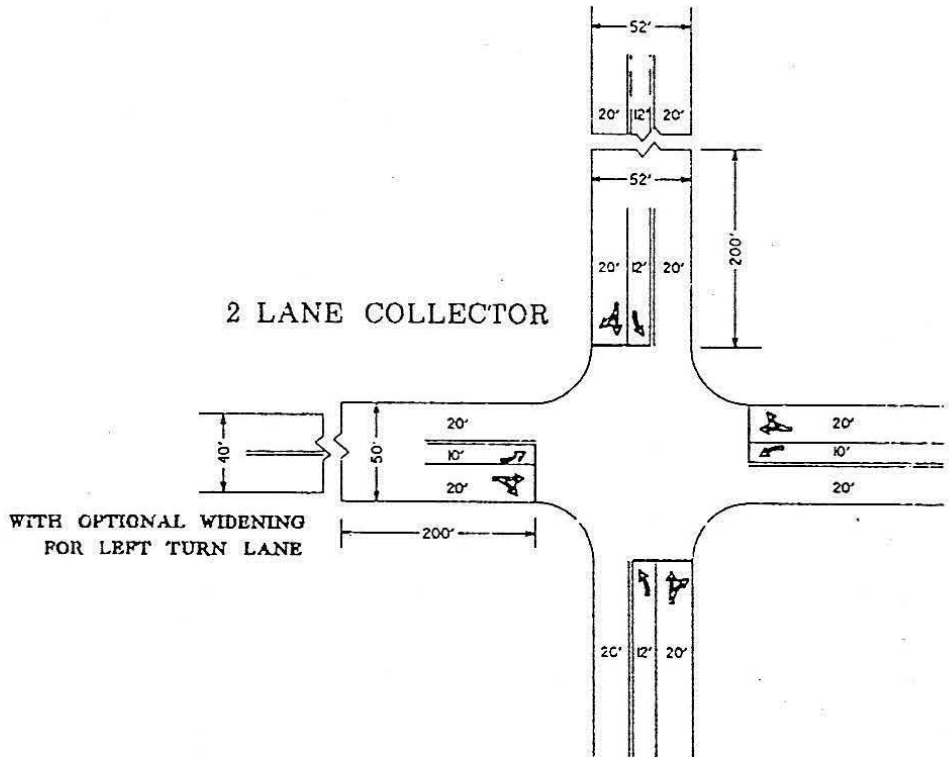
APPENDIX 4

INTERSECTION LANE CONFIGURATIONS

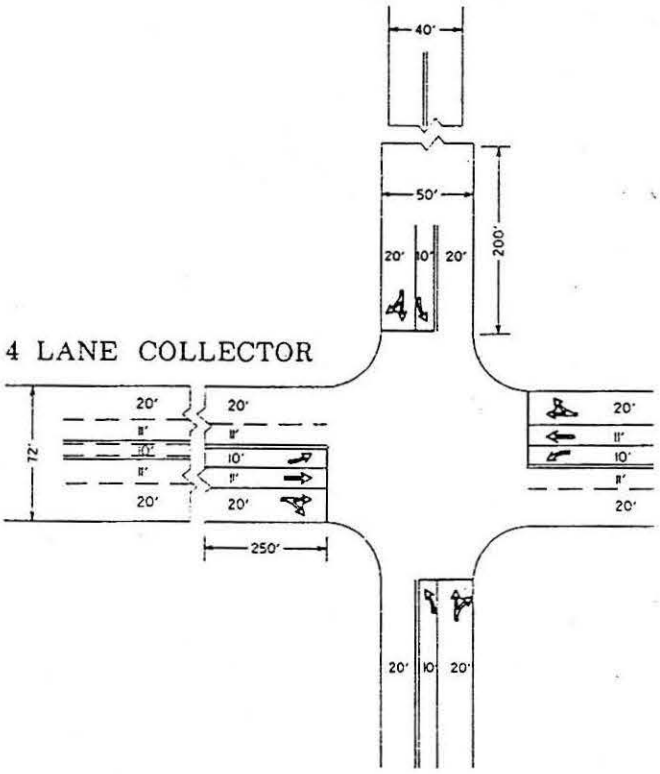
2 LANE COLLECTOR



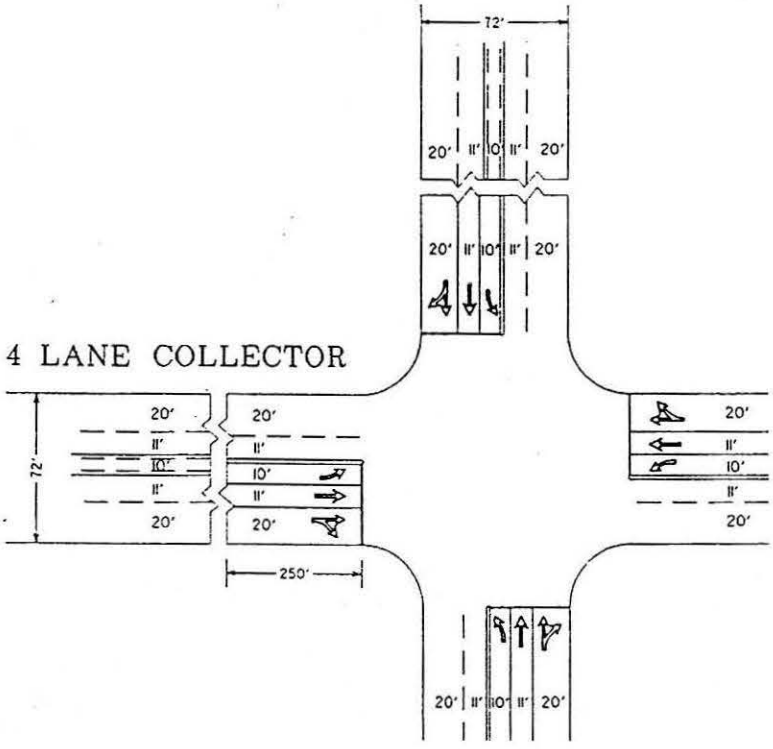
2 LANE COLLECTOR
WITH CONTINOUS TWO-WAY
LEFT-TURN LANE



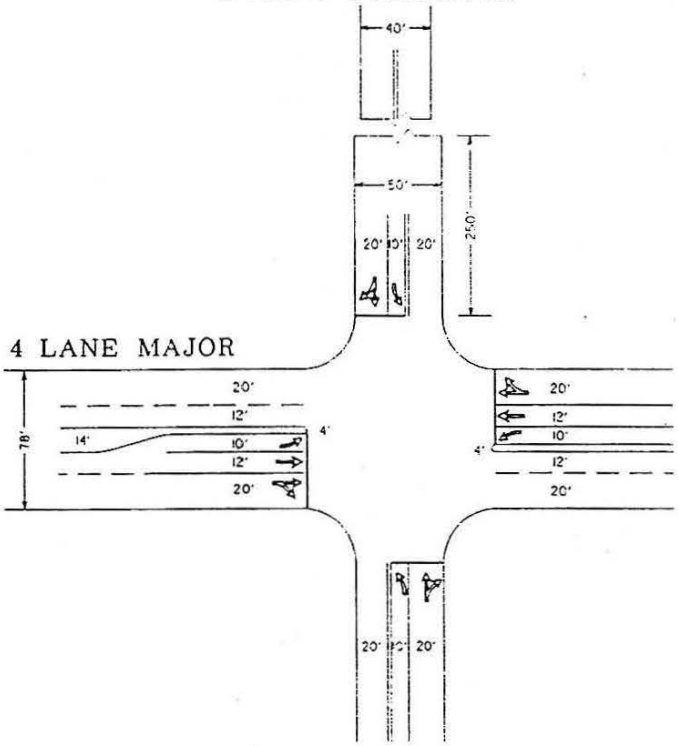
2 LANE COLLECTOR



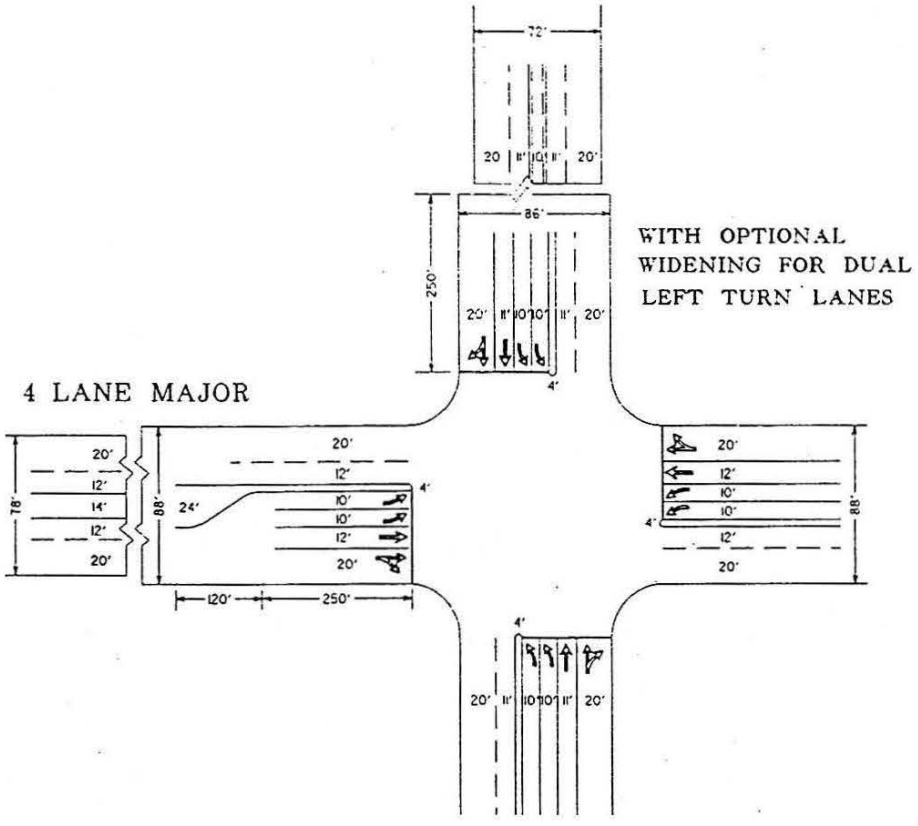
4 LANE COLLECTOR



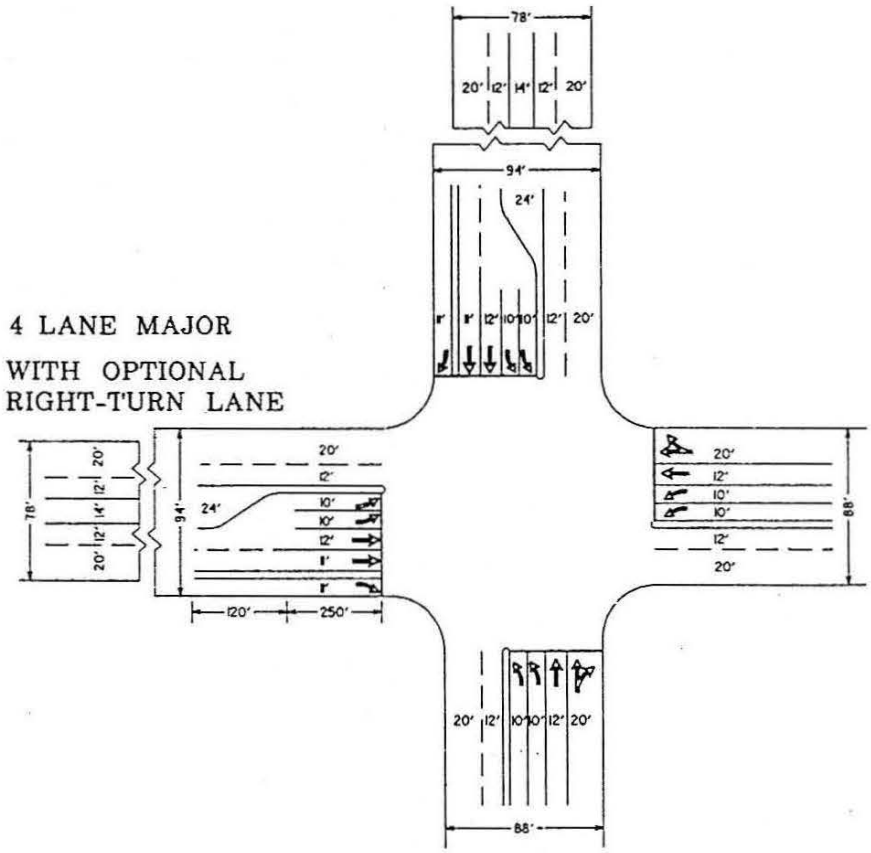
2 LANE COLLECTOR



4 LANE COLLECTOR

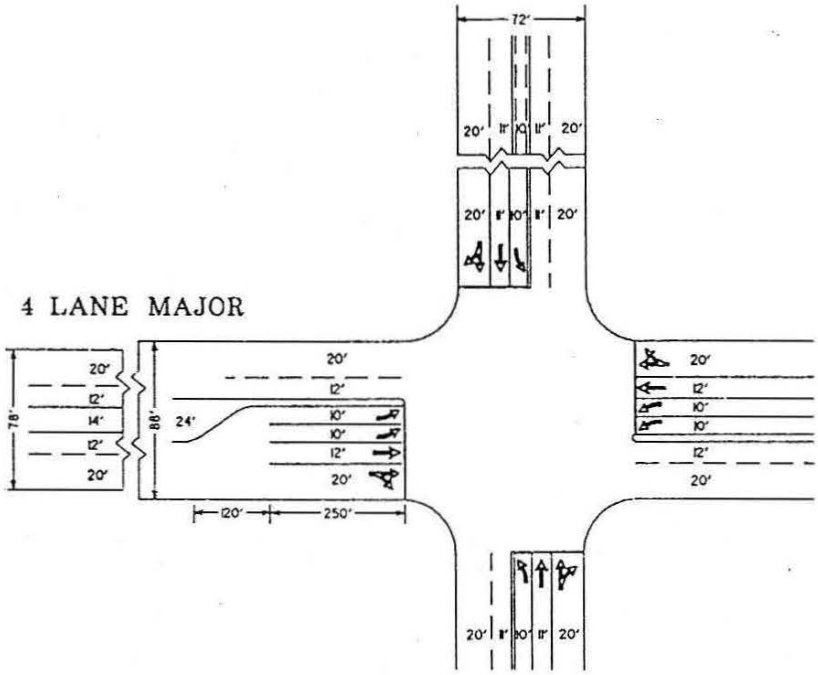


4 LANE MAJOR



4 LANE MAJOR
WITH OPTIONAL
RIGHT-TURN LANE

4 LANE COLLECTOR



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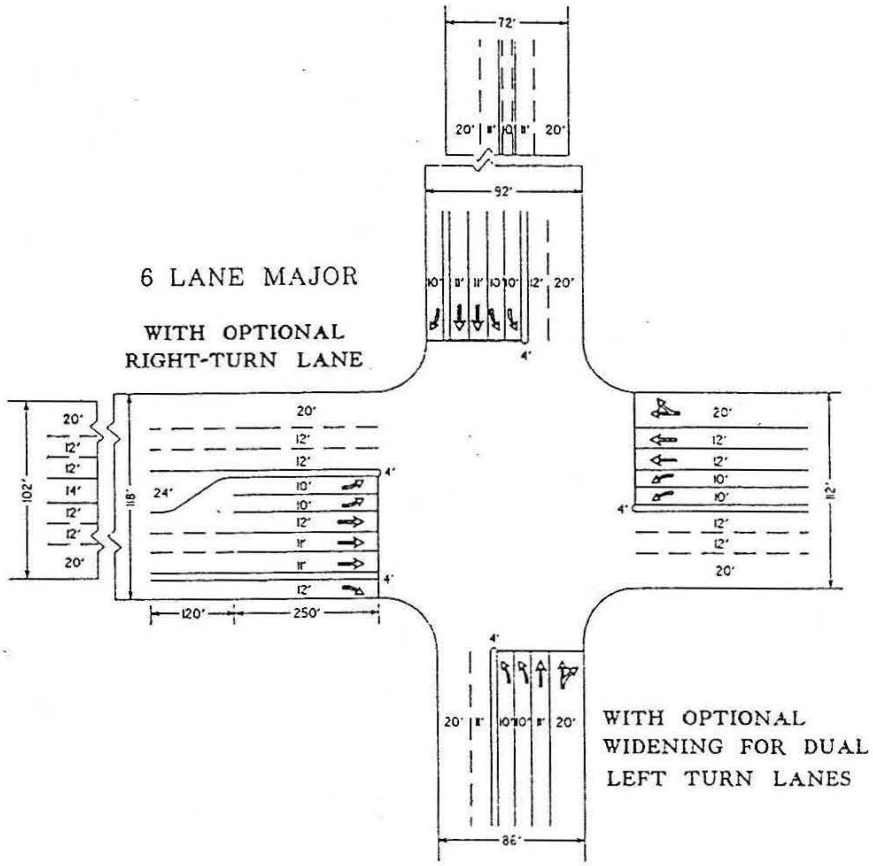
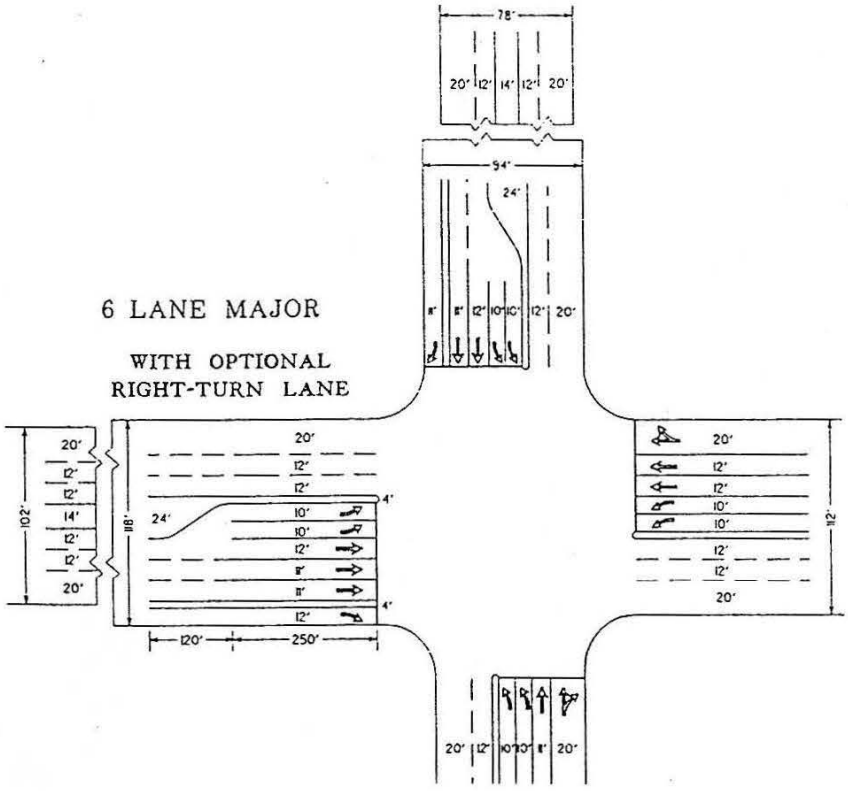
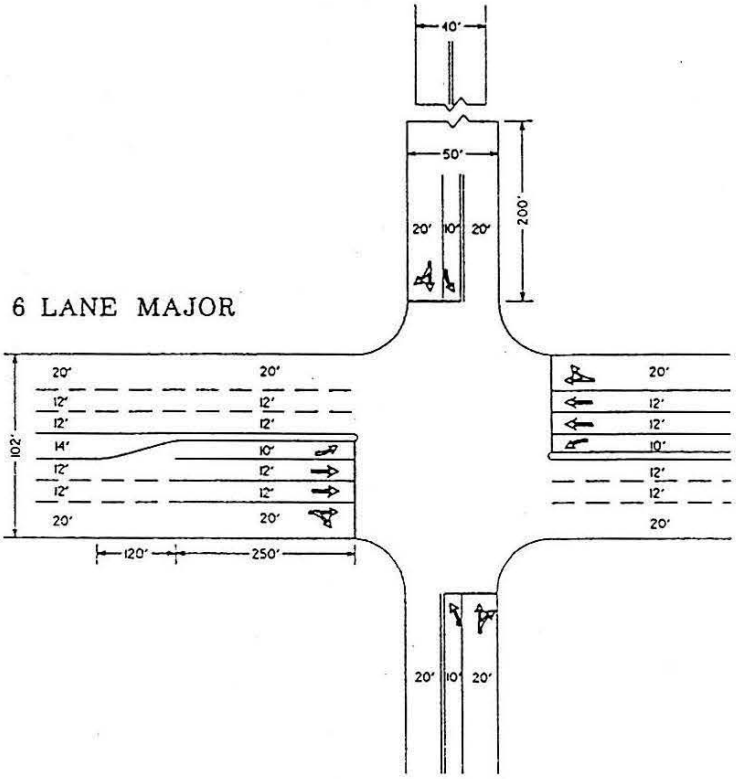


4 LANE MAJOR

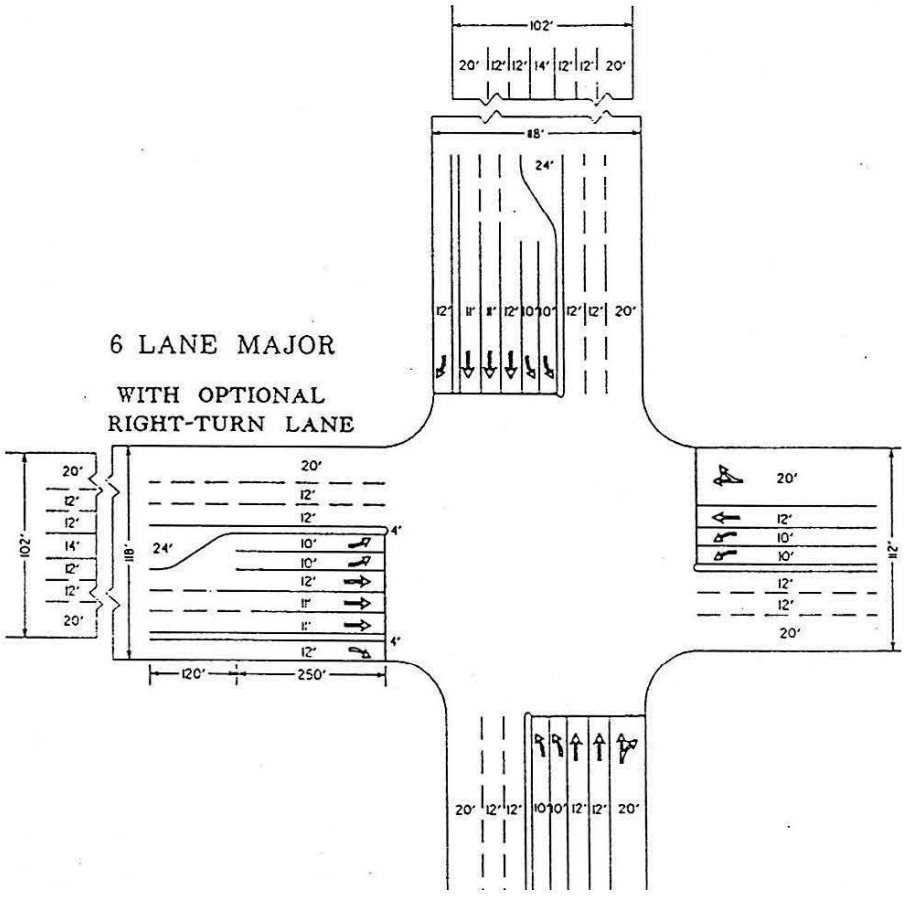


2 LANE COLLECTOR



6 LANE MAJOR

6 LANE MAJOR



6 LANE MAJOR

WITH OPTIONAL
RIGHT-TURN LANE

City Staff Members who participated in the 1993 effort:

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Erik Ruehr (JHK & Associates)
Ronald Sieke (P&D Technologies, Inc.)

O. TRANSPORTATION / CIRCULATION and PARKING

Note: This section is to be applied for projects deemed complete on or after January 1, 2007. For projects deemed complete prior to January 1, 2007, the following Section O.1. on Page 73 is to be applied.

Project-related traffic impacts are one of the most commonly identified environmental impacts under the CEQA. Traffic operations and safety impacts are addressed in this section. Other environmental impacts associated with project- related traffic and transportation infrastructure improvements (e.g., air quality, noise, biology) are addressed in the applicable sections of this manual which pertain to such issues.

Direct traffic impacts are those projected to occur at the time a proposed development becomes operational, including other developments not presently operational but which are anticipated to be operational at that time (near term).

Cumulative traffic impacts are those projected to occur at some point after a proposed development becomes operational, such as during subsequent phases of a project and when additional proposed developments in the area become operational (short-term cumulative) or when the affected community plan area reaches full planned build out (long-term cumulative).

It is possible that a project's near term (direct) impacts may be reduced in the long term, as future projects develop and provide additional roadway improvements (for instance, through implementation of traffic phasing plans). In such a case, the project may have direct impacts but not contribute considerably to a cumulative impact.

For intersections and roadway segments affected by a project, level of service (LOS) D or better is considered acceptable under both direct and cumulative conditions.

INITIAL STUDY CHECKLIST QUESTIONS

The following are taken from the City's Initial Study Checklist. They provide guidance on determining the potential significance of impacts to transportation, circulation systems, and parking:

Would the proposal result in:

1. Traffic generation in excess of specific community plan allocation?
2. An increase in projected traffic which is substantial (see table on following page) in relation to the existing traffic load and capacity of the street system?
3. Addition of a substantial amount of traffic to a congested freeway segment, interchange, or ramp as shown in the table on the next page?
4. An increased demand for off-site parking?
5. Effects on existing parking?
6. Substantial impact upon existing or planned transportation systems?
7. Substantial alterations to present circulation movements including effects on existing public access to beaches, parks, or other open space areas?

8. Increase in traffic hazards for motor vehicles, bicyclists or pedestrians due to a proposed, non-standard design feature (e.g., poor sight distance or driveway onto an access-restricted roadway)?
9. A conflict with adopted policies, plans or programs supporting alternative transportation models (e.g., bus turnouts, bicycle racks)?

SIGNIFICANCE THRESHOLDS

The following thresholds have been established to determine significant traffic impacts:

1. If any intersection, roadway segment, or freeway segment affected by a project would operate at LOS E or F under either direct or cumulative conditions, the impact would be significant if the project exceeds the thresholds shown in the table below.

2. At any ramp meter location with delays above 15 minutes, the impact would be significant if the project exceeds the thresholds shown in the table below.

3. If a project would add a substantial amount of traffic to a congested freeway segment, interchange, or ramp, the impact may be significant.

4. Addition of a substantial amount of traffic to a congested freeway segment, interchange, or ramp as shown in the table below?

5. If a project would increase traffic hazards to motor vehicles, bicyclists or pedestrians due to proposed non-standard design features (e.g., poor sight distance, proposed driveway onto an access-restricted roadway), the impact would be significant. Note: analysts should refer readers to a discussion of this issue in the Health and Safety section of the environmental document.

5. If a project would result in the construction of a roadway which is inconsistent with the General Plan and/or a community plan, the impact would be significant if the proposed roadway would not properly align with other existing or planned roadways.

6. If a project would result in a substantial restriction in access to publicly or privately owned land, the impact would be significant.

Level of Service with Project *	**Allowable Change Due To Project Impact ****					
	Freeways		**Roadway Segments**		**Intersections**	**Ramp Metering**
	V/C	***Speed (mph)***	***V/C***	***Speed (mph)***	***Delay (sec.)***	***Delay (min.)***
E (or ramp meter delays above 15 min.)	0.010	1.0	0.02	1.0	2.0	2.0
F (or ramp meter delays above 15 min.)	0.005	0.5	0.01	0.5	1.0	1.0

Note 1: The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS E is 2 minutes.

Note 2: The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway LOS F is 1 minute.

* All LOS measurements are based upon Highway Capacity Manual procedures for peak-hour conditions. However, V/C ratios for roadway segments are estimated on an ADT/24-hour traffic volume basis (using Table 2 of the City's Traffic Impact Study Manual. The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped locations). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

** If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. The project applicant shall then identify feasible improvements (within the Traffic Impact Study) that will restore/and maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see above * note), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating the project's direct significant and/or cumulatively considerable traffic impacts.

KEY:
Delay = Average control delay per vehicle measured in seconds for intersections, or minutes for ramp meters
LOS = Level of Service
Speed = Speed measured in miles per hour
V/C = Volume to Capacity ratio

PARKING

Parking requirements vary by land use and location and are dictated by the City of San Diego Municipal Code and adopted by the City Council policies.

SIGNIFICANCE THRESHOLDS

Non-compliance with the City's parking ordinance does not necessarily constitute a significant environmental impact. However, it can lead to a decrease in the availability of existing public parking in the vicinity of the project. Generally, if a project is deficient by more than ten percent of the required amount of parking and at least one of the following criteria applies, then a significant impact may result:

1. The project's parking shortfall or displacement of existing parking would substantially affect the availability of parking in an adjacent residential area, including the availability of public parking.

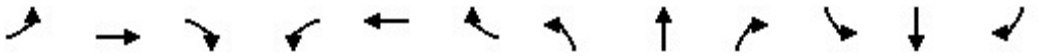
2. The parking deficiency would severely impede the accessibility of a public facility, such as a park or beach.

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

Roadway Functional Classification	Lanes	Level of Service				
		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	6	25,000	35,000	50,000	55,000	60,000
Prime Arterial	4	17,500	24,500	35,000	40,000	45,000
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	3	11,250	15,750	22,500	26,250	30,000
Major Arterial	2	7,500	10,500	15,000	17,500	20,000
Major Arterial (one-way)	3	12,500	16,500	22,500	25,000	27,500
Major Arterial (one-way)	2	10,000	13,000	17,500	20,000	22,500
Collector (w/ two-way left-turn lane)	4	10,000	14,000	20,000	25,000	30,000
Collector (w/ two-way left-turn lane)	3	7,500	10,500	15,000	18,750	22,500
Collector (w/ two-way left-turn lane)	2	5,000	7,000	10,000	13,000	15,000
Collector (w/o two-way left-turn lane)	4	5,000	7,000	10,000	13,000	15,000
Collector (w/o two-way left-turn lane)	3	4,000	5,000	7,500	10,000	11,000
Collector (w/o two-way left-turn lane)	2	2,500	3,500	5,000	6,500	8,000
Collector (w/o two-way left-turn lane) – no fronting property	2	4,000	5,500	7,500	9,000	10,000
Collector (one-way)	3	11,000	14,000	19,000	22,500	26,000
Collector (one-way)	2	7,500	9,500	12,500	15,500	17,500
Collector (one-way)	1	2,500	3,500	5,000	6,500	7,500
Sub-Collector (single-family)	2	-	-	2,200	-	-

Source: City of San Diego Traffic Impact Study Manual (1998)
Updated with input from City of San Diego Planning Department Mobility Staff (2019)

Attachment 9 – Peak Hour Intersection Calculation Worksheets – Existing Conditions



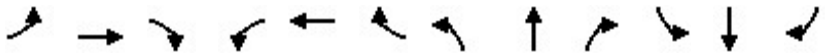
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	257	1	67	5	347	553	152	487	1
Future Volume (veh/h)	0	0	5	257	1	67	5	347	553	152	487	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.99	1.00		1.00	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	1856	1856	1856	1826	1856	1856	1856	1856	1826	1856	1856	1856
Adj Flow Rate, veh/h	0	0	10	265	1	62	6	418	594	167	535	0
Peak Hour Factor	0.42	0.42	0.42	0.97	0.97	0.97	0.83	0.83	0.83	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	5	3	3	3	3	5	3	3	3
Cap, veh/h	3	125	62	378	399	335	11	1628	888	261	1875	836
Arrive On Green	0.00	0.00	0.04	0.11	0.21	0.21	0.01	0.46	0.46	0.08	0.53	0.00
Sat Flow, veh/h	1767	3526	1486	3374	1856	1557	1767	3526	1547	3428	3526	1572
Grp Volume(v), veh/h	0	0	10	265	1	62	6	418	594	167	535	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1486	1687	1856	1557	1767	1763	1547	1714	1763	1572
Q Serve(g_s), s	0.0	0.0	0.4	4.9	0.0	2.1	0.2	4.7	17.3	3.1	5.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.4	4.9	0.0	2.1	0.2	4.7	17.3	3.1	5.5	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	3	125	62	378	399	335	11	1628	888	261	1875	836
V/C Ratio(X)	0.00	0.00	0.16	0.70	0.00	0.19	0.54	0.26	0.67	0.64	0.29	0.00
Avail Cap(c_a), veh/h	108	946	409	1739	1309	1099	108	2363	1211	610	2731	1218
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	30.1	27.9	20.1	20.9	32.3	10.7	9.6	29.2	8.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.5	0.9	0.0	0.5	14.1	0.2	1.8	1.0	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	0.0	0.2	1.8	0.0	0.7	0.1	1.7	4.2	1.2	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	31.7	28.8	20.1	21.5	46.4	10.9	11.4	30.2	8.8	0.0
LnGrp LOS	A	A	C	C	C	C	D	B	B	C	A	A
Approach Vol, veh/h		10			328			1018			702	
Approach Delay, s/veh		31.7			27.4			11.4			13.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	35.8	11.7	8.3	4.8	40.4	0.0	20.0
Change Period (Y+Rc), s	4.4	* 5.7	4.4	* 6	4.4	5.7	4.4	6.0
Max Green Setting (Gmax), s	11.6	* 44	33.6	* 18	4.0	50.5	4.0	46.0
Max Q Clear Time (g_c+I1), s	5.1	19.3	6.9	2.4	2.2	7.5	0.0	4.1
Green Ext Time (p_c), s	0.1	10.8	0.4	0.0	0.0	10.5	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	14.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

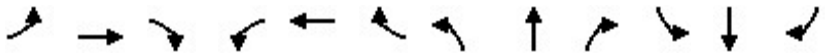


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	705	0	0	284	1	0	0	0	0	0	72
Future Volume (veh/h)	0	705	0	0	284	1	0	0	0	0	0	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking 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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	766	0	0	309	1	0	0	0	0	0	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.92	0.90
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	7	2172	674	7	2172	674	7	281	0	7	0	238
Arrive On Green	0.00	0.44	0.00	0.00	0.44	0.44	0.00	0.00	0.00	0.00	0.00	0.15
Sat Flow, veh/h	1739	4985	1547	1739	4985	1547	1767	1856	0	1767	0	1572
Grp Volume(v), veh/h	0	766	0	0	309	1	0	0	0	0	0	71
Grp Sat Flow(s),veh/h/ln	1739	1662	1547	1739	1662	1547	1767	1856	0	1767	0	1572
Q Serve(g_s), s	0.0	2.7	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	0.0	2.7	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	7	2172	674	7	2172	674	7	281	0	7	0	238
V/C Ratio(X)	0.00	0.35	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.30
Avail Cap(c_a), veh/h	263	4568	1418	263	4568	1418	268	3029	0	268	0	2567
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	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.0	0.0	0.0	4.5	4.2	0.0	0.0	0.0	0.0	0.0	10.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	0.0	0.0	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	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.1	0.0	0.0	4.5	4.2	0.0	0.0	0.0	0.0	0.0	10.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	B
Approach Vol, veh/h		766			310			0			71	
Approach Delay, s/veh		5.1			4.5			0.0			10.2	
Approach LOS		A			A						B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	17.5	0.0	8.9	0.0	17.5	0.0	8.9
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	4.6	24.2	4.0	43.1	4.0	24.2	4.0	43.1
Max Q Clear Time (g_c+I1), s	0.0	4.7	0.0	3.1	0.0	3.0	0.0	0.0
Green Ext Time (p_c), s	0.0	6.8	0.0	0.3	0.0	2.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.3
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	320	0	1	197	38	0	0	0	28	0	88
Future Volume (veh/h)	325	320	0	1	197	38	0	0	0	28	0	88
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	1826	1826	0	1826	1826	1826	1856	1856	1856	1826	0	1826
Adj Flow Rate, veh/h	382	376	0	1	224	38	0	0	0	39	0	99
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.92	0.92	0.92	0.71	0.71	0.71
Percent Heavy Veh, %	5	5	0	5	5	5	3	3	3	5	0	5
Cap, veh/h	822	3066	0	6	1857	576	0	7	0	0	0	0
Arrive On Green	0.24	0.62	0.00	0.00	0.37	0.37	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3374	5149	0	1739	4985	1546	0	1856	0		0	
Grp Volume(v), veh/h	382	376	0	1	224	38	0	0	0		0.0	
Grp Sat Flow(s),veh/h/ln	1687	1662	0	1739	1662	1546	0	1856	0			
Q Serve(g_s), s	2.6	0.9	0.0	0.0	0.8	0.4	0.0	0.0	0.0			
Cycle Q Clear(g_c), s	2.6	0.9	0.0	0.0	0.8	0.4	0.0	0.0	0.0			
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00			
Lane Grp Cap(c), veh/h	822	3066	0	6	1857	576	0	7	0			
V/C Ratio(X)	0.46	0.12	0.00	0.16	0.12	0.07	0.00	0.00	0.00			
Avail Cap(c_a), veh/h	1071	7320	0	257	6474	2008	0	3013	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	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00			
Uniform Delay (d), s/veh	8.7	2.2	0.0	13.5	5.6	5.5	0.0	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.0	0.0	4.1	0.1	0.1	0.0	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	0.4	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.9	2.2	0.0	17.6	5.6	5.6	0.0	0.0	0.0			
LnGrp LOS	A	A	A	B	A	A	A	A	A			
Approach Vol, veh/h		758			263			0				
Approach Delay, s/veh		5.6			5.7			0.0				
Approach LOS		A			A							
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.4	22.7			11.0	16.1		0.0				
Change Period (Y+Rc), s	4.4	6.0			4.4	6.0		4.9				
Max Green Setting (Gmax), s	4.6	39.8			8.6	35.2		44.0				
Max Q Clear Time (g_c+I1), s	2.0	2.9			4.6	2.8		0.0				
Green Ext Time (p_c), s	0.0	3.8			0.3	2.7		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			5.6									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	430	3	0	272	34	0	0	5	0	0	47
Future Volume (veh/h)	0	430	3	0	272	34	0	0	5	0	0	47
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		0.96
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	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	0	506	3	0	320	35	0	0	10	0	0	64
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.42	0.42	0.42	0.65	0.65	0.65
Percent Heavy Veh, %	5	5	5	8	8	8	3	3	3	5	5	5
Cap, veh/h	1	4032	24	1	3835	1160	0	0	35	0	0	127
Arrive On Green	0.00	0.79	0.79	0.00	0.79	0.79	0.00	0.00	0.02	0.00	0.00	0.09
Sat Flow, veh/h	1739	5113	30	1697	4863	1471	0	0	1548	0	0	1482
Grp Volume(v), veh/h	0	329	180	0	320	35	0	0	10	0	0	64
Grp Sat Flow(s),veh/h/ln	1739	1662	1820	1697	1621	1471	0	0	1548	0	0	1482
Q Serve(g_s), s	0.0	3.5	3.5	0.0	2.2	0.8	0.0	0.0	1.0	0.0	0.0	6.2
Cycle Q Clear(g_c), s	0.0	3.5	3.5	0.0	2.2	0.8	0.0	0.0	1.0	0.0	0.0	6.2
Prop In Lane	1.00		0.02	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	2621	1435	1	3835	1160	0	0	35	0	0	127
V/C Ratio(X)	0.00	0.13	0.13	0.00	0.08	0.03	0.00	0.00	0.28	0.00	0.00	0.51
Avail Cap(c_a), veh/h	46	2621	1435	45	3835	1160	0	0	413	0	0	395
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	1.00	1.00	0.00	0.99	0.99	0.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	3.7	3.7	0.0	3.6	3.4	0.0	0.0	72.1	0.0	0.0	65.6
Incr Delay (d2), s/veh	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	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	0.0	0.9	1.1	0.0	0.6	0.2	0.0	0.0	0.4	0.0	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.8	3.9	0.0	3.6	3.5	0.0	0.0	77.8	0.0	0.0	66.7
LnGrp LOS	A	A	A	A	A	A	A	A	E	A	A	E
Approach Vol, veh/h		509			355			10			64	
Approach Delay, s/veh		3.8			3.6			77.8			66.7	
Approach LOS		A			A			E			E	

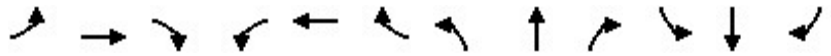
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	124.5		16.8	0.0	124.5		8.7
Change Period (Y+Rc), s	4.4	6.2		4.0	4.4	* 6.2		5.3
Max Green Setting (Gmax), s	4.6	46.1		40.0	4.0	* 46		40.0
Max Q Clear Time (g_c+I1), s	0.0	5.5		8.2	0.0	4.2		3.0
Green Ext Time (p_c), s	0.0	4.5		0.2	0.0	2.8		0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

* 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)	148	171	117	43	160	119	31	25	21	154	21	105
Future Volume (veh/h)	148	171	117	43	160	119	31	25	21	154	21	105
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		0.95	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	1781	1781	1781	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	178	206	136	50	186	131	42	34	14	167	23	92
Peak Hour Factor	0.83	0.83	0.83	0.86	0.86	0.86	0.74	0.74	0.74	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	5	5	5
Cap, veh/h	278	1479	452	131	1261	377	62	188	78	210	437	867
Arrive On Green	0.08	0.30	0.30	0.04	0.26	0.26	0.04	0.15	0.15	0.12	0.24	0.24
Sat Flow, veh/h	3291	4863	1485	3291	4863	1455	1767	1229	506	1739	1826	2665
Grp Volume(v), veh/h	178	206	136	50	186	131	42	0	48	167	23	92
Grp Sat Flow(s),veh/h/ln	1646	1621	1485	1646	1621	1455	1767	0	1736	1739	1826	1332
Q Serve(g_s), s	2.7	1.6	3.6	0.8	1.5	3.8	1.2	0.0	1.2	4.8	0.5	1.2
Cycle Q Clear(g_c), s	2.7	1.6	3.6	0.8	1.5	3.8	1.2	0.0	1.2	4.8	0.5	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	278	1479	452	131	1261	377	62	0	266	210	437	867
V/C Ratio(X)	0.64	0.14	0.30	0.38	0.15	0.35	0.68	0.00	0.18	0.79	0.05	0.11
Avail Cap(c_a), veh/h	357	3527	1077	338	3499	1047	247	0	1649	290	1785	2835
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	1.00	1.00
Uniform Delay (d), s/veh	22.8	13.0	13.7	24.1	14.7	15.5	24.6	0.0	19.0	22.0	15.1	12.2
Incr Delay (d2), s/veh	0.9	0.1	0.6	0.7	0.1	0.9	4.7	0.0	0.7	6.8	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	0.9	0.4	1.1	0.3	0.4	1.2	0.6	0.0	0.5	2.2	0.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	13.1	14.3	24.8	14.8	16.4	29.3	0.0	19.7	28.8	15.1	12.2
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	B	B
Approach Vol, veh/h		520			367			90			282	
Approach Delay, s/veh		17.1			16.8			24.2			22.3	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	21.7	6.2	17.2	8.8	19.4	10.6	12.8
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	5.3	37.4	7.2	50.4	5.6	37.1	8.6	49.0
Max Q Clear Time (g_c+I1), s	2.8	5.6	3.2	3.2	4.7	5.8	6.8	3.2
Green Ext Time (p_c), s	0.0	2.8	0.0	0.3	0.0	2.6	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	21	0	59	276	812	0	0	246	469
Future Volume (veh/h)	0	0	0	21	0	59	276	812	0	0	246	469
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		0.93
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				1826	1826	1826	1826	1826	0	0	1826	1826
Adj Flow Rate, veh/h				27	0	69	303	892	0	0	273	465
Peak Hour Factor				0.77	0.77	0.77	0.91	0.91	0.91	0.90	0.90	0.90
Percent Heavy Veh, %				5	5	5	5	5	0	0	5	5
Cap, veh/h				126	0	112	364	3579	0	0	1390	600
Arrive On Green				0.07	0.00	0.07	0.21	0.72	0.00	0.00	0.42	0.42
Sat Flow, veh/h				1739	0	1547	1739	5149	0	0	3487	1435
Grp Volume(v), veh/h				27	0	69	303	892	0	0	273	465
Grp Sat Flow(s),veh/h/ln				1739	0	1547	1739	1662	0	0	1662	1435
Q Serve(g_s), s				0.8	0.0	2.2	8.7	3.2	0.0	0.0	2.7	14.5
Cycle Q Clear(g_c), s				0.8	0.0	2.2	8.7	3.2	0.0	0.0	2.7	14.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				126	0	112	364	3579	0	0	1390	600
V/C Ratio(X)				0.22	0.00	0.62	0.83	0.25	0.00	0.00	0.20	0.77
Avail Cap(c_a), veh/h				167	0	149	479	4233	0	0	1606	693
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				22.7	0.0	23.4	19.7	2.5	0.0	0.0	9.6	13.0
Incr Delay (d2), s/veh				0.8	0.0	5.5	9.3	0.0	0.0	0.0	0.1	4.8
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				0.3	0.0	0.9	4.1	0.4	0.0	0.0	0.8	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				23.6	0.0	28.9	29.0	2.6	0.0	0.0	9.6	17.8
LnGrp LOS				C	A	C	C	A	A	A	A	B
Approach Vol, veh/h					96			1195			738	
Approach Delay, s/veh					27.4			9.3			14.8	
Approach LOS					C			A			B	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	43.1		15.6	27.5		8.8
Change Period (Y+Rc), s	5.8		* 4.7	5.8		5.1
Max Green Setting (Gmax), s	44.1		* 14	25.1		5.0
Max Q Clear Time (g_c+I1), s	5.2		10.7	16.5		4.2
Green Ext Time (p_c), s	7.7		0.3	3.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.1
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)	589	1	486	0	0	0	0	511	59	89	264	0
Future Volume (veh/h)	589	1	486	0	0	0	0	511	59	89	264	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				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	1826	1826	1826				0	1856	1856	1826	1856	0
Adj Flow Rate, veh/h	552	115	469				0	720	75	148	440	0
Peak Hour Factor	0.93	0.93	0.93				0.71	0.71	0.71	0.60	0.60	0.60
Percent Heavy Veh, %	5	5	5				0	3	3	5	3	0
Cap, veh/h	759	129	527				0	1061	110	185	1422	0
Arrive On Green	0.44	0.44	0.44				0.00	0.23	0.23	0.11	0.40	0.00
Sat Flow, veh/h	1739	296	1208				0	4820	481	1739	3618	0
Grp Volume(v), veh/h	552	0	584				0	521	274	148	440	0
Grp Sat Flow(s),veh/h/ln	1739	0	1504				0	1689	1756	1739	1763	0
Q Serve(g_s), s	17.8	0.0	24.3				0.0	9.6	9.7	5.7	5.8	0.0
Cycle Q Clear(g_c), s	17.8	0.0	24.3				0.0	9.6	9.7	5.7	5.8	0.0
Prop In Lane	1.00		0.80				0.00		0.27	1.00		0.00
Lane Grp Cap(c), veh/h	759	0	657				0	770	401	185	1422	0
V/C Ratio(X)	0.73	0.00	0.89				0.00	0.68	0.68	0.80	0.31	0.00
Avail Cap(c_a), veh/h	841	0	727				0	1102	573	238	1875	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				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.8	0.0	17.7				0.0	24.0	24.0	29.7	13.8	0.0
Incr Delay (d2), s/veh	2.8	0.0	12.2				0.0	1.0	2.1	10.8	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
%ile BackOfQ(50%),veh/ln	6.9	0.0	9.6				0.0	3.7	4.0	2.8	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.7	0.0	29.9				0.0	25.0	26.1	40.5	14.0	0.0
LnGrp LOS	B	A	C				A	C	C	D	B	A
Approach Vol, veh/h		1136						795			588	
Approach Delay, s/veh		24.4						25.4			20.7	
Approach LOS		C						C			C	

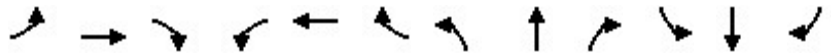
Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	11.9	21.3	34.8	33.2
Change Period (Y+Rc), s	* 4.7	5.8	5.1	5.8
Max Green Setting (Gmax), s	* 9.3	22.2	32.9	36.2
Max Q Clear Time (g_c+I1), s	7.7	11.7	26.3	7.8
Green Ext Time (p_c), s	0.0	3.8	3.4	3.1

Intersection Summary	
HCM 6th Ctrl Delay	23.9
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)	365	1	7	0	1	55	4	195	0	33	277	425
Future Volume (veh/h)	365	1	7	0	1	55	4	195	0	33	277	425
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		0.82
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	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	488	0	0	0	1	57	8	368	0	49	407	562
Peak Hour Factor	0.76	0.76	0.76	0.78	0.78	0.78	0.53	0.53	0.53	0.68	0.68	0.68
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1100	578	0	177	96	80	14	2218	0	63	821	601
Arrive On Green	0.31	0.00	0.00	0.00	0.05	0.05	0.01	0.44	0.00	0.04	0.47	0.47
Sat Flow, veh/h	3534	1856	0	3428	1856	1548	1767	5233	0	1767	1763	1290
Grp Volume(v), veh/h	488	0	0	0	1	57	8	368	0	49	407	562
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1714	1856	1548	1767	1689	0	1767	1763	1290
Q Serve(g_s), s	12.5	0.0	0.0	0.0	0.1	4.1	0.5	5.0	0.0	3.1	18.2	46.9
Cycle Q Clear(g_c), s	12.5	0.0	0.0	0.0	0.1	4.1	0.5	5.0	0.0	3.1	18.2	46.9
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1100	578	0	177	96	80	14	2218	0	63	821	601
V/C Ratio(X)	0.44	0.00	0.00	0.00	0.01	0.71	0.58	0.17	0.00	0.78	0.50	0.94
Avail Cap(c_a), veh/h	1153	605	0	1058	573	478	62	2218	0	152	856	626
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	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	0.0	0.0	0.0	51.2	53.1	56.2	19.4	0.0	54.4	21.1	28.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	12.4	13.2	0.0	0.0	7.5	0.6	21.4
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	5.4	0.0	0.0	0.0	0.0	1.9	0.3	2.0	0.0	1.5	7.5	17.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	0.0	0.0	0.0	51.2	65.5	69.5	19.4	0.0	61.9	21.7	50.2
LnGrp LOS	C	A	A	A	D	E	E	B	A	E	C	D
Approach Vol, veh/h		488			58			376			1018	
Approach Delay, s/veh		31.5			65.2			20.5			39.4	
Approach LOS		C			E			C			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.4	54.7		39.8	5.3	57.9		10.8
Change Period (Y+Rc), s	4.4	4.9		4.4	4.4	4.9		4.9
Max Green Setting (Gmax), s	9.8	49.4		37.1	4.0	55.2		35.1
Max Q Clear Time (g_c+I1), s	5.1	7.0		14.5	2.5	48.9		6.1
Green Ext Time (p_c), s	0.0	3.9		1.2	0.0	4.0		0.2

Intersection Summary	
HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

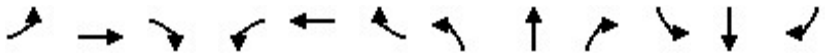
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	16	697	7	198	22	486	311	124	228	0
Future Volume (veh/h)	2	0	16	697	7	198	22	486	311	124	228	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.76	1.00		0.97	1.00		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1826	1856	1856	1856	1856	1826	1856	1856	1856
Adj Flow Rate, veh/h	4	0	25	860	9	219	31	685	396	144	265	0
Peak Hour Factor	0.56	0.56	0.56	0.81	0.81	0.81	0.71	0.71	0.71	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	5	3	3	3	3	5	3	3	3
Cap, veh/h	7	270	130	960	662	543	42	1229	973	214	1365	609
Arrive On Green	0.00	0.00	0.08	0.28	0.36	0.36	0.02	0.35	0.35	0.06	0.39	0.00
Sat Flow, veh/h	1767	3526	1202	3374	1856	1521	1767	3526	1527	3428	3526	1572
Grp Volume(v), veh/h	4	0	25	860	9	219	31	685	396	144	265	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1202	1687	1856	1521	1767	1763	1527	1714	1763	1572
Q Serve(g_s), s	0.2	0.0	1.7	22.0	0.3	9.7	1.6	14.1	11.6	3.7	4.5	0.0
Cycle Q Clear(g_c), s	0.2	0.0	1.7	22.0	0.3	9.7	1.6	14.1	11.6	3.7	4.5	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	7	270	130	960	662	543	42	1229	973	214	1365	609
V/C Ratio(X)	0.54	0.00	0.19	0.90	0.01	0.40	0.73	0.56	0.41	0.67	0.19	0.00
Avail Cap(c_a), veh/h	78	391	171	1558	958	785	110	1753	1200	381	1894	845
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	0.00
Uniform Delay (d), s/veh	44.8	0.0	37.2	30.9	18.7	21.8	43.7	23.7	8.2	41.3	18.3	0.0
Incr Delay (d2), s/veh	20.3	0.0	0.9	2.7	0.0	1.0	8.7	0.8	0.6	1.4	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	0.1	0.0	0.5	8.5	0.1	3.3	0.8	5.8	3.0	1.6	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	0.0	38.1	33.6	18.7	22.7	52.4	24.5	8.7	42.7	18.6	0.0
LnGrp LOS	E	A	D	C	B	C	D	C	A	D	B	A
Approach Vol, veh/h		29			1088			1112			409	
Approach Delay, s/veh		41.8			31.3			19.7			27.1	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	37.1	30.0	12.9	6.6	40.6	4.8	38.2
Change Period (Y+Rc), s	4.4	* 5.7	4.4	* 6	4.4	5.7	4.4	6.0
Max Green Setting (Gmax), s	10.0	* 45	41.6	* 10	5.6	48.4	4.0	46.5
Max Q Clear Time (g_c+I1), s	5.7	16.1	24.0	3.7	3.6	6.5	2.2	11.7
Green Ext Time (p_c), s	0.1	13.3	1.6	0.0	0.0	4.7	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Notes

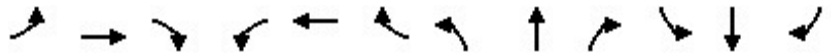
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



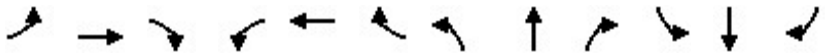
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	435	0	0	869	16	0	0	0	0	0	42
Future Volume (veh/h)	0	435	0	0	869	16	0	0	0	0	0	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	473	0	0	945	15	0	0	0	0	0	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.92	0.90
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	6	2404	746	6	2404	746	6	258	0	6	0	219
Arrive On Green	0.00	0.48	0.00	0.00	0.48	0.48	0.00	0.00	0.00	0.00	0.00	0.14
Sat Flow, veh/h	1739	4985	1547	1739	4985	1547	1767	1856	0	1767	0	1572
Grp Volume(v), veh/h	0	473	0	0	945	15	0	0	0	0	0	38
Grp Sat Flow(s),veh/h/ln	1739	1662	1547	1739	1662	1547	1767	1856	0	1767	0	1572
Q Serve(g_s), s	0.0	1.6	0.0	0.0	3.5	0.1	0.0	0.0	0.0	0.0	0.0	0.6
Cycle Q Clear(g_c), s	0.0	1.6	0.0	0.0	3.5	0.1	0.0	0.0	0.0	0.0	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	6	2404	746	6	2404	746	6	258	0	6	0	219
V/C Ratio(X)	0.00	0.20	0.00	0.00	0.39	0.02	0.00	0.00	0.00	0.00	0.00	0.17
Avail Cap(c_a), veh/h	242	4209	1307	242	4209	1307	246	2773	0	246	0	2350
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	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.3	0.0	0.0	4.8	3.9	0.0	0.0	0.0	0.0	0.0	10.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	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	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.3	0.0	0.0	4.9	3.9	0.0	0.0	0.0	0.0	0.0	11.1
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	B
Approach Vol, veh/h		473			960			0			38	
Approach Delay, s/veh		4.3			4.9			0.0			11.1	
Approach LOS		A			A						B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	19.9	0.0	8.9	0.0	19.9	0.0	8.9
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	4.6	24.3	4.0	43.0	4.0	24.3	4.0	43.0
Max Q Clear Time (g_c+I1), s	0.0	3.6	0.0	2.6	0.0	5.5	0.0	0.0
Green Ext Time (p_c), s	0.0	4.1	0.0	0.1	0.0	8.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	4.9
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	239	0	19	548	70	0	0	0	117	0	337
Future Volume (veh/h)	161	239	0	19	548	70	0	0	0	117	0	337
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	1826	1826	0	1826	1826	1826	1856	1856	1856	1826	0	1826
Adj Flow Rate, veh/h	194	288	0	23	660	76	0	0	0	156	0	342
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.75	0.75	0.75
Percent Heavy Veh, %	5	5	0	5	5	5	3	3	3	5	0	5
Cap, veh/h	644	3079	0	41	2244	697	0	6	0	0	0	0
Arrive On Green	0.19	0.62	0.00	0.02	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3374	5149	0	1739	4985	1547	0	1856	0		0	
Grp Volume(v), veh/h	194	288	0	23	660	76	0	0	0		0.0	
Grp Sat Flow(s),veh/h/ln	1687	1662	0	1739	1662	1547	0	1856	0			
Q Serve(g_s), s	1.4	0.7	0.0	0.4	2.4	0.8	0.0	0.0	0.0			
Cycle Q Clear(g_c), s	1.4	0.7	0.0	0.4	2.4	0.8	0.0	0.0	0.0			
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00			
Lane Grp Cap(c), veh/h	644	3079	0	41	2244	697	0	6	0			
V/C Ratio(X)	0.30	0.09	0.00	0.57	0.29	0.11	0.00	0.00	0.00			
Avail Cap(c_a), veh/h	815	6331	0	354	6142	1907	0	2818	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	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00			
Uniform Delay (d), s/veh	10.1	2.2	0.0	14.0	5.0	4.6	0.0	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.0	0.0	4.6	0.1	0.1	0.0	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	0.3	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.2	2.3	0.0	18.6	5.2	4.7	0.0	0.0	0.0			
LnGrp LOS	B	A	A	B	A	A	A	A	A			
Approach Vol, veh/h		482			759			0				
Approach Delay, s/veh		5.4			5.5			0.0				
Approach LOS		A			A							
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	5.1	23.9			9.9	19.0		0.0				
Change Period (Y+Rc), s	4.4	6.0			4.4	6.0		4.9				
Max Green Setting (Gmax), s	5.9	36.8			7.0	35.7		44.0				
Max Q Clear Time (g_c+I1), s	2.4	2.7			3.4	4.4		0.0				
Green Ext Time (p_c), s	0.0	2.8			0.1	8.6		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			5.5									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	361	5	0	554	29	0	0	5	0	0	113
Future Volume (veh/h)	0	361	5	0	554	29	0	0	5	0	0	113
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		0.99	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	1826	1826	1826	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	0	392	4	0	616	29	0	0	6	0	0	143
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.62	0.62	0.62	0.72	0.72	0.72
Percent Heavy Veh, %	5	5	5	8	8	8	3	3	3	5	5	5
Cap, veh/h	1	861	9	906	3652	1131	0	0	23	0	0	179
Arrive On Green	0.00	0.17	0.17	0.00	0.75	0.75	0.00	0.00	0.01	0.00	0.00	0.12
Sat Flow, veh/h	1739	5087	52	1697	4863	1507	0	0	1549	0	0	1535
Grp Volume(v), veh/h	0	256	140	0	616	29	0	0	6	0	0	143
Grp Sat Flow(s),veh/h/ln	1739	1662	1815	1697	1621	1507	0	0	1549	0	0	1535
Q Serve(g_s), s	0.0	9.0	9.0	0.0	4.7	0.6	0.0	0.0	0.5	0.0	0.0	11.8
Cycle Q Clear(g_c), s	0.0	9.0	9.0	0.0	4.7	0.6	0.0	0.0	0.5	0.0	0.0	11.8
Prop In Lane	1.00		0.03	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	562	307	906	3652	1131	0	0	23	0	0	179
V/C Ratio(X)	0.00	0.45	0.46	0.00	0.17	0.03	0.00	0.00	0.26	0.00	0.00	0.80
Avail Cap(c_a), veh/h	330	562	307	906	3652	1131	0	0	429	0	0	402
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	0.97	0.97	0.00	0.96	0.96	0.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	48.6	48.6	0.0	4.6	4.1	0.0	0.0	63.3	0.0	0.0	56.0
Incr Delay (d2), s/veh	0.0	2.6	4.7	0.0	0.1	0.0	0.0	0.0	7.6	0.0	0.0	3.1
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	0.0	3.8	4.4	0.0	1.3	0.2	0.0	0.0	0.2	0.0	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	51.2	53.3	0.0	4.7	4.1	0.0	0.0	70.9	0.0	0.0	59.1
LnGrp LOS	A	D	D	A	A	A	A	A	E	A	A	E
Approach Vol, veh/h		396			645			6			143	
Approach Delay, s/veh		51.9			4.7			70.9			59.1	
Approach LOS		D			A			E			E	

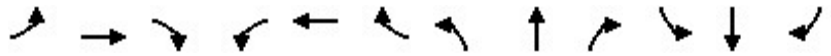
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	28.2		19.1	0.0	103.6		7.2
Change Period (Y+Rc), s	6.0	* 6.2		4.0	4.4	6.0		5.3
Max Green Setting (Gmax), s	8.1	* 22		34.0	24.7	15.6		36.0
Max Q Clear Time (g_c+I1), s	0.0	11.0		13.8	0.0	6.7		2.5
Green Ext Time (p_c), s	0.0	2.1		0.3	0.0	3.1		0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

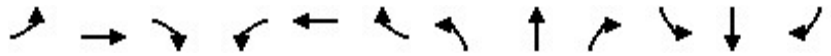
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	181	51	41	230	180	115	36	53	174	30	249
Future Volume (veh/h)	149	181	51	41	230	180	115	36	53	174	30	249
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		0.95	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	1781	1781	1781	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	162	197	51	45	250	174	124	39	40	210	36	283
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.83	0.83	0.83
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	5	5	5
Cap, veh/h	255	1458	445	118	1255	375	160	136	140	260	412	812
Arrive On Green	0.08	0.30	0.30	0.04	0.26	0.26	0.09	0.17	0.17	0.15	0.23	0.23
Sat Flow, veh/h	3291	4863	1483	3291	4863	1454	1767	817	838	1739	1826	2665
Grp Volume(v), veh/h	162	197	51	45	250	174	124	0	79	210	36	283
Grp Sat Flow(s),veh/h/ln	1646	1621	1483	1646	1621	1454	1767	0	1656	1739	1826	1332
Q Serve(g_s), s	2.7	1.7	1.4	0.8	2.3	5.7	3.9	0.0	2.4	6.6	0.9	4.7
Cycle Q Clear(g_c), s	2.7	1.7	1.4	0.8	2.3	5.7	3.9	0.0	2.4	6.6	0.9	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		1.00
Lane Grp Cap(c), veh/h	255	1458	445	118	1255	375	160	0	276	260	412	812
V/C Ratio(X)	0.64	0.14	0.11	0.38	0.20	0.46	0.77	0.00	0.29	0.81	0.09	0.35
Avail Cap(c_a), veh/h	396	3257	993	302	3120	933	512	0	1375	467	1478	2368
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	1.00	1.00
Uniform Delay (d), s/veh	25.3	14.5	14.4	26.7	16.4	17.7	25.2	0.0	20.6	23.3	17.3	15.4
Incr Delay (d2), s/veh	1.0	0.1	0.2	0.8	0.1	1.5	3.0	0.0	1.2	2.3	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	1.0	0.5	0.5	0.3	0.7	1.9	1.7	0.0	0.9	2.7	0.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	14.5	14.5	27.4	16.5	19.2	28.1	0.0	21.8	25.6	17.3	15.5
LnGrp LOS	C	B	B	C	B	B	C	A	C	C	B	B
Approach Vol, veh/h		410			469			203			529	
Approach Delay, s/veh		19.2			18.6			25.7			19.6	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	23.0	9.5	17.7	8.8	20.6	12.9	14.3
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	5.3	37.9	16.4	45.8	6.8	36.3	15.2	47.0
Max Q Clear Time (g_c+I1), s	2.8	3.7	5.9	6.7	4.7	7.7	8.6	4.4
Green Ext Time (p_c), s	0.0	2.2	0.1	0.8	0.1	3.6	0.2	0.9

Intersection Summary	
HCM 6th Ctrl Delay	20.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	36	4	84	458	790	0	0	220	684
Future Volume (veh/h)	0	0	0	36	4	84	458	790	0	0	220	684
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		0.80
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				1826	1826	1826	1826	1826	0	0	1826	1826
Adj Flow Rate, veh/h				44	5	91	627	1082	0	0	227	633
Peak Hour Factor				0.82	0.82	0.82	0.73	0.73	0.73	0.97	0.97	0.97
Percent Heavy Veh, %				5	5	5	5	5	0	0	5	5
Cap, veh/h				117	13	113	664	4177	0	0	1390	517
Arrive On Green				0.07	0.07	0.07	0.38	0.84	0.00	0.00	0.42	0.42
Sat Flow, veh/h				1569	178	1518	1739	5149	0	0	3487	1237
Grp Volume(v), veh/h				49	0	91	627	1082	0	0	227	633
Grp Sat Flow(s),veh/h/ln				1747	0	1518	1739	1662	0	0	1662	1237
Q Serve(g_s), s				3.3	0.0	7.4	43.5	5.6	0.0	0.0	5.3	52.2
Cycle Q Clear(g_c), s				3.3	0.0	7.4	43.5	5.6	0.0	0.0	5.3	52.2
Prop In Lane				0.90		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				130	0	113	664	4177	0	0	1390	517
V/C Ratio(X)				0.38	0.00	0.80	0.94	0.26	0.00	0.00	0.16	1.22
Avail Cap(c_a), veh/h				139	0	120	938	4961	0	0	1390	517
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				55.0	0.0	56.8	37.3	2.1	0.0	0.0	22.7	36.3
Incr Delay (d2), s/veh				1.8	0.0	29.9	14.1	0.0	0.0	0.0	0.1	117.0
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				1.5	0.0	3.8	20.8	1.3	0.0	0.0	2.1	32.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				56.7	0.0	86.7	51.3	2.1	0.0	0.0	22.7	153.3
LnGrp LOS				E	A	F	D	A	A	A	C	F
Approach Vol, veh/h					140			1709			860	
Approach Delay, s/veh					76.2			20.2			118.8	
Approach LOS					E			C			F	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	110.4		52.4	58.0		14.4
Change Period (Y+Rc), s	5.8		* 4.7	5.8		5.1
Max Green Setting (Gmax), s	124.2		* 67	52.2		9.9
Max Q Clear Time (g_c+I1), s	7.6		45.5	54.2		9.4
Green Ext Time (p_c), s	10.7		2.2	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.4
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)	565	4	322	0	0	0	0	681	76	98	170	0
Future Volume (veh/h)	565	4	322	0	0	0	0	681	76	98	170	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.87				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	1826	1826	1826				0	1856	1856	1826	1856	0
Adj Flow Rate, veh/h	530	240	357				0	1195	119	132	230	0
Peak Hour Factor	0.81	0.81	0.81				0.57	0.57	0.57	0.74	0.74	0.74
Percent Heavy Veh, %	5	5	5				0	3	3	5	3	0
Cap, veh/h	745	259	385				0	1449	144	162	1599	0
Arrive On Green	0.43	0.43	0.43				0.00	0.31	0.31	0.09	0.45	0.00
Sat Flow, veh/h	1739	605	899				0	4849	466	1739	3618	0
Grp Volume(v), veh/h	530	0	597				0	862	452	132	230	0
Grp Sat Flow(s),veh/h/ln	1739	0	1504				0	1689	1771	1739	1763	0
Q Serve(g_s), s	23.1	0.0	34.7				0.0	21.8	21.9	6.9	3.5	0.0
Cycle Q Clear(g_c), s	23.1	0.0	34.7				0.0	21.8	21.9	6.9	3.5	0.0
Prop In Lane	1.00		0.60				0.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	745	0	644				0	1045	548	162	1599	0
V/C Ratio(X)	0.71	0.00	0.93				0.00	0.82	0.83	0.81	0.14	0.00
Avail Cap(c_a), veh/h	789	0	683				0	1141	598	213	1802	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				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.7	0.0	25.0				0.0	29.6	29.6	41.1	14.7	0.0
Incr Delay (d2), s/veh	2.8	0.0	18.3				0.0	4.7	8.6	12.7	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	9.6	0.0	14.9				0.0	9.3	10.3	3.5	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	0.0	43.3				0.0	34.3	38.2	53.8	14.8	0.0
LnGrp LOS	C	A	D				A	C	D	D	B	A
Approach Vol, veh/h		1127						1314			362	
Approach Delay, s/veh		34.5						35.6			29.0	
Approach LOS		C						D			C	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	13.3	34.4	44.6	47.7
Change Period (Y+Rc), s*	4.7	5.8	5.1	5.8
Max Green Setting (Gmax), s	11.1	31.2	41.9	47.2
Max Q Clear Time (g_c+I1), s	8.9	23.9	36.7	5.5
Green Ext Time (p_c), s	0.0	4.7	2.8	1.6

Intersection Summary	
HCM 6th Ctrl Delay	34.3
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)	326	5	7	4	2	110	5	308	6	92	171	192
Future Volume (veh/h)	326	5	7	4	2	110	5	308	6	92	171	192
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		0.96	1.00		0.75	1.00		0.75
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	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	479	0	0	7	4	184	10	629	10	153	285	287
Peak Hour Factor	0.70	0.70	0.70	0.54	0.54	0.54	0.49	0.49	0.49	0.60	0.60	0.60
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1067	560	0	633	343	280	17	1323	21	180	620	417
Arrive On Green	0.30	0.00	0.00	0.18	0.18	0.18	0.01	0.26	0.26	0.10	0.35	0.35
Sat Flow, veh/h	3534	1856	0	3428	1856	1514	1767	5106	81	1767	1763	1185
Grp Volume(v), veh/h	479	0	0	7	4	184	10	415	224	153	285	287
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1714	1856	1514	1767	1689	1809	1767	1763	1185
Q Serve(g_s), s	13.4	0.0	0.0	0.2	0.2	13.8	0.7	12.7	12.8	10.4	15.3	25.3
Cycle Q Clear(g_c), s	13.4	0.0	0.0	0.2	0.2	13.8	0.7	12.7	12.8	10.4	15.3	25.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	1067	560	0	633	343	280	17	875	469	180	620	417
V/C Ratio(X)	0.45	0.00	0.00	0.01	0.01	0.66	0.60	0.47	0.48	0.85	0.46	0.69
Avail Cap(c_a), veh/h	1088	571	0	985	533	435	58	998	535	327	790	531
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	0.0	40.7	40.7	46.2	60.3	38.2	38.2	53.9	30.6	33.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	3.0	12.2	0.5	1.0	4.2	0.7	3.2
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	5.8	0.0	0.0	0.1	0.1	5.5	0.4	5.4	5.9	4.8	6.6	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	0.0	0.0	40.7	40.7	49.2	72.5	38.7	39.3	58.1	31.3	37.1
LnGrp LOS	C	A	A	D	D	D	E	D	D	E	C	D
Approach Vol, veh/h		479			195			649			725	
Approach Delay, s/veh		34.6			48.7			39.4			39.2	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.9	36.5		41.2	5.6	47.9		27.5
Change Period (Y+Rc), s	4.4	4.9		4.4	4.4	4.9		4.9
Max Green Setting (Gmax), s	22.6	36.1		37.6	4.0	54.7		35.1
Max Q Clear Time (g_c+I1), s	12.4	14.8		15.4	2.7	27.3		15.8
Green Ext Time (p_c), s	0.1	5.6		1.2	0.0	5.9		0.7

Intersection Summary	
HCM 6th Ctrl Delay	39.1
HCM 6th LOS	D

Notes

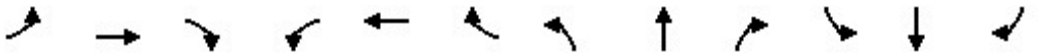
User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

Attachment 10 – Peak Hour Intersection Calculation Worksheets – Existing with Project Conditions

1: Caliente Avenue/Ocean View Hills Parkway & Otay Mesa Road

AM Peak Hour



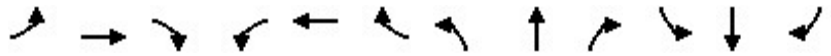
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	5	351	1	96	5	347	579	161	487	1
Future Volume (veh/h)	0	0	5	351	1	96	5	347	579	161	487	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.99	1.00		1.00	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	1856	1856	1856	1826	1856	1856	1856	1856	1826	1856	1856	1856
Adj Flow Rate, veh/h	0	0	10	362	1	92	6	418	626	177	535	0
Peak Hour Factor	0.42	0.42	0.42	0.97	0.97	0.97	0.83	0.83	0.83	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	5	3	3	3	3	5	3	3	3
Cap, veh/h	3	123	62	474	441	371	11	1604	921	268	1858	829
Arrive On Green	0.00	0.00	0.03	0.14	0.24	0.24	0.01	0.46	0.46	0.08	0.53	0.00
Sat Flow, veh/h	1767	3526	1481	3374	1856	1559	1767	3526	1547	3428	3526	1572
Grp Volume(v), veh/h	0	0	10	362	1	92	6	418	626	177	535	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1481	1687	1856	1559	1767	1763	1547	1714	1763	1572
Q Serve(g_s), s	0.0	0.0	0.5	7.3	0.0	3.4	0.2	5.2	19.3	3.5	6.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.5	7.3	0.0	3.4	0.2	5.2	19.3	3.5	6.0	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	3	123	62	474	441	371	11	1604	921	268	1858	829
V/C Ratio(X)	0.00	0.00	0.16	0.76	0.00	0.25	0.54	0.26	0.68	0.66	0.29	0.00
Avail Cap(c_a), veh/h	100	777	336	1707	1213	1019	100	2190	1178	565	2531	1129
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	32.6	29.1	20.4	21.7	34.9	11.8	9.7	31.5	9.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.6	1.0	0.0	0.7	14.3	0.2	1.9	1.0	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	0.0	0.2	2.7	0.0	1.2	0.1	1.9	4.8	1.4	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	34.1	30.1	20.4	22.4	49.1	12.0	11.6	32.6	9.6	0.0
LnGrp LOS	A	A	C	C	C	C	D	B	B	C	A	A
Approach Vol, veh/h		10			455			1050			712	
Approach Delay, s/veh		34.1			28.5			12.0			15.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	37.7	14.3	8.5	4.8	42.8	0.0	22.7
Change Period (Y+Rc), s	4.4	* 5.7	4.4	* 6	4.4	5.7	4.4	6.0
Max Green Setting (Gmax), s	11.6	* 44	35.6	* 16	4.0	50.5	4.0	46.0
Max Q Clear Time (g_c+I1), s	5.5	21.3	9.3	2.5	2.2	8.0	0.0	5.4
Green Ext Time (p_c), s	0.1	10.7	0.6	0.0	0.0	10.5	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	16.5
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)	0	721	17	5	345	1	61	3	17	0	0	72
Future Volume (veh/h)	0	721	17	5	345	1	61	3	17	0	0	72
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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	784	16	5	375	1	66	3	18	0	0	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.92	0.90
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	5	1637	508	9	2232	693	93	62	372	5	0	163
Arrive On Green	0.00	0.33	0.33	0.01	0.45	0.45	0.05	0.27	0.27	0.00	0.00	0.10
Sat Flow, veh/h	1739	4985	1547	1739	4985	1547	1767	230	1378	1767	0	1572
Grp Volume(v), veh/h	0	784	16	5	375	1	66	0	21	0	0	71
Grp Sat Flow(s),veh/h/ln	1739	1662	1547	1739	1662	1547	1767	0	1608	1767	0	1572
Q Serve(g_s), s	0.0	4.8	0.3	0.1	1.7	0.0	1.4	0.0	0.4	0.0	0.0	1.6
Cycle Q Clear(g_c), s	0.0	4.8	0.3	0.1	1.7	0.0	1.4	0.0	0.4	0.0	0.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	5	1637	508	9	2232	693	93	0	434	5	0	163
V/C Ratio(X)	0.00	0.48	0.03	0.53	0.17	0.00	0.71	0.00	0.05	0.00	0.00	0.44
Avail Cap(c_a), veh/h	180	2672	829	180	2672	829	348	0	1940	183	0	1751
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.3	8.8	19.2	6.4	5.9	18.0	0.0	10.4	0.0	0.0	16.3
Incr Delay (d2), s/veh	0.0	0.3	0.0	16.2	0.1	0.0	3.7	0.0	0.0	0.0	0.0	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	0.0	1.1	0.1	0.1	0.3	0.0	0.6	0.0	0.1	0.0	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.7	8.8	35.3	6.4	5.9	21.7	0.0	10.4	0.0	0.0	16.9
LnGrp LOS	A	B	A	D	A	A	C	A	B	A	A	B
Approach Vol, veh/h		800			381			87			71	
Approach Delay, s/veh		10.6			6.8			19.0			16.9	
Approach LOS		B			A			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	18.7	6.4	8.9	0.0	23.3	0.0	15.3
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	4.6	20.7	7.6	43.0	4.0	20.7	4.0	46.6
Max Q Clear Time (g_c+I1), s	2.1	6.8	3.4	3.6	0.0	3.7	0.0	2.4
Green Ext Time (p_c), s	0.0	5.8	0.0	0.3	0.0	2.9	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

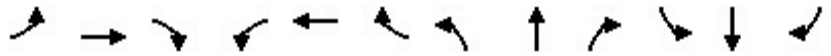
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	334	16	9	202	38	61	1	26	28	0	88
Future Volume (veh/h)	325	334	16	9	202	38	61	1	26	28	0	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	382	393	19	10	230	38	66	1	28	39	0	99
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.92	0.92	0.92	0.71	0.71	0.71
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	5	5	5
Cap, veh/h	516	1797	558	18	1087	530	84	1	36	217	0	860
Arrive On Green	0.15	0.36	0.36	0.01	0.22	0.22	0.07	0.07	0.07	0.13	0.00	0.13
Sat Flow, veh/h	3374	4985	1547	1739	4985	1545	1185	18	503	1739	0	3089
Grp Volume(v), veh/h	382	393	19	10	230	38	95	0	0	39	0	99
Grp Sat Flow(s),veh/h/ln	1687	1662	1547	1739	1662	1545	1706	0	0	1739	0	1544
Q Serve(g_s), s	5.0	2.6	0.4	0.3	1.8	0.8	2.6	0.0	0.0	0.9	0.0	1.1
Cycle Q Clear(g_c), s	5.0	2.6	0.4	0.3	1.8	0.8	2.6	0.0	0.0	0.9	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	0.69		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	516	1797	558	18	1087	530	121	0	0	217	0	860
V/C Ratio(X)	0.74	0.22	0.03	0.55	0.21	0.07	0.79	0.00	0.00	0.18	0.00	0.12
Avail Cap(c_a), veh/h	622	4255	1321	149	3763	1360	1610	0	0	261	0	937
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	1.00
Uniform Delay (d), s/veh	18.9	10.3	9.6	23.0	14.9	10.3	21.3	0.0	0.0	18.3	0.0	12.6
Incr Delay (d2), s/veh	2.8	0.1	0.0	9.4	0.2	0.1	4.2	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	1.7	0.7	0.1	0.1	0.5	0.3	1.1	0.0	0.0	0.3	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	10.4	9.7	32.3	15.1	10.4	25.6	0.0	0.0	18.4	0.0	12.6
LnGrp LOS	C	B	A	C	B	B	C	A	A	B	A	B
Approach Vol, veh/h		794			278			95			138	
Approach Delay, s/veh		15.8			15.1			25.6			14.2	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.9	22.8		10.7	11.5	16.2		8.2
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	6.0		4.9
Max Green Setting (Gmax), s	4.6	39.8		7.0	8.6	35.2		44.0
Max Q Clear Time (g_c+I1), s	2.3	4.6		3.1	7.0	3.8		4.6
Green Ext Time (p_c), s	0.0	4.1		0.1	0.1	2.8		0.1

Intersection Summary	
HCM 6th Ctrl Delay	16.2
HCM 6th LOS	B

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	467	6	0	282	34	0	0	5	0	0	47
Future Volume (veh/h)	0	467	6	0	282	34	0	0	5	0	0	47
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		0.96
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	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	0	549	6	0	332	35	0	0	10	0	0	64
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.42	0.42	0.42	0.65	0.65	0.65
Percent Heavy Veh, %	5	5	5	8	8	8	3	3	3	5	5	5
Cap, veh/h	1	4008	44	1	3835	1160	0	0	35	0	0	127
Arrive On Green	0.00	0.79	0.79	0.00	0.79	0.79	0.00	0.00	0.02	0.00	0.00	0.09
Sat Flow, veh/h	1739	5082	55	1697	4863	1471	0	0	1548	0	0	1482
Grp Volume(v), veh/h	0	359	196	0	332	35	0	0	10	0	0	64
Grp Sat Flow(s),veh/h/ln	1739	1662	1815	1697	1621	1471	0	0	1548	0	0	1482
Q Serve(g_s), s	0.0	3.8	3.8	0.0	2.3	0.8	0.0	0.0	1.0	0.0	0.0	6.2
Cycle Q Clear(g_c), s	0.0	3.8	3.8	0.0	2.3	0.8	0.0	0.0	1.0	0.0	0.0	6.2
Prop In Lane	1.00		0.03	1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1	2621	1431	1	3835	1160	0	0	35	0	0	127
V/C Ratio(X)	0.00	0.14	0.14	0.00	0.09	0.03	0.00	0.00	0.28	0.00	0.00	0.51
Avail Cap(c_a), veh/h	77	2621	1431	75	3835	1160	0	0	413	0	0	395
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	0.99	0.99	0.00	0.99	0.99	0.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	3.8	3.8	0.0	3.6	3.4	0.0	0.0	72.1	0.0	0.0	65.6
Incr Delay (d2), s/veh	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	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	0.0	1.1	1.2	0.0	0.6	0.2	0.0	0.0	0.4	0.0	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.9	4.0	0.0	3.6	3.5	0.0	0.0	77.8	0.0	0.0	66.7
LnGrp LOS	A	A	A	A	A	A	A	A	E	A	A	E
Approach Vol, veh/h		555			367			10			64	
Approach Delay, s/veh		3.9			3.6			77.8			66.7	
Approach LOS		A			A			E			E	

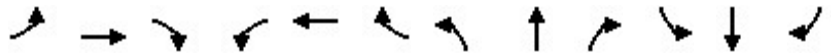
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	124.5		16.8	0.0	124.5		8.7
Change Period (Y+Rc), s	4.4	6.2		4.0	4.4	* 6.2		5.3
Max Green Setting (Gmax), s	6.6	43.5		40.0	6.6	* 44		40.0
Max Q Clear Time (g_c+I1), s	0.0	5.8		8.2	0.0	4.3		3.0
Green Ext Time (p_c), s	0.0	4.9		0.2	0.0	2.9		0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.6
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

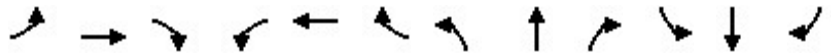
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	208	117	43	170	119	31	25	21	154	21	105
Future Volume (veh/h)	148	208	117	43	170	119	31	25	21	154	21	105
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		0.96	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	1781	1781	1781	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	178	251	112	50	198	110	42	34	25	167	23	79
Peak Hour Factor	0.83	0.83	0.83	0.86	0.86	0.86	0.74	0.74	0.74	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	5	5	5
Cap, veh/h	287	1471	449	130	1239	371	62	157	115	215	457	904
Arrive On Green	0.09	0.30	0.30	0.04	0.25	0.25	0.03	0.16	0.16	0.12	0.25	0.25
Sat Flow, veh/h	3291	4863	1485	3291	4863	1455	1767	973	715	1739	1826	2666
Grp Volume(v), veh/h	178	251	112	50	198	110	42	0	59	167	23	79
Grp Sat Flow(s),veh/h/ln	1646	1621	1485	1646	1621	1455	1767	0	1688	1739	1826	1333
Q Serve(g_s), s	2.8	2.0	3.0	0.8	1.7	3.2	1.2	0.0	1.6	4.9	0.5	1.1
Cycle Q Clear(g_c), s	2.8	2.0	3.0	0.8	1.7	3.2	1.2	0.0	1.6	4.9	0.5	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	287	1471	449	130	1239	371	62	0	272	215	457	904
V/C Ratio(X)	0.62	0.17	0.25	0.39	0.16	0.30	0.68	0.00	0.22	0.78	0.05	0.09
Avail Cap(c_a), veh/h	973	4423	1351	412	3594	1075	321	0	1570	877	2287	3576
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	1.00	1.00
Uniform Delay (d), s/veh	23.2	13.5	13.9	24.7	15.3	15.9	25.2	0.0	19.2	22.4	15.0	11.9
Incr Delay (d2), s/veh	0.8	0.1	0.5	0.7	0.1	0.7	4.9	0.0	0.8	2.3	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	0.9	0.6	0.9	0.3	0.5	1.0	0.6	0.0	0.6	2.0	0.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	13.6	14.3	25.4	15.4	16.6	30.0	0.0	20.1	24.7	15.0	12.0
LnGrp LOS	C	B	B	C	B	B	C	A	C	C	B	B
Approach Vol, veh/h		541			358			101			269	
Approach Delay, s/veh		17.2			17.2			24.2			20.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	22.0	6.2	18.1	9.0	19.4	10.9	13.4
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	6.6	48.0	9.6	66.1	15.6	39.0	26.6	49.1
Max Q Clear Time (g_c+I1), s	2.8	5.0	3.2	3.1	4.8	5.2	6.9	3.6
Green Ext Time (p_c), s	0.0	3.2	0.0	0.3	0.2	2.7	0.2	0.6

Intersection Summary	
HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	21	0	59	276	838	0	0	260	549
Future Volume (veh/h)	0	0	0	21	0	59	276	838	0	0	260	549
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		0.93
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				1826	1826	1826	1826	1826	0	0	1826	1826
Adj Flow Rate, veh/h				27	0	69	303	921	0	0	289	554
Peak Hour Factor				0.77	0.77	0.77	0.91	0.91	0.91	0.90	0.90	0.90
Percent Heavy Veh, %				5	5	5	5	5	0	0	5	5
Cap, veh/h				122	0	109	360	3642	0	0	1454	630
Arrive On Green				0.07	0.00	0.07	0.21	0.73	0.00	0.00	0.44	0.44
Sat Flow, veh/h				1739	0	1547	1739	5149	0	0	3487	1440
Grp Volume(v), veh/h				27	0	69	303	921	0	0	289	554
Grp Sat Flow(s),veh/h/ln				1739	0	1547	1739	1662	0	0	1662	1440
Q Serve(g_s), s				0.8	0.0	2.4	9.2	3.3	0.0	0.0	2.9	19.3
Cycle Q Clear(g_c), s				0.8	0.0	2.4	9.2	3.3	0.0	0.0	2.9	19.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				122	0	109	360	3642	0	0	1454	630
V/C Ratio(X)				0.22	0.00	0.64	0.84	0.25	0.00	0.00	0.20	0.88
Avail Cap(c_a), veh/h				159	0	141	454	4017	0	0	1524	660
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				24.0	0.0	24.8	20.8	2.4	0.0	0.0	9.5	14.1
Incr Delay (d2), s/veh				0.9	0.0	6.0	10.9	0.0	0.0	0.0	0.1	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				0.3	0.0	1.0	4.5	0.5	0.0	0.0	0.9	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				24.9	0.0	30.8	31.8	2.5	0.0	0.0	9.5	26.7
LnGrp LOS				C	A	C	C	A	A	A	A	C
Approach Vol, veh/h					96			1224			843	
Approach Delay, s/veh					29.1			9.7			20.8	
Approach LOS					C			A			C	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	45.8		16.0	29.7		8.9
Change Period (Y+Rc), s	5.8		* 4.7	5.8		5.1
Max Green Setting (Gmax), s	44.1		* 14	25.1		5.0
Max Q Clear Time (g_c+I1), s	5.3		11.2	21.3		4.4
Green Ext Time (p_c), s	8.0		0.3	2.1		0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.9
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)	612	1	486	0	0	0	0	515	59	89	278	0
Future Volume (veh/h)	612	1	486	0	0	0	0	515	59	89	278	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				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	1826	1826	1826				0	1856	1856	1826	1856	0
Adj Flow Rate, veh/h	564	132	469				0	725	75	148	463	0
Peak Hour Factor	0.93	0.93	0.93				0.71	0.71	0.71	0.60	0.60	0.60
Percent Heavy Veh, %	5	5	5				0	3	3	5	3	0
Cap, veh/h	767	146	520				0	1059	109	184	1415	0
Arrive On Green	0.44	0.44	0.44				0.00	0.23	0.23	0.11	0.40	0.00
Sat Flow, veh/h	1739	332	1180				0	4823	478	1739	3618	0
Grp Volume(v), veh/h	564	0	601				0	524	276	148	463	0
Grp Sat Flow(s),veh/h/ln	1739	0	1512				0	1689	1757	1739	1763	0
Q Serve(g_s), s	18.6	0.0	25.5				0.0	9.8	9.9	5.7	6.3	0.0
Cycle Q Clear(g_c), s	18.6	0.0	25.5				0.0	9.8	9.9	5.7	6.3	0.0
Prop In Lane	1.00		0.78				0.00		0.27	1.00		0.00
Lane Grp Cap(c), veh/h	767	0	667				0	768	400	184	1415	0
V/C Ratio(X)	0.74	0.00	0.90				0.00	0.68	0.69	0.80	0.33	0.00
Avail Cap(c_a), veh/h	828	0	720				0	1085	564	234	1847	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				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.0	0.0	17.9				0.0	24.4	24.5	30.2	14.3	0.0
Incr Delay (d2), s/veh	3.2	0.0	13.9				0.0	1.1	2.1	11.4	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
%ile BackOfQ(50%),veh/ln	7.2	0.0	10.4				0.0	3.8	4.1	2.9	2.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	0.0	31.8				0.0	25.5	26.6	41.6	14.4	0.0
LnGrp LOS	B	A	C				A	C	C	D	B	A
Approach Vol, veh/h		1165						800			611	
Approach Delay, s/veh		25.7						25.9			21.0	
Approach LOS		C						C			C	

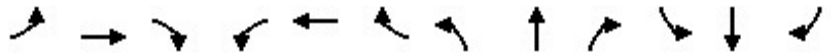
Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	12.0	21.5	35.6	33.5
Change Period (Y+Rc), s	* 4.7	5.8	5.1	5.8
Max Green Setting (Gmax), s	* 9.3	22.2	32.9	36.2
Max Q Clear Time (g_c+I1), s	7.7	11.9	27.5	8.3
Green Ext Time (p_c), s	0.0	3.8	3.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	24.6
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)	369	1	7	0	1	55	4	195	0	33	279	437
Future Volume (veh/h)	369	1	7	0	1	55	4	195	0	33	279	437
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		0.82
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	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	494	0	0	0	1	57	8	368	0	49	410	578
Peak Hour Factor	0.76	0.76	0.76	0.78	0.78	0.78	0.53	0.53	0.53	0.68	0.68	0.68
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1092	573	0	176	95	80	14	2240	0	63	828	607
Arrive On Green	0.31	0.00	0.00	0.00	0.05	0.05	0.01	0.44	0.00	0.04	0.47	0.47
Sat Flow, veh/h	3534	1856	0	3428	1856	1548	1767	5233	0	1767	1763	1292
Grp Volume(v), veh/h	494	0	0	0	1	57	8	368	0	49	410	578
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1714	1856	1548	1767	1689	0	1767	1763	1292
Q Serve(g_s), s	12.9	0.0	0.0	0.0	0.1	4.2	0.5	5.0	0.0	3.2	18.5	49.3
Cycle Q Clear(g_c), s	12.9	0.0	0.0	0.0	0.1	4.2	0.5	5.0	0.0	3.2	18.5	49.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	1092	573	0	176	95	80	14	2240	0	63	828	607
V/C Ratio(X)	0.45	0.00	0.00	0.00	0.01	0.72	0.58	0.16	0.00	0.78	0.49	0.95
Avail Cap(c_a), veh/h	1142	599	0	1048	567	473	62	2240	0	151	847	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	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	0.0	0.0	0.0	51.7	53.7	56.8	19.3	0.0	54.9	21.0	29.2
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	12.7	13.3	0.0	0.0	7.5	0.6	24.6
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	5.6	0.0	0.0	0.0	0.0	1.9	0.3	2.0	0.0	1.5	7.6	18.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	0.0	0.0	0.0	51.8	66.3	70.1	19.3	0.0	62.5	21.6	53.8
LnGrp LOS	C	A	A	A	D	E	E	B	A	E	C	D
Approach Vol, veh/h		494			58			376			1037	
Approach Delay, s/veh		32.1			66.1			20.4			41.5	
Approach LOS		C			E			C			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	55.7		39.9	5.3	58.9		10.8
Change Period (Y+Rc), s	4.4	4.9		4.4	4.4	4.9		4.9
Max Green Setting (Gmax), s	9.8	49.4		37.1	4.0	55.2		35.1
Max Q Clear Time (g_c+I1), s	5.2	7.0		14.9	2.5	51.3		6.2
Green Ext Time (p_c), s	0.0	3.9		1.2	0.0	2.7		0.2

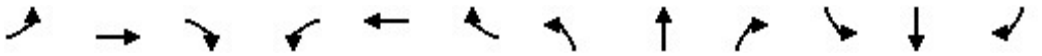
Intersection Summary	
HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

1: Caliente Avenue/Ocean View Hills Parkway & Otay Mesa Road

PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	16	743	7	211	22	486	408	153	228	0
Future Volume (veh/h)	2	0	16	743	7	211	22	486	408	153	228	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.75	1.00		0.97	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1826	1856	1856	1856	1856	1826	1856	1856	1856
Adj Flow Rate, veh/h	4	0	25	917	9	233	31	685	517	178	265	0
Peak Hour Factor	0.56	0.56	0.56	0.81	0.81	0.81	0.71	0.71	0.71	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	5	3	3	3	3	5	3	3	3
Cap, veh/h	7	261	125	1010	685	562	41	1203	984	248	1375	613
Arrive On Green	0.00	0.00	0.07	0.30	0.37	0.37	0.02	0.34	0.34	0.07	0.39	0.00
Sat Flow, veh/h	1767	3526	1184	3374	1856	1522	1767	3526	1527	3428	3526	1572
Grp Volume(v), veh/h	4	0	25	917	9	233	31	685	517	178	265	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1184	1687	1856	1522	1767	1763	1527	1714	1763	1572
Q Serve(g_s), s	0.2	0.0	1.9	25.2	0.3	11.0	1.7	15.3	17.7	4.9	4.8	0.0
Cycle Q Clear(g_c), s	0.2	0.0	1.9	25.2	0.3	11.0	1.7	15.3	17.7	4.9	4.8	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	7	261	125	1010	685	562	41	1203	984	248	1375	613
V/C Ratio(X)	0.54	0.00	0.20	0.91	0.01	0.41	0.75	0.57	0.53	0.72	0.19	0.00
Avail Cap(c_a), veh/h	73	366	160	1459	897	735	84	1583	1149	413	1810	807
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	0.00
Uniform Delay (d), s/veh	47.8	0.0	40.0	32.4	19.2	22.6	46.7	25.9	9.4	43.7	19.4	0.0
Incr Delay (d2), s/veh	20.5	0.0	1.0	5.0	0.0	1.0	9.6	0.9	0.9	1.5	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	0.1	0.0	0.6	10.1	0.1	3.8	0.8	6.4	4.8	2.1	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.3	0.0	41.0	37.4	19.2	23.6	56.3	26.8	10.3	45.1	19.7	0.0
LnGrp LOS	E	A	D	D	B	C	E	C	B	D	B	A
Approach Vol, veh/h		29			1159			1233			443	
Approach Delay, s/veh		44.8			34.5			20.6			29.9	
Approach LOS		D			C			C			C	

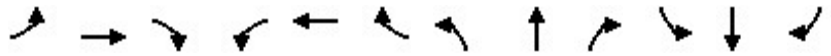
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	38.5	33.2	13.1	6.7	43.2	4.8	41.5
Change Period (Y+Rc), s	4.4	* 5.7	4.4	* 6	4.4	5.7	4.4	6.0
Max Green Setting (Gmax), s	11.6	* 43	41.6	* 10	4.6	49.4	4.0	46.5
Max Q Clear Time (g_c+I1), s	6.9	19.7	27.2	3.9	3.7	6.8	2.2	13.0
Green Ext Time (p_c), s	0.1	13.1	1.7	0.0	0.0	4.7	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

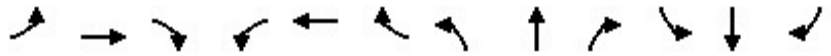
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	496	66	16	896	16	32	2	9	0	4	42
Future Volume (veh/h)	0	496	66	16	896	16	32	2	9	0	4	42
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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	539	72	17	974	15	35	2	10	0	4	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.92	0.90
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	5	1411	438	30	2115	657	58	72	362	5	17	162
Arrive On Green	0.00	0.28	0.28	0.02	0.42	0.42	0.03	0.27	0.27	0.00	0.11	0.11
Sat Flow, veh/h	1739	4985	1547	1739	4985	1547	1767	269	1345	1767	152	1444
Grp Volume(v), veh/h	0	539	72	17	974	15	35	0	12	0	0	42
Grp Sat Flow(s),veh/h/ln	1739	1662	1547	1739	1662	1547	1767	0	1614	1767	0	1596
Q Serve(g_s), s	0.0	3.1	1.2	0.3	5.0	0.2	0.7	0.0	0.2	0.0	0.0	0.9
Cycle Q Clear(g_c), s	0.0	3.1	1.2	0.3	5.0	0.2	0.7	0.0	0.2	0.0	0.0	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.83	1.00		0.90
Lane Grp Cap(c), veh/h	5	1411	438	30	2115	657	58	0	434	5	0	180
V/C Ratio(X)	0.00	0.38	0.16	0.56	0.46	0.02	0.60	0.00	0.03	0.00	0.00	0.23
Avail Cap(c_a), veh/h	196	3323	1031	196	3323	1031	229	0	1979	199	0	1930
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.2	9.6	17.3	7.3	5.9	17.0	0.0	9.6	0.0	0.0	14.4
Incr Delay (d2), s/veh	0.0	0.3	0.3	6.0	0.2	0.0	3.7	0.0	0.0	0.0	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	0.0	0.7	0.3	0.2	0.8	0.0	0.3	0.0	0.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.5	9.9	23.3	7.6	6.0	20.7	0.0	9.6	0.0	0.0	14.6
LnGrp LOS	A	B	A	C	A	A	C	A	A	A	A	B
Approach Vol, veh/h		611			1006			47			42	
Approach Delay, s/veh		10.4			7.8			17.8			14.6	
Approach LOS		B			A			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	16.1	5.6	8.9	0.0	21.1	0.0	14.5
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	4.6	23.7	4.6	43.0	4.0	23.7	4.0	43.6
Max Q Clear Time (g_c+I1), s	2.3	5.1	2.7	2.9	0.0	7.0	0.0	2.2
Green Ext Time (p_c), s	0.0	5.0	0.0	0.1	0.0	8.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A



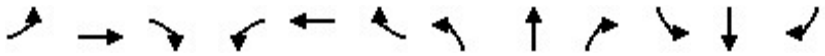
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	246	61	45	563	70	27	0	11	117	1	337
Future Volume (veh/h)	161	246	61	45	563	70	27	0	11	117	1	337
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	194	296	73	54	678	76	29	0	12	156	0	343
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.75	0.75	0.75
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	5	5	5
Cap, veh/h	429	1982	615	73	1556	693	42	0	17	235	0	812
Arrive On Green	0.13	0.40	0.40	0.04	0.31	0.31	0.03	0.00	0.03	0.14	0.00	0.14
Sat Flow, veh/h	3374	4985	1547	1739	4985	1547	1206	0	499	1739	0	3095
Grp Volume(v), veh/h	194	296	73	54	678	76	41	0	0	156	0	343
Grp Sat Flow(s),veh/h/ln	1687	1662	1547	1739	1662	1547	1705	0	0	1739	0	1547
Q Serve(g_s), s	2.8	2.0	1.5	1.6	5.6	1.5	1.2	0.0	0.0	4.4	0.0	4.8
Cycle Q Clear(g_c), s	2.8	2.0	1.5	1.6	5.6	1.5	1.2	0.0	0.0	4.4	0.0	4.8
Prop In Lane	1.00		1.00	1.00		1.00	0.71		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	429	1982	615	73	1556	693	59	0	0	235	0	812
V/C Ratio(X)	0.45	0.15	0.12	0.74	0.44	0.11	0.70	0.00	0.00	0.66	0.00	0.42
Avail Cap(c_a), veh/h	457	3203	994	320	3444	1278	1452	0	0	273	0	878
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	1.00
Uniform Delay (d), s/veh	20.9	10.0	9.8	24.5	14.1	8.3	24.7	0.0	0.0	21.2	0.0	15.8
Incr Delay (d2), s/veh	0.3	0.1	0.1	5.5	0.4	0.1	5.5	0.0	0.0	3.1	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	0.5	0.4	0.7	1.6	0.5	0.5	0.0	0.0	1.8	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	10.0	10.0	30.0	14.5	8.4	30.1	0.0	0.0	24.4	0.0	15.9
LnGrp LOS	C	B	A	C	B	A	C	A	A	C	A	B
Approach Vol, veh/h		563			808			41			499	
Approach Delay, s/veh		13.9			15.0			30.1			18.6	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	26.5		11.9	11.0	22.1		6.7				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	6.0		4.9				
Max Green Setting (Gmax), s	9.5	33.2		8.1	7.0	35.7		44.0				
Max Q Clear Time (g_c+I1), s	3.6	4.0		6.8	4.8	7.6		3.2				
Green Ext Time (p_c), s	0.0	3.2		0.2	0.1	8.5		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

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	379	7	0	593	29	4	0	5	0	0	113
Future Volume (veh/h)	0	379	7	0	593	29	4	0	5	0	0	113
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		0.99	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	1826	1826	1826	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	0	412	7	0	659	29	6	0	6	0	0	143
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.62	0.62	0.62	0.72	0.72	0.72
Percent Heavy Veh, %	5	5	5	8	8	8	3	3	3	5	5	5
Cap, veh/h	1	854	14	886	3594	1113	22	0	22	0	0	179
Arrive On Green	0.00	0.17	0.17	0.00	0.74	0.74	0.03	0.00	0.03	0.00	0.00	0.12
Sat Flow, veh/h	1739	5046	85	1697	4863	1507	825	0	825	0	0	1535
Grp Volume(v), veh/h	0	271	148	0	659	29	12	0	0	0	0	143
Grp Sat Flow(s),veh/h/ln	1739	1662	1808	1697	1621	1507	1651	0	0	0	0	1535
Q Serve(g_s), s	0.0	9.6	9.6	0.0	5.3	0.7	0.9	0.0	0.0	0.0	0.0	11.8
Cycle Q Clear(g_c), s	0.0	9.6	9.6	0.0	5.3	0.7	0.9	0.0	0.0	0.0	0.0	11.8
Prop In Lane	1.00		0.05	1.00		1.00	0.50		0.50	0.00		1.00
Lane Grp Cap(c), veh/h	1	562	306	886	3594	1113	45	0	0	0	0	179
V/C Ratio(X)	0.00	0.48	0.48	0.00	0.18	0.03	0.27	0.00	0.00	0.00	0.00	0.80
Avail Cap(c_a), veh/h	330	562	306	886	3594	1113	457	0	0	0	0	402
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	0.96	0.96	0.00	0.96	0.96	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	48.8	48.9	0.0	5.1	4.5	62.0	0.0	0.0	0.0	0.0	56.0
Incr Delay (d2), s/veh	0.0	2.8	5.2	0.0	0.1	0.0	4.2	0.0	0.0	0.0	0.0	3.1
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	0.0	4.1	4.7	0.0	1.5	0.2	0.4	0.0	0.0	0.0	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	51.7	54.0	0.0	5.2	4.6	66.2	0.0	0.0	0.0	0.0	59.1
LnGrp LOS	A	D	D	A	A	A	E	A	A	A	A	E
Approach Vol, veh/h		419			688			12			143	
Approach Delay, s/veh		52.5			5.2			66.2			59.1	
Approach LOS		D			A			E			E	

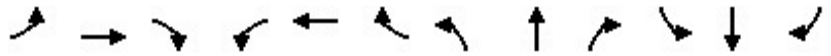
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.9	28.2		19.1	0.0	102.1		8.8				
Change Period (Y+Rc), s	6.0	* 6.2		4.0	4.4	6.0		5.3				
Max Green Setting (Gmax), s	18.1	* 22		34.0	24.7	15.6		36.0				
Max Q Clear Time (g_c+I1), s	10.6	11.6		13.8	0.0	7.3		2.9				
Green Ext Time (p_c), s	0.0	2.2		0.3	0.0	3.1		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* 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)	149	199	51	41	269	180	115	36	53	174	30	249
Future Volume (veh/h)	149	199	51	41	269	180	115	36	53	174	30	249
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		0.95	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	1781	1781	1781	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	162	216	51	45	292	174	124	39	40	210	36	283
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.83	0.83	0.83
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	5	5	5
Cap, veh/h	256	1485	453	118	1280	383	158	136	139	257	410	811
Arrive On Green	0.08	0.31	0.31	0.04	0.26	0.26	0.09	0.17	0.17	0.15	0.22	0.22
Sat Flow, veh/h	3291	4863	1484	3291	4863	1455	1767	817	838	1739	1826	2665
Grp Volume(v), veh/h	162	216	51	45	292	174	124	0	79	210	36	283
Grp Sat Flow(s),veh/h/ln	1646	1621	1484	1646	1621	1455	1767	0	1656	1739	1826	1332
Q Serve(g_s), s	2.7	1.8	1.4	0.8	2.7	5.7	3.9	0.0	2.4	6.7	0.9	4.7
Cycle Q Clear(g_c), s	2.7	1.8	1.4	0.8	2.7	5.7	3.9	0.0	2.4	6.7	0.9	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.51	1.00		1.00
Lane Grp Cap(c), veh/h	256	1485	453	118	1280	383	158	0	275	257	410	811
V/C Ratio(X)	0.63	0.15	0.11	0.38	0.23	0.45	0.79	0.00	0.29	0.82	0.09	0.35
Avail Cap(c_a), veh/h	484	2716	829	738	3091	925	192	0	1450	323	1739	2750
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	1.00	1.00
Uniform Delay (d), s/veh	25.5	14.4	14.3	26.9	16.5	17.6	25.5	0.0	20.8	23.6	17.5	15.5
Incr Delay (d2), s/veh	1.0	0.1	0.2	0.8	0.1	1.4	12.9	0.0	1.2	10.0	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	1.0	0.6	0.4	0.3	0.8	1.9	2.1	0.0	1.0	3.3	0.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	14.5	14.4	27.7	16.6	19.0	38.4	0.0	22.1	33.6	17.5	15.6
LnGrp LOS	C	B	B	C	B	B	D	A	C	C	B	B
Approach Vol, veh/h		429			511			203			529	
Approach Delay, s/veh		19.0			18.4			32.0			22.9	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	23.4	9.5	17.7	8.8	21.0	12.8	14.4
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	2.0	31.9	6.2	54.4	8.4	36.3	10.6	50.0
Max Q Clear Time (g_c+I1), s	2.8	3.8	5.9	6.7	4.7	7.7	8.7	4.4
Green Ext Time (p_c), s	0.0	2.3	0.0	0.8	0.1	4.0	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	36	4	84	458	887	0	0	227	724
Future Volume (veh/h)	0	0	0	36	4	84	458	887	0	0	227	724
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		0.82
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				1826	1826	1826	1826	1826	0	0	1826	1826
Adj Flow Rate, veh/h				44	5	91	627	1215	0	0	234	674
Peak Hour Factor				0.82	0.82	0.82	0.73	0.73	0.73	0.97	0.97	0.97
Percent Heavy Veh, %				5	5	5	5	5	0	0	5	5
Cap, veh/h				98	11	95	645	4297	0	0	1524	579
Arrive On Green				0.06	0.06	0.06	0.37	0.86	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1569	178	1516	1739	5149	0	0	3487	1264
Grp Volume(v), veh/h				49	0	91	627	1215	0	0	234	674
Grp Sat Flow(s),veh/h/ln				1747	0	1516	1739	1662	0	0	1662	1264
Q Serve(g_s), s				3.9	0.0	8.6	51.1	6.4	0.0	0.0	5.9	66.1
Cycle Q Clear(g_c), s				3.9	0.0	8.6	51.1	6.4	0.0	0.0	5.9	66.1
Prop In Lane				0.90		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				109	0	95	645	4297	0	0	1524	579
V/C Ratio(X)				0.45	0.00	0.96	0.97	0.28	0.00	0.00	0.15	1.16
Avail Cap(c_a), veh/h				109	0	95	655	4325	0	0	1524	579
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				65.2	0.0	67.4	44.6	1.8	0.0	0.0	22.7	39.0
Incr Delay (d2), s/veh				2.9	0.0	79.7	28.1	0.0	0.0	0.0	0.0	91.2
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				1.8	0.0	5.4	26.9	1.4	0.0	0.0	2.4	34.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				68.1	0.0	147.1	72.7	1.9	0.0	0.0	22.8	130.3
LnGrp LOS				E	A	F	E	A	A	A	C	F
Approach Vol, veh/h					140			1842			908	
Approach Delay, s/veh					119.5			26.0			102.6	
Approach LOS					F			C			F	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	130.1		58.2	71.9		14.1
Change Period (Y+Rc), s	5.8		* 4.7	5.8		5.1
Max Green Setting (Gmax), s	125.1		* 54	66.1		9.0
Max Q Clear Time (g_c+I1), s	8.4		53.1	68.1		10.6
Green Ext Time (p_c), s	12.8		0.3	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	54.6
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)	649	4	322	0	0	0	0	695	76	98	177	0
Future Volume (veh/h)	649	4	322	0	0	0	0	695	76	98	177	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.87				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	1826	1826	1826				0	1856	1856	1826	1856	0
Adj Flow Rate, veh/h	582	312	357				0	1219	119	132	239	0
Peak Hour Factor	0.81	0.81	0.81				0.57	0.57	0.57	0.74	0.74	0.74
Percent Heavy Veh, %	5	5	5				0	3	3	5	3	0
Cap, veh/h	762	314	359				0	1436	140	162	1580	0
Arrive On Green	0.44	0.44	0.44				0.00	0.31	0.31	0.09	0.45	0.00
Sat Flow, veh/h	1739	716	820				0	4858	458	1739	3618	0
Grp Volume(v), veh/h	582	0	669				0	877	461	132	239	0
Grp Sat Flow(s),veh/h/ln	1739	0	1536				0	1689	1772	1739	1763	0
Q Serve(g_s), s	27.1	0.0	41.5				0.0	23.3	23.3	7.1	3.8	0.0
Cycle Q Clear(g_c), s	27.1	0.0	41.5				0.0	23.3	23.3	7.1	3.8	0.0
Prop In Lane	1.00		0.53				0.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	762	0	673				0	1034	543	162	1580	0
V/C Ratio(X)	0.76	0.00	0.99				0.00	0.85	0.85	0.82	0.15	0.00
Avail Cap(c_a), veh/h	762	0	673				0	1101	578	205	1739	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				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.7	0.0	26.8				0.0	31.1	31.1	42.6	15.6	0.0
Incr Delay (d2), s/veh	4.6	0.0	33.2				0.0	6.1	10.9	14.5	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
%ile BackOfQ(50%),veh/ln	11.5	0.0	20.5				0.0	10.1	11.3	3.7	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	0.0	60.0				0.0	37.2	42.1	57.1	15.7	0.0
LnGrp LOS	C	A	E				A	D	D	E	B	A
Approach Vol, veh/h		1251						1338			371	
Approach Delay, s/veh		44.8						38.9			30.4	
Approach LOS		D						D			C	

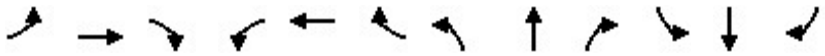
Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	13.6	35.1	47.0	48.7
Change Period (Y+Rc), s	* 4.7	5.8	5.1	5.8
Max Green Setting (Gmax), s	* 11	31.2	41.9	47.2
Max Q Clear Time (g_c+I1), s	9.1	25.3	43.5	5.8
Green Ext Time (p_c), s	0.0	4.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	40.3
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.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	5	7	4	2	110	5	310	6	92	171	198
Future Volume (veh/h)	338	5	7	4	2	110	5	310	6	92	171	198
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		0.96	1.00		0.75	1.00		0.75
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	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	496	0	0	7	4	184	10	633	10	153	285	297
Peak Hour Factor	0.70	0.70	0.70	0.54	0.54	0.54	0.49	0.49	0.49	0.60	0.60	0.60
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	1066	560	0	633	343	280	17	1324	21	180	620	417
Arrive On Green	0.30	0.00	0.00	0.18	0.18	0.18	0.01	0.26	0.26	0.10	0.35	0.35
Sat Flow, veh/h	3534	1856	0	3428	1856	1514	1767	5107	80	1767	1763	1186
Grp Volume(v), veh/h	496	0	0	7	4	184	10	418	225	153	285	297
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1714	1856	1514	1767	1689	1810	1767	1763	1186
Q Serve(g_s), s	13.9	0.0	0.0	0.2	0.2	13.8	0.7	12.8	12.9	10.4	15.3	26.5
Cycle Q Clear(g_c), s	13.9	0.0	0.0	0.2	0.2	13.8	0.7	12.8	12.9	10.4	15.3	26.5
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	1066	560	0	633	343	280	17	875	469	180	620	417
V/C Ratio(X)	0.47	0.00	0.00	0.01	0.01	0.66	0.60	0.48	0.48	0.85	0.46	0.71
Avail Cap(c_a), veh/h	1088	571	0	985	533	435	58	998	535	327	789	531
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	0.0	0.0	40.7	40.7	46.2	60.3	38.2	38.3	53.9	30.6	34.2
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	3.0	12.2	0.5	1.0	4.2	0.7	3.9
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	6.1	0.0	0.0	0.1	0.1	5.5	0.4	5.4	5.9	4.8	6.6	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	0.0	0.0	40.7	40.7	49.2	72.5	38.8	39.3	58.1	31.3	38.1
LnGrp LOS	C	A	A	D	D	D	E	D	D	E	C	D
Approach Vol, veh/h		496			195			653			735	
Approach Delay, s/veh		34.8			48.7			39.5			39.6	
Approach LOS		C			D			D			D	

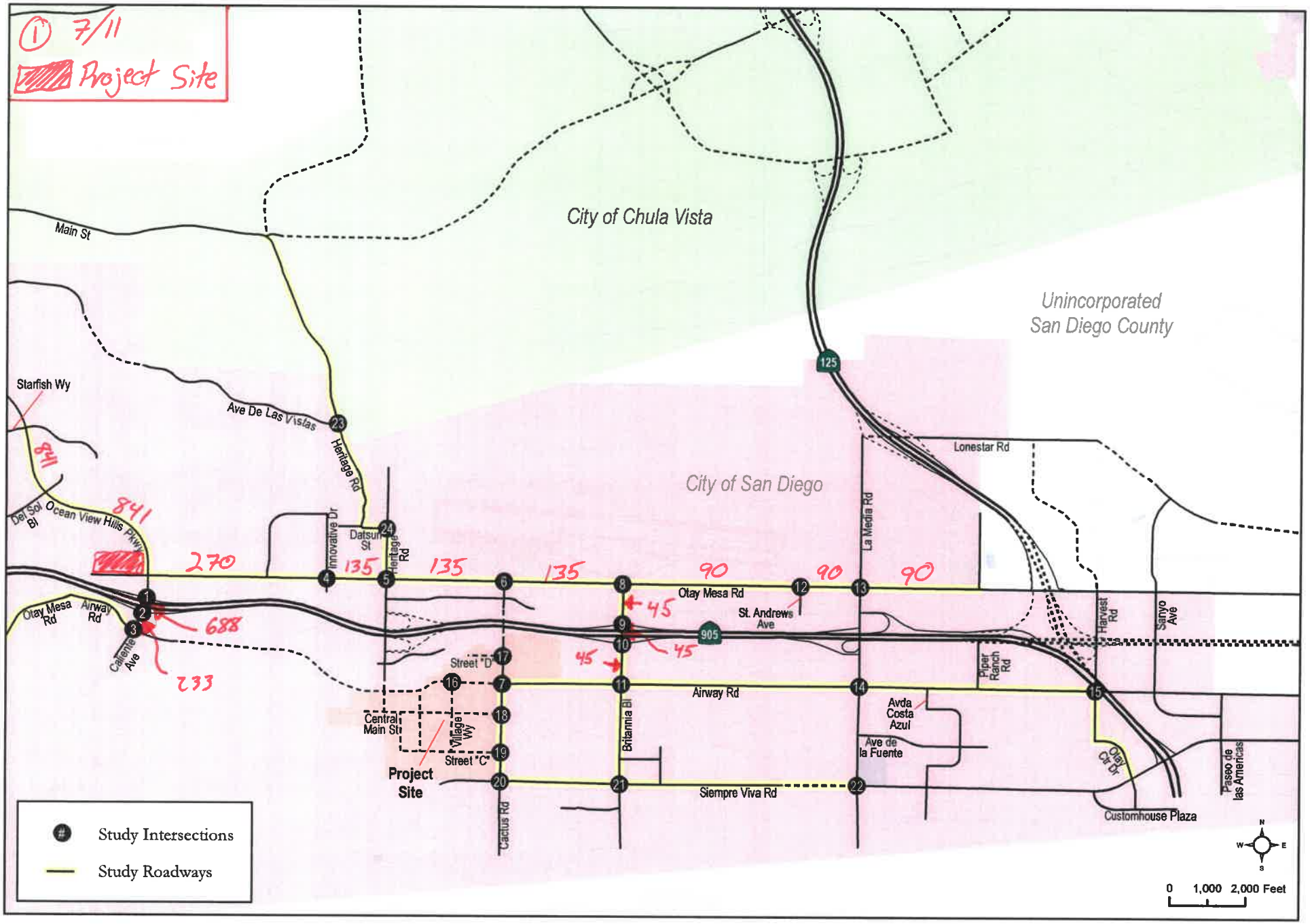
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.9	36.6		41.3	5.6	47.9		27.5
Change Period (Y+Rc), s	4.4	4.9		4.4	4.4	4.9		4.9
Max Green Setting (Gmax), s	22.6	36.1		37.6	4.0	54.7		35.1
Max Q Clear Time (g_c+I1), s	12.4	14.9		15.9	2.7	28.5		15.8
Green Ext Time (p_c), s	0.1	5.7		1.2	0.0	5.9		0.7

Intersection Summary	
HCM 6th Ctrl Delay	39.3
HCM 6th LOS	D

Notes

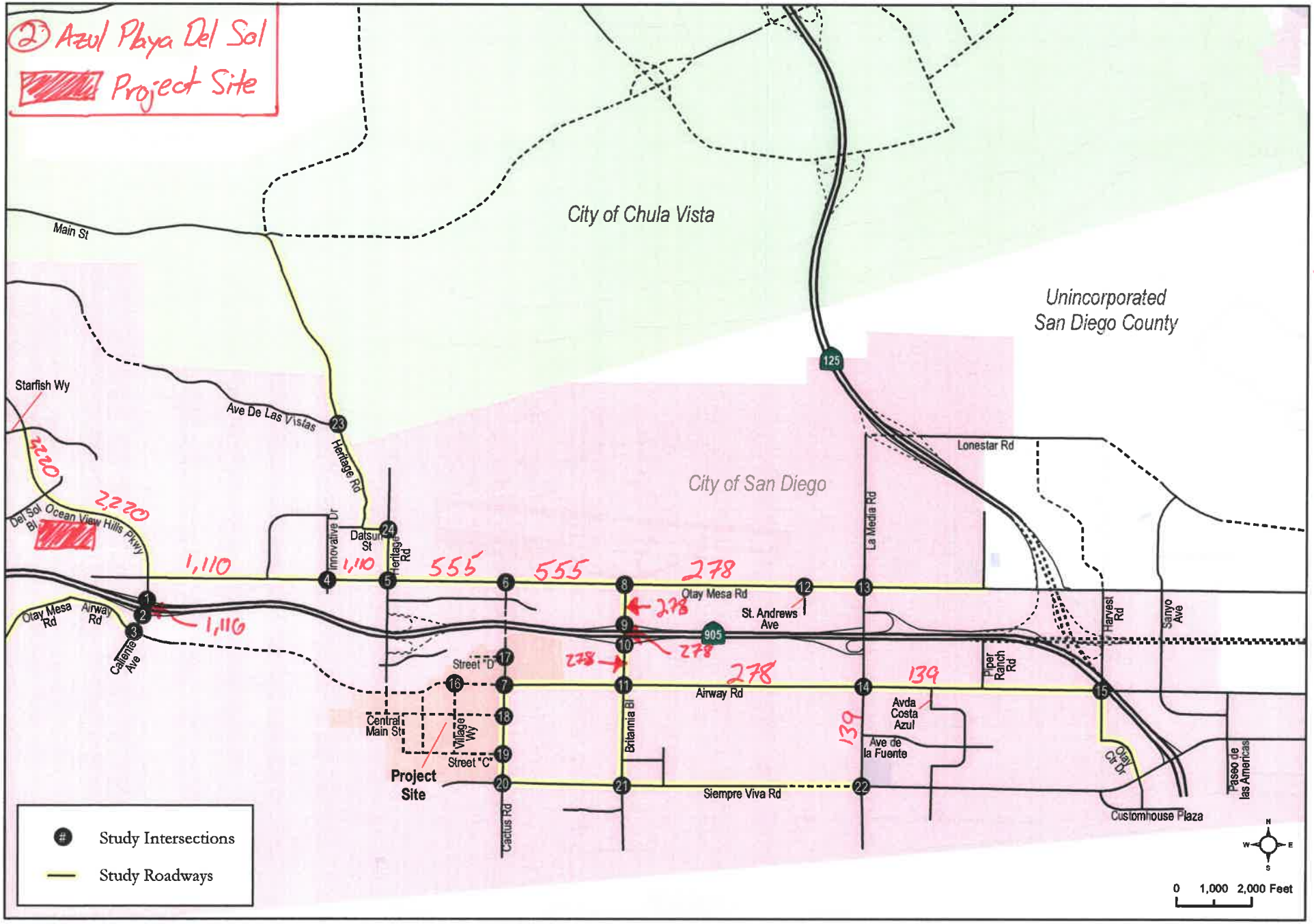
User approved volume balancing among the lanes for turning movement.

Attachment 11 – Cumulative Projects Information



Otay Mesa Lumina
Transportation Impact Study
CHEN RYAN

Figure 1-2
Project Study Area



Otay Mesa Lumina
Transportation Impact Study
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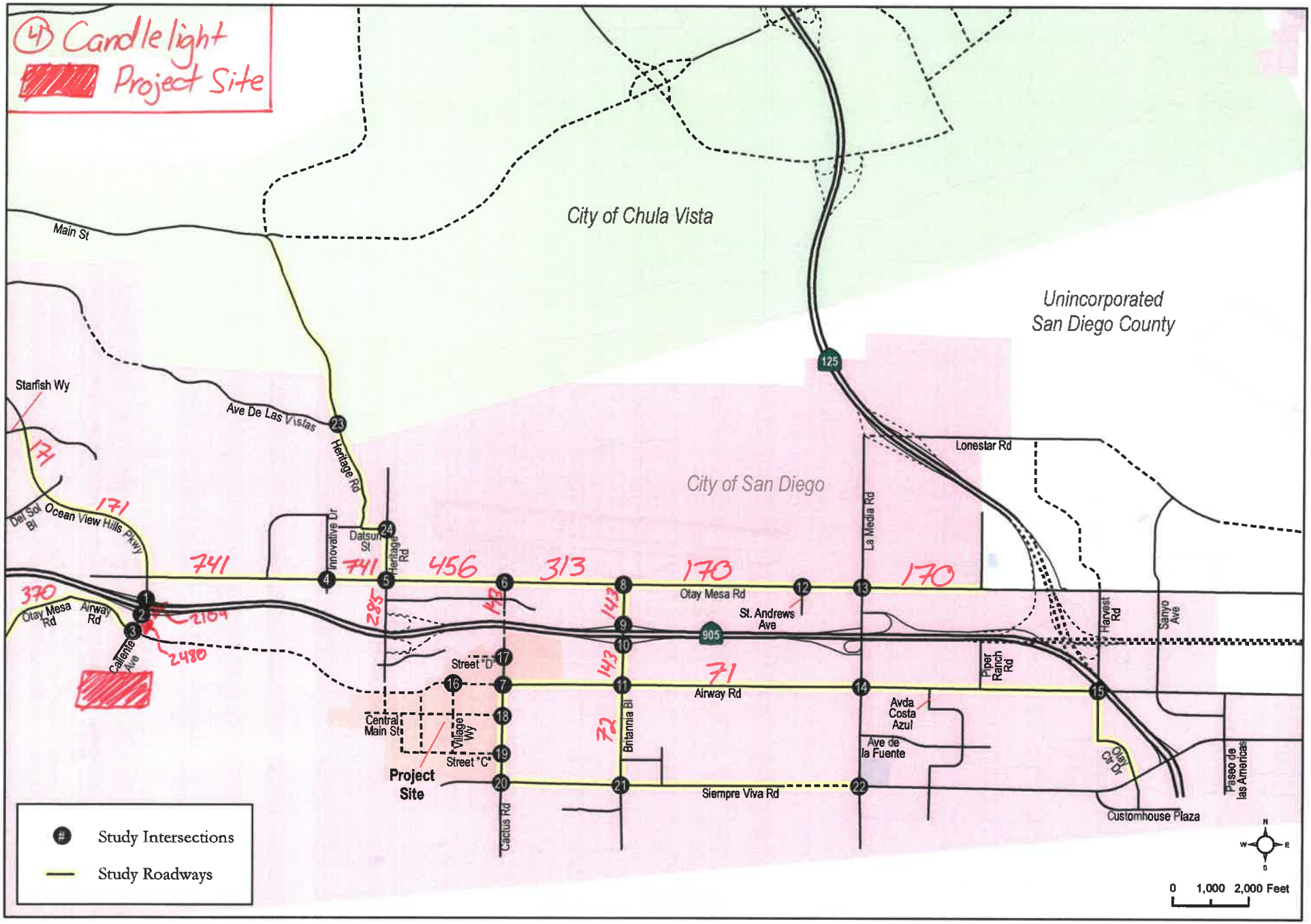
Figure 1-2
Project Study Area



Otay Mesa Lumina
Transportation Impact Study
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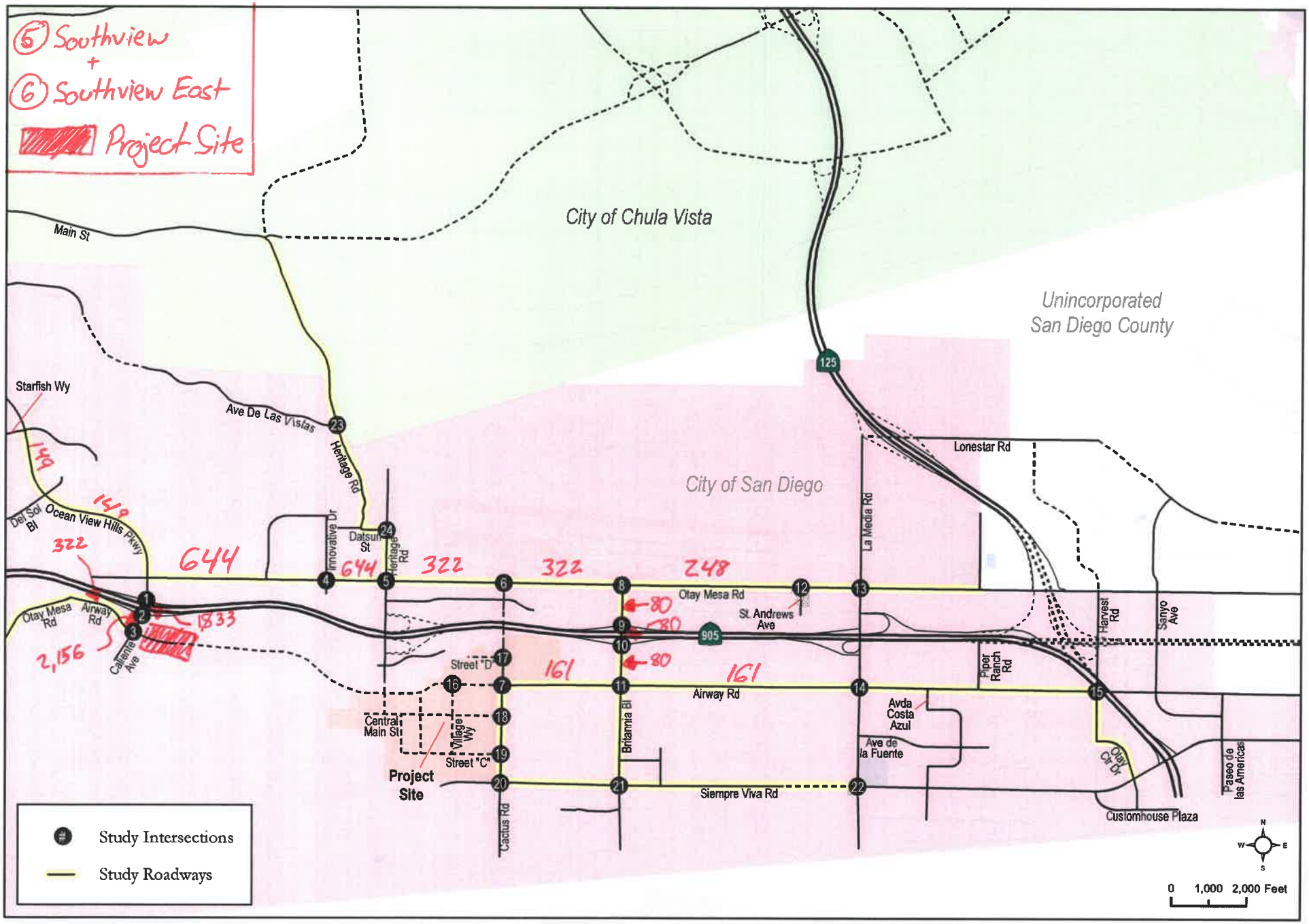
Figure 1-2
Project Study Area



Otay Mesa Lumina
Transportation Impact Study
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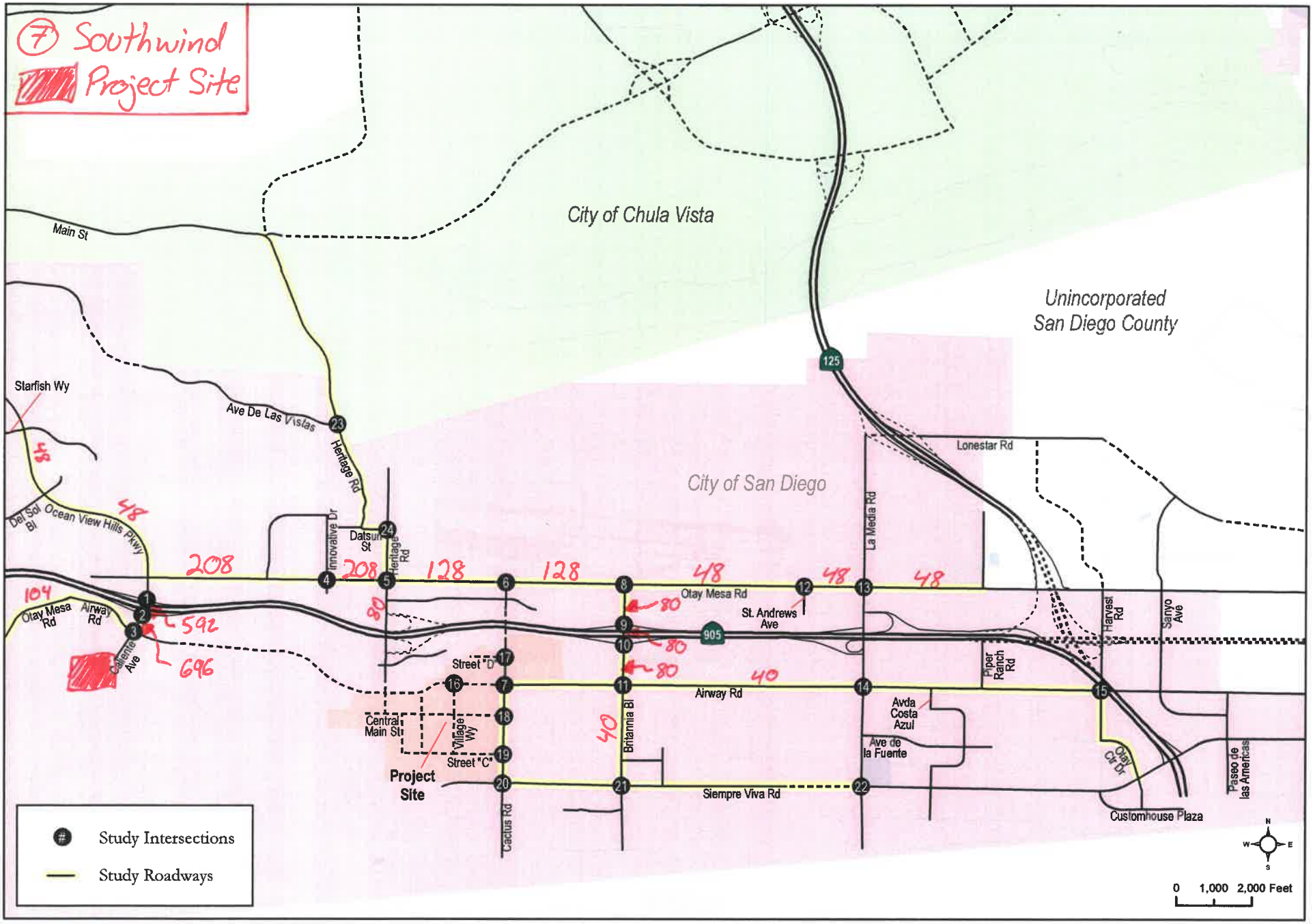
Figure 1-2
Project Study Area



Otay Mesa Lumina
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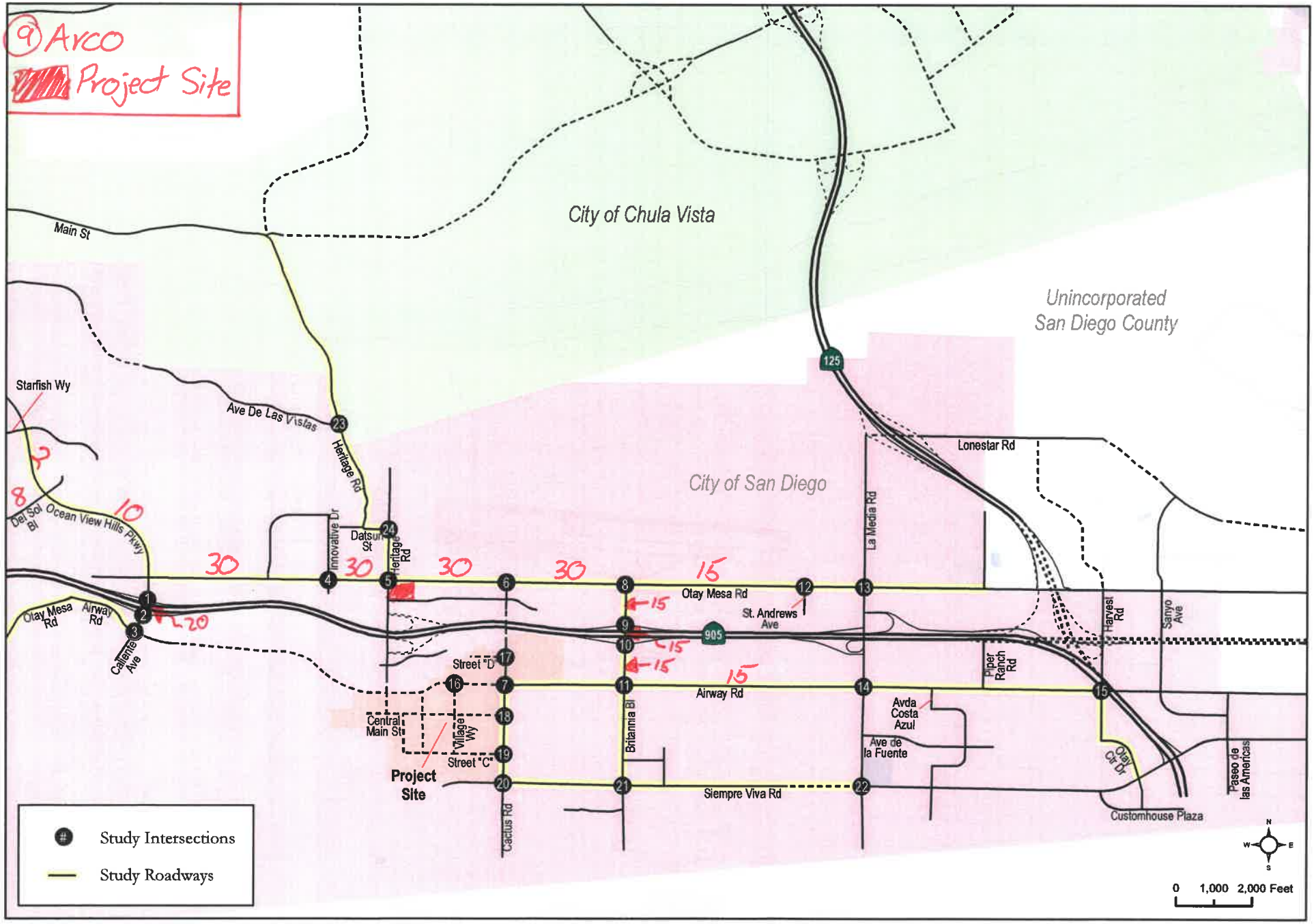
Figure 1-2
Project Study Area



Otay Mesa Lumina
Transportation Impact Study
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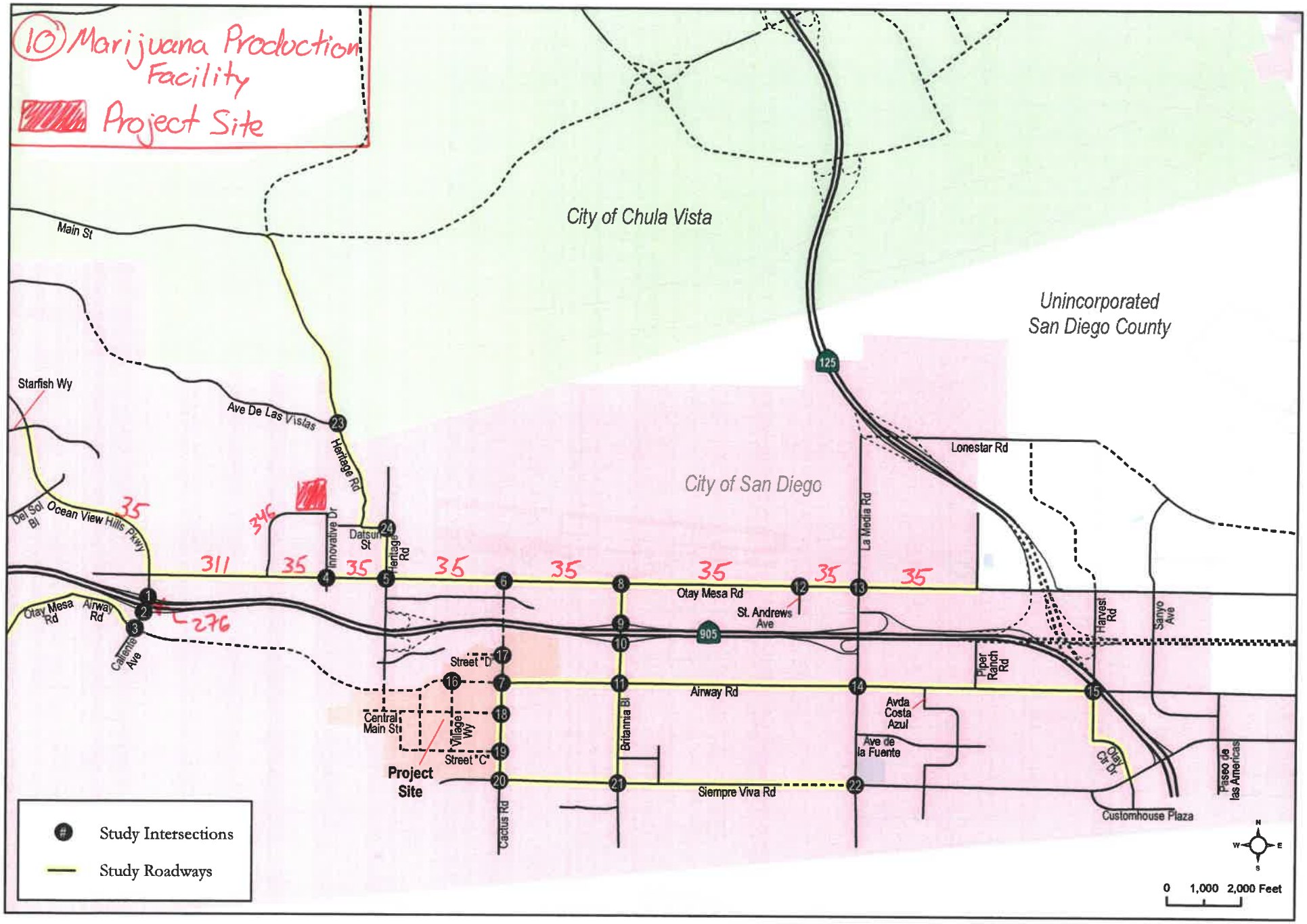
Figure 1-2
Project Study Area



Otay Mesa Lumina
Transportation Impact Study
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Figure 1-2
Project Study Area

flows through the CBF. For Phase 1, the CBF building will be an approximately 45,000 sf, two-level facility designed to serve up to approximately 6,838 average daily passengers and 400 peak-hour northbound passengers. For purposes of this analysis, Phase 1 is associated with the Phase 1 condition. There will be no parking structure in Phase 1; instead, there will be 889 surface parking spaces. The CBF is scheduled to open in late 2012.

In Phase 2, the CBF will be expanded by approximately 10,000 sf to a 55,000 sf facility designed to serve up to approximately 13,172 average daily passengers (up to 800 peak-hour northbound airline passengers). A parking structure will be constructed that will provide a total of 1,712 parking spaces on site. For purposes of this analysis, Phase 2 is associated with the Phase 2 condition.

The build out is currently projected for 2026, when the CBF building will reach 95,000 sf, which is designed to serve 17,225 average daily passengers and 1,200 peak-hour airline passengers from Mexico to the United States. For purposes of this analysis, this Horizon Year 2030 phase of the project will be referred to as Build Out Adopted Community Plan condition.

PROJECT TRIP GENERATION

The project is proposed ultimately to develop the 95,000 sf CBF, 402,000 sf of industrial use, 34,000 sf of specialty retail complex, 340 hotel rooms, a 12-pump gas station with a 1,200 sf convenience market and car wash, and a 6,000 sf restaurant by project build out.

As noted previously, the property is currently zoned Otay Mesa Development District (OMDD), which permits uses within the Heavy Industrial (IH-2-1) base zone plus research and development and limited commercial development, and is designated as Industrial in the 1981 Otay Mesa Community Plan. A Community Plan Amendment (CPA) is requested to change the designation of the entire site from Industrial to Institutional and to permit the Cross Border Facility and other non-industrial uses on the site.

The project trip generation for both the commercial and industrial land uses was determined using trip rates from the San Diego Municipal Code Land Development Code, *Trip Generation Manual* (May 2003). The project trip generation is shown in Table B. It should be noted that a rate of 12 trips per 1,000 sf of industrial use was used since the project is still in the early planning stages and will be developing a mixture of various industrial land uses that have a range of trip generation rates (i.e., Large Industrial Park, Small Industrial Park, Industrial/Business Park with some commercial included, Warehousing). The 12 trips per 1,000 sf is a reasonable average rate that captures the range that could occur on site. As shown in the table, the industrial land use is forecast to generate 4,824 ADT, 531 a.m. peak-hour trips, and 579 p.m. peak-hour trips. The commercial land uses (specialty retail, hotel, and gas station with convenience market) are forecast to generate 7,400 ADT, 456 a.m. peak-hour trips, and 623 p.m. peak-hour trips.

As part of the recent San Diego International Airport (SDIA) Master Plan effort, great detail and time was expended in developing the trip generation rate for air travel passengers in the region. Because both SDIA and the CBF are of similar land use types, the 2030 long-range trip generation rates developed for SDIA were used to forecast trips for the CBF. The SDIA trip rates are provided in Appendix C. Furthermore, based on discussion with City staff, these rates have been reviewed and approved for use in this analysis and have been applied to the future forecast passenger data from the

Table B: Project Trip Generation Summary

Land Use	Size	Units	ADT	A.M. Peak Hour			P.M. Peak Hour		
				In	Out	Total	In	Out	Total
Hotel (w/ convention facilities/restaurant)									
Trip Rate[1]		Rooms	10.00	0.36	0.24	0.60	0.48	0.32	0.80
Trip Generation	340	Rooms	3,400	122	82	204	163	109	272
Sit Down Restaurant									
Trip Rate[2]		TSF	130.00	5.20	5.20	10.40	6.24	4.16	10.40
Trip Generation	6.000	TSF	780	31	31	62	37	25	62
Gasoline w/ Food Mart and Car Wash									
Trip Rate[3]		VFS	155.00	6.20	6.20	12.40	6.98	6.98	13.95
Trip Generation	12	VFS	1,860	74	74	149	84	84	167
Specialty Retail									
Trip Rate[1]		TSF	40.00	0.72	0.48	1.20	1.80	1.80	3.60
Trip Generation	34.000	TSF	1,360	24	16	41	61	61	122
Industrial/Business Park (no comm.)									
Trip Rate[1]		TSF	12.00	1.19	0.13	1.32	0.29	1.15	1.44
Trip Generation	402.000	TSF	4,824	478	53	531	116	463	579
Cross Border Facility									
Trip Rate[4]			2.00	0.05	0.03	0.08	0.04	0.04	0.08
Trip Generation (2030)	17,225	Passengers	34,467	775	551	1,326	655	689	1,344
Total Project Trip Generation			**46,691**	**1,505**	**808**	**2,313**	**1,116**	**1,431**	**2,547**

Trip rates referenced from the San Diego Municipal Code Land Development Code, "Trip Generation Manual," May 2003.

[1]Hotel (With Convention Facilities/Restaurant), Specialty Center/Strip Commercial, Industrial/Business Park (No Commercial)

[2]Driveway Vehicle trip rate based on High Turnover (Sit-Down) Restaurant.

[3]Driveway Vehicle trip rate based on Gasoline Station with Food Mart and Car Wash.

[4]Trip Rates based on San Diego International Airport Master Plan EIR, April 2008 (Proposed Airport Land Use Plan, Year 2030).

TSF = Thousand Square Feet

VFS = Vehicle Fueling Space

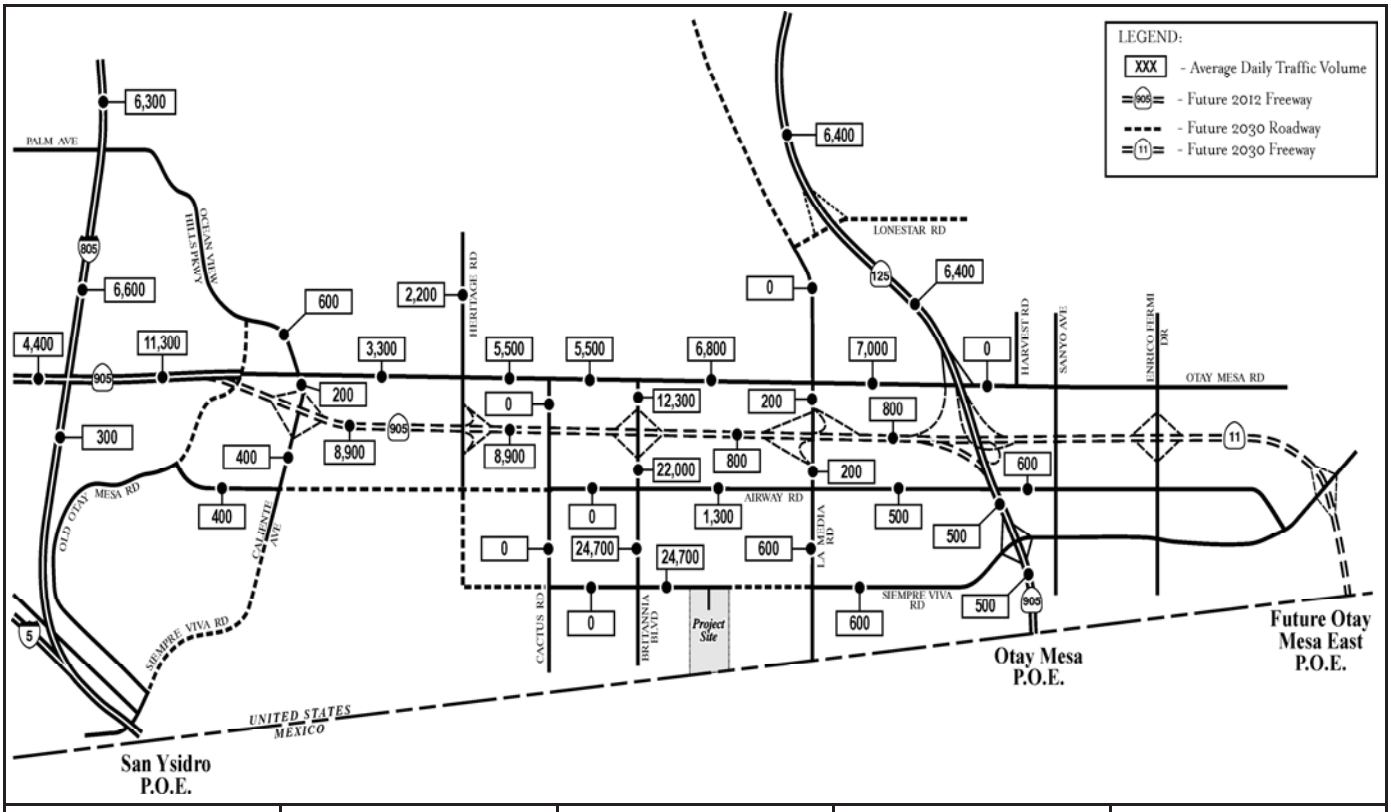
SH&E study. By 2030 the proposed CBF is anticipated to service approximately 17,225 passengers per day. In that horizon, the facility is forecast to generate 34,467 ADT, 1,326 a.m. peak-hour trips, and 1,344 p.m. peak-hour trips.

The total gross forecast trips generated by the proposed project are approximately 46,691 ADT, 2,313 a.m. peak-hour trips, and 2,547 p.m. peak-hour trips. The City's *Traffic Impact Study Manual* recommends a 4 percent trip reduction from the industrial land use trips to account for potential trip capture between commercial and industrial uses, which has been factored into the trip generation estimates used in the analysis. While LSA understands that additional trip capture will occur between the commercial land uses and the CBF, internal capture rates for these uses are not available and were not factored into this analysis so that it is a conservative, worst-case scenario for the proposed project. With the reduction in trips from internal trip capture, the project is forecast to generate approximately 46,498 ADT, 2,291 a.m. peak-hour trips, and 2,523 p.m. peak-hour trips externally from the site.

TRIP DISTRIBUTION AND ASSIGNMENT

The City of San Diego prepared select zone assignment traffic forecasts for the CBF and non-terminal uses. Project trips were distributed separately to the study area roadway network since the project consists of various land uses. LSA made minor adjustments to the City's forecast plots to reduce internal trip capture to account for an increase of trips along I-5. It should be noted that project traffic was distributed assuming the completion of the SR-905 freeway extension. The trip distribution percentages for the CBF are approximately 83 percent toward the north (via I-5, I-805, Caliente Avenue, Heritage Road, La Media Road, and State Route 125 [SR-125]), percent to the west (via SR-905 and Airway Road), 4 percent to the east (via Airway Road and Siempre Viva Road), 4 percent in the vicinity of the project site, and 5 percent to the United States/Mexico border. The trip distribution percentages for non-terminal uses are approximately 53 percent toward the north (via I-5, I-805, Caliente Avenue, Heritage Road, La Media Road, and SR-125), 8 percent to the west (via SR-905 and Airway Road), 7 percent to the east (via Airway Road and Siempre Viva Road), 25 percent in the vicinity of the project site, and 7 percent to the United States/Mexico border. Figure 3 shows the project trip distribution for the CBF use only for Build Out of Community Plan. Figure 4 shows the project trip distribution for the ancillary uses for Build Out of Community Plan. Trip assignment for the proposed project for each development scenario was developed by multiplying the trip generation for each land use by its specific trip distribution, as illustrated in Figures 5, 6, and 7. Figure 5 illustrates the project trip assignment associated with the Phase 1 condition. Figure 6 illustrates the project trip assignment associated with the Phase 2 condition. Figure 7 illustrates the project trip assignment associated with the Build Out Adopted Community Plan condition.

As previously stated in the project description and market study, a fraction of the CBF traffic along the I-805 and I-5 freeways north of the SR-905 are new trips. The traffic to the Tijuana International Airport now and in the future is already utilizing the I-805 and I-5 freeways. The CBF project will divert trips destined to each port of entry to the project. Therefore, manual adjustments were made to the freeway analysis to include 25 percent of the CBF trips and 100 percent of the non-ancillary uses.



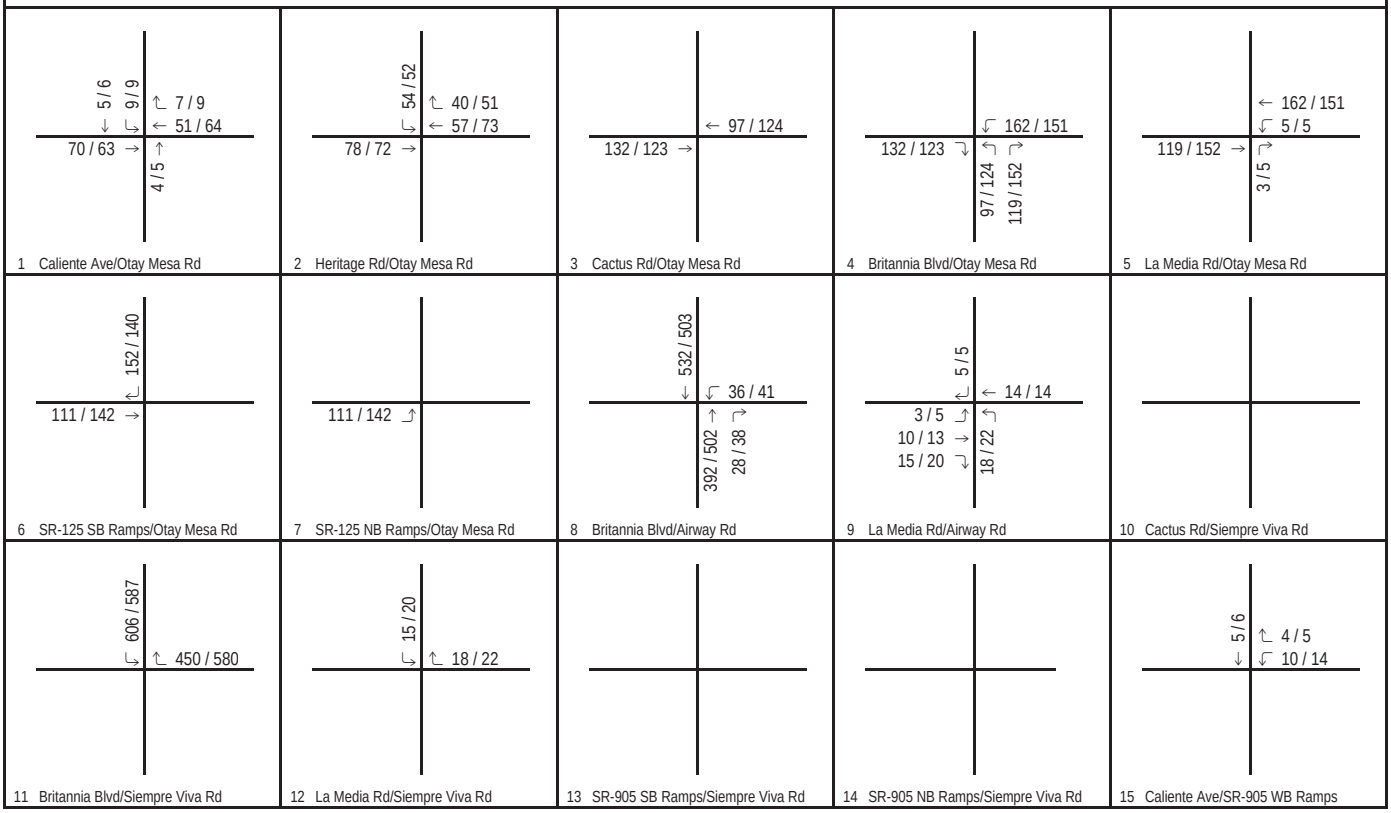


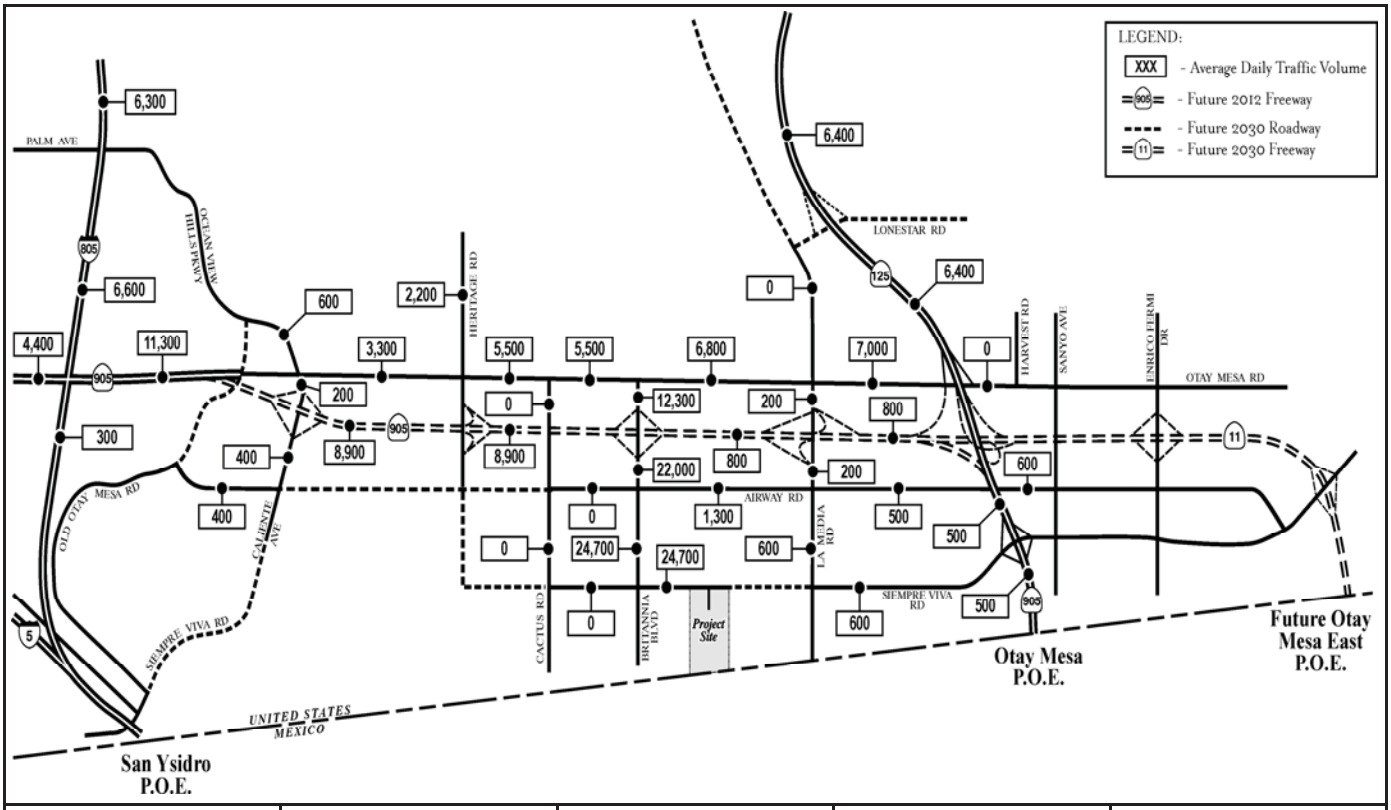
FIGURE 6A

Legend

123 / 456 AM / PM Volume

Otay Cross Border Facility

Project Trip Assignment (Phase 2)



10 / 14 ← 5 / 6 ↵ 13 / 15 ↵ 16 Caliente Ave/SR-905 EB Ramps	Future Intersection 17 Heritage Rd/SR-905 WB Ramps	Future Intersection 18 Heritage Rd/SR-905 EB Ramps	295 / 274 ← ↵ 20 / 20 161 / 207 ↵ 216 / 276 → 19 Britannia Blvd/SR-905 WB Ramps	314 / 294 ← 218 / 209 ↵ 377 / 483 → 15 / 19 ↵ 20 Britannia Blvd/SR-905 EB Ramps
5 / 5 ← 3 / 5 → 21 La Media Rd/SR-905 WB Ramps	5 / 5 ← 3 / 5 → 22 La Media Rd/SR-905 EB Ramps	Future Intersection 23 Heritage Rd/Airway Rd	24 Cactus Rd/Airway Rd	10 / 14 ↵ 13 / 15 ↵ 25 Caliente Ave/Airway Rd
Future Intersection 26 La Media Rd/Lone Star Rd	Future Intersection 27 SR-125 SB off-ramp/Lone Star Rd	Future Intersection 28 SR-125 NB on-ramp/Lone Star Rd		

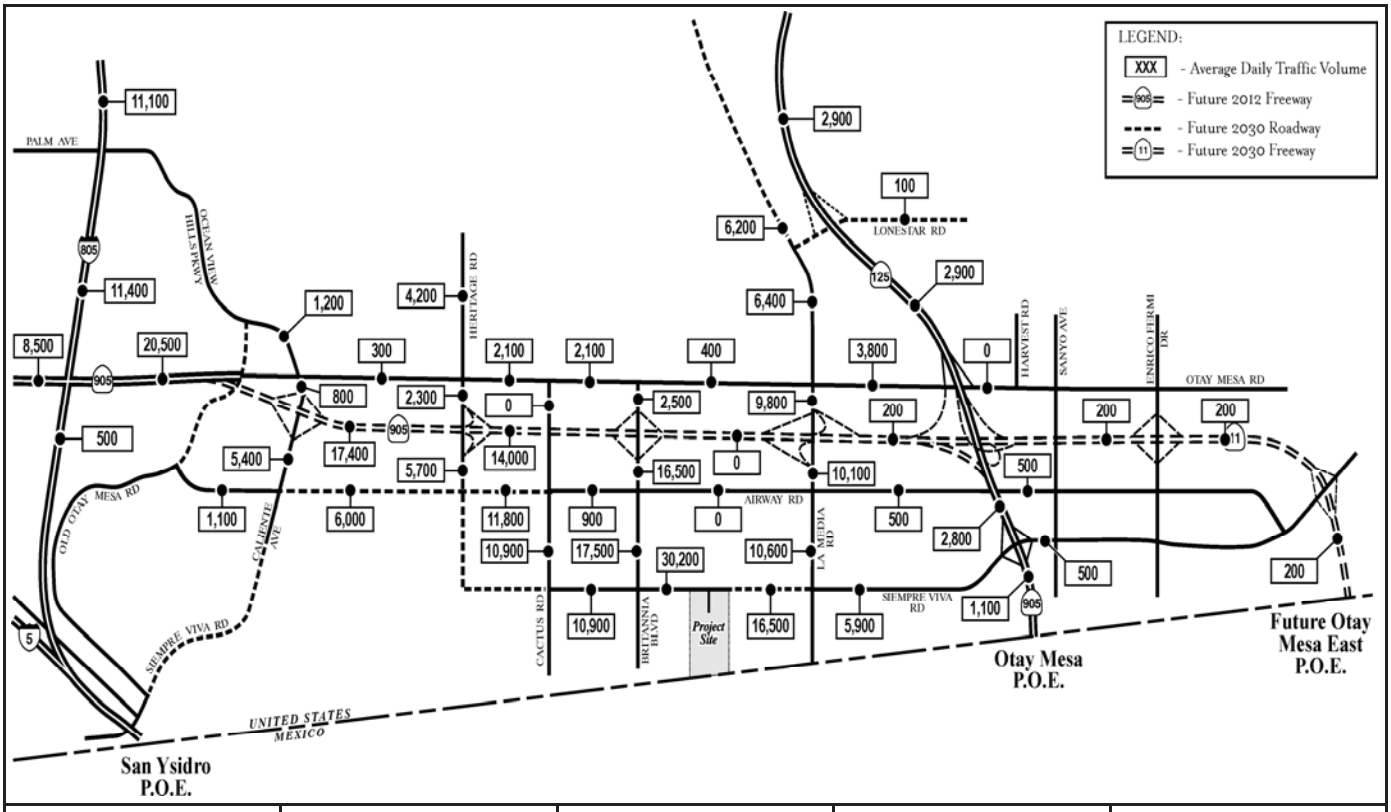
FIGURE 6B

Legend

123 / 456 AM / PM Volume

Otay Cross Border Facility

Project Trip Assignment (Phase 2)



30 / 21 ↓ 11 / 8 ↳ ↑ 5 / 10 ← 15 / 29 →	74 / 55 ↓ 57 / 43 ↳ ↑ 32 / 54 ← 5 / 8 9 / 6 → 2 / 1 ↲ 1 / 2 ↰ ↑ 40 / 70	← 36 / 63 66 / 49 →	↰ 14 / 10 66 / 49 ↲ 36 / 63 ↰ ↱ 6 / 13	189 / 144 ↓ ← 14 / 10 ↰ 103 / 79 6 / 13 → 109 / 177 → ↱ 59 / 97
1 Caliente Ave/Otay Mesa Rd	2 Heritage Rd/Otay Mesa Rd	3 Cactus Rd/Otay Mesa Rd	4 Britannia Blvd/Otay Mesa Rd	5 La Media Rd/Otay Mesa Rd
72 / 57 ↰ 44 / 67 →	44 / 67 ↲	520 / 388 ↓ 18 / 13 ↲ ↰ 16 / 31 ↑ 284 / 491	300 / 228 ↓ ↰ 19 / 14 171 / 282 → ↱ 10 / 18	350 / 263 ↳ ↑ 186 / 318
6 SR-125 SB Ramps/Otay Mesa Rd	7 SR-125 NB Ramps/Otay Mesa Rd	8 Britannia Blvd/Airway Rd	9 La Media Rd/Airway Rd	10 Cactus Rd/Siempre Viva Rd
627 / 460 ↳ ↑ 337 / 611 ← 186 / 318 350 / 263 →	319 / 242 ↲ ← 209 / 150 180 / 300 ↲ 105 / 202 →	80 / 62 ↲ ← 56 / 41 57 / 92 → 19 / 36 ↲	← 19 / 14 48 / 74 ↲ 10 / 18 → ↰ 38 / 27	30 / 21 ↓ ↑ 15 / 29 ↰ 14 / 36 ↰ 74 / 93
11 Britannia Blvd/Siempre Viva Rd	12 La Media Rd/Siempre Viva Rd	13 SR-905 SB Ramps/Siempre Viva Rd	14 SR-905 NB Ramps/Siempre Viva Rd	15 Caliente Ave/SR-905 WB Ramps

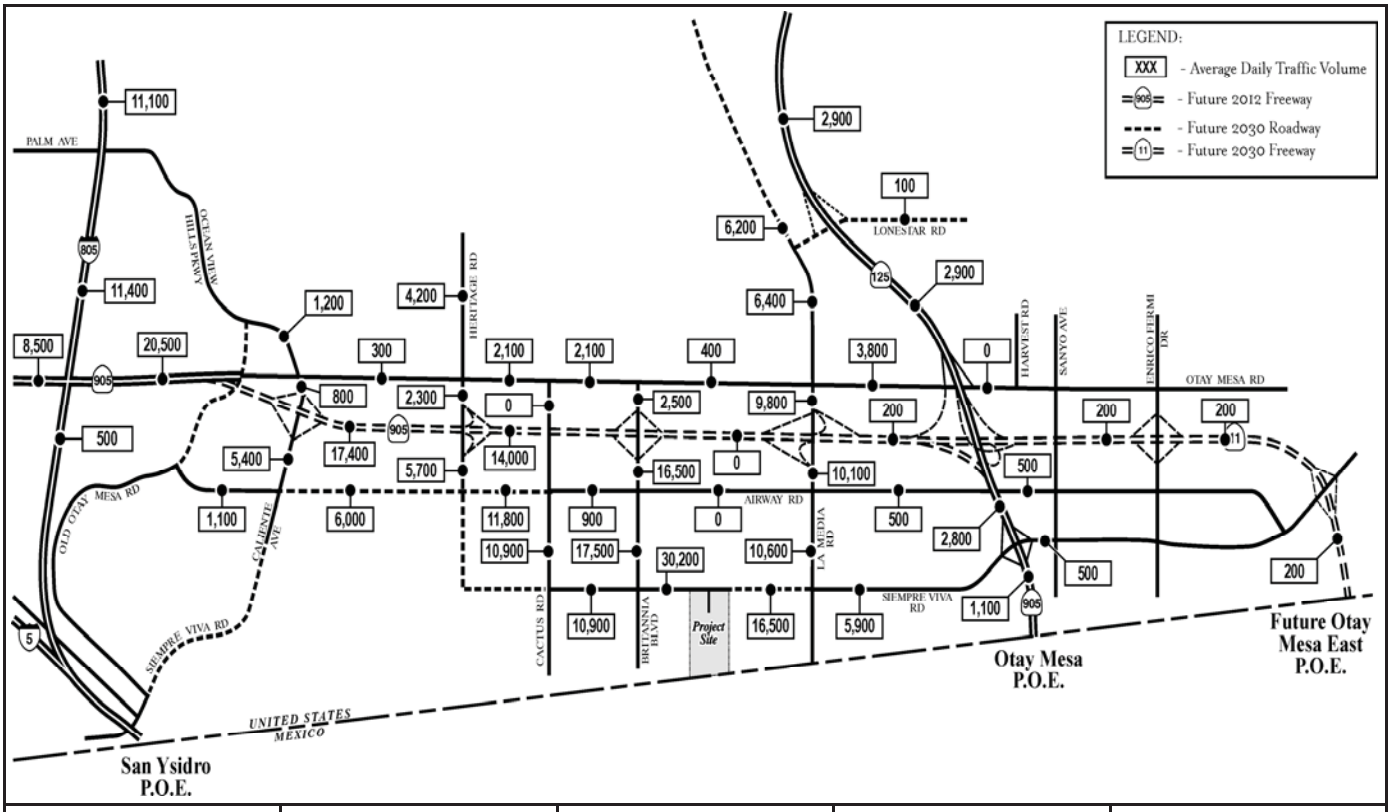
FIGURE 7A

Legend

123 / 456 AM / PM Volume

Otay Cross Border Facility

Project Trip Assignment (Buildout Adopted Community Plan)



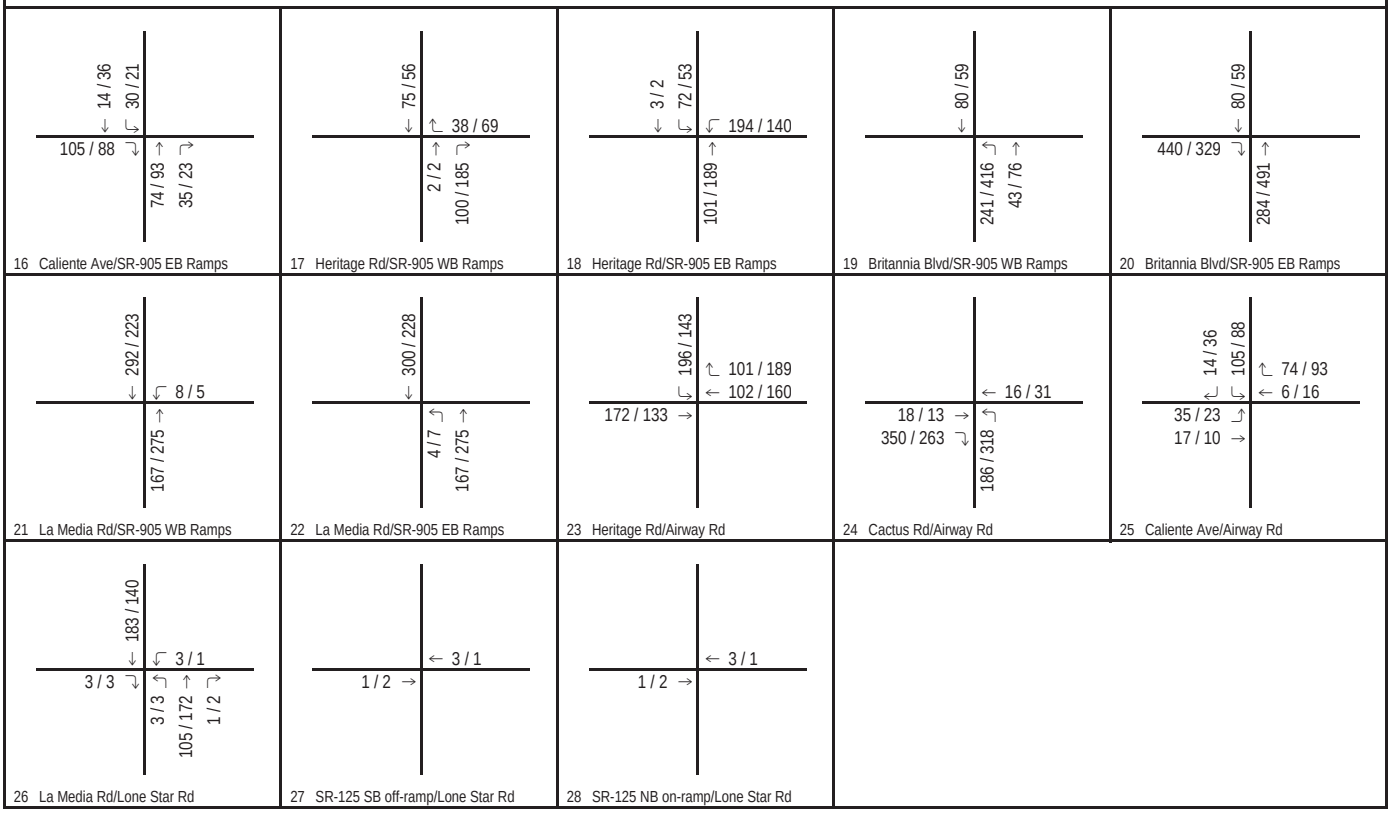


FIGURE 7B

Legend

123 / 456 AM / PM Volume

Otay Cross Border Facility

Project Trip Assignment (Buildout Adopted Community Plan)

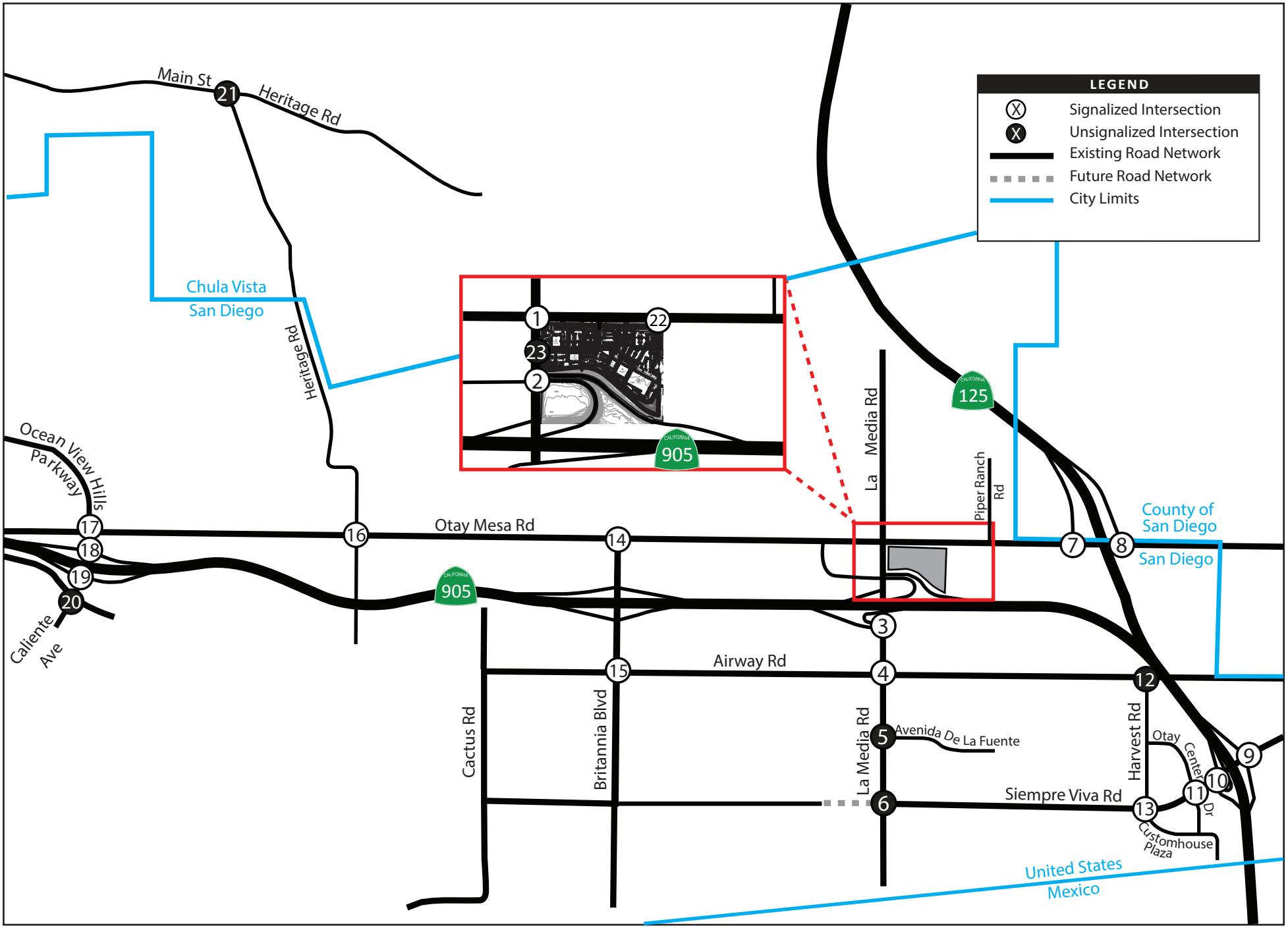


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Figure 1-1
Project Study Area

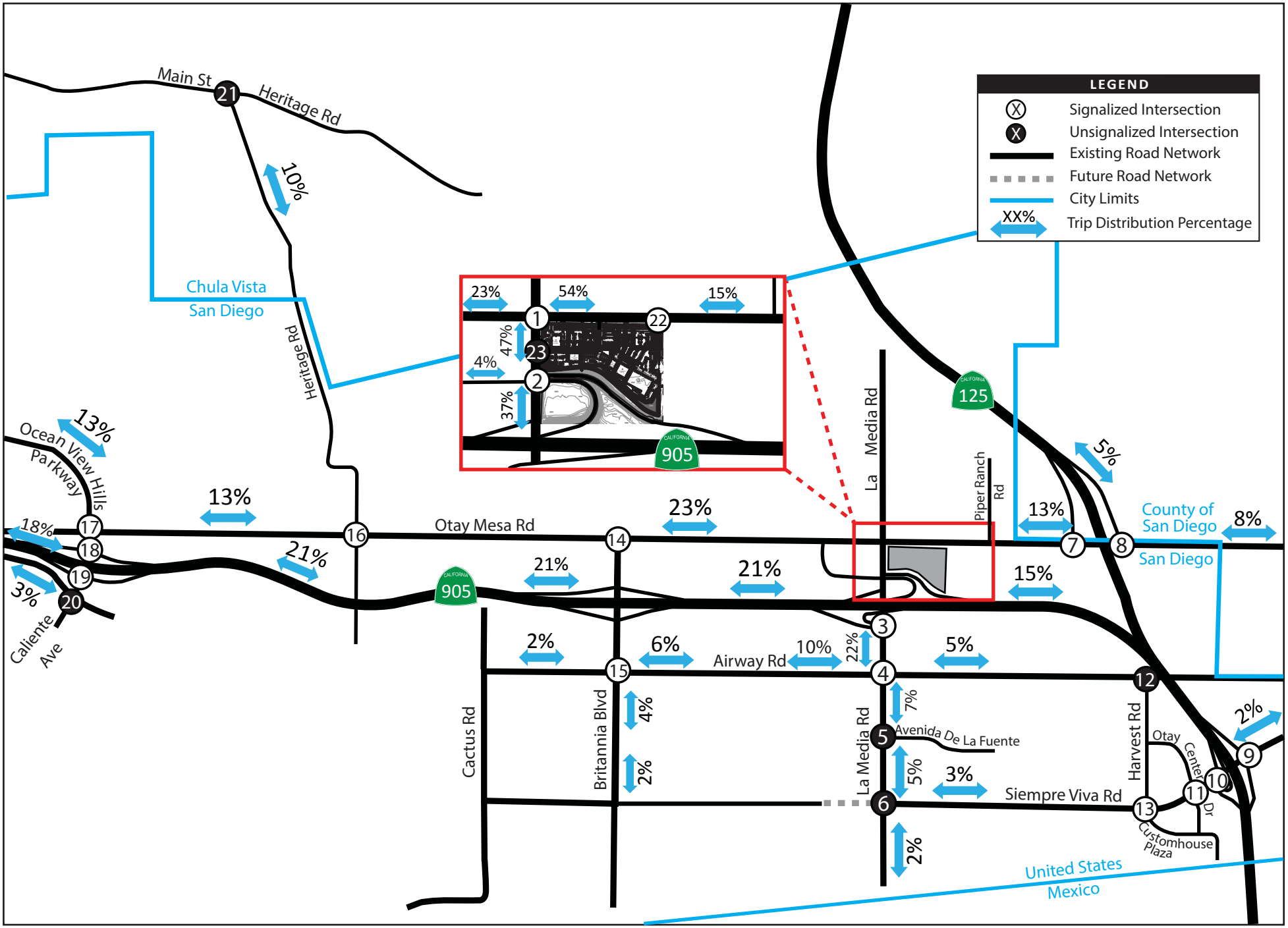

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Figure 4-1
Opening Year 2018 Project Trip Distribution

Plaza La Media Trip Generation

TRIP GENERATION RATES						
Land Use	Dwy Rate / Cum Rate		AM PEAK % of ADT	AM PEAK In:Out Ratio	PM PEAK % of ADT	PM PEAK In:Out Ratio
Community Retail	70 / 49	trips / ksf	3%	0.60 : 0.40	10%	0.50 : 0.50
Fast Food w/Drive Thru	700 / 420	trips / ksf	4%	0.60 : 0.40	8%	0.50 : 0.50
Drugstore	90 / 40	trips / ksf	4%	0.60 : 0.40	10%	0.50 : 0.50
Gas Station w/Food Mart & Carwash	155 / 31	trips / vfs	8%	0.50 : 0.50	9%	0.50 : 0.50

TRIP GENERATION CALCULATIONS								
Land Use	Amount	ADT	AM PEAK In	AM PEAK Out	AM PEAK Total	PM PEAK In	PM PEAK Out	PM PEAK Total
Community Retail	106.7 ksf	7,469	134	90	224	374	373	747
Drugstore	13.5 ksf	1,215	29	20	49	61	61	122
Fast Food w/Drive Thru	6.0 ksf	4,200	101	67	168	168	168	336
Gas Station w/Food Mart & Carwash	12 vfs	1,860	75	74	149	84	83	167
Driveway Trips Total		*14,744*	*339*	*251*	*590*	*687*	*685*	*1,372*
Cumulative Trips Total (a)		8,660	183	127	310	407	405	812

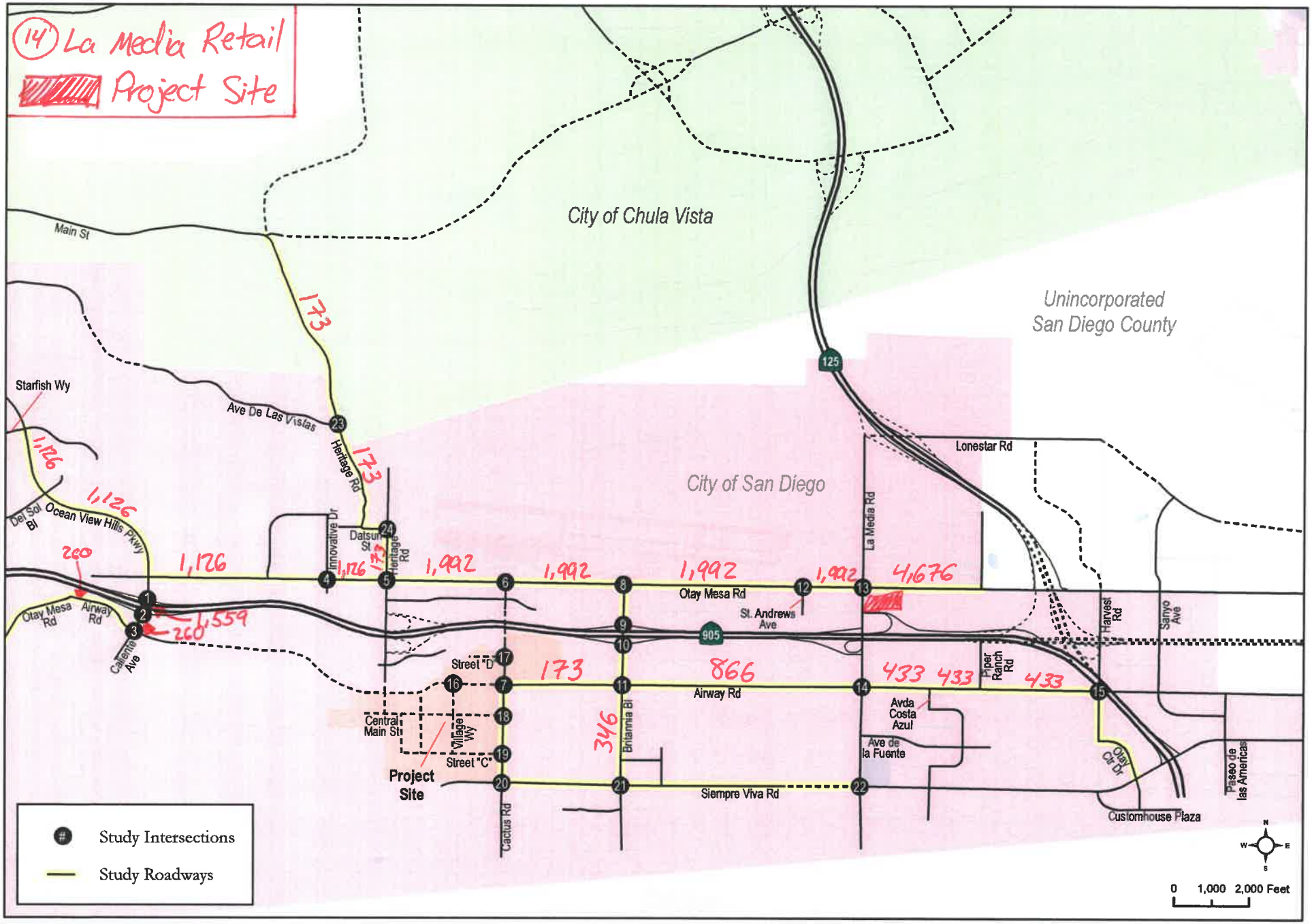
Notes:

ksf: 1,000 square feet, vfs: vehicle fueling space

The trip rates for the proposed uses are based on *the City of San Diego's Trip Generation Manual, May 2003* .

Dwy = Driveway; Cum = Cumulative

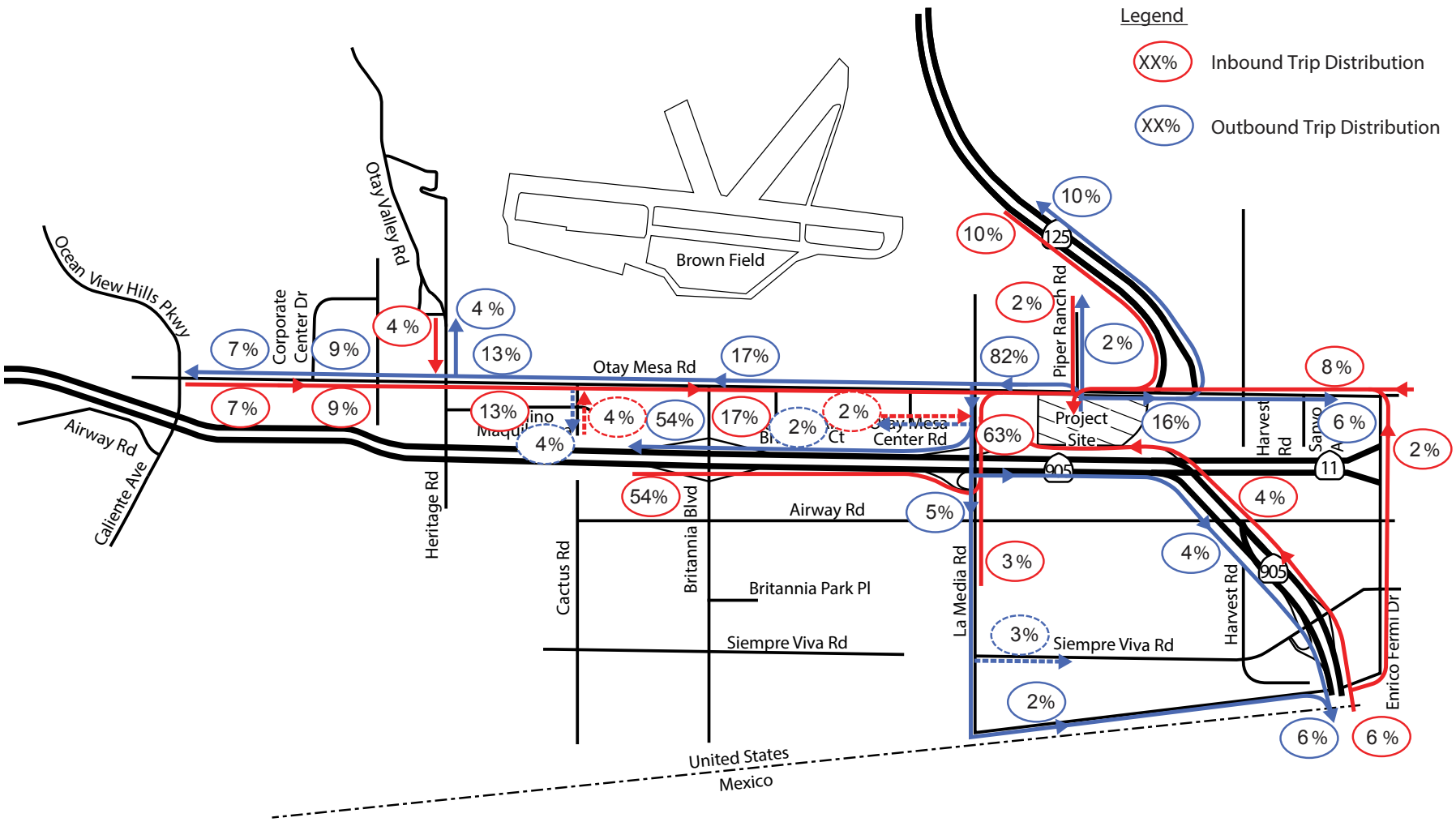
(a) Cumulative trips are based off of the cumulative trip rate and take into account pass by and diverted link trips.



Otay Mesa Lumina
Transportation Impact Study
CHEN RYAN

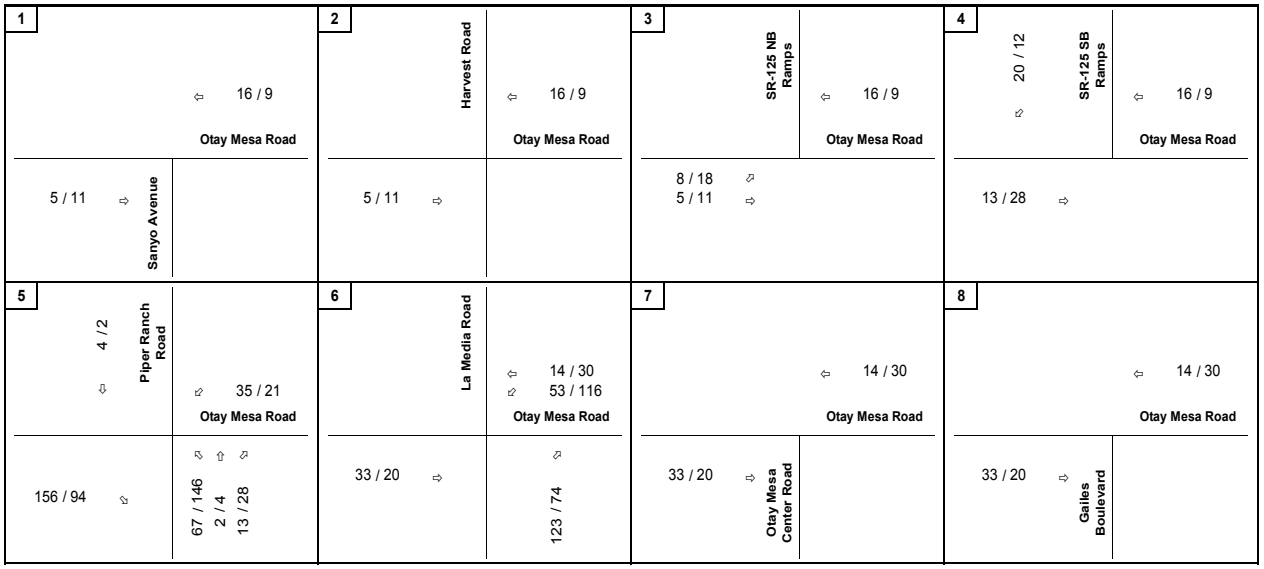
Figure 1-2
Project Study Area

FIGURE 4-1



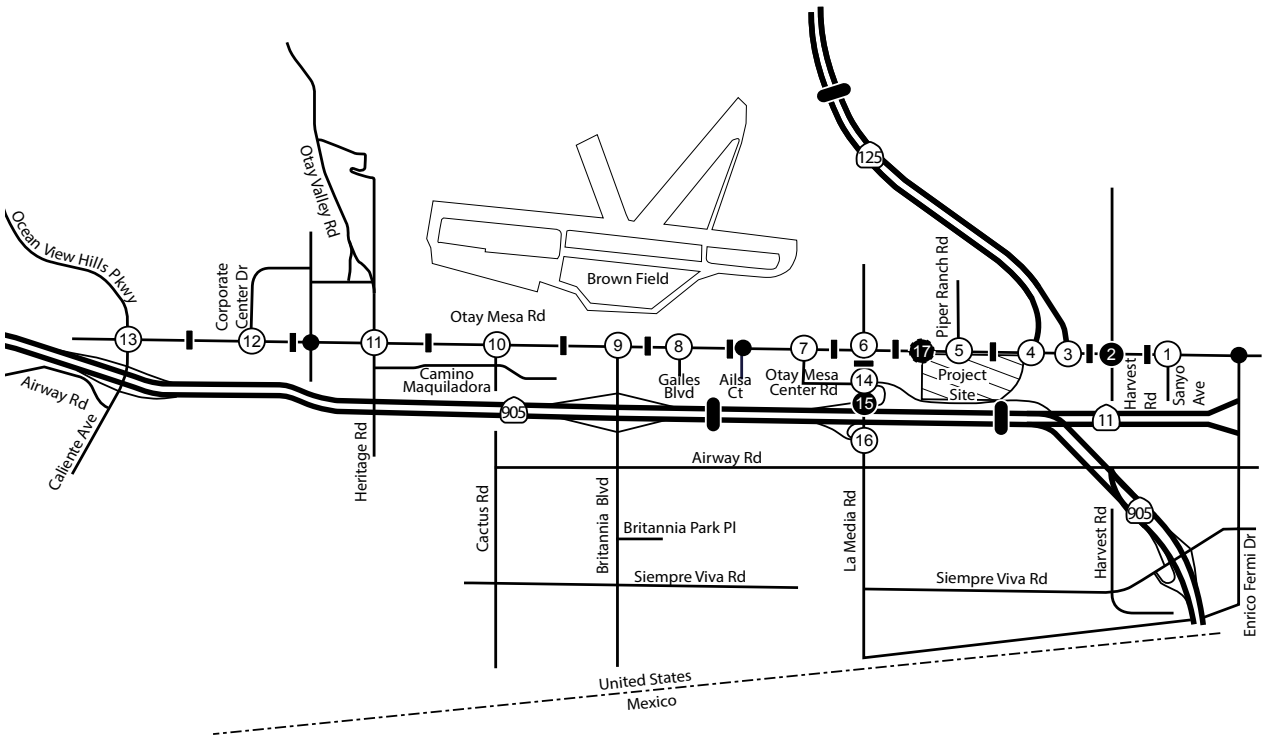
General Trip Distribution
Existing & Near Term Conditions

FIGURE 4-11



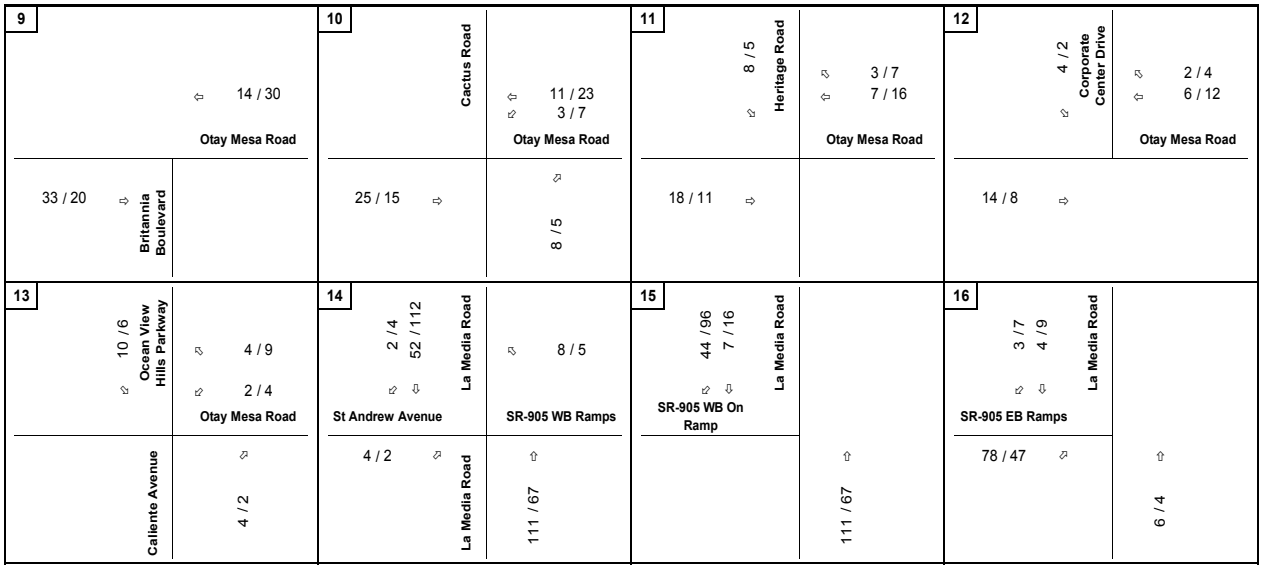
LEGEND

X/Y	AM/PM Peak Hour Traffic Volumes



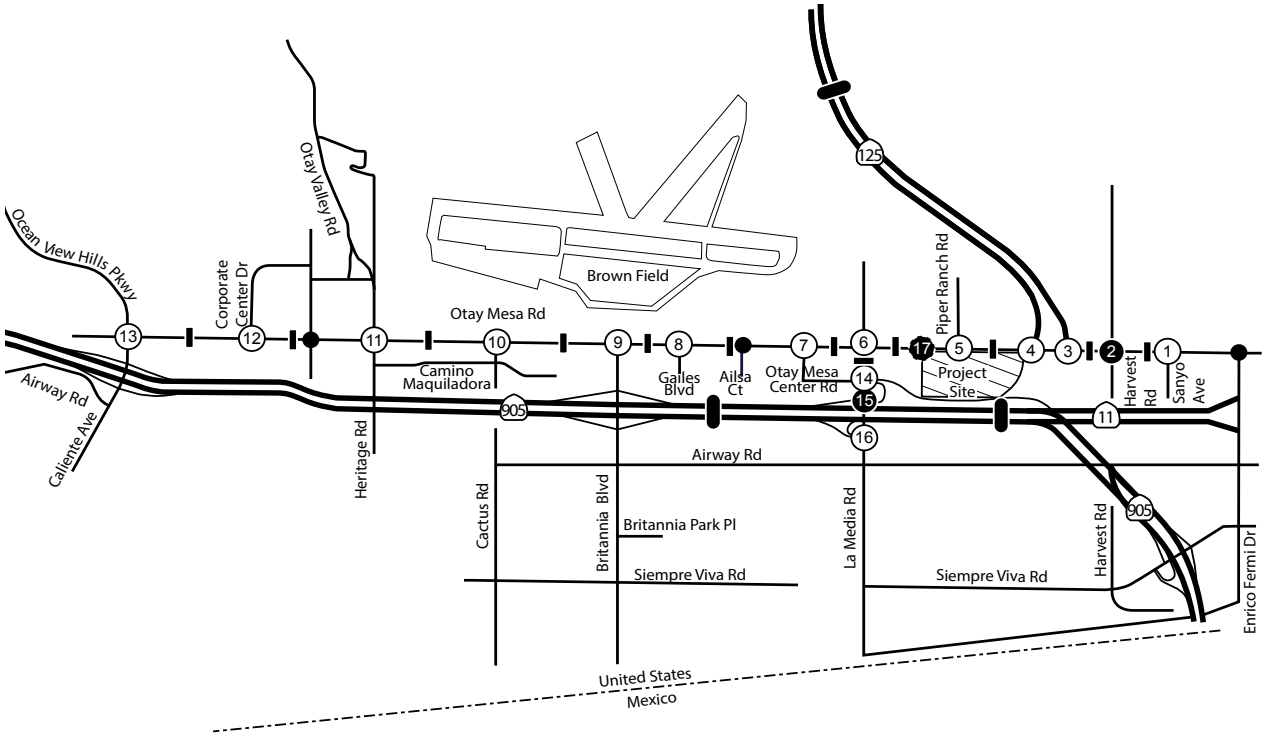
Trip Assignment For Phase 1
Existing & Near Term Conditions

FIGURE 4-12



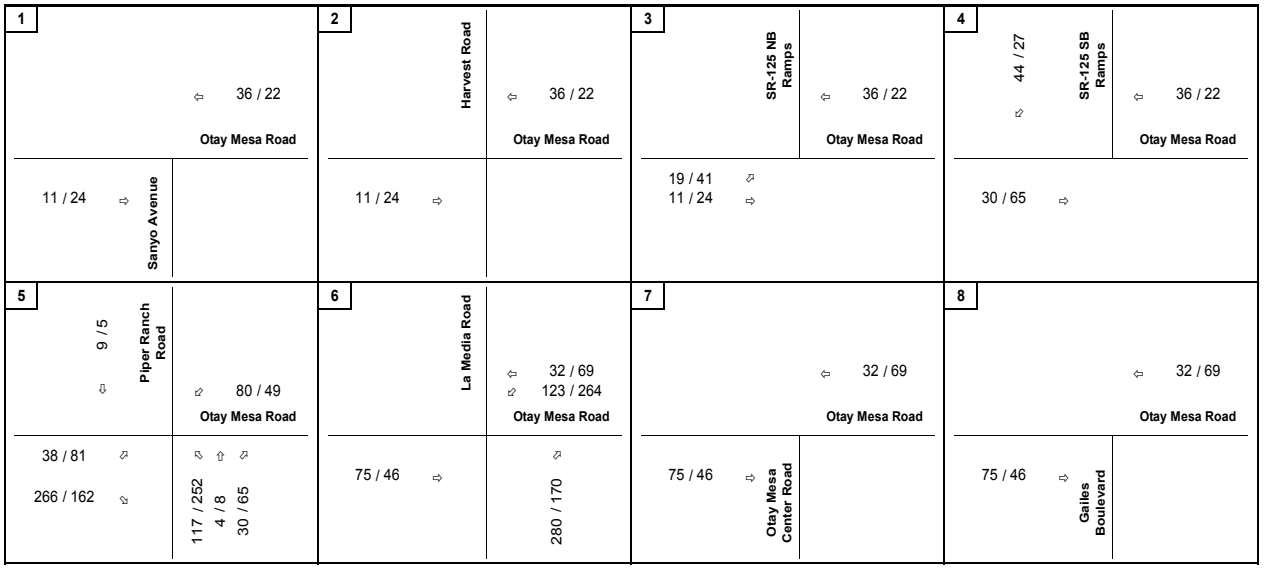
LEGEND

X/Y	AM/PM Peak Hour Traffic Volumes



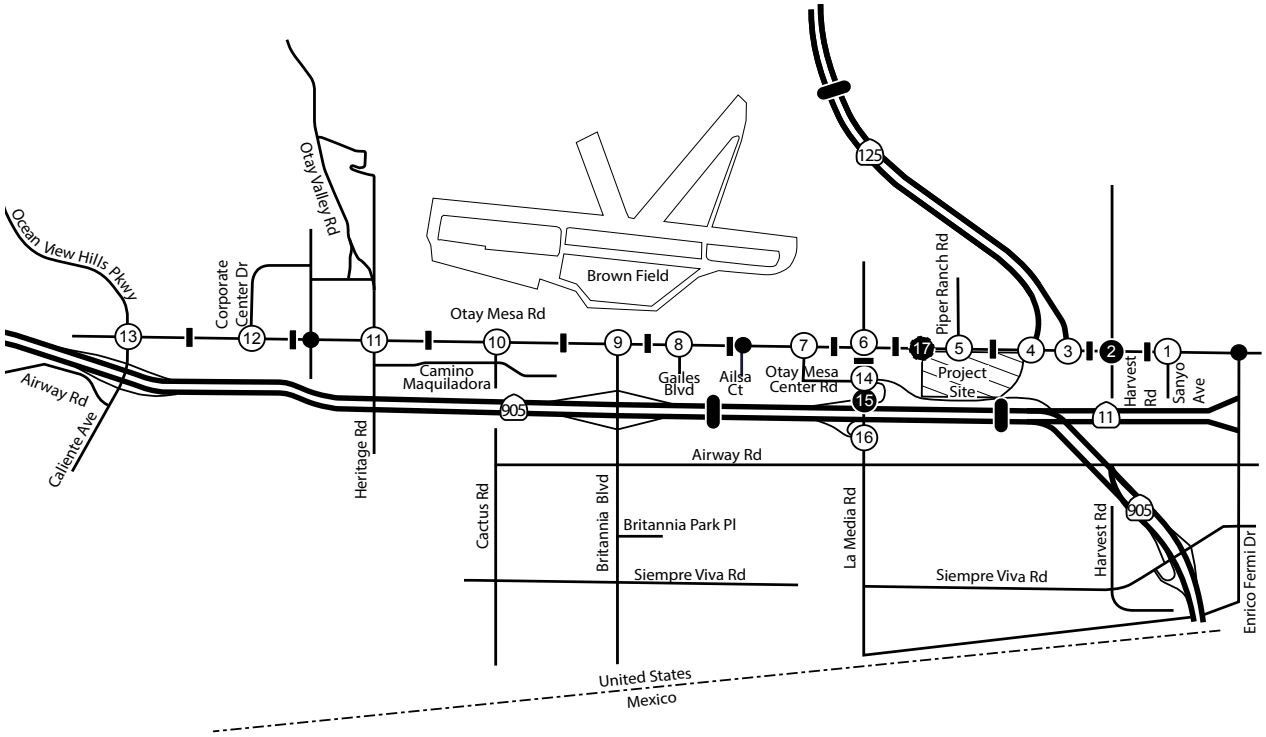
Trip Assignment For Phase 1
Existing & Near Term Conditions (cont.)

FIGURE 4-13



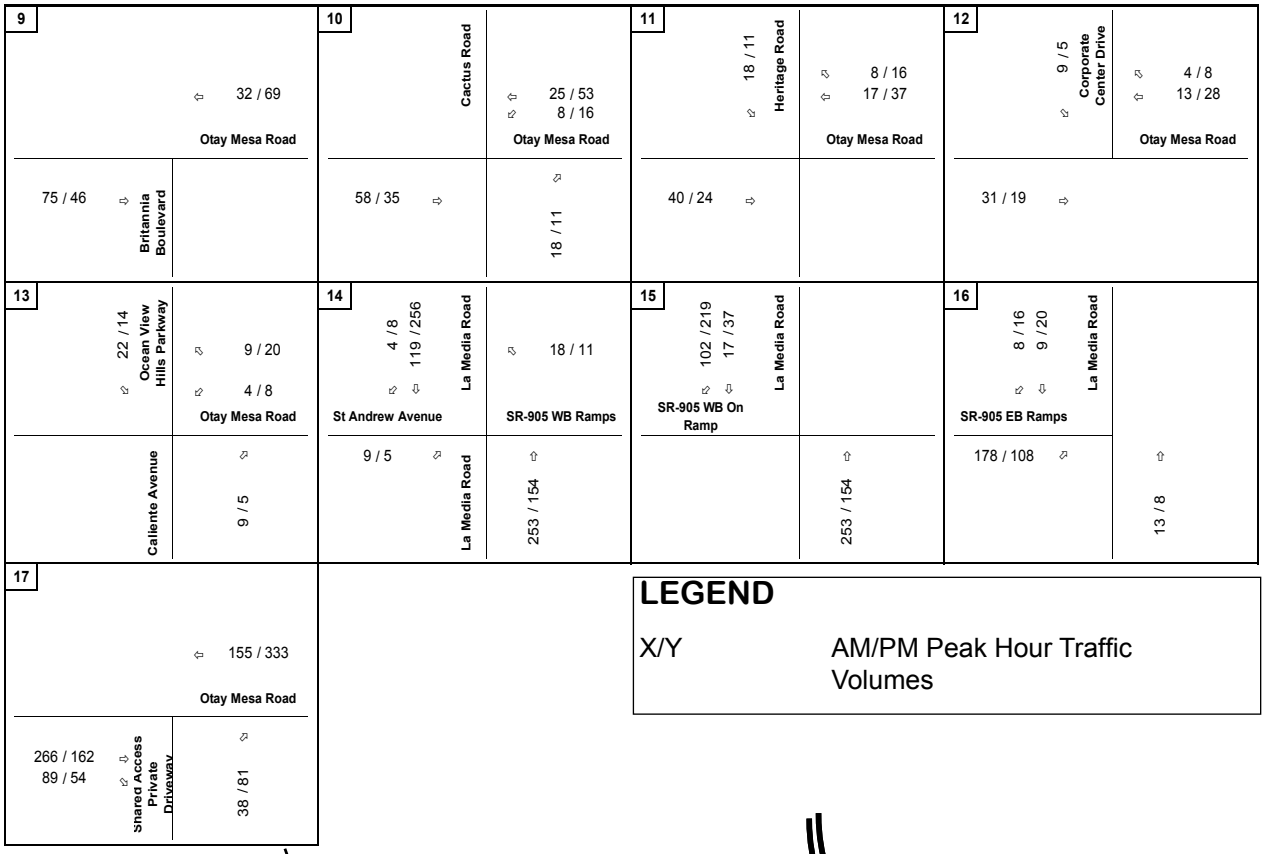
LEGEND

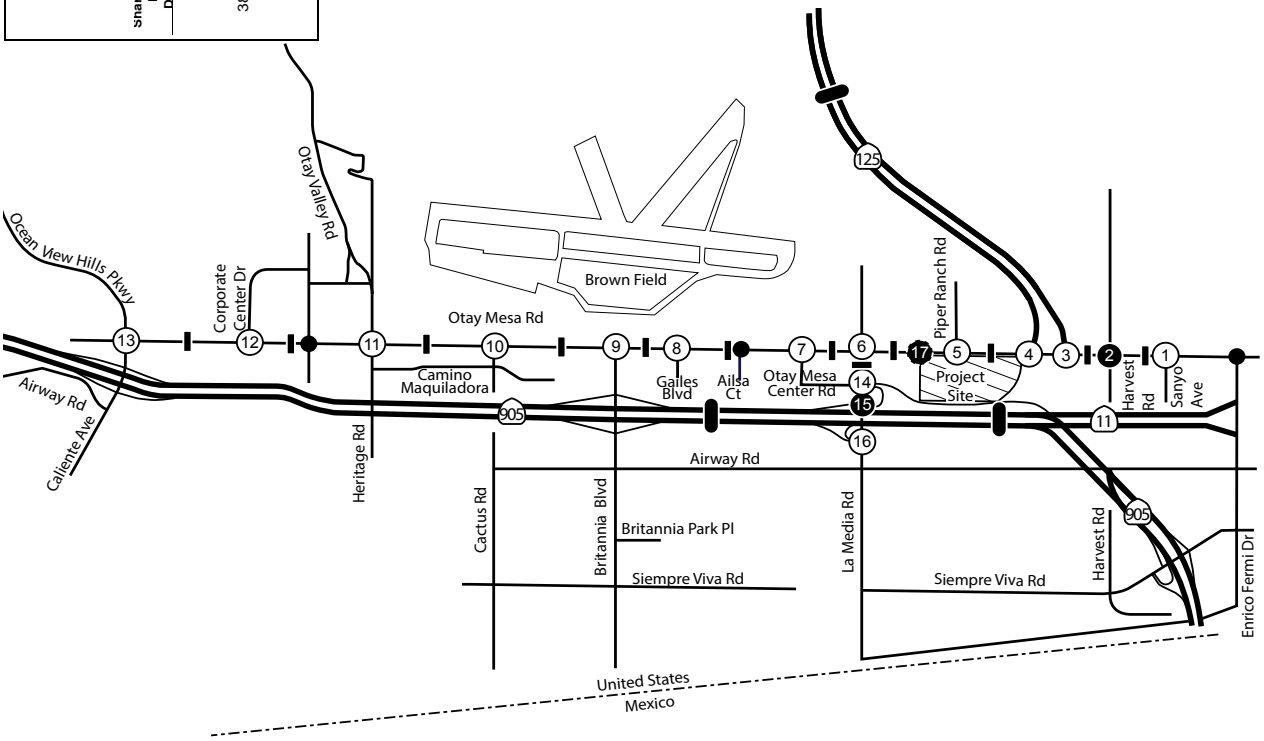
X/Y	AM/PM Peak Hour Traffic Volumes



Trip Assignment For Phase 1 & 2
Existing Condition

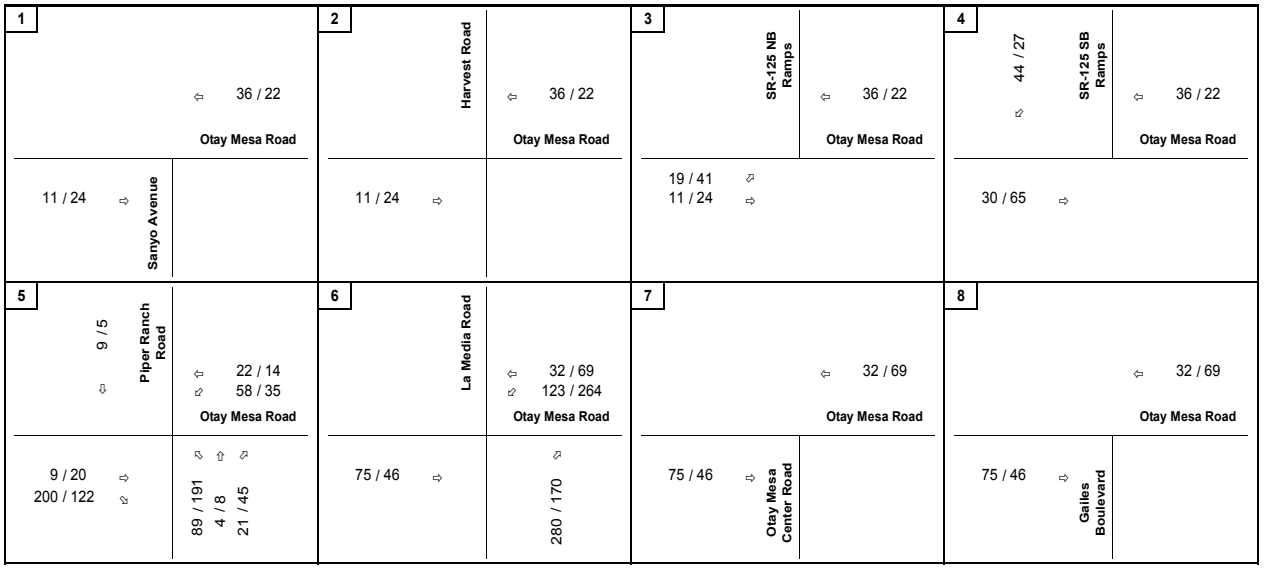
FIGURE 4-14





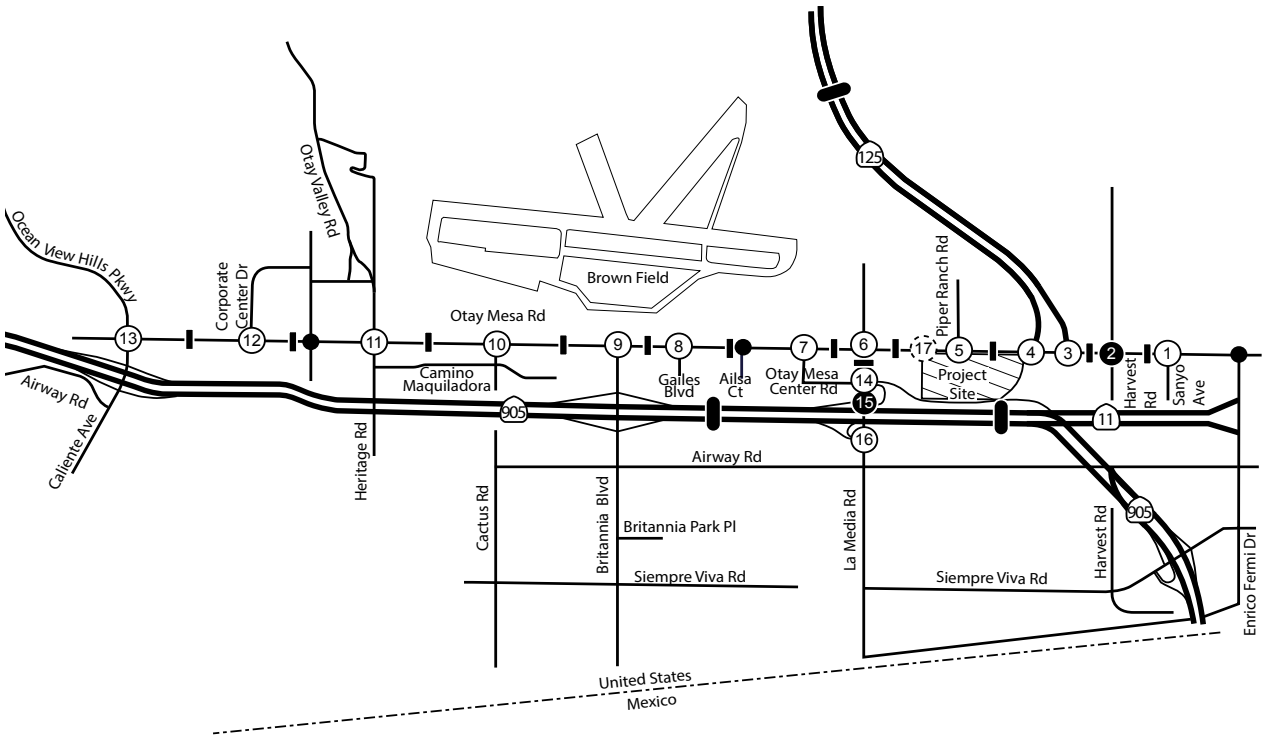
Trip Assignment For Phase 1 & 2 Existing Condition (cont.)

FIGURE 4-15



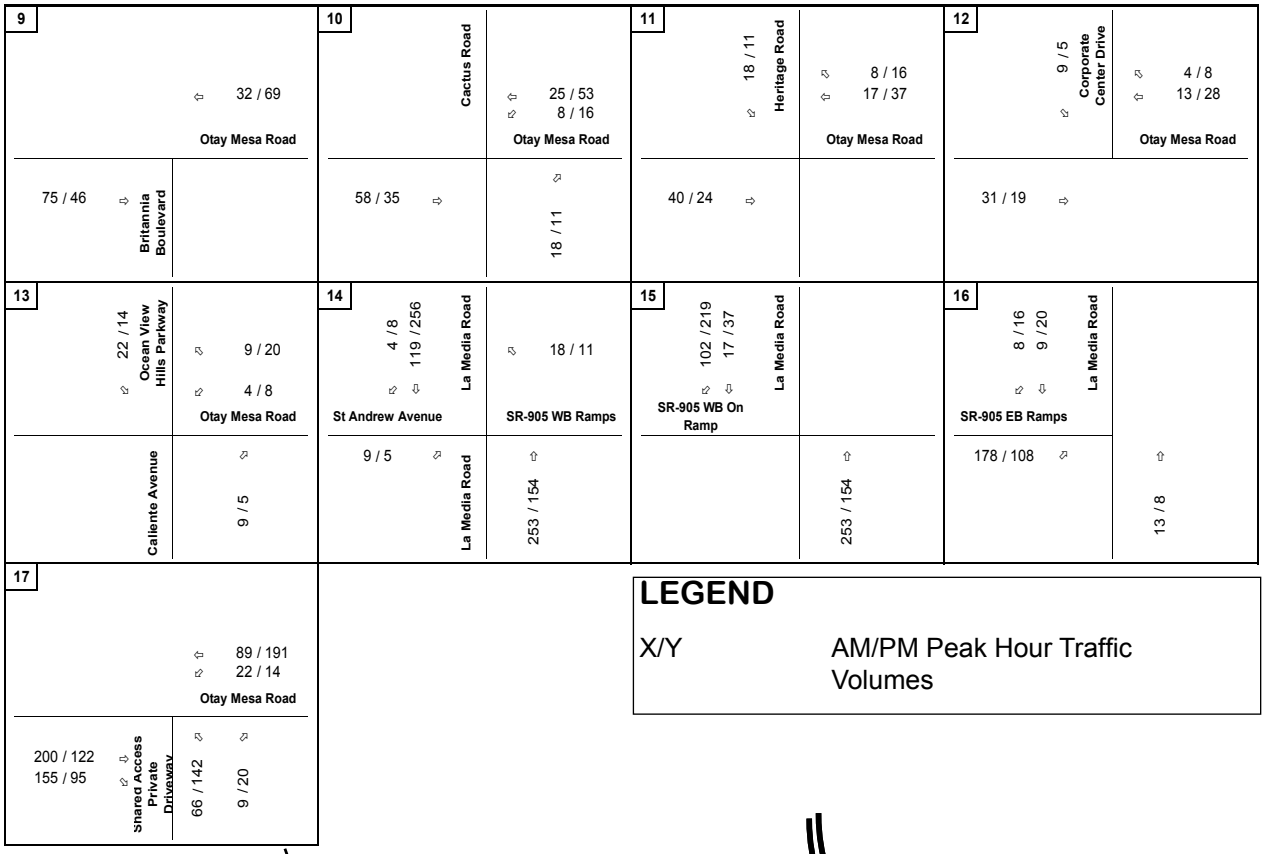
LEGEND

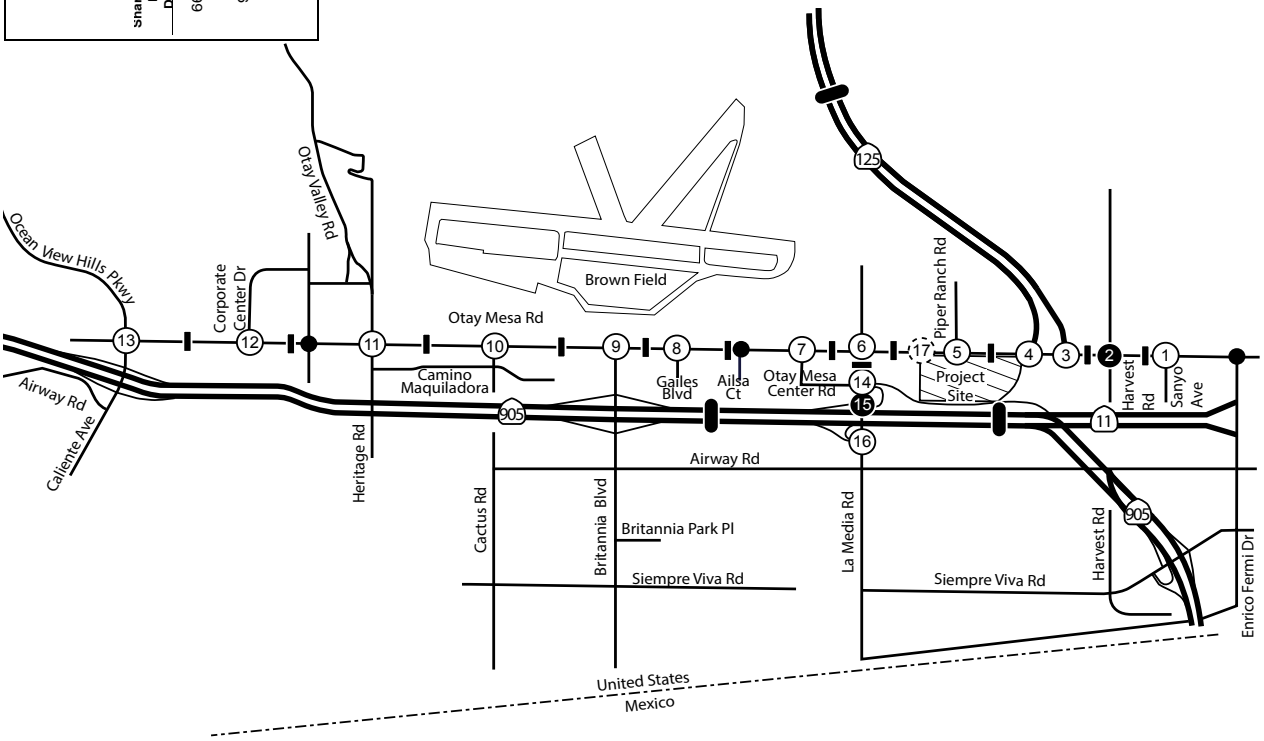
X/Y	AM/PM Peak Hour Traffic Volumes



Trip Assignment For Phase 1 & 2
Near Term (2020) Condition

FIGURE 4-16





Trip Assignment For Phase 1 & 2
Near Term (2020) Condition (cont.)

Table 4-1 Trip Generation Summary

Land Use	d Use as listed in SanD	Units[1]	Trip Rate[2]	Daily Trips	AM Peak-Hour					PM Peak-Hour				
					% of ADT[2]	In:Out Ratio[2]	In	Out	Total	% of ADT[2]	In:Out Ratio[2]	In	Out	Total
Cumulative Trips [3]														
Proposed														
Phase 1														
Building 3	Warehousing	216.3 ksf	5 / ksf	1,082	15%	7.00 : 3.00	114	48	162	16%	4.00 : 6.00	69	104	173
Building 4	Warehousing	153.5 ksf	5 / ksf	768	15%	7.00 : 3.00	81	34	115	16%	4.00 : 6.00	49	74	123
Phase Total				**1,849**			**195**	**82**	**277**			**118**	**178**	**296**
Phase 2														
Building 1	Warehousing	234.7 ksf	5 / ksf	1,173	15%	7.00 : 3.00	123	53	176	16%	4.00 : 6.00	75	113	188
Building 2	Warehousing	240.6 ksf	5 / ksf	1,203	15%	7.00 : 3.00	126	54	180	16%	4.00 : 6.00	77	115	192
Phase Total				**2,376**			**249**	**107**	**356**			**152**	**228**	**380**
Proposed Total				**4,225**			**444**	**189**	**633**			**270**	**406**	**676**
GENERATION =				**4,225**			**444**	**189**	**633**			**270**	**406**	**676**

Note:

1. ksf = Thousand Square Feet
2. Daily and peak-hour trip generation rates referenced from the City of San Diego Land Development Code - Trip Generation Manual, May 2003.
3. Cumulative trips are the total trips generated by the site exclusive of pass-by trips already on the roadway.

K:\SND_LDEV\095128024 - Sunroad Otay\Traffic\ANALYSIS\EXCEL\[095128024_TG01.xlsm]Summary

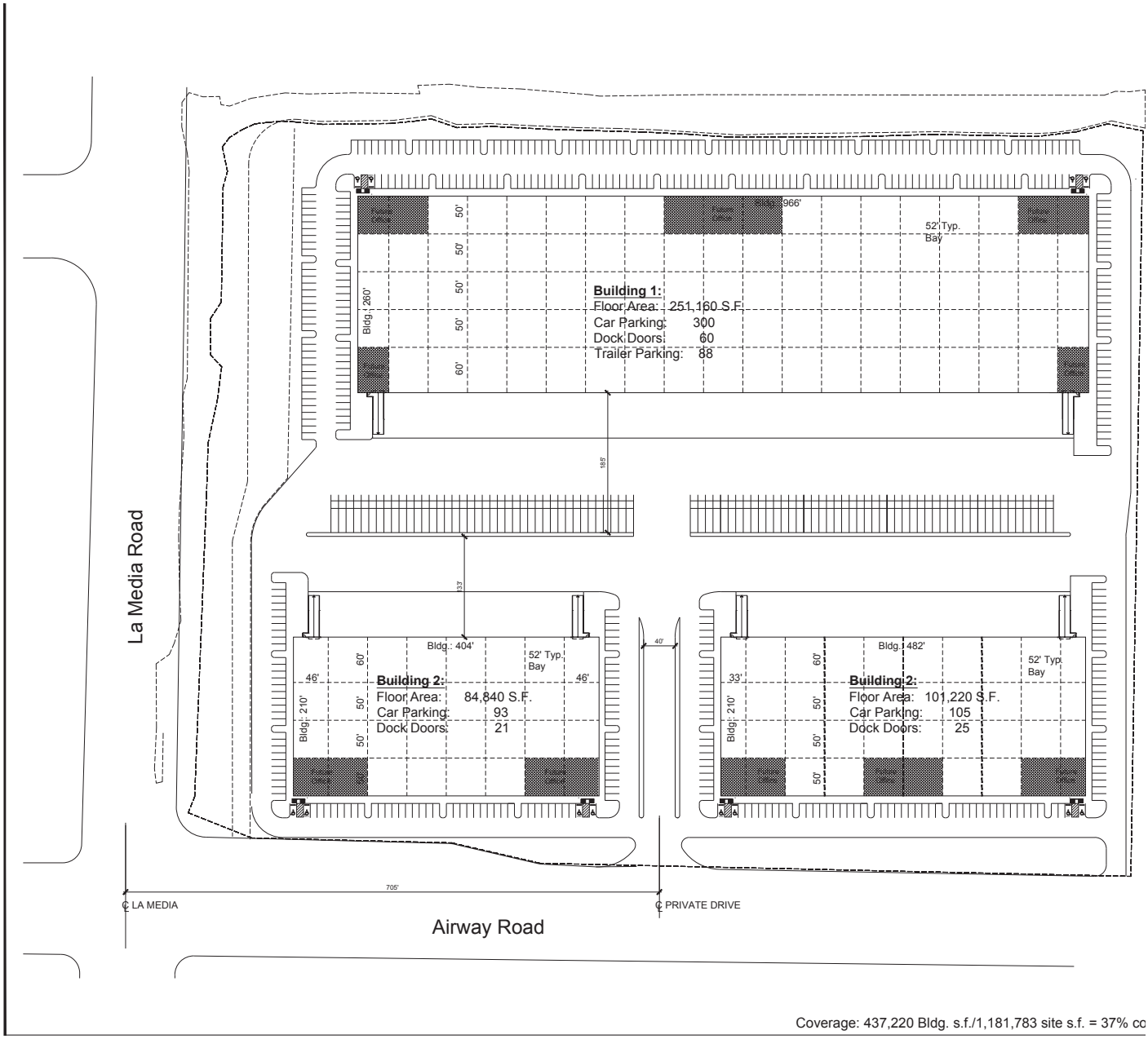

La Media Road
Airway Road
Bldg.: 966'
52' Typ. Bay
Building 1:
Floor Area: 251,160 S.F.
Car Parking: 300
Dock Doors: 60
Trailer Parking: 88
Bldg.: 260'
50'
50'
50'
60'
165'
133'
Bldg.: 404'
52' Typ. Bay
Building 2:
Floor Area: 84,840 S.F.
Car Parking: 93
Dock Doors: 21
Bldg.: 210'
46'
46'
60'
50'
50'
40'
Bldg.: 482'
52' Typ. Bay
Building 2:
Floor Area: 101,220 S.F.
Car Parking: 105
Dock Doors: 25
Bldg.: 210'
33'
60'
50'
50'
705'
℄ LA MEDIA
℄ PRIVATE DRIVE
Coverage: 437,220 Bldg. s.f./1,181,783 site s.f. = 37% co

Table 3 Trip Generation Summary

Description	Land Use	Units[1]	Trip Rate[2]	Daily Trips	AM Peak-Hour					PM Peak-Hour				
					% of ADT[2]	In:Out Ratio[2]	In	Out	Total	% of ADT[2]	In:Out Ratio[2]	In	Out	Total
Driveway Trips[3]														
Proposed														
Building 1	Warehousing	251.16 ksf	5 / ksf	1,256	15%	7.00 : 3.00	132	56	188	16%	4.00 : 6.00	80	121	201
Building 2	Warehousing	84.84 ksf	5 / ksf	424	15%	7.00 : 3.00	45	19	64	16%	4.00 : 6.00	27	41	68
Building 3	Warehousing	101.22 ksf	5 / ksf	506	15%	7.00 : 3.00	53	23	76	16%	4.00 : 6.00	32	49	81
Proposed Total				**2,186**			**230**	**98**	**328**			**139**	**211**	**350**

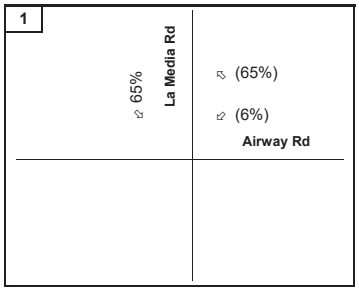
Note:

1. ksf = Thousand Square Feet
2. Daily and peak-hour trip generation rates referenced from the City of San Diego Land Development Code - Trip Generation Manual, May 2003.
3. Driveway trips are the total number of trips generated by a site.

K:\SND_LDEV\195208002 - Majestic Airway\Traffic\Sensitivity Analysis\ANALYSIS\EXCEL\[095208002_TG01.xlsm]Summary

Figure 4 — Project Traffic Distribution

Plaza La Media South | Traffic Sensitivity Analysis | February 2020



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3.2 Project Trip Generation, Distribution, and Assignment

Project Trip Generation

Project trip generation estimates were derived utilizing the trip generation rates outlined in *Table 1* of the *City of San Diego Land Development Code – Trip Generation Manual, May 2003*. **Table 3.1** displays the proposed project's trip generation.

TABLE 3.1
OTAY MESA FLORIO
PROPOSED PROJECT TRIP GENERATION

Land Use	Units	Trip Rate	ADT	AM Peak Hour					PM Peak Hour				
				%	Trips	Split	In	Out	%	Trips	Split	In	Out
Multi-Family (Over 20 DU/acre)	900 DU	6	5,400	8%	432	2:8	86	346	9%	486	7:3	340	146
Park (Developed)	3.5 Acres	50	175	4%	7	5:5	4	3	8%	14	5:5	7	7
Community Commercial[a]	10 KSF	70[a]	700	3%	21	6:4	13	8	10%	70	5:5	35	35
		Total	**6,275**	**-**	**460**	**-**	**103**	**357**	**-**	**570**	**-**	**382**	**188**

Source: City of San Diego Land Development Code – Trip Generation Manual, May 2003

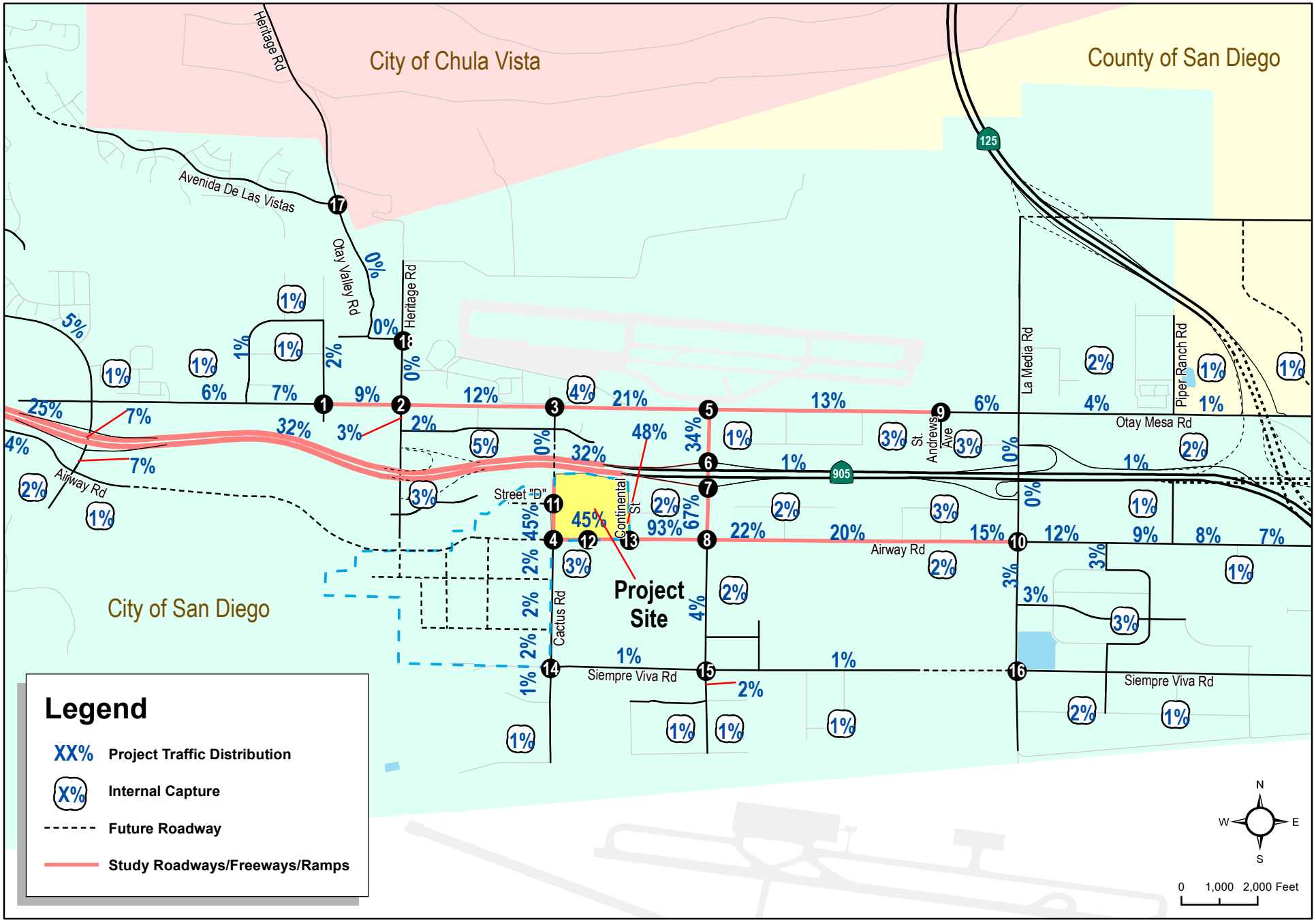
Notes:
[a] Trip generation rate used is consistent with the Otay Mesa CPU & OMCVSP. Community Commercial land use is defined in the Otay Mesa Community Plan FEIR as "provides for shopping areas with retail, service, civic, and office uses for the community at large within three to six miles" and density range of CC-2-3 with 0.3 FAR.

As shown in Table 3.1, the Proposed Project is anticipated to generate a total of 6,275 daily trips, including 460 (103-in / 357-out) AM peak hour trips and 570 (382-in / 188-out) PM peak hour trips.

Project Trip Distribution

Project trip distribution patterns were derived from the same SANDAG Select Zone Assignment that was conducted for the approved Otay Mesa Central Village Specific Plan Transportation Facilities Trigger Analysis (TFTA) and utilized for the Otay Mesa Lumina TIS, February 20, 2019. Due to the similar nature of the land uses in both the Lumina Project and this Florio Project, project trip distribution patterns were assumed to be consistent with the Otay Mesa Lumina TIS.

Trip distribution is identical under the Existing plus Project and the Near-Term Year 2023 plus Project (Opening Day) scenarios. The difference in trip distribution between Existing plus Project, Near-Term Year 2023 plus Project (Opening Day), and Buildout of Community Plan Conditions lies in trips not being assigned on Heritage Road, as the land uses in Chula Vista are not fully developed, and a higher percentage of trips using SR-905 heading west under Existing and Near-Term scenarios. Under Buildout of Community Plan Conditions, the same project trip distribution utilized for the Otay Mesa Central Village Specific Plan TFTA was employed as the model assumed buildout of the community.



Otay Mesa Florio
Memorandum of Approach
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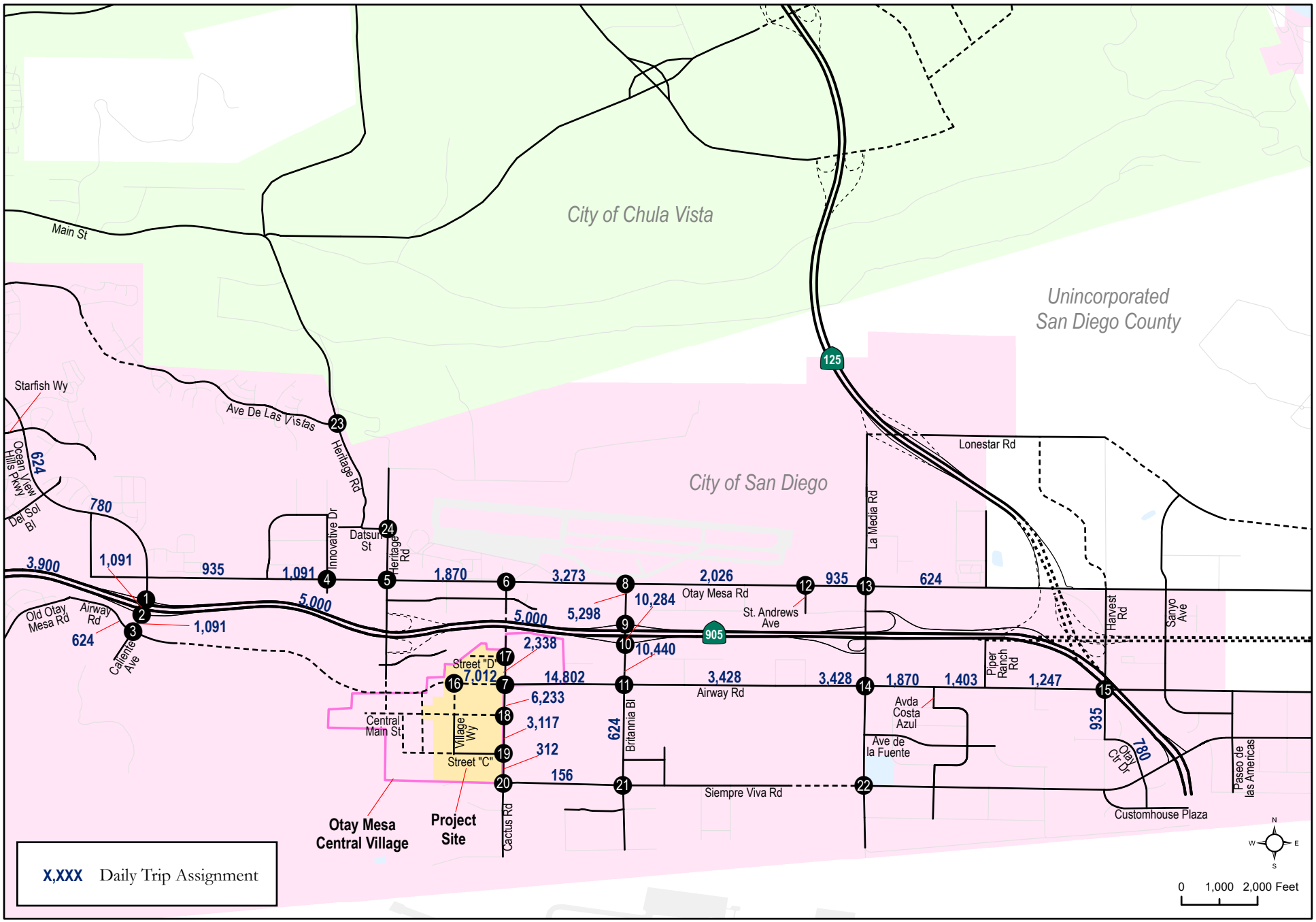
Figure 3-2
Project Trip Distribution



Otay Mesa Lumina
Transportation Impact Study
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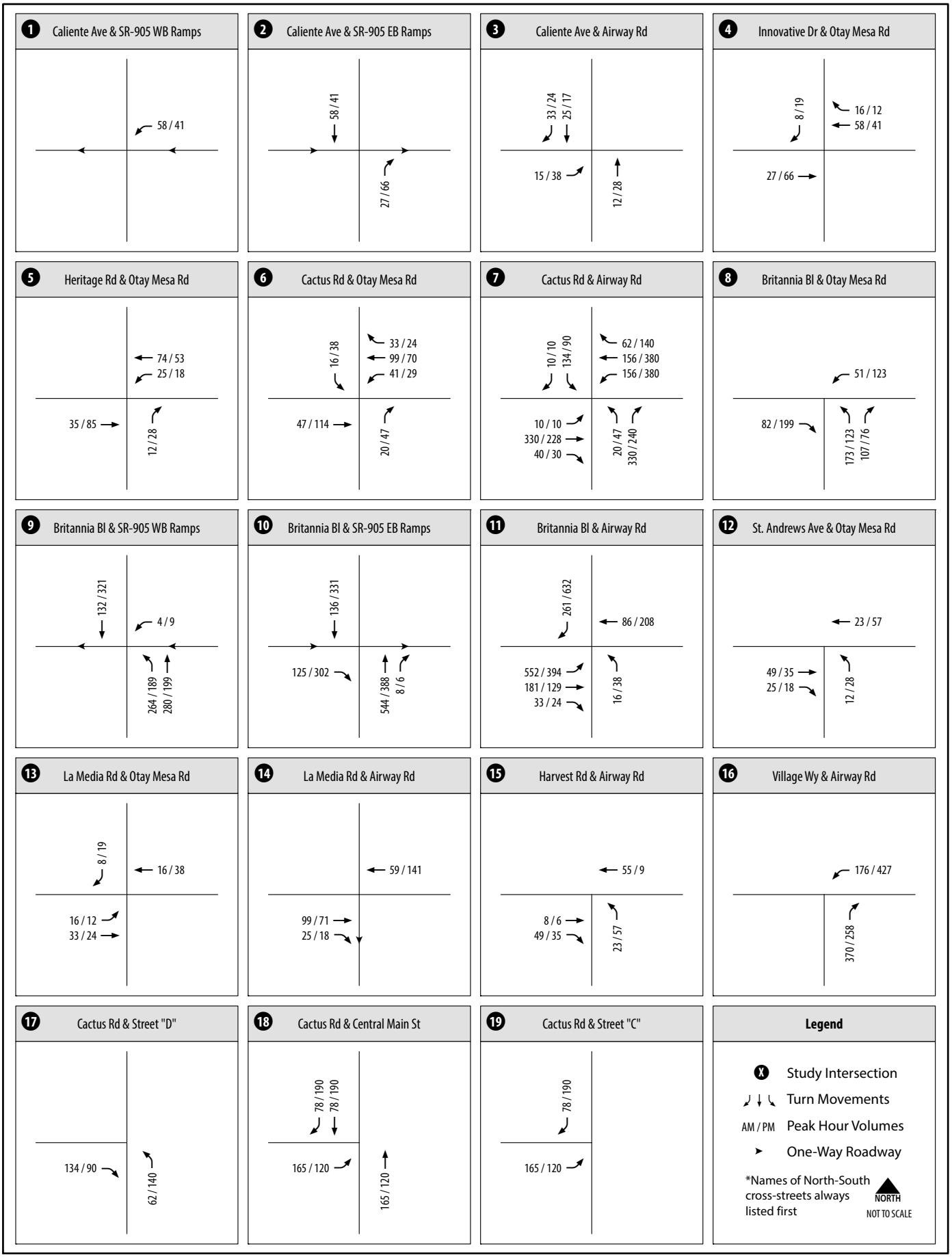
Figure 3-8
Project Trip Assignment (Full Development) - Existing and Near-Term 2027 Roadway Network



Otay Mesa Lumina
Transportation Impact Study
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Figure 3-9
Project Trip Assignment (Full Development) - Existing and Near-Term 2027 (Intersections 1-19)

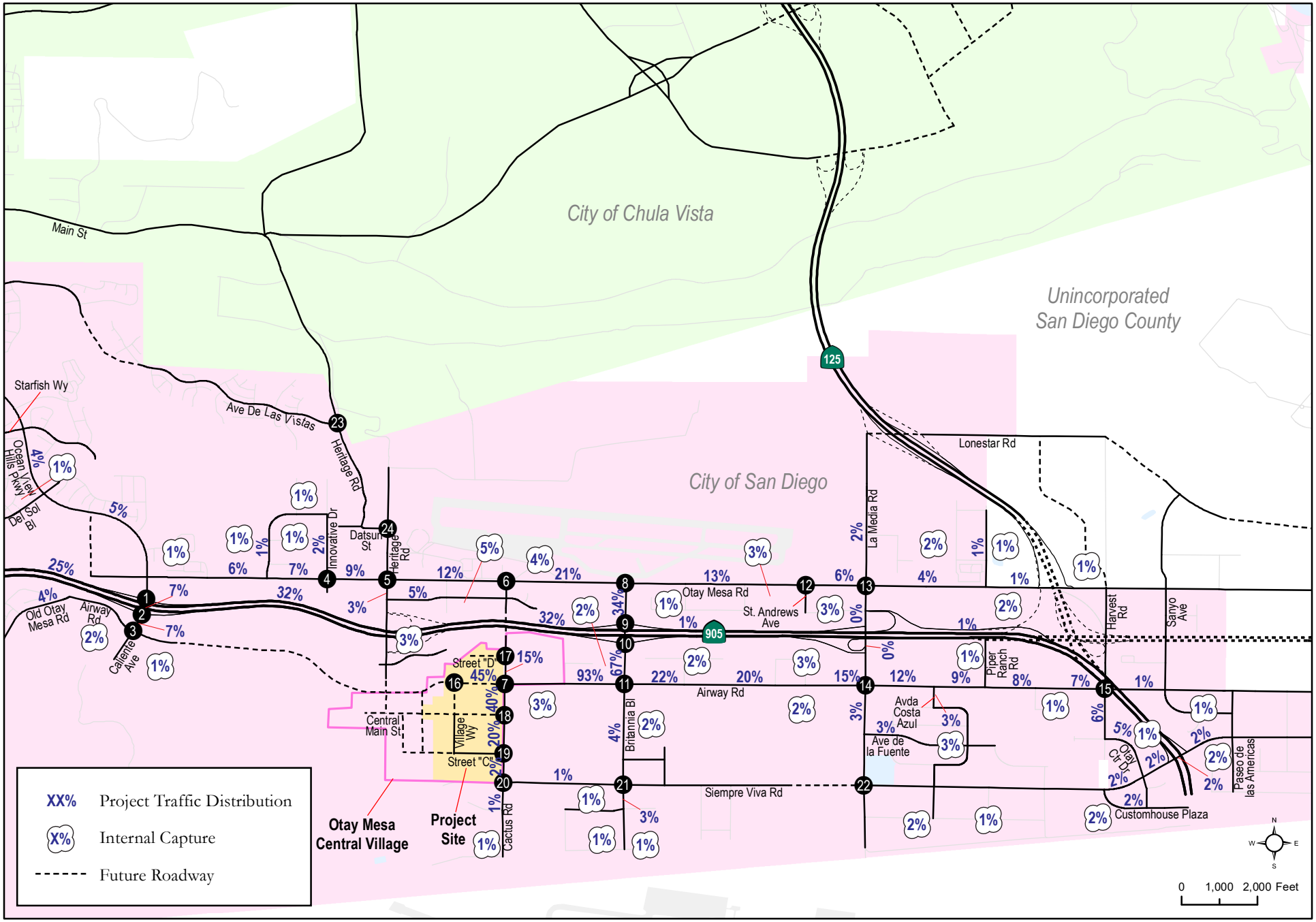

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Figure 3-4
Project Trip Distribution - Existing and Near-Term (2023 and 2027)

Project Trip Generation

Project trip generation estimates were derived utilizing the trip generation rates outlined in Table 1 of the City of San Diego Land Development Code – Trip Generation Manual, May 2003. **Table 1** displays the proposed project's trip generation.

Table 1 Otay Mesa Lumina II – Trip Generation

		Trip		AM Peak Hour					PM Peak Hour				
Land Use	Units	Rate	ADT	%	Trips	Split	In	Out	%	Trips	Split	In	Out
Multi-Family	132	6 / DU	792	8%	64	2:8	13	51	9%	72	7:3	50	22

Source: City of San Diego Land Development Code – Trip Generation Manual, May 2003.

As shown in Table 1, the proposed project would generate a total of 792 daily trips, including 64 (13-in / 51-out) AM peak hour trips and 72 (50-in / 22-out) PM peak hour trips.

Project Distribution

Since the project is anticipated to have an opening year by 2027, the same project trip distribution (Year 2027) utilized in the Otay Mesa Lumina Transportation Impact Study, February 2019, was employed for the analysis of Otay Mesa Lumina II. **Figure 3** displays the project trip distribution patterns associated with the proposed project.

Project Assignment

Based upon the project trip distribution patterns, the daily and AM/PM peak hour project trips were assigned to the study area roadway network. **Figure 4** displays the assignment of project trips to the roadway network and intersections.

Project Study Area

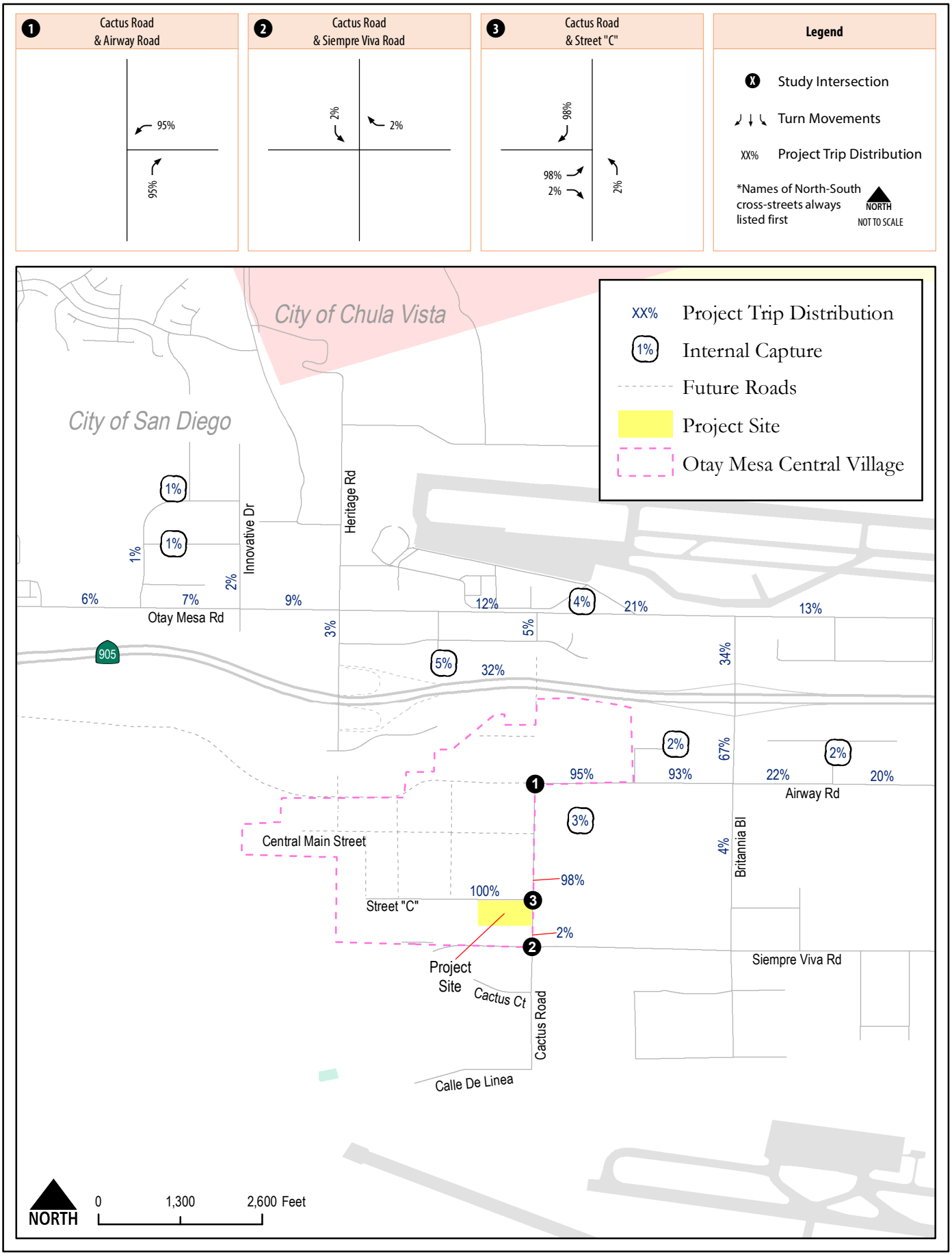
This section documents the project study area roadway and intersection configurations, traffic volumes and traffic operations.

Roadway Segments

- Cactus Road, between Airway Road and Siempre Viva Road
- Street C, between Cactus Road and Village Way

After implementation of the proposed project, the roadway segment of Cactus Road, between Airway Road and Siempre Viva Road will be divided into three (3) study segments as follows:

- Cactus Road, between Airway Road and Street "C";
- Cactus Road, between Street "C" and southern property boundary; and
- Cactus Road, between southern property boundary and Siempre Viva Road.



Otay Mesa Lumina II
Traffic Analysis Memorandum
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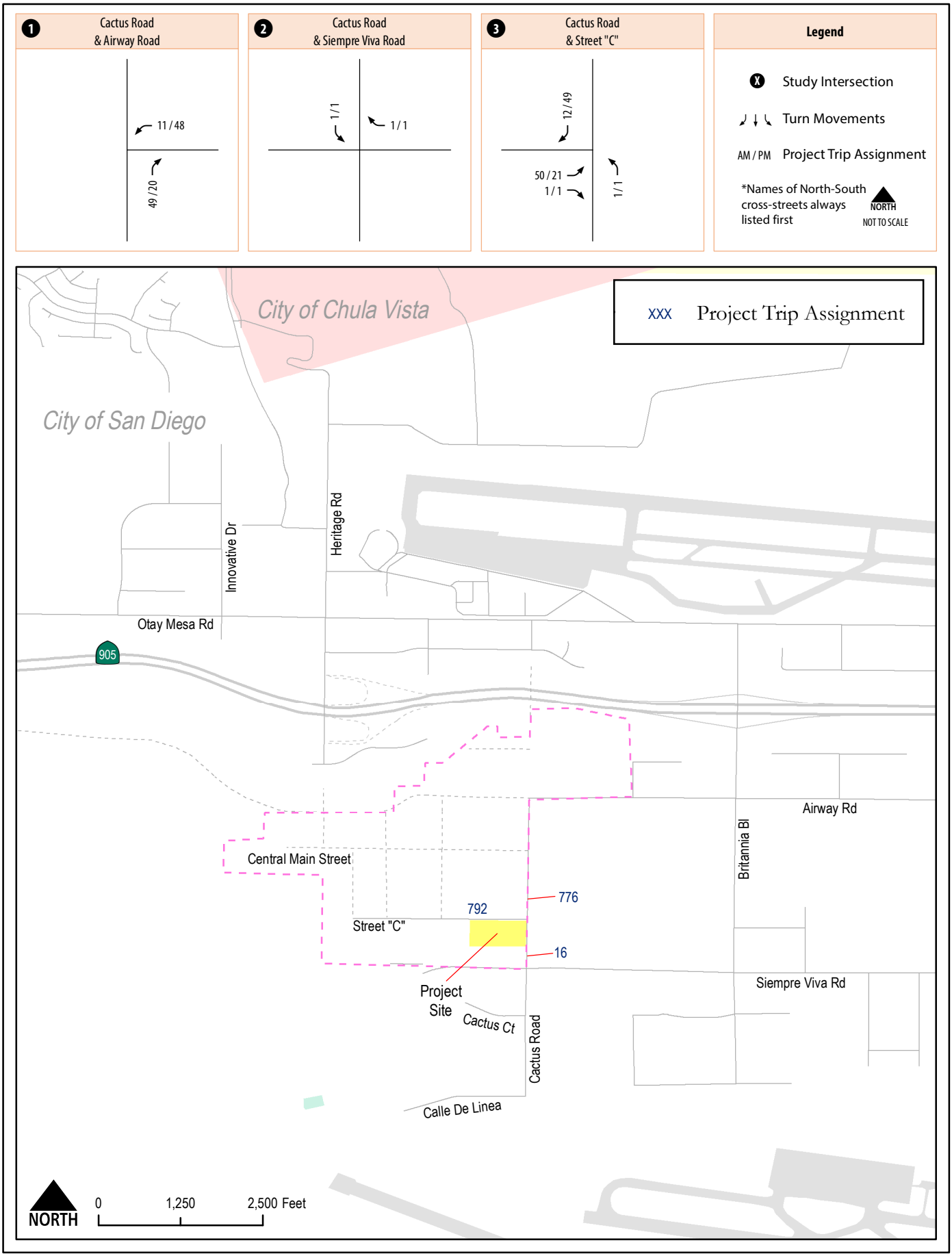
Figure 3
Project Trip Distribution



Otay Mesa Lumina II
Traffic Analysis Memorandum
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Figure 4
Project Trip Assignment

Project Trip Generation

Project trip generation estimates were derived utilizing the trip generation rates outlined in Table 1 of the City of San Diego Land Development Code – Trip Generation Manual, May 2003. **Table 1** displays the proposed project's trip generation.

Table 1 Otay Mesa Lumina III – Trip Generation

		Trip		AM Peak Hour					PM Peak Hour				
Land Use	Units	Rate	ADT	%	Trips	Split	In	Out	%	Trips	Split	In	Out
Multi-Family	25	8 / DU	200	8%	16	2:8	3	13	10%	20	7:3	14	6

Source: City of San Diego Land Development Code – Trip Generation Manual, May 2003.

As shown in Table 1, the proposed project would generate a total of 200 daily trips, including 16 (3-in / 13-out) AM peak hour trips and 20 (14-in / 6-out) PM peak hour trips.

Project Distribution

Since the project is anticipated to be open in year 2027, the same project trip distribution (Year 2027) utilized in the Otay Mesa Lumina Transportation Impact Study (February 2019), was employed for the analysis of Otay Mesa Lumina III. **Figure 3** displays the project trip distribution patterns associated with the proposed project.

Project Assignment

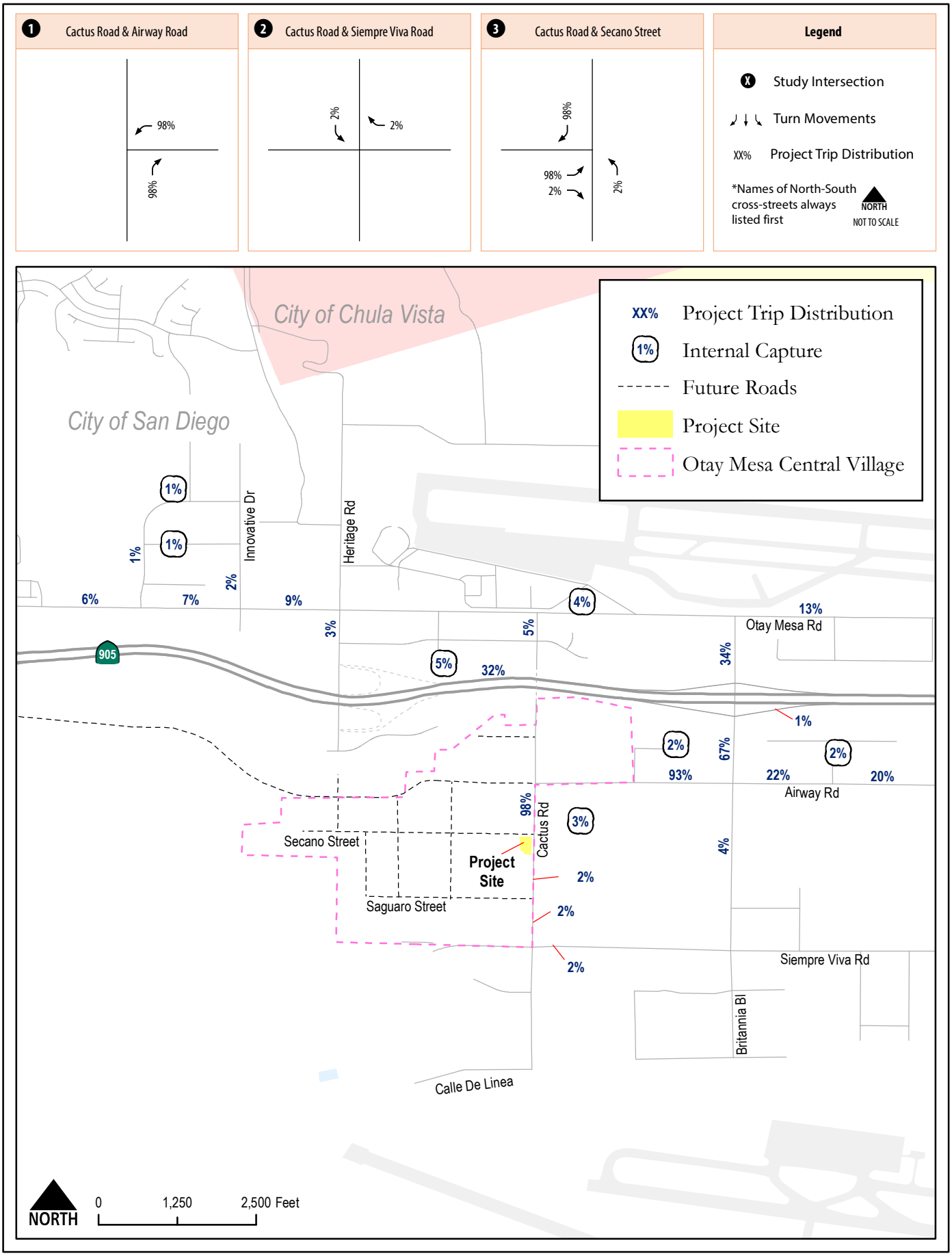
Based upon the project trip distribution patterns, the daily and AM/PM peak hour project trips were assigned to the study area roadway network. **Figure 4** displays the assignment of project trips to the roadway network and intersection.

Project Study Area

This section documents the project study area roadway and intersection configurations, traffic volumes and traffic operations.

Roadway Segments

- Cactus Road, between Airway Road and Siempre Viva Road
- Secano Street, between Cactus Road and Village Way



Otay Mesa Lumina III
Traffic Analysis Memorandum
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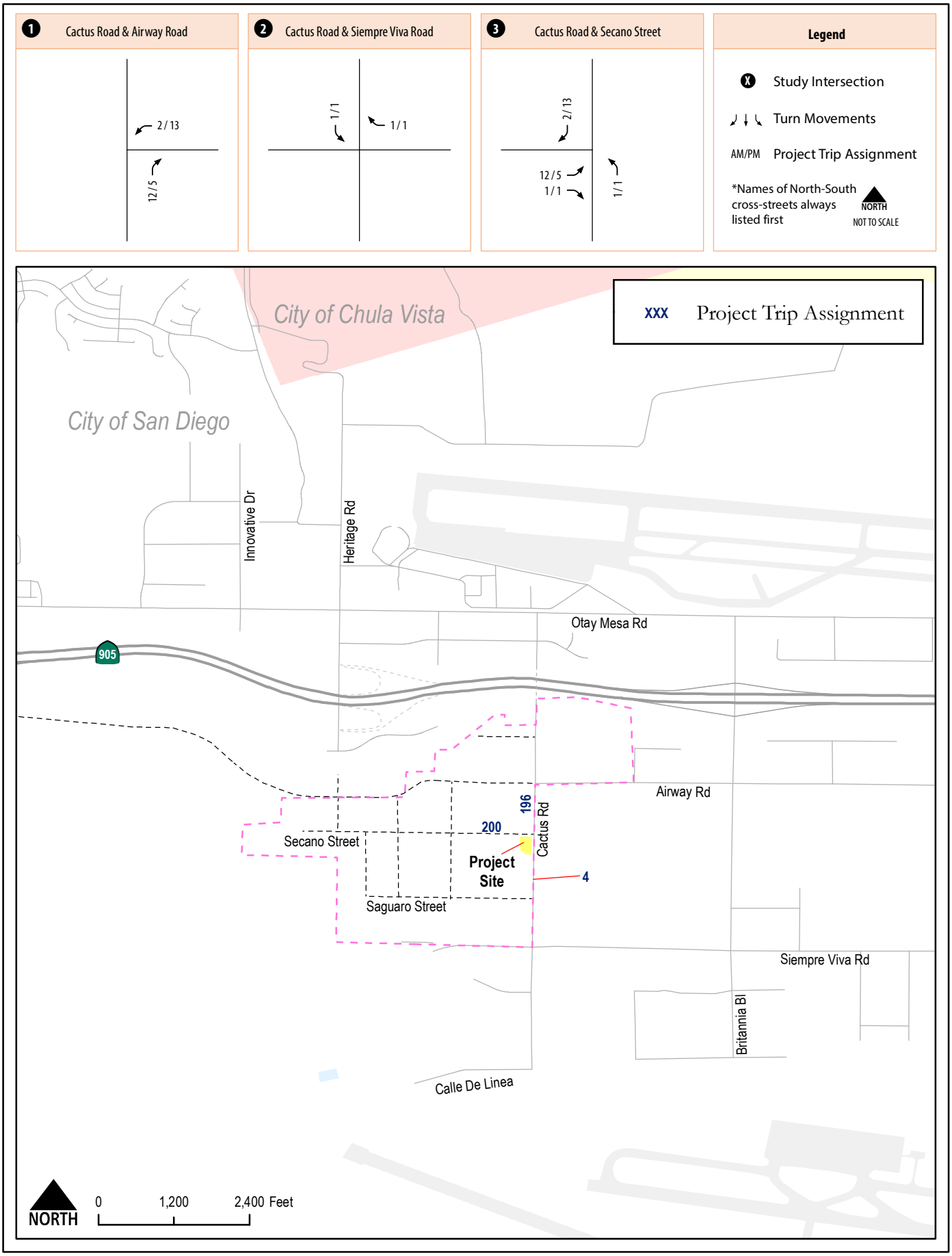
Figure 3
Project Trip Distribution



Otay Mesa Lumina III
Traffic Analysis Memorandum
CHEN RYAN

Figure 4
Project Trip Assignment

Plaza La Media Trip Generation

TRIP GENERATION RATES						
	Dwy / Cum		AM PEAK		PM PEAK	
Land Use	Rate		% of ADT	In:Out Ratio	% of ADT	In:Out Ratio
Community Retail	70 / 49	trips / ksf	3%	0.60 : 0.40	10%	0.50 : 0.50
Fast Food w/Drive Thru	700 / 420	trips / ksf	4%	0.60 : 0.40	8%	0.50 : 0.50
Drugstore	90 / 40	trips / ksf	4%	0.60 : 0.40	10%	0.50 : 0.50
Gas Station w/Food Mart & Carwash	155 / 31	trips / vfs	8%	0.50 : 0.50	9%	0.50 : 0.50

TRIP GENERATION CALCULATIONS								
			AM PEAK			PM PEAK		
Land Use	Amount	ADT	In	Out	Total	In	Out	Total
Community Retail	106.7 ksf	7,469	134	90	224	374	373	747
Drugstore	13.5 ksf	1,215	29	20	49	61	61	122
Fast Food w/Drive Thru	6.0 ksf	4,200	101	67	168	168	168	336
Gas Station w/Food Mart & Carwash	12 vfs	1,860	75	74	149	84	83	167
Driveway Trips Total		*14,744*	*339*	*251*	*590*	*687*	*685*	*1,372*
Cumulative Trips Total (a)		8,660	183	127	310	407	405	812

Notes:

ksf: 1,000 square feet, vfs: vehicle fueling space

The trip rates for the proposed uses are based on *the City of San Diego's Trip Generation Manual, May 2003* .

Dwy = Driveway; Cum = Cumulative

(a) Cumulative trips are based off of the cumulative trip rate and take into account pass by and diverted link trips.

4.0 Project Description

The proposed California Terraces PA 61 is a mixed-use project with 171 to 267 multi-family units, up to 45,000 sf of commercial/retail space, and a 0.19 acre private park. The site of approximately 14 acres is currently vacant. The project is anticipated to open in 2020. The City of San Diego *Otay Mesa Community Plan* identifies the site as Community Commercial (Appendix E). The project requires a CPA to redesignate the site from Community Commercial – Residential Prohibited to Community Commercial – Residential Permitted and to rezone the eastern portion of the property from CC-1-3 to RM-2-5. The following discretionary approvals are required as part of the project:

1) Vesting Tentative Map
2) Site Development Permit
3) Master Planned Development Permit
4) Neighborhood Development Permit
5) Community Plan Amendment Land Use and Roadway Classification
6) Street Vacation and Rezone

4.1 Project Site Access

Two new public cul-de-sac streets are proposed as part of the project (Street A and Street B). Project access will be from driveways on these cul-de-sac streets. A right-in/right-out only point of access is proposed on Otay Mesa Road approximately 500 feet east of Caliente Avenue (centerline to centerline, Street A) and a full signalized shared access at Otay Mesa Road/Emerald Crest Court/ Street B. The intersection of Otay Mesa Road /Emerald Crest Court will be signalized by the first applicant to obtain building permits between this project and the adjacent Handler commercial project, unless it is completed beforehand as outlined in the Deferred Improvement Agreement between Garden Communities and City of San Diego dated 4/24/2007. Additionally, Pardee and Handler have letters of permission for offsite grading/improvements from each other (included in **Appendix J**) to allow the first in line to proceed with the full construction of Street B (southerly extension of Emerald Crest Ct); however, Pardee agrees to the conditions of approval that requires the construction of Street B if Pardee precedes the adjacent Handler commercial project. Each of the two access points will have a dedicated right turn deceleration lane along Otay Mesa Road.

Street B will also serve the adjacent and easterly parcel currently being processed as the Handler Commercial improvement plans. Coordination is on-going with the Handler Commercial applicant. The California MUTCD Figure 4C-103 (Average Traffic Estimate Form) signal warrant analysis is satisfied with the addition of project traffic for a traffic signal at the intersection of Otay Mesa Road/Street B/Emerald Crest Court. The traffic signal warrant is also included in Appendix J.

4.2 Project Trip Generation

The trip generation for the project was calculated using trip rates from the City of San Diego *Trip Generation Manual*, May 2003 (excerpt included in **Appendix K**). Two trip generation rates were applied: a driveway rate for project access points and intersection of Otay Mesa Road/ Caliente Avenue/Ocean View Hills Parkway and a cumulative rate that was applied for all other analyzed roadways.

A Series 13, year 2050 SANDAG Select Zone Assignment for the project land uses documented an internal capture rate of 2.8% that was applied to the trip generation. The SANDAG internal capture rate is included in **Appendix L**. The residential density is greater than 20 units per acres (267 du/9.2 acres = 29.0 du/acre).

The project driveway volumes were calculated at 6,816 ADT with 336 AM peak hour trips (152 inbound and 184 outbound) and 717 PM peak hour trips (387 inbound and 330 outbound). The cumulative traffic volumes were calculated at 4,716 ADT with 252 AM peak hour trips (101 inbound and 151 outbound) and 486 PM peak hour trips (271 inbound and 215 outbound) as shown in **Table 9**.

TABLE 9: PROJECT TRIP GENERATION AS ANALYZED IN THIS TIA (HIGHEST DENSITY RESIDENTIAL WITH 267 UNITS)

Land Use	Daily Rate	Size & Units	ADT	AM %	AM Split	AM IN	AM OUT	PM %	PM Split	PM IN	PM OUT
Driveway Trips											
Neighborhood Shopping Center	120 /KSF	45,000 SF	**5,400**	4%	0.6 0.4	**130**	**86**	11%	0.5 0.5	**297**	**297**
Multi Family (over 20 du/ac)	6 /DU	267 DU	**1,602**	8%	0.2 0.8	**26**	**103**	9%	0.7 0.3	**101**	**43**
Developed Park	50 /Acre	0.19 Acres	**10**	4%	0.5 0.5	**0**	**0**	8%	0.5 0.5	**0**	**0**
SANDAG Traffic Model Internal Capture 2.8%			**-196**			**-4**	**-5**			**-11**	**-10**
External Driveway Trips:			**6,816**			**152**	**184**			**387**	**330**
Cumulative Trips											
Neighborhood Shopping Center	72 /KSF	45,000 SF	**3,240**	4%	0.6 0.4	**78**	**52**	11%	0.5 0.5	**178**	**178**
Multi Family (over 20 du/ac)	6 /DU	267 DU	**1,602**	8%	0.2 0.8	**26**	**103**	9%	0.7 0.3	**101**	**43**
Developed Park	50 /Acre	0.19 Acres	**10**	4%	0.5 0.5	**0**	**0**	8%	0.5 0.5	**0**	**0**
SANDAG Traffic Model Internal Capture 2.8%			**-136**			**-3**	**-4**			**-8**	**-6**
External Cumulative Trips:			**4,716**			**101**	**151**			**271**	**215**

Source: City of San Diego *Trip Generation Manual*, May 2003. SF - Square Feet; ADT-Average Daily Traffic. Totals above ±1 due to Excel rounding.

SF - Square Feet; ADT-Average Daily Traffic; Split-percent inbound and outbound.

If the final project has fewer units, the trip generation will decrease until reaching 183 units at which time the density decreases to less than 20 du/acre (183 du/9.2ac = 19.9 du/acre). At 183 units, the applicable trip generation rate of 8 ADT/du results in 1,464 ADT with 117 AM peak hour trips (23 inbound and 94 outbound) and 146 PM peak hour trips (102 inbound and 44 outbound). When compared to the 183 units at the higher trip rate, 267 units at 6 ADT/du is calculated to generate 1,602 ADT (138 more ADT), 128 AM peak hour trips (11 more peak hour trips), and 144 PM peak hour trips.

If the project is completed at a lower density as shown on the site plan with only 171 dwelling units, then the project driveway volumes were calculated at 6,656 ADT with 320 AM peak hour trips (149 inbound and 171 outbound) and 718 PM peak hour trips (386 inbound and 332 outbound). The cumulative traffic volumes were calculated at 4,535 ADT with 235 AM peak hour trips (98 inbound and 137 outbound) and 484 PM peak hour trips (269 inbound and 215 outbound) as shown in **Table 10**.

TABLE 10: PROJECT TRIP GENERATION NOT ANALYZED (LOWEST DENSITY RESIDENTIAL WITH 171 UNITS)

Land Use	Rate	Size & Units	ADT	AM %	AM Split	AM IN	AM OUT	PM %	PM Split	PM IN	PM OUT
Driveway Trips											
Neighborhood Shopping Center	120 /KSF	45,000 SF	**5,400**	4%	0.6 0.4	**130**	**86**	11%	0.5 0.5	**297**	**297**
Residential - Multi Family	8 /DU	171 DU	**1,368**	8%	0.2 0.8	**22**	**88**	10%	0.7 0.3	**96**	**41**
Developed Park	50 /Acre	0.19 Acres	**10**	4%	0.5 0.5	**0**	**0**	8%	0.5 0.5	**0**	**0**
SANDAG Internal Capture 1.8%			**-122**			**-3**	**-3**			**-7**	**-6**
External Driveway Trips:			**6,656**			**149**	**171**			**386**	**332**
Cumulative Trips											
Neighborhood Shopping Center	72 /KSF	45,000 SF	**3,240**	4%	0.6 0.4	**78**	**52**	11%	0.5 0.5	**178**	**178**
Residential - Multi Family	8 /DU	171 DU	**1,368**	8%	0.2 0.8	**22**	**88**	10%	0.7 0.3	**96**	**41**
Developed Park	50 /Acre	0.19 Acres	**10**	4%	0.5 0.5	**0**	**0**	8%	0.5 0.5	**0**	**0**
SANDAG Internal Capture 1.8%			**-83**			**-2**	**-3**			**-5**	**-4**
External Cumulative Trips:			**4,535**			**98**	**137**			**269**	**215**

Source: City of San Diego *Trip Generation Manual*, May 2003. SF - Square Feet; ADT-Average Daily Traffic. Totals above ±1 due to Excel rounding.

SF - Square Feet; ADT-Average Daily Traffic rounded to nearest 10 for total; Split-percent inbound and outbound.

4.3 Project Distribution and Assignment

Project traffic was distributed to the adjacent roadway network based on coordination with City staff, a review of existing traffic patterns, surrounding land uses, existing and future network changes, and a Series 13 Year 2050 SANDAG Select Zone Assignment (Appendix L). The project distribution is shown in **Figure 6**. The project assignment is shown in **Figure 7** to which driveway trips are applied to intersections #6, #10 and #11 to comply with the City of San Diego *Traffic Impact Study Manual*, July 1998 that states on page 13 "All site access points should be evaluated using the higher driveway rates."

Figure 6: Project Distribution

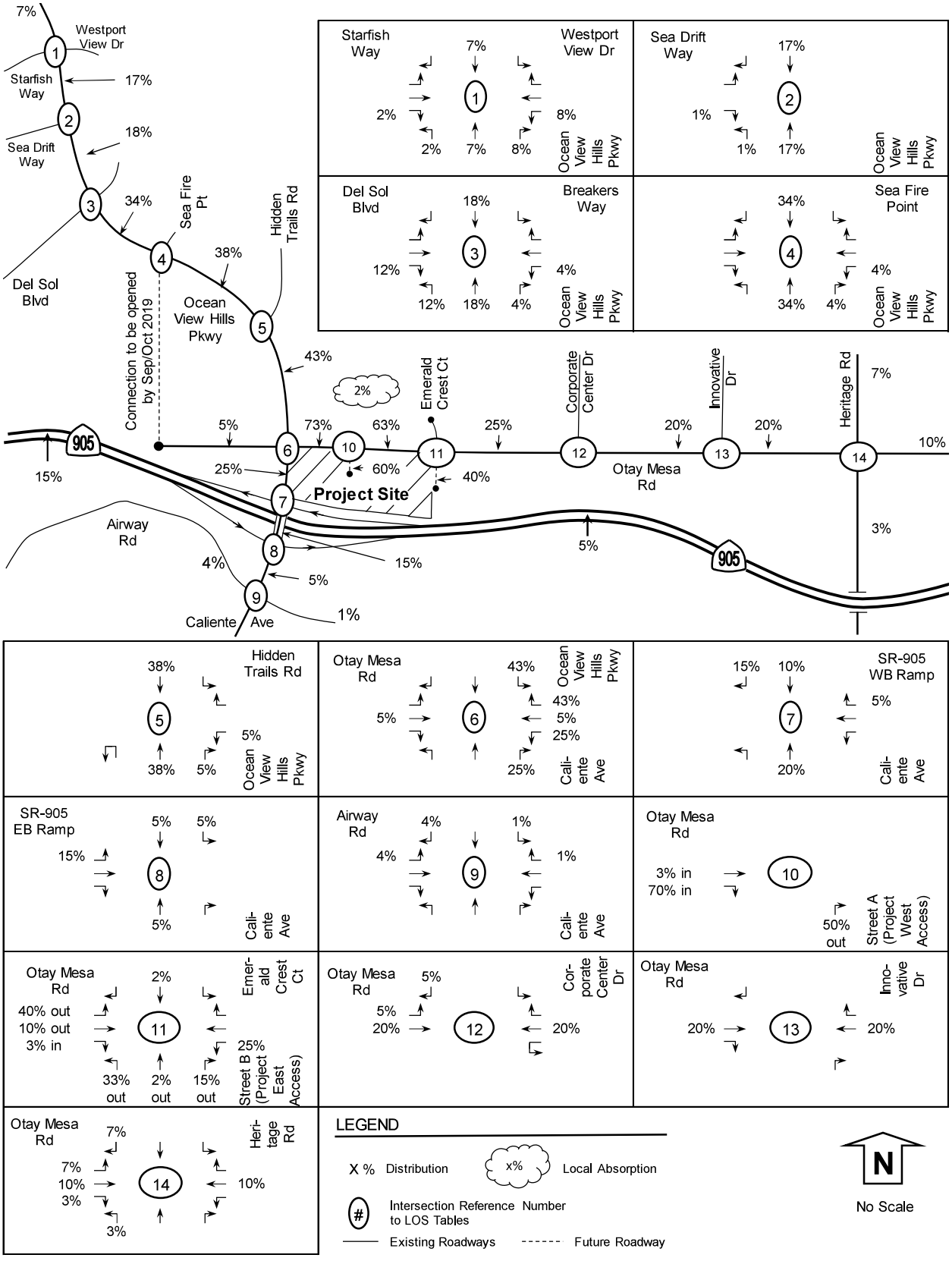
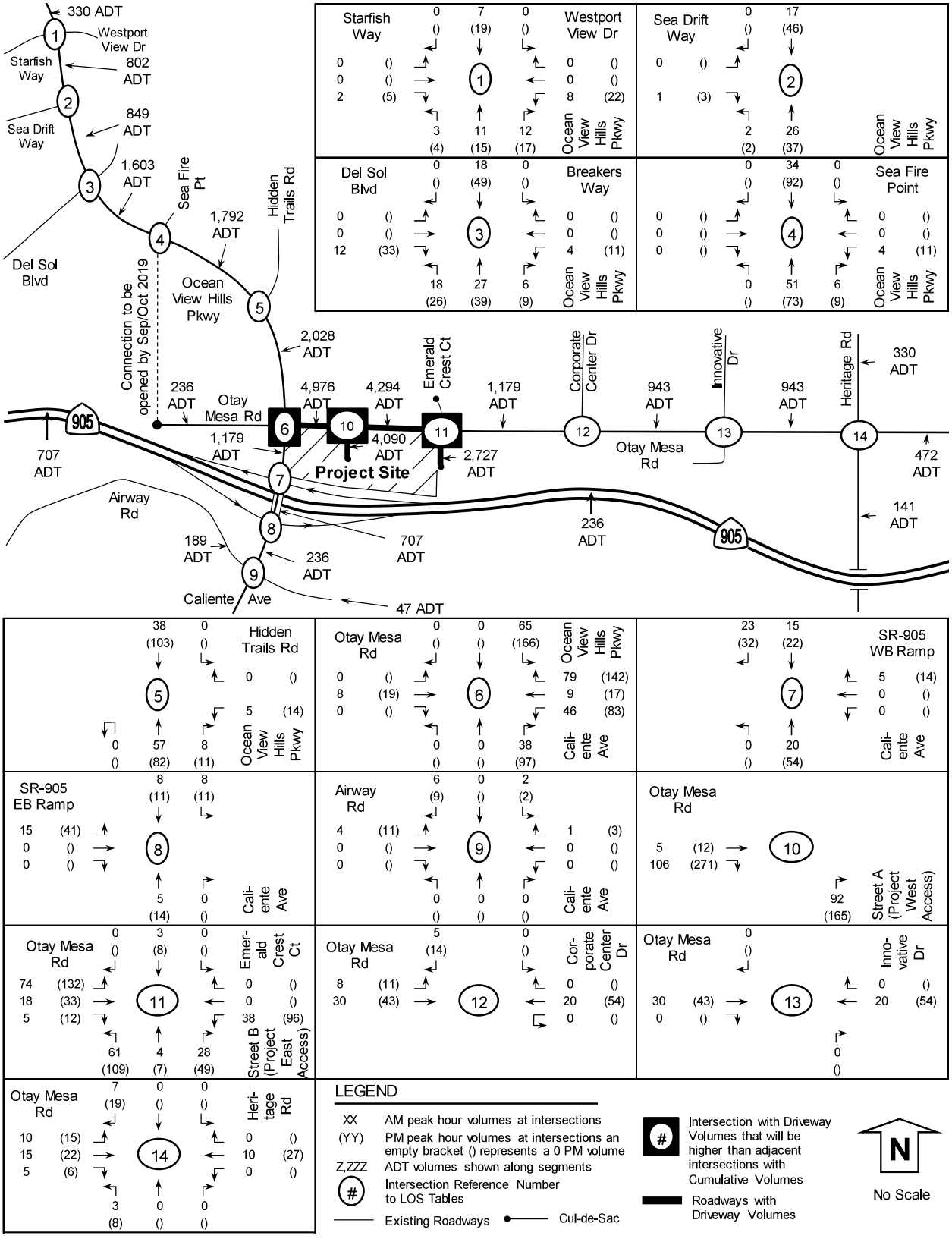


Figure 7: Project Assignment



Southwest Village Trip Generation (2027)

							AM							PM					
Land Use	Rate Type	Units	Type	Trip Rate	Per	ADT	%	Trips	Split			In	Out	%	Trips	Split			In	Out
RESIDENTIAL - Multi-Family (Under 20 DU/acre)	Cumulative	800	DU	8	Unit	6400	8%	512	2	:	8	102	410	10%	640	7	:	3	448	192
Total						**6,400**		**512**				**102**	**410**		**640**				**448**	**192**

Beyer Park Trip Generation

							AM						PM					
Land Use	Rate Type	Units	Type	Trip Rate	Per	ADT	%	Trips	Split			In	Out	%	Trips	Split			In	Out
RECREATION - Developed	Cumulative	32	Acres	50	Acre	1585	4%	64	59	:	41	38	26	8%	127	55	:	45	70	57
Total						**1,585**		**64**				**38**	**26**		**127**				**70**	**57**

Festival Trip Generation

							AM						PM					
Land Use	Rate Type	Units	Type	Trip Rate	Per	ADT	%	Trips	Split			In	Out	%	Trips	Split			In	Out
COMMERCIAL-RETAIL - Restaurant (Fast Food)	Cumulative	5,500	SF	420	KSF	2310	4%	93	6	:	4	56	37	8%	185	5	:	5	93	92
Total						**2,310**		**93**				**56**	**37**		**185**				**93**	**92**

TABLE 5
REPHASED PROJECT TRIP GENERATION ESTIMATES USING DRIVEWAY TRIP RATES
METROPOLITAN AIRPARK, CITY OF SAN DIEGO

Land Use	Size	Unit	Daily Trips		AM Peak Hour Trips					PM Peak Hour Trips				
			Driveway Rate	ADT	Peak Hour %	In/Out Split	Inbound	Outbound	Total	Peak Hour %	In/Out Split	Inbound	Outbound	Total
Phase 1A (2012 thru 2016)														
Airport (General Aviation)[1,8]	163	Flights	2	327	6%	60/40	12	8	20	7%	50/50	11	12	23
Total Phase 1A Project Trips				**327**			**12**	**8**	**20**			**11**	**12**	**23**
Phase 1B (2016/2017)														
Commercial Office[2,8] (Jet FBO)	51.175	Ksf	(See Footnote 2)	1,017	13%	90/10	119	13	132	14%	20/80	28	114	142
Total (Phases 1A + 1B) Project Trips				**1,344**			**131**	**21**	**152**			**39**	**126**	**165**
Phase 2 (2017 thru 2021)														
Airport (General Aviation)[1]	9	Flights	2	18	6%	60/40	1	1	2	7%	50/50	1	1	2
Industrial[3] (south)	905	Ksf	8	7,240	11%	90/10	718	79	797	12%	20/80	75	694	769
Total Phase 2 Project Trips				***7,258***			***719***	***80***	***799***			***76***	***695***	***771***
Total (Phases 1 + 2) Project Trips				**8,602**			**850**	**101**	**951**			**115**	**821**	**936**
Phase 3A (2022 thru 2026)														
Industrial[3] (north)	450	Ksf	8	3,600	11%	90/10	356	40	396	12%	20/80	86	346	432
Total (Phases 1 + 2 + 3A) Project Trips				**12,202**			**1,206**	**141**	**1,347**			**201**	**1,167**	**1,368**
Phase 3B (2022 thru 2026)														
Airport Related Commercial[5]	152.2	Ksf	70	10,654	3%	60/40	192	128	320	10%	50/50	533	533	1,065
Total (Phase 1 +2 +3A + 3B) Project Trips				**22,856**			**1,398**	**269**	**1,667**			**734**	**1,700**	**2,434**
Phase 3C (2022 thru 2026)														
High Turnover Restaurant[4]	5	Ksf	130	650	8%	50/50	26	26	52	8%	60/40	31	21	52
Airport Related Commercial[5]	50.725	Ksf	70	3,551	3%	60/40	64	43	107	10%	50/50	178	178	355
Hotel[6]	150	rooms	10	1,500	6%	60/40	54	36	90	8%	60/40	72	48	120
Total Phase 3C Project Trips				***5,701***			***144***	***105***	***249***			***281***	***247***	***527***
Total (Phase 1 +2 +3A + 3B + 3C) Project Trips				**28,557**			**1,542**	**374**	**1,916**			**1,015**	**1,946**	**2,961**
Phase 4 (2027 thru 2031)														
Airport (General Aviation)[1,9]	146	Flights	2	292	6%	60/40	11	8	19	7%	50/50	11	11	22
Hotel[6]	120	rooms	10	1,200	6%	60/40	43	29	72	8%	60/40	58	38	96
Solar Field[7]	66.5	acre	-	2	-	-	1	0	1	-	-	0	1	1
Total Phase 4 Project Trips				***1,494***			***55***	***37***	***92***			***69***	***50***	***119***
Total (Phase 1 +2 + 3 + 4) Project Trips				**30,051**			**1,597**	**411**	**2,008**			**1,084**	**1,996**	**3,080**

Note:

Trip rates are trips per flight or trips per 1,000 square feet (Ksf) or trips per room; ADT=Average Daily Traffic

[1]Airport: Trip generation rates for "General Aviation" were used per City of San Diego Trip Generation Manual. The number of flights for each phase was determined based on the difference between the project and no project scenarios for the "Average Day of Peak Month" Aircraft and Operational Forecasts. Source: "Brown Field Airport Master Plan Update", "Working Paper No. 2, Summary of Aviation Activity Forecasts" prepared by Mead and Hunt; Peak hour percentages and in/out splits for "Commercial Airport" land use were used to derive the peak hour trips for the proposed Aviation facility

[2]Commercial Office: Trip generation rates for "Commercial Office" were based on the natural logarithmic equation per City of San Diego Trip Generation Manual

[3]Industrial: Trip generation rates for "Large Industrial Park" were used per City of San Diego Trip Generation Manual

[4]High Turnover Restaurant: Trip generation rates for "High Turnover (sit down)" land use were used per City of San Diego Trip Generation Manual

[5]Airport Related Commercial: Trip generation rates for "Community Shopping Center" were used per City of San Diego Trip Generation Manual; This will include uses such as grocery and/or drug store, beauty shops, stationery, recreational facilities, custom shops, etc.

[6]Hotel: Trip generation rates for "Hotel" were used per City of San Diego Trip Generation Manual; The proposed hotel will have conventional facilities or restaurants

[7]Solar Field: Two daily trips were assumed for maintenance/operation

[8]The Phase 1 FBO includes 102,350 sq. ft. of total office space. 51,175 sq. ft. services direct aviation functions; therefore, the ADT calculations (by flight) are included in the FBO calculations. The remaining 51,175 sq. ft. calculates ADT's by using City's Commercial Office trip generation rate.

[9]Phase 4 large jet FBOs and rotorcraft FBO contain approximately 37,507 sq. ft. of offices. These offices are directly related to aviation flight operations; therefore, the ADT calculations (by flight) are included in their respective FBO calculations.

TABLE 6
REPHASED PROJECT TRIP GENERATION ESTIMATES USING CUMULATIVE TRIP RATES
METROPOLITAN AIRPARK, CITY OF SAN DIEGO

Land Use	Size	Unit	Daily Trips		AM Peak Hour Trips					PM Peak Hour Trips				
			Cumulative Rate	ADT	Peak Hour %	In/Out Split	Inbound	Outbound	Total	Peak Hour %	In/Out Split	Inbound	Outbound	Total
Phase 1A (2012 thru 2016)														
Airport (General Aviation)[1,8]	163	Flights	2	327	6%	60/40	12	8	20	7%	50/50	11	12	23
Total Phase 1A Project Trips				**327**			**12**	**8**	**20**			**11**	**12**	**23**
Phase 1B (2016/2017)														
Commercial Office[2,8] (Jet FBO)	51.175	Ksf	(See Footnote 2)	1,017	13%	90/10	119	13	132	14%	20/80	28	114	142
Total (Phases 1A + 1B) Project Trips				**1,344**			**131**	**21**	**152**			**39**	**126**	**165**
Phase 2 (2017 thru 2021)														
Airport (General Aviation)[1]	9	Flights	2	18	6%	60/40	1	1	2	7%	50/50	1	1	2
Industrial[3] (south)	905	Ksf	8	7,240	11%	90/10	718	79	797	12%	20/80	75	694	769
Total Phase 2 Project Trips				***7,258***			***719***	***80***	***799***			***76***	***695***	***771***
Total (Phases 1 + 2) Project Trips				**8,602**			**850**	**101**	**951**			**115**	**821**	**936**
Phase 3A (2022 thru 2026)														
Industrial[3] (north)	450	Ksf	8	3,600	11%	90/10	356	40	396	12%	20/80	86	346	432
Total (Phases 1 + 2 + 3A) Project Trips				**12,202**			**1,206**	**141**	**1,347**			**201**	**1,167**	**1,368**
Phase 3B (2022 thru 2026)														
Airport Related Commercial[5]	152.2	Ksf	49	7,458	3%	60/40	134	90	224	10%	50/50	373	373	746
Total (Phase 1 +2 +3A + 3B) Project Trips				**19,660**			**1,340**	**231**	**1,571**			**574**	**1,540**	**2,114**
Phase 3C (2022 thru 2026)														
High Turnover Restaurant[4]	5	Ksf	104	520	8%	50/50	21	21	42	8%	60/40	25	17	42
Airport Related Commercial[5]	50.725	Ksf	49	2,486	3%	60/40	45	30	75	10%	50/50	125	125	249
Hotel[6]	150	rooms	10	1,500	6%	60/40	54	36	90	8%	60/40	72	48	120
Total Phase 3 Project Trips				***4,506***			***120***	***87***	***207***			***222***	***190***	***411***
Total (Phase 1 +2 +3A + 3B + 3C) Project Trips				**24,165**			**1,460**	**318**	**1,778**			**795**	**1,730**	**2,525**
Phase 4 (2027 thru 2031)														
Airport (General Aviation)[1,9]	146	Flights	2	292	6%	60/40	11	8	19	7%	50/50	11	11	22
Hotel[6]	120	rooms	10	1,200	6%	60/40	43	29	72	8%	60/40	58	38	96
Solar Field[7]	66.5	acre	-	2	-	-	1	0	1	-	-	0	1	1
Total Phase 4 Project Trips				***1,494***			***55***	***37***	***92***			***69***	***50***	***119***
Total (Phase 1 +2 + 3 + 4) Project Trips				**25,659**			**1,515**	**355**	**1,870**			**864**	**1,780**	**2,644**

Note:

Trip rates are trips per flight or trips per 1,000 square feet (Ksf) or trips per room; ADT=Average Daily Traffic

[1]Airport: Trip generation rates for "General Aviation" were used per City of San Diego Trip Generation Manual. The number of flights for each phase was determined based on the difference between the project and no project scenarios for the "Average Day of Peak Month" Aircraft and Operational Forecasts. Source: "Brown Field Airport Master Plan Update", "Working Paper No. 2, Summary of Aviation Activity Forecasts" prepared by Mead and Hunt; Peak hour percentages and in/out splits for "Commercial Airport" land use were used to derive the peak hour trips for the proposed Aviation facility

[2]Commercial Office: Trip generation rates for "Commercial Office" were based on the natural logarithmic equation per City of San Diego Trip Generation Manual

[3]Industrial: Trip generation rates for "Large Industrial Park" were used per City of San Diego Trip Generation Manual

[4]High Turnover Restaurant: Trip generation rates for "High Turnover (sit down)" land use were used per City of San Diego Trip Generation Manual

[5]Airport Related Commercial: Trip generation rates for "Community Shopping Center" were used per City of San Diego Trip Generation Manual; This will include uses such as grocery and/or drug store, beauty shops, stationery, recreational facilities, custom shops, etc.

[6]Hotel: Trip generation rates for "Hotel" were used per City of San Diego Trip Generation Manual; The proposed hotel will have conventional facilities or restaurants

[7]Solar Field: Two daily trips were assumed for maintenance/operation

[8]The Phase 1 FBO includes 102,350 sq. ft. of total office space. 51,175 sq. ft. services direct aviation functions; therefore, the ADT calculations (by flight) are included in the FBO calculations. The remaining 51,175 sq. ft. calculates ADT's by using City's Commercial Office trip generation rate.

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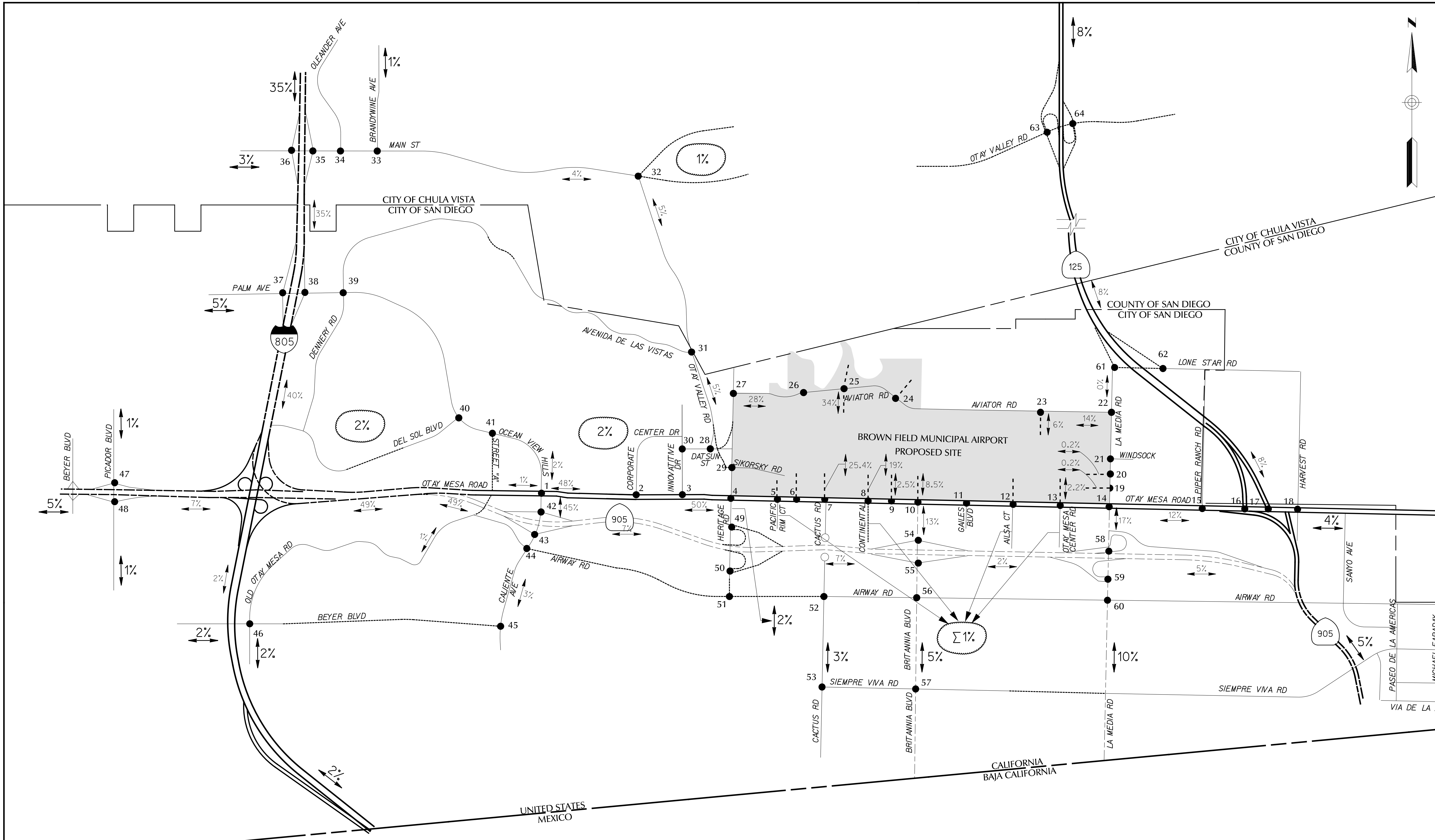

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EXHIBIT 7

PHASE 1+2 TRIP DISTRIBUTION FOR YEAR 2017 (PHASE 2 OPENING YEAR) SCENARIO

METROPOLITAN AIRPARK TRAFFIC IMPACT ANALYSIS

LEGEND

● = STUDY INTERSECTION
- - - -= PROJECT ACCESS
-------- = FUTURE ROAD
—-·= TRUCK ROUTE
XX% = MACRO TRIP DISTRIBUTION ASSIGNMENT
XX% = MICRO TRIP DISTRIBUTION ASSIGNMENT

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EXHIBIT 13A

PHASE 1 + 2 TRIP ASSIGNMENT FOR YEAR 2017 (PHASE 2 OPENING YEAR) SCENARIO

METROPOLITAN AIRPARK TRAFFIC IMPACT ANALYSIS

LEGEND

● = STUDY INTERSECTION
----= PROJECT ACCESS
------- = FUTURE ROAD
——-= TRUCK ROUTE
XX,XXX = ADT

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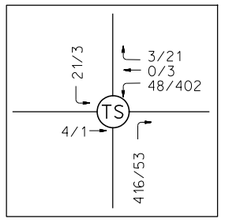

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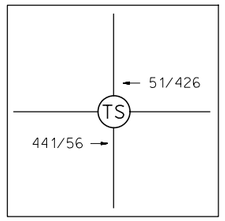

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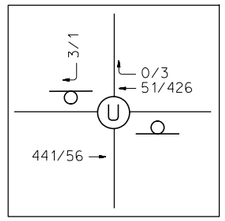

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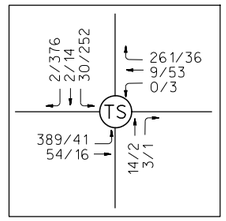

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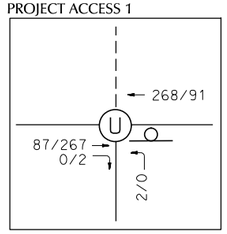

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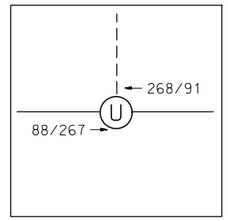

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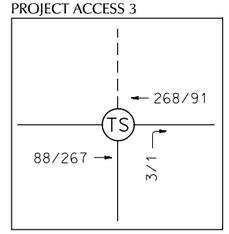

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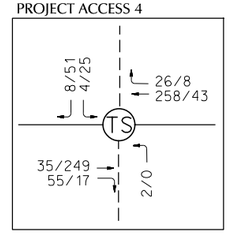

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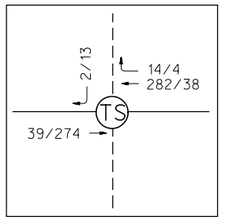

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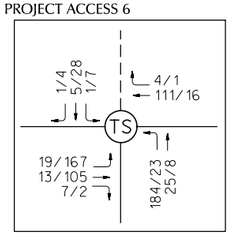

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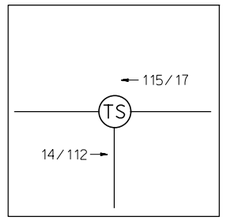

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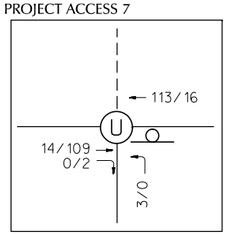
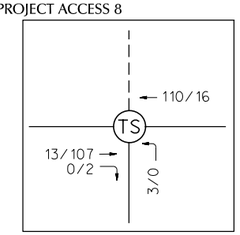


13. OTAY MESA RD/OTAY MESA CENTER RD/ PROJECT ACCESS 8



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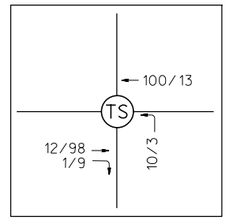

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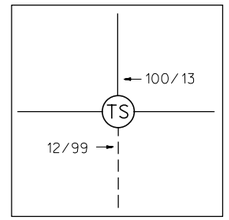

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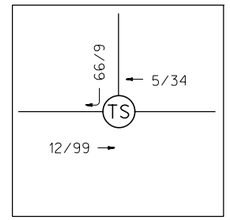

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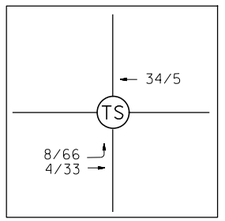

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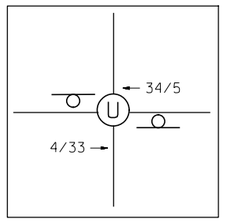

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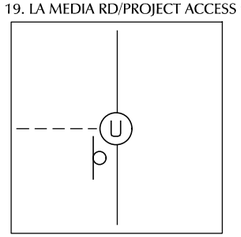

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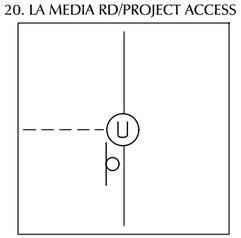

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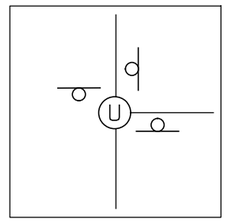

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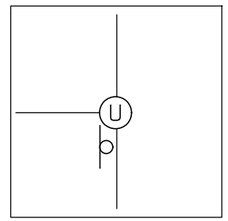

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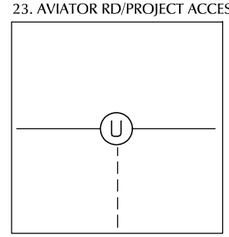

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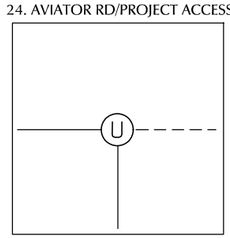

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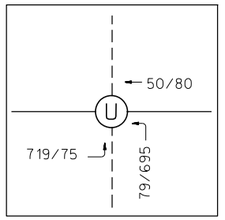

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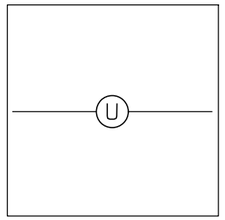

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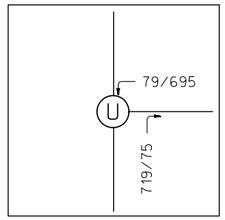

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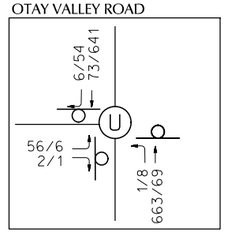

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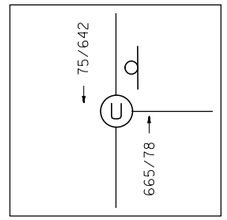
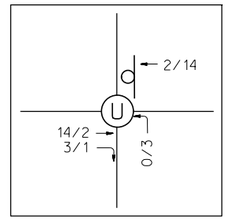
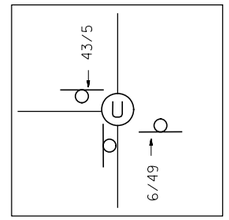


30. DATSUN ST/INNOVATIVE DR



31. AVENIDA DE LAS VISTAS/FUTURE OTAY VALLEY RD



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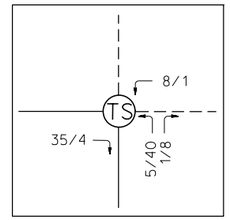
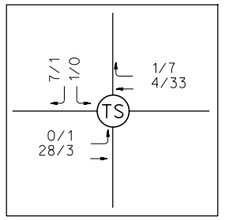


33. MAIN ST/BRANDYWINE AVE



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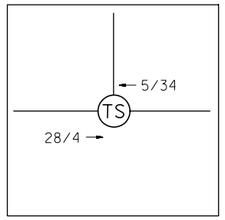

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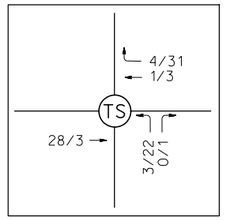

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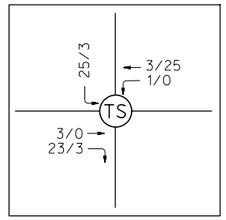

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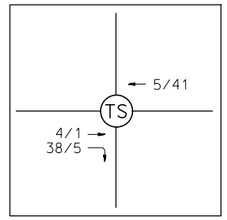
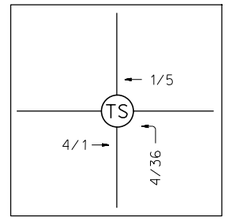
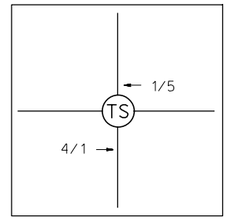


38. PALM AVE/I-805 NB RAMP



39. PALM AVE/DENNERY RD



40. DEL SOL BLVD/OCEAN HILLS PKWY

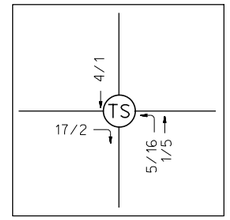


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EXHIBIT 13B

PHASE 1 + 2 TRIP ASSIGNMENT FOR YEAR 2017 (PHASE 2 OPENING YEAR) SCENARIO

METROPOLITAN AIRPARK TRAFFIC IMPACT ANALYSIS

LEGEND

= STOP-CONTROLLED

TS = TRAFFIC SIGNAL

U = UNSIGNALIZED INTERSECTION

XXX/XXX = AM/PM PEAK HOUR VOLUMES

——— = FUTURE STREET/ PROJECT ACCESS

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\\cp.rickeng.com\projects\C_SD_R\15818B_MetropolitanAirpark\Traffic\Graphics\June2021_NEWExhibits\SD CorpStds 2005_half.dscript
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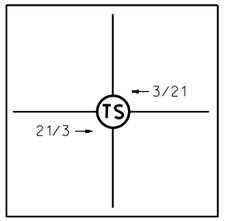
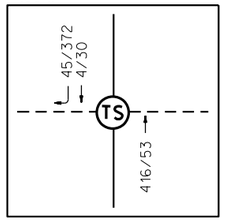
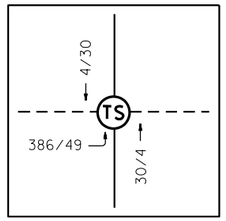
41. OCEAN HILLS PKWY/STREET "A"



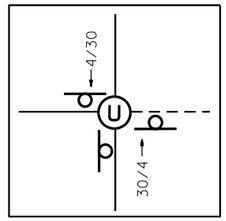
42. CALIENTE AVE/SR-905 WB RAMP



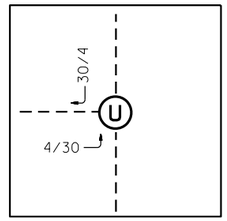
43. CALIENTE AVE/SR-905 EB RAMP



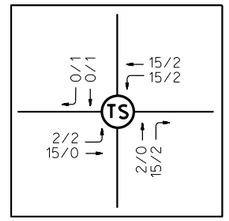
44. CALIENTE AVE/AIRWAY RD



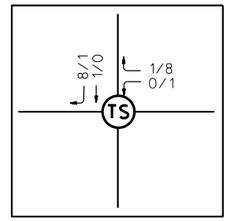
45. CALIENTE AVE/BEYER BLVD



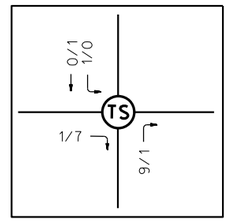
46. OLD OTAY MESA RD/BEYER BLVD



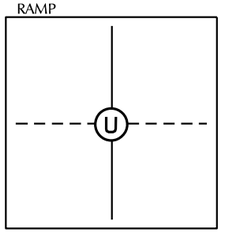
47. PICADOR BLVD/SR-905 WB RAMP



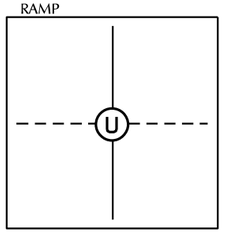
48. PICADOR BLVD/SR-905 EB RAMP



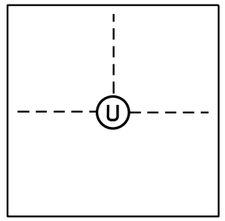
49. HERITAGE RD/SR-905 WB RAMP



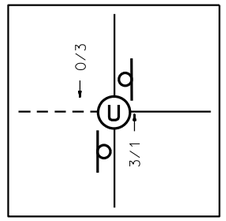
50. HERITAGE RD/SR-905 EB RAMP



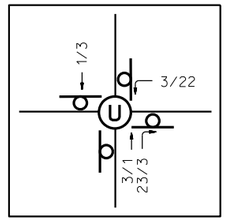
51. HERITAGE RD/AIRWAY RD



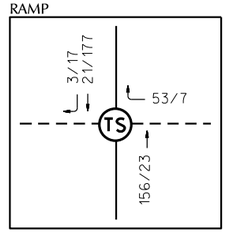
52. CACTUS RD/AIRWAY RD



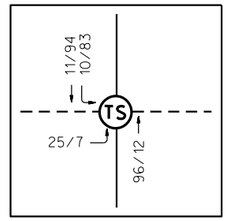
53. CACTUS RD/SIEMPRE VIVA RD



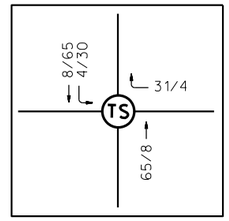
54. BRITANNIA BLVD/SR-905 WB RAMP



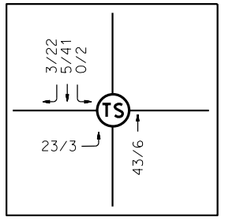
55. BRITANNIA BLVD/SR-905 EB RAMP



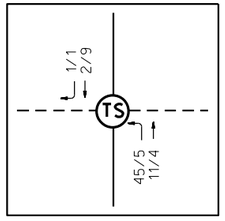
56. BRITANNIA BLVD/AIRWAY RD



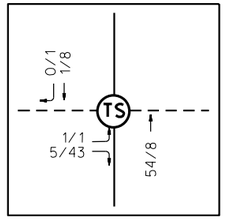
57. BRITANNIA BLVD/SIEMPRE VIVA RD



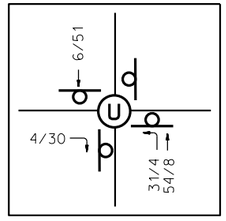
58. LA MEDIA RD/SR-905 WB RAMP



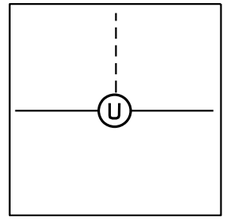
59. LA MEDIA RD/SR-905 EB RAMP



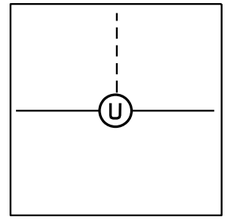
60. LA MEDIA RD/AIRWAY RD



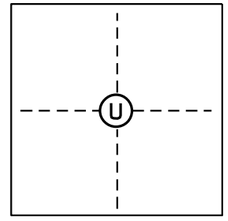
61. LONE STAR RD/SR-125 SB RAMP



62. LONE STAR RD/SR-125 NB RAMP



63. OTAY VALLEY RD/SR-125 SB RAMP



64. OTAY VALLEY RD/SR-125 NB RAMP

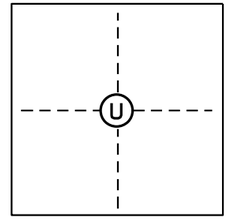


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EXHIBIT 13C

PHASE 1 + 2 TRIP ASSIGNMENT FOR YEAR 2017 (PHASE 2 OPENING YEAR) SCENARIO

METROPOLITAN AIRPARK TRAFFIC IMPACT ANALYSIS

LEGEND

= STOP-CONTROLLED

TS = TRAFFIC SIGNAL

U = UNSIGNALIZED INTERSECTION

XXX/XXX = AM/PM PEAK HOUR VOLUMES

--- = FUTURE STREET/ PROJECT ACCESS

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			Cumulative Project Trip Generation																		
			Azul	7-Eleven	Southview+Southview East	Candlelight	Southwind	Southwest Village SPU	Marijuana Production	Lumina I	Lumina II	Lumina III	Metro Airpark	CA Terraces	La Media Retail	Sunroad	Border Cross Facility	Otay Mesa Florio	Arco	Plaza La Media South	Warehouse Distribution	Beyer Park	Festival
Roadway Segment	Segment	Near-Term ADT Total	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT	Project ADT
Caliente Ave	Otay Mesa Rd to SR-905 WB	10,993	1,110	688	792	912	256	1,024	276	0	0	0	3,871	1,179	0	85	800	0	Project Withdrawn	Not anticipated to add traffic to study facilities	Not anticipated to add traffic to study facilities	Not anticipated to add traffic to study facilities	Not anticipated to add traffic to study facilities
Caliente Ave	SR-905 WB to SR-905 EB	10,889	555	460	1,475	1,696	476	1,792	138	1,091	0	0	2,064	707	130	85		220					
Otay Mesa Rd	Ocean View Hills Pkwy to Emerald Crest Ct	16,124	1,110	270	644	742	208	640	312	935	48	12	4,129	4,976	1,126	296	300	376					
Otay Mesa Rd	Emerald Crest Ct to Corporate Center Dr	12,327	1,110	270	644	742	208	640	312	935	48	12	4,129	1,179	1,126	296	300	376					
Otay Mesa Rd	Corporate Center Dr to Innovative Dr	12,300	1,110	270	644	742	208	640	35	1,091	56	14	4,301	943	1,126	380	300	440					
Otay Mesa Rd	Innovative Dr to Heritage Rd	12,311	1,110	136	644	742	208	640	35	1,091	73	18	4,301	943	1,126	380	300	564					
Caliente Ave	SR-905 EB to Airway Rd	10,494	0	232	2,156	2,480	696	2,560		1,091	0	0	258	236	260	85		440					

Total AM Cumulative Projects

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	28	81	655	254	113	34	34	23	28	139	20	205
2	61	4	28	0	3	0	74	839	5	38	247	0
3	0	0	0	11	0	11	64	795	0	0	261	15
4	0	0	0	2	0	16	5	800	0	0	262	24
5	10	54	18	123	76	14	420	363	30	38	223	314
6	171	732	0	0	110	163	0	0	0	136	0	20
7	0	414	216	38	211	0	487	0	43	0	0	0
8	52	417	0	37	138	84	71	5	13	0	21	138

Azul Playa Del Sol/Luna

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1		18		71		71						
2									71			18
3									71			18
4									71			18
5									71			18
6		18					71					
7								18				
8												

7-Eleven

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	28						34	34	11	28		11
2									11			11
3									11			11
4							5	5	5			5
5									5			5
6			28			9	18					
7			9			9		18				
8			5			5	5	5				

Southview+Southview East

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
1			9	41		2					10		
2									41			10	
3									41			10	
4									41			10	
5							5	21	21			5	
6		46	51			13					10		
7			96	41		23				12			
8					35				5			21	137

Candlelight

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1		11	47		3					12		
2									47			12
3									47			12
4									47			12
5	5								29	18		7
6	53	58			15						12	
7		111	47		27					13		
8	24	158			40					6		

Southwind

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1			3	13		1					3	
2									13			3
3									13			3
4									13			3
5		1							8	5		2
6		15	16			4					3	
7			31	13		8				4		
8		7	44			11				2		

Southwest Village

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1		25	41		6					10		
2									41			10
3									41			10
4									41			10
5									41			10
6	57	66			16					10		
7		123	41		27					14		
8	21	164			41					5		

Marijuana Production

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1				50	6						6	1
2									56			6
3					1		6	56				6
4									1			6
5									1			6
6			50				6					
7								50				
8												

Plaza la Media

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
1					24								17
2									24			17	
3									24			17	
4									24			17	
5					18				24			17	13
6											4		
7				5		4							
8			1			1	3	4					

CA Terraces

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	0	0	38	65	0	0	0	8	0	46	9	79
2	61	4	28	0	3	0	74	18	5	38	0	0
3	0	0	0	0	0	5	8	30	0	0	20	0
4	0	0	0	0	0	0	0	30	0	0	20	0
5	3	0	0	0	0	7	10	15	5	0	10	0
6	0	20	0	0	15	23	0	0	0	0	0	5
7	0	5	0	8	8	0	15	0	0	0	0	0
8	0	0	0	2	0	6	4	0	0	0	0	1

Cross Border Facility

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1		15		11	30							5
2									11			5
3									11			5
4									11			5
5	1	40		57	74				9	2		5
6					30						14	15
7			35	30	14							
8							14	35				

Metro Airpark Site

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	0	416	21	0			4		48			3
2							441				51	
3							441				51	
4				0		3			441		51	
5	14	3	30	2	2	389	54		0	9	261	
6	416			4	45				0		0	
7	30	0	0	4		386						
8	30			4								

Sunroad Otay Mesa

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1				9	22						4	9
2									31		13	
3					9				31		13	4
4									40		17	
5					18				40		17	8
6			9			4						
7			9			4						
8							9	4				

Lumina I

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
1				27									66
2									27			66	
3									27			66	
4							8		27			58	16
5				12					35		25	74	
6											58		
7				27		58							
8			12			25	33	15					

Lumina II

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
1				1									3
2									1			3	
3									1			3	1
4									1			4	1
5									1		2	5	
6													
7													
8													

Lumina III

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
1													1
2												1	
3												1	
4												1	
5												1	
6													
7													
8													

Otay Mesa Floreo

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
1				6									21
2									6			21	
3				1					6			21	4
4				2					7			25	7
5			3						9		11	32	
6											25		
7			7		25								
8		3			11	14	4						

Arco

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1												
2												
3												
4												
5							**Project Withdrawn**					
6												
7												
8												

Plaza La Media South

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1												
2												
3												
4					**Not anticipated to add traffic to study facilities**							
5												
6												
7												
8												

Warehouse Distribution

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1												
2												
3												
4					**Not anticipated to add traffic to study facilities**							
5												
6												
7												
8												

Beyer Park

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1												
2												
3												
4					**Not anticipated to add traffic to study facilities**							
5												
6												
7												
8												

Festival

AM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1												
2												
3												
4					**Not anticipated to add traffic to study facilities**							
5												
6												
7												
8												

Total PM Cumulative Projects

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	28	139	305	368	101	34	34	31	28	685	31	394
2	109	7	49	0	8	0	132	454	122	96	868	0
3	0	0	0	16	0	64	24	451	0	0	872	11
4	0	0	0	9	0	25	5	461	0	0	860	19
5	34	72	42	347	69	415	103	369	17	28	430	147
6	161	401	0	0	288	496	0	0	0	250	0	43
7	0	373	267	32	502	0	189	0	176	0	0	0
8	23	216	0	138	446	99	106	20	52	0	47	319

Azul Playa Del Sol/Luna

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1		70		30	30							70
2									30		70	
3									30		70	
4									30		70	
5									30		70	
6		70					30					
7								70				
8												

7-Eleven

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	28						34	34	11	28		11
2									11			11
3									11			11
4							5	5	5			5
5									5			5
6			28			9	18					
7			9			9		18				
8			5			5	5	5				

Southview+Southview East

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1		22	94		9					41		
2									94		41	
3									94		41	
4									94		41	
5							20	47	47		20	
6	105	116			50					41		
7		221	94		90					45		
8				136					20		47	316

Candlelight

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1		5	20		11					47		
2									20			47
3									20			47
4									20			47
5	18								12	8		29
6	22	25			58					47		
7		47	20		104					52		
8	10	67			157					23		

Southwind

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1			1	6		3					15	
2									6			15
3									6			15
4									6			15
5		6							4	2		9
6		7	8			18					15	
7			15	6		32				16		
8		3	21			49				7		

Southwest Village

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1		12	19		27						45	
2									19			45
3									19			45
4									19			45
5									19			45
6	27	31			72						45	
7		58	19		116					63		
8	10	77			179					22		

Marijuana Production

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1				11	1						44	6
2									13		50	
3					6		50	13				1
4									6		1	
5									6		1	
6			11				44					
7								11				
8												

Plaza la Media

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
1					53								53
2									53			53	
3									53			53	
4									53			53	
5					41				53			53	41
6											12		
7				12		12							
8			3			3	9	9					

CA Terraces

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	0	0	97	166	0	0	0	19	0	83	17	142
2	109	7	49	0	8	0	132	33	122	96	0	0
3	0	0	0	0	0	14	11	43	0	0	54	0
4	0	0	0	0	0	0	0	43	0	0	54	0
5	8	0	0	0	0	19	15	22	6	0	27	0
6	0	54	0	0	22	32	0	0	0	0	0	14
7	0	14	0	11	11	0	41	0	0	0	0	0
8	0	0	0	2	0	9	11	0	0	0	0	3

Cross Border Facility

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1		29		8	21							10
2									7		10	
3									7		10	
4									7		10	
5	2	70		43	55				6	1	8	54
6					21					36		29
7			23	21	36							
8							36	23				

Metro Airpark Site

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	0	53	3	0			1	402	3	21		
2							56		426			
3							56		426			
4			0		1		56		426	3		
5	2	1	252	14	376	41	16	3	53	36		
6	53			30	372			0		0		
7	4	0	0	30		49						
8	4			30								

Sunroad Otay Mesa

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1				5	14						8	20
2									19		28	
3					5				19		28	8
4									24		37	
5					11				24		37	16
6			5			8						
7			5			8						
8							8	5				

Lumina I

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
1					66								60
2									66			60	
3									66			60	
4							19		66			41	12
5				28					85		18	53	
6											41		
7				66		41							
8			28			17	24	38					

Lumina II

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1				3								1
2									3		1	
3				1					3		1	
4				1					4		2	
5				2					5	1	2	
6												
7												
8												

Lumina III

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1					1							
2									1			
3									1			
4									1			
5									1			1
6												
7												
8												

Otay Mesa Floreo

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1				23								11
2									23		11	
3				4					23		11	2
4				8					27		13	4
5			11						34	6	17	
6										13		
7			27		13							
8		11			6	8	15					

Arco

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1												
2												
3												
4							**Project Withdrawn**					
5												
6												
7												
8												

Plaza La Media South

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1												
2												
3												
4					**Not anticipated to add traffic to study facilities**							
5												
6												
7												
8												

Warehouse Distribution

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1												
2												
3												
4					**Not anticipated to add traffic to study facilities**							
5												
6												
7												
8												

Beyer Park

PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1												
2												
3												
4					**Not anticipated to add traffic to study facilities**							
5												
6												
7												
8												

Festival

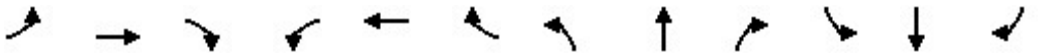
PM Peak Hour Turning Movement Count

INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1												
2												
3												
4					**Not anticipated to add traffic to study facilities**							
5												
6												
7												
8												

Attachment 12 – Peak Hour Intersection Calculation Worksheets – Near-Term Year (Opening Day) 2027 Conditions

1: Caliente Avenue/Ocean View Hills Parkway & Otay Mesa Road

AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	23	33	396	21	272	33	428	1208	406	600	35
Future Volume (veh/h)	34	23	33	396	21	272	33	428	1208	406	600	35
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		0.99	1.00		1.00	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	1856	1856	1856	1826	1856	1856	1856	1856	1826	1856	1856	1856
Adj Flow Rate, veh/h	81	55	62	408	22	224	40	516	1260	446	659	30
Peak Hour Factor	0.42	0.42	0.42	0.97	0.97	0.97	0.83	0.83	0.83	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	5	3	3	3	3	5	3	3	3
Cap, veh/h	103	408	217	493	378	317	50	1286	791	529	1731	739
Arrive On Green	0.06	0.12	0.12	0.15	0.20	0.20	0.03	0.36	0.36	0.15	0.49	0.49
Sat Flow, veh/h	1767	3526	1491	3374	1856	1556	1767	3526	1547	3428	3526	1505
Grp Volume(v), veh/h	81	55	62	408	22	224	40	516	1260	446	659	30
Grp Sat Flow(s),veh/h/ln	1767	1763	1491	1687	1856	1556	1767	1763	1547	1714	1763	1505
Q Serve(g_s), s	4.2	1.3	3.5	11.0	0.9	12.6	2.1	10.2	34.2	11.9	11.0	1.0
Cycle Q Clear(g_c), s	4.2	1.3	3.5	11.0	0.9	12.6	2.1	10.2	34.2	11.9	11.0	1.0
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	103	408	217	493	378	317	50	1286	791	529	1731	739
V/C Ratio(X)	0.78	0.13	0.29	0.83	0.06	0.71	0.80	0.40	1.59	0.84	0.38	0.04
Avail Cap(c_a), veh/h	124	643	317	1353	930	780	94	1286	791	823	1915	817
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	43.5	37.2	35.8	38.9	30.1	34.7	45.3	22.1	22.9	38.5	14.9	12.4
Incr Delay (d2), s/veh	18.9	0.2	0.9	1.4	0.1	5.8	10.2	0.4	272.9	2.8	0.6	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	2.3	0.6	1.2	4.4	0.4	4.9	1.1	4.2	74.4	5.0	4.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4	37.4	36.7	40.2	30.2	40.5	55.5	22.6	295.8	41.3	15.5	12.5
LnGrp LOS	E	D	D	D	C	D	E	C	F	D	B	B
Approach Vol, veh/h		198			654			1816			1135	
Approach Delay, s/veh		47.4			40.0			212.9			25.6	
Approach LOS		D			D			F			C	

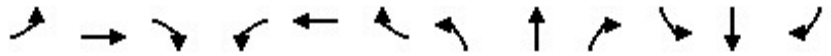
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.9	39.9	18.1	16.9	7.1	51.7	9.9	25.1
Change Period (Y+Rc), s	4.4	* 5.7	4.4	* 6	4.4	5.7	4.4	6.0
Max Green Setting (Gmax), s	22.5	* 34	37.6	* 17	5.0	50.9	6.6	47.0
Max Q Clear Time (g_c+I1), s	13.9	36.2	13.0	5.5	4.1	13.0	6.2	14.6
Green Ext Time (p_c), s	0.6	0.0	0.7	0.4	0.0	13.4	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	118.6
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

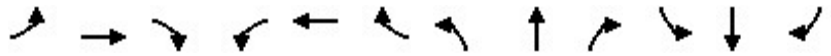
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	1544	5	38	531	1	61	4	28	0	3	72
Future Volume (veh/h)	74	1544	5	38	531	1	61	4	28	0	3	72
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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	80	1678	4	41	577	1	66	4	27	0	3	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.92	0.90
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	100	2216	688	60	2101	652	84	46	311	3	6	136
Arrive On Green	0.06	0.44	0.44	0.03	0.42	0.42	0.05	0.22	0.22	0.00	0.09	0.09
Sat Flow, veh/h	1739	4985	1547	1739	4985	1547	1767	207	1397	1767	64	1518
Grp Volume(v), veh/h	80	1678	4	41	577	1	66	0	31	0	0	74
Grp Sat Flow(s),veh/h/ln	1739	1662	1547	1739	1662	1547	1767	0	1604	1767	0	1582
Q Serve(g_s), s	2.3	14.5	0.1	1.2	3.9	0.0	1.9	0.0	0.8	0.0	0.0	2.3
Cycle Q Clear(g_c), s	2.3	14.5	0.1	1.2	3.9	0.0	1.9	0.0	0.8	0.0	0.0	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.87	1.00		0.96
Lane Grp Cap(c), veh/h	100	2216	688	60	2101	652	84	0	357	3	0	141
V/C Ratio(X)	0.80	0.76	0.01	0.68	0.27	0.00	0.79	0.00	0.09	0.00	0.00	0.52
Avail Cap(c_a), veh/h	244	2323	721	136	2101	652	152	0	1357	138	0	1327
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	23.9	11.9	7.9	24.5	9.7	8.6	24.2	0.0	15.8	0.0	0.0	22.3
Incr Delay (d2), s/veh	5.4	1.6	0.0	5.0	0.1	0.0	5.9	0.0	0.0	0.0	0.0	1.1
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	1.0	3.8	0.0	0.5	1.0	0.0	0.9	0.0	0.3	0.0	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	13.5	7.9	29.5	9.8	8.6	30.1	0.0	15.8	0.0	0.0	23.4
LnGrp LOS	C	B	A	C	A	A	C	A	B	A	A	C
Approach Vol, veh/h		1762			619			97			74	
Approach Delay, s/veh		14.2			11.1			25.5			23.4	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	28.8	6.8	9.5	7.4	27.6	0.0	16.3
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	4.6	23.9	4.4	43.0	7.2	20.7	4.0	43.4
Max Q Clear Time (g_c+I1), s	3.3	16.5	3.9	4.3	4.3	5.9	0.0	2.8
Green Ext Time (p_c), s	0.0	6.3	0.0	0.3	0.0	4.4	0.0	0.1

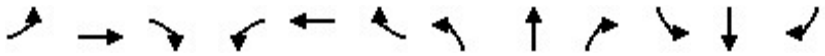
Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	389	1115	0	1	458	53	0	0	0	39	0	99
Future Volume (veh/h)	389	1115	0	1	458	53	0	0	0	39	0	99
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	1826	1826	0	1826	1826	1826	1856	1856	1856	1826	0	1826
Adj Flow Rate, veh/h	458	1312	0	1	520	48	0	0	0	55	0	97
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.92	0.92	0.92	0.71	0.71	0.71
Percent Heavy Veh, %	5	5	0	5	5	5	3	3	3	5	0	5
Cap, veh/h	715	3383	0	5	2331	723	0	6	0	0	0	0
Arrive On Green	0.21	0.68	0.00	0.00	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3374	5149	0	1739	4985	1546	0	1856	0		0	
Grp Volume(v), veh/h	458	1312	0	1	520	48	0	0	0		0.0	
Grp Sat Flow(s),veh/h/ln	1687	1662	0	1739	1662	1546	0	1856	0			
Q Serve(g_s), s	4.0	3.7	0.0	0.0	2.0	0.6	0.0	0.0	0.0			
Cycle Q Clear(g_c), s	4.0	3.7	0.0	0.0	2.0	0.6	0.0	0.0	0.0			
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00			
Lane Grp Cap(c), veh/h	715	3383	0	5	2331	723	0	6	0			
V/C Ratio(X)	0.64	0.39	0.00	0.19	0.22	0.07	0.00	0.00	0.00			
Avail Cap(c_a), veh/h	893	6109	0	214	5403	1676	0	2514	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	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00			
Uniform Delay (d), s/veh	11.7	2.3	0.0	16.2	5.1	4.7	0.0	0.0	0.0			
Incr Delay (d2), s/veh	0.5	0.1	0.0	6.1	0.1	0.1	0.0	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	0.9	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.1	2.4	0.0	22.3	5.2	4.8	0.0	0.0	0.0			
LnGrp LOS	B	A	A	C	A	A	A	A	A			
Approach Vol, veh/h		1770			569			0				
Approach Delay, s/veh		4.9			5.2			0.0				
Approach LOS		A			A							

Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.4	28.0			11.3	21.2		0.0				
Change Period (Y+Rc), s	4.4	6.0			4.4	6.0		4.9				
Max Green Setting (Gmax), s	4.6	39.8			8.6	35.2		44.0				
Max Q Clear Time (g_c+I1), s	2.0	5.7			6.0	4.0		0.0				
Green Ext Time (p_c), s	0.0	16.3			0.3	6.5		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			5.0									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1230	3	0	534	58	0	0	5	2	0	63
Future Volume (veh/h)	5	1230	3	0	534	58	0	0	5	2	0	63
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		0.96
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	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	6	1447	3	0	628	61	0	0	10	3	0	88
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.42	0.42	0.42	0.65	0.65	0.65
Percent Heavy Veh, %	5	5	5	8	8	8	3	3	3	5	5	5
Cap, veh/h	10	3966	8	1	3584	1084	0	0	35	5	0	147
Arrive On Green	0.01	0.77	0.77	0.00	0.74	0.74	0.00	0.00	0.02	0.10	0.00	0.10
Sat Flow, veh/h	1739	5136	11	1697	4863	1471	0	0	1548	49	0	1448
Grp Volume(v), veh/h	6	936	514	0	628	61	0	0	10	91	0	0
Grp Sat Flow(s),veh/h/ln	1739	1662	1824	1697	1621	1471	0	0	1548	1497	0	0
Q Serve(g_s), s	0.5	13.4	13.4	0.0	5.9	1.7	0.0	0.0	1.0	8.7	0.0	0.0
Cycle Q Clear(g_c), s	0.5	13.4	13.4	0.0	5.9	1.7	0.0	0.0	1.0	8.7	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.03		0.97
Lane Grp Cap(c), veh/h	10	2566	1408	1	3584	1084	0	0	35	152	0	0
V/C Ratio(X)	0.58	0.36	0.36	0.00	0.18	0.06	0.00	0.00	0.28	0.60	0.00	0.00
Avail Cap(c_a), veh/h	46	2566	1408	45	3584	1084	0	0	413	399	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)	0.91	0.91	0.91	0.00	0.93	0.93	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	74.4	5.4	5.4	0.0	6.0	5.4	0.0	0.0	72.1	64.4	0.0	0.0
Incr Delay (d2), s/veh	16.6	0.4	0.7	0.0	0.1	0.1	0.0	0.0	5.8	1.4	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	3.8	4.3	0.0	1.8	0.5	0.0	0.0	0.4	3.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.0	5.8	6.1	0.0	6.1	5.5	0.0	0.0	77.8	65.8	0.0	0.0
LnGrp LOS	F	A	A	A	A	A	A	A	E	E	A	A
Approach Vol, veh/h		1456			689			10			91	
Approach Delay, s/veh		6.2			6.0			77.8			65.8	
Approach LOS		A			A			E			E	

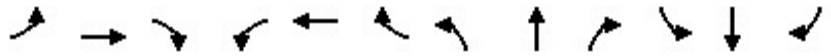
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	122.0		19.3	5.3	116.7		8.7
Change Period (Y+Rc), s	4.4	6.2		4.0	4.4	* 6.2		5.3
Max Green Setting (Gmax), s	4.6	46.1		40.0	4.0	* 46		40.0
Max Q Clear Time (g_c+I1), s	0.0	15.4		10.7	2.5	7.9		3.0
Green Ext Time (p_c), s	0.0	15.4		0.2	0.0	5.9		0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



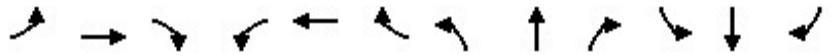
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	568	534	147	81	383	433	41	79	39	277	97	119
Future Volume (veh/h)	568	534	147	81	383	433	41	79	39	277	97	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	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	1781	1781	1781	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	684	643	141	94	445	462	55	107	48	301	105	90
Peak Hour Factor	0.83	0.83	0.83	0.86	0.86	0.86	0.74	0.74	0.74	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	5	5	5
Cap, veh/h	662	2205	674	141	1435	431	71	208	93	293	553	1356
Arrive On Green	0.20	0.45	0.45	0.04	0.30	0.30	0.04	0.17	0.17	0.17	0.30	0.30
Sat Flow, veh/h	3291	4863	1487	3291	4863	1460	1767	1195	536	1739	1826	2670
Grp Volume(v), veh/h	684	643	141	94	445	462	55	0	155	301	105	90
Grp Sat Flow(s),veh/h/ln	1646	1621	1487	1646	1621	1460	1767	0	1731	1739	1826	1335
Q Serve(g_s), s	24.6	10.2	7.0	3.4	8.7	36.1	3.8	0.0	9.9	20.6	5.2	2.1
Cycle Q Clear(g_c), s	24.6	10.2	7.0	3.4	8.7	36.1	3.8	0.0	9.9	20.6	5.2	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	662	2205	674	141	1435	431	71	0	302	293	553	1356
V/C Ratio(X)	1.03	0.29	0.21	0.67	0.31	1.07	0.78	0.00	0.51	1.03	0.19	0.07
Avail Cap(c_a), veh/h	662	2205	674	239	1435	431	149	0	694	293	885	1842
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	1.00	1.00
Uniform Delay (d), s/veh	48.9	21.1	20.2	57.7	33.4	43.1	58.2	0.0	45.8	50.9	31.6	15.6
Incr Delay (d2), s/veh	43.8	0.1	0.2	2.0	0.2	64.0	6.7	0.0	2.9	59.9	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	13.7	3.7	2.5	1.4	3.3	20.5	1.8	0.0	4.5	13.9	2.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.7	21.2	20.4	59.7	33.6	107.1	64.9	0.0	48.7	110.8	31.6	15.6
LnGrp LOS	F	C	C	E	C	F	E	A	D	F	C	B
Approach Vol, veh/h		1468			1001			210			496	
Approach Delay, s/veh		54.4			70.0			52.9			76.7	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	61.4	9.3	41.9	29.0	42.1	25.0	26.2
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	8.3	51.8	10.3	59.3	24.6	36.1	20.6	49.0
Max Q Clear Time (g_c+I1), s	5.4	12.2	5.8	7.2	26.6	38.1	22.6	11.9
Green Ext Time (p_c), s	0.0	8.2	0.0	0.6	0.0	0.0	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	62.7
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	157	0	79	447	1544	0	0	356	632
Future Volume (veh/h)	0	0	0	157	0	79	447	1544	0	0	356	632
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		0.93
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				1826	1826	1826	1826	1826	0	0	1826	1826
Adj Flow Rate, veh/h				204	0	82	491	1697	0	0	396	635
Peak Hour Factor				0.77	0.77	0.77	0.91	0.91	0.91	0.90	0.90	0.90
Percent Heavy Veh, %				5	5	5	5	5	0	0	5	5
Cap, veh/h				240	0	213	472	3690	0	0	1382	596
Arrive On Green				0.14	0.00	0.14	0.27	0.74	0.00	0.00	0.42	0.42
Sat Flow, veh/h				1739	0	1547	1739	5149	0	0	3487	1434
Grp Volume(v), veh/h				204	0	82	491	1697	0	0	396	635
Grp Sat Flow(s),veh/h/ln				1739	0	1547	1739	1662	0	0	1662	1434
Q Serve(g_s), s				10.2	0.0	4.3	24.3	12.0	0.0	0.0	7.1	37.2
Cycle Q Clear(g_c), s				10.2	0.0	4.3	24.3	12.0	0.0	0.0	7.1	37.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				240	0	213	472	3690	0	0	1382	596
V/C Ratio(X)				0.85	0.00	0.38	1.04	0.46	0.00	0.00	0.29	1.06
Avail Cap(c_a), veh/h				251	0	223	472	3690	0	0	1382	596
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.6	0.0	35.1	32.6	4.6	0.0	0.0	17.3	26.1
Incr Delay (d2), s/veh				22.6	0.0	1.1	51.9	0.1	0.0	0.0	0.1	55.3
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				5.8	0.0	1.7	16.7	3.1	0.0	0.0	2.6	21.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				60.3	0.0	36.2	84.5	4.7	0.0	0.0	17.4	81.4
LnGrp LOS				E	A	D	F	A	A	A	B	F
Approach Vol, veh/h					286			2188			1031	
Approach Delay, s/veh					53.4			22.6			56.8	
Approach LOS					D			C			E	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	72.0		29.0	43.0		17.4
Change Period (Y+Rc), s	5.8		* 4.7	5.8		5.1
Max Green Setting (Gmax), s	66.2		* 24	37.2		12.9
Max Q Clear Time (g_c+I1), s	14.0		26.3	39.2		12.2
Green Ext Time (p_c), s	21.1		0.0	0.0		0.1

Intersection Summary	
HCM 6th Ctrl Delay	35.2
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)	1076	1	529	0	0	0	0	925	275	127	475	0
Future Volume (veh/h)	1076	1	529	0	0	0	0	925	275	127	475	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				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	1826	1826	1826				0	1856	1856	1826	1856	0
Adj Flow Rate, veh/h	830	459	501				0	1303	348	212	792	0
Peak Hour Factor	0.93	0.93	0.93				0.71	0.71	0.71	0.60	0.60	0.60
Percent Heavy Veh, %	5	5	5				0	3	3	5	3	0
Cap, veh/h	778	343	375				0	1289	344	207	1683	0
Arrive On Green	0.45	0.45	0.45				0.00	0.33	0.33	0.12	0.48	0.00
Sat Flow, veh/h	1739	767	837				0	4127	1056	1739	3618	0
Grp Volume(v), veh/h	830	0	960				0	1111	540	212	792	0
Grp Sat Flow(s),veh/h/ln	1739	0	1604				0	1689	1639	1739	1763	0
Q Serve(g_s), s	64.9	0.0	64.9				0.0	47.2	47.2	17.3	22.0	0.0
Cycle Q Clear(g_c), s	64.9	0.0	64.9				0.0	47.2	47.2	17.3	22.0	0.0
Prop In Lane	1.00		0.52				0.00		0.64	1.00		0.00
Lane Grp Cap(c), veh/h	778	0	718				0	1099	533	207	1683	0
V/C Ratio(X)	1.07	0.00	1.34				0.00	1.01	1.01	1.02	0.47	0.00
Avail Cap(c_a), veh/h	778	0	718				0	1099	533	207	1683	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				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.0	0.0	40.1				0.0	48.9	48.9	63.8	25.6	0.0
Incr Delay (d2), s/veh	51.4	0.0	160.9				0.0	29.8	42.1	68.3	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
%ile BackOfQ(50%),veh/ln	38.4	0.0	57.3				0.0	24.3	25.4	11.6	9.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.5	0.0	201.0				0.0	78.7	91.0	132.1	25.8	0.0
LnGrp LOS	F	A	F				A	F	F	F	C	A
Approach Vol, veh/h		1790						1651			1004	
Approach Delay, s/veh		150.2						82.7			48.2	
Approach LOS		F						F			D	

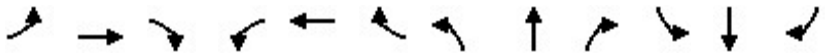
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.0	53.0		70.0		75.0
Change Period (Y+Rc), s*	4.7	5.8		5.1		5.8
Max Green Setting (Gmax), s	17.3	47.2		64.9		69.2
Max Q Clear Time (g_c+I1), s	19.3	49.2		66.9		24.0
Green Ext Time (p_c), s	0.0	0.0		0.0		6.7

Intersection Summary	
HCM 6th Ctrl Delay	102.1
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.



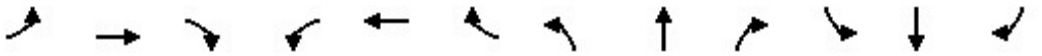
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	436	6	20	0	22	193	56	612	0	70	415	509
Future Volume (veh/h)	436	6	20	0	22	193	56	612	0	70	415	509
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.79
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	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	602	0	0	0	28	178	106	1155	0	103	610	674
Peak Hour Factor	0.76	0.76	0.76	0.78	0.78	0.78	0.53	0.53	0.53	0.68	0.68	0.68
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	990	519	0	459	248	208	104	1880	0	126	677	475
Arrive On Green	0.28	0.00	0.00	0.00	0.13	0.13	0.06	0.37	0.00	0.07	0.38	0.38
Sat Flow, veh/h	3534	1856	0	3428	1856	1551	1767	5233	0	1767	1763	1237
Grp Volume(v), veh/h	602	0	0	0	28	178	106	1155	0	103	610	674
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1714	1856	1551	1767	1689	0	1767	1763	1237
Q Serve(g_s), s	19.1	0.0	0.0	0.0	1.7	14.5	7.6	24.0	0.0	7.4	42.2	49.7
Cycle Q Clear(g_c), s	19.1	0.0	0.0	0.0	1.7	14.5	7.6	24.0	0.0	7.4	42.2	49.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	990	519	0	459	248	208	104	1880	0	126	677	475
V/C Ratio(X)	0.61	0.00	0.00	0.00	0.11	0.86	1.02	0.61	0.00	0.82	0.90	1.42
Avail Cap(c_a), veh/h	1037	545	0	956	517	432	104	1880	0	199	677	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	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	0.0	0.0	0.0	49.3	54.9	60.9	33.2	0.0	59.3	37.6	39.9
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.0	0.2	10.9	94.4	0.7	0.0	6.5	15.5	200.9
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	8.5	0.0	0.0	0.0	0.8	6.4	6.2	10.1	0.0	3.6	20.9	41.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.2	0.0	0.0	0.0	49.5	65.7	155.3	33.9	0.0	65.8	53.1	240.8
LnGrp LOS	D	A	A	A	D	E	F	C	A	E	D	F
Approach Vol, veh/h		602			206			1261			1387	
Approach Delay, s/veh		41.2			63.5			44.1			145.3	
Approach LOS		D			E			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.7	52.9		40.6	12.0	54.6		22.2
Change Period (Y+Rc), s	4.4	4.9		4.4	4.4	4.9		4.9
Max Green Setting (Gmax), s	14.6	42.7		38.0	7.6	49.7		36.1
Max Q Clear Time (g_c+I1), s	9.4	26.0		21.1	9.6	51.7		16.5
Green Ext Time (p_c), s	0.0	9.5		1.5	0.0	0.0		0.8

Intersection Summary	
HCM 6th Ctrl Delay	85.3
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.



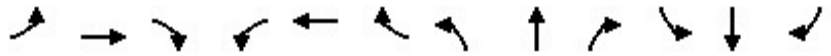
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	31	44	1382	38	592	50	625	616	492	329	34
Future Volume (veh/h)	36	31	44	1382	38	592	50	625	616	492	329	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.73	1.00		0.97	1.00		0.99	1.00		0.88
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	1826	1856	1856	1856	1856	1826	1856	1856	1856
Adj Flow Rate, veh/h	64	55	63	1706	47	589	70	880	707	572	383	32
Peak Hour Factor	0.56	0.56	0.56	0.81	0.81	0.81	0.71	0.71	0.71	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	5	3	3	3	3	5	3	3	3
Cap, veh/h	81	240	157	1273	741	609	88	929	986	512	1279	504
Arrive On Green	0.05	0.07	0.07	0.38	0.40	0.40	0.05	0.26	0.26	0.15	0.36	0.36
Sat Flow, veh/h	1767	3526	1150	3374	1856	1524	1767	3526	1526	3428	3526	1388
Grp Volume(v), veh/h	64	55	63	1706	47	589	70	880	707	572	383	32
Grp Sat Flow(s),veh/h/ln	1767	1763	1150	1687	1856	1524	1767	1763	1526	1714	1763	1388
Q Serve(g_s), s	5.2	2.1	7.4	54.6	2.3	54.7	5.7	35.4	38.1	21.6	11.2	2.2
Cycle Q Clear(g_c), s	5.2	2.1	7.4	54.6	2.3	54.7	5.7	35.4	38.1	21.6	11.2	2.2
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	81	240	157	1273	741	609	88	929	986	512	1279	504
V/C Ratio(X)	0.79	0.23	0.40	1.34	0.06	0.97	0.79	0.95	0.72	1.12	0.30	0.06
Avail Cap(c_a), veh/h	142	295	175	1273	741	609	142	929	986	512	1279	504
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	68.3	63.8	59.5	45.0	26.8	42.5	68.0	52.3	17.4	61.5	32.9	30.1
Incr Delay (d2), s/veh	6.2	0.6	2.1	158.2	0.1	28.6	5.9	18.5	3.1	76.0	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	2.4	1.0	2.2	49.7	1.0	24.4	2.7	18.1	14.9	14.7	4.9	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	64.4	61.7	203.2	26.8	71.1	73.9	70.8	20.5	137.5	33.5	30.3
LnGrp LOS	E	E	E	F	C	E	E	E	C	F	C	C
Approach Vol, veh/h		182			2342			1657			987	
Approach Delay, s/veh		67.0			166.5			49.4			93.7	
Approach LOS		E			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	43.8	59.0	15.8	11.6	58.2	11.1	63.8
Change Period (Y+Rc), s	4.4	* 5.7	4.4	* 6	4.4	5.7	4.4	6.0
Max Green Setting (Gmax), s	21.6	* 38	54.6	* 12	11.6	47.3	11.6	54.0
Max Q Clear Time (g_c+I1), s	23.6	40.1	56.6	9.4	7.7	13.2	7.2	56.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	7.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	111.5
HCM 6th LOS	F

Notes

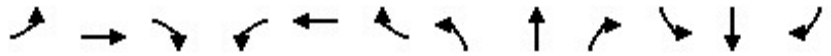
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	889	122	96	1737	16	109	7	49	0	8	42
Future Volume (veh/h)	132	889	122	96	1737	16	109	7	49	0	8	42
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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	143	966	106	104	1888	15	118	8	48	0	9	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.92	0.90
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	179	2465	765	133	2334	725	150	48	290	3	17	83
Arrive On Green	0.10	0.49	0.49	0.08	0.47	0.47	0.08	0.21	0.21	0.00	0.06	0.06
Sat Flow, veh/h	1739	4985	1547	1739	4985	1547	1767	230	1378	1767	280	1336
Grp Volume(v), veh/h	143	966	106	104	1888	15	118	0	56	0	0	52
Grp Sat Flow(s),veh/h/ln	1739	1662	1547	1739	1662	1547	1767	0	1608	1767	0	1615
Q Serve(g_s), s	5.6	8.5	2.6	4.1	22.7	0.4	4.6	0.0	2.0	0.0	0.0	2.2
Cycle Q Clear(g_c), s	5.6	8.5	2.6	4.1	22.7	0.4	4.6	0.0	2.0	0.0	0.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.83
Lane Grp Cap(c), veh/h	179	2465	765	133	2334	725	150	0	338	3	0	101
V/C Ratio(X)	0.80	0.39	0.14	0.78	0.81	0.02	0.79	0.00	0.17	0.00	0.00	0.52
Avail Cap(c_a), veh/h	251	2465	765	338	2409	748	212	0	1090	101	0	993
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	30.7	11.1	9.6	31.7	15.9	10.0	31.4	0.0	22.6	0.0	0.0	31.8
Incr Delay (d2), s/veh	7.7	0.2	0.1	3.7	2.3	0.0	7.5	0.0	0.1	0.0	0.0	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	2.5	2.4	0.8	1.7	7.1	0.1	2.2	0.0	0.7	0.0	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	11.2	9.7	35.5	18.2	10.0	38.9	0.0	22.7	0.0	0.0	33.3
LnGrp LOS	D	B	A	D	B	B	D	A	C	A	A	C
Approach Vol, veh/h		1215			2007			174			52	
Approach Delay, s/veh		14.3			19.0			33.7			33.3	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	40.6	10.3	9.3	11.6	38.7	0.0	19.6
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	13.6	30.3	8.4	43.0	10.1	33.8	4.0	47.4
Max Q Clear Time (g_c+I1), s	6.1	10.5	6.6	4.2	7.6	24.7	0.0	4.0
Green Ext Time (p_c), s	0.1	9.4	0.0	0.2	0.0	8.1	0.0	0.2

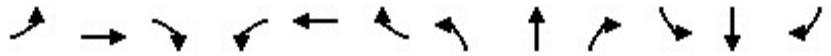
Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	690	0	19	1420	81	0	0	0	133	0	401
Future Volume (veh/h)	185	690	0	19	1420	81	0	0	0	133	0	401
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	1826	1826	0	1826	1826	1826	1856	1856	1856	1826	0	1826
Adj Flow Rate, veh/h	223	831	0	23	1711	79	0	0	0	177	0	375
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.75	0.75	0.75
Percent Heavy Veh, %	5	5	0	5	5	5	3	3	3	5	0	5
Cap, veh/h	419	3926	0	38	3415	1060	0	3	0	0	0	0
Arrive On Green	0.12	0.79	0.00	0.02	0.69	0.69	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3374	5149	0	1739	4985	1547	0	1856	0		0	
Grp Volume(v), veh/h	223	831	0	23	1711	79	0	0	0		0.0	
Grp Sat Flow(s),veh/h/ln	1687	1662	0	1739	1662	1547	0	1856	0			
Q Serve(g_s), s	3.4	2.3	0.0	0.7	9.0	0.9	0.0	0.0	0.0			
Cycle Q Clear(g_c), s	3.4	2.3	0.0	0.7	9.0	0.9	0.0	0.0	0.0			
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00			
Lane Grp Cap(c), veh/h	419	3926	0	38	3415	1060	0	3	0			
V/C Ratio(X)	0.53	0.21	0.00	0.61	0.50	0.07	0.00	0.00	0.00			
Avail Cap(c_a), veh/h	594	4647	0	198	4336	1346	0	1498	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	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00			
Uniform Delay (d), s/veh	22.4	1.5	0.0	26.4	4.1	2.8	0.0	0.0	0.0			
Incr Delay (d2), s/veh	0.4	0.0	0.0	5.9	0.2	0.1	0.0	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	1.2	0.0	0.0	0.3	0.9	0.1	0.0	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	1.5	0.0	32.3	4.3	2.9	0.0	0.0	0.0			
LnGrp LOS	C	A	A	C	A	A	A	A	A			
Approach Vol, veh/h		1054			1813			0				
Approach Delay, s/veh		6.0			4.6			0.0				
Approach LOS		A			A							

Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	5.6	48.9			11.2	43.3		0.0				
Change Period (Y+Rc), s	4.4	6.0			4.4	6.0		4.9				
Max Green Setting (Gmax), s	6.3	50.8			9.6	47.4		44.0				
Max Q Clear Time (g_c+I1), s	2.7	4.3			5.4	11.0		0.0				
Green Ext Time (p_c), s	0.0	9.9			0.2	26.4		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			5.1									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	822	5	0	1414	48	0	0	5	9	0	138
Future Volume (veh/h)	5	822	5	0	1414	48	0	0	5	9	0	138
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		0.99	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	1826	1826	1826	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	5	893	4	0	1571	42	0	0	6	12	0	173
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.62	0.62	0.62	0.72	0.72	0.72
Percent Heavy Veh, %	5	5	5	8	8	8	3	3	3	5	5	5
Cap, veh/h	9	1962	9	524	3408	1056	0	0	23	13	0	185
Arrive On Green	0.01	0.38	0.38	0.00	0.70	0.70	0.00	0.00	0.01	0.13	0.00	0.13
Sat Flow, veh/h	1739	5121	23	1697	4863	1506	0	0	1549	100	0	1448
Grp Volume(v), veh/h	5	579	318	0	1571	42	0	0	6	185	0	0
Grp Sat Flow(s),veh/h/ln	1739	1662	1821	1697	1621	1506	0	0	1549	1548	0	0
Q Serve(g_s), s	0.4	16.9	16.9	0.0	18.6	1.1	0.0	0.0	0.5	15.4	0.0	0.0
Cycle Q Clear(g_c), s	0.4	16.9	16.9	0.0	18.6	1.1	0.0	0.0	0.5	15.4	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.06		0.94
Lane Grp Cap(c), veh/h	9	1273	698	524	3408	1056	0	0	23	198	0	0
V/C Ratio(X)	0.57	0.46	0.46	0.00	0.46	0.04	0.00	0.00	0.26	0.94	0.00	0.00
Avail Cap(c_a), veh/h	490	1273	698	524	3408	1056	0	0	179	198	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)	0.95	0.95	0.95	0.00	0.72	0.72	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	64.5	30.0	30.0	0.0	8.6	6.0	0.0	0.0	63.3	56.2	0.0	0.0
Incr Delay (d2), s/veh	18.5	1.1	2.0	0.0	0.3	0.1	0.0	0.0	7.6	45.5	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	0.2	6.7	7.5	0.0	5.5	0.3	0.0	0.0	0.2	8.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.0	31.1	32.0	0.0	8.9	6.0	0.0	0.0	70.9	101.6	0.0	0.0
LnGrp LOS	F	C	C	A	A	A	A	A	E	F	A	A
Approach Vol, veh/h		902			1613			6			185	
Approach Delay, s/veh		31.7			8.9			70.9			101.6	
Approach LOS		C			A			E			F	

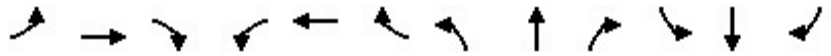
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.2	56.0		20.6	5.1	97.1		7.2
Change Period (Y+Rc), s	6.0	* 6.2		4.0	4.4	6.0		5.3
Max Green Setting (Gmax), s	28.7	* 50		16.6	36.6	42.1		15.0
Max Q Clear Time (g_c+I1), s	0.4	18.9		17.4	2.4	20.6		2.5
Green Ext Time (p_c), s	0.0	8.4		0.0	0.0	13.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

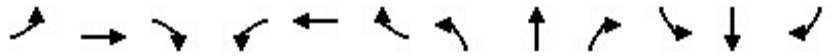
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	550	68	69	660	327	149	108	95	521	99	664
Future Volume (veh/h)	252	550	68	69	660	327	149	108	95	521	99	664
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		0.96	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	1781	1781	1781	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	274	598	59	75	717	290	160	116	91	628	119	695
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.83	0.83	0.83
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	5	5	5
Cap, veh/h	244	1505	459	120	1321	396	189	192	150	489	689	1212
Arrive On Green	0.07	0.31	0.31	0.04	0.27	0.27	0.11	0.20	0.20	0.28	0.38	0.38
Sat Flow, veh/h	3291	4863	1484	3291	4863	1456	1767	944	741	1739	1826	2675
Grp Volume(v), veh/h	274	598	59	75	717	290	160	0	207	628	119	695
Grp Sat Flow(s),veh/h/ln	1646	1621	1484	1646	1621	1456	1767	0	1685	1739	1826	1338
Q Serve(g_s), s	8.6	11.2	3.3	2.6	14.6	21.0	10.3	0.0	12.9	32.6	5.0	22.3
Cycle Q Clear(g_c), s	8.6	11.2	3.3	2.6	14.6	21.0	10.3	0.0	12.9	32.6	5.0	22.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	244	1505	459	120	1321	396	189	0	342	489	689	1212
V/C Ratio(X)	1.12	0.40	0.13	0.63	0.54	0.73	0.85	0.00	0.61	1.28	0.17	0.57
Avail Cap(c_a), veh/h	244	1607	490	210	1557	466	337	0	683	489	906	1529
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	1.00	1.00
Uniform Delay (d), s/veh	53.7	31.5	28.8	55.1	36.1	38.4	50.8	0.0	42.0	41.7	24.0	23.6
Incr Delay (d2), s/veh	94.3	0.3	0.2	2.0	0.6	6.1	4.0	0.0	3.7	142.7	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	6.6	4.2	1.2	1.1	5.6	8.1	4.8	0.0	5.7	33.3	2.2	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	148.0	31.8	29.0	57.1	36.6	44.5	54.9	0.0	45.6	184.3	24.1	23.7
LnGrp LOS	F	C	C	E	D	D	D	A	D	F	C	C
Approach Vol, veh/h		931			1082			367			1442	
Approach Delay, s/veh		65.8			40.2			49.7			93.7	
Approach LOS		E			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	41.9	16.8	48.6	13.0	37.5	37.0	28.4
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	7.4	38.3	22.1	57.5	8.6	37.1	32.6	47.0
Max Q Clear Time (g_c+I1), s	4.6	13.2	12.3	24.3	10.6	23.0	34.6	14.9
Green Ext Time (p_c), s	0.0	6.2	0.1	2.3	0.0	6.9	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	67.5
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	286	4	127	619	1191	0	0	508	1180
Future Volume (veh/h)	0	0	0	286	4	127	619	1191	0	0	508	1180
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		0.81
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				1826	1826	1826	1826	1826	0	0	1826	1826
Adj Flow Rate, veh/h				349	5	123	848	1632	0	0	524	1131
Peak Hour Factor				0.82	0.82	0.82	0.73	0.73	0.73	0.97	0.97	0.97
Percent Heavy Veh, %				5	5	5	5	5	0	0	5	5
Cap, veh/h				285	4	253	490	3795	0	0	1489	564
Arrive On Green				0.17	0.17	0.17	0.28	0.76	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1716	25	1524	1739	5149	0	0	3487	1259
Grp Volume(v), veh/h				354	0	123	848	1632	0	0	524	1131
Grp Sat Flow(s),veh/h/ln				1740	0	1524	1739	1662	0	0	1662	1259
Q Serve(g_s), s				24.9	0.0	11.0	42.3	17.4	0.0	0.0	15.5	67.2
Cycle Q Clear(g_c), s				24.9	0.0	11.0	42.3	17.4	0.0	0.0	15.5	67.2
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				289	0	253	490	3795	0	0	1489	564
V/C Ratio(X)				1.23	0.00	0.49	1.73	0.43	0.00	0.00	0.35	2.01
Avail Cap(c_a), veh/h				289	0	253	490	3795	0	0	1489	564
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				62.6	0.0	56.7	53.8	6.4	0.0	0.0	27.1	41.4
Incr Delay (d2), s/veh				128.3	0.0	1.4	336.6	0.1	0.0	0.0	0.1	458.6
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				21.3	0.0	4.4	64.3	5.8	0.0	0.0	6.3	92.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				190.8	0.0	58.2	390.5	6.4	0.0	0.0	27.3	500.0
LnGrp LOS				F	A	E	F	A	A	A	C	F
Approach Vol, veh/h					477			2480			1655	
Approach Delay, s/veh					156.6			137.8			350.3	
Approach LOS					F			F			F	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	120.0		47.0	73.0		30.0
Change Period (Y+Rc), s	5.8		* 4.7	5.8		5.1
Max Green Setting (Gmax), s	114.2		* 42	67.2		24.9
Max Q Clear Time (g_c+I1), s	19.4		44.3	69.2		26.9
Green Ext Time (p_c), s	22.2		0.0	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	216.0
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)	754	4	498	0	0	0	0	1054	343	130	672	0
Future Volume (veh/h)	754	4	498	0	0	0	0	1054	343	130	672	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.87				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	1826	1826	1826				0	1856	1856	1826	1856	0
Adj Flow Rate, veh/h	739	274	542				0	1849	541	176	908	0
Peak Hour Factor	0.81	0.81	0.81				0.57	0.57	0.57	0.74	0.74	0.74
Percent Heavy Veh, %	5	5	5				0	3	3	5	3	0
Cap, veh/h	776	222	439				0	1445	407	143	1697	0
Arrive On Green	0.45	0.45	0.45				0.00	0.37	0.37	0.08	0.48	0.00
Sat Flow, veh/h	1739	498	984				0	4093	1105	1739	3618	0
Grp Volume(v), veh/h	739	0	816				0	1580	810	176	908	0
Grp Sat Flow(s),veh/h/ln	1739	0	1482				0	1689	1655	1739	1763	0
Q Serve(g_s), s	61.4	0.0	66.9				0.0	55.2	55.2	12.3	27.0	0.0
Cycle Q Clear(g_c), s	61.4	0.0	66.9				0.0	55.2	55.2	12.3	27.0	0.0
Prop In Lane	1.00		0.66				0.00		0.67	1.00		0.00
Lane Grp Cap(c), veh/h	776	0	661				0	1243	609	143	1697	0
V/C Ratio(X)	0.95	0.00	1.23				0.00	1.27	1.33	1.23	0.54	0.00
Avail Cap(c_a), veh/h	776	0	661				0	1243	609	143	1697	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				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.0	0.0	41.6				0.0	47.4	47.4	68.8	27.2	0.0
Incr Delay (d2), s/veh	21.5	0.0	118.4				0.0	128.6	159.6	151.7	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	30.6	0.0	45.8				0.0	45.2	49.6	11.5	11.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.6	0.0	160.0				0.0	176.0	207.0	220.5	27.5	0.0
LnGrp LOS	E	A	F				A	F	F	F	C	A
Approach Vol, veh/h		1555						2390			1084	
Approach Delay, s/veh		113.2						186.5			58.8	
Approach LOS		F						F			E	

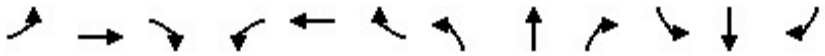
Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	17.0	61.0	72.0	78.0
Change Period (Y+Rc), s*	4.7	5.8	5.1	5.8
Max Green Setting (Gmax), s	12.3	55.2	66.9	72.2
Max Q Clear Time (g_c+I1), s	14.3	57.2	68.9	29.0
Green Ext Time (p_c), s	0.0	0.0	0.0	8.1

Intersection Summary	
HCM 6th Ctrl Delay	136.3
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)	432	25	59	4	49	429	28	524	6	230	617	291
Future Volume (veh/h)	432	25	59	4	49	429	28	524	6	230	617	291
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		0.72	1.00		0.76
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	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	713	0	0	7	91	600	57	1069	10	383	1028	437
Peak Hour Factor	0.70	0.70	0.70	0.54	0.54	0.54	0.49	0.49	0.49	0.60	0.60	0.60
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	872	458	0	1008	546	452	47	1192	11	184	688	277
Arrive On Green	0.25	0.00	0.00	0.29	0.29	0.29	0.03	0.23	0.23	0.10	0.31	0.31
Sat Flow, veh/h	3534	1856	0	3428	1856	1536	1767	5154	48	1767	2228	896
Grp Volume(v), veh/h	713	0	0	7	91	600	57	700	379	383	801	664
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1714	1856	1536	1767	1689	1825	1767	1763	1362
Q Serve(g_s), s	28.6	0.0	0.0	0.2	5.5	44.1	4.0	30.2	30.2	15.6	46.3	46.3
Cycle Q Clear(g_c), s	28.6	0.0	0.0	0.2	5.5	44.1	4.0	30.2	30.2	15.6	46.3	46.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.03	1.00		0.66
Lane Grp Cap(c), veh/h	872	458	0	1008	546	452	47	781	422	184	544	420
V/C Ratio(X)	0.82	0.00	0.00	0.01	0.17	1.33	1.21	0.90	0.90	2.08	1.47	1.58
Avail Cap(c_a), veh/h	872	458	0	1008	546	452	47	781	422	184	544	420
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	0.0	0.0	37.5	39.3	52.9	73.0	55.9	55.9	67.2	51.8	51.8
Incr Delay (d2), s/veh	5.9	0.0	0.0	0.0	0.2	162.7	198.8	13.2	21.6	505.8	222.3	271.9
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	13.5	0.0	0.0	0.1	2.6	37.5	4.4	14.4	16.6	32.9	54.0	47.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.2	0.0	0.0	37.5	39.5	215.6	271.8	69.1	77.6	573.0	274.1	323.8
LnGrp LOS	E	A	A	D	D	F	F	E	E	F	F	F
Approach Vol, veh/h		713			698			1136			1848	
Approach Delay, s/veh		59.2			190.9			82.1			353.9	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	30.0	39.6		41.4	8.4	51.2		49.0
Change Period (Y+Rc), s	4.4	4.9		4.4	4.4	4.9		4.9
Max Green Setting (Gmax), s	25.6	34.7		37.0	4.0	46.3		44.1
Max Q Clear Time (g_c+I1), s	17.6	32.2		30.6	6.0	48.3		46.1
Green Ext Time (p_c), s	0.0	1.8		1.2	0.0	0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay	210.0	
HCM 6th LOS	F	

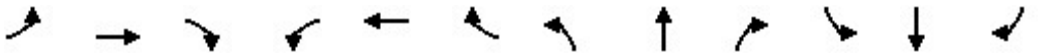
Notes

User approved volume balancing among the lanes for turning movement.

Attachment 13 – Peak Hour Intersection Calculation Worksheets – Near-Term Year (Opening Day) 2027 with Project Conditions

1: Caliente Avenue/Ocean View Hills Parkway & Otay Mesa Road

AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	23	33	490	21	301	33	428	1234	415	600	35
Future Volume (veh/h)	34	23	33	490	21	301	33	428	1234	415	600	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.99	1.00		1.00	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	1856	1856	1856	1826	1856	1856	1856	1856	1826	1856	1856	1856
Adj Flow Rate, veh/h	81	55	62	505	22	248	40	516	1286	456	659	30
Peak Hour Factor	0.42	0.42	0.42	0.97	0.97	0.97	0.83	0.83	0.83	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	5	3	3	3	3	5	3	3	3
Cap, veh/h	103	355	194	596	406	341	50	1198	799	542	1656	706
Arrive On Green	0.06	0.10	0.10	0.18	0.22	0.22	0.03	0.34	0.34	0.16	0.47	0.47
Sat Flow, veh/h	1767	3526	1482	3374	1856	1557	1767	3526	1547	3428	3526	1504
Grp Volume(v), veh/h	81	55	62	505	22	248	40	516	1286	456	659	30
Grp Sat Flow(s),veh/h/ln	1767	1763	1482	1687	1856	1557	1767	1763	1547	1714	1763	1504
Q Serve(g_s), s	4.1	1.3	3.5	13.2	0.9	13.5	2.1	10.3	31.0	11.8	11.1	1.0
Cycle Q Clear(g_c), s	4.1	1.3	3.5	13.2	0.9	13.5	2.1	10.3	31.0	11.8	11.1	1.0
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	103	355	194	596	406	341	50	1198	799	542	1656	706
V/C Ratio(X)	0.78	0.15	0.32	0.85	0.05	0.73	0.80	0.43	1.61	0.84	0.40	0.04
Avail Cap(c_a), veh/h	128	394	210	1575	917	770	108	1198	799	849	1824	778
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	42.4	37.5	36.1	36.4	28.2	33.1	44.1	23.3	22.1	37.3	15.8	13.1
Incr Delay (d2), s/veh	17.3	0.3	1.2	1.3	0.1	5.9	10.3	0.5	280.0	2.5	0.7	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	2.2	0.5	1.2	5.2	0.4	5.3	1.0	4.3	76.1	4.9	4.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	37.7	37.3	37.7	28.3	39.1	54.4	23.8	302.0	39.8	16.5	13.2
LnGrp LOS	E	D	D	D	C	D	D	C	F	D	B	B
Approach Vol, veh/h		198			775			1842			1145	
Approach Delay, s/veh		46.6			37.9			218.7			25.7	
Approach LOS		D			D			F			C	

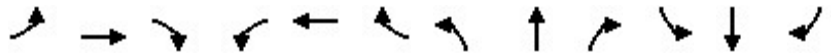
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.8	36.7	20.5	15.2	7.0	48.5	9.7	26.0
Change Period (Y+Rc), s	4.4	* 5.7	4.4	* 6	4.4	5.7	4.4	6.0
Max Green Setting (Gmax), s	22.6	* 31	42.6	* 10	5.6	47.2	6.6	45.1
Max Q Clear Time (g_c+I1), s	13.8	33.0	15.2	5.5	4.1	13.1	6.1	15.5
Green Ext Time (p_c), s	0.6	0.0	0.9	0.2	0.0	12.8	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	118.9
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

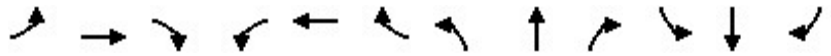
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	1560	22	43	592	1	122	7	45	0	3	72
Future Volume (veh/h)	74	1560	22	43	592	1	122	7	45	0	3	72
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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	80	1696	19	47	643	1	133	8	44	0	3	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.92	0.90
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	100	2023	628	66	1925	598	151	64	354	3	6	135
Arrive On Green	0.06	0.41	0.41	0.04	0.39	0.39	0.09	0.26	0.26	0.00	0.09	0.09
Sat Flow, veh/h	1739	4985	1547	1739	4985	1547	1767	248	1363	1767	64	1518
Grp Volume(v), veh/h	80	1696	19	47	643	1	133	0	52	0	0	74
Grp Sat Flow(s),veh/h/ln	1739	1662	1547	1739	1662	1547	1767	0	1610	1767	0	1582
Q Serve(g_s), s	2.3	15.8	0.4	1.4	4.7	0.0	3.8	0.0	1.3	0.0	0.0	2.3
Cycle Q Clear(g_c), s	2.3	15.8	0.4	1.4	4.7	0.0	3.8	0.0	1.3	0.0	0.0	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.85	1.00		0.96
Lane Grp Cap(c), veh/h	100	2023	628	66	1925	598	151	0	418	3	0	141
V/C Ratio(X)	0.80	0.84	0.03	0.71	0.33	0.00	0.88	0.00	0.12	0.00	0.00	0.53
Avail Cap(c_a), veh/h	243	2058	639	222	2000	621	151	0	1336	158	0	1319
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	24.0	13.8	9.2	24.5	11.2	9.7	23.3	0.0	14.6	0.0	0.0	22.5
Incr Delay (d2), s/veh	5.4	3.4	0.0	5.2	0.2	0.0	40.0	0.0	0.0	0.0	0.0	1.1
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	1.0	4.7	0.1	0.6	1.3	0.0	3.1	0.0	0.4	0.0	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	17.2	9.3	29.7	11.3	9.7	63.4	0.0	14.7	0.0	0.0	23.6
LnGrp LOS	C	B	A	C	B	A	E	A	B	A	A	C
Approach Vol, veh/h		1795			691			185			74	
Approach Delay, s/veh		17.7			12.6			49.7			23.6	
Approach LOS		B			B			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	26.9	8.8	9.5	7.4	25.9	0.0	18.3
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	6.6	21.3	4.4	43.0	7.2	20.7	4.6	42.8
Max Q Clear Time (g_c+I1), s	3.4	17.8	5.8	4.3	4.3	6.7	0.0	3.3
Green Ext Time (p_c), s	0.0	3.1	0.0	0.3	0.0	4.8	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B



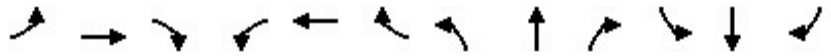
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	389	1129	16	9	463	53	61	1	26	39	0	99
Future Volume (veh/h)	389	1129	16	9	463	53	61	1	26	39	0	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	458	1328	14	10	526	48	66	1	25	55	0	97
Peak Hour Factor	0.85	0.85	0.85	0.88	0.88	0.88	0.92	0.92	0.92	0.71	0.71	0.71
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	5	5	5
Cap, veh/h	490	2348	729	18	1675	688	85	1	32	189	0	785
Arrive On Green	0.15	0.47	0.47	0.01	0.34	0.34	0.07	0.07	0.07	0.11	0.00	0.11
Sat Flow, veh/h	3374	4985	1547	1739	4985	1546	1227	19	465	1739	0	3087
Grp Volume(v), veh/h	458	1328	14	10	526	48	92	0	0	55	0	97
Grp Sat Flow(s),veh/h/ln	1687	1662	1547	1739	1662	1546	1711	0	0	1739	0	1543
Q Serve(g_s), s	7.9	11.4	0.3	0.3	4.6	1.1	3.1	0.0	0.0	1.7	0.0	1.4
Cycle Q Clear(g_c), s	7.9	11.4	0.3	0.3	4.6	1.1	3.1	0.0	0.0	1.7	0.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	490	2348	729	18	1675	688	118	0	0	189	0	785
V/C Ratio(X)	0.93	0.57	0.02	0.56	0.31	0.07	0.78	0.00	0.00	0.29	0.00	0.12
Avail Cap(c_a), veh/h	490	3351	1040	117	2964	1087	1271	0	0	206	0	815
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	1.00
Uniform Delay (d), s/veh	25.0	11.3	8.4	29.2	14.6	9.4	27.1	0.0	0.0	24.3	0.0	17.0
Incr Delay (d2), s/veh	25.0	0.3	0.0	9.9	0.2	0.1	4.2	0.0	0.0	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	4.4	3.0	0.1	0.2	1.4	0.4	1.3	0.0	0.0	0.7	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	11.6	8.4	39.0	14.8	9.5	31.3	0.0	0.0	24.6	0.0	17.0
LnGrp LOS	D	B	A	D	B	A	C	A	A	C	A	B
Approach Vol, veh/h		1800			584			92			152	
Approach Delay, s/veh		21.4			14.8			31.3			19.8	
Approach LOS		C			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	33.9		11.3	13.0	25.9		9.0				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	6.0		4.9				
Max Green Setting (Gmax), s	4.6	39.8		7.0	8.6	35.2		44.0				
Max Q Clear Time (g_c+I1), s	2.3	13.4		3.7	9.9	6.6		5.1				
Green Ext Time (p_c), s	0.0	14.5		0.1	0.0	6.4		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

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)	5	1267	6	0	544	58	0	0	5	2	0	63
Future Volume (veh/h)	5	1267	6	0	544	58	0	0	5	2	0	63
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		0.96
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	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	6	1491	6	0	640	61	0	0	10	3	0	88
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.42	0.42	0.42	0.65	0.65	0.65
Percent Heavy Veh, %	5	5	5	8	8	8	3	3	3	5	5	5
Cap, veh/h	10	3956	16	1	3584	1084	0	0	35	5	0	147
Arrive On Green	0.01	0.77	0.77	0.00	0.74	0.74	0.00	0.00	0.02	0.10	0.00	0.10
Sat Flow, veh/h	1739	5124	21	1697	4863	1471	0	0	1548	49	0	1448
Grp Volume(v), veh/h	6	967	530	0	640	61	0	0	10	91	0	0
Grp Sat Flow(s),veh/h/ln	1739	1662	1822	1697	1621	1471	0	0	1548	1497	0	0
Q Serve(g_s), s	0.5	14.0	14.0	0.0	6.0	1.7	0.0	0.0	1.0	8.7	0.0	0.0
Cycle Q Clear(g_c), s	0.5	14.0	14.0	0.0	6.0	1.7	0.0	0.0	1.0	8.7	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	0.00		1.00	0.03		0.97
Lane Grp Cap(c), veh/h	10	2566	1406	1	3584	1084	0	0	35	152	0	0
V/C Ratio(X)	0.58	0.38	0.38	0.00	0.18	0.06	0.00	0.00	0.28	0.60	0.00	0.00
Avail Cap(c_a), veh/h	46	2566	1406	45	3584	1084	0	0	413	399	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)	0.88	0.88	0.88	0.00	0.93	0.93	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	74.4	5.5	5.5	0.0	6.0	5.4	0.0	0.0	72.1	64.4	0.0	0.0
Incr Delay (d2), s/veh	16.1	0.4	0.7	0.0	0.1	0.1	0.0	0.0	5.8	1.4	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	4.0	4.5	0.0	1.8	0.5	0.0	0.0	0.4	3.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.5	5.9	6.2	0.0	6.1	5.5	0.0	0.0	77.8	65.8	0.0	0.0
LnGrp LOS	F	A	A	A	A	A	A	A	E	E	A	A
Approach Vol, veh/h		1503			701			10			91	
Approach Delay, s/veh		6.3			6.0			77.8			65.8	
Approach LOS		A			A			E			E	

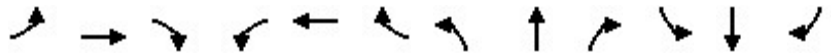
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	0.0	122.0		19.3	5.3	116.7		8.7
Change Period (Y+Rc), s	4.4	6.2		4.0	4.4	* 6.2		5.3
Max Green Setting (Gmax), s	4.6	46.1		40.0	4.0	* 46		40.0
Max Q Clear Time (g_c+I1), s	10.0	16.0		10.7	2.5	8.0		3.0
Green Ext Time (p_c), s	0.0	15.8		0.2	0.0	6.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



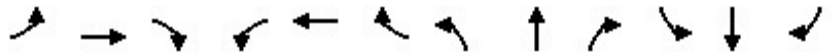
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	568	571	147	81	393	433	41	79	39	277	97	119
Future Volume (veh/h)	568	571	147	81	393	433	41	79	39	277	97	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	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	1781	1781	1781	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	684	688	141	94	457	462	55	107	48	301	105	90
Peak Hour Factor	0.83	0.83	0.83	0.86	0.86	0.86	0.74	0.74	0.74	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	5	5	5
Cap, veh/h	635	2205	674	141	1475	443	71	208	93	293	553	1334
Arrive On Green	0.19	0.45	0.45	0.04	0.30	0.30	0.04	0.17	0.17	0.17	0.30	0.30
Sat Flow, veh/h	3291	4863	1487	3291	4863	1461	1767	1195	536	1739	1826	2670
Grp Volume(v), veh/h	684	688	141	94	457	462	55	0	155	301	105	90
Grp Sat Flow(s),veh/h/ln	1646	1621	1487	1646	1621	1461	1767	0	1731	1739	1826	1335
Q Serve(g_s), s	23.6	11.0	7.0	3.4	8.8	37.1	3.8	0.0	9.9	20.6	5.2	2.2
Cycle Q Clear(g_c), s	23.6	11.0	7.0	3.4	8.8	37.1	3.8	0.0	9.9	20.6	5.2	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	635	2205	674	141	1475	443	71	0	302	293	553	1334
V/C Ratio(X)	1.08	0.31	0.21	0.67	0.31	1.04	0.78	0.00	0.51	1.03	0.19	0.07
Avail Cap(c_a), veh/h	635	2205	674	239	1475	443	149	0	694	293	885	1820
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	1.00	1.00
Uniform Delay (d), s/veh	49.4	21.3	20.2	57.7	32.8	42.6	58.2	0.0	45.8	50.9	31.6	16.1
Incr Delay (d2), s/veh	58.2	0.1	0.2	2.0	0.2	54.4	6.7	0.0	2.9	59.9	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	14.4	4.0	2.5	1.4	3.4	19.9	1.8	0.0	4.5	13.9	2.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.6	21.4	20.4	59.7	33.0	97.0	64.9	0.0	48.7	110.8	31.6	16.1
LnGrp LOS	F	C	C	E	C	F	E	A	D	F	C	B
Approach Vol, veh/h		1513			1013			210			496	
Approach Delay, s/veh		60.3			64.6			52.9			76.8	
Approach LOS		E			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	61.4	9.3	41.9	28.0	43.1	25.0	26.2
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	8.3	51.8	10.3	59.3	23.6	37.1	20.6	49.0
Max Q Clear Time (g_c+I1), s	5.4	13.0	5.8	7.2	25.6	39.1	22.6	11.9
Green Ext Time (p_c), s	0.0	8.8	0.0	0.6	0.0	0.0	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	63.7
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	157	0	79	447	1570	0	0	370	712
Future Volume (veh/h)	0	0	0	157	0	79	447	1570	0	0	370	712
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		0.93
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				1826	1826	1826	1826	1826	0	0	1826	1826
Adj Flow Rate, veh/h				204	0	82	491	1725	0	0	411	717
Peak Hour Factor				0.77	0.77	0.77	0.91	0.91	0.91	0.90	0.90	0.90
Percent Heavy Veh, %				5	5	5	5	5	0	0	5	5
Cap, veh/h				172	0	153	489	3888	0	0	1484	644
Arrive On Green				0.10	0.00	0.10	0.28	0.78	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1739	0	1547	1739	5149	0	0	3487	1442
Grp Volume(v), veh/h				204	0	82	491	1725	0	0	411	717
Grp Sat Flow(s),veh/h/ln				1739	0	1547	1739	1662	0	0	1662	1442
Q Serve(g_s), s				8.9	0.0	4.5	25.3	10.5	0.0	0.0	7.0	40.2
Cycle Q Clear(g_c), s				8.9	0.0	4.5	25.3	10.5	0.0	0.0	7.0	40.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				172	0	153	489	3888	0	0	1484	644
V/C Ratio(X)				1.19	0.00	0.54	1.00	0.44	0.00	0.00	0.28	1.11
Avail Cap(c_a), veh/h				172	0	153	489	3888	0	0	1484	644
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				40.6	0.0	38.6	32.3	3.3	0.0	0.0	15.7	24.9
Incr Delay (d2), s/veh				127.6	0.0	3.6	41.8	0.1	0.0	0.0	0.1	70.8
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				9.8	0.0	1.9	15.9	2.3	0.0	0.0	2.6	25.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				168.2	0.0	42.2	74.2	3.4	0.0	0.0	15.8	95.7
LnGrp LOS				F	A	D	F	A	A	A	B	F
Approach Vol, veh/h					286			2216			1128	
Approach Delay, s/veh					132.1			19.1			66.6	
Approach LOS					F			B			E	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	76.0		30.0	46.0		14.0
Change Period (Y+Rc), s	5.8		* 4.7	5.8		5.1
Max Green Setting (Gmax), s	70.2		* 25	40.2		8.9
Max Q Clear Time (g_c+I1), s	12.5		27.3	42.2		10.9
Green Ext Time (p_c), s	22.4		0.0	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.8
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)	1099	1	529	0	0	0	0	929	275	127	489	0
Future Volume (veh/h)	1099	1	529	0	0	0	0	929	275	127	489	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				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	1826	1826	1826				0	1856	1856	1826	1856	0
Adj Flow Rate, veh/h	842	478	500				0	1308	348	212	815	0
Peak Hour Factor	0.93	0.93	0.93				0.71	0.71	0.71	0.60	0.60	0.60
Percent Heavy Veh, %	5	5	5				0	3	3	5	3	0
Cap, veh/h	781	353	369				0	1391	369	160	1676	0
Arrive On Green	0.45	0.45	0.45				0.00	0.35	0.35	0.09	0.48	0.00
Sat Flow, veh/h	1739	786	822				0	4131	1053	1739	3618	0
Grp Volume(v), veh/h	842	0	978				0	1114	542	212	815	0
Grp Sat Flow(s),veh/h/ln	1739	0	1609				0	1689	1639	1739	1763	0
Q Serve(g_s), s	64.9	0.0	64.9				0.0	46.2	46.3	13.3	22.8	0.0
Cycle Q Clear(g_c), s	64.9	0.0	64.9				0.0	46.2	46.3	13.3	22.8	0.0
Prop In Lane	1.00		0.51				0.00		0.64	1.00		0.00
Lane Grp Cap(c), veh/h	781	0	722				0	1185	575	160	1676	0
V/C Ratio(X)	1.08	0.00	1.35				0.00	0.94	0.94	1.32	0.49	0.00
Avail Cap(c_a), veh/h	781	0	722				0	1196	581	160	1688	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				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.8	0.0	39.8				0.0	45.4	45.5	65.6	25.9	0.0
Incr Delay (d2), s/veh	55.4	0.0	168.2				0.0	14.0	23.8	182.8	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
%ile BackOfQ(50%),veh/ln	39.3	0.0	59.0				0.0	21.6	22.5	14.0	9.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.2	0.0	208.0				0.0	59.4	69.3	248.4	26.1	0.0
LnGrp LOS	F	A	F				A	E	E	F	C	A
Approach Vol, veh/h		1820						1656			1027	
Approach Delay, s/veh		155.8						62.6			72.0	
Approach LOS		F						E			E	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	18.0	56.5	70.0	74.5
Change Period (Y+Rc), s*	4.7	5.8	5.1	5.8
Max Green Setting (Gmax), s	13.3	51.2	64.9	69.2
Max Q Clear Time (g_c+I1), s	15.3	48.3	66.9	24.8
Green Ext Time (p_c), s	0.0	2.4	0.0	7.0

Intersection Summary	
HCM 6th Ctrl Delay	102.4
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.

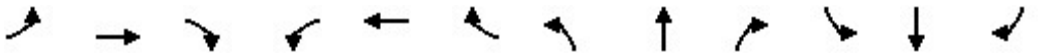
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	440	6	20	0	22	193	56	612	0	70	417	521
Future Volume (veh/h)	440	6	20	0	22	193	56	612	0	70	417	521
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.79
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	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	607	0	0	0	28	178	106	1155	0	103	613	690
Peak Hour Factor	0.76	0.76	0.76	0.78	0.78	0.78	0.53	0.53	0.53	0.68	0.68	0.68
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	990	520	0	459	248	207	76	1880	0	126	704	499
Arrive On Green	0.28	0.00	0.00	0.00	0.13	0.13	0.04	0.37	0.00	0.07	0.40	0.40
Sat Flow, veh/h	3534	1856	0	3428	1856	1551	1767	5233	0	1767	1763	1248
Grp Volume(v), veh/h	607	0	0	0	28	178	106	1155	0	103	613	690
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1714	1856	1551	1767	1689	0	1767	1763	1248
Q Serve(g_s), s	19.3	0.0	0.0	0.0	1.7	14.5	5.6	24.1	0.0	7.4	41.5	51.7
Cycle Q Clear(g_c), s	19.3	0.0	0.0	0.0	1.7	14.5	5.6	24.1	0.0	7.4	41.5	51.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	990	520	0	459	248	207	76	1880	0	126	704	499
V/C Ratio(X)	0.61	0.00	0.00	0.00	0.11	0.86	1.39	0.61	0.00	0.82	0.87	1.38
Avail Cap(c_a), veh/h	1054	553	0	940	509	425	76	1880	0	199	704	499
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	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	0.0	0.0	0.0	49.3	54.9	61.9	33.2	0.0	59.3	35.8	38.9
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.0	0.2	10.9	236.3	0.7	0.0	6.5	11.7	185.0
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	8.6	0.0	0.0	0.0	0.8	6.4	7.6	10.1	0.0	3.6	19.9	41.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	0.0	0.0	0.0	49.5	65.8	298.2	33.9	0.0	65.8	47.5	223.9
LnGrp LOS	D	A	A	A	D	E	F	C	A	E	D	F
Approach Vol, veh/h		607			206			1261			1406	
Approach Delay, s/veh		41.3			63.6			56.1			135.4	
Approach LOS		D			E			E			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.7	52.9		40.7	10.0	56.6		22.2
Change Period (Y+Rc), s	4.4	4.9		4.4	4.4	4.9		4.9
Max Green Setting (Gmax), s	14.6	42.7		38.6	5.6	51.7		35.5
Max Q Clear Time (g_c+I1), s	9.4	26.1		21.3	7.6	53.7		16.5
Green Ext Time (p_c), s	0.0	9.5		1.5	0.0	0.0		0.8

Intersection Summary	
HCM 6th Ctrl Delay	86.0
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)	36	31	44	1428	38	605	50	625	713	521	329	34
Future Volume (veh/h)	36	31	44	1428	38	605	50	625	713	521	329	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.73	1.00		0.97	1.00		0.99	1.00		0.88
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	1826	1856	1856	1856	1856	1826	1856	1856	1856
Adj Flow Rate, veh/h	64	55	63	1763	47	603	70	880	815	606	383	32
Peak Hour Factor	0.56	0.56	0.56	0.81	0.81	0.81	0.71	0.71	0.71	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	5	3	3	3	3	5	3	3	3
Cap, veh/h	81	237	155	1348	781	642	88	844	983	528	1211	473
Arrive On Green	0.05	0.07	0.07	0.40	0.42	0.42	0.05	0.24	0.24	0.15	0.34	0.34
Sat Flow, veh/h	1767	3526	1144	3374	1856	1526	1767	3526	1526	3428	3526	1378
Grp Volume(v), veh/h	64	55	63	1763	47	603	70	880	815	606	383	32
Grp Sat Flow(s),veh/h/ln	1767	1763	1144	1687	1856	1526	1767	1763	1526	1714	1763	1378
Q Serve(g_s), s	5.3	2.2	7.5	58.6	2.2	55.5	5.7	35.1	35.1	22.6	11.7	2.3
Cycle Q Clear(g_c), s	5.3	2.2	7.5	58.6	2.2	55.5	5.7	35.1	35.1	22.6	11.7	2.3
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	81	237	155	1348	781	642	88	844	983	528	1211	473
V/C Ratio(X)	0.79	0.23	0.41	1.31	0.06	0.94	0.79	1.04	0.83	1.15	0.32	0.07
Avail Cap(c_a), veh/h	176	243	157	1348	781	642	116	844	983	528	1211	473
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	69.2	64.8	60.5	44.0	25.2	40.7	68.9	55.8	20.5	62.0	35.4	32.3
Incr Delay (d2), s/veh	6.2	0.6	2.2	144.0	0.1	22.3	18.1	42.7	6.6	86.5	0.6	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	2.5	1.0	2.2	50.2	1.0	23.7	3.1	20.6	20.9	16.1	5.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.4	65.5	62.7	188.0	25.3	63.0	87.0	98.5	27.1	148.5	36.1	32.6
LnGrp LOS	E	E	E	F	C	E	F	F	C	F	D	C
Approach Vol, veh/h		182			2413			1765			1021	
Approach Delay, s/veh		68.0			153.6			65.1			102.7	
Approach LOS		E			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	40.8	63.0	15.9	11.7	56.1	11.1	67.7
Change Period (Y+Rc), s	4.4	* 5.7	4.4	* 6	4.4	5.7	4.4	6.0
Max Green Setting (Gmax), s	22.6	* 35	58.6	* 10	9.6	47.3	14.6	53.0
Max Q Clear Time (g_c+I1), s	24.6	37.1	60.6	9.5	7.7	13.7	7.3	57.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	112.0
HCM 6th LOS	F

Notes

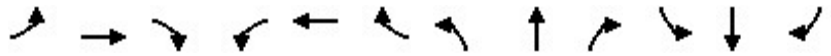
User approved pedestrian interval to be less than phase max green.

* 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)	132	903	188	112	1357	16	141	9	58	0	12	42
Future Volume (veh/h)	132	903	188	112	1357	16	141	9	58	0	12	42
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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	143	982	163	122	1475	15	153	10	56	0	13	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.92	0.90
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	179	2224	691	155	2156	669	190	58	326	3	25	82
Arrive On Green	0.10	0.45	0.45	0.09	0.43	0.43	0.11	0.24	0.24	0.00	0.07	0.07
Sat Flow, veh/h	1739	4985	1547	1739	4985	1547	1767	244	1366	1767	378	1252
Grp Volume(v), veh/h	143	982	163	122	1475	15	153	0	66	0	0	56
Grp Sat Flow(s),veh/h/ln	1739	1662	1547	1739	1662	1547	1767	0	1610	1767	0	1630
Q Serve(g_s), s	5.4	9.2	4.4	4.7	16.1	0.4	5.7	0.0	2.2	0.0	0.0	2.2
Cycle Q Clear(g_c), s	5.4	9.2	4.4	4.7	16.1	0.4	5.7	0.0	2.2	0.0	0.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.85	1.00		0.77
Lane Grp Cap(c), veh/h	179	2224	691	155	2156	669	190	0	384	3	0	107
V/C Ratio(X)	0.80	0.44	0.24	0.79	0.68	0.02	0.80	0.00	0.17	0.00	0.00	0.52
Avail Cap(c_a), veh/h	259	2231	693	349	2489	773	198	0	1127	104	0	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	29.7	12.9	11.6	30.2	15.5	11.0	29.5	0.0	20.5	0.0	0.0	30.6
Incr Delay (d2), s/veh	6.5	0.2	0.3	3.3	0.8	0.0	18.5	0.0	0.1	0.0	0.0	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	2.4	2.7	1.4	1.9	5.0	0.1	3.3	0.0	0.8	0.0	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	13.1	11.9	33.5	16.3	11.0	48.0	0.0	20.5	0.0	0.0	32.1
LnGrp LOS	D	B	B	C	B	B	D	A	C	A	A	C
Approach Vol, veh/h		1288			1612			219			56	
Approach Delay, s/veh		15.5			17.6			39.8			32.1	
Approach LOS		B			B			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	36.2	11.7	9.3	11.4	35.3	0.0	21.0
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	13.6	30.3	7.6	43.8	10.1	33.8	4.0	47.4
Max Q Clear Time (g_c+I1), s	6.7	11.2	7.7	4.2	7.4	18.1	0.0	4.2
Green Ext Time (p_c), s	0.1	9.6	0.0	0.2	0.0	11.1	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B



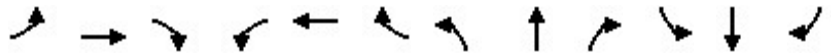
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	650	61	45	1028	81	27	0	11	133	1	401
Future Volume (veh/h)	185	650	61	45	1028	81	27	0	11	133	1	401
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	223	783	65	54	1239	79	29	0	10	177	0	374
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.92	0.92	0.92	0.75	0.75	0.75
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	5	5	5
Cap, veh/h	324	2542	789	67	2256	918	38	0	13	244	0	733
Arrive On Green	0.10	0.51	0.51	0.04	0.45	0.45	0.03	0.00	0.03	0.14	0.00	0.14
Sat Flow, veh/h	3374	4985	1547	1739	4985	1547	1274	0	439	1739	0	3095
Grp Volume(v), veh/h	223	783	65	54	1239	79	39	0	0	177	0	374
Grp Sat Flow(s),veh/h/ln	1687	1662	1547	1739	1662	1547	1713	0	0	1739	0	1547
Q Serve(g_s), s	4.6	6.6	1.5	2.2	13.0	1.6	1.6	0.0	0.0	7.0	0.0	7.6
Cycle Q Clear(g_c), s	4.6	6.6	1.5	2.2	13.0	1.6	1.6	0.0	0.0	7.0	0.0	7.6
Prop In Lane	1.00		1.00	1.00		1.00	0.74		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	324	2542	789	67	2256	918	52	0	0	244	0	733
V/C Ratio(X)	0.69	0.31	0.08	0.80	0.55	0.09	0.76	0.00	0.00	0.72	0.00	0.51
Avail Cap(c_a), veh/h	450	3517	1092	150	3282	1236	1047	0	0	333	0	891
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	1.00
Uniform Delay (d), s/veh	31.5	10.3	9.0	34.3	14.4	6.3	34.7	0.0	0.0	29.6	0.0	23.9
Incr Delay (d2), s/veh	1.0	0.1	0.1	7.9	0.4	0.1	8.1	0.0	0.0	2.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.9	0.4	1.0	4.0	0.6	0.8	0.0	0.0	3.0	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.5	10.4	9.1	42.3	14.8	6.4	42.7	0.0	0.0	32.2	0.0	24.1
LnGrp LOS	C	B	A	D	B	A	D	A	A	C	A	C
Approach Vol, veh/h		1071			1372			39			551	
Approach Delay, s/veh		14.9			15.4			42.7			26.7	
Approach LOS		B			B			D			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.2	42.7		15.0	11.3	38.6		7.1
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	6.0		4.9
Max Green Setting (Gmax), s	6.3	50.8		13.8	9.6	47.4		44.0
Max Q Clear Time (g_c+I1), s	4.2	8.6		9.6	6.6	15.0		3.6
Green Ext Time (p_c), s	0.0	9.6		0.6	0.1	17.5		0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

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)	5	793	7	0	1046	46	4	0	5	10	0	137
Future Volume (veh/h)	5	793	7	0	1046	46	4	0	5	10	0	137
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		0.99	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	1826	1826	1826	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	5	862	7	0	1162	40	6	0	6	14	0	171
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.62	0.62	0.62	0.72	0.72	0.72
Percent Heavy Veh, %	5	5	5	8	8	8	3	3	3	5	5	5
Cap, veh/h	9	1953	16	504	3349	1037	22	0	22	15	0	183
Arrive On Green	0.01	0.38	0.38	0.00	0.69	0.69	0.03	0.00	0.03	0.13	0.00	0.13
Sat Flow, veh/h	1739	5099	41	1697	4863	1506	825	0	825	117	0	1433
Grp Volume(v), veh/h	5	562	307	0	1162	40	12	0	0	185	0	0
Grp Sat Flow(s),veh/h/ln	1739	1662	1817	1697	1621	1506	1651	0	0	1550	0	0
Q Serve(g_s), s	0.4	16.3	16.3	0.0	12.7	1.1	0.9	0.0	0.0	15.4	0.0	0.0
Cycle Q Clear(g_c), s	0.4	16.3	16.3	0.0	12.7	1.1	0.9	0.0	0.0	15.4	0.0	0.0
Prop In Lane	1.00		0.02	1.00		1.00	0.50		0.50	0.08		0.92
Lane Grp Cap(c), veh/h	9	1273	696	504	3349	1037	45	0	0	198	0	0
V/C Ratio(X)	0.57	0.44	0.44	0.00	0.35	0.04	0.27	0.00	0.00	0.93	0.00	0.00
Avail Cap(c_a), veh/h	490	1273	696	504	3349	1037	190	0	0	198	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)	0.92	0.92	0.92	0.00	0.70	0.70	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	64.5	29.8	29.8	0.0	8.3	6.5	62.0	0.0	0.0	56.2	0.0	0.0
Incr Delay (d2), s/veh	17.9	1.0	1.9	0.0	0.2	0.0	4.2	0.0	0.0	45.1	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	0.2	6.4	7.2	0.0	3.9	0.3	0.4	0.0	0.0	8.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.5	30.8	31.6	0.0	8.5	6.5	66.2	0.0	0.0	101.3	0.0	0.0
LnGrp LOS	F	C	C	A	A	A	E	A	A	F	A	A
Approach Vol, veh/h		874			1202			12			185	
Approach Delay, s/veh		31.4			8.4			66.2			101.3	
Approach LOS		C			A			E			F	

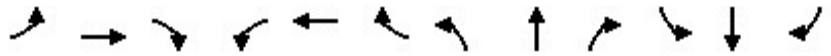
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.6	56.0		20.6	5.1	95.5		8.8				
Change Period (Y+Rc), s	6.0	* 6.2		4.0	4.4	6.0		5.3				
Max Green Setting (Gmax), s	28.7	* 50		16.6	36.6	42.1		15.0				
Max Q Clear Time (g_c+I1), s	0.0	18.3		17.4	2.4	14.7		2.9				
Green Ext Time (p_c), s	0.0	8.1		0.0	0.0	11.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

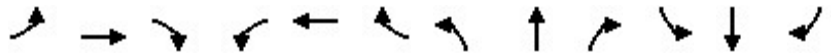
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	568	68	69	699	327	149	108	95	521	99	664
Future Volume (veh/h)	252	568	68	69	699	327	149	108	95	521	99	664
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		0.96	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	1781	1781	1781	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	274	617	59	75	760	290	160	116	91	628	119	695
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.83	0.83	0.83
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	5	5	5
Cap, veh/h	245	1524	465	120	1339	401	189	192	150	481	681	1200
Arrive On Green	0.07	0.31	0.31	0.04	0.28	0.28	0.11	0.20	0.20	0.28	0.37	0.37
Sat Flow, veh/h	3291	4863	1484	3291	4863	1457	1767	944	741	1739	1826	2675
Grp Volume(v), veh/h	274	617	59	75	760	290	160	0	207	628	119	695
Grp Sat Flow(s),veh/h/ln	1646	1621	1484	1646	1621	1457	1767	0	1685	1739	1826	1338
Q Serve(g_s), s	8.6	11.5	3.3	2.6	15.5	20.8	10.3	0.0	12.9	31.9	5.0	22.4
Cycle Q Clear(g_c), s	8.6	11.5	3.3	2.6	15.5	20.8	10.3	0.0	12.9	31.9	5.0	22.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	245	1524	465	120	1339	401	189	0	342	481	681	1200
V/C Ratio(X)	1.12	0.40	0.13	0.63	0.57	0.72	0.85	0.00	0.60	1.31	0.17	0.58
Avail Cap(c_a), veh/h	245	1643	501	211	1593	477	328	0	686	481	910	1536
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	1.00	1.00
Uniform Delay (d), s/veh	53.4	31.2	28.3	54.8	35.9	37.8	50.6	0.0	41.8	41.8	24.3	23.8
Incr Delay (d2), s/veh	92.6	0.3	0.2	2.0	0.6	5.6	4.0	0.0	3.6	152.5	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	6.6	4.3	1.2	1.1	5.9	8.0	4.7	0.0	5.7	34.0	2.2	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	146.0	31.4	28.5	56.8	36.5	43.4	54.6	0.0	45.4	194.2	24.3	24.0
LnGrp LOS	F	C	C	E	D	D	D	A	D	F	C	C
Approach Vol, veh/h		950			1125			367			1442	
Approach Delay, s/veh		64.3			39.7			49.4			98.2	
Approach LOS		E			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	42.2	16.7	47.9	13.0	37.8	36.3	28.3
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	7.4	39.0	21.4	57.5	8.6	37.8	31.9	47.0
Max Q Clear Time (g_c+I1), s	14.6	13.5	12.3	24.4	10.6	22.8	33.9	14.9
Green Ext Time (p_c), s	0.0	6.4	0.1	2.3	0.0	7.5	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	68.3
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	286	4	127	619	1288	0	0	515	1220
Future Volume (veh/h)	0	0	0	286	4	127	619	1288	0	0	515	1220
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		0.81
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				1826	1826	1826	1826	1826	0	0	1826	1826
Adj Flow Rate, veh/h				349	5	123	848	1764	0	0	531	1168
Peak Hour Factor				0.82	0.82	0.82	0.73	0.73	0.73	0.97	0.97	0.97
Percent Heavy Veh, %				5	5	5	5	5	0	0	5	5
Cap, veh/h				212	3	188	567	3995	0	0	1471	555
Arrive On Green				0.12	0.12	0.12	0.33	0.80	0.00	0.00	0.44	0.44
Sat Flow, veh/h				1716	25	1522	1739	5149	0	0	3487	1254
Grp Volume(v), veh/h				354	0	123	848	1764	0	0	531	1168
Grp Sat Flow(s),veh/h/ln				1740	0	1522	1739	1662	0	0	1662	1254
Q Serve(g_s), s				17.9	0.0	11.2	47.3	15.8	0.0	0.0	15.4	64.2
Cycle Q Clear(g_c), s				17.9	0.0	11.2	47.3	15.8	0.0	0.0	15.4	64.2
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				215	0	188	567	3995	0	0	1471	555
V/C Ratio(X)				1.65	0.00	0.65	1.49	0.44	0.00	0.00	0.36	2.10
Avail Cap(c_a), veh/h				215	0	188	567	3995	0	0	1471	555
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				63.6	0.0	60.6	48.8	4.4	0.0	0.0	26.8	40.4
Incr Delay (d2), s/veh				311.5	0.0	7.9	231.9	0.1	0.0	0.0	0.1	502.9
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				26.5	0.0	4.7	56.9	4.7	0.0	0.0	6.2	97.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				375.1	0.0	68.5	280.8	4.5	0.0	0.0	26.9	543.3
LnGrp LOS				F	A	E	F	A	A	A	C	F
Approach Vol, veh/h					477			2612			1699	
Approach Delay, s/veh					296.0			94.2			381.9	
Approach LOS					F			F			F	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	122.0		52.0	70.0		23.0
Change Period (Y+Rc), s	5.8		* 4.7	5.8		5.1
Max Green Setting (Gmax), s	116.2		* 47	64.2		17.9
Max Q Clear Time (g_c+I1), s	17.8		49.3	66.2		19.9
Green Ext Time (p_c), s	26.3		0.0	0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		216.4
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)	838	4	498	0	0	0	0	1068	343	130	679	0
Future Volume (veh/h)	838	4	498	0	0	0	0	1068	343	130	679	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.87				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	1826	1826	1826				0	1856	1856	1826	1856	0
Adj Flow Rate, veh/h	791	346	542				0	1874	541	176	918	0
Peak Hour Factor	0.81	0.81	0.81				0.57	0.57	0.57	0.74	0.74	0.74
Percent Heavy Veh, %	5	5	5				0	3	3	5	3	0
Cap, veh/h	764	257	403				0	1555	431	108	1720	0
Arrive On Green	0.44	0.44	0.44				0.00	0.39	0.39	0.06	0.49	0.00
Sat Flow, veh/h	1739	585	917				0	4108	1093	1739	3618	0
Grp Volume(v), veh/h	791	0	888				0	1595	820	176	918	0
Grp Sat Flow(s),veh/h/ln	1739	0	1502				0	1689	1657	1739	1763	0
Q Serve(g_s), s	65.9	0.0	65.9				0.0	59.2	59.2	9.3	27.0	0.0
Cycle Q Clear(g_c), s	65.9	0.0	65.9				0.0	59.2	59.2	9.3	27.0	0.0
Prop In Lane	1.00		0.61				0.00		0.66	1.00		0.00
Lane Grp Cap(c), veh/h	764	0	660				0	1333	654	108	1720	0
V/C Ratio(X)	1.04	0.00	1.35				0.00	1.20	1.25	1.63	0.53	0.00
Avail Cap(c_a), veh/h	764	0	660				0	1333	654	108	1720	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				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.0	0.0	42.1				0.0	45.4	45.4	70.4	26.6	0.0
Incr Delay (d2), s/veh	42.0	0.0	165.4				0.0	96.0	126.6	322.6	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	66.8	0.0	54.4				0.0	42.4	47.1	13.8	11.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.1	0.0	207.4				0.0	141.4	172.0	393.0	26.9	0.0
LnGrp LOS	F	A	F				A	F	F	F	C	A
Approach Vol, veh/h		1679						2415			1094	
Approach Delay, s/veh		149.3						151.8			85.8	
Approach LOS		F						F			F	

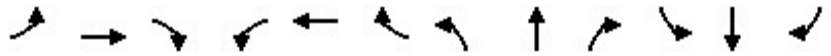
Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	14.0	65.0	71.0	79.0
Change Period (Y+Rc), s*	4.7	5.8	5.1	5.8
Max Green Setting (Gmax), s	9.3	59.2	65.9	73.2
Max Q Clear Time (g_c+I1), s	11.3	61.2	67.9	29.0
Green Ext Time (p_c), s	0.0	0.0	0.0	8.2

Intersection Summary	
HCM 6th Ctrl Delay	137.1
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)	444	25	59	4	49	429	28	526	6	230	617	297
Future Volume (veh/h)	444	25	59	4	49	429	28	526	6	230	617	297
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		0.72	1.00		0.76
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	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	730	0	0	7	91	600	57	1073	10	383	1028	442
Peak Hour Factor	0.70	0.70	0.70	0.54	0.54	0.54	0.49	0.49	0.49	0.60	0.60	0.60
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	872	458	0	1008	546	451	47	1192	11	184	685	278
Arrive On Green	0.25	0.00	0.00	0.29	0.29	0.29	0.03	0.23	0.23	0.10	0.31	0.31
Sat Flow, veh/h	3534	1856	0	3428	1856	1536	1767	5154	48	1767	2220	902
Grp Volume(v), veh/h	730	0	0	7	91	600	57	703	380	383	804	666
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1714	1856	1536	1767	1689	1825	1767	1763	1359
Q Serve(g_s), s	29.4	0.0	0.0	0.2	5.5	44.1	4.0	30.3	30.3	15.6	46.3	46.3
Cycle Q Clear(g_c), s	29.4	0.0	0.0	0.2	5.5	44.1	4.0	30.3	30.3	15.6	46.3	46.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.03	1.00		0.66
Lane Grp Cap(c), veh/h	872	458	0	1008	546	451	47	781	422	184	544	419
V/C Ratio(X)	0.84	0.00	0.00	0.01	0.17	1.33	1.21	0.90	0.90	2.08	1.48	1.59
Avail Cap(c_a), veh/h	872	458	0	1008	546	451	47	781	422	184	544	419
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	0.0	0.0	37.5	39.3	52.9	73.0	56.0	56.0	67.2	51.8	51.8
Incr Delay (d2), s/veh	7.0	0.0	0.0	0.0	0.2	162.7	198.8	13.6	22.2	505.9	224.5	275.8
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	14.1	0.0	0.0	0.1	2.6	37.5	4.4	14.5	16.7	32.9	54.3	47.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	0.0	0.0	37.5	39.5	215.6	271.8	69.5	78.1	573.1	276.4	327.6
LnGrp LOS	E	A	A	D	D	F	F	E	E	F	F	F
Approach Vol, veh/h		730			698			1140			1853	
Approach Delay, s/veh		60.6			190.9			82.5			356.1	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.0	39.6		41.4	8.4	51.2		49.0
Change Period (Y+Rc), s	4.4	4.9		4.4	4.4	4.9		4.9
Max Green Setting (Gmax), s	15.6	34.7		37.0	4.0	46.3		44.1
Max Q Clear Time (g_c+I1), s	17.6	32.3		31.4	6.0	48.3		46.1
Green Ext Time (p_c), s	0.0	1.7		1.1	0.0	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	210.7
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Attachment 14 – Horizon Year 2062 Volume Calculations

Horizon Year Volume Development

Forecasted Horizon Year 2062 ADT were developed by determining growth per year observed in the SANDAG Series 14 model and applying growth per year to existing counts for study roadway segments.

Horizon Year 2062 intersection peak hour turning movement volumes were developed by utilizing the National Cooperative Highway Research Program (NCHRP) Report 255 methodology for estimating intersection turning movements. This methodology describes the use of growth factors, based on the comparison of existing ADT and estimated Horizon Year 2062 ADT, which are applied to existing peak hour intersection approach and departure volumes. For legs at intersections without known existing or forecasted Horizon Year 2062 ADT, a 10% growth rate was assumed for minor streets, or a growth percentage was assumed based on other legs at intersection that do have existing and forecasted Horizon Year 2062 ADT.

Manual adjustments were also made to ensure that traffic volumes among adjacent intersections were reasonably balanced. As a conservative approach, these Horizon Year 2062 intersection turning movement volumes were also compared to Near-Term and adjusted, if necessary, to ensure future year volumes were higher than near-term volumes.

Existing Volumes

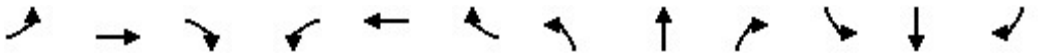
	Name	Existing Movement Volume												Directional volume (Leg)				Existing ADT				Future ADT				Leg Growth				Future Directional Volume				Future Directional Growth				Movement Growth												Future Movement							
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W	N Leg	S Leg	E Leg	W Leg	N Leg	S Leg	E Leg	W Leg	N Leg	S Leg	E Leg	W Leg	N	S	E	W	N	S	E	W	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBR	WBL	WBT	WBR
1A	Caliente Ave/Ocean View Hills Pkwy & Otay Mesa Rd	5	347	553	152	487	1			5	257	1	67	640	905	325	5	11,405	20,951	16,454	-	15,800	29,750	32,850	-	139%	142%	200%	110%	887	1285	649	6	247	380	324	1	93	117	169	109	78	60	0	0	0	118	91	115	98	464	722	261	565	61	0	0	5	375	92	182
2A	Otay Mesa Rd & Emerald Crest Ct						72			705			284	1	72	0	285	705	-	-	15,855	16,454	-	-	33,460	32,850	110%	110%	211%	200%	79	0	601	1408	7	0	316	703	0	0	0	3	1	3	179	344	179	83	150	83	0	0	0	0	0	75	0	1049	0	0	434	84
3A	Otay Mesa Rd & Corporate Center Dr				28		88	325	320		1	197	38	116	0	236	645	-	-	12,327	15,855	-	-	24,630	33,460	110%	110%	200%	211%	128	0	472	1361	12	0	236	716	0	0	0	5	3	5	188	341	188	60	116	60	0	0	0	33	0	93	513	661	0	61	313	98
4A	Otay Mesa Rd & Innovative Dr			5			47		430	3		272	34	47	5	306	433	-	-	12,904	12,327	-	-	22,330	24,630	110%	110%	173%	200%	52	6	530	865	5	1	224	432	0	0	0	2	1	2	121	190	121	59	107	59	0	0	5	0	0	49	0	620	124	0	379	93
5A	Otay Mesa Rd & Heritage Rd	31	25	21	154	21	105	148	171	117	43	160	119	280	77	322	436	9,898	-	-	12,904	22,200	-	-	22,330	224%	125%	200%	173%	628	96	644	754	348	19	322	318	6	7	6	140	87	121	130	116	72	77	107	138	37	32	27	294	108	226	278	287	189	120	267	257
6A	Caliente Ave & SR-905 WB Ramps	276	812			246	469				21		59	715	1088	80	0	20,951	14,288	-	-	29,750	31,890	-	-	142%	223%	164%	0%	1015	2428	131	0	300	1340	51	0	0	622	718	127	173	0	0	0	0	31	0	20	276	1434	0	0	419	469	0	0	0	52	0	79
7A	Caliente Ave & SR-905 EB Ramps		511	59	89	264		589	1	486				353	570	0	1076	14,288	7,947	-	-	31,890	34,350	-	-	223%	432%	0%	328%	788	2464	0	3526	435	1894	0	2450	1127	767	0	0	247	188	834	0	1616	0	0	0	0	1278	59	89	511	0	1423	1	2102	0	0	0
8A	SR-905 EB Ramps & Airway Rd	4	195		33	277	425	365	1	7		1	55	735	199	56	373	7,947	-	-	-	34,350	-	-	-	432%	328%	110%	110%	3177	652	62	410	2442	453	6	37	76	300	76	490	1461	490	18	5	14	2	1	3	80	495	0	523	1738	915	383	6	21	0	2	58

Existing Volumes		Existing Movement Volume											Directional volume (Leg)				Existing ADT				Future ADT				Leg Growth				Future Directional Volume				Future Directional Growth				Movement Growth												Future Movement											
	Name	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W	N Leg	S Leg	E Leg	W Leg	N Leg	S Leg	E Leg	W Leg	N Leg	S Leg	E Leg	W Leg	N	S	E	W	N	S	E	W	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBR	WBL	WBT	WBR
1A	Caliente Ave/Ocean View Hills Pkwy & Otay Mesa Rd	22	486	311	124	228		2		16	697	7	198	352	819	902	18	11,405	20,951	16,454	-	15,800	29,750	32,850	-	139%	142%	200%	110%	488	1163	1801	20	136	344	899	2	84	106	153	60	43	33	1	1	1	327	253	319	106	592	464	184	271	0	3	0	17	1024	260	517
2A	Otay Mesa Rd & Emerald Crest Ct						42		435			869	16	42	0	885	435	-	-	15,855	16,454	-	-	33,460	32,850	110%	110%	211%	200%	46	0	1868	868	4	0	983	433	0	0	0	2	1	2	111	212	111	258	468	258	0	0	0	0	0	44	0	647	0	0	1337	274
3A	Otay Mesa Rd & Corporate Center Dr				117		337	161	239		19	548	70	454	0	637	400	-	-	12,327	15,855	-	-	24,630	33,460	110%	110%	200%	211%	499	0	1273	844	45	0	636	444	0	0	0	17	10	18	116	211	116	162	311	162	0	0	0	134	0	355	277	450	0	181	859	232
4A	Otay Mesa Rd & Innovative Dr			5			113		361	5		554	29	113	5	583	366	-	-	12,904	12,327	-	-	22,330	24,630	110%	110%	173%	200%	124	6	1009	731	11	1	426	365	0	0	0	4	3	5	102	161	102	112	203	112	0	0	5	0	0	118	0	522	107	0	757	141
5A	Otay Mesa Rd & Heritage Rd	115	36	53	174	30	249	149	181	51	41	230	180	453	204	451	381	9,898	-	-	12,904	22,200	-	-	22,330	224%	125%	200%	173%	1016	255	902	659	563	51	451	278	15	19	17	226	141	196	114	101	63	108	149	194	130	55	70	400	171	445	263	282	114	149	379	374
6A	Caliente Ave & SR-905 WB Ramps	458	790			220	684				36	4	84	904	1248	124	0	20,951	14,288	-	-	29,750	31,890	-	-	142%	223%	164%	0%	1284	2785	203	0	380	1537	79	0	0	714	823	161	219	0	0	0	0	48	0	31	458	1504	0	0	439	684	0	0	0	84	4	115
7A	Caliente Ave & SR-905 EB Ramps		681	76	98	170		565	4	322				268	757	0	891	14,288	7,947	-	-	31,890	34,350	-	-	223%	432%	0%	328%	598	3272	0	2920	330	2515	0	2029	1496	1019	0	0	188	142	691	0	1338	0	0	0	0	1700	76	98	358	0	1256	4	1660	0	0	0
8A	SR-905 EB Ramps & Airway Rd	5	308	6	92	171	192	326	5	7	4	2	110	455	319	116	338	7,947	-	-	-	34,350	-	-	-	432%	328%	110%	110%	1967	1045	128	372	1512	726	12	34	122	481	122	304	905	304	17	4	13	5	2	6	127	789	128	396	1076	496	343	9	20	9	4	116

Attachment 15 - Peak Hour Intersection Calculation Worksheets – Horizon Year 2062 Conditions

1: Caliente Avenue/Ocean View Hills Parkway & Otay Mesa Road

AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	40	50	440	40	300	50	460	1280	450	650	60
Future Volume (veh/h)	50	40	50	440	40	300	50	460	1280	450	650	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.99	1.00		1.00	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	1856	1856	1856	1826	1856	1856	1856	1856	1826	1856	1856	1856
Adj Flow Rate, veh/h	53	42	42	454	41	247	53	484	1078	474	684	50
Peak Hour Factor	0.95	0.95	0.95	0.97	0.97	0.97	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	3	3	3	3	5	3	3	3
Cap, veh/h	68	351	207	545	413	347	67	1215	783	565	1662	709
Arrive On Green	0.04	0.10	0.10	0.16	0.22	0.22	0.04	0.34	0.34	0.16	0.47	0.47
Sat Flow, veh/h	1767	3526	1481	3374	1856	1558	1767	3526	1547	3428	3526	1504
Grp Volume(v), veh/h	53	42	42	454	41	247	53	484	1078	474	684	50
Grp Sat Flow(s),veh/h/ln	1767	1763	1481	1687	1856	1558	1767	1763	1547	1714	1763	1504
Q Serve(g_s), s	2.7	1.0	2.2	11.6	1.6	13.1	2.7	9.3	30.8	12.0	11.4	1.6
Cycle Q Clear(g_c), s	2.7	1.0	2.2	11.6	1.6	13.1	2.7	9.3	30.8	12.0	11.4	1.6
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	68	351	207	545	413	347	67	1215	783	565	1662	709
V/C Ratio(X)	0.78	0.12	0.20	0.83	0.10	0.71	0.79	0.40	1.38	0.84	0.41	0.07
Avail Cap(c_a), veh/h	235	398	227	2250	1177	988	111	1215	783	994	1984	846
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	42.6	36.7	34.2	36.3	27.6	32.1	42.6	22.2	22.1	36.2	15.5	12.9
Incr Delay (d2), s/veh	7.2	0.2	0.6	1.3	0.2	5.4	7.3	0.4	177.2	1.3	0.7	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	1.2	0.4	0.8	4.6	0.7	5.1	1.3	3.8	52.0	4.9	4.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.8	36.9	34.8	37.6	27.8	37.5	49.9	22.7	199.3	37.5	16.2	13.1
LnGrp LOS	D	D	C	D	C	D	D	C	F	D	B	B
Approach Vol, veh/h		137			742			1615			1208	
Approach Delay, s/veh		41.2			37.0			141.4			24.4	
Approach LOS		D			D			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.1	36.5	18.8	14.9	7.8	47.8	7.8	25.9
Change Period (Y+Rc), s	4.4	* 5.7	4.4	* 6	4.4	5.7	4.4	6.0
Max Green Setting (Gmax), s	25.9	* 31	59.6	* 10	5.6	50.3	11.9	56.7
Max Q Clear Time (g_c+I1), s	14.0	32.8	13.6	4.2	4.7	13.4	4.7	15.1
Green Ext Time (p_c), s	0.8	0.0	0.8	0.1	0.0	14.1	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	78.6
HCM 6th LOS	E

Notes

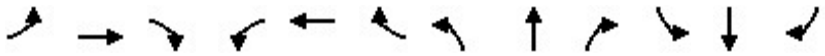
User approved pedestrian interval to be less than phase max green.

* 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	1640	10	40	620	10	70	10	40	20	10	80
Future Volume (veh/h)	80	1640	10	40	620	10	70	10	40	20	10	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		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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	84	1726	9	42	653	9	74	11	38	21	11	76
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	107	2483	771	58	2343	727	94	45	157	35	18	127
Arrive On Green	0.06	0.50	0.50	0.03	0.47	0.47	0.05	0.12	0.12	0.02	0.09	0.09
Sat Flow, veh/h	1739	4985	1547	1739	4985	1547	1767	366	1263	1767	203	1401
Grp Volume(v), veh/h	84	1726	9	42	653	9	74	0	49	21	0	87
Grp Sat Flow(s),veh/h/ln	1739	1662	1547	1739	1662	1547	1767	0	1628	1767	0	1603
Q Serve(g_s), s	2.9	16.1	0.2	1.5	4.8	0.2	2.5	0.0	1.6	0.7	0.0	3.2
Cycle Q Clear(g_c), s	2.9	16.1	0.2	1.5	4.8	0.2	2.5	0.0	1.6	0.7	0.0	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.87
Lane Grp Cap(c), veh/h	107	2483	771	58	2343	727	94	0	202	35	0	146
V/C Ratio(X)	0.79	0.70	0.01	0.72	0.28	0.01	0.79	0.00	0.24	0.60	0.00	0.60
Avail Cap(c_a), veh/h	309	2735	849	115	2343	727	146	0	1138	163	0	1136
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	28.1	11.7	7.7	29.0	9.8	8.6	28.4	0.0	24.0	29.5	0.0	26.5
Incr Delay (d2), s/veh	4.7	0.8	0.0	6.2	0.1	0.0	6.4	0.0	0.2	6.2	0.0	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	1.2	4.3	0.1	0.6	1.3	0.1	1.2	0.0	0.6	0.3	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	12.5	7.7	35.2	9.9	8.6	34.8	0.0	24.2	35.7	0.0	28.0
LnGrp LOS	C	B	A	D	A	A	C	A	C	D	A	C
Approach Vol, veh/h		1819			704			123			108	
Approach Delay, s/veh		13.4			11.4			30.6			29.5	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	36.2	7.6	10.4	8.1	34.5	5.6	12.4
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	4.6	33.3	5.0	43.0	10.8	26.5	5.6	42.4
Max Q Clear Time (g_c+I1), s	3.5	18.1	4.5	5.2	4.9	6.8	2.7	3.6
Green Ext Time (p_c), s	0.0	12.1	0.0	0.3	0.0	5.8	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	440	1260	0	10	560	70	0	0	0	60	0	120
Future Volume (veh/h)	440	1260	0	10	560	70	0	0	0	60	0	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		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	1826	1826	0	1826	1826	1826	1856	1856	1856	1826	0	1826
Adj Flow Rate, veh/h	463	1326	0	11	589	59	0	0	0	63	0	88
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	0	5	5	5	3	3	3	5	0	5
Cap, veh/h	702	3364	0	20	2385	740	0	6	0	0	0	0
Arrive On Green	0.21	0.67	0.00	0.01	0.48	0.48	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3374	5149	0	1739	4985	1546	0	1856	0		0	
Grp Volume(v), veh/h	463	1326	0	11	589	59	0	0	0		0.0	
Grp Sat Flow(s),veh/h/ln	1687	1662	0	1739	1662	1546	0	1856	0			
Q Serve(g_s), s	4.2	3.9	0.0	0.2	2.3	0.7	0.0	0.0	0.0			
Cycle Q Clear(g_c), s	4.2	3.9	0.0	0.2	2.3	0.7	0.0	0.0	0.0			
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00			
Lane Grp Cap(c), veh/h	702	3364	0	20	2385	740	0	6	0			
V/C Ratio(X)	0.66	0.39	0.00	0.54	0.25	0.08	0.00	0.00	0.00			
Avail Cap(c_a), veh/h	874	5979	0	210	5288	1641	0	2461	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	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00			
Uniform Delay (d), s/veh	12.1	2.4	0.0	16.3	5.1	4.7	0.0	0.0	0.0			
Incr Delay (d2), s/veh	0.7	0.1	0.0	8.2	0.1	0.1	0.0	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	1.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.7	2.5	0.0	24.5	5.2	4.8	0.0	0.0	0.0			
LnGrp LOS	B	A	A	C	A	A	A	A	A			
Approach Vol, veh/h		1789			659			0				
Approach Delay, s/veh		5.2			5.5			0.0				
Approach LOS		A			A							

Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.8	28.4			11.3	21.9		0.0				
Change Period (Y+Rc), s	4.4	6.0			4.4	6.0		4.9				
Max Green Setting (Gmax), s	4.8	39.8			8.6	35.2		44.0				
Max Q Clear Time (g_c+I1), s	2.2	5.9			6.2	4.3		0.0				
Green Ext Time (p_c), s	0.0	16.5			0.3	7.5		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			5.2									
HCM 6th LOS			A									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1330	20	10	580	70	10	10	20	20	10	100
Future Volume (veh/h)	10	1330	20	10	580	70	10	10	20	20	10	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1826	1826	1826	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	11	1400	19	11	611	59	11	11	19	21	11	96
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	8	8	8	3	3	3	5	5	5
Cap, veh/h	17	3456	47	17	3317	1003	25	25	42	31	16	141
Arrive On Green	0.01	0.68	0.68	0.01	0.68	0.68	0.05	0.05	0.05	0.12	0.12	0.12
Sat Flow, veh/h	1739	5066	69	1697	4863	1470	450	450	778	255	134	1167
Grp Volume(v), veh/h	11	918	501	11	611	59	41	0	0	128	0	0
Grp Sat Flow(s),veh/h/ln	1739	1662	1812	1697	1621	1470	1679	0	0	1556	0	0
Q Serve(g_s), s	0.9	18.2	18.2	1.0	6.9	2.0	3.6	0.0	0.0	11.8	0.0	0.0
Cycle Q Clear(g_c), s	0.9	18.2	18.2	1.0	6.9	2.0	3.6	0.0	0.0	11.8	0.0	0.0
Prop In Lane	1.00		0.04	1.00		1.00	0.27		0.46	0.16		0.75
Lane Grp Cap(c), veh/h	17	2267	1236	17	3317	1003	92	0	0	188	0	0
V/C Ratio(X)	0.65	0.41	0.41	0.66	0.18	0.06	0.45	0.00	0.00	0.68	0.00	0.00
Avail Cap(c_a), veh/h	46	2267	1236	45	3317	1003	448	0	0	415	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)	0.91	0.91	0.91	0.92	0.92	0.92	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	74.0	10.5	10.5	74.0	8.7	7.9	68.7	0.0	0.0	63.2	0.0	0.0
Incr Delay (d2), s/veh	13.0	0.5	0.9	14.3	0.1	0.1	4.5	0.0	0.0	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	0.5	6.2	6.8	0.5	2.2	0.6	1.7	0.0	0.0	4.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.0	11.0	11.4	88.3	8.8	8.0	73.2	0.0	0.0	64.8	0.0	0.0
LnGrp LOS	F	B	B	F	A	A	E	A	A	E	A	A
Approach Vol, veh/h		1430			681			41			128	
Approach Delay, s/veh		11.7			10.0			73.2			64.8	
Approach LOS		B			A			E			E	

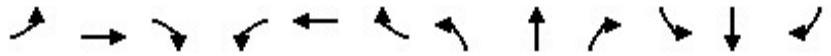
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	108.5		22.1	5.9	108.5		13.5
Change Period (Y+Rc), s	4.4	6.2		4.0	4.4	* 6.2		5.3
Max Green Setting (Gmax), s	4.6	46.1		40.0	4.0	* 46		40.0
Max Q Clear Time (g_c+I1), s	3.0	20.2		13.8	2.9	8.9		5.6
Green Ext Time (p_c), s	0.0	13.7		0.3	0.0	5.7		0.3

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



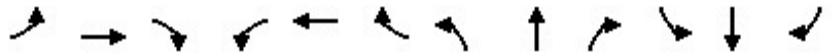
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	600	590	180	100	420	490	50	100	60	300	120	150
Future Volume (veh/h)	600	590	180	100	420	490	50	100	60	300	120	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	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	1781	1781	1781	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	632	621	151	105	442	413	53	105	57	316	126	111
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	5	5	5
Cap, veh/h	632	2084	637	154	1377	413	68	198	108	324	595	1394
Arrive On Green	0.19	0.43	0.43	0.05	0.28	0.28	0.04	0.18	0.18	0.19	0.33	0.33
Sat Flow, veh/h	3291	4863	1487	3291	4863	1458	1767	1112	604	1739	1826	2672
Grp Volume(v), veh/h	632	621	151	105	442	413	53	0	162	316	126	111
Grp Sat Flow(s),veh/h/ln	1646	1621	1487	1646	1621	1458	1767	0	1716	1739	1826	1336
Q Serve(g_s), s	23.6	10.3	7.9	3.9	8.8	34.8	3.7	0.0	10.5	22.2	6.1	2.6
Cycle Q Clear(g_c), s	23.6	10.3	7.9	3.9	8.8	34.8	3.7	0.0	10.5	22.2	6.1	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	632	2084	637	154	1377	413	68	0	306	324	595	1394
V/C Ratio(X)	1.00	0.30	0.24	0.68	0.32	1.00	0.78	0.00	0.53	0.98	0.21	0.08
Avail Cap(c_a), veh/h	632	2084	637	252	1377	413	165	0	684	324	897	1836
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	1.00	1.00
Uniform Delay (d), s/veh	49.6	23.0	22.3	57.7	34.7	44.1	58.6	0.0	45.8	49.7	30.0	14.9
Incr Delay (d2), s/veh	35.8	0.1	0.3	2.0	0.2	44.3	6.9	0.0	3.0	43.0	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	12.4	3.8	2.8	1.6	3.4	17.5	1.8	0.0	4.8	13.6	2.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.4	23.1	22.6	59.7	35.0	88.4	65.5	0.0	48.8	92.7	30.1	14.9
LnGrp LOS	F	C	C	E	C	F	E	A	D	F	C	B
Approach Vol, veh/h		1404			960			215			553	
Approach Delay, s/veh		51.1			60.6			52.9			62.8	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	58.7	9.1	45.0	28.0	40.8	27.3	26.8
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	9.4	49.0	11.5	60.4	23.6	34.8	22.9	49.0
Max Q Clear Time (g_c+I1), s	5.9	12.3	5.7	8.1	25.6	36.8	24.2	12.5
Green Ext Time (p_c), s	0.0	7.8	0.0	0.8	0.0	0.0	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	56.2
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	190	10	140	480	1650	0	0	470	680
Future Volume (veh/h)	0	0	0	190	10	140	480	1650	0	0	470	680
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		0.93
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				1826	1826	1826	1826	1826	0	0	1826	1826
Adj Flow Rate, veh/h				200	11	118	505	1737	0	0	495	644
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				5	5	5	5	5	0	0	5	5
Cap, veh/h				239	13	224	544	3795	0	0	1355	584
Arrive On Green				0.14	0.14	0.14	0.31	0.76	0.00	0.00	0.41	0.41
Sat Flow, veh/h				1652	91	1547	1739	5149	0	0	3487	1432
Grp Volume(v), veh/h				211	0	118	505	1737	0	0	495	644
Grp Sat Flow(s),veh/h/ln				1743	0	1547	1739	1662	0	0	1662	1432
Q Serve(g_s), s				13.6	0.0	8.2	32.5	14.8	0.0	0.0	12.0	47.2
Cycle Q Clear(g_c), s				13.6	0.0	8.2	32.5	14.8	0.0	0.0	12.0	47.2
Prop In Lane				0.95		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				252	0	224	544	3795	0	0	1355	584
V/C Ratio(X)				0.84	0.00	0.53	0.93	0.46	0.00	0.00	0.37	1.10
Avail Cap(c_a), veh/h				375	0	333	936	4917	0	0	1355	584
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				48.2	0.0	45.9	38.5	5.1	0.0	0.0	23.9	34.3
Incr Delay (d2), s/veh				10.2	0.0	1.9	9.2	0.1	0.0	0.0	0.2	68.8
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				6.6	0.0	3.3	15.1	4.3	0.0	0.0	4.7	27.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				58.4	0.0	47.8	47.7	5.1	0.0	0.0	24.0	103.1
LnGrp LOS				E	A	D	D	A	A	A	C	F
Approach Vol, veh/h					329			2242			1139	
Approach Delay, s/veh					54.6			14.7			68.7	
Approach LOS					D			B			E	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	93.9		40.9	53.0		21.8
Change Period (Y+Rc), s	5.8		* 4.7	5.8		5.1
Max Green Setting (Gmax), s	114.2		* 62	47.2		24.9
Max Q Clear Time (g_c+I1), s	16.8		34.5	49.2		15.6
Green Ext Time (p_c), s	25.4		1.7	0.0		1.1

Intersection Summary	
HCM 6th Ctrl Delay	34.8
HCM 6th LOS	C

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)	1150	10	550	0	0	0	0	980	320	150	510	0
Future Volume (veh/h)	1150	10	550	0	0	0	0	980	320	150	510	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94				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	1826	1826	1826				0	1856	1856	1826	1856	0
Adj Flow Rate, veh/h	872	486	521				0	1032	303	158	537	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5				0	3	3	5	3	0
Cap, veh/h	961	431	462				0	1010	296	143	1321	0
Arrive On Green	0.55	0.55	0.55				0.00	0.26	0.26	0.08	0.37	0.00
Sat Flow, veh/h	1739	780	836				0	4032	1134	1739	3618	0
Grp Volume(v), veh/h	872	0	1007				0	902	433	158	537	0
Grp Sat Flow(s),veh/h/ln	1739	0	1616				0	1689	1622	1739	1763	0
Q Serve(g_s), s	67.5	0.0	82.9				0.0	39.2	39.2	12.3	16.9	0.0
Cycle Q Clear(g_c), s	67.5	0.0	82.9				0.0	39.2	39.2	12.3	16.9	0.0
Prop In Lane	1.00		0.52				0.00		0.70	1.00		0.00
Lane Grp Cap(c), veh/h	961	0	893				0	883	424	143	1321	0
V/C Ratio(X)	0.91	0.00	1.13				0.00	1.02	1.02	1.11	0.41	0.00
Avail Cap(c_a), veh/h	961	0	893				0	883	424	143	1321	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				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.1	0.0	33.6				0.0	55.4	55.4	68.8	34.6	0.0
Incr Delay (d2), s/veh	12.1	0.0	71.5				0.0	35.8	49.5	107.3	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
%ile BackOfQ(50%),veh/ln	30.8	0.0	49.2				0.0	21.1	21.8	9.7	7.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.2	0.0	105.1				0.0	91.2	104.9	176.1	34.8	0.0
LnGrp LOS	D	A	F				A	F	F	F	C	A
Approach Vol, veh/h		1879						1335			695	
Approach Delay, s/veh		75.9						95.7			66.9	
Approach LOS		E						F			E	

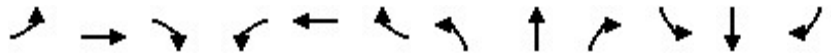
Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	17.0	45.0	88.0	62.0
Change Period (Y+Rc), s*	4.7	5.8	5.1	5.8
Max Green Setting (Gmax), s	12.3	39.2	82.9	56.2
Max Q Clear Time (g_c+I1), s	14.3	41.2	84.9	18.9
Green Ext Time (p_c), s	0.0	0.0	0.0	4.1

Intersection Summary	
HCM 6th Ctrl Delay	81.1
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)	450	30	30	10	40	200	80	650	10	80	450	530
Future Volume (veh/h)	450	30	30	10	40	200	80	650	10	80	450	530
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		0.79
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	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	524	0	0	11	42	169	84	684	10	84	474	502
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	975	512	0	441	239	199	105	2024	30	106	695	491
Arrive On Green	0.28	0.00	0.00	0.13	0.13	0.13	0.06	0.39	0.39	0.06	0.39	0.39
Sat Flow, veh/h	3534	1856	0	3428	1856	1551	1767	5141	75	1767	1763	1245
Grp Volume(v), veh/h	524	0	0	11	42	169	84	449	245	84	474	502
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1714	1856	1551	1767	1689	1839	1767	1763	1245
Q Serve(g_s), s	16.5	0.0	0.0	0.4	2.6	14.0	6.1	12.2	12.2	6.1	29.2	51.6
Cycle Q Clear(g_c), s	16.5	0.0	0.0	0.4	2.6	14.0	6.1	12.2	12.2	6.1	29.2	51.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	975	512	0	441	239	199	105	1329	724	106	695	491
V/C Ratio(X)	0.54	0.00	0.00	0.02	0.18	0.85	0.80	0.34	0.34	0.80	0.68	1.02
Avail Cap(c_a), veh/h	999	524	0	917	496	415	105	1329	724	294	695	491
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	0.0	0.0	49.9	50.9	55.8	60.8	27.8	27.8	60.8	32.9	39.7
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.0	0.4	10.6	32.1	0.2	0.4	5.0	3.0	46.7
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	7.3	0.0	0.0	0.2	1.3	6.1	3.7	5.1	5.6	2.9	13.0	21.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	0.0	0.0	49.9	51.3	66.4	92.9	28.0	28.1	65.8	35.9	86.4
LnGrp LOS	D	A	A	D	D	E	F	C	C	E	D	F
Approach Vol, veh/h		524			222			778			1060	
Approach Delay, s/veh		40.7			62.7			35.0			62.1	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.2	56.4		40.5	12.2	56.5		21.7
Change Period (Y+Rc), s	4.4	4.9		4.4	4.4	4.9		4.9
Max Green Setting (Gmax), s	21.8	37.6		37.0	7.8	51.6		35.0
Max Q Clear Time (g_c+I1), s	8.1	14.2		18.5	8.1	53.6		16.0
Green Ext Time (p_c), s	0.1	6.4		1.3	0.0	0.0		0.9

Intersection Summary	
HCM 6th Ctrl Delay	49.7
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)	40	50	60	1440	60	630	60	680	670	540	350	40
Future Volume (veh/h)	40	50	60	1440	60	630	60	680	670	540	350	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.73	1.00		0.97	1.00		0.99	1.00		0.88
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	1826	1856	1856	1856	1856	1826	1856	1856	1856
Adj Flow Rate, veh/h	42	53	50	1516	63	547	63	716	543	568	368	34
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	3	3	3	3	5	3	3	3
Cap, veh/h	54	237	141	1347	809	665	72	737	937	608	1218	476
Arrive On Green	0.03	0.07	0.07	0.40	0.44	0.44	0.04	0.21	0.21	0.18	0.35	0.35
Sat Flow, veh/h	1767	3526	1144	3374	1856	1527	1767	3526	1526	3428	3526	1379
Grp Volume(v), veh/h	42	53	50	1516	63	547	63	716	543	568	368	34
Grp Sat Flow(s),veh/h/ln	1767	1763	1144	1687	1856	1527	1767	1763	1526	1714	1763	1379
Q Serve(g_s), s	3.3	2.0	5.7	55.6	2.8	43.9	4.9	28.1	29.1	22.7	10.6	2.3
Cycle Q Clear(g_c), s	3.3	2.0	5.7	55.6	2.8	43.9	4.9	28.1	29.1	22.7	10.6	2.3
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	54	237	141	1347	809	665	72	737	937	608	1218	476
V/C Ratio(X)	0.78	0.22	0.35	1.13	0.08	0.82	0.87	0.97	0.58	0.93	0.30	0.07
Avail Cap(c_a), veh/h	115	430	204	1347	831	684	72	737	937	608	1218	476
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	67.0	61.5	57.9	41.8	22.9	34.5	66.4	54.7	16.6	56.5	33.3	30.6
Incr Delay (d2), s/veh	8.7	0.6	1.9	66.6	0.1	8.7	62.0	26.5	1.4	21.4	0.6	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	1.6	0.9	1.7	34.3	1.2	17.0	3.5	15.2	9.9	11.5	4.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.7	62.1	59.9	108.4	23.0	43.3	128.4	81.1	18.0	77.9	33.9	30.9
LnGrp LOS	E	E	E	F	C	D	F	F	B	E	C	C
Approach Vol, veh/h		145			2126			1322			970	
Approach Delay, s/veh		65.3			89.1			57.4			59.5	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.1	34.8	60.0	15.4	10.1	53.8	8.7	66.7
Change Period (Y+Rc), s	4.4	* 5.7	4.4	* 6	4.4	5.7	4.4	6.0
Max Green Setting (Gmax), s	24.7	* 29	55.6	* 17	5.7	47.3	9.1	62.4
Max Q Clear Time (g_c+I1), s	24.7	31.1	57.6	7.7	6.9	12.6	5.3	45.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	6.9	0.0	4.6

Intersection Summary	
HCM 6th Ctrl Delay	72.9
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* 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	940	140	110	1840	30	120	10	60	10	10	50
Future Volume (veh/h)	150	940	140	110	1840	30	120	10	60	10	10	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		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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	158	989	118	116	1937	26	126	11	57	11	11	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	192	2664	827	146	2534	787	157	36	189	19	19	81
Arrive On Green	0.11	0.53	0.53	0.08	0.51	0.51	0.09	0.14	0.14	0.01	0.06	0.06
Sat Flow, veh/h	1739	4985	1547	1739	4985	1547	1767	261	1351	1767	302	1317
Grp Volume(v), veh/h	158	989	118	116	1937	26	126	0	68	11	0	59
Grp Sat Flow(s),veh/h/ln	1739	1662	1547	1739	1662	1547	1767	0	1612	1767	0	1619
Q Serve(g_s), s	7.6	9.8	3.3	5.6	26.6	0.7	6.0	0.0	3.2	0.5	0.0	3.0
Cycle Q Clear(g_c), s	7.6	9.8	3.3	5.6	26.6	0.7	6.0	0.0	3.2	0.5	0.0	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.84	1.00		0.81
Lane Grp Cap(c), veh/h	192	2664	827	146	2534	787	157	0	225	19	0	99
V/C Ratio(X)	0.82	0.37	0.14	0.79	0.76	0.03	0.80	0.00	0.30	0.58	0.00	0.59
Avail Cap(c_a), veh/h	241	2664	827	337	2696	837	195	0	916	83	0	817
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	37.1	11.5	10.0	38.3	16.9	10.5	38.1	0.0	32.9	42.0	0.0	39.0
Incr Delay (d2), s/veh	13.8	0.1	0.1	3.7	1.4	0.0	14.0	0.0	0.3	9.9	0.0	2.1
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	3.7	3.0	1.1	2.4	8.6	0.2	3.1	0.0	1.3	0.3	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	11.7	10.1	42.0	18.3	10.5	52.1	0.0	33.2	51.9	0.0	41.1
LnGrp LOS	D	B	B	D	B	B	D	A	C	D	A	D
Approach Vol, veh/h		1265			2079			194			70	
Approach Delay, s/veh		16.4			19.5			45.5			42.8	
Approach LOS		B			B			D			D	

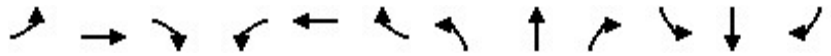
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	51.5	12.0	10.1	13.8	49.3	5.3	16.8
Change Period (Y+Rc), s	4.4	6.0	4.4	4.9	4.4	6.0	4.4	4.9
Max Green Setting (Gmax), s	16.5	41.4	9.4	43.0	11.8	46.1	4.0	48.4
Max Q Clear Time (g_c+I1), s	7.6	11.8	8.0	5.0	9.6	28.6	2.5	5.2
Green Ext Time (p_c), s	0.1	11.8	0.0	0.2	0.0	14.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	770	0	30	1520	110	0	0	0	140	0	430
Future Volume (veh/h)	220	770	0	30	1520	110	0	0	0	140	0	430
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	1826	1826	0	1826	1826	1826	1856	1856	1856	1826	0	1826
Adj Flow Rate, veh/h	232	811	0	32	1600	93	0	0	0	147	0	317
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	0	5	5	5	3	3	3	5	0	5
Cap, veh/h	462	3781	0	50	3241	1006	0	4	0	0	0	0
Arrive On Green	0.14	0.76	0.00	0.03	0.65	0.65	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	3374	5149	0	1739	4985	1547	0	1856	0		0	
Grp Volume(v), veh/h	232	811	0	32	1600	93	0	0	0		0.0	
Grp Sat Flow(s),veh/h/ln	1687	1662	0	1739	1662	1547	0	1856	0			
Q Serve(g_s), s	3.1	2.3	0.0	0.9	8.1	1.1	0.0	0.0	0.0			
Cycle Q Clear(g_c), s	3.1	2.3	0.0	0.9	8.1	1.1	0.0	0.0	0.0			
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.00			
Lane Grp Cap(c), veh/h	462	3781	0	50	3241	1006	0	4	0			
V/C Ratio(X)	0.50	0.21	0.00	0.64	0.49	0.09	0.00	0.00	0.00			
Avail Cap(c_a), veh/h	649	4384	0	238	4108	1275	0	1670	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	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00			
Uniform Delay (d), s/veh	19.6	1.7	0.0	23.5	4.4	3.2	0.0	0.0	0.0			
Incr Delay (d2), s/veh	0.3	0.0	0.0	4.9	0.2	0.1	0.0	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	1.0	0.0	0.0	0.4	0.9	0.1	0.0	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	1.7	0.0	28.4	4.6	3.3	0.0	0.0	0.0			
LnGrp LOS	B	A	A	C	A	A	A	A	A			
Approach Vol, veh/h		1043			1725			0				
Approach Delay, s/veh		5.8			5.0			0.0				
Approach LOS		A			A							

Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	5.8	43.1			11.1	37.8		0.0				
Change Period (Y+Rc), s	4.4	6.0			4.4	6.0		4.9				
Max Green Setting (Gmax), s	6.7	43.0			9.4	40.3		44.0				
Max Q Clear Time (g_c+I1), s	2.9	4.3			5.1	10.1		0.0				
Green Ext Time (p_c), s	0.0	9.3			0.2	21.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			5.3									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	890	10	10	1500	70	10	10	10	20	10	160
Future Volume (veh/h)	10	890	10	10	1500	70	10	10	10	20	10	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1826	1826	1826	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	11	937	10	11	1579	59	11	11	10	21	11	151
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	8	8	8	3	3	3	5	5	5
Cap, veh/h	17	3408	36	17	3260	1010	29	29	26	25	13	179
Arrive On Green	0.01	0.67	0.67	0.01	0.67	0.67	0.05	0.05	0.05	0.14	0.14	0.14
Sat Flow, veh/h	1739	5084	54	1697	4863	1506	591	591	537	181	95	1298
Grp Volume(v), veh/h	11	612	335	11	1579	59	32	0	0	183	0	0
Grp Sat Flow(s),veh/h/ln	1739	1662	1815	1697	1621	1506	1719	0	0	1573	0	0
Q Serve(g_s), s	0.9	11.2	11.2	1.0	23.8	2.0	2.7	0.0	0.0	17.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	11.2	11.2	1.0	23.8	2.0	2.7	0.0	0.0	17.0	0.0	0.0
Prop In Lane	1.00		0.03	1.00		1.00	0.34		0.31	0.11		0.83
Lane Grp Cap(c), veh/h	17	2227	1216	17	3260	1010	84	0	0	217	0	0
V/C Ratio(X)	0.65	0.27	0.28	0.66	0.48	0.06	0.38	0.00	0.00	0.84	0.00	0.00
Avail Cap(c_a), veh/h	46	2227	1216	45	3260	1010	459	0	0	420	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)	0.95	0.95	0.95	0.73	0.73	0.73	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	74.0	10.0	10.0	74.0	12.1	8.5	69.1	0.0	0.0	63.0	0.0	0.0
Incr Delay (d2), s/veh	13.5	0.3	0.5	11.5	0.4	0.1	3.7	0.0	0.0	3.4	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	3.8	4.3	0.5	7.9	0.6	1.3	0.0	0.0	7.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.5	10.3	10.5	85.5	12.5	8.6	72.8	0.0	0.0	66.4	0.0	0.0
LnGrp LOS	F	B	B	F	B	A	E	A	A	E	A	A
Approach Vol, veh/h		958			1649			32			183	
Approach Delay, s/veh		11.3			12.8			72.8			66.4	
Approach LOS		B			B			E			E	

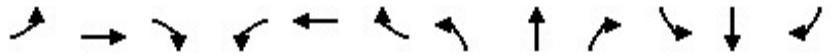
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	106.7		24.7	5.9	106.7		12.7
Change Period (Y+Rc), s	4.4	6.2		4.0	4.4	* 6.2		5.3
Max Green Setting (Gmax), s	4.6	46.1		40.0	4.0	* 46		40.0
Max Q Clear Time (g_c+I1), s	3.0	13.2		19.0	2.9	25.8		4.7
Green Ext Time (p_c), s	0.0	9.2		0.4	0.0	13.1		0.2

Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



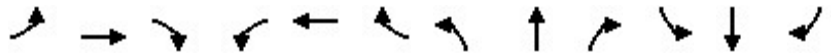
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	600	90	100	730	360	160	140	130	550	120	690
Future Volume (veh/h)	280	600	90	100	730	360	160	140	130	550	120	690
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.96	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	1781	1781	1781	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	295	632	76	105	768	303	168	147	123	579	126	511
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	5	5	5
Cap, veh/h	275	1465	447	153	1284	384	195	213	178	460	707	1263
Arrive On Green	0.08	0.30	0.30	0.05	0.26	0.26	0.11	0.23	0.23	0.26	0.39	0.39
Sat Flow, veh/h	3291	4863	1483	3291	4863	1455	1767	916	767	1739	1826	2676
Grp Volume(v), veh/h	295	632	76	105	768	303	168	0	270	579	126	511
Grp Sat Flow(s),veh/h/ln	1646	1621	1483	1646	1621	1455	1767	0	1683	1739	1826	1338
Q Serve(g_s), s	10.6	13.2	4.8	4.0	17.5	24.6	11.9	0.0	18.6	33.6	5.8	15.9
Cycle Q Clear(g_c), s	10.6	13.2	4.8	4.0	17.5	24.6	11.9	0.0	18.6	33.6	5.8	15.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	275	1465	447	153	1284	384	195	0	391	460	707	1263
V/C Ratio(X)	1.07	0.43	0.17	0.69	0.60	0.79	0.86	0.00	0.69	1.26	0.18	0.40
Avail Cap(c_a), veh/h	275	1467	448	244	1421	425	333	0	650	460	844	1465
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	1.00	1.00
Uniform Delay (d), s/veh	58.2	35.6	32.7	59.6	40.8	43.4	55.5	0.0	44.5	46.7	25.6	22.0
Incr Delay (d2), s/veh	75.1	0.3	0.3	2.1	0.8	10.0	4.8	0.0	4.6	132.8	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	7.1	5.1	1.8	1.7	6.8	9.9	5.5	0.0	8.3	31.5	2.6	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	133.3	35.9	32.9	61.7	41.7	53.4	60.4	0.0	49.1	179.4	25.7	22.1
LnGrp LOS	F	D	C	E	D	D	E	A	D	F	C	C
Approach Vol, veh/h		1003			1176			438			1216	
Approach Delay, s/veh		64.3			46.5			53.4			97.4	
Approach LOS		E			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	44.2	18.4	54.0	15.0	39.5	38.0	34.4
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	5.9	38.3	23.9	58.7	10.6	37.1	33.6	49.0
Max Q Clear Time (g_c+I1), s	6.6	15.2	13.9	17.9	12.6	26.6	35.6	20.6
Green Ext Time (p_c), s	0.0	6.4	0.2	1.8	0.0	6.0	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	68.1
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	310	10	150	660	1260	0	0	570	1280
Future Volume (veh/h)	0	0	0	310	10	150	660	1260	0	0	570	1280
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		0.80
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				1826	1826	1826	1826	1826	0	0	1826	1826
Adj Flow Rate, veh/h				326	11	126	695	1326	0	0	588	1188
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.97	0.97	0.97
Percent Heavy Veh, %				5	5	5	5	5	0	0	5	5
Cap, veh/h				251	8	227	475	3699	0	0	1402	523
Arrive On Green				0.15	0.15	0.15	0.27	0.74	0.00	0.00	0.42	0.42
Sat Flow, veh/h				1685	57	1523	1739	5149	0	0	3487	1239
Grp Volume(v), veh/h				337	0	126	695	1326	0	0	588	1188
Grp Sat Flow(s),veh/h/ln				1742	0	1523	1739	1662	0	0	1662	1239
Q Serve(g_s), s				14.9	0.0	7.7	27.3	9.4	0.0	0.0	12.4	42.2
Cycle Q Clear(g_c), s				14.9	0.0	7.7	27.3	9.4	0.0	0.0	12.4	42.2
Prop In Lane				0.97		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				260	0	227	475	3699	0	0	1402	523
V/C Ratio(X)				1.30	0.00	0.56	1.46	0.36	0.00	0.00	0.42	2.27
Avail Cap(c_a), veh/h				260	0	227	475	3699	0	0	1402	523
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				42.6	0.0	39.5	36.3	4.5	0.0	0.0	20.3	28.9
Incr Delay (d2), s/veh				159.7	0.0	2.9	220.1	0.1	0.0	0.0	0.2	578.2
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				17.8	0.0	3.0	40.3	2.6	0.0	0.0	4.7	95.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				202.3	0.0	42.4	256.5	4.6	0.0	0.0	20.5	607.1
LnGrp LOS				F	A	D	F	A	A	A	C	F
Approach Vol, veh/h					463			2021			1776	
Approach Delay, s/veh					158.8			91.2			412.9	
Approach LOS					F			F			F	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	80.0		32.0	48.0		20.0
Change Period (Y+Rc), s	5.8		* 4.7	5.8		5.1
Max Green Setting (Gmax), s	74.2		* 27	42.2		14.9
Max Q Clear Time (g_c+I1), s	11.4		29.3	44.2		16.9
Green Ext Time (p_c), s	14.5		0.0	0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay	232.7	
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)	800	10	550	0	0	0	0	1120	360	160	720	0
Future Volume (veh/h)	800	10	550	0	0	0	0	1120	360	160	720	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.89				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	1826	1826	1826				0	1856	1856	1826	1856	0
Adj Flow Rate, veh/h	687	228	521				0	1179	341	168	758	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5				0	3	3	5	3	0
Cap, veh/h	889	232	529				0	1124	325	168	1468	0
Arrive On Green	0.51	0.51	0.51				0.00	0.29	0.29	0.10	0.42	0.00
Sat Flow, veh/h	1739	453	1036				0	4067	1128	1739	3618	0
Grp Volume(v), veh/h	687	0	749				0	1021	499	168	758	0
Grp Sat Flow(s),veh/h/ln	1739	0	1489				0	1689	1650	1739	1763	0
Q Serve(g_s), s	47.9	0.0	74.2				0.0	43.2	43.2	14.5	24.0	0.0
Cycle Q Clear(g_c), s	47.9	0.0	74.2				0.0	43.2	43.2	14.5	24.0	0.0
Prop In Lane	1.00		0.70				0.00		0.68	1.00		0.00
Lane Grp Cap(c), veh/h	889	0	761				0	973	476	168	1468	0
V/C Ratio(X)	0.77	0.00	0.98				0.00	1.05	1.05	1.00	0.52	0.00
Avail Cap(c_a), veh/h	890	0	762				0	973	476	168	1468	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				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.6	0.0	36.1				0.0	53.3	53.3	67.7	32.5	0.0
Incr Delay (d2), s/veh	4.3	0.0	28.7				0.0	42.6	54.8	69.0	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	20.9	0.0	32.4				0.0	24.0	25.1	9.7	10.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	0.0	64.7				0.0	95.9	108.1	136.7	32.8	0.0
LnGrp LOS	C	A	E				A	F	F	F	C	A
Approach Vol, veh/h		1436						1520			926	
Approach Delay, s/veh		50.0						99.9			51.7	
Approach LOS		D						F			D	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	19.2	49.0	81.7	68.2
Change Period (Y+Rc), s	* 4.7	5.8	5.1	5.8
Max Green Setting (Gmax), s	* 15	43.2	76.7	62.4
Max Q Clear Time (g_c+I1), s	16.5	45.2	76.2	26.0
Green Ext Time (p_c), s	0.0	0.0	0.4	6.2

Intersection Summary	
HCM 6th Ctrl Delay	69.9
HCM 6th LOS	E

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)	440	50	70	20	80	440	40	600	20	240	710	320
Future Volume (veh/h)	440	50	70	20	80	440	40	600	20	240	710	320
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.69	1.00		0.97	1.00		0.73	1.00		0.79
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	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	291	293	67	21	84	370	42	632	19	253	747	303
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	441	333	76	810	439	361	54	1211	36	258	807	327
Arrive On Green	0.25	0.25	0.25	0.24	0.24	0.24	0.03	0.24	0.24	0.15	0.36	0.36
Sat Flow, veh/h	1767	1335	305	3428	1856	1527	1767	4994	149	1767	2256	914
Grp Volume(v), veh/h	291	0	360	21	84	370	42	425	226	253	583	467
Grp Sat Flow(s),veh/h/ln	1767	0	1640	1714	1856	1527	1767	1689	1765	1767	1763	1407
Q Serve(g_s), s	21.9	0.0	31.2	0.7	5.4	35.0	3.5	16.2	16.4	21.1	47.0	47.2
Cycle Q Clear(g_c), s	21.9	0.0	31.2	0.7	5.4	35.0	3.5	16.2	16.4	21.1	47.0	47.2
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.08	1.00		0.65
Lane Grp Cap(c), veh/h	441	0	410	810	439	361	54	819	428	258	631	504
V/C Ratio(X)	0.66	0.00	0.88	0.03	0.19	1.03	0.78	0.52	0.53	0.98	0.92	0.93
Avail Cap(c_a), veh/h	442	0	410	810	439	361	54	862	451	258	653	522
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	49.9	0.0	53.4	43.4	45.2	56.5	71.3	48.6	48.7	63.0	45.6	45.7
Incr Delay (d2), s/veh	3.2	0.0	18.7	0.0	0.2	54.1	48.3	0.7	1.3	50.6	19.0	22.7
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	10.2	0.0	15.1	0.3	2.6	19.0	2.3	7.0	7.5	13.1	23.9	19.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	0.0	72.1	43.5	45.5	110.6	119.6	49.3	50.1	113.6	64.7	68.3
LnGrp LOS	D	A	E	D	D	F	F	D	D	F	E	E
Approach Vol, veh/h		651			475			693			1303	
Approach Delay, s/veh		63.6			96.1			53.8			75.5	
Approach LOS		E			F			D			E	

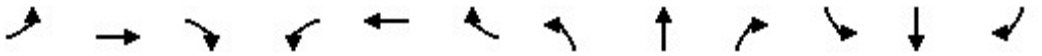
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.0	40.8		41.4	8.9	57.9		39.9
Change Period (Y+Rc), s	4.4	4.9		4.4	4.4	4.9		4.9
Max Green Setting (Gmax), s	21.6	37.8		37.0	4.5	54.9		35.0
Max Q Clear Time (g_c+I1), s	23.1	18.4		33.2	5.5	49.2		37.0
Green Ext Time (p_c), s	0.0	5.5		1.0	0.0	3.8		0.0

Intersection Summary	
HCM 6th Ctrl Delay	71.3
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Attachment 16 – Peak Hour Intersection Calculation Worksheets – Horizon Year 2062 with Project Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	40	50	534	40	329	50	460	1306	459	650	60
Future Volume (veh/h)	50	40	50	534	40	329	50	460	1306	459	650	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.99	1.00		1.00	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	1856	1856	1856	1826	1856	1856	1856	1856	1826	1856	1856	1856
Adj Flow Rate, veh/h	53	42	42	551	41	273	53	484	1099	483	684	50
Peak Hour Factor	0.95	0.95	0.95	0.97	0.97	0.97	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	3	3	3	3	5	3	3	3
Cap, veh/h	68	305	187	647	445	374	67	1128	792	576	1587	676
Arrive On Green	0.04	0.09	0.09	0.19	0.24	0.24	0.04	0.32	0.32	0.17	0.45	0.45
Sat Flow, veh/h	1767	3526	1470	3374	1856	1559	1767	3526	1547	3428	3526	1502
Grp Volume(v), veh/h	53	42	42	551	41	273	53	484	1099	483	684	50
Grp Sat Flow(s),veh/h/ln	1767	1763	1470	1687	1856	1559	1767	1763	1547	1714	1763	1502
Q Serve(g_s), s	2.6	1.0	2.3	13.9	1.5	14.2	2.6	9.5	28.1	12.0	11.6	1.7
Cycle Q Clear(g_c), s	2.6	1.0	2.3	13.9	1.5	14.2	2.6	9.5	28.1	12.0	11.6	1.7
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	68	305	187	647	445	374	67	1128	792	576	1587	676
V/C Ratio(X)	0.78	0.14	0.22	0.85	0.09	0.73	0.79	0.43	1.39	0.84	0.43	0.07
Avail Cap(c_a), veh/h	334	406	229	2367	1141	959	133	1128	792	1039	1900	809
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	41.8	37.1	34.6	34.3	25.9	30.7	41.9	23.5	21.4	35.4	16.5	13.7
Incr Delay (d2), s/veh	7.1	0.3	0.8	1.3	0.2	5.5	7.3	0.5	182.2	1.3	0.8	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	1.2	0.4	0.8	5.4	0.6	5.4	1.3	3.9	53.2	4.9	4.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.0	37.3	35.4	35.5	26.1	36.2	49.2	24.0	203.6	36.6	17.3	13.9
LnGrp LOS	D	D	D	D	C	D	D	C	F	D	B	B
Approach Vol, veh/h		137			865			1636			1217	
Approach Delay, s/veh		41.2			35.3			145.5			24.8	
Approach LOS		D			D			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	33.8	21.2	13.6	7.7	45.2	7.8	27.1
Change Period (Y+Rc), s	4.4	* 5.7	4.4	* 6	4.4	5.7	4.4	6.0
Max Green Setting (Gmax), s	26.6	* 28	61.6	* 10	6.6	47.3	16.6	54.0
Max Q Clear Time (g_c+I1), s	14.0	30.1	15.9	4.3	4.6	13.6	4.6	16.2
Green Ext Time (p_c), s	0.8	0.0	1.0	0.1	0.0	13.5	0.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	79.0
HCM 6th LOS	E

Notes

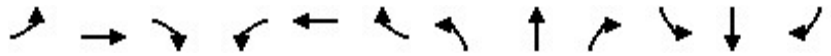
User approved pedestrian interval to be less than phase max green.

* 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	1656	27	45	681	10	131	13	57	20	10	80
Future Volume (veh/h)	80	1656	27	45	681	10	131	13	57	20	10	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		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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	84	1743	22	47	717	9	138	14	54	21	11	76
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	107	2496	775	59	2358	732	174	55	213	34	17	120
Arrive On Green	0.06	0.50	0.50	0.03	0.47	0.47	0.10	0.16	0.16	0.02	0.09	0.09
Sat Flow, veh/h	1739	4985	1547	1739	4985	1547	1767	334	1289	1767	203	1401
Grp Volume(v), veh/h	84	1743	22	47	717	9	138	0	68	21	0	87
Grp Sat Flow(s),veh/h/ln	1739	1662	1547	1739	1662	1547	1767	0	1623	1767	0	1603
Q Serve(g_s), s	3.3	18.8	0.5	1.9	6.2	0.2	5.4	0.0	2.6	0.8	0.0	3.7
Cycle Q Clear(g_c), s	3.3	18.8	0.5	1.9	6.2	0.2	5.4	0.0	2.6	0.8	0.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.87
Lane Grp Cap(c), veh/h	107	2496	775	59	2358	732	174	0	268	34	0	138
V/C Ratio(X)	0.78	0.70	0.03	0.79	0.30	0.01	0.80	0.00	0.25	0.62	0.00	0.63
Avail Cap(c_a), veh/h	305	2781	863	99	2358	732	232	0	1077	144	0	984
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	32.4	13.4	8.9	33.6	11.4	9.8	30.9	0.0	25.5	34.1	0.0	31.0
Incr Delay (d2), s/veh	4.6	0.8	0.0	8.4	0.1	0.0	9.3	0.0	0.2	6.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	5.5	0.2	0.9	1.8	0.1	2.6	0.0	1.0	0.4	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	14.3	8.9	42.0	11.5	9.8	40.2	0.0	25.7	40.8	0.0	32.7
LnGrp LOS	D	B	A	D	B	A	D	A	C	D	A	C
Approach Vol, veh/h		1849			773			206			108	
Approach Delay, s/veh		15.2			13.3			35.4			34.3	
Approach LOS		B			B			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	41.1	11.3	10.9	8.7	39.2	5.7	16.5
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	4.6	39.1	9.2	43.0	12.3	30.8	5.7	46.5
Max Q Clear Time (g_c+I1), s	3.9	20.8	7.4	5.7	5.3	8.2	2.8	4.6
Green Ext Time (p_c), s	0.0	14.3	0.0	0.3	0.0	6.8	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B



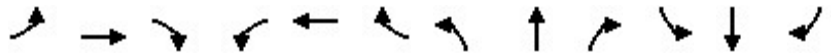
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	440	1274	16	18	565	70	61	1	26	60	0	120
Future Volume (veh/h)	440	1274	16	18	565	70	61	1	26	60	0	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	463	1341	13	19	595	59	64	1	24	63	0	88
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	5	5	5
Cap, veh/h	484	2348	729	31	1723	701	82	1	31	187	0	775
Arrive On Green	0.14	0.47	0.47	0.02	0.35	0.35	0.07	0.07	0.07	0.11	0.00	0.11
Sat Flow, veh/h	3374	4985	1547	1739	4985	1546	1230	19	461	1739	0	3087
Grp Volume(v), veh/h	463	1341	13	19	595	59	89	0	0	63	0	88
Grp Sat Flow(s),veh/h/ln	1687	1662	1547	1739	1662	1546	1711	0	0	1739	0	1543
Q Serve(g_s), s	8.2	11.7	0.3	0.7	5.3	1.3	3.1	0.0	0.0	2.0	0.0	1.3
Cycle Q Clear(g_c), s	8.2	11.7	0.3	0.7	5.3	1.3	3.1	0.0	0.0	2.0	0.0	1.3
Prop In Lane	1.00		1.00	1.00		1.00	0.72		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	484	2348	729	31	1723	701	114	0	0	187	0	775
V/C Ratio(X)	0.96	0.57	0.02	0.60	0.35	0.08	0.78	0.00	0.00	0.34	0.00	0.11
Avail Cap(c_a), veh/h	484	3309	1027	116	2927	1074	1256	0	0	203	0	804
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	1.00
Uniform Delay (d), s/veh	25.5	11.5	8.5	29.2	14.6	9.3	27.5	0.0	0.0	24.8	0.0	17.3
Incr Delay (d2), s/veh	29.9	0.3	0.0	6.7	0.2	0.1	4.3	0.0	0.0	0.4	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	4.8	3.1	0.1	0.3	1.6	0.5	1.3	0.0	0.0	0.8	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.4	11.8	8.5	36.0	14.8	9.4	31.9	0.0	0.0	25.2	0.0	17.3
LnGrp LOS	E	B	A	D	B	A	C	A	A	C	A	B
Approach Vol, veh/h		1817			673			89			151	
Approach Delay, s/veh		22.9			14.9			31.9			20.6	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.5	34.2		11.3	13.0	26.7		8.9
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	6.0		4.9
Max Green Setting (Gmax), s	4.6	39.8		7.0	8.6	35.2		44.0
Max Q Clear Time (g_c+I1), s	2.7	13.7		4.0	10.2	7.3		5.1
Green Ext Time (p_c), s	0.0	14.6		0.1	0.0	7.3		0.1

Intersection Summary	
HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

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)	10	1367	23	10	590	70	10	10	20	20	10	100
Future Volume (veh/h)	10	1367	23	10	590	70	10	10	20	20	10	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1826	1826	1826	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	11	1439	21	11	621	59	11	11	19	21	11	96
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	8	8	8	3	3	3	5	5	5
Cap, veh/h	17	3452	50	17	3317	1003	25	25	42	31	16	141
Arrive On Green	0.01	0.68	0.68	0.01	0.68	0.68	0.05	0.05	0.05	0.12	0.12	0.12
Sat Flow, veh/h	1739	5060	74	1697	4863	1470	450	450	778	255	134	1167
Grp Volume(v), veh/h	11	945	515	11	621	59	41	0	0	128	0	0
Grp Sat Flow(s),veh/h/ln	1739	1662	1811	1697	1621	1470	1679	0	0	1556	0	0
Q Serve(g_s), s	0.9	18.9	18.9	1.0	7.0	2.0	3.6	0.0	0.0	11.8	0.0	0.0
Cycle Q Clear(g_c), s	0.9	18.9	18.9	1.0	7.0	2.0	3.6	0.0	0.0	11.8	0.0	0.0
Prop In Lane	1.00		0.04	1.00		1.00	0.27		0.46	0.16		0.75
Lane Grp Cap(c), veh/h	17	2267	1235	17	3317	1003	92	0	0	188	0	0
V/C Ratio(X)	0.65	0.42	0.42	0.66	0.19	0.06	0.45	0.00	0.00	0.68	0.00	0.00
Avail Cap(c_a), veh/h	77	2267	1235	75	3317	1003	448	0	0	415	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)	0.88	0.88	0.88	0.93	0.93	0.93	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	74.0	10.6	10.6	74.0	8.7	7.9	68.7	0.0	0.0	63.2	0.0	0.0
Incr Delay (d2), s/veh	12.6	0.5	0.9	14.4	0.1	0.1	4.5	0.0	0.0	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	0.5	6.4	7.1	0.5	2.3	0.6	1.7	0.0	0.0	4.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	11.1	11.5	88.4	8.8	8.0	73.2	0.0	0.0	64.8	0.0	0.0
LnGrp LOS	F	B	B	F	A	A	E	A	A	E	A	A
Approach Vol, veh/h		1471			691			41			128	
Approach Delay, s/veh		11.8			10.0			73.2			64.8	
Approach LOS		B			B			E			E	

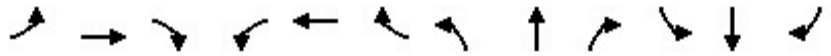
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	108.5		22.1	5.9	108.5		13.5
Change Period (Y+Rc), s	4.4	6.2		4.0	4.4	* 6.2		5.3
Max Green Setting (Gmax), s	6.6	43.5		40.0	6.6	* 44		40.0
Max Q Clear Time (g_c+I1), s	3.0	20.9		13.8	2.9	9.0		5.6
Green Ext Time (p_c), s	0.0	13.0		0.3	0.0	5.7		0.3

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* 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)	600	627	180	100	430	490	50	100	60	300	120	150
Future Volume (veh/h)	600	627	180	100	430	490	50	100	60	300	120	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	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	1781	1781	1781	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	632	660	151	105	453	413	53	105	57	316	126	111
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	5	5	5
Cap, veh/h	608	2126	650	154	1455	437	68	198	108	307	578	1348
Arrive On Green	0.18	0.44	0.44	0.05	0.30	0.30	0.04	0.18	0.18	0.18	0.32	0.32
Sat Flow, veh/h	3291	4863	1487	3291	4863	1460	1767	1112	604	1739	1826	2671
Grp Volume(v), veh/h	632	660	151	105	453	413	53	0	162	316	126	111
Grp Sat Flow(s),veh/h/ln	1646	1621	1487	1646	1621	1460	1767	0	1716	1739	1826	1336
Q Serve(g_s), s	22.6	10.8	7.8	3.8	8.8	33.8	3.6	0.0	10.5	21.6	6.2	2.6
Cycle Q Clear(g_c), s	22.6	10.8	7.8	3.8	8.8	33.8	3.6	0.0	10.5	21.6	6.2	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	608	2126	650	154	1455	437	68	0	306	307	578	1348
V/C Ratio(X)	1.04	0.31	0.23	0.68	0.31	0.95	0.78	0.00	0.53	1.03	0.22	0.08
Avail Cap(c_a), veh/h	608	2126	650	285	1475	443	147	0	687	307	902	1822
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	1.00	1.00
Uniform Delay (d), s/veh	49.9	22.4	21.6	57.4	33.1	41.9	58.3	0.0	45.6	50.4	30.7	15.9
Incr Delay (d2), s/veh	47.1	0.1	0.3	2.0	0.2	29.5	6.9	0.0	3.0	59.1	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	3.9	2.8	1.6	3.4	15.6	1.8	0.0	4.7	14.5	2.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.0	22.6	21.9	59.4	33.3	71.4	65.2	0.0	48.6	109.4	30.8	15.9
LnGrp LOS	F	C	C	E	C	E	E	A	D	F	C	B
Approach Vol, veh/h		1443			971			215			553	
Approach Delay, s/veh		55.1			52.4			52.7			72.7	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	59.5	9.1	43.6	27.0	42.6	26.0	26.7
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	10.6	49.1	10.2	60.4	22.6	37.1	21.6	49.0
Max Q Clear Time (g_c+I1), s	5.8	12.8	5.6	8.2	24.6	35.8	23.6	12.5
Green Ext Time (p_c), s	0.1	8.3	0.0	0.8	0.0	0.8	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	57.2
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	190	10	140	480	1676	0	0	484	760
Future Volume (veh/h)	0	0	0	190	10	140	480	1676	0	0	484	760
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		0.93
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				1826	1826	1826	1826	1826	0	0	1826	1826
Adj Flow Rate, veh/h				200	11	118	505	1764	0	0	509	720
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				5	5	5	5	5	0	0	5	5
Cap, veh/h				177	10	165	540	4034	0	0	1538	669
Arrive On Green				0.11	0.11	0.11	0.31	0.81	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1652	91	1547	1739	5149	0	0	3487	1445
Grp Volume(v), veh/h				211	0	118	505	1764	0	0	509	720
Grp Sat Flow(s),veh/h/ln				1743	0	1547	1739	1662	0	0	1662	1445
Q Serve(g_s), s				13.9	0.0	9.6	36.7	13.6	0.0	0.0	12.6	60.2
Cycle Q Clear(g_c), s				13.9	0.0	9.6	36.7	13.6	0.0	0.0	12.6	60.2
Prop In Lane				0.95		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				186	0	165	540	4034	0	0	1538	669
V/C Ratio(X)				1.13	0.00	0.71	0.94	0.44	0.00	0.00	0.33	1.08
Avail Cap(c_a), veh/h				186	0	165	806	4799	0	0	1538	669
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				58.1	0.0	56.2	43.6	3.7	0.0	0.0	22.2	34.9
Incr Delay (d2), s/veh				106.0	0.0	13.5	13.7	0.1	0.0	0.0	0.1	57.1
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				11.6	0.0	4.4	17.7	3.7	0.0	0.0	5.0	31.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				164.1	0.0	69.7	57.3	3.7	0.0	0.0	22.3	92.0
LnGrp LOS				F	A	E	E	A	A	A	C	F
Approach Vol, veh/h					329			2269			1229	
Approach Delay, s/veh					130.2			15.7			63.1	
Approach LOS					F			B			E	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	111.1		45.1	66.0		19.0
Change Period (Y+Rc), s	5.8		* 4.7	5.8		5.1
Max Green Setting (Gmax), s	125.2		* 60	60.2		13.9
Max Q Clear Time (g_c+I1), s	15.6		38.7	62.2		15.9
Green Ext Time (p_c), s	26.6		1.6	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.8
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)	1173	10	550	0	0	0	0	984	320	150	524	0
Future Volume (veh/h)	1173	10	550	0	0	0	0	984	320	150	524	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94				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	1826	1826	1826				0	1856	1856	1826	1856	0
Adj Flow Rate, veh/h	884	503	521				0	1036	303	158	552	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5				0	3	3	5	3	0
Cap, veh/h	950	435	450				0	1086	317	120	1342	0
Arrive On Green	0.55	0.55	0.55				0.00	0.28	0.28	0.07	0.38	0.00
Sat Flow, veh/h	1739	795	824				0	4036	1131	1739	3618	0
Grp Volume(v), veh/h	884	0	1024				0	904	435	158	552	0
Grp Sat Flow(s),veh/h/ln	1739	0	1619				0	1689	1623	1739	1763	0
Q Serve(g_s), s	70.2	0.0	81.9				0.0	39.4	39.5	10.3	17.2	0.0
Cycle Q Clear(g_c), s	70.2	0.0	81.9				0.0	39.4	39.5	10.3	17.2	0.0
Prop In Lane	1.00		0.51				0.00		0.70	1.00		0.00
Lane Grp Cap(c), veh/h	950	0	885				0	947	455	120	1342	0
V/C Ratio(X)	0.93	0.00	1.16				0.00	0.95	0.96	1.32	0.41	0.00
Avail Cap(c_a), veh/h	950	0	885				0	951	457	120	1346	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				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.3	0.0	34.0				0.0	53.0	53.0	69.8	34.1	0.0
Incr Delay (d2), s/veh	15.1	0.0	83.4				0.0	19.0	30.8	191.6	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
%ile BackOfQ(50%),veh/ln	32.8	0.0	51.7				0.0	19.2	20.0	11.0	7.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	0.0	117.4				0.0	72.0	83.7	261.3	34.3	0.0
LnGrp LOS	D	A	F				A	E	F	F	C	A
Approach Vol, veh/h		1908						1339			710	
Approach Delay, s/veh		84.5						75.8			84.8	
Approach LOS		F						E			F	

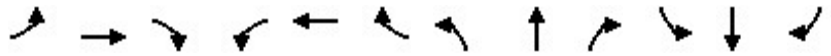
Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	15.0	47.8	87.0	62.8
Change Period (Y+Rc), s*	4.7	5.8	5.1	5.8
Max Green Setting (Gmax), s	10.3	42.2	81.9	57.2
Max Q Clear Time (g_c+I1), s	12.3	41.5	83.9	19.2
Green Ext Time (p_c), s	0.0	0.6	0.0	4.2

Intersection Summary	
HCM 6th Ctrl Delay	81.6
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.



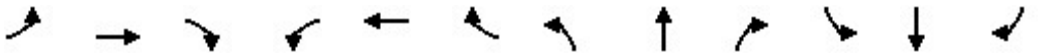
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	454	30	30	10	40	200	80	650	10	80	452	542
Future Volume (veh/h)	454	30	30	10	40	200	80	650	10	80	452	542
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.97	1.00		0.80
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	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	528	0	0	11	42	169	84	684	10	84	476	514
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	975	512	0	441	239	199	89	2024	30	106	711	504
Arrive On Green	0.28	0.00	0.00	0.13	0.13	0.13	0.05	0.39	0.39	0.06	0.40	0.40
Sat Flow, veh/h	3534	1856	0	3428	1856	1551	1767	5141	75	1767	1763	1251
Grp Volume(v), veh/h	528	0	0	11	42	169	84	449	245	84	476	514
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1714	1856	1551	1767	1689	1839	1767	1763	1251
Q Serve(g_s), s	16.7	0.0	0.0	0.4	2.6	14.0	6.2	12.2	12.2	6.1	28.9	52.8
Cycle Q Clear(g_c), s	16.7	0.0	0.0	0.4	2.6	14.0	6.2	12.2	12.2	6.1	28.9	52.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	975	512	0	441	239	199	89	1330	724	106	711	504
V/C Ratio(X)	0.54	0.00	0.00	0.02	0.18	0.85	0.94	0.34	0.34	0.80	0.67	1.02
Avail Cap(c_a), veh/h	998	524	0	916	496	414	89	1330	724	294	711	504
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	0.0	0.0	49.9	50.9	55.8	62.0	27.8	27.8	60.8	32.0	39.1
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.0	0.4	10.6	75.8	0.2	0.4	5.0	2.7	44.9
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	7.4	0.0	0.0	0.2	1.3	6.1	4.7	5.1	5.6	2.9	12.8	22.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.8	0.0	0.0	49.9	51.3	66.4	137.8	28.0	28.1	65.8	34.6	84.0
LnGrp LOS	D	A	A	D	D	E	F	C	C	E	C	F
Approach Vol, veh/h		528			222			778			1074	
Approach Delay, s/veh		40.8			62.7			39.9			60.7	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.2	56.5		40.5	11.0	57.7		21.7
Change Period (Y+Rc), s	4.4	4.9		4.4	4.4	4.9		4.9
Max Green Setting (Gmax), s	21.8	37.6		37.0	6.6	52.8		35.0
Max Q Clear Time (g_c+I1), s	8.1	14.2		18.7	8.2	54.8		16.0
Green Ext Time (p_c), s	0.1	6.4		1.3	0.0	0.0		0.9

Intersection Summary	
HCM 6th Ctrl Delay	50.6
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)	40	50	60	1486	60	643	60	680	767	569	350	40
Future Volume (veh/h)	40	50	60	1486	60	643	60	680	767	569	350	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.72	1.00		0.97	1.00		0.99	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	1856	1856	1856	1826	1856	1856	1856	1856	1826	1856	1856	1856
Adj Flow Rate, veh/h	42	53	50	1564	63	561	63	716	645	599	368	34
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	3	3	3	3	5	3	3	3
Cap, veh/h	54	228	144	1428	848	699	80	694	955	600	1152	447
Arrive On Green	0.03	0.06	0.06	0.42	0.46	0.46	0.05	0.20	0.20	0.18	0.33	0.33
Sat Flow, veh/h	1767	3526	1127	3374	1856	1528	1767	3526	1525	3428	3526	1368
Grp Volume(v), veh/h	42	53	50	1564	63	561	63	716	645	599	368	34
Grp Sat Flow(s),veh/h/ln	1767	1763	1127	1687	1856	1528	1767	1763	1525	1714	1763	1368
Q Serve(g_s), s	3.5	2.1	6.0	61.9	2.8	46.1	5.2	28.8	28.8	25.5	11.5	2.5
Cycle Q Clear(g_c), s	3.5	2.1	6.0	61.9	2.8	46.1	5.2	28.8	28.8	25.5	11.5	2.5
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	54	228	144	1428	848	699	80	694	955	600	1152	447
V/C Ratio(X)	0.78	0.23	0.35	1.10	0.07	0.80	0.79	1.03	0.68	1.00	0.32	0.08
Avail Cap(c_a), veh/h	128	243	149	1428	848	699	80	694	955	600	1152	447
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	70.4	65.0	60.7	42.2	22.3	34.0	69.1	58.7	18.3	60.3	37.0	34.0
Incr Delay (d2), s/veh	8.6	0.7	1.9	54.3	0.1	7.5	37.3	42.4	2.5	36.2	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	1.7	0.9	1.8	35.1	1.2	17.7	3.2	16.9	13.6	14.0	5.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.0	65.6	62.5	96.5	22.4	41.6	106.5	101.1	20.7	96.5	37.7	34.3
LnGrp LOS	E	E	E	F	C	D	F	F	C	F	D	C
Approach Vol, veh/h		145			2188			1424			1001	
Approach Delay, s/veh		68.4			80.3			64.9			72.8	
Approach LOS		E			F			E			E	

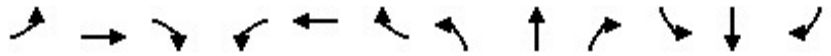
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	34.5	66.3	15.4	11.0	53.5	8.9	72.9
Change Period (Y+Rc), s	4.4	* 5.7	4.4	* 6	4.4	5.7	4.4	6.0
Max Green Setting (Gmax), s	25.6	* 29	61.9	* 10	6.6	47.0	10.6	60.3
Max Q Clear Time (g_c+I1), s	27.5	30.8	63.9	8.0	7.2	13.5	5.5	48.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	6.8	0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	73.7
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

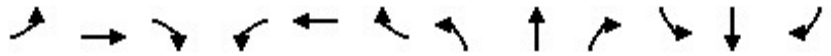
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	1001	206	126	1867	30	152	12	69	10	14	50
Future Volume (veh/h)	150	1001	206	126	1867	30	152	12	69	10	14	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		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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	158	1054	173	133	1965	26	160	13	66	11	15	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	3	3	3
Cap, veh/h	189	2670	829	163	2597	806	192	42	213	19	24	75
Arrive On Green	0.11	0.54	0.54	0.09	0.52	0.52	0.11	0.16	0.16	0.01	0.06	0.06
Sat Flow, veh/h	1739	4985	1547	1739	4985	1547	1767	265	1348	1767	389	1243
Grp Volume(v), veh/h	158	1054	173	133	1965	26	160	0	79	11	0	63
Grp Sat Flow(s),veh/h/ln	1739	1662	1547	1739	1662	1547	1767	0	1613	1767	0	1632
Q Serve(g_s), s	8.7	12.2	5.7	7.3	30.5	0.8	8.7	0.0	4.2	0.6	0.0	3.7
Cycle Q Clear(g_c), s	8.7	12.2	5.7	7.3	30.5	0.8	8.7	0.0	4.2	0.6	0.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.84	1.00		0.76
Lane Grp Cap(c), veh/h	189	2670	829	163	2597	806	192	0	255	19	0	99
V/C Ratio(X)	0.84	0.39	0.21	0.81	0.76	0.03	0.84	0.00	0.31	0.59	0.00	0.64
Avail Cap(c_a), veh/h	244	2670	829	349	2805	871	246	0	868	72	0	718
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	42.7	13.4	11.9	43.4	18.5	11.4	42.7	0.0	36.4	48.1	0.0	44.9
Incr Delay (d2), s/veh	14.4	0.2	0.2	3.7	1.3	0.0	14.3	0.0	0.3	10.5	0.0	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	4.3	4.0	1.9	3.2	10.3	0.3	4.5	0.0	1.7	0.3	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.1	13.5	12.1	47.1	19.8	11.4	57.0	0.0	36.7	58.6	0.0	47.4
LnGrp LOS	E	B	B	D	B	B	E	A	D	E	A	D
Approach Vol, veh/h		1385			2124			239			74	
Approach Delay, s/veh		18.3			21.4			50.3			49.1	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	58.3	15.0	10.8	15.0	56.9	5.4	20.4
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	9.6	49.1	13.6	43.0	13.7	55.0	4.0	52.6
Max Q Clear Time (g_c+I1), s	10.7	14.2	10.7	5.7	10.7	32.5	2.6	6.2
Green Ext Time (p_c), s	0.1	14.1	0.1	0.2	0.1	18.4	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C



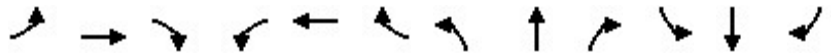
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	777	61	56	1535	110	27	0	11	140	1	430
Future Volume (veh/h)	220	777	61	56	1535	110	27	0	11	140	1	430
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	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	1826	1826	1826	1826	1826	1826	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	232	818	49	59	1616	93	28	0	10	147	0	318
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	5	5	5	3	3	3	5	5	5
Cap, veh/h	318	2671	829	74	2415	937	37	0	13	210	0	666
Arrive On Green	0.09	0.54	0.54	0.04	0.48	0.48	0.03	0.00	0.03	0.12	0.00	0.12
Sat Flow, veh/h	3374	4985	1547	1739	4985	1547	1261	0	450	1739	0	3095
Grp Volume(v), veh/h	232	818	49	59	1616	93	38	0	0	147	0	318
Grp Sat Flow(s),veh/h/ln	1687	1662	1547	1739	1662	1547	1711	0	0	1739	0	1547
Q Serve(g_s), s	5.0	6.8	1.1	2.5	18.4	1.9	1.6	0.0	0.0	6.0	0.0	6.7
Cycle Q Clear(g_c), s	5.0	6.8	1.1	2.5	18.4	1.9	1.6	0.0	0.0	6.0	0.0	6.7
Prop In Lane	1.00		1.00	1.00		1.00	0.74		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	318	2671	829	74	2415	937	50	0	0	210	0	666
V/C Ratio(X)	0.73	0.31	0.06	0.79	0.67	0.10	0.76	0.00	0.00	0.70	0.00	0.48
Avail Cap(c_a), veh/h	426	2671	829	233	2690	1022	1011	0	0	261	0	757
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	1.00
Uniform Delay (d), s/veh	32.8	9.6	8.3	35.3	14.7	6.2	35.9	0.0	0.0	31.4	0.0	25.6
Incr Delay (d2), s/veh	2.4	0.1	0.0	6.9	0.8	0.1	8.4	0.0	0.0	3.8	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	2.0	1.9	0.3	1.1	5.7	0.7	0.8	0.0	0.0	2.7	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	9.7	8.3	42.2	15.5	6.3	44.3	0.0	0.0	35.2	0.0	25.8
LnGrp LOS	D	A	A	D	B	A	D	A	A	D	A	C
Approach Vol, veh/h		1099			1768			38			465	
Approach Delay, s/veh		15.0			15.9			44.3			28.8	
Approach LOS		B			B			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	45.9		13.9	11.4	42.1		7.1				
Change Period (Y+Rc), s	4.4	6.0		4.9	4.4	6.0		4.9				
Max Green Setting (Gmax), s	10.6	39.6		11.2	9.4	40.2		44.0				
Max Q Clear Time (g_c+I1), s	4.5	8.8		8.7	7.0	20.4		3.6				
Green Ext Time (p_c), s	0.0	9.2		0.3	0.1	15.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

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)	10	908	12	10	1539	70	14	10	10	20	10	160
Future Volume (veh/h)	10	908	12	10	1539	70	14	10	10	20	10	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1826	1826	1826	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	11	956	12	11	1620	59	15	11	10	21	11	151
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	8	8	8	3	3	3	5	5	5
Cap, veh/h	17	3386	42	17	3247	1006	37	27	25	25	13	179
Arrive On Green	0.01	0.67	0.67	0.01	0.67	0.67	0.05	0.05	0.05	0.14	0.14	0.14
Sat Flow, veh/h	1739	5072	64	1697	4863	1506	719	527	479	181	95	1298
Grp Volume(v), veh/h	11	626	342	11	1620	59	36	0	0	183	0	0
Grp Sat Flow(s),veh/h/ln	1739	1662	1813	1697	1621	1506	1725	0	0	1573	0	0
Q Serve(g_s), s	0.9	11.6	11.6	1.0	24.9	2.0	3.0	0.0	0.0	17.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	11.6	11.6	1.0	24.9	2.0	3.0	0.0	0.0	17.0	0.0	0.0
Prop In Lane	1.00		0.04	1.00		1.00	0.42		0.28	0.11		0.83
Lane Grp Cap(c), veh/h	17	2218	1210	17	3247	1006	89	0	0	217	0	0
V/C Ratio(X)	0.65	0.28	0.28	0.66	0.50	0.06	0.40	0.00	0.00	0.84	0.00	0.00
Avail Cap(c_a), veh/h	46	2218	1210	45	3247	1006	460	0	0	420	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)	0.93	0.93	0.93	0.70	0.70	0.70	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	74.0	10.2	10.2	74.0	12.4	8.6	68.9	0.0	0.0	63.0	0.0	0.0
Incr Delay (d2), s/veh	13.2	0.3	0.5	11.1	0.4	0.1	3.9	0.0	0.0	3.4	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	4.0	4.4	0.5	8.3	0.6	1.5	0.0	0.0	7.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.2	10.5	10.8	85.1	12.8	8.7	72.7	0.0	0.0	66.4	0.0	0.0
LnGrp LOS	F	B	B	F	B	A	E	A	A	E	A	A
Approach Vol, veh/h		979			1690			36			183	
Approach Delay, s/veh		11.5			13.1			72.7			66.4	
Approach LOS		B			B			E			E	

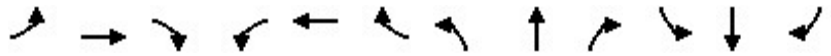
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	106.3		24.7	5.9	106.3		13.1
Change Period (Y+Rc), s	4.4	6.2		4.0	4.4	* 6.2		5.3
Max Green Setting (Gmax), s	4.6	46.1		40.0	4.0	* 46		40.0
Max Q Clear Time (g_c+I1), s	3.0	13.6		19.0	2.9	26.9		5.0
Green Ext Time (p_c), s	0.0	9.4		0.4	0.0	12.9		0.2

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



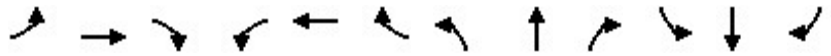
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	618	90	100	769	360	160	140	130	550	120	690
Future Volume (veh/h)	280	618	90	100	769	360	160	140	130	550	120	690
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.96	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	1781	1781	1781	1781	1781	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	295	651	76	105	809	303	168	147	123	579	126	514
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	3	3	3	5	5	5
Cap, veh/h	274	1469	448	152	1288	385	193	213	178	460	708	1264
Arrive On Green	0.08	0.30	0.30	0.05	0.26	0.26	0.11	0.23	0.23	0.26	0.39	0.39
Sat Flow, veh/h	3291	4863	1483	3291	4863	1455	1767	916	767	1739	1826	2676
Grp Volume(v), veh/h	295	651	76	105	809	303	168	0	270	579	126	514
Grp Sat Flow(s),veh/h/ln	1646	1621	1483	1646	1621	1455	1767	0	1683	1739	1826	1338
Q Serve(g_s), s	10.6	13.7	4.8	4.0	18.6	24.6	11.9	0.0	18.6	33.6	5.8	16.0
Cycle Q Clear(g_c), s	10.6	13.7	4.8	4.0	18.6	24.6	11.9	0.0	18.6	33.6	5.8	16.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	274	1469	448	152	1288	385	193	0	391	460	708	1264
V/C Ratio(X)	1.07	0.44	0.17	0.69	0.63	0.79	0.87	0.00	0.69	1.26	0.18	0.41
Avail Cap(c_a), veh/h	274	1469	448	243	1419	425	203	0	649	460	977	1658
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	1.00	1.00
Uniform Delay (d), s/veh	58.3	35.8	32.6	59.7	41.2	43.4	55.7	0.0	44.6	46.8	25.6	22.0
Incr Delay (d2), s/veh	75.6	0.3	0.3	2.1	1.0	9.8	28.8	0.0	4.6	133.5	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	7.2	5.3	1.8	1.7	7.3	9.9	6.8	0.0	8.3	31.6	2.6	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	133.9	36.1	32.9	61.8	42.2	53.2	84.5	0.0	49.2	180.3	25.6	22.1
LnGrp LOS	F	D	C	E	D	D	F	A	D	F	C	C
Approach Vol, veh/h		1022			1217			438			1219	
Approach Delay, s/veh		64.1			46.7			62.7			97.6	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	44.4	18.3	54.2	15.0	39.7	38.0	34.5
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	5.9	38.3	14.6	68.0	10.6	37.1	33.6	49.0
Max Q Clear Time (g_c+I1), s	6.6	15.7	13.9	18.0	12.6	26.6	35.6	20.6
Green Ext Time (p_c), s	0.0	6.6	0.0	1.8	0.0	6.2	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	69.0
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	310	10	150	660	1357	0	0	577	1320
Future Volume (veh/h)	0	0	0	310	10	150	660	1357	0	0	577	1320
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		0.81
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				1826	1826	1826	1826	1826	0	0	1826	1826
Adj Flow Rate, veh/h				326	11	126	695	1428	0	0	595	1225
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.97	0.97	0.97
Percent Heavy Veh, %				5	5	5	5	5	0	0	5	5
Cap, veh/h				234	8	212	475	3748	0	0	1436	538
Arrive On Green				0.14	0.14	0.14	0.27	0.75	0.00	0.00	0.43	0.43
Sat Flow, veh/h				1685	57	1523	1739	5149	0	0	3487	1246
Grp Volume(v), veh/h				337	0	126	695	1428	0	0	595	1225
Grp Sat Flow(s),veh/h/ln				1742	0	1523	1739	1662	0	0	1662	1246
Q Serve(g_s), s				13.9	0.0	7.8	27.3	10.0	0.0	0.0	12.4	43.2
Cycle Q Clear(g_c), s				13.9	0.0	7.8	27.3	10.0	0.0	0.0	12.4	43.2
Prop In Lane				0.97		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				242	0	212	475	3748	0	0	1436	538
V/C Ratio(X)				1.39	0.00	0.60	1.46	0.38	0.00	0.00	0.41	2.27
Avail Cap(c_a), veh/h				242	0	212	475	3748	0	0	1436	538
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				43.1	0.0	40.4	36.3	4.3	0.0	0.0	19.6	28.4
Incr Delay (d2), s/veh				199.7	0.0	4.5	220.1	0.1	0.0	0.0	0.2	579.6
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				19.3	0.0	3.1	40.3	2.7	0.0	0.0	4.7	98.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				242.8	0.0	44.9	256.5	4.4	0.0	0.0	19.8	608.0
LnGrp LOS				F	A	D	F	A	A	A	B	F
Approach Vol, veh/h					463			2123			1820	
Approach Delay, s/veh					188.9			86.9			415.7	
Approach LOS					F			F			F	

Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	81.0		32.0	49.0		19.0
Change Period (Y+Rc), s	5.8		* 4.7	5.8		5.1
Max Green Setting (Gmax), s	75.2		* 27	43.2		13.9
Max Q Clear Time (g_c+I1), s	12.0		29.3	45.2		15.9
Green Ext Time (p_c), s	16.4		0.0	0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay	233.5	
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)	884	10	550	0	0	0	0	1134	360	160	727	0
Future Volume (veh/h)	884	10	550	0	0	0	0	1134	360	160	727	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88				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	1826	1826	1826				0	1856	1856	1826	1856	0
Adj Flow Rate, veh/h	732	290	521				0	1194	341	168	765	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5				0	3	3	5	3	0
Cap, veh/h	796	245	440				0	1374	392	146	1648	0
Arrive On Green	0.46	0.46	0.46				0.00	0.35	0.35	0.08	0.47	0.00
Sat Flow, veh/h	1739	535	960				0	4080	1117	1739	3618	0
Grp Volume(v), veh/h	732	0	811				0	1031	504	168	765	0
Grp Sat Flow(s),veh/h/ln	1739	0	1495				0	1689	1653	1739	1763	0
Q Serve(g_s), s	57.6	0.0	66.9				0.0	41.6	41.7	12.3	21.6	0.0
Cycle Q Clear(g_c), s	57.6	0.0	66.9				0.0	41.6	41.7	12.3	21.6	0.0
Prop In Lane	1.00		0.64				0.00		0.68	1.00		0.00
Lane Grp Cap(c), veh/h	796	0	684				0	1186	580	146	1648	0
V/C Ratio(X)	0.92	0.00	1.18				0.00	0.87	0.87	1.15	0.46	0.00
Avail Cap(c_a), veh/h	796	0	684				0	1276	624	146	1742	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				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.1	0.0	39.6				0.0	44.3	44.3	66.9	26.5	0.0
Incr Delay (d2), s/veh	15.7	0.0	97.6				0.0	6.3	12.0	119.6	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
%ile BackOfQ(50%),veh/ln	27.7	0.0	42.7				0.0	18.4	18.9	10.3	9.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	0.0	137.2				0.0	50.6	56.2	186.5	26.7	0.0
LnGrp LOS	D	A	F				A	D	E	F	C	A
Approach Vol, veh/h		1543						1535			933	
Approach Delay, s/veh		97.2						52.5			55.4	
Approach LOS		F						D			E	

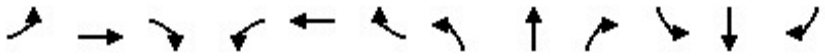
Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	17.0	57.1	72.0	74.1
Change Period (Y+Rc), s	* 4.7	5.8	5.1	5.8
Max Green Setting (Gmax), s	* 12	55.2	66.9	72.2
Max Q Clear Time (g_c+I1), s	14.3	43.7	68.9	23.6
Green Ext Time (p_c), s	0.0	7.7	0.0	6.5

Intersection Summary	
HCM 6th Ctrl Delay	70.3
HCM 6th LOS	E

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)	452	50	70	20	80	440	40	602	20	240	710	326
Future Volume (veh/h)	452	50	70	20	80	440	40	602	20	240	710	326
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.69	1.00		0.97	1.00		0.73	1.00		0.79
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	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	298	302	67	21	84	370	42	634	19	253	747	308
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	441	336	75	809	438	360	54	1216	36	257	805	331
Arrive On Green	0.25	0.25	0.25	0.24	0.24	0.24	0.03	0.24	0.24	0.15	0.36	0.36
Sat Flow, veh/h	1767	1346	299	3428	1856	1527	1767	4995	148	1767	2243	924
Grp Volume(v), veh/h	298	0	369	21	84	370	42	427	226	253	587	468
Grp Sat Flow(s),veh/h/ln	1767	0	1645	1714	1856	1527	1767	1689	1766	1767	1763	1404
Q Serve(g_s), s	22.6	0.0	32.2	0.7	5.4	35.0	3.5	16.2	16.5	21.2	47.5	47.6
Cycle Q Clear(g_c), s	22.6	0.0	32.2	0.7	5.4	35.0	3.5	16.2	16.5	21.2	47.5	47.6
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.08	1.00		0.66
Lane Grp Cap(c), veh/h	441	0	410	809	438	360	54	822	430	257	632	504
V/C Ratio(X)	0.68	0.00	0.90	0.03	0.19	1.03	0.78	0.52	0.53	0.98	0.93	0.93
Avail Cap(c_a), veh/h	441	0	410	809	438	360	54	861	450	257	653	520
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	50.2	0.0	53.8	43.5	45.3	56.6	71.4	48.6	48.7	63.2	45.7	45.7
Incr Delay (d2), s/veh	3.6	0.0	21.8	0.0	0.2	54.5	48.6	0.7	1.4	51.0	19.6	23.4
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	10.6	0.0	15.9	0.3	2.6	19.0	2.3	7.0	7.6	13.2	24.1	19.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	0.0	75.7	43.6	45.6	111.1	120.0	49.3	50.0	114.2	65.3	69.1
LnGrp LOS	D	A	E	D	D	F	F	D	D	F	E	E
Approach Vol, veh/h		667			475			695			1308	
Approach Delay, s/veh		65.9			96.5			53.8			76.1	
Approach LOS		E			F			D			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.0	41.0		41.4	8.9	58.1		39.9
Change Period (Y+Rc), s	4.4	4.9		4.4	4.4	4.9		4.9
Max Green Setting (Gmax), s	21.6	37.8		37.0	4.5	54.9		35.0
Max Q Clear Time (g_c+I1), s	23.2	18.5		34.2	5.5	49.6		37.0
Green Ext Time (p_c), s	0.0	5.5		0.8	0.0	3.6		0.0

Intersection Summary	
HCM 6th Ctrl Delay	72.1
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Attachment 17 – SimTraffic Queue Results

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB
Directions Served	T	T	T	T	T	T	R	L	TR
Maximum Queue (ft)	269	259	72	168	123	96	23	55	69
Average Queue (ft)	116	36	19	28	47	34	1	2	26
95th Queue (ft)	201	130	54	81	84	77	8	19	56
Link Distance (ft)	625	625	625	1255	1255	1255		226	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)							400		50
Storage Blk Time (%)	2							0	1
Queuing Penalty (veh)	0							0	0

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	SB	SB
Directions Served	L	L	T	T	T	L	T	T	T	R	L	R
Maximum Queue (ft)	165	189	46	66	103	17	61	71	55	28	48	56
Average Queue (ft)	47	75	8	6	15	1	14	21	18	5	20	23
95th Queue (ft)	113	138	34	32	60	6	43	55	50	23	43	49
Link Distance (ft)			1255	1255	1255		1246	1246	1246		424	424
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	470	470				280				560		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	SB
Directions Served	R
Maximum Queue (ft)	43
Average Queue (ft)	2
95th Queue (ft)	16
Link Distance (ft)	424
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Caliente Avenue & SR-905 EB Off-Ramp/SR-905 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	T	T	TR	L	T	T
Maximum Queue (ft)	1076	845	154	152	248	181	101	172
Average Queue (ft)	1050	844	50	50	109	67	41	68
95th Queue (ft)	1074	849	89	111	196	137	83	131
Link Distance (ft)	1024		399	399	399	394	394	394
Upstream Blk Time (%)	53							
Queuing Penalty (veh)	0							
Storage Bay Dist (ft)		820						
Storage Blk Time (%)	39	55						
Queuing Penalty (veh)	305	163						

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	EB	EB	EB	WB	WB	WB	WB	SB
Directions Served	T	T	T	T	T	T	R	TR
Maximum Queue (ft)	165	126	45	181	182	270	26	52
Average Queue (ft)	59	14	9	58	85	88	6	19
95th Queue (ft)	119	54	27	135	162	176	22	44
Link Distance (ft)	636	636	636	1242	1242	1242		
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)							400	50
Storage Blk Time (%)	0							1
Queuing Penalty (veh)	0							0

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	SB	SB
Directions Served	L	L	T	T	T	L	T	T	T	R	L	R
Maximum Queue (ft)	140	138	128	67	104	129	350	333	325	52	153	425
Average Queue (ft)	30	50	27	13	30	28	97	104	122	18	64	98
95th Queue (ft)	82	102	81	40	79	82	227	238	240	44	108	236
Link Distance (ft)			1242	1242	1242		1218	1218	1218		436	436
Upstream Blk Time (%)												0
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	470	470				280				560		
Storage Blk Time (%)							1					
Queuing Penalty (veh)							0					

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	SB
Directions Served	R
Maximum Queue (ft)	383
Average Queue (ft)	52
95th Queue (ft)	187
Link Distance (ft)	436
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Caliente Avenue & SR-905 EB Off-Ramp/SR-905 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	T	T	TR	L	T	T
Maximum Queue (ft)	354	511	246	246	256	122	87	91
Average Queue (ft)	204	223	125	104	122	65	35	42
95th Queue (ft)	312	409	214	180	202	113	76	83
Link Distance (ft)	1038		399	399	399	318	318	318
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		820						
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 2: Emerald Crest Court & Otay Mesa Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	T	T	T	R	L	T	T	T	L	TR	TR
Maximum Queue (ft)	290	227	80	20	53	68	99	106	140	26	58
Average Queue (ft)	124	33	25	6	4	36	39	40	40	7	24
95th Queue (ft)	223	109	66	19	24	66	72	84	94	24	43
Link Distance (ft)	626	626	626			1252	1252	1252	137	137	
Upstream Blk Time (%)									0		
Queuing Penalty (veh)									0		
Storage Bay Dist (ft)				185	640						50
Storage Blk Time (%)	3										0
Queuing Penalty (veh)	0										0

Intersection: 3: Corporate Center Drive & Otay Mesa Road

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	LTR
Maximum Queue (ft)	232	247	46	126	128	16	24	58	88	75	89	89
Average Queue (ft)	73	92	14	13	34	2	5	21	24	33	17	40
95th Queue (ft)	159	182	40	52	87	9	19	54	62	71	58	77
Link Distance (ft)			1252	1252	1252			1246	1246	1246		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	470	470				400	280				560	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: Corporate Center Drive & Otay Mesa Road

Movement	SB	SB	SB
Directions Served	L	TR	R
Maximum Queue (ft)	67	67	16
Average Queue (ft)	19	27	1
95th Queue (ft)	46	60	5
Link Distance (ft)	424	424	424
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Caliente Avenue & SR-905 EB Off-Ramp/SR-905 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	T	T	TR	L	T	T
Maximum Queue (ft)	1076	845	111	143	214	170	123	162
Average Queue (ft)	1038	842	57	54	121	58	49	82
95th Queue (ft)	1140	854	109	123	206	110	99	149
Link Distance (ft)	1024		399	399	399	394	394	394
Upstream Blk Time (%)	50							
Queuing Penalty (veh)	0							
Storage Bay Dist (ft)		820						
Storage Blk Time (%)	38	47						
Queuing Penalty (veh)	302	143						

Intersection: 10: Private Drwy B & Gate

Movement	EB	SB
Directions Served	T	LR
Maximum Queue (ft)	68	31
Average Queue (ft)	18	1
95th Queue (ft)	52	11
Link Distance (ft)	258	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Gate & Corporate Center Drive

Movement	SB
Directions Served	T
Maximum Queue (ft)	68
Average Queue (ft)	23
95th Queue (ft)	54
Link Distance (ft)	226
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Emerald Crest Court & Otay Mesa Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	SB
Directions Served	T	T	T	R	L	T	T	T	R	L	TR	TR
Maximum Queue (ft)	212	194	90	54	27	198	185	200	24	110	24	28
Average Queue (ft)	82	12	25	18	10	53	85	87	6	26	8	19
95th Queue (ft)	159	53	65	48	30	108	149	155	22	69	26	38
Link Distance (ft)	634	634	634			1237	1237	1237				
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				185	640				400			50
Storage Blk Time (%)	2											
Queuing Penalty (veh)	0											

Intersection: 3: Corporate Center Drive & Otay Mesa Road

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	LTR
Maximum Queue (ft)	122	159	85	45	126	40	304	992	1033	1068	585	70
Average Queue (ft)	42	60	23	10	29	8	55	231	244	270	118	23
95th Queue (ft)	97	111	63	32	80	25	202	714	758	788	478	56
Link Distance (ft)			1237	1237	1237			1217	1217	1217		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	470	470				400	280				560	
Storage Blk Time (%)							0	25		17	0	
Queuing Penalty (veh)							0	11		12	0	

Intersection: 3: Corporate Center Drive & Otay Mesa Road

Movement	SB	SB	SB
Directions Served	L	TR	R
Maximum Queue (ft)	448	485	485
Average Queue (ft)	82	179	147
95th Queue (ft)	253	451	445
Link Distance (ft)	433	433	433
Upstream Blk Time (%)	4	16	14
Queuing Penalty (veh)	0	0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Caliente Avenue & SR-905 EB Off-Ramp/SR-905 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	T	T	TR	L	T	T
Maximum Queue (ft)	492	538	230	228	224	137	76	105
Average Queue (ft)	288	333	133	95	129	67	28	35
95th Queue (ft)	489	515	227	176	214	113	67	81
Link Distance (ft)	1038		457	457	457	318	318	318
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		820						
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 10: Private Drive B & Gate

Movement	EB	SB
Directions Served	T	LR
Maximum Queue (ft)	68	32
Average Queue (ft)	47	2
95th Queue (ft)	75	15
Link Distance (ft)	300	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Corporate Center Drive & Gate

Movement	EB	SB
Directions Served	LTR	T
Maximum Queue (ft)	33	67
Average Queue (ft)	7	34
95th Queue (ft)	28	57
Link Distance (ft)	214	214
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	TR
Maximum Queue (ft)	195	513	440	237	22	86	120	156	158	22	116	82
Average Queue (ft)	102	310	232	60	4	22	57	67	40	1	31	17
95th Queue (ft)	227	455	394	154	18	57	109	124	113	7	68	50
Link Distance (ft)		626	626	626			1255	1255	1255		269	269
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	170				185	640				400		
Storage Blk Time (%)	0	30		0								
Queuing Penalty (veh)	0	22		0								

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	28	69
Average Queue (ft)	1	26
95th Queue (ft)	9	51
Link Distance (ft)	226	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		0
Queuing Penalty (veh)		0

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	L	L	T	T	T	T	T	T	R	L	R	R
Maximum Queue (ft)	167	187	245	252	224	186	151	111	61	106	59	19
Average Queue (ft)	84	101	58	77	65	103	60	7	20	32	25	2
95th Queue (ft)	153	157	180	199	185	183	139	43	50	74	50	11
Link Distance (ft)			1255	1255	1255	1298	1298	1298		425	425	425
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	470	470							560			
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 7: Caliente Avenue & SR-905 EB Off-Ramp/SR-905 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	T	T	TR	L	T	T
Maximum Queue (ft)	1076	845	351	507	428	239	217	326
Average Queue (ft)	1046	843	143	343	407	121	101	152
95th Queue (ft)	1065	850	289	491	421	222	183	264
Link Distance (ft)	1024		399	399	399	394	394	394
Upstream Blk Time (%)	53			6	45			
Queuing Penalty (veh)	0			25	176			
Storage Bay Dist (ft)		820						
Storage Blk Time (%)	30	53						
Queuing Penalty (veh)	318	283						

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	TR
Maximum Queue (ft)	194	251	208	107	56	165	602	613	542	412	106	48
Average Queue (ft)	76	137	82	18	26	69	285	304	315	20	64	18
95th Queue (ft)	132	208	183	57	50	132	499	492	512	146	102	37
Link Distance (ft)		632	632	632			1240	1240	1240		269	269
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	170				185	640				400		
Storage Blk Time (%)	0	3							5	0		
Queuing Penalty (veh)	0	4							1	0		

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	SB
Directions Served	TR
Maximum Queue (ft)	59
Average Queue (ft)	32
95th Queue (ft)	62
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	50
Storage Blk Time (%)	6
Queuing Penalty (veh)	0

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	SB	SB
Directions Served	L	L	T	T	T	L	T	T	T	R	L	R
Maximum Queue (ft)	97	129	181	184	222	304	681	666	580	72	218	247
Average Queue (ft)	35	62	66	78	61	55	363	320	228	26	117	96
95th Queue (ft)	77	113	155	168	155	225	604	574	447	58	202	177
Link Distance (ft)			1240	1240	1240		1289	1289	1289		434	434
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	470	470				280				560		
Storage Blk Time (%)						0	24		0			
Queuing Penalty (veh)						0	5		0			

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	SB
Directions Served	R
Maximum Queue (ft)	153
Average Queue (ft)	36
95th Queue (ft)	103
Link Distance (ft)	434
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Caliente Avenue & SR-905 EB Off-Ramp/SR-905 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	T	T	TR	L	T	T
Maximum Queue (ft)	1090	845	467	498	461	169	281	312
Average Queue (ft)	1065	844	456	334	315	92	96	98
95th Queue (ft)	1091	848	466	560	472	166	184	194
Link Distance (ft)	1038		444	444	444	318	318	318
Upstream Blk Time (%)	49		59	1	4			0
Queuing Penalty (veh)	0		268	4	29			0
Storage Bay Dist (ft)		820						
Storage Blk Time (%)	34	41						
Queuing Penalty (veh)	309	154						

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	T	R	L	T	T	T	L	TR	TR
Maximum Queue (ft)	195	643	537	363	48	74	142	128	159	134	72	68
Average Queue (ft)	117	430	346	140	4	29	64	72	59	66	27	31
95th Queue (ft)	247	647	548	277	23	55	123	124	122	110	56	61
Link Distance (ft)		626	626	626			1250	1250	1250			
Upstream Blk Time (%)		1										
Queuing Penalty (veh)		0										
Storage Bay Dist (ft)	170				185	640						50
Storage Blk Time (%)	0	47		1								1
Queuing Penalty (veh)	0	35		0								0

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	LTR
Maximum Queue (ft)	153	189	235	284	252	16	48	265	239	148	61	111
Average Queue (ft)	84	113	66	92	106	2	7	102	54	13	26	46
95th Queue (ft)	158	184	158	193	229	9	27	183	143	60	55	84
Link Distance (ft)			1250	1250	1250			1298	1298	1298		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	470	470				400	280				560	
Storage Blk Time (%)								0				
Queuing Penalty (veh)								0				

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	SB	SB	SB
Directions Served	L	TR	R
Maximum Queue (ft)	84	69	19
Average Queue (ft)	23	31	3
95th Queue (ft)	55	56	13
Link Distance (ft)	425	425	425
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Caliente Avenue & SR-905 EB Off-Ramp/SR-905 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	T	T	TR	L	T	T
Maximum Queue (ft)	1076	845	395	448	425	256	367	409
Average Queue (ft)	1049	842	171	370	406	134	118	153
95th Queue (ft)	1073	854	351	473	416	253	273	301
Link Distance (ft)	1024		399	399	399	394	394	394
Upstream Blk Time (%)	53		0	7	43			0
Queuing Penalty (veh)	0		0	24	180			1
Storage Bay Dist (ft)		820						
Storage Blk Time (%)	30	54						
Queuing Penalty (veh)	326	294						

Intersection: 10: Private Drive B & Gate

Movement	EB	SB
Directions Served	T	LR
Maximum Queue (ft)	33	31
Average Queue (ft)	17	2
95th Queue (ft)	44	15
Link Distance (ft)	304	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Gate & Corporate Center Dr

Movement	EB	SB
Directions Served	LTR	T
Maximum Queue (ft)	32	68
Average Queue (ft)	5	17
95th Queue (ft)	23	47
Link Distance (ft)	122	216
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	TR
Maximum Queue (ft)	194	334	228	174	88	178	422	458	464	47	88	63
Average Queue (ft)	106	173	109	32	33	57	174	199	203	9	59	18
95th Queue (ft)	206	282	201	89	63	112	275	318	311	30	82	48
Link Distance (ft)		632	632	632			1236	1236	1236			
Upstream Blk Time (%)											2	
Queuing Penalty (veh)											0	
Storage Bay Dist (ft)	170				185	640				400		
Storage Blk Time (%)	2	6		0					1			
Queuing Penalty (veh)	7	8		0					0			

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	85	70
Average Queue (ft)	3	29
95th Queue (ft)	30	57
Link Distance (ft)	226	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	0	2
Queuing Penalty (veh)	0	0

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	LTR
Maximum Queue (ft)	136	150	152	156	233	53	292	526	493	469	79	95
Average Queue (ft)	46	63	71	80	64	13	31	236	200	140	22	27
95th Queue (ft)	107	113	143	140	160	38	58	392	372	300	56	66
Link Distance (ft)			1236	1236	1236			1289	1289	1289		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	470	470				400	280				560	
Storage Blk Time (%)							0	6				
Queuing Penalty (veh)							0	3				

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	SB	SB	SB
Directions Served	L	TR	R
Maximum Queue (ft)	165	151	138
Average Queue (ft)	67	78	25
95th Queue (ft)	132	119	78
Link Distance (ft)	434	434	434
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Caliente Avenue & SR-905 EB Off-Ramp/SR-905 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	T	T	TR	L	T	T
Maximum Queue (ft)	1090	845	444	444	464	150	236	242
Average Queue (ft)	1063	843	252	300	392	85	110	120
95th Queue (ft)	1084	852	451	532	520	138	189	210
Link Distance (ft)	1038		444	444	444	318	318	318
Upstream Blk Time (%)	51		2	0	16			
Queuing Penalty (veh)	0		17	2	99			
Storage Bay Dist (ft)		820						
Storage Blk Time (%)	37	43						
Queuing Penalty (veh)	350	182						

Intersection: 10: Private Drive B & Gate

Movement	EB	SB
Directions Served	T	LR
Maximum Queue (ft)	68	32
Average Queue (ft)	36	6
95th Queue (ft)	50	26
Link Distance (ft)	320	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Corporate Center Drive & Gate

Movement	EB	SB
Directions Served	LTR	T
Maximum Queue (ft)	33	69
Average Queue (ft)	1	36
95th Queue (ft)	12	66
Link Distance (ft)	245	300
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	TR
Maximum Queue (ft)	195	678	643	386	16	63	147	146	120	62	116	55
Average Queue (ft)	110	451	361	140	1	26	70	81	47	8	47	16
95th Queue (ft)	234	709	616	302	6	54	134	132	105	31	87	39
Link Distance (ft)		626	626	626			1255	1255	1255		269	269
Upstream Blk Time (%)		6	1									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	170				185	640				400		
Storage Blk Time (%)	0	43		4								
Queuing Penalty (veh)	0	35		0								

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	88	75
Average Queue (ft)	19	33
95th Queue (ft)	57	65
Link Distance (ft)	226	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	1	1
Queuing Penalty (veh)	1	0

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	SB	SB
Directions Served	L	L	T	T	T	L	T	T	T	R	L	R
Maximum Queue (ft)	353	343	277	295	350	26	222	170	61	56	94	57
Average Queue (ft)	138	159	86	110	125	6	125	63	16	20	40	31
95th Queue (ft)	284	308	236	254	291	21	184	134	49	43	69	51
Link Distance (ft)			1255	1255	1255		1298	1298	1298		425	425
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	470	470				280				560		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	SB
Directions Served	R
Maximum Queue (ft)	20
Average Queue (ft)	2
95th Queue (ft)	12
Link Distance (ft)	425
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Caliente Avenue & SR-905 EB Off-Ramp/SR-905 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	T	T	TR	L	T	T
Maximum Queue (ft)	1076	845	395	438	449	372	255	253
Average Queue (ft)	1047	842	136	327	409	179	113	173
95th Queue (ft)	1068	851	316	512	427	286	183	245
Link Distance (ft)	1024		399	399	399	394	394	394
Upstream Blk Time (%)	40		0	3	57			
Queuing Penalty (veh)	0		0	13	247			
Storage Bay Dist (ft)		820						
Storage Blk Time (%)	24	38						
Queuing Penalty (veh)	269	219						

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	TR
Maximum Queue (ft)	194	332	233	198	83	172	522	470	492	417	160	69
Average Queue (ft)	99	184	124	40	29	73	247	264	283	26	65	26
95th Queue (ft)	198	281	216	119	65	124	426	423	433	152	122	53
Link Distance (ft)		626	626	626			1255	1255	1255		269	269
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	170				185	640				400		
Storage Blk Time (%)	3	7		0					1	0		
Queuing Penalty (veh)	9	11		0					0	0		

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	56	69
Average Queue (ft)	11	32
95th Queue (ft)	33	65
Link Distance (ft)	226	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	0	5
Queuing Penalty (veh)	0	1

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	SB	SB
Directions Served	L	L	T	T	T	L	T	T	T	R	L	R
Maximum Queue (ft)	120	151	153	140	136	299	561	518	444	89	172	209
Average Queue (ft)	50	69	58	68	60	17	291	246	189	30	86	100
95th Queue (ft)	97	131	133	147	133	47	466	415	330	61	151	164
Link Distance (ft)			1255	1255	1255		1298	1298	1298		425	425
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	470	470				280				560		
Storage Blk Time (%)							14					
Queuing Penalty (veh)							4					

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	SB
Directions Served	R
Maximum Queue (ft)	201
Average Queue (ft)	38
95th Queue (ft)	108
Link Distance (ft)	425
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Caliente Avenue & SR-905 EB Off-Ramp/SR-905 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	T	T	TR	L	T	T
Maximum Queue (ft)	1076	845	446	431	444	167	220	276
Average Queue (ft)	1053	843	402	379	408	90	124	134
95th Queue (ft)	1080	855	440	453	429	146	181	202
Link Distance (ft)	1024		399	399	399	394	394	394
Upstream Blk Time (%)	43		29	8	27			
Queuing Penalty (veh)	0		144	39	131			
Storage Bay Dist (ft)		820						
Storage Blk Time (%)	28	36						
Queuing Penalty (veh)	266	144						

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	TR
Maximum Queue (ft)	195	664	641	479	206	97	213	174	197	54	116	94
Average Queue (ft)	153	519	396	205	13	30	86	98	82	3	67	35
95th Queue (ft)	265	693	631	362	76	65	165	160	164	14	112	72
Link Distance (ft)		626	626	626			1250	1250	1250			
Upstream Blk Time (%)		6	1									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	170				185	640				400		
Storage Blk Time (%)	0	51		7	0							
Queuing Penalty (veh)	0	41		2	0							

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	77	74
Average Queue (ft)	19	33
95th Queue (ft)	53	62
Link Distance (ft)	226	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	2	1
Queuing Penalty (veh)	2	0

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	LTR
Maximum Queue (ft)	284	264	266	305	308	54	59	254	268	257	171	110
Average Queue (ft)	111	127	95	134	130	5	15	129	85	25	29	48
95th Queue (ft)	211	217	224	260	264	23	46	213	173	64	83	97
Link Distance (ft)			1250	1250	1250			1298	1298	1298		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	470	470				400	280				560	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	SB	SB	SB
Directions Served	L	TR	R
Maximum Queue (ft)	127	59	19
Average Queue (ft)	41	30	2
95th Queue (ft)	86	56	12
Link Distance (ft)	425	425	425
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Caliente Avenue & SR-905 EB Off-Ramp/SR-905 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	T	T	TR	L	T	T
Maximum Queue (ft)	1076	845	335	458	453	401	380	362
Average Queue (ft)	1050	842	154	331	409	252	131	194
95th Queue (ft)	1072	852	307	509	427	415	243	285
Link Distance (ft)	1024		399	399	399	394	394	394
Upstream Blk Time (%)	43			10	55	4	0	
Queuing Penalty (veh)	0			45	241	8	0	
Storage Bay Dist (ft)		820						
Storage Blk Time (%)	20	46						
Queuing Penalty (veh)	230	270						

Intersection: 10: Private Drive B & Gate

Movement	EB
Directions Served	T
Maximum Queue (ft)	56
Average Queue (ft)	15
95th Queue (ft)	43
Link Distance (ft)	304
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: Gate & Corporate Center Dr

Movement	EB	SB
Directions Served	LTR	T
Maximum Queue (ft)	30	68
Average Queue (ft)	3	20
95th Queue (ft)	19	56
Link Distance (ft)	122	216
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	T	R	L	TR
Maximum Queue (ft)	195	460	350	279	123	664	969	937	939	425	125	68
Average Queue (ft)	129	256	173	65	43	119	493	503	515	85	86	28
95th Queue (ft)	230	424	338	162	94	379	874	860	882	345	113	58
Link Distance (ft)		626	626	626			1253	1253	1253			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	170				185	640				400		
Storage Blk Time (%)	4	18		0		0	8		25	0		
Queuing Penalty (veh)	14	27		0		0	11		7	0		

Intersection: 2: Otay Mesa Road & Emerald Crest Court

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	198	75
Average Queue (ft)	25	31
95th Queue (ft)	92	65
Link Distance (ft)	226	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	0	8
Queuing Penalty (veh)	0	1

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	EB	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB
Directions Served	L	L	T	T	T	R	L	T	T	T	R	LTR
Maximum Queue (ft)	140	156	176	234	250	55	305	644	570	465	63	50
Average Queue (ft)	60	76	90	96	94	17	73	373	328	241	25	20
95th Queue (ft)	120	136	165	187	190	45	232	584	526	407	60	49
Link Distance (ft)			1253	1253	1253			1298	1298	1298		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	470	470				400	280				560	
Storage Blk Time (%)								22				
Queuing Penalty (veh)								12				

Intersection: 3: Otay Mesa Road & Corporate Center Drive

Movement	SB	SB	SB
Directions Served	L	TR	R
Maximum Queue (ft)	164	198	153
Average Queue (ft)	85	112	53
95th Queue (ft)	148	174	126
Link Distance (ft)	425	425	425
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Caliente Avenue & SR-905 EB Off-Ramp/SR-905 EB On-Ramp

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LTR	T	T	TR	L	T	T
Maximum Queue (ft)	1076	845	417	434	435	232	209	195
Average Queue (ft)	1048	842	357	354	408	112	113	115
95th Queue (ft)	1070	855	469	501	422	201	182	175
Link Distance (ft)	1024		399	399	399	394	394	394
Upstream Blk Time (%)	57		10	10	29			
Queuing Penalty (veh)	0		48	49	144			
Storage Bay Dist (ft)		820						
Storage Blk Time (%)	33	43						
Queuing Penalty (veh)	332	189						

Intersection: 10: Private Drive B & Gate

Movement	EB	SB
Directions Served	T	LR
Maximum Queue (ft)	68	32
Average Queue (ft)	33	3
95th Queue (ft)	55	19
Link Distance (ft)	320	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Corporate Center Drive & Gate

Movement	EB	SB
Directions Served	LTR	T
Maximum Queue (ft)	33	68
Average Queue (ft)	5	40
95th Queue (ft)	23	68
Link Distance (ft)	245	276
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		