ATTACHMENT F

iteris

Rosemead Family Apartments Local Mobility Analysis

Final Report

April 10, 2026

Submitted to:

13186.26 | Prepared by **Iteris, Inc.**

Innovating Through Informatics™

TABLE OF CONTENTS

TABLES

FIGURES

1 INTRODUCTION

This report summarizes the results of a Local Mobility Analysis (LMA) for the proposed Rosemead Family Apartments project, hereinafter referred to as the "project", located at 600 North Rosemead Boulevard in the City of Pasadena. This report provides detailed information on the existing and future transportation conditions in the vicinity of the project site. Six (6) existing signalized intersections and one (1) street segment in the vicinity of the project site were analyzed. Additionally, an Active Transportation Review was prepared to identify potential effects of the proposed project on the bicycle, pedestrian, and transit network. This report is prepared based on requirements within the City of Pasadena *Transportation Impact Analysis Guidelines* (April 2022).

1.1 Project Description

The proposed project consists of a two-story and a five-story family housing development with a total of 133 units (131 affordable housing units and 2 manager's units). The project is planned to provide a total of 55 vehicle parking spaces and 22 bicycle parking spaces with two full-access driveways off of Rosemead Boulevard to the south of the project site. The primary pedestrian access would be through access points fronting Rosemead Boulevard. The project would include amenities such as office, club rooms, laundry room, landscaped patios, open courtyard, playground areas, and other recreational amenities. The existing project site consists of a 56,828 square-foot two-story office building (west building) and a two-story parking garage (east building), for a total area of approximately 93,760 square feet. The construction of this project would require the west building to be repurposed and converted to a residential building and east building to be demolished. **Figure 1** presents the project's site plan.

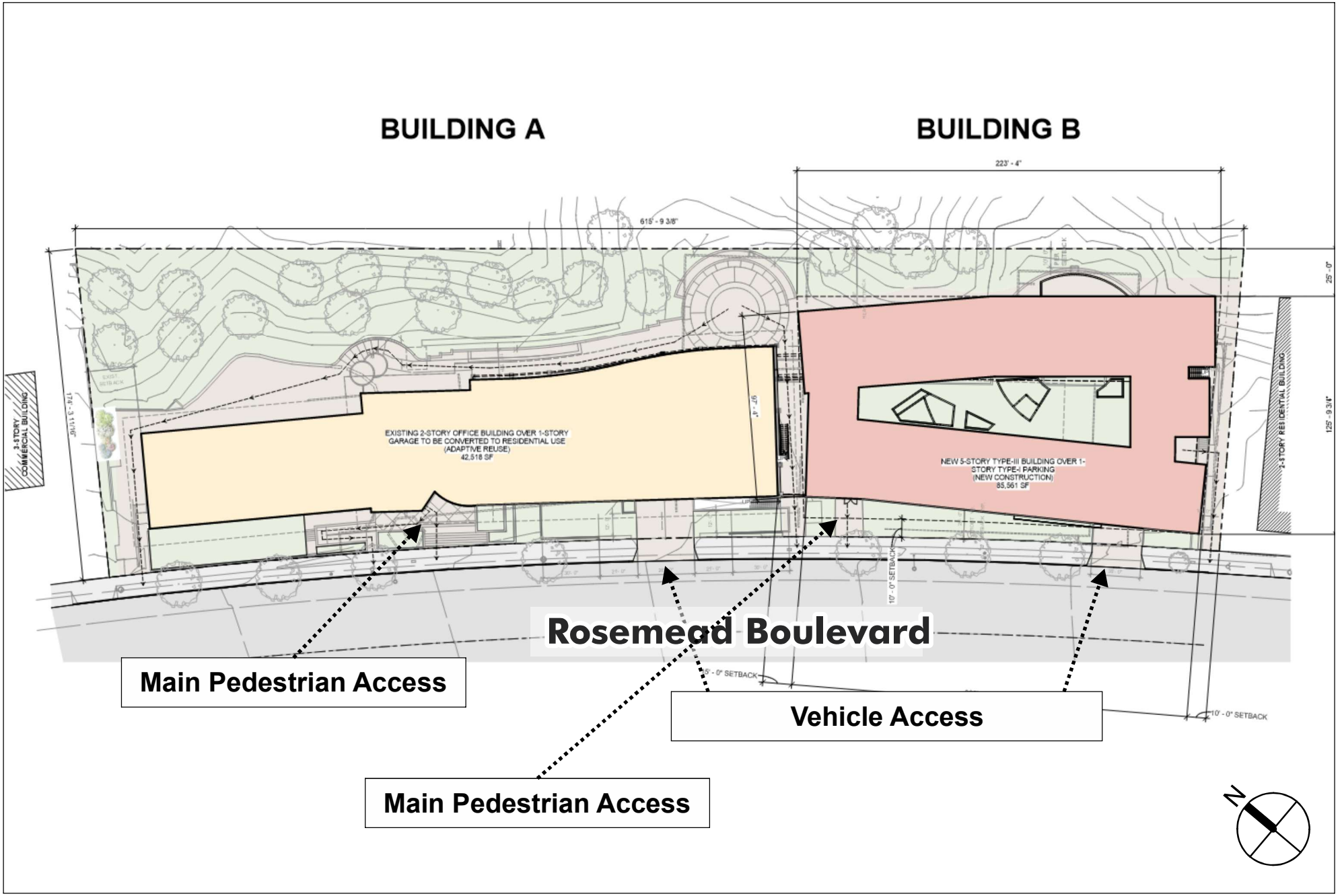


Figure 1
Project Site Plan

2 EXISTING TRANSPORTATION NETWORK

This section describes the roadway system within the project vicinity. The existing configurations of the transportation network, within the study area, are described below:

Orange Grove Boulevard, oriented in an east-west direction, is designated as a City Connector. The roadway is undivided, and consists of two lanes in each direction. On-street parking is generally permitted in both directions. The roadway has a posted speed limit of 40 mph.

Rosemead Boulevard, oriented in an east-west direction, is designated as a City Connector. The roadway is divided with a two-way-left-turn lane, and consists of two lanes in each direction in the study area. On-street parking is generally permitted in both directions, but a portion of the west side is unavailable for on-street parking as it is designated as No Stopping at Any Time. The roadway has a posted speed limit of 40 mph. Rosemead Boulevard is the sole vehicular and pedestrian access point for the project site.

Foothill Boulevard, oriented in an east-west direction, is designated as a City Connector. The roadway is partially divided with raised medians and partially divided with a two-way-left-turn lane, and consists of two lanes in each direction in the study area. On-street parking is generally prohibited in both directions, except a short section east of Halstead Street, where on-street parking is permitted in both directions with a two-hour limit. The roadway has a posted speed limit of 35 mph.

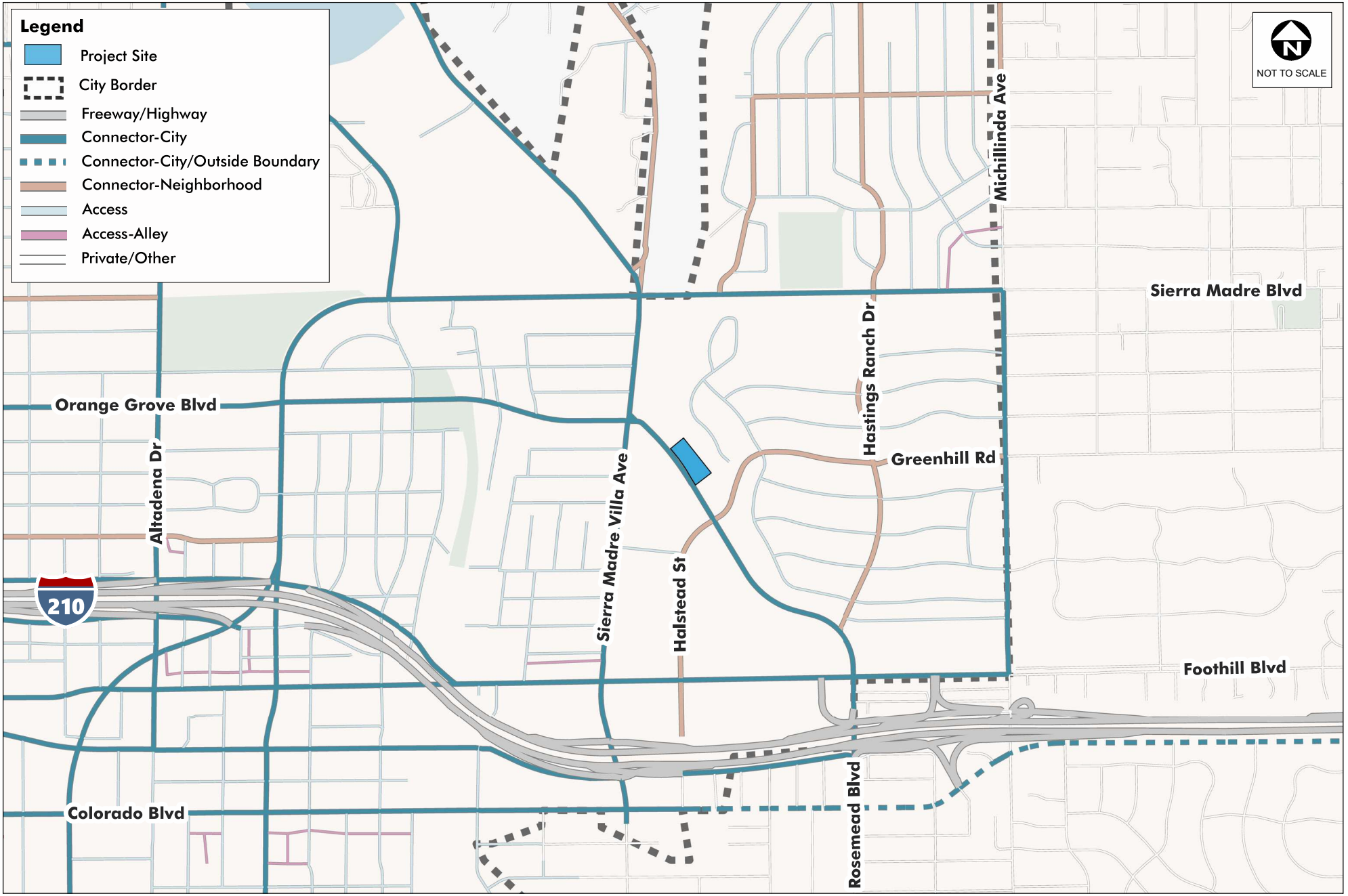
Hastings Ranch Drive, oriented in an east-west direction, is designated as a Neighborhood Connector. The roadway is undivided, and consists of one lane in each direction. On-street parking is generally permitted in both directions. The roadway has a posted speed limit of 35 mph.

Sierra Madre Villa Avenue, oriented in a north-south direction, is designated as a City Connector. The roadway is partially undivided and partially divided with a two-way-left-turn lane, and consists of one lane in each direction south of Hermanos Street and two lanes in each direction north of Hermanos Street. On-street parking is generally permitted in both directions north of Orange Grove Boulevard – Rosemead Boulevard. South of Orange Grove Boulevard – Rosemead Boulevard, on-street parking is generally permitted in the southbound direction with a two-hour limit. The roadway has a posted speed limit of 30 mph.

Greenhill Road, oriented in a north-south direction, is designated as a Neighborhood Connector. The roadway is undivided, and consists of one lane in each direction. On-street parking is generally prohibited in both directions. The roadway has a posted speed limit of 25 mph.

Halstead Street, oriented in a north-south direction, is designated as a Neighborhood Connector. The roadway is divided with a two-way-left-turn lane, and consists of one lane in each direction. On-street parking is generally prohibited in the northbound direction and is generally permitted in the southbound direction with a two-hour limit. The roadway assumes the prima facie speed of 25 mph.

Figure 2 shows the existing street network and classifications in the study area.



iteris®

City of Pasadena
Rosemead Family Apartments
Local Mobility Analysis & CEQA

Figure 2
Roadway Classifications

3 PROPOSED PROJECT TRAFFIC

This section describes the methodology used to determine project trip generation. The first step in analyzing traffic conditions with the project is to estimate the number of new trips expected to be generated by the proposed project. The proposed project is a 133-unit affordable housing development, consisting of 131 affordable units and 2 manager's units.

The net trip generation for the proposed project was calculated based on a combination of trip rates published in the Institute of Transportation Engineers (ITE), *Trip Generation, 12th Edition,* and traffic counts at the current site. The land use categories applied in this analysis are:

- Proposed Project
  - Multifamily Housing Mid-Rise (Land Use code 221 in ITE)
  - Affordable Housing (Land Use code 223 in ITE; income limit restriction)
- Existing Site
  - Manual Traffic Counts at the project site (conducted February 2026)

As mentioned, the existing site is currently occupied by a two-story office building and a two-story parking garage. In order to accurately capture the existing land use's activities, a field survey was conducted during the a.m. and p.m. peak period to collect the number of inbound and outbound trips. It was observed that there were a total of 9 trips entering and exiting the existing businesses during the a.m. peak hour. For the purpose of calculating the total daily trips of the existing land use, a K-factor of 10% was assumed, and applied to the a.m. peak hour trips to calculate 90 daily vehicle trips.

In addition, the project is located within a close proximity to bus stops with less than 30-minute peak hour headways located at the Sierra Madre Villa Avenue/Orange Grove Boulevard/Rosemead Boulevard intersection. The accessibility to transit would affect mode choices and reduce the vehicular trip generation from the project. The project is adjacent to bus stops that serve several bus routes (Pasadena Transit 32, 33, 40 and Metro 268); thus, it is assumed that 10 percent of newly generated trips would be transit trips. **Table 1** summarizes the net trip generation calculation for the project.

Table 1: Project Trip Generation

Land Use (ITE Code)	Size	Units	Trip Generation Rates							Trip Generation						
			AM Peak Hour			PM Peak Hour			Daily	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total		In	Out	Total	In	Out	Total	
Proposed Project																
Affordable Housing (223) [1]	131	du	29%	71%	0.36	59%	41%	0.46	4.81	14	34	48	36	25	61	630
Multifamily Housing (Mid-Rise) (221) [1]	2	du	23%	77%	0.38	64%	36%	0.38	4.46	1	1	2	1	1	2	9
Transit Oriented Development Adjustment[2]										-1	-3	-4	-3	-2	-5	-63
Project Sub-Total										**14**	**32**	**46**	**34**	**24**	**58**	**576**
Existing Site																
Office Building	See Note 3									-7	-2	-9	0	-4	-4	-90
PROJECT NET TOTAL TRIPS										**7**	**30**	**37**	**34**	**20**	**54**	**486**

1 = Based on ITE Trip Generation, 12th Edition
2 = 10% Transit Adjustments applied. Outside of TOD area, but adjacent to transit with less than 30-minute headways during peak periods (Pasadena Transit 32/33/40/Metro 268)
3 = The existing land use is operational. Trips from the driveways of the existing land use were collected during the a.m. and p.m. peak hours. Observed peak hour driveway volumes were converted to daily trips using an assumed peak hour to daily factor of 0.10.

As shown in **Table 1**, the proposed project is forecast to generate 37 (7 ingress, 30 egress) a.m. peak hour trips, 54 (34 ingress, 20 egress) p.m. peak hour trips, and 486 daily trips.

4 INTERSECTION OPERATIONAL ANALYSIS

This section presents the operational analysis of intersections in the vicinity of the proposed project. This section includes a discussion of analysis methodology, study area, data collection, and existing and future traffic operations.

4.1 Analysis Methodology

This section discusses the methodologies and thresholds used in the intersection operational analysis. The quality of traffic operations is characterized using the concept of level of service (LOS). Level of service is defined by a range of grades from A (best) to F (worst). At intersections, LOS "A" represents relatively free flow operating conditions with little or no delay. LOS "F" is characterized by extremely unstable flow conditions, severe congestion, and delays with traffic volumes at or near the intersection's design capacity. This typically results in long vehicular queues extending from all approaches of an intersection.

Per the City's guidelines, LOS analysis is performed using the Highway Capacity Manual (HCM) 6th Edition methodology, which uses vehicular delay criteria to determine LOS. The LOS was calculated by utilizing Synchro 11 software. **Table 2** presents a brief description of each level of service letter grade.

Table 2: Intersection Level of Service Definitions – HCM Methodology

Level Of Service	Description	HCM Average Delay (sec) - Signalized Intersections
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 10
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	>10-20
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	>20-35
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues.	>35-55
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	>55-80
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	>80

4.1.1 Intersection Thresholds of Significance/Caps

After the performance measures are calculated, the values are compared to the City's thresholds/caps for intersection LOS, which are shown in **Table 3**.

Table 3: Intersection Level of Service Caps

Study Intersections	Existing with Project LOS Cap
Citywide	D
Transit Oriented District (TOD)	E

4.2 Study Area, Analysis Scenarios, and Existing Volumes

The project site location, study intersections and study segment are illustrated in **Figure 3**. The study area for analysis includes the following six (6) intersections and one (1) segment in the vicinity of the project site:

Intersections

1. Sierra Madre Villa Avenue/Orange Grove Boulevard/Rosemead Boulevard;
2. Sierra Madre Villa Avenue/Foothill Boulevard (TOD);
3. Greenhill Road/Halstead Street/Rosemead Boulevard;
4. Halstead Street/Foothill Boulevard (TOD);
5. Rosemead Boulevard/Hastings Ranch Drive;
6. Rosemead Boulevard/Foothill Boulevard.

Segment

1. Greenhill Road between Cliff Drive and Hastings Ranch Drive.

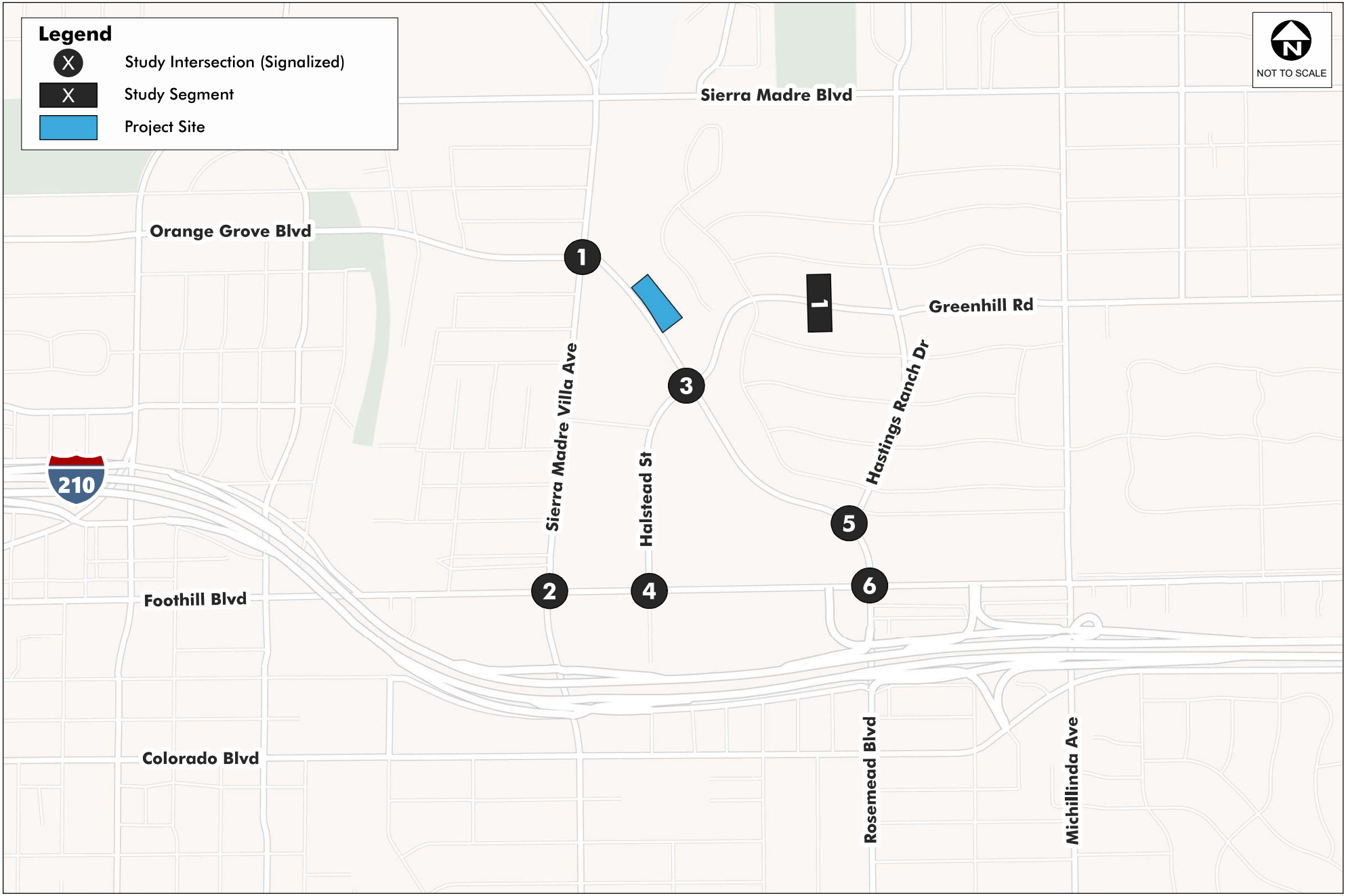
Intersection traffic operations were evaluated for each of the following scenarios during the weekday morning (7:00 – 9:00 a.m.) and evening (4:00 – 6:00 p.m.) peak periods during typical weekday conditions (during the school year):

- Existing (2026) Conditions;
- Existing (2026) with Project Conditions;
- Future (2028) Baseline Conditions;
- Future (2028) with Project Conditions.

The street segment evaluation is presented in detail in **Section 5.**

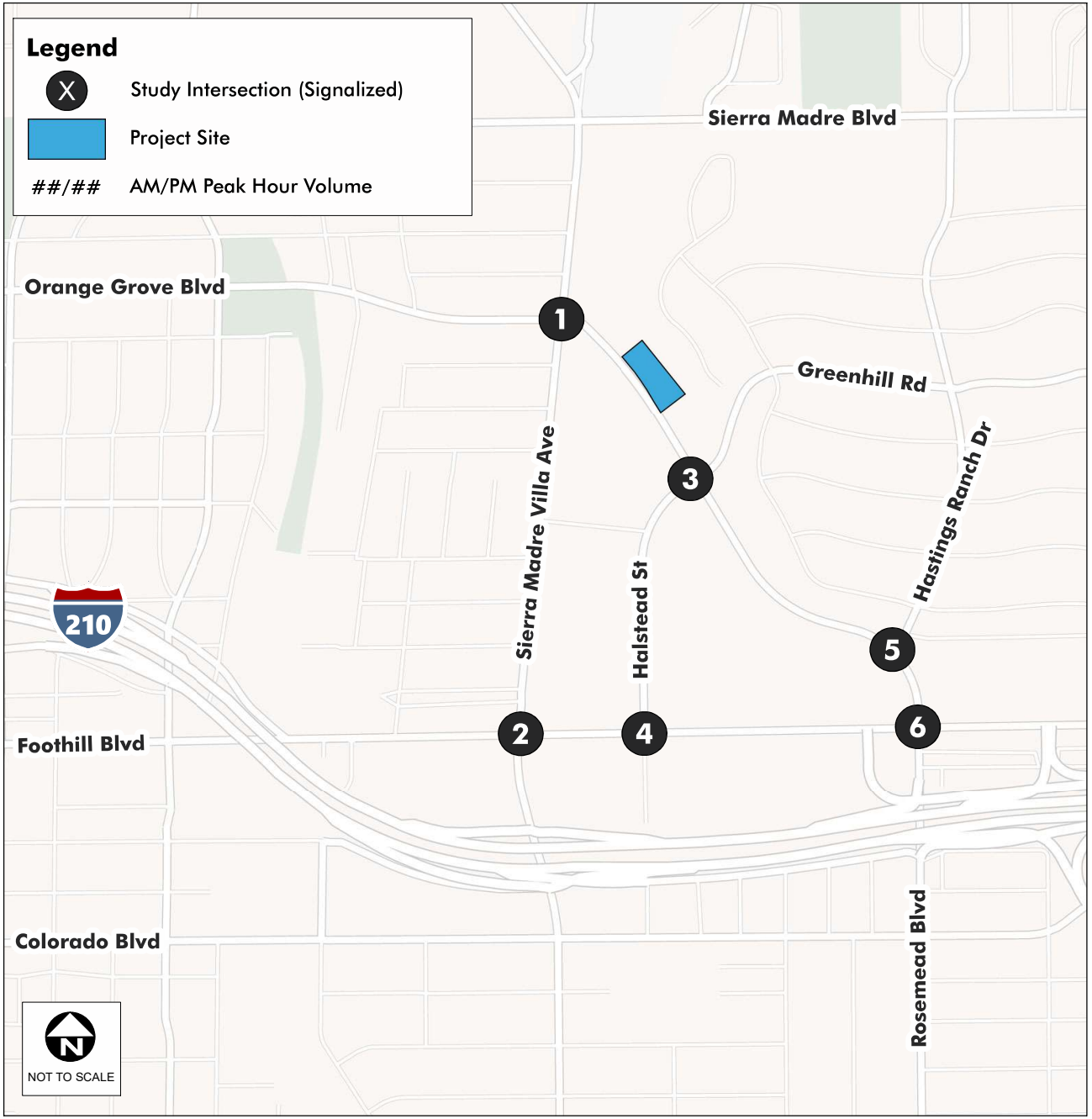
4.2.1 Existing Traffic Volumes

Existing traffic counts at study intersections were collected in February 2026 on a typical weekday, with local schools in session. All counts were conducted during the morning peak period (7:00 – 9:00 a.m.) and the evening peak period (4:00 – 6:00 p.m.). The traffic impact analysis is based on the highest single hour of traffic during each time period at each location. Detailed vehicle turning movement data is included in **Appendix A. Figure 4** illustrates the existing peak hour volumes at the study intersections.



City of Pasadena
Rosemead Family Apartments
Local Mobility Analysis & CEQA

Figure 3
Project Location, Study Intersections and Study Segment



1. Sierra Madre Villa Ave & Rosemead Blvd & Orange Grove Blvd

24/27 ↰	294/263 ↓	208/336 ↱
739/409 ↰	646/479 ←	15/25 ↱
21/21 ↰	211/629 →	81/121 ↱
93/105 ↰	287/330 ↑	23/22 ↱

2. Sierra Madre Villa Ave & Foothill Blvd

87/63 ↰	275/270 ↓	39/82 ↱
34/55 ↰	820/653 ←	169/249 ↱
44/131 ↰	243/726 →	50/63 ↱
261/150 ↰	388/397 ↑	281/399 ↱

3. Halstead St & Greenhill Rd & Rosemead Blvd

151/56 ↰	40/50 ↓	16/19 ↱
9/17 ↰	1205/702 ←	56/66 ↱
Rosemead Blvd 23/153 ↰	375/791 →	35/67 ↱
49/132 ↰	36/114 ↑	27/94 ↱

4. Halstead St & Foothill Blvd

45/165 ↰	37/39 ↓	13/170 ↱
36/74 ↰	898/630 ←	68/54 ↱
102/115 ↰	316/951 →	58/85 ↱
94/72 ↰	19/35 ↑	41/62 ↱

5. Rosemead Blvd & Hastings Ranch Dr

6/32 ↰	228/553 ↓	83/264 ↱
301/209 ↰	Rosemead Blvd 35/60 ←	192/96 ↱
8/28 ↰	16/97 →	7/33 ↱
32/47 ↰	1020/611 ↑	143/167 ↱

6. Rosemead Blvd & Foothill Blvd

28/27 ↰	322/454 ↓	81/317 ↱
491/301 ↰	880/533 ←	194/202 ↱
72/111 ↰	160/696 →	195/314 ↱
157/167 ↰	642/410 ↑	229/310 ↱

iteris

City of Pasadena
Rosemead Family Apartments
Local Mobility Analysis & CEQA

Figure 4
Existing (2026) Peak Hour Intersection Volumes

4.3 Intersection Level of Service Analysis

This section includes the LOS analysis of the study intersections in existing and future year conditions. **Figure 5** shows the existing intersection lane configuration. All study intersections are signalized.

4.3.1 Existing Conditions

Existing intersection operations were evaluated during the a.m. and p.m. peak hours at study intersections using HCM 6th methodology. Per City of Pasadena DOT guidelines, the following Synchro model inputs for saturation flow rates and peak hour factors were included in the analysis:

Saturation Flow Rates:

- 1,800 vehicles per hour per lane (vphpl) for exclusive through and right-turn lanes, and shared thru/right-turn or left-turn lanes
- 1,700 vphpl for exclusive left-turn lanes
- 1,600 vphpl for exclusive dual left-turn lanes

Peak Hour Factors:

- Utilization for peak hour factor (PHF) is based on the traffic volumes for the entire intersection as a whole, using the traffic volumes collected in the field.

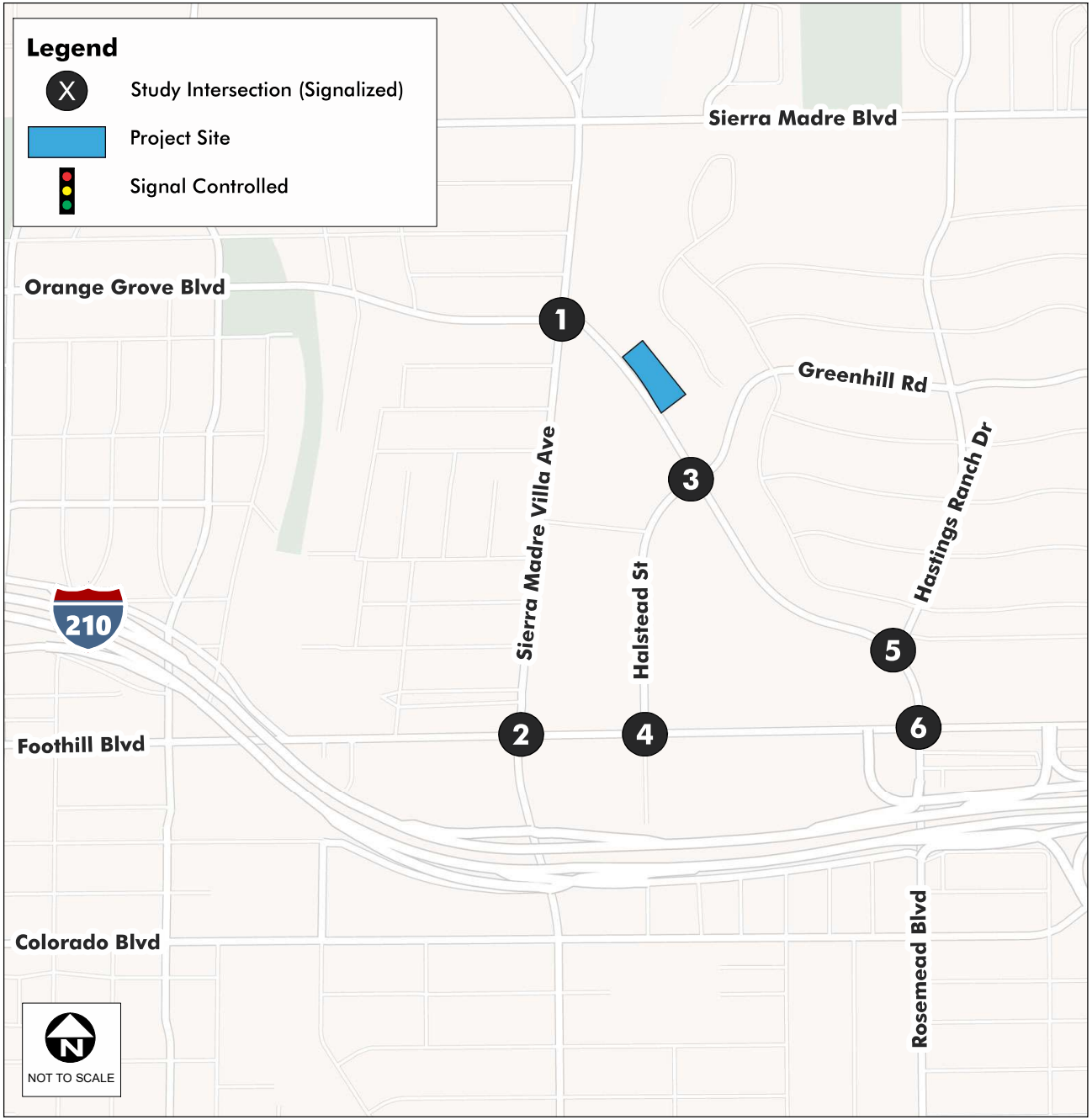
Table 4 summarizes the existing LOS at the study intersections. LOS calculation sheets are provided in **Appendix B**.

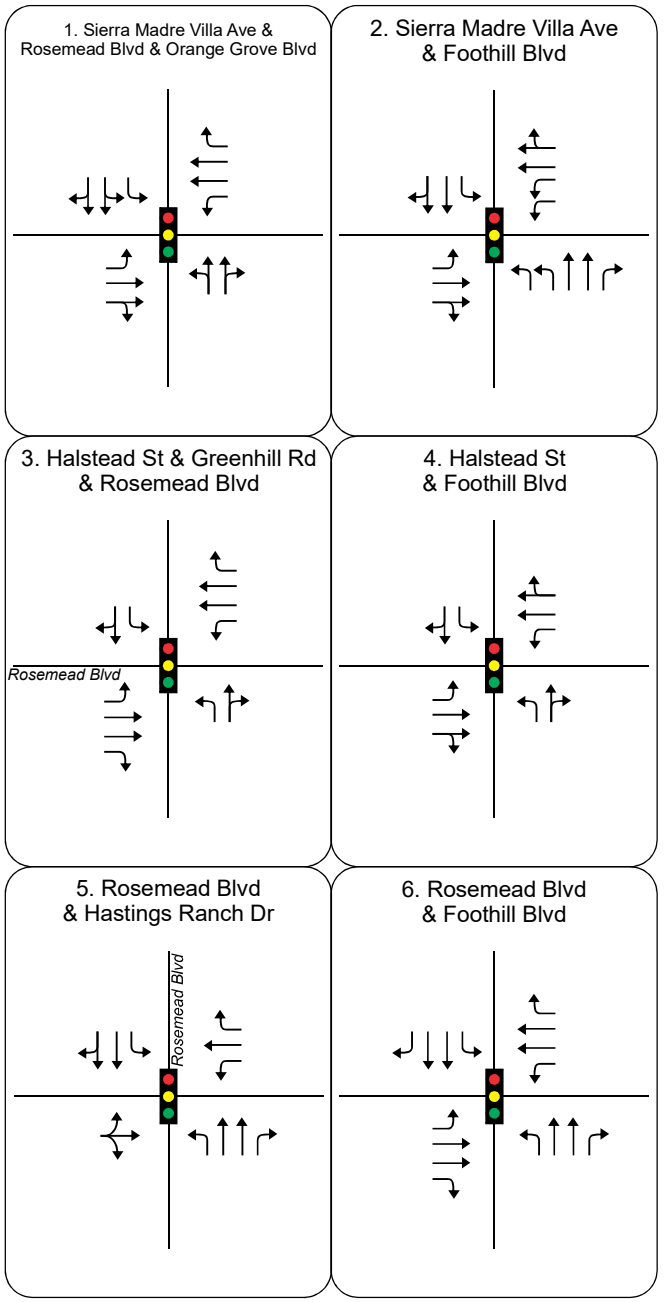
Table 4: Existing (2026) Intersection Peak Hour Level of Service

Intersection		Control Type	AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
1	Sierra Madre Villa Ave/Orange Grove Blvd/Rosemead Blvd*	Signalized	35.1	D	34.2	C
2	Sierra Madre Villa Ave/Foothill Blvd	Signalized	23.4	C	29.6	C
3	Greenhill Rd/Halstead St/Rosemead Blvd*	Signalized	14.8	B	16.8	B
4	Halstead St/Foothill Blvd	Signalized	18.1	B	24.1	C
5	Rosemead Blvd/Hastings Ranch Dr*	Signalized	30.0	C	41.7	D
6	Rosemead Blvd/Foothill Blvd	Signalized	41.9	D	51.0	D

s = seconds, LOS = Level of Service.
* HCM 6th methodology is not applicable due to non-NEMA phasing sequence. HCM 2000 delay presented.

As shown in **Table 4**, all study intersections are currently operating at LOS D or better during both the a.m. and p.m. peak hours, and all study intersections meet the minimum acceptable LOS standard. The intersection experiencing the highest delay in the study area is the Rosemead Boulevard/Foothill Boulevard intersection, which operates at LOS D during both peak hours.





iteris

City of Pasadena
Rosemead Family Apartments
Local Mobility Analysis & CEQA

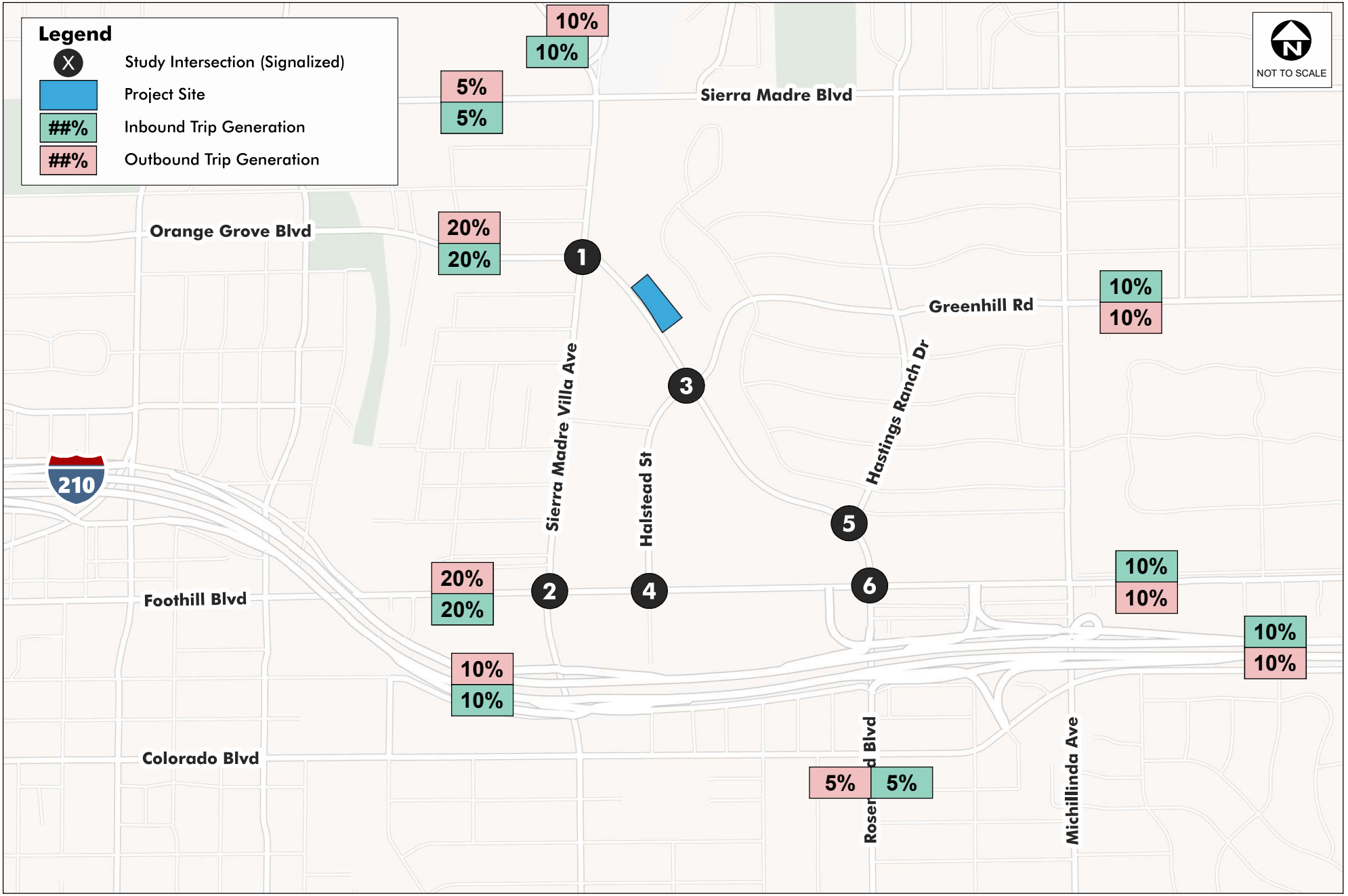
Figure 5
Existing Intersection Lane Configuration

4.3.2 Existing with Project Conditions

This section presents the analysis of existing with project conditions. Existing with project conditions were developed by adding trips forecast to be generated by the proposed project to existing volumes.

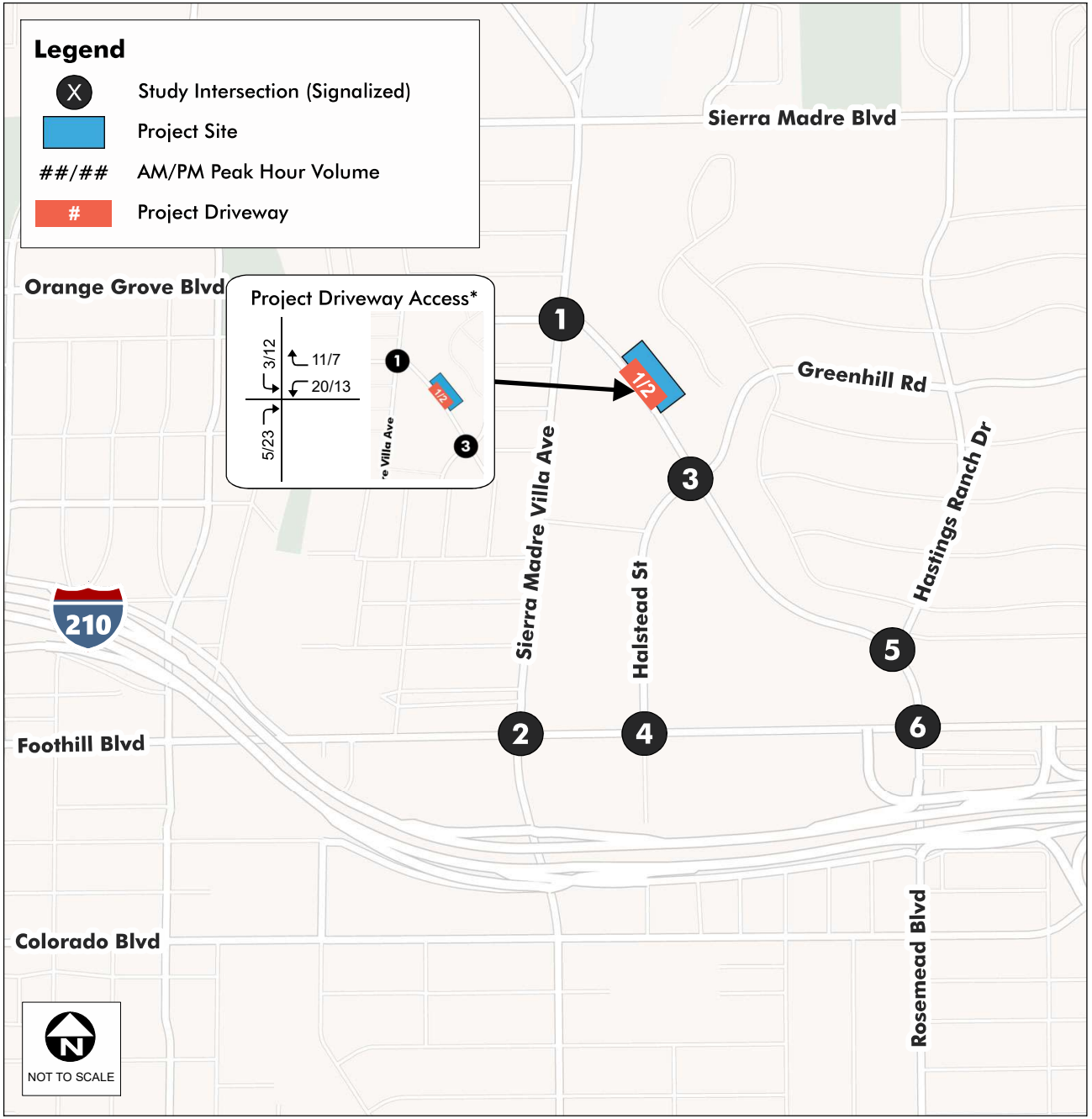
As a first step, trip distribution assumptions were developed to determine the origin and destination of new vehicle trips associated with the proposed project. Project trip distribution is based on the land use, the circulation network in the vicinity of the project, and project access locations, and was derived by utilizing the City of Pasadena Travel Demand Model (via a select zone model run). The general project trip distribution is shown in **Figure 6**.

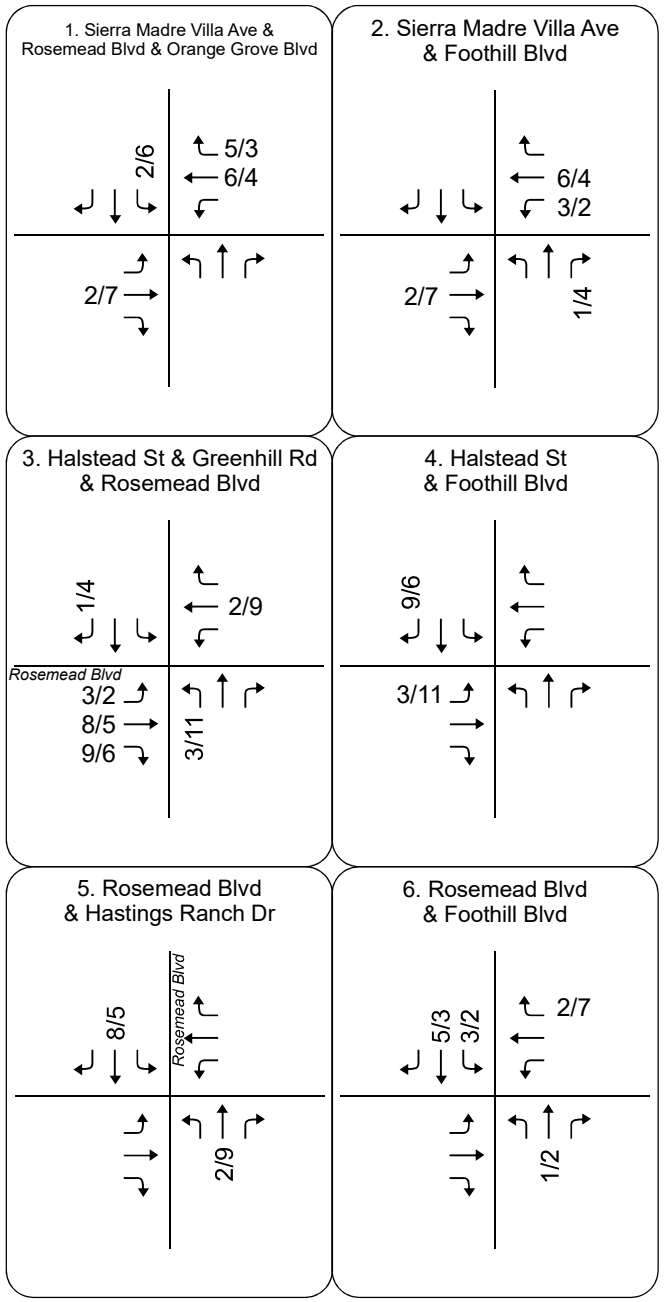
As a second step, the new trips generated by the project, as shown in **Table 1**, were then assigned to the surrounding roadway system based on the distribution pattern to estimate the project-related peak-hour traffic at each of the study intersections. **Figure 7** illustrates the proposed project trip assignment onto the roadway network during the a.m. and p.m. peak hours.



City of Pasadena
Rosemead Family Apartments
Local Mobility Analysis & CEQA

Figure 6
Project Trip Distribution





** All turning movements are rounded up, and trip assignments may exceed trip generation.*

iteris®

City of Pasadena
Rosemead Family Apartments
Local Mobility Analysis & CEQA

Figure 7
Project Trip Assignment

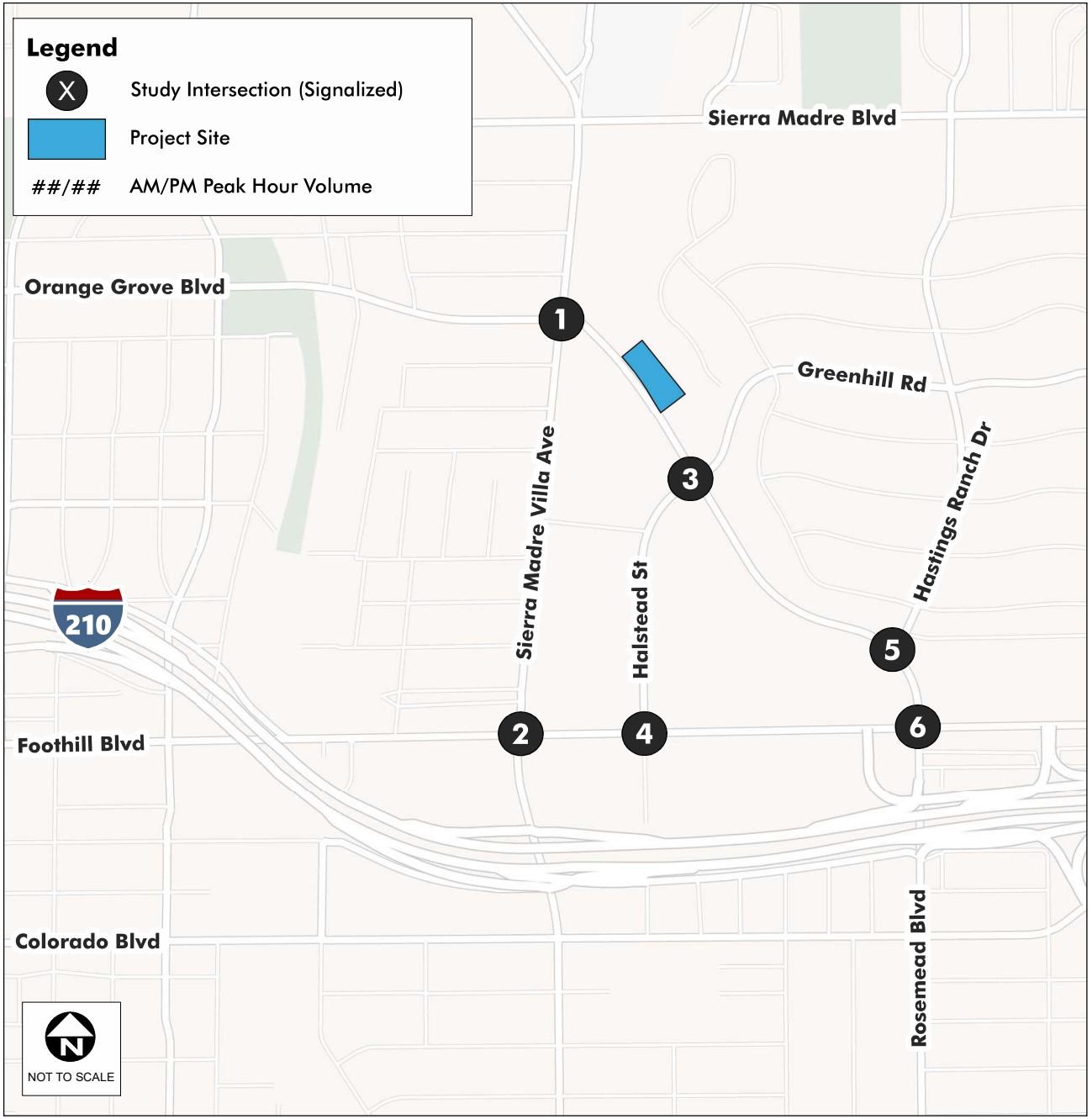
Existing with project traffic volumes are illustrated in **Figure 8.** Existing with project levels of service at the study intersections are summarized in **Table 5**. Level of service calculation worksheets are included in **Appendix B.**

Table 5: Existing (2026) with Project Intersection Peak Hour Level of Service

Intersection		Existing (2026) Conditions				Existing (2026) with Project Conditions				Exceeds LOS Cap?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
		Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	
1	Sierra Madre Villa Ave/Orange Grove Blvd/Rosemead Blvd*	35.1	D	34.2	C	35.1	D	35.3	D	No
2	Sierra Madre Villa Ave/Foothill Blvd	23.4	C	29.6	C	23.5	C	29.9	C	No
3	Greenhill Rd/Halstead St/Rosemead Blvd*	14.8	B	16.8	B	16.2	B	17.2	B	No
4	Halstead St/Foothill Blvd	18.1	B	24.1	C	18.4	B	24.4	C	No
5	Rosemead Blvd/Hastings Ranch Dr*	30.0	C	41.7	D	30.1	C	41.6	D	No
6	Rosemead Blvd/Foothill Blvd	41.9	D	51.0	D	42.0	D	51.2	D	No

s = seconds, LOS = Level of Service.
* HCM 6th methodology is not applicable due to non-NEMA phasing sequence. HCM 2000 delay presented.

As shown in **Table 5,** the study intersections would experience marginal or no increases in delays with the proposed project. All intersections would continue to operate at LOS D or better during both the a.m. and p.m. peak hours under the existing with project conditions. The LOS cap would not be exceeded as the result of the proposed project.



1. Sierra Madre Villa Ave & Rosemead Blvd & Orange Grove Blvd

24/27	294/263	210/342
744/412	652/483	15/25
21/21	213/636	81/121
93/105	287/330	23/22

2. Sierra Madre Villa Ave & Foothill Blvd

87/63	275/270	39/82
34/55	826/657	172/251
44/131	245/733	50/63
261/150	388/397	282/403

3. Halstead St & Greenhill Rd & Rosemead Blvd

152/60	40/50	16/19
9/17	1207/711	56/66
Rosemead Blvd 26/155	383/796	44/73
52/143	36/114	27/94

4. Halstead St & Foothill Blvd

54/171	37/39	13/170
36/74	898/630	68/54
105/126	316/951	58/85
94/72	19/35	41/62

5. Rosemead Blvd & Hastings Ranch Dr

6/32	236/558	83/264
Rosemead Blvd 301/209	35/60	192/96
8/28	16/97	7/33
32/47	1022/620	143/167

6. Rosemead Blvd & Foothill Blvd

28/27	327/457	84/319
493/308	880/533	194/202
72/111	160/696	195/314
157/167	643/412	229/310

iteris

City of Pasadena
Rosemead Family Apartments
Local Mobility Analysis & CEQA

Figure 8
Existing (2026) with Project Peak Hour Intersection Volumes

4.3.3 Future Baseline Conditions

This section presents the analysis of future baseline conditions (without the proposed project), evaluating the study area in the project's opening year of 2028. Future baseline conditions traffic volumes were developed by utilizing the City of Pasadena Travel Demand Model to evaluate projected growth in traffic within the study area. Based on a review of the roadway links in the study area within the model's base year and future year scenarios, the following growth rate was applied to existing volumes to derive future baseline (2028) volumes:

- 1.0% annual growth rate in a.m. and p.m. peak hours.

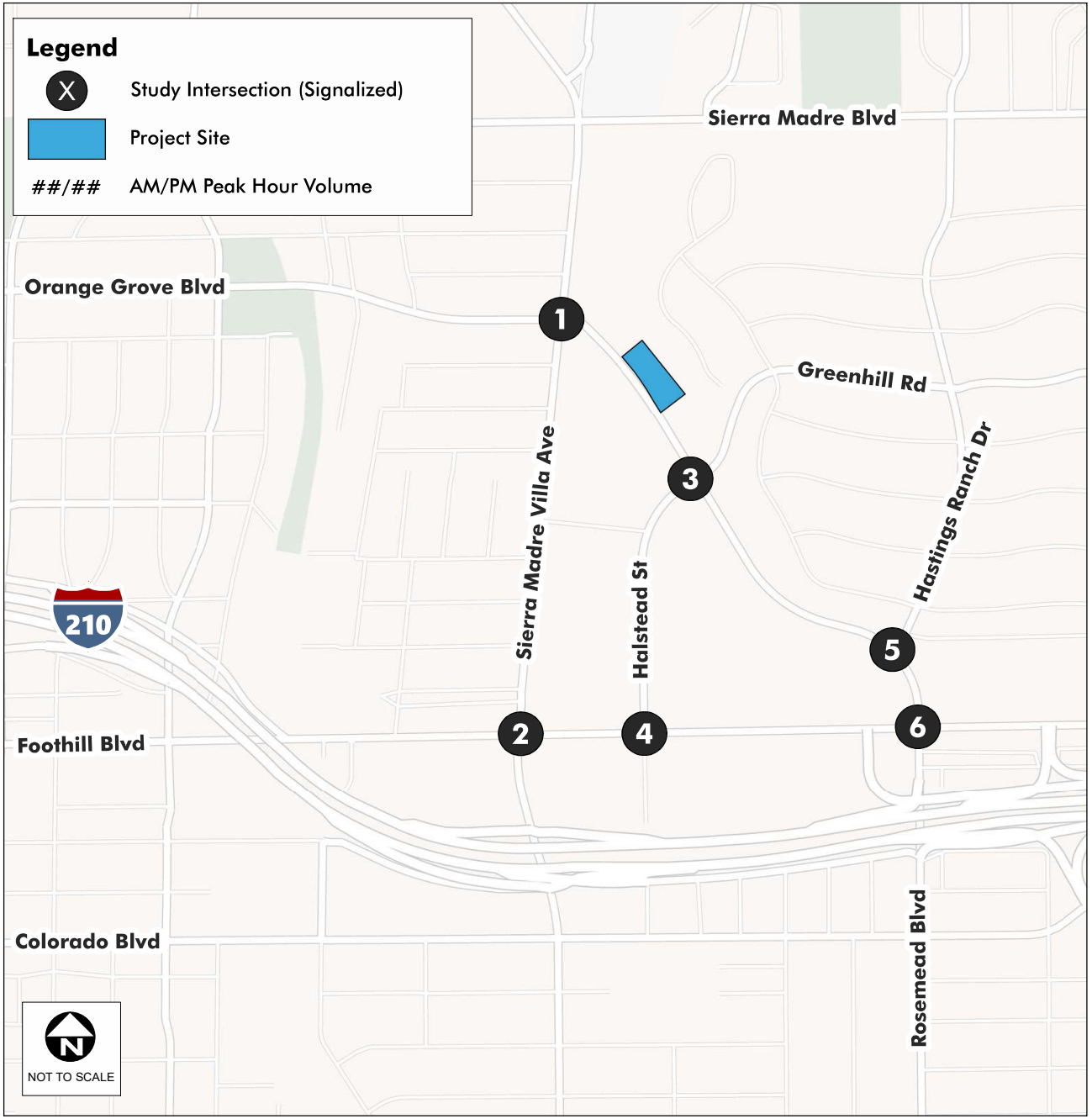
Future baseline traffic volumes are illustrated in **Figure 9**. **Table 6** summarizes the future baseline LOS at the study intersections. LOS calculation sheets are provided in **Appendix B**.

Table 6: Future (2028) Baseline Intersection Peak Hour Level of Service

Intersection		Control Type	AM Peak Hour		PM Peak Hour	
			Delay (s)	LOS	Delay (s)	LOS
1	Sierra Madre Villa Ave/Orange Grove Blvd/Rosemead Blvd*	Signalized	35.6	D	35.3	D
2	Sierra Madre Villa Ave/Foothill Blvd	Signalized	23.9	C	30.5	C
3	Greenhill Rd/Halstead St/Rosemead Blvd*	Signalized	15.2	B	17.3	B
4	Halstead St/Foothill Blvd	Signalized	18.5	B	25.3	C
5	Rosemead Blvd/Hastings Ranch Dr*	Signalized	30.4	C	42.2	D
6	Rosemead Blvd/Foothill Blvd	Signalized	42.9	D	52.7	D

s = seconds, LOS = Level of Service.
* HCM 6th methodology is not applicable due to non-NEMA phasing sequence. HCM 2000 delay presented.

As shown in **Table 6**, all study intersections would operate at LOS D or better during both the a.m. and p.m. peak hours under the future baseline conditions, and all study intersection would meet the acceptable LOS standard. The intersection experiencing the highest delay in the study area would be the Rosemead Boulevard/Foothill Boulevard intersection, which operates at LOS D during both peak hours.



1. Sierra Madre Villa Ave & Rosemead Blvd & Orange Grove Blvd

25/28	300/269	213/343
22/22	216/642	83/124
95/108	293/337	24/23
754/418	659/489	16/26

2. Sierra Madre Villa Ave & Foothill Blvd

89/65	281/276	40/84
45/134	248/741	52/65
267/154	396/405	287/408
35/57	837/667	173/255

3. Halstead St & Greenhill Rd & Rosemead Blvd

155/58	41/52	17/20
Rosemead Blvd 24/157	383/807	36/69
50/135	37/117	28/96
10/18	1230/717	58/68

4. Halstead St & Foothill Blvd

46/169	38/40	14/174
105/118	323/971	60/87
96/74	20/36	42/64
37/76	917/643	70/56

5. Rosemead Blvd & Hastings Ranch Dr

7/33	233/565	85/270
9/29	17/99	8/34
33/48	1041/624	146/171
Rosemead Blvd 308/214	36/62	196/98

6. Rosemead Blvd & Foothill Blvd

29/28	329/464	83/324
74/114	164/710	199/321
161/171	655/419	234/317
501/308	898/544	198/207

4.3.4 Future With Project Conditions

This section presents the analysis of future with project conditions. Future with project conditions traffic volumes were developed by adding trips forecast to be generated by the project to future baseline conditions traffic volumes. Future with project traffic volumes are illustrated in **Figure 10**.

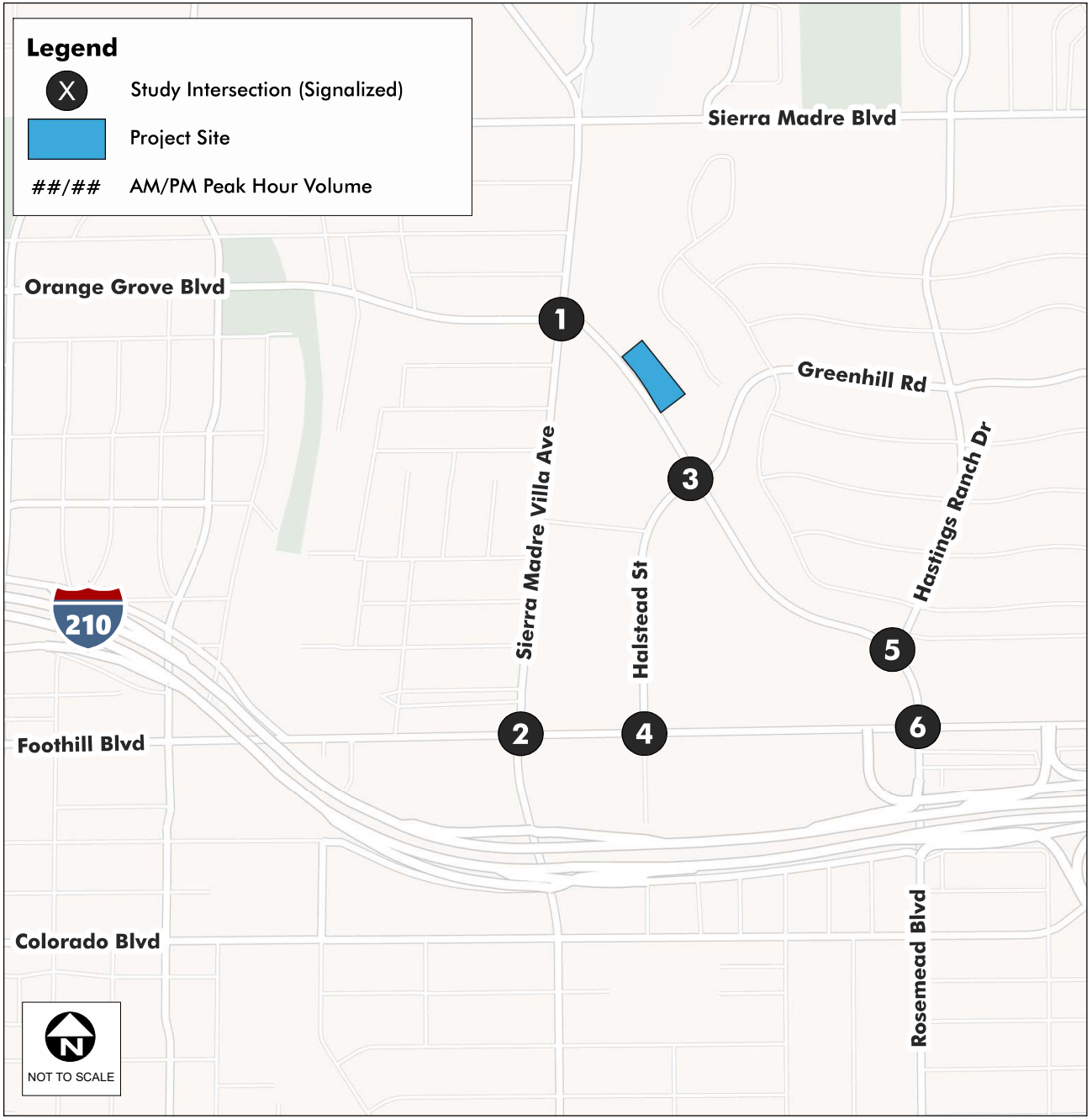
Future with project levels of service at the study intersections are summarized in **Table 7**. Level of service calculation worksheets are included in **Appendix B**.

Table 7: Future (2028) With Project Intersection Peak Hour Level of Service

Intersection		Future (2028) Baseline Conditions				Future (2028) With Project Conditions				Exceeds LOS Cap?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
		Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	
1	Sierra Madre Villa Ave/Orange Grove Blvd/Rosemead Blvd*	35.6	D	35.3	D	35.9	D	36.4	D	No
2	Sierra Madre Villa Ave/Foothill Blvd	23.9	C	30.5	C	24.1	C	30.8	C	No
3	Greenhill Rd/Halstead St/Rosemead Blvd*	15.2	B	17.3	B	16.5	B	17.7	B	No
4	Halstead St/Foothill Blvd	18.5	B	25.3	C	18.8	B	25.6	C	No
5	Rosemead Blvd/Hastings Ranch Dr*	30.4	C	42.2	D	30.6	C	42.2	D	No
6	Rosemead Blvd/Foothill Blvd	42.9	D	52.7	D	42.9	D	52.9	D	No

s = seconds, LOS = Level of Service.
* HCM 6th methodology is not applicable due to non-NEMA phasing sequence. HCM 2000 delay presented.

As shown in **Table 7**, the study intersections would experience marginal or no increases in delays with the proposed project in the future conditions. All intersections would continue to operate at LOS D or better during both the a.m. and p.m. peak hours under the future with project conditions; thus, the LOS cap would not be exceeded as a result of the proposed project.



1. Sierra Madre Villa Ave & Rosemead Blvd & Orange Grove Blvd

25/28 ↰	300/269 ↓	215/349 ↱
759/421 ↰	665/493 ←	16/26 ↱
22/22 ↱	218/649 →	83/124 ↳
95/108 ↰	293/337 ↑	24/23 ↱

2. Sierra Madre Villa Ave & Foothill Blvd

89/65 ↰	281/276 ↓	40/84 ↱
35/57 ↰	843/671 ←	176/257 ↱
45/134 ↱	250/748 →	52/65 ↳
267/154 ↰	396/405 ↑	288/412 ↱

3. Halstead St & Greenhill Rd & Rosemead Blvd

156/62 ↰	41/52 ↓	17/20 ↱
10/18 ↰	1232/726 ←	58/68 ↱
Rosemead Blvd 27/159 ↱	391/812 →	45/75 ↳
53/146 ↰	37/117 ↑	28/96 ↱

4. Halstead St & Foothill Blvd

55/175 ↰	38/40 ↓	14/174 ↱
37/76 ↰	917/643 ←	70/56 ↱
108/129 ↱	323/971 →	60/87 ↳
96/74 ↰	20/36 ↑	42/64 ↱

5. Rosemead Blvd & Hastings Ranch Dr

7/33 ↰	241/570 ↓	85/270 ↱
308/214 ↰	Rosemead Blvd ←	196/98 ↱
9/29 ↱	17/99 →	8/34 ↳
33/48 ↰	1043/633 ↑	146/171 ↱

6. Rosemead Blvd & Foothill Blvd

29/28 ↰	334/467 ↓	86/326 ↱
503/315 ↰	898/544 ←	198/207 ↱
74/114 ↱	164/710 →	199/321 ↳
161/171 ↰	656/421 ↑	234/317 ↱

Figure 10
Future (2028) with Project Peak Hour Intersection Volumes

5 STREET SEGMENT ANALYSIS

This section presents the evaluation of street segments in the vicinity of the proposed project site.

5.1 Analysis Methodology

The project site will be accessed via driveways on Rosemead Boulevard (designated as a City Connector) which connects to Greenhill Road (designated as a Neighborhood Connector). A street segment analysis was conducted to measure the project-related vehicular increase in Average Daily Traffic (ADT) as compared to the existing ADT of the roadway. In order to determine whether there would be any potential significant volume increases along residential neighborhood street segments by the addition of project traffic, the calculation below is applied:

Percent of Increase = net new project trips/existing daily traffic

Using the percentage of increase calculated from the formula above or the project-related increase in trips, the project's traffic impact is analyzed based on the impact thresholds listed in **Table 8**.

Table 8: Street Segment Thresholds

Existing ADT	Project-Related Vehicular Increase in ADT
0 to 1,500 daily trips	150 trips or more
1,501 to 3,499 daily trips	10 percent or more of final project ADT
3,500 or more	8 percent or more of final project ADT

5.2 Analysis

One (1) neighborhood connector segment was analyzed to determine whether the project-related increase in ADT exceeds the residential neighborhood intrusion criteria along Access or Neighborhood Connector streets. The street segment evaluated was:

- Greenhill Road between Cliff Drive and Hastings Ranch Drive.

The analysis is summarized in **Table 9**. Existing ADT counts were collected by a count firm on a typical weekday in February 2026 (same day as the intersection counts). Using the daily trip generation number and the project trip distribution, a daily project trip assignment volume was calculated for the segment as shown below:

Greenhill Road between Cliff Drive and Hastings Ranch Drive Daily Trip Assignment Calculation

$$Daily\ Trip\ Assignment = 486 \times 10\% = 49\ \boldsymbol{daily\ trips}$$
$$\ldots Daily\ Project\ Trip\ Generation = 486\ trips$$
$$\ldots Daily\ Trip\ Distribution = 10\%\ inbound; 10\%\ outbound = 10\%\ average$$

Table 9: Street Segment Analysis Summary

Segment	Existing ADT	Impact Threshold	Daily Project Trip Assignment	Vehicular Increase	Impact?
Greenhill Rd between Cliff Dr & Hastings Ranch Dr	1,573	10% or more	49	3.1%	No

As shown, the project is anticipated to distribute 49 or 3.1% more daily trips than the existing land use to Greenhill Road segment between Cliff Drive and Hastings Ranch Drive. Trips distributed to the segment is lower than the impact threshold of 10 percent or more; therefore, the segment is not forecast to be impacted by the proposed project.

6 OFF-SITE QUEUING ANALYSIS

The exclusive turn lane movements at the study intersections were evaluated to determine if adequate storage would be provided with the addition of project-related trips. **Table 10** summarizes the 95th percentile queue lengths for future year without and with project conditions. Storage lengths measure the striped lengths of exclusive turn lanes and are rounded up to the nearest ten feet, and do not include extra lengths where queues may be stored such as tapers and two-way-left-turn lanes. The calculated 95th percentile queue lengths are rounded up to the nearest ten feet. Queue output sheets are provided in **Appendix C**.

Table 10: Off-site Queue Analysis Summary

Intersection Movement	Storage Length (ft)	Future (2028) Baseline Conditions		Future (2028) With Project Conditions	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
1. Sierra Madre Villa Ave/Orange Grove Blvd/Rosemead Blvd					
Southbound Left-turn	130	**190**	**210**	**190**	**210**
Eastbound Left-turn	60	40	40	40	40
Westbound Left-turn	100	20	40	20	50
Westbound Right-turn	280	**380**	120	**390**	130
2. Sierra Madre Villa Ave/Foothill Blvd					
Northbound Left-turn	320	150	100	150	100
Northbound Right-turn	180	50	**280**	50	**280**
Southbound Left-turn	80	70	**120**	70	**120**
Eastbound Left-turn	100	80	**170**	80	**170**
Westbound Left-turn	150	110	140	110	140
3. Greenhill Rd/Halstead St/Rosemead Blvd					
Northbound Left-turn	120	70	**140**	80	**150**
Southbound Left-turn	90	30	30	30	30
Eastbound Left-turn	100	30	**110**	30	**110**
Eastbound Right-turn	80	20	20	20	20
Westbound Left-turn	100	40	70	40	70
Westbound Right-turn	100	0	0	0	0
4. Halstead St/Foothill Blvd					
Northbound Left-turn	110	70	60	70	60
Southbound Left-turn	190	20	120	20	120
Eastbound Left-turn	100	50	60	50	70
Westbound Left-turn	80	40	40	40	40
5. Rosemead Blvd/Hastings Ranch Dr					
Northbound Left-turn	120	50	80	50	80
Northbound Right-turn	140	80	110	90	110
Southbound Left-turn	310	120	310	120	310

Intersection Movement	Storage Length (ft)	Future (2028) Baseline Conditions		Future (2028) With Project Conditions	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Westbound Left-turn	150	**230**	130	**230**	130
Westbound Right-turn	250**	60	50	60	50
6. Rosemead Blvd/Foothill Blvd					
Northbound Left-turn	190	**260**	**260**	**260**	**260**
Northbound Right-turn	180**	50	**210**	50	**210**
Southbound Left-turn	240	90	**490**	90	**490**
Southbound Right-turn	210	10	10	10	10
Eastbound Left-turn	210	110	150	110	150
Eastbound Right-turn	230	50	190	50	190
Westbound Left-turn	200	**300**	**310**	**300**	**310**
Westbound Right-turn	200	**340**	130	**340**	140

* Highlighted bold and red when 95th percentile queue lengths at the exclusive turning movements are forecast to exceed the available storage lengths.
**Trap lane. The distance to the adjacent intersection is presented.

As shown in **Table 10,** 95th percentile queues are expected to exceed the current exclusive turn lane pocket lengths in the future baseline and future with project conditions at five study intersections. The project is expected to generate additional trips in some of these exclusive turn lanes, but would cause zero or minimal increase in queue lengths. The following provides detailed information of the project's impact where capacity is forecast to be exceeded:

- Sierra Madre Villa Avenue/Orange Grove Boulevard/Rosemead Boulevard
  - Southbound left-turn pocket during both the a.m. and p.m. peak hours. The storage length is 130 feet, and the future baseline 95th percentile queue length is 190 feet during the a.m. peak hour and 210 feet during the p.m. peak hour. The proposed project is forecast to add 2 trips during the a.m. peak hour and 6 trips during the p.m. peak hour, which would not increase the queue lengths.
  - Westbound right-turn pocket during the a.m. peak hour. The storage length is 280 feet and the future baseline 95th percentile queue length is 380 feet during the a.m. peak hour. The proposed project is forecast to add 5 trips during the a.m. peak hour and 3 trips during the p.m. peak hour, which would increase the queue lengths by 10 feet. Since the westbound right-turn pocket has a 140-feet long, 10-feet wide transition taper shared with Class II bike lane, the increase in queue length due to project traffic would not spill back and impede the westbound through movements.
- Sierra Madre Villa Avenue/Foothill Boulevard
  - Northbound right-turn pocket during the p.m. peak hour. The storage length is 180 feet and the future baseline 95th percentile queue length is 280 feet during the p.m. peak hour. The proposed project is forecast to add 1 trip during the a.m. peak hour and 4 trips during the p.m. peak hour, which would not increase the queue lengths.
  - Southbound left-turn pocket during the p.m. peak hour. The storage length is 80 feet, and the

future baseline 95th percentile queue length is 120 feet during the p.m. peak hour. The proposed project is not forecast to add any trips to this turning movement.
    - Eastbound left-turn pocket during the p.m. peak hour. The storage length is 100 feet and the future baseline 95th percentile queue length is 170 feet during the p.m. peak hour. The proposed project is not forecast to add any trips to this turning movement.
- Greenhill Road/Halstead Street/Rosemead Boulevard
    - Northbound left-turn pocket during the p.m. peak hour. The storage length is 120 feet and the future baseline 95th percentile queue length is 140 feet during the p.m. peak hour. The proposed project is forecast to add 3 trips during the a.m. peak hour and 11 trips during the p.m. peak hour, which would increase the queue lengths by 10 feet. Since there is a two-way left-turn lane along Halstead Street, the increase in queue length due to project traffic would not spill back and impede the northbound through movements.
    - Eastbound left-turn pocket during the p.m. peak hour. The storage length is 100 feet and the future baseline 95th percentile queue length is 110 feet during the p.m. peak hour. The proposed project is forecast to add 3 trips during the a.m. peak hour and 2 trips during the p.m. peak hour, which would not increase the queue lengths.
- Rosemead Boulevard/Hastings Ranch Drive
    - Westbound left-turn pocket during the a.m. peak hour. The storage length is 150 feet and the future baseline 95th percentile queue length is 230 feet during the a.m. peak hour. The proposed project is not forecast to add any trips to this turning movement.
- Rosemead Boulevard/Foothill Boulevard
    - Northbound left-turn pocket during both the a.m. and p.m. peak hours. The storage length is 190 feet and the future baseline 95th percentile queue length is 260 feet during the a.m. peak hour and 260 feet during the p.m. peak hour. The proposed project is not forecast to add any trips to this turning movement.
    - Northbound right-turn pocket during the p.m. peak hour. The storage length is 180 feet and the future baseline 95th percentile queue length is 210 feet during the p.m. peak hour. The proposed project is not forecast to add any trips to this movement.
    - Southbound left-turn pocket during the p.m. peak hour. The storage length is 240 feet and the future baseline 95th percentile queue length is 490 feet during the p.m. peak hour. The proposed project is forecast to add 3 trips during the a.m. peak hour and 2 trips during the p.m. peak hour, which would not increase the queue lengths.
    - Westbound left-turn pocket during both the a.m. and p.m. peak hours. The storage length is 200 feet and the future baseline 95th percentile queue length is 300 feet during the a.m. peak hour and 310 feet during the p.m. peak hour. The proposed project is not forecast to add any trips to this turning movement.
    - Westbound right-turn pocket during the a.m. peak hour. The storage length is 200 feet and the future baseline 95th percentile queue length is 340 feet during the a.m. peak hour. The proposed project is forecast to add 2 trips during the a.m. peak hour and 7 trips during the p.m. peak hour, which would not increase the queue lengths.

7 ACTIVE TRANSPORTATION REVIEW

This section presents an Active Transportation Review, for the purpose of determining the proposed project's effect on the pedestrian, bicycle, and transit network in the vicinity of the site. The review focuses on whether the project would result in a negative effect through removal or degradation of existing facilities, or by adding demand to substandard or inadequate facilities. Iteris staff conducted a thorough field survey of the project site area to develop an inventory of facilities. Following the inventory collection, the project's potential negative effects were evaluated based on the City of Pasadena's latest Transportation Impact Analysis Guidelines.

7.1 Inventory

A field survey of the area was performed to collect active transportation facilities within a 0.25-mile radius of the project boundary. The survey focuses on the inventory of key amenities such as transit stops, bike routes, mobility hubs, and key multi-modal trip attractors such as shopping centers, grocery stores, schools, public services (i.e., libraries, hospitals), and parks. For all transit stops adjacent to the project site, a detailed inventory was conducted to note current amenities at each stop, such as transit routes served, shelters, benches, trash cans, and text-to-speech real-time bus arrivals. **Figure 11** presents the active transportation inventory of the 0.25-mile radius study area.

City of Pasadena
Rosemead Family Apartments
Local Mobility Analysis & CEQA

Figure 11
Active Transportation Inventory

A more detailed survey was performed for the blocks of Rosemead Boulevard, Sierra Madre Villa Avenue, and Greenhill Road adjacent to the project site of 600 North Rosemead Boulevard.

Existing Transit Facilities

One eastbound and one westbound bus stop are located on Orange Grove Boulevard adjacent to the project site. One northbound and one southbound bus stop are located on Sierra Madre Villa Avenue adjacent to the project site. One eastbound and one westbound bus stop are located on Rosemead Boulevard adjacent to the project site. **Figure 12** shows the eastbound bus stop on Orange Grove Boulevard (Stop ID 1618), which is located at the southwest corner of the Orange Grove Boulevard – Rosemead Boulevard/Sierra Madre Villa Avenue intersection. This bus stop is served by Pasadena Transit 33 and Pasadena Transit 40 with services to Sierra Madre Villa A Line Station.

Figure 12 – Eastbound Orange Grove Boulevard Bus Stop (Stop ID 1618)

Figure 13 shows the westbound bus stop on Orange Grove Boulevard (Stop ID 10170), which is located at the northwest corner of the Orange Grove Boulevard – Rosemead Boulevard/Sierra Madre Villa Avenue intersection. This bus stop is served by Pasadena Transit 33 with service to Highland Park A Line Station and Pasadena Transit 40 with service to Old Pasadena.

Figure 13 – Westbound Orange Grove Boulevard Bus Stop (Stop ID 10170)

Figure 14 shows the northbound bus stop on Sierra Madre Villa Avenue (Stop ID 176163), which is located at the southeast corner of the Orange Grove Boulevard – Rosemead Boulevard/Sierra Madre Villa Avenue intersection. This bus stop is equipped with a bench and a trash can, and is served by Pasadena Transit 32 with service to Northwest Pasadena (Fair Oaks Avenue/Woodbury Road) and Metro 268 with service to El Monte Station.

Figure 14 – Northbound Sierra Madre Villa Avenue Bus Stop (Stop ID 176163)

Figure 15 shows the southbound bus stop on Sierra Madre Villa Avenue (Stop ID 176161), which is located at the northwest corner of the Orange Grove Boulevard – Rosemead Boulevard/Sierra Madre Villa Avenue intersection. This bus stop is served by Pasadena Transit 32 and Metro 268 with services to Sierra Madre Villa A Line Station.

Figure 15 – Southbound Sierra Madre Villa Avenue Bus Stop (Stop ID 176161)

Figure 16 shows the westbound bus stop on Rosemead Boulevard (Stop ID 12332), which is located at the northwest corner of the Halstead Street – Greenhill Road/Rosemead Boulevard intersection. This bus stop is equipped with a bus shelter, bench, and a trash can, and is served by Pasadena Transit 33 with service to Highland Park A Line Station and Pasadena Transit 40 with service to Old Pasadena.

Figure 16 – Westbound Rosemead Boulevard Bus Stop (Stop ID 12332)

Figure 17 shows the eastbound bus stop on Rosemead Boulevard (Stop ID 3856), which is located at the southwest corner of the Halstead Street – Greenhill Road/Rosemead Boulevard intersection. This bus stop is equipped with a bus shelter and a bench, and is served by Pasadena Transit 33 and Pasadena Transit 40 with services to Sierra Madre Villa A Line Station.

Figure 17 – Eastbound Rosemead Boulevard Bus Stop (Stop ID 3856)

Existing Pedestrian Facilities

The City of Pasadena aims to provide safe and appropriate walking spaces for pedestrian traffic to travel without obstruction. Street Design Guide, published March 2017, by the City provides a list of recommended dimensions for each zone of streets based on the street typology. The following dimensions are recommended for each of the street types adjacent to the project site:

- **Connector-City/Suburban Commercial**
  - Amenity/Curb Zone: 3 to 7 feet
  - Walk Zone: Minimum clear walk of 5 feet
  - Total Sidewalk: 8 to 12 feet
- **Connector-City/Suburban Residential**
  - Amenity/Curb Zone: 3 to 7 feet
  - Walk Zone: Minimum clear walk of 5 feet
  - Total Sidewalk: 8 to 12 feet
- **Connector-Neighborhood/Suburban Residential**
  - Amenity/Curb Zone: 3 to 7 feet
  - Walk Zone: Minimum clear walk of 5 feet
  - Total Sidewalk: 8 to 12 feet

Streets along the project frontage provide sidewalks on both sides of roadways, which are generally in good condition. The sidewalk on the east side of Greenhill Road is discontinuous beyond the building frontage at the northeast corner of the Halstead Street – Greenhill Road/Rosemead Boulevard intersection. **Table 11** summarizes the available sidewalk dimensions and whether they meet recommended dimensions per Street Design Guide.

Table 11: Sidewalk Dimensions

Street	Type	Side	Amenity/ Curb Zone	Walk Zone	Total Width	Meets Recommendation
Rosemead Boulevard	Connector – City Suburban Commercial	North	7	5	12	Yes
		South	7	5	12	Yes
Sierra Madre Villa Avenue	Connector – City Suburban Residential	East	7	5	12	Yes
		West	7	5	12	Yes
Greenhill Road	Connector – Neighborhood Suburban Residential	East	0	10	10	No
		West	5	5	10	Yes

As presented in **Table 11**, the streets each provide a minimum of 5 feet of unobstructed width, and generally 5 to 7 feet of amenity/curb zones that separate the pedestrians from moving vehicles. The east side of Greenhill Road lacks 3 feet of amenity/curb zone, but is compensated by 5 feet of extra width than minimum of the walk zone for a total sidewalk width of 10 feet, which is considered adequate.

Figure 18, Figure 19, and **Figure 20** show the sidewalks along Rosemead Boulevard along the project frontage, sidewalks along the east side of Sierra Madre Villa Avenue and west side of Greenhill Road. There are some deficiencies along the sidewalks adjacent to the project site on Sierra Madre Villa Avenue and Greenhill Road, where sidewalks have been moderately uprooted, and asphalt has been patched up to smoothen the surface. While treated, and currently moderate, it is prone to further uprooting in the future, and may cause difficulties maneuvering through the street for wheelchair users.

Figure 18 – Sidewalk along the North Side of Rosemead Boulevard

Figure 19 – Sidewalk along the East Side of Sierra Madre Villa Avenue

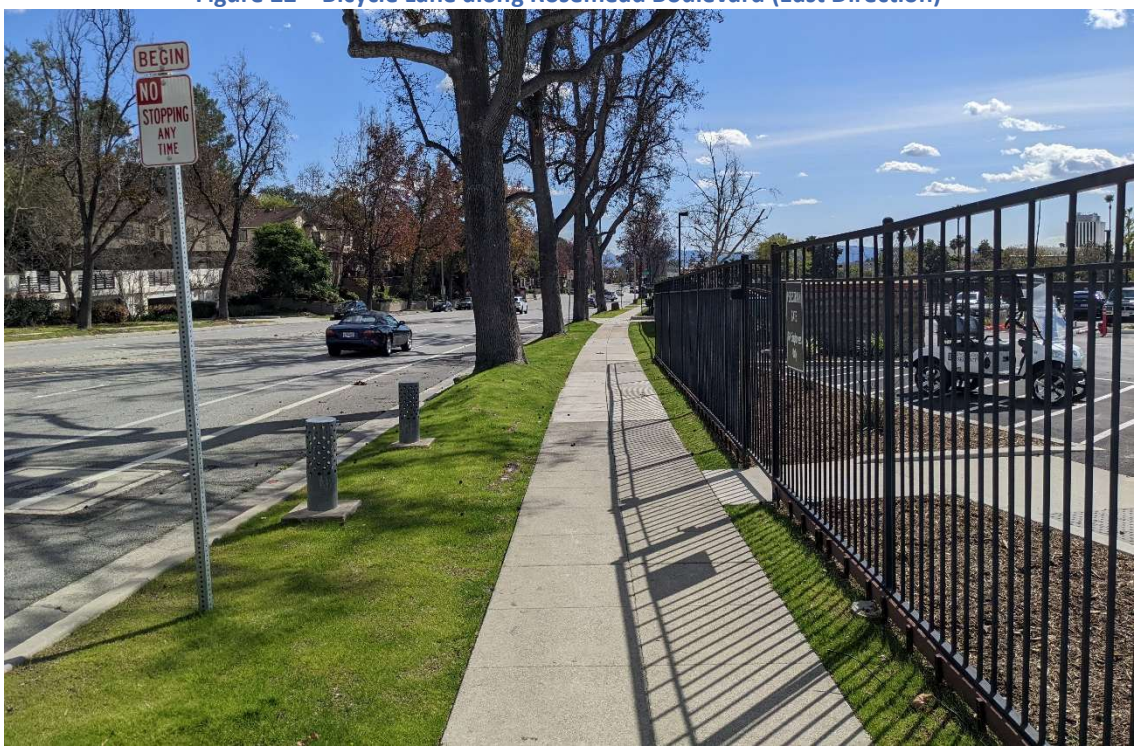
Figure 20 – Sidewalk along the West Side of Greenhill Road

Bicycle Facilities

Within the project study area, Class II bicycle lanes are provided along both sides of Rosemead Boulevard, and are approximately 5 feet wide. Class II bicycle lanes are provided along both sides of Sierra Madre Villa Avenue south of Orange Grove Boulevard – Rosemead Boulevard, and along both sides of Halstead Street south of Rosemead Boulevard. **Figure 21** shows the Class II bicycle lane along Rosemead Boulevard in the west direction. **Figure 22** shows the Class II bicycle lane along Rosemead Boulevard in the east direction.

Figure 21 – Bicycle Lane along Rosemead Boulevard (West Direction)

Figure 22 – Bicycle Lane along Rosemead Boulevard (East Direction)



Intersections

Orange Grove Boulevard – Rosemead Boulevard/Sierra Madre Villa Avenue and Halstead Street – Greenhill Road/Rosemead Boulevard are the signalized intersections adjacent to the project site. They are both equipped with advanced stops, push buttons, countdown signals with diagonal ramps and good landing spaces with no obstructions at all corners and legs of the intersection. The Orange Grove Boulevard – Rosemead Boulevard/Sierra Madre Villa Avenue intersection is equipped with continental crosswalks at all legs. The Halstead Street – Greenhill Road/Rosemead Boulevard intersection is equipped with parallel crosswalks, leading pedestrian interval and audible pedestrian signal at all legs. Truncated domes are installed at all corners at both intersections. **Figure 23** and **Figure 24** show the view of the two signalized intersections facing the project site.

Figure 23 – Orange Grove Boulevard – Rosemead Boulevard/Sierra Madre Villa Avenue Intersection from Southwest Corner

Figure 24 – Halstead Street – Greenhill Road/Rosemead Boulevard Intersection from Southeast Corner

7.2 Assessment

Per the City's guidelines, a development project would result in a negative effect on the active transportation network if it resulted in the removal or degradation of existing infrastructure which supports pedestrian, bicycle, and transit travel modes. In addition, a development project would also have a negative effect on the transportation network if it resulted in increased pedestrian or bicycle demand for facilities which are missing, damaged, or not designed to current standards. Given these criteria, the assessment of the project's impacts is shown in **Table 12**.

Table 12: Active Transportation Impact Assessment

Criteria	Yes/No?
Assessment 1: Removal or degradation of existing infrastructure	
Would the project remove transit stops, public benches/shelters, or other transit amenities?	No
Would the project remove bicycle lanes or public bicycle parking?	No
Would the project remove or obstruct sidewalks, pedestrian paths, or crossings?	No
Would the project degrade street buffering elements such as street trees, parkway strips, and bicycle lane buffers?	No
Would the project degrade visibility and lines of sight?	No
Would the project degrade appropriate-scale lighting?	No
Assessment 2: Increased demand on missing/damaged/sub-standard facilities	
Would the project increase pedestrian demand where there are missing curb ramps/crosswalks, narrow or broken sidewalks, or where a controlled crossing is not available without significant rerouting?	No
Would the project increase bicycle demand where there are no bicycle lanes, poor quality pavement, or lack of secure and well-lit parking?	No
Would the project increase transit demand where there are missing crossings or where stops are located in isolated, unshaded, or unlit areas?	No

As shown in **Table 12**, the project is not anticipated to have an impact on the existing active transportation system within the 0.25-mile radius.

8 CONCLUSIONS

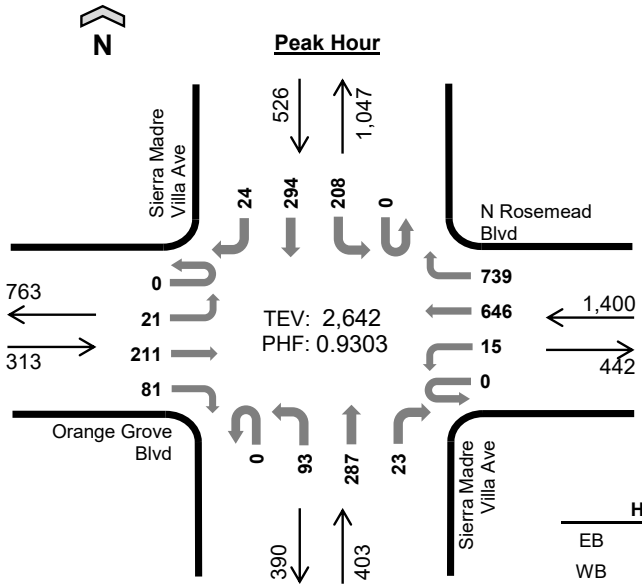
Iteris prepared a Local Mobility Analysis for the proposed affordable housing development located at 600 North Rosemead Boulevard (Rosemead Family Apartments) in the City of Pasadena. The following describes the results of the Local Mobility Analysis:

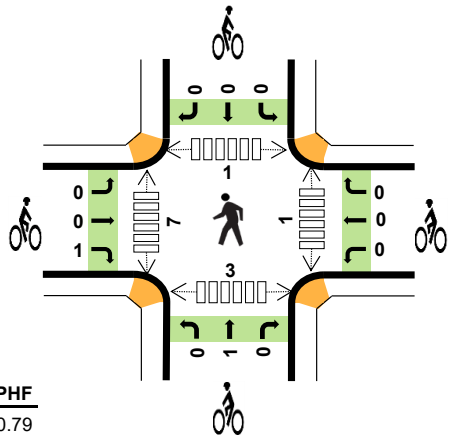
- The proposed project is forecast to result in an additional 37 a.m. peak hour trips, 54 p.m. peak hour trips, and 486 daily trips.
- None of the signalized study intersections are forecast to operate at an LOS that exceeds the LOS cap.
- The street segment (Greenhill Road) is not forecast to be impacted by the proposed project based on the City's street segment impact analysis thresholds.
- The proposed project is anticipated to add trips to some of the exclusive turn lanes with 95th percentile queue lengths exceeding the storage lengths. The added trips would cause zero or minimal increases in queue lengths. The added project trips would increase the westbound right-turn queue length by 10 feet at the Sierra Madre Villa Avenue/Orange Grove Boulevard/Rosemead Boulevard intersection, but the increase in queue length due to project traffic would not spill back and impede the westbound through movements due to the 140-feet long, 10-feet wide transition taper shared with Class II bike lane. The added project trips would increase the northbound left-turn queue length by 10 feet at the Greenhill Road/Halstead Street/Rosemead Boulevard intersection, but the increase in queue length due to project traffic would not spill back and impede the northbound through movements due to the existing two-way left-turn lane along Halstead Street. Therefore, the proposed project is not anticipated to have impacts on exclusive turn lanes.
- Based on a comprehensive field survey, one deficiency was observed along the east side of Greenhill Road, where the amenity/curb zone does not exist. However, it is compensated by a walk zone 5 feet wider than the minimum recommended for a total sidewalk width of 10 feet, which is satisfactory. Sidewalks along the east side of Sierra Madre Villa Avenue and west side of Greenhill Road show a history of moderate uprooting, which has been patched up with asphalt; the sidewalks are prone to further uprooting in the future. The bike lanes along Rosemead Boulevard, Sierra Madre Villa Avenue and Halstead Street provide bicycle access for potential visitors of the project site. Nonetheless, the proposed project is not anticipated to have a negative impact on the existing active transportation system within a 0.25-mile radius.

APPENDIX A – TRAFFIC COUNT DATA

Sierra Madre Villa Ave
Orange Grove Blvd

Date: 2/25/2026
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV%	PHF
EB	3%	0.79
WB	3%	0.93
NB	2%	0.91
SB	2%	0.83
TOTAL	3%	0.93

Peak Hour Count Summaries

Peak Hour Interval Start		Orange Grove Blvd				N Rosemead Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	7	59	15	0	4	170	186	0	24	65	7	0	44	61	6	648	0
8:00 AM		0	3	36	19	0	4	165	190	0	28	77	6	0	47	63	5	643	0
8:15 AM		0	3	51	21	0	3	181	192	0	24	72	5	0	60	92	6	710	0
8:30 AM		0	8	65	26	0	4	130	171	0	17	73	5	0	57	78	7	641	2,642
Pk Hr	All	0	21	211	81	0	15	646	739	0	93	287	23	0	208	294	24	2,642	
	HV	0	1	6	3	0	0	19	28	0	1	9	0	0	4	9	0	80	
	HV%	-	5%	3%	4%	-	0%	3%	4%	-	1%	3%	0%	-	2%	3%	0%	3%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	2	11	4	4	*21*	1	0	0	0	*1*	1	4	1	0	*6*
8:00 AM	1	14	1	3	*19*	0	0	0	0	*0*	0	1	0	3	*4*
8:15 AM	3	9	5	3	*20*	0	0	1	0	*1*	0	1	0	0	*1*
8:30 AM	4	13	0	3	*20*	0	0	0	0	*0*	0	1	0	0	*1*
Peak Hour	10	47	10	13	*80*	1	0	1	0	*2*	1	7	1	3	*12*

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - All Vehicles

Interval Start	Orange Grove Blvd				N Rosemead Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	25	8	0	3	51	84	0	4	28	6	0	19	26	3	258	0
7:15 AM	0	2	29	15	0	4	67	90	0	8	42	4	0	18	37	3	319	0
7:30 AM	0	9	24	6	0	3	145	155	0	22	49	8	0	36	38	8	503	0
7:45 AM	**0**	**7**	**59**	**15**	**0**	**4**	**170**	**186**	**0**	**24**	**65**	**7**	**0**	**44**	**61**	**6**	**648**	**1,728**
8:00 AM	**0**	**3**	**36**	**19**	**0**	**4**	**165**	**190**	**0**	**28**	**77**	**6**	**0**	**47**	**63**	**5**	**643**	**2,113**
8:15 AM	**0**	**3**	**51**	**21**	**0**	**3**	**181**	**192**	**0**	**24**	**72**	**5**	**0**	**60**	**92**	**6**	**710**	**2,504**
8:30 AM	**0**	**8**	**65**	**26**	**0**	**4**	**130**	**171**	**0**	**17**	**73**	**5**	**0**	**57**	**78**	**7**	**641**	**2,642**
8:45 AM	0	0	54	21	0	2	117	124	0	16	66	13	0	52	65	4	534	2,528
Count Total	0	33	343	131	0	27	1,026	1,192	0	143	472	54	0	333	460	42	4,256	
Pk Hr All	**0**	**21**	**211**	**81**	**0**	**15**	**646**	**739**	**0**	**93**	**287**	**23**	**0**	**208**	**294**	**24**	**2,642**	
Pk Hr HV	**0**	**1**	**6**	**3**	**0**	**0**	**19**	**28**	**0**	**1**	**9**	**0**	**0**	**4**	**9**	**0**	**80**	
Pk Hr HV%	**-**	**5%**	**3%**	**4%**	**-**	**0%**	**3%**	**4%**	**-**	**1%**	**3%**	**0%**	**-**	**2%**	**3%**	**0%**	**3%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	2	7	4	5	*18*	0	0	0	1	*1*	0	1	0	0	*1*
7:15 AM	1	9	5	4	*19*	0	0	0	0	*0*	1	0	3	1	*5*
7:30 AM	1	9	2	4	*16*	0	0	0	0	*0*	1	1	0	3	*5*
7:45 AM	**2**	**11**	**4**	**4**	**21**	**1**	**0**	**0**	**0**	**1**	**1**	**4**	**1**	**0**	**6**
8:00 AM	**1**	**14**	**1**	**3**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**4**
8:15 AM	**3**	**9**	**5**	**3**	**20**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**	**1**
8:30 AM	**4**	**13**	**0**	**3**	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
8:45 AM	2	9	5	3	*19*	0	1	0	1	*2*	2	2	2	1	*7*
Count Total	16	81	26	29	*152*	1	1	1	2	*5*	5	11	6	8	*30*
Peak Hour	**10**	**47**	**10**	**13**	***80***	**1**	**0**	**1**	**0**	**2**	**1**	**7**	**1**	**3**	**12**

NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

Count Summaries - Heavy Vehicles

Interval Start	Orange Grove Blvd				N Rosemead Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	0	0	0	2	5	0	0	4	0	0	2	3	0	18	0
7:15 AM	0	0	0	1	0	0	6	3	0	0	5	0	0	2	2	0	19	0
7:30 AM	0	0	1	0	0	0	3	6	0	0	2	0	0	2	2	0	16	0
7:45 AM	**0**	**0**	**1**	**1**	**0**	**0**	**3**	**8**	**0**	**1**	**3**	**0**	**0**	**1**	**3**	**0**	**21**	**74**
8:00 AM	**0**	**0**	**1**	**0**	**0**	**0**	**7**	**7**	**0**	**0**	**1**	**0**	**0**	**2**	**1**	**0**	**19**	**75**
8:15 AM	**0**	**0**	**3**	**0**	**0**	**0**	**6**	**3**	**0**	**0**	**5**	**0**	**0**	**0**	**3**	**0**	**20**	**76**
8:30 AM	**0**	**1**	**1**	**2**	**0**	**0**	**3**	**10**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**20**	**80**
8:45 AM	0	0	1	1	0	0	5	4	0	0	3	2	0	0	3	0	19	78
Count Total	0	1	10	5	0	0	35	46	0	1	23	2	0	10	19	0	152	
Pk Hr Heavy	**0**	**1**	**6**	**3**	**0**	**0**	**19**	**28**	**0**	**1**	**9**	**0**	**0**	**4**	**9**	**0**	**80**	

Count Summaries - Bikes

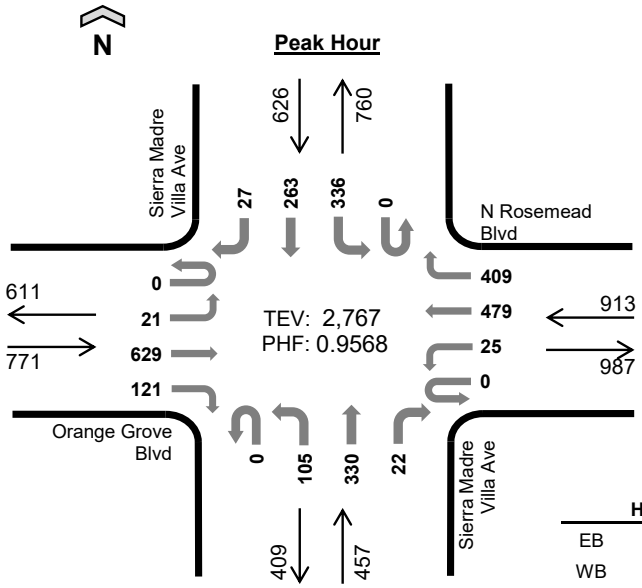
Interval Start	Orange Grove Blvd				N Rosemead Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:15 AM	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**2**
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	3
Count Total	0	0	0	1	0	0	0	1	0	0	1	0	0	0	2	0	5	
Pk Hr Bike	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	

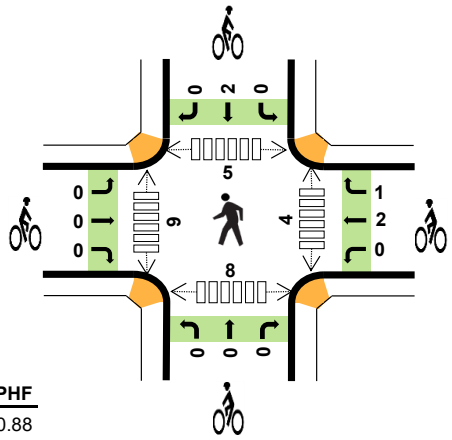
NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

Sierra Madre Villa Ave
Orange Grove Blvd

Date: 2/25/2026
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM





	HV%	PHF
EB	2%	0.88
WB	1%	0.91
NB	1%	0.94
SB	1%	0.93
TOTAL	1%	0.96

Peak Hour Count Summaries

Peak Hour Interval Start		Orange Grove Blvd				N Rosemead Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:30 PM		0	7	160	26	0	8	133	94	0	22	78	9	0	86	65	7	695	0
4:45 PM		0	4	148	26	0	7	111	112	0	23	87	3	0	95	70	4	690	0
5:00 PM		0	6	146	29	0	4	103	89	0	37	79	5	0	80	70	11	659	0
5:15 PM		0	4	175	40	0	6	132	114	0	23	86	5	0	75	58	5	723	2,767
Pk Hr	All	0	21	629	121	0	25	479	409	0	105	330	22	0	336	263	27	2,767	
	HV	0	0	11	1	0	0	6	3	0	0	5	0	0	5	2	0	33	
	HV%	-	0%	2%	1%	-	0%	1%	1%	-	0%	2%	0%	-	1%	1%	0%	1%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:30 PM	4	1	0	1	*6*	0	0	0	1	*1*	2	2	1	3	*8*
4:45 PM	4	5	1	1	*11*	0	0	0	0	*0*	0	4	1	2	*7*
5:00 PM	1	1	2	2	*6*	0	3	0	0	*3*	0	3	0	0	*3*
5:15 PM	3	2	2	3	*10*	0	0	0	1	*1*	2	0	3	3	*8*
Peak Hour	12	9	5	7	*33*	0	3	0	2	*5*	4	9	5	8	*26*

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - All Vehicles

Interval Start	Orange Grove Blvd				N Rosemead Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	5	158	27	0	6	98	104	0	22	64	2	0	86	59	3	634	0
4:15 PM	0	5	190	26	0	3	96	87	0	25	66	7	0	91	74	3	673	0
4:30 PM	**0**	**7**	**160**	**26**	**0**	**8**	**133**	**94**	**0**	**22**	**78**	**9**	**0**	**86**	**65**	**7**	**695**	**0**
4:45 PM	**0**	**4**	**148**	**26**	**0**	**7**	**111**	**112**	**0**	**23**	**87**	**3**	**0**	**95**	**70**	**4**	**690**	**2,692**
5:00 PM	**0**	**6**	**146**	**29**	**0**	**4**	**103**	**89**	**0**	**37**	**79**	**5**	**0**	**80**	**70**	**11**	**659**	**2,717**
5:15 PM	**0**	**4**	**175**	**40**	**0**	**6**	**132**	**114**	**0**	**23**	**86**	**5**	**0**	**75**	**58**	**5**	**723**	**2,767**
5:30 PM	0	5	152	33	0	9	106	82	0	28	74	4	0	74	64	3	634	2,706
5:45 PM	0	5	131	27	0	6	83	88	0	27	76	9	0	63	70	6	591	2,607
Count Total	0	41	1,260	234	0	49	862	770	0	207	610	44	0	650	530	42	5,299	
Pk Hr All	**0**	**21**	**629**	**121**	**0**	**25**	**479**	**409**	**0**	**105**	**330**	**22**	**0**	**336**	**263**	**27**	**2,767**	
Pk Hr HV	**0**	**0**	**11**	**1**	**0**	**0**	**6**	**3**	**0**	**0**	**5**	**0**	**0**	**5**	**2**	**0**	**33**	
Pk Hr HV%	**-**	**0%**	**2%**	**1%**	**-**	**0%**	**1%**	**1%**	**-**	**0%**	**2%**	**0%**	**-**	**1%**	**1%**	**0%**	**1%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	0	5	1	1	*7*	0	1	1	0	*2*	1	1	0	0	*2*
4:15 PM	2	1	1	5	*9*	0	0	0	1	*1*	0	2	0	1	*3*
4:30 PM	**4**	**1**	**0**	**1**	**6**	**0**	**0**	**0**	**1**	**1**	**2**	**2**	**1**	**3**	**8**
4:45 PM	**4**	**5**	**1**	**1**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**2**	**7**
5:00 PM	**1**	**1**	**2**	**2**	**6**	**0**	**3**	**0**	**0**	**3**	**0**	**3**	**0**	**0**	**3**
5:15 PM	**3**	**2**	**2**	**3**	**10**	**0**	**0**	**0**	**1**	**1**	**2**	**0**	**3**	**3**	**8**
5:30 PM	2	1	1	2	*6*	0	0	0	0	*0*	0	0	0	2	*2*
5:45 PM	1	2	1	1	*5*	0	0	0	0	*0*	0	0	1	0	*1*
Count Total	17	18	9	16	*60*	0	4	1	3	*8*	5	12	6	11	*34*
Peak Hour	**12**	**9**	**5**	**7**	***33***	**0**	**3**	**0**	**2**	***5***	**4**	**9**	**5**	**8**	**26**

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - Heavy Vehicles

Interval Start	Orange Grove Blvd				N Rosemead Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	2	3	0	0	1	0	0	1	0	0	7	0
4:15 PM	0	0	2	0	0	0	1	0	0	0	1	0	0	2	3	0	9	0
4:30 PM	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**6**	**0**
4:45 PM	**0**	**0**	**3**	**1**	**0**	**0**	**3**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**11**	**33**
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**6**	**32**
5:15 PM	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	**1**	**0**	**10**	**33**
5:30 PM	0	0	2	0	0	0	1	0	0	0	1	0	0	1	1	0	6	33
5:45 PM	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	0	5	27
Count Total	0	0	16	1	0	0	11	7	0	0	9	0	0	9	7	0	60	
Pk Hr Heavy	**0**	**0**	**11**	**1**	**0**	**0**	**6**	**3**	**0**	**0**	**5**	**0**	**0**	**5**	**2**	**0**	**33**	

Count Summaries - Bikes

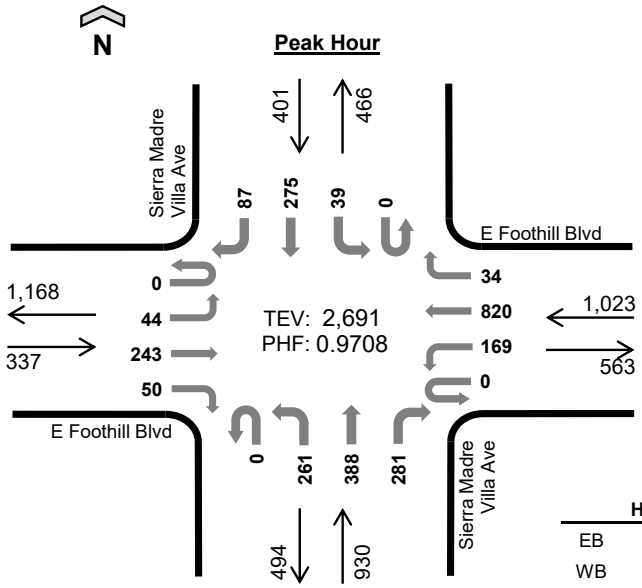
Interval Start	Orange Grove Blvd				N Rosemead Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**5**
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**5**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Count Total	0	0	0	0	0	0	3	1	0	0	1	0	0	0	3	0	8	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**5**	

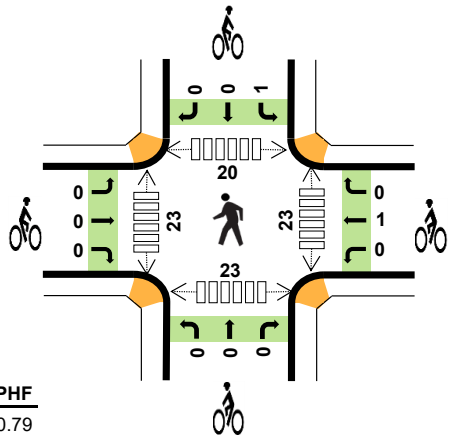
NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

Sierra Madre Villa Ave
E Foothill Blvd

Date: 2/25/2026
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV%	PHF
EB	3%	0.79
WB	2%	0.92
NB	4%	0.87
SB	3%	0.81
TOTAL	3%	0.97

Peak Hour Count Summaries

Peak Hour Interval Start		E Foothill Blvd Eastbound				E Foothill Blvd Westbound				Sierra Madre Villa Ave Northbound				Sierra Madre Villa Ave Southbound				15-min Total	Rolling Hour Total
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
8:00 AM		0	15	52	13	0	38	216	5	0	56	106	64	0	6	67	16	654	0
8:15 AM		0	7	50	11	0	42	223	7	0	70	96	62	0	9	69	21	667	0
8:30 AM		0	12	60	11	0	52	214	11	0	57	87	65	0	17	89	18	693	0
8:45 AM		0	10	81	15	0	37	167	11	0	78	99	90	0	7	50	32	677	2,691
Pk Hr	All	0	44	243	50	0	169	820	34	0	261	388	281	0	39	275	87	2,691	
	HV	0	1	10	0	0	3	17	0	0	12	11	12	0	6	6	1	79	
	HV%	-	2%	4%	0%	-	2%	2%	0%	-	5%	3%	4%	-	15%	2%	1%	3%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
8:00 AM	2	1	9	2	*14*	0	0	0	1	*1*	5	4	1	1	*11*
8:15 AM	2	5	9	3	*19*	0	0	0	0	*0*	5	6	5	7	*23*
8:30 AM	5	4	8	6	*23*	0	0	0	0	*0*	3	6	5	6	*20*
8:45 AM	2	10	9	2	*23*	0	1	0	0	*1*	10	7	9	9	*35*
Peak Hour	11	20	35	13	*79*	0	1	0	1	*2*	23	23	20	23	*89*

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - All Vehicles

Interval Start	E Foothill Blvd				E Foothill Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	19	5	0	28	104	4	0	22	33	35	0	0	48	7	307	0
7:15 AM	0	6	28	11	0	30	101	3	0	23	51	46	1	11	36	9	356	0
7:30 AM	0	9	37	2	0	29	171	7	0	35	81	56	0	0	54	11	492	0
7:45 AM	0	9	58	6	0	30	214	10	0	62	89	69	0	5	64	14	630	1,785
8:00 AM	**0**	**15**	**52**	**13**	**0**	**38**	**216**	**5**	**0**	**56**	**106**	**64**	**0**	**6**	**67**	**16**	**654**	**2,132**
8:15 AM	**0**	**7**	**50**	**11**	**0**	**42**	**223**	**7**	**0**	**70**	**96**	**62**	**0**	**9**	**69**	**21**	**667**	**2,443**
8:30 AM	**0**	**12**	**60**	**11**	**0**	**52**	**214**	**11**	**0**	**57**	**87**	**65**	**0**	**17**	**89**	**18**	**693**	**2,644**
8:45 AM	**0**	**10**	**81**	**15**	**0**	**37**	**167**	**11**	**0**	**78**	**99**	**90**	**0**	**7**	**50**	**32**	**677**	**2,691**
Count Total	0	70	385	74	0	286	1,410	58	0	403	642	487	1	55	477	128	4,476	
Pk Hr All	**0**	**44**	**243**	**50**	**0**	**169**	**820**	**34**	**0**	**261**	**388**	**281**	**0**	**39**	**275**	**87**	**2,691**	
Pk Hr HV	**0**	**1**	**10**	**0**	**0**	**3**	**17**	**0**	**0**	**12**	**11**	**12**	**0**	**6**	**6**	**1**	**79**	
Pk Hr HV%	**-**	**2%**	**4%**	**0%**	**-**	**2%**	**2%**	**0%**	**-**	**5%**	**3%**	**4%**	**-**	**15%**	**2%**	**1%**	**3%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	3	5	8	5	*21*	0	0	0	0	*0*	1	0	0	0	*1*
7:15 AM	7	3	8	4	*22*	0	0	0	0	*0*	4	0	1	0	*5*
7:30 AM	1	6	8	2	*17*	0	0	1	0	*1*	2	0	2	1	*5*
7:45 AM	5	2	8	3	*18*	0	0	0	0	*0*	5	5	3	8	*21*
8:00 AM	**2**	**1**	**9**	**2**	**14**	**0**	**0**	**0**	**1**	**1**	**5**	**4**	**1**	**1**	**11**
8:15 AM	**2**	**5**	**9**	**3**	**19**	**0**	**0**	**0**	**0**	**0**	**5**	**6**	**5**	**7**	**23**
8:30 AM	**5**	**4**	**8**	**6**	**23**	**0**	**0**	**0**	**0**	**0**	**3**	**6**	**5**	**6**	**20**
8:45 AM	**2**	**10**	**9**	**2**	**23**	**0**	**1**	**0**	**0**	**1**	**10**	**7**	**9**	**9**	**35**
Count Total	27	36	67	27	*157*	0	1	1	1	*3*	35	28	26	32	*121*
Peak Hour	**11**	**20**	**35**	**13**	**79**	**0**	**1**	**0**	**1**	**2**	**23**	**23**	**20**	**23**	**89**

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - Heavy Vehicles

Interval Start	E Foothill Blvd				E Foothill Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	1	0	1	3	1	0	1	4	3	0	0	3	2	21	0
7:15 AM	0	1	4	2	0	0	2	1	0	0	3	5	0	1	3	0	22	0
7:30 AM	0	0	1	0	0	0	6	0	0	5	1	2	0	0	2	0	17	0
7:45 AM	0	0	4	1	0	0	2	0	0	1	4	3	0	1	1	1	18	78
8:00 AM	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**3**	**4**	**0**	**1**	**1**	**0**	**14**	**71**
8:15 AM	**0**	**1**	**1**	**0**	**0**	**1**	**4**	**0**	**0**	**3**	**3**	**3**	**0**	**2**	**1**	**0**	**19**	**68**
8:30 AM	**0**	**0**	**5**	**0**	**0**	**2**	**2**	**0**	**0**	**5**	**0**	**3**	**0**	**2**	**4**	**0**	**23**	**74**
8:45 AM	**0**	**0**	**2**	**0**	**0**	**0**	**10**	**0**	**0**	**2**	**5**	**2**	**0**	**1**	**0**	**1**	**23**	**79**
Count Total	0	2	21	4	0	4	30	2	0	19	23	25	0	8	15	4	157	
Pk Hr Heavy	**0**	**1**	**10**	**0**	**0**	**3**	**17**	**0**	**0**	**12**	**11**	**12**	**0**	**6**	**6**	**1**	**79**	

Count Summaries - Bikes

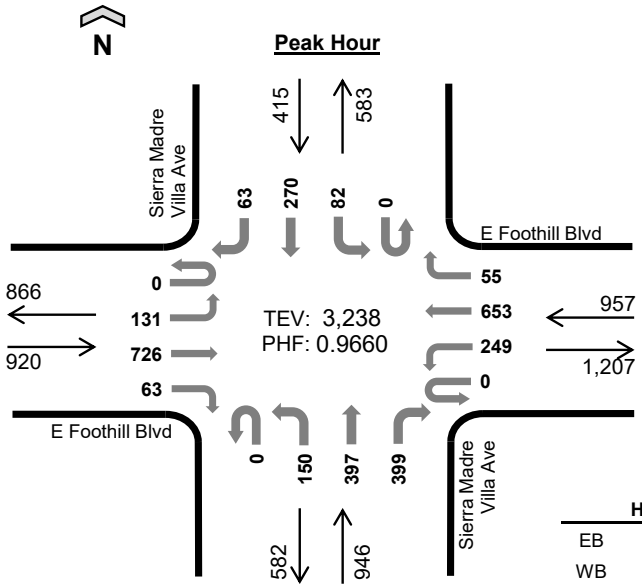
Interval Start	E Foothill Blvd				E Foothill Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**2**
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**
Count Total	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	3	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	

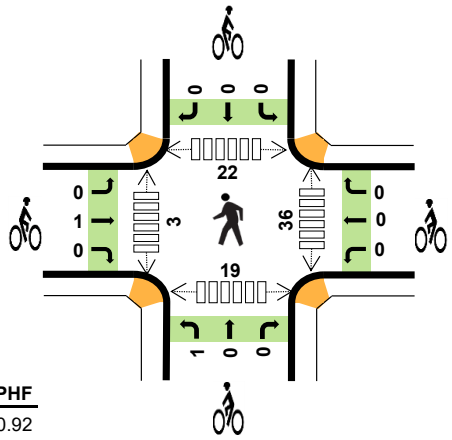
NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

Sierra Madre Villa Ave
E Foothill Blvd

Date: 2/25/2026
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV%	PHF
EB	1%	0.92
WB	1%	0.94
NB	1%	0.93
SB	1%	0.87
TOTAL	1%	0.97

Peak Hour Count Summaries

Peak Hour Interval Start		E Foothill Blvd Eastbound				E Foothill Blvd Westbound				Sierra Madre Villa Ave Northbound				Sierra Madre Villa Ave Southbound				15-min Total	Rolling Hour Total
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:45 PM		0	35	188	17	0	43	150	17	0	47	107	99	0	18	67	15	803	0
5:00 PM		0	30	205	14	0	68	161	17	0	33	99	97	0	25	66	23	838	0
5:15 PM		0	36	179	20	0	65	169	13	0	39	98	95	0	16	54	12	796	0
5:30 PM		0	30	154	12	0	73	173	8	0	31	93	108	0	23	83	13	801	3,238
Pk Hr	All	0	131	726	63	0	249	653	55	0	150	397	399	0	82	270	63	3,238	
	HV	0	0	9	0	0	2	5	1	0	2	5	5	0	4	2	0	35	
	HV%	-	0%	1%	0%	-	1%	1%	2%	-	1%	1%	1%	-	5%	1%	0%	1%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:45 PM	3	2	2	3	*10*	0	0	0	0	*0*	12	1	2	3	*18*
5:00 PM	2	0	3	1	*6*	0	0	0	0	*0*	18	1	10	7	*36*
5:15 PM	3	1	6	1	*11*	1	0	1	0	*2*	3	0	4	3	*10*
5:30 PM	1	5	1	1	*8*	0	0	0	0	*0*	3	1	6	6	*16*
Peak Hour	9	8	12	6	*35*	1	0	1	0	*2*	36	3	22	19	*80*

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - All Vehicles

Interval Start	E Foothill Blvd				E Foothill Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	28	195	20	0	57	167	10	0	42	75	84	0	14	71	18	781	0
4:15 PM	0	33	186	18	0	41	172	10	0	32	75	83	0	17	79	13	759	0
4:30 PM	0	37	181	13	0	69	173	6	0	27	79	73	0	11	74	21	764	0
4:45 PM	**0**	**35**	**188**	**17**	**0**	**43**	**150**	**17**	**0**	**47**	**107**	**99**	**0**	**18**	**67**	**15**	**803**	**3,107**
5:00 PM	**0**	**30**	**205**	**14**	**0**	**68**	**161**	**17**	**0**	**33**	**99**	**97**	**0**	**25**	**66**	**23**	**838**	**3,164**
5:15 PM	**0**	**36**	**179**	**20**	**0**	**65**	**169**	**13**	**0**	**39**	**98**	**95**	**0**	**16**	**54**	**12**	**796**	**3,201**
5:30 PM	**0**	**30**	**154**	**12**	**0**	**73**	**173**	**8**	**0**	**31**	**93**	**108**	**0**	**23**	**83**	**13**	**801**	**3,238**
5:45 PM	0	25	164	18	0	52	150	11	0	30	111	105	0	12	65	23	766	3,201
Count Total	0	254	1,452	132	0	468	1,315	92	0	281	737	744	0	136	559	138	6,308	
Pk Hr All	**0**	**131**	**726**	**63**	**0**	**249**	**653**	**55**	**0**	**150**	**397**	**399**	**0**	**82**	**270**	**63**	**3,238**	
Pk Hr HV	**0**	**0**	**9**	**0**	**0**	**2**	**5**	**1**	**0**	**2**	**5**	**5**	**0**	**4**	**2**	**0**	**35**	
Pk Hr HV%	**-**	**0%**	**1%**	**0%**	**-**	**1%**	**1%**	**2%**	**-**	**1%**	**1%**	**1%**	**-**	**5%**	**1%**	**0%**	**1%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	2	3	4	1	*10*	0	0	0	0	*0*	9	6	3	4	*22*
4:15 PM	6	3	3	3	*15*	0	0	0	1	*1*	7	4	8	11	*30*
4:30 PM	3	3	5	0	*11*	1	0	0	0	*1*	7	1	5	9	*22*
4:45 PM	**3**	**2**	**2**	**3**	**10**	**0**	**0**	**0**	**0**	**0**	**12**	**1**	**2**	**3**	**18**
5:00 PM	**2**	**0**	**3**	**1**	**6**	**0**	**0**	**0**	**0**	**0**	**18**	**1**	**10**	**7**	**36**
5:15 PM	**3**	**1**	**6**	**1**	**11**	**1**	**0**	**1**	**0**	**2**	**3**	**0**	**4**	**3**	**10**
5:30 PM	**1**	**5**	**1**	**1**	**8**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**6**	**6**	**16**
5:45 PM	3	2	5	1	*11*	0	0	0	0	*0*	11	1	7	1	*20*
Count Total	23	19	29	11	*82*	2	0	1	1	*4*	70	15	45	44	*174*
Peak Hour	**9**	**8**	**12**	**6**	***35***	**1**	**0**	**1**	**0**	***2***	**36**	**3**	**22**	**19**	**80**

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - Heavy Vehicles

Interval Start	E Foothill Blvd				E Foothill Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	0	0	0	2	1	0	2	0	2	0	0	0	1	10	0
4:15 PM	0	0	6	0	0	0	3	0	0	0	1	2	0	1	2	0	15	0
4:30 PM	0	0	3	0	0	0	3	0	0	2	1	2	0	0	0	0	11	0
4:45 PM	**0**	**0**	**3**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**1**	**0**	**1**	**2**	**0**	**10**	**46**
5:00 PM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**1**	**0**	**0**	**6**	**42**
5:15 PM	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**2**	**2**	**0**	**1**	**0**	**0**	**11**	**38**
5:30 PM	**0**	**0**	**1**	**0**	**0**	**1**	**3**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**8**	**35**
5:45 PM	0	0	3	0	0	1	1	0	0	2	1	2	0	1	0	0	11	36
Count Total	0	0	23	0	0	3	14	2	0	8	8	13	0	6	4	1	82	
Pk Hr Heavy	**0**	**0**	**9**	**0**	**0**	**2**	**5**	**1**	**0**	**2**	**5**	**5**	**0**	**4**	**2**	**0**	**35**	

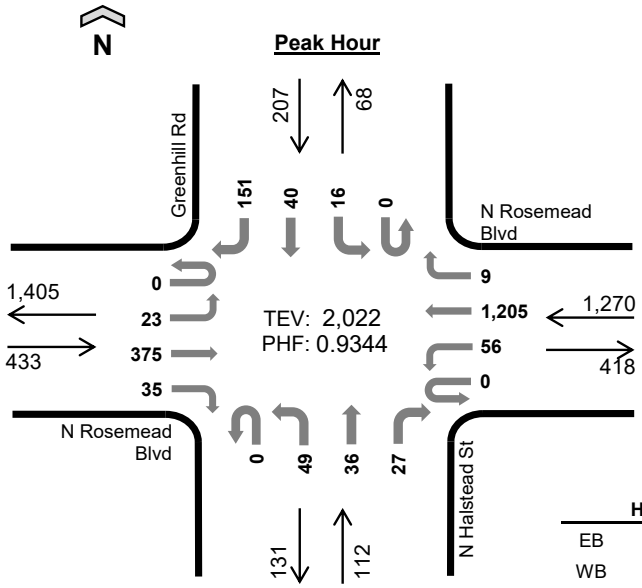
Count Summaries - Bikes

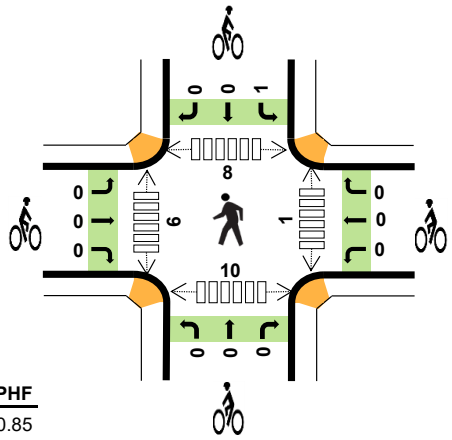
Interval Start	E Foothill Blvd				E Foothill Blvd				Sierra Madre Villa Ave				Sierra Madre Villa Ave				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
5:15 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	1	1	0	0	0	0	0	1	0	0	0	0	1	0	4	
Pk Hr Bike	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

N Halstead St
N Rosemead Blvd

Date: 2/25/2026
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV%	PHF
EB	2%	0.85
WB	3%	0.97
NB	3%	0.76
SB	0%	0.83
TOTAL	3%	0.93

Peak Hour Count Summaries

Peak Hour Interval Start		N Rosemead Blvd Eastbound				N Rosemead Blvd Westbound				N Halstead St Northbound				Greenhill Rd Southbound				15-min Total	Rolling Hour Total
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	7	83	9	0	10	319	0	0	9	9	6	0	3	13	29	497	0
8:00 AM		0	3	80	9	0	16	305	0	0	10	7	8	0	3	13	46	500	0
8:15 AM		0	8	96	11	0	11	309	7	0	19	11	7	0	3	9	50	541	0
8:30 AM		0	5	116	6	0	19	272	2	0	11	9	6	0	7	5	26	484	2,022
Pk Hr	All	0	23	375	35	0	56	1,205	9	0	49	36	27	0	16	40	151	2,022	
	HV	0	0	7	3	0	0	44	0	0	3	0	0	0	0	0	0	57	
	HV%	-	0%	2%	9%	-	0%	4%	0%	-	6%	0%	0%	-	0%	0%	0%	3%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	2	11	0	0	*13*	0	0	0	1	*1*	0	1	1	4	*6*
8:00 AM	3	13	1	0	*17*	0	0	0	0	*0*	1	1	4	2	*8*
8:15 AM	3	8	1	0	*12*	0	0	0	0	*0*	0	1	1	3	*5*
8:30 AM	2	12	1	0	*15*	0	0	0	0	*0*	0	3	2	1	*6*
Peak Hour	10	44	3	0	*57*	0	0	0	1	*1*	1	6	8	10	*25*

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - All Vehicles

Interval Start	N Rosemead Blvd				N Rosemead Blvd				N Halstead St				Greenhill Rd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	3	36	4	0	5	139	1	0	4	1	5	0	3	5	2	208	0
7:15 AM	0	1	43	3	0	6	147	1	0	5	5	2	0	3	4	13	233	0
7:30 AM	0	5	56	8	0	13	284	2	0	5	5	3	0	4	7	29	421	0
7:45 AM	**0**	**7**	**83**	**9**	**0**	**10**	**319**	**0**	**0**	**9**	**9**	**6**	**0**	**3**	**13**	**29**	**497**	**1,359**
8:00 AM	**0**	**3**	**80**	**9**	**0**	**16**	**305**	**0**	**0**	**10**	**7**	**8**	**0**	**3**	**13**	**46**	**500**	**1,651**
8:15 AM	**0**	**8**	**96**	**11**	**0**	**11**	**309**	**7**	**0**	**19**	**11**	**7**	**0**	**3**	**9**	**50**	**541**	**1,959**
8:30 AM	**0**	**5**	**116**	**6**	**0**	**19**	**272**	**2**	**0**	**11**	**9**	**6**	**0**	**7**	**5**	**26**	**484**	**2,022**
8:45 AM	0	7	91	13	0	10	205	2	0	15	12	11	0	6	15	26	413	1,938
Count Total	0	39	601	63	0	90	1,980	15	0	78	59	48	0	32	71	221	3,297	
Pk Hr All	**0**	**23**	**375**	**35**	**0**	**56**	**1,205**	**9**	**0**	**49**	**36**	**27**	**0**	**16**	**40**	**151**	**2,022**	
Pk Hr HV	**0**	**0**	**7**	**3**	**0**	**0**	**44**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**57**	
Pk Hr HV%	**-**	**0%**	**2%**	**9%**	**-**	**0%**	**4%**	**0%**	**-**	**6%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**3%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	4	7	0	0	*11*	0	0	0	0	*0*	1	0	2	0	*3*
7:15 AM	2	8	1	0	*11*	0	0	0	0	*0*	0	0	1	1	*2*
7:30 AM	3	9	0	0	*12*	0	0	0	0	*0*	0	0	3	0	*3*
7:45 AM	**2**	**11**	**0**	**0**	**13**	**0**	**0**	**0**	**1**	**1**	**0**	**1**	**1**	**4**	**6**
8:00 AM	**3**	**13**	**1**	**0**	**17**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**4**	**2**	**8**
8:15 AM	**3**	**8**	**1**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**3**	**5**
8:30 AM	**2**	**12**	**1**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**1**	**6**
8:45 AM	3	7	1	3	*14*	0	0	0	0	*0*	0	3	0	0	*3*
Count Total	22	75	5	3	*105*	0	0	0	1	*1*	2	9	14	11	*36*
Peak Hour	**10**	**44**	**3**	**0**	***57***	**0**	**0**	**0**	**1**	***1***	**1**	**6**	**8**	**10**	**25**

NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

Count Summaries - Heavy Vehicles

Interval Start	N Rosemead Blvd				N Rosemead Blvd				N Halstead St				Greenhill Rd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	3	1	0	0	7	0	0	0	0	0	0	0	0	0	11	0
7:15 AM	0	0	2	0	0	0	8	0	0	1	0	0	0	0	0	0	11	0
7:30 AM	0	0	3	0	0	0	9	0	0	0	0	0	0	0	0	0	12	0
7:45 AM	**0**	**0**	**1**	**1**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**47**
8:00 AM	**0**	**0**	**2**	**1**	**0**	**0**	**13**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**17**	**53**
8:15 AM	**0**	**0**	**2**	**1**	**0**	**0**	**8**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**54**
8:30 AM	**0**	**0**	**2**	**0**	**0**	**0**	**12**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**57**
8:45 AM	0	0	3	0	0	0	7	0	0	0	1	0	0	1	0	2	14	58
Count Total	0	0	18	4	0	0	75	0	0	4	1	0	0	1	0	2	105	
Pk Hr Heavy	**0**	**0**	**7**	**3**	**0**	**0**	**44**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**57**	

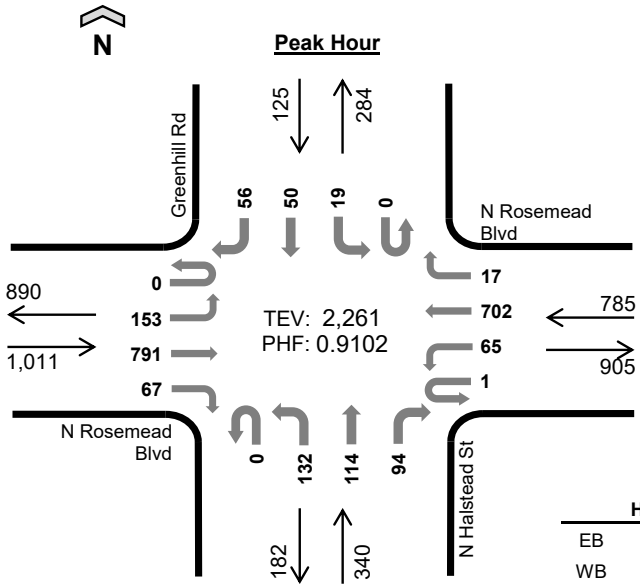
Count Summaries - Bikes

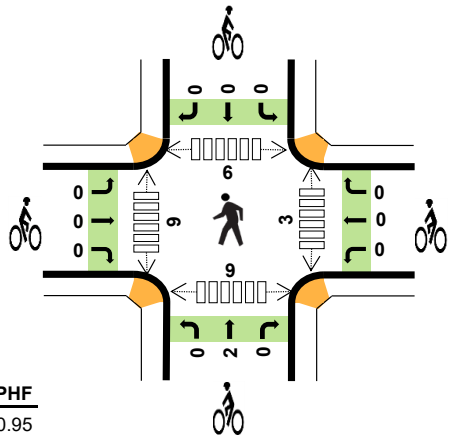
Interval Start	N Rosemead Blvd				N Rosemead Blvd				N Halstead St				Greenhill Rd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	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**	**1**	**0**	**0**	**1**	**1**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

N Halstead St
N Rosemead Blvd

Date: 2/25/2026
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM





	HV%	PHF
EB	2%	0.95
WB	1%	0.93
NB	0%	0.82
SB	1%	0.80
TOTAL	1%	0.91

Peak Hour Count Summaries

Peak Hour Interval Start		N Rosemead Blvd Eastbound				N Rosemead Blvd Westbound				N Halstead St Northbound				Greenhill Rd Southbound				15-min Total	Rolling Hour Total
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:30 PM		0	37	205	16	0	13	189	7	0	34	15	20	0	4	8	14	562	0
4:45 PM		0	39	199	9	0	15	180	3	0	28	31	14	0	5	13	15	551	0
5:00 PM		0	31	181	27	0	18	145	4	0	28	35	31	0	4	10	13	527	0
5:15 PM		0	46	206	15	1	19	188	3	0	42	33	29	0	6	19	14	621	2,261
Pk Hr	All	0	153	791	67	1	65	702	17	0	132	114	94	0	19	50	56	2,261	
	HV	0	3	12	2	0	0	5	0	0	1	0	0	0	0	0	1	24	
	HV%	-	2%	2%	3%	0%	0%	1%	0%	-	1%	0%	0%	-	0%	0%	2%	1%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:30 PM	5	0	0	0	*5*	0	0	0	0	*0*	0	4	2	0	*6*
4:45 PM	3	3	1	1	*8*	0	0	0	0	*0*	0	3	1	5	*9*
5:00 PM	4	1	0	0	*5*	0	0	1	0	*1*	2	0	2	1	*5*
5:15 PM	5	1	0	0	*6*	0	0	1	0	*1*	1	2	1	3	*7*
Peak Hour	17	5	1	1	*24*	0	0	2	0	*2*	3	9	6	9	*27*

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - All Vehicles

Interval Start	N Rosemead Blvd				N Rosemead Blvd				N Halstead St				Greenhill Rd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	29	215	12	0	9	176	9	0	27	22	22	0	4	12	15	552	0
4:15 PM	0	44	234	10	0	15	155	7	0	22	28	30	0	3	9	4	561	0
4:30 PM	**0**	**37**	**205**	**16**	**0**	**13**	**189**	**7**	**0**	**34**	**15**	**20**	**0**	**4**	**8**	**14**	**562**	**0**
4:45 PM	**0**	**39**	**199**	**9**	**0**	**15**	**180**	**3**	**0**	**28**	**31**	**14**	**0**	**5**	**13**	**15**	**551**	**2,226**
5:00 PM	**0**	**31**	**181**	**27**	**0**	**18**	**145**	**4**	**0**	**28**	**35**	**31**	**0**	**4**	**10**	**13**	**527**	**2,201**
5:15 PM	**0**	**46**	**206**	**15**	**1**	**19**	**188**	**3**	**0**	**42**	**33**	**29**	**0**	**6**	**19**	**14**	**621**	**2,261**
5:30 PM	0	35	185	8	0	13	172	8	0	22	26	11	0	2	6	10	498	2,197
5:45 PM	0	36	169	13	0	7	138	5	0	35	42	18	0	8	12	7	490	2,136
Count Total	0	297	1,594	110	1	109	1,343	46	0	238	232	175	0	36	89	92	4,362	
Pk Hr All	**0**	**153**	**791**	**67**	**1**	**65**	**702**	**17**	**0**	**132**	**114**	**94**	**0**	**19**	**50**	**56**	**2,261**	
Pk Hr HV	**0**	**3**	**12**	**2**	**0**	**0**	**5**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**24**	
Pk Hr HV%	**-**	**2%**	**2%**	**3%**	**0%**	**0%**	**1%**	**0%**	**-**	**1%**	**0%**	**0%**	**-**	**0%**	**0%**	**2%**	**1%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	1	6	1	0	*8*	0	0	0	0	*0*	1	0	1	0	*2*
4:15 PM	3	1	1	0	*5*	0	0	0	0	*0*	1	0	1	4	*6*
4:30 PM	**5**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**2**	**0**	**6**
4:45 PM	**3**	**3**	**1**	**1**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**5**	**9**
5:00 PM	**4**	**1**	**0**	**0**	**5**	**0**	**0**	**1**	**0**	**1**	**2**	**0**	**2**	**1**	**5**
5:15 PM	**5**	**1**	**0**	**0**	**6**	**0**	**0**	**1**	**0**	**1**	**1**	**2**	**1**	**3**	**7**
5:30 PM	3	1	1	0	*5*	0	0	0	0	*0*	1	2	1	1	*5*
5:45 PM	1	2	0	0	*3*	0	0	0	0	*0*	0	0	0	1	*1*
Count Total	25	15	4	1	*45*	0	0	2	0	*2*	6	11	9	15	*41*
Peak Hour	**17**	**5**	**1**	**1**	***24***	**0**	**0**	**2**	**0**	**2**	**3**	**9**	**6**	**9**	**27**

NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

Count Summaries - Heavy Vehicles

Interval Start	N Rosemead Blvd				N Rosemead Blvd				N Halstead St				Greenhill Rd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	0	0	0	6	0	0	0	0	1	0	0	0	0	8	0
4:15 PM	0	0	3	0	0	0	1	0	0	1	0	0	0	0	0	0	5	0
4:30 PM	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**
4:45 PM	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**8**	**26**
5:00 PM	**0**	**2**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**23**
5:15 PM	**0**	**1**	**3**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**24**
5:30 PM	0	1	2	0	0	1	0	0	0	1	0	0	0	0	0	0	5	24
5:45 PM	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	3	19
Count Total	0	4	18	3	0	1	14	0	0	3	0	1	0	0	0	1	45	
Pk Hr Heavy	**0**	**3**	**12**	**2**	**0**	**0**	**5**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**24**	

Count Summaries - Bikes

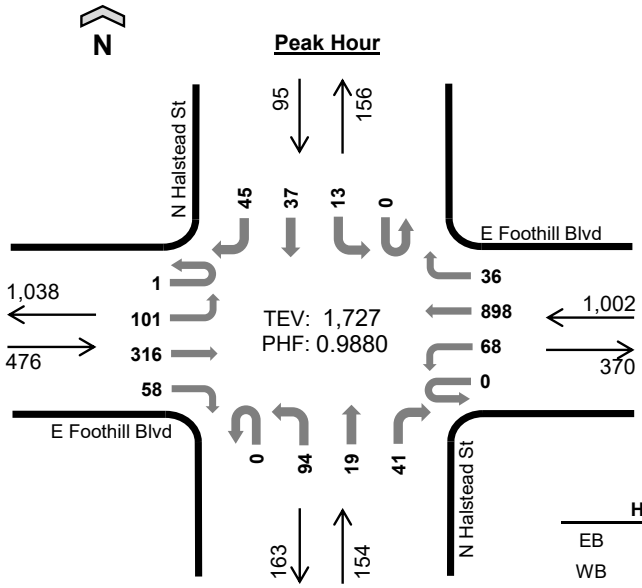
Interval Start	N Rosemead Blvd				N Rosemead Blvd				N Halstead St				Greenhill Rd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**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**	**0**	**0**	**0**	**0**	**0**
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**2**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	

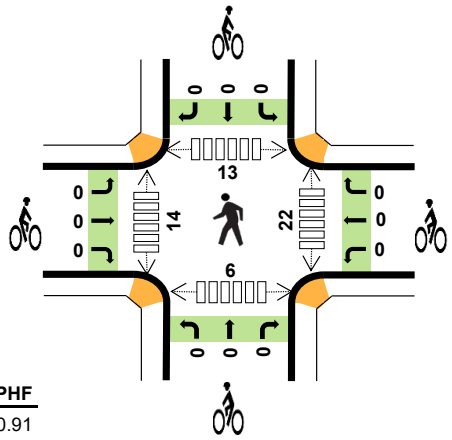
NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

N Halstead St
E Foothill Blvd

Date: 2/25/2026
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV%	PHF
EB	6%	0.91
WB	2%	0.94
NB	2%	0.96
SB	4%	0.85
TOTAL	3%	0.99

Peak Hour Count Summaries

Peak Hour Interval Start		E Foothill Blvd Eastbound				E Foothill Blvd Westbound				N Halstead St Northbound				N Halstead St Southbound				15-min Total	Rolling Hour Total
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	28	87	11	0	20	209	10	0	25	5	9	0	3	8	14	429	0
8:00 AM		0	22	75	14	0	13	228	11	0	26	4	8	0	6	13	9	429	0
8:15 AM		0	28	69	11	0	22	237	8	0	22	3	12	0	1	10	9	432	0
8:30 AM		1	23	85	22	0	13	224	7	0	21	7	12	0	3	6	13	437	1,727
Pk Hr	All	1	101	316	58	0	68	898	36	0	94	19	41	0	13	37	45	1,727	
	HV	1	3	17	9	0	8	8	0	0	1	0	2	0	1	2	1	53	
	HV%	100%	3%	5%	16%	-	12%	1%	0%	-	1%	0%	5%	-	8%	5%	2%	3%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	8	2	0	1	*11*	0	0	0	0	*0*	9	4	8	0	*21*
8:00 AM	7	4	0	1	*12*	0	0	0	0	*0*	6	5	1	4	*16*
8:15 AM	6	9	1	1	*17*	0	0	0	0	*0*	4	3	2	1	*10*
8:30 AM	9	1	2	1	*13*	0	0	0	0	*0*	3	2	2	1	*8*
Peak Hour	30	16	3	4	*53*	0	0	0	0	*0*	22	14	13	6	*55*

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - All Vehicles

Interval Start	E Foothill Blvd				E Foothill Blvd				N Halstead St				N Halstead St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	6	42	7	0	11	114	5	0	15	3	3	0	2	7	6	221	0
7:15 AM	0	12	51	14	0	12	105	5	0	19	3	3	0	0	5	4	233	0
7:30 AM	0	12	50	14	0	10	159	3	0	25	4	10	0	5	9	9	310	0
7:45 AM	**0**	**28**	**87**	**11**	**0**	**20**	**209**	**10**	**0**	**25**	**5**	**9**	**0**	**3**	**8**	**14**	**429**	**1,193**
8:00 AM	**0**	**22**	**75**	**14**	**0**	**13**	**228**	**11**	**0**	**26**	**4**	**8**	**0**	**6**	**13**	**9**	**429**	**1,401**
8:15 AM	**0**	**28**	**69**	**11**	**0**	**22**	**237**	**8**	**0**	**22**	**3**	**12**	**0**	**1**	**10**	**9**	**432**	**1,600**
8:30 AM	**1**	**23**	**85**	**22**	**0**	**13**	**224**	**7**	**0**	**21**	**7**	**12**	**0**	**3**	**6**	**13**	**437**	**1,727**
8:45 AM	0	39	114	11	0	11	178	11	0	16	4	5	0	3	7	8	407	1,705
Count Total	1	170	573	104	0	112	1,454	60	0	169	33	62	0	23	65	72	2,898	
Pk Hr All	**1**	**101**	**316**	**58**	**0**	**68**	**898**	**36**	**0**	**94**	**19**	**41**	**0**	**13**	**37**	**45**	**1,727**	
Pk Hr HV	**1**	**3**	**17**	**9**	**0**	**8**	**8**	**0**	**0**	**1**	**0**	**2**	**0**	**1**	**2**	**1**	**53**	
Pk Hr HV%	**100%**	**3%**	**5%**	**16%**	**-**	**12%**	**1%**	**0%**	**-**	**1%**	**0%**	**5%**	**-**	**8%**	**5%**	**2%**	**3%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	5	7	0	1	*13*	0	0	0	0	*0*	1	0	2	1	*4*
7:15 AM	9	4	1	1	*15*	0	0	0	0	*0*	2	2	1	0	*5*
7:30 AM	2	6	1	1	*10*	0	0	1	0	*1*	0	4	0	4	*8*
7:45 AM	**8**	**2**	**0**	**1**	**11**	**0**	**0**	**0**	**0**	**0**	**9**	**4**	**8**	**0**	**21**
8:00 AM	**7**	**4**	**0**	**1**	**12**	**0**	**0**	**0**	**0**	**0**	**6**	**5**	**1**	**4**	**16**
8:15 AM	**6**	**9**	**1**	**1**	**17**	**0**	**0**	**0**	**0**	**0**	**4**	**3**	**2**	**1**	**10**
8:30 AM	**9**	**1**	**2**	**1**	**13**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**2**	**1**	**8**
8:45 AM	7	13	0	1	*21*	0	0	0	0	*0*	1	3	1	2	*7*
Count Total	53	46	5	8	*112*	0	0	1	0	*1*	26	23	17	13	*79*
Peak Hour	**30**	**16**	**3**	**4**	***53***	**0**	**0**	**0**	**0**	***0***	**22**	**14**	**13**	**6**	**55**

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - Heavy Vehicles

Interval Start	E Foothill Blvd				E Foothill Blvd				N Halstead St				N Halstead St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	5	0	0	3	4	0	0	0	0	0	0	0	1	0	13	0
7:15 AM	0	2	5	2	0	1	3	0	0	1	0	0	0	0	1	0	15	0
7:30 AM	0	0	2	0	0	3	3	0	0	1	0	0	0	0	0	1	10	0
7:45 AM	**0**	**0**	**6**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**11**	**49**
8:00 AM	**0**	**1**	**2**	**4**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**12**	**48**
8:15 AM	**0**	**1**	**4**	**1**	**0**	**5**	**4**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**17**	**50**
8:30 AM	**1**	**1**	**5**	**2**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**13**	**53**
8:45 AM	0	0	4	3	0	3	9	1	0	0	0	0	0	0	0	1	21	63
Count Total	1	5	33	14	0	18	27	1	0	3	0	2	0	1	4	3	112	
Pk Hr Heavy	**1**	**3**	**17**	**9**	**0**	**8**	**8**	**0**	**0**	**1**	**0**	**2**	**0**	**1**	**2**	**1**	**53**	

Count Summaries - Bikes

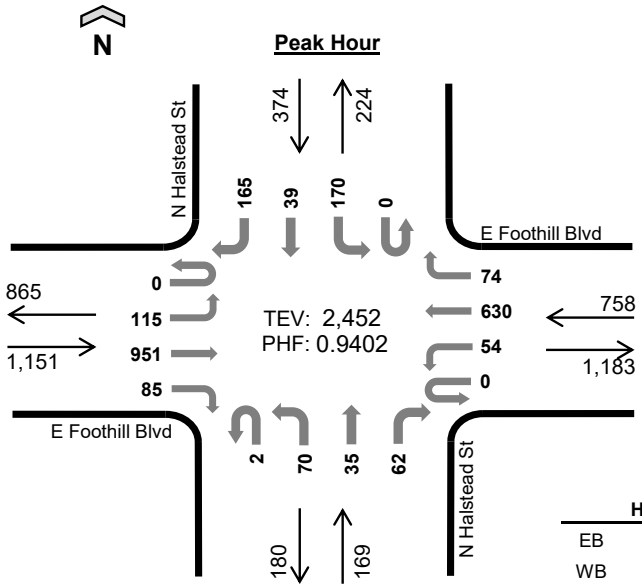
Interval Start	E Foothill Blvd				E Foothill Blvd				N Halstead St				N Halstead St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	**0**	**0**	**0**	**0**	**0**	**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	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

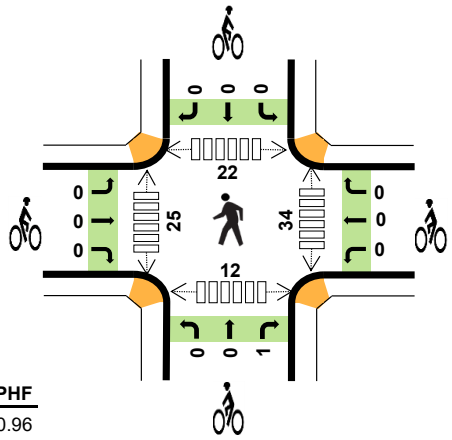
NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

N Halstead St
E Foothill Blvd

Date: 2/25/2026
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV%	PHF
EB	1%	0.96
WB	2%	0.94
NB	1%	0.80
SB	1%	0.84
TOTAL	2%	0.94

Peak Hour Count Summaries

Peak Hour Interval Start		E Foothill Blvd Eastbound				E Foothill Blvd Westbound				N Halstead St Northbound				N Halstead St Southbound				15-min Total	Rolling Hour Total
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:45 PM		0	23	257	20	0	9	156	23	2	17	2	7	0	33	6	28	583	0
5:00 PM		0	27	241	25	0	16	170	16	0	22	10	14	0	56	10	45	652	0
5:15 PM		0	32	230	18	0	15	154	20	0	21	13	19	0	41	14	43	620	0
5:30 PM		0	33	223	22	0	14	150	15	0	10	10	22	0	40	9	49	597	2,452
Pk Hr	All	0	115	951	85	0	54	630	74	2	70	35	62	0	170	39	165	2,452	
	HV	0	0	11	6	0	5	9	1	0	0	1	1	0	0	3	0	37	
	HV%	-	0%	1%	7%	-	9%	1%	1%	0%	0%	3%	2%	-	0%	8%	0%	2%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:45 PM	4	5	0	1	*10*	0	0	1	0	*1*	8	8	2	3	*21*
5:00 PM	3	3	1	0	*7*	0	0	0	0	*0*	14	1	6	1	*22*
5:15 PM	7	1	1	1	*10*	0	0	0	0	*0*	4	10	9	8	*31*
5:30 PM	3	6	0	1	*10*	0	0	0	0	*0*	8	6	5	0	*19*
Peak Hour	17	15	2	3	*37*	0	0	1	0	*1*	34	25	22	12	*93*

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - All Vehicles

Interval Start	E Foothill Blvd				E Foothill Blvd				N Halstead St				N Halstead St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	30	228	7	0	10	196	31	0	12	4	10	0	27	3	32	590	0
4:15 PM	0	22	241	12	0	10	180	23	0	7	4	6	0	36	6	41	588	0
4:30 PM	0	23	208	11	0	7	146	28	0	13	4	8	0	37	6	40	531	0
4:45 PM	**0**	**23**	**257**	**20**	**0**	**9**	**156**	**23**	**2**	**17**	**2**	**7**	**0**	**33**	**6**	**28**	**583**	**2,292**
5:00 PM	**0**	**27**	**241**	**25**	**0**	**16**	**170**	**16**	**0**	**22**	**10**	**14**	**0**	**56**	**10**	**45**	**652**	**2,354**
5:15 PM	**0**	**32**	**230**	**18**	**0**	**15**	**154**	**20**	**0**	**21**	**13**	**19**	**0**	**41**	**14**	**43**	**620**	**2,386**
5:30 PM	**0**	**33**	**223**	**22**	**0**	**14**	**150**	**15**	**0**	**10**	**10**	**22**	**0**	**40**	**9**	**49**	**597**	**2,452**
5:45 PM	0	25	233	16	0	9	167	20	1	13	9	14	0	32	7	33	579	2,448
Count Total	0	215	1,861	131	0	90	1,319	176	3	115	56	100	0	302	61	311	4,740	
Pk Hr All	**0**	**115**	**951**	**85**	**0**	**54**	**630**	**74**	**2**	**70**	**35**	**62**	**0**	**170**	**39**	**165**	**2,452**	
Pk Hr HV	**0**	**0**	**11**	**6**	**0**	**5**	**9**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**3**	**0**	**37**	
Pk Hr HV%	**-**	**0%**	**1%**	**7%**	**-**	**9%**	**1%**	**1%**	**0%**	**0%**	**3%**	**2%**	**-**	**0%**	**8%**	**0%**	**2%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	4	3	0	1	*8*	0	0	0	0	*0*	6	2	9	4	*21*
4:15 PM	10	4	0	1	*15*	0	0	0	0	*0*	6	4	10	2	*22*
4:30 PM	5	3	0	1	*9*	0	0	0	0	*0*	8	6	5	0	*19*
4:45 PM	**4**	**5**	**0**	**1**	**10**	**0**	**0**	**1**	**0**	**1**	**8**	**8**	**2**	**3**	**21**
5:00 PM	**3**	**3**	**1**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**14**	**1**	**6**	**1**	**22**
5:15 PM	**7**	**1**	**1**	**1**	**10**	**0**	**0**	**0**	**0**	**0**	**4**	**10**	**9**	**8**	**31**
5:30 PM	**3**	**6**	**0**	**1**	**10**	**0**	**0**	**0**	**0**	**0**	**8**	**6**	**5**	**0**	**19**
5:45 PM	6	2	0	1	*9*	0	0	0	0	*0*	8	2	2	4	*16*
Count Total	42	27	2	7	*78*	0	0	1	0	*1*	62	39	48	22	*171*
Peak Hour	**17**	**15**	**2**	**3**	***37***	**0**	**0**	**1**	**0**	***1***	**34**	**25**	**22**	**12**	**93**

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - Heavy Vehicles

Interval Start	E Foothill Blvd				E Foothill Blvd				N Halstead St				N Halstead St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	4	0	0	1	2	0	0	0	0	0	0	0	1	0	8	0
4:15 PM	0	1	5	4	0	1	3	0	0	0	0	0	0	0	0	1	15	0
4:30 PM	0	0	5	0	0	2	1	0	0	0	0	0	0	0	1	0	9	0
4:45 PM	**0**	**0**	**2**	**2**	**0**	**1**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**10**	**42**
5:00 PM	**0**	**0**	**2**	**1**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**7**	**41**
5:15 PM	**0**	**0**	**5**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**10**	**36**
5:30 PM	**0**	**0**	**2**	**1**	**0**	**1**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**10**	**37**
5:45 PM	0	0	5	1	0	1	1	0	0	0	0	0	0	0	1	0	9	36
Count Total	0	1	30	11	0	10	16	1	0	0	1	1	0	0	6	1	78	
Pk Hr Heavy	**0**	**0**	**11**	**6**	**0**	**5**	**9**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**3**	**0**	**37**	

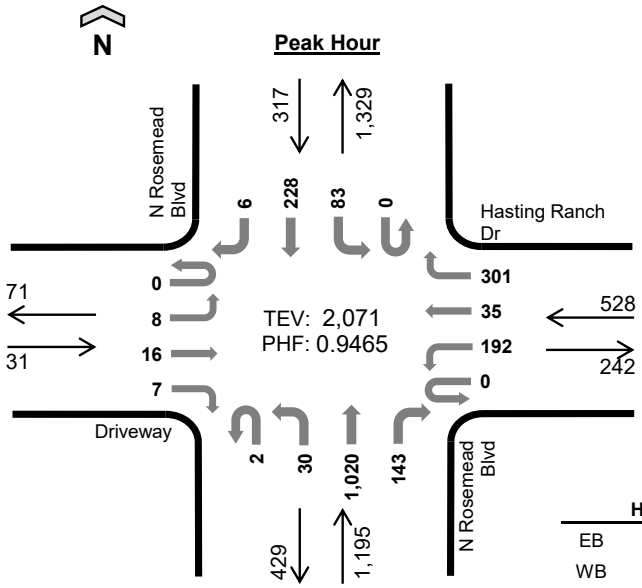
Count Summaries - Bikes

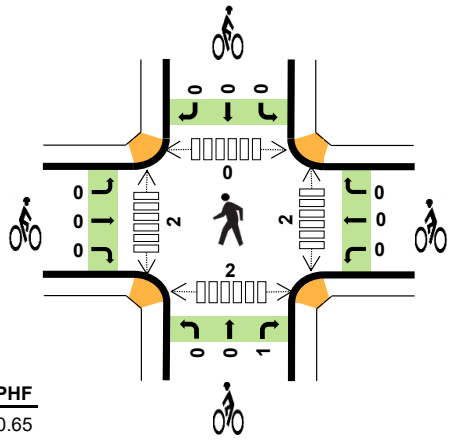
Interval Start	E Foothill Blvd				E Foothill Blvd				N Halstead St				N Halstead St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	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**	**1**	**0**	**0**	**0**	**0**	**1**	**1**
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**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**	**0**	**0**	**0**	**0**	**1**
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

N Rosemead Blvd
Hasting Ranch Dr

Date: 2/25/2026
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV%	PHF
EB	0%	0.65
WB	2%	0.86
NB	3%	0.94
SB	2%	0.79
TOTAL	3%	0.95

Peak Hour Count Summaries

Peak Hour Interval Start		Driveway				Hasting Ranch Dr				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	2	2	2	0	37	9	68	0	2	278	34	0	20	44	0	498	0
8:00 AM		0	1	4	2	0	43	5	83	0	2	241	38	0	25	50	2	496	0
8:15 AM		0	2	3	1	0	47	9	74	1	6	272	39	0	20	55	1	530	0
8:30 AM		0	3	7	2	0	65	12	76	1	20	229	32	0	18	79	3	547	2,071
Pk Hr	All	0	8	16	7	0	192	35	301	2	30	1,020	143	0	83	228	6	2,071	
	HV	0	0	0	0	0	4	1	4	0	0	39	2	0	0	7	0	57	
	HV%	-	0%	0%	0%	-	2%	3%	1%	0%	0%	4%	1%	-	0%	3%	0%	3%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	0	1	10	2	*13*	0	0	0	0	*0*	0	0	0	0	*0*
8:00 AM	0	2	13	1	*16*	0	0	1	0	*1*	2	1	0	1	*4*
8:15 AM	0	2	9	3	*14*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	0	4	9	1	*14*	0	0	0	0	*0*	0	1	0	1	*2*
Peak Hour	0	9	41	7	*57*	0	0	1	0	*1*	2	2	0	2	*6*

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - All Vehicles

Interval Start	Driveway				Hasting Ranch Dr				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	5	8	0	23	4	5	2	2	125	13	0	8	25	1	223	0
7:15 AM	0	0	6	4	0	35	3	13	0	4	139	24	0	8	29	2	267	0
7:30 AM	0	3	3	1	0	42	4	44	0	3	246	24	0	8	42	1	421	0
7:45 AM	**0**	**2**	**2**	**2**	**0**	**37**	**9**	**68**	**0**	**2**	**278**	**34**	**0**	**20**	**44**	**0**	**498**	**1,409**
8:00 AM	**0**	**1**	**4**	**2**	**0**	**43**	**5**	**83**	**0**	**2**	**241**	**38**	**0**	**25**	**50**	**2**	**496**	**1,682**
8:15 AM	**0**	**2**	**3**	**1**	**0**	**47**	**9**	**74**	**1**	**6**	**272**	**39**	**0**	**20**	**55**	**1**	**530**	**1,945**
8:30 AM	**0**	**3**	**7**	**2**	**0**	**65**	**12**	**76**	**1**	**20**	**229**	**32**	**0**	**18**	**79**	**3**	**547**	**2,071**
8:45 AM	0	1	8	6	0	61	15	43	0	15	200	26	0	16	63	1	455	2,028
Count Total	0	14	38	26	0	353	61	406	4	54	1,730	230	0	123	387	11	3,437	
Pk Hr All	**0**	**8**	**16**	**7**	**0**	**192**	**35**	**301**	**2**	**30**	**1,020**	**143**	**0**	**83**	**228**	**6**	**2,071**	
Pk Hr HV	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**4**	**0**	**0**	**39**	**2**	**0**	**0**	**7**	**0**	**57**	
Pk Hr HV%	**-**	**0%**	**0%**	**0%**	**-**	**2%**	**3%**	**1%**	**0%**	**0%**	**4%**	**1%**	**-**	**0%**	**3%**	**0%**	**3%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	0	9	3	*12*	0	0	0	0	*0*	0	1	0	2	*3*
7:15 AM	0	0	9	2	*11*	0	0	0	0	*0*	0	0	1	0	*1*
7:30 AM	0	1	8	4	*13*	0	0	0	0	*0*	0	0	4	0	*4*
7:45 AM	**0**	**1**	**10**	**2**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	**0**	**2**	**13**	**1**	**16**	**0**	**0**	**1**	**0**	**1**	**2**	**1**	**0**	**1**	**4**
8:15 AM	**0**	**2**	**9**	**3**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	**0**	**4**	**9**	**1**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**2**
8:45 AM	0	1	6	4	*11*	0	0	0	0	*0*	2	0	3	0	*5*
Count Total	0	11	73	20	*104*	0	0	1	0	*1*	4	3	8	4	*19*
Peak Hour	**0**	**9**	**41**	**7**	***57***	**0**	**0**	**1**	**0**	***1***	**2**	**2**	**0**	**2**	**6**

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - Heavy Vehicles

Interval Start	Driveway				Hasting Ranch Dr				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	9	0	0	1	2	0	12	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	8	1	0	0	2	0	11	0
7:30 AM	0	0	0	0	0	1	0	0	0	0	7	1	0	0	4	0	13	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**2**	**0**	**13**	**49**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**12**	**1**	**0**	**0**	**1**	**0**	**16**	**53**
8:15 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**8**	**1**	**0**	**0**	**3**	**0**	**14**	**56**
8:30 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**9**	**0**	**0**	**0**	**1**	**0**	**14**	**57**
8:45 AM	0	0	0	0	0	0	0	1	0	0	6	0	0	0	4	0	11	55
Count Total	0	0	0	0	0	5	1	5	0	0	69	4	0	1	19	0	104	
Pk Hr Heavy	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**4**	**0**	**0**	**39**	**2**	**0**	**0**	**7**	**0**	**57**	

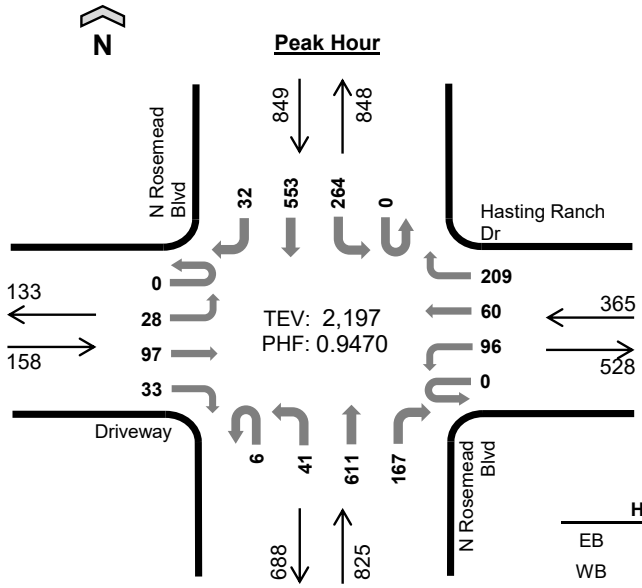
Count Summaries - Bikes

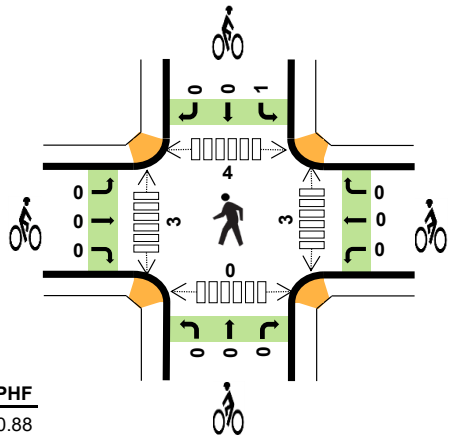
Interval Start	Driveway				Hasting Ranch Dr				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	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**	**0**	**0**	**0**	**0**	**0**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1**
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

N Rosemead Blvd
Hasting Ranch Dr

Date: 2/25/2026
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM





	HV%	PHF
EB	0%	0.88
WB	1%	0.91
NB	0%	0.89
SB	1%	0.94
TOTAL	1%	0.95

Peak Hour Count Summaries

Peak Hour Interval Start		Driveway				Hasting Ranch Dr				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:30 PM		0	7	23	8	0	23	13	49	0	13	174	44	0	70	147	8	579	0
4:45 PM		0	6	23	7	0	23	11	53	3	12	154	38	0	64	130	9	533	0
5:00 PM		0	4	26	9	0	23	21	49	2	6	120	39	0	64	135	7	505	0
5:15 PM		0	11	25	9	0	27	15	58	1	10	163	46	0	66	141	8	580	2,197
Pk Hr	All	0	28	97	33	0	96	60	209	6	41	611	167	0	264	553	32	2,197	
	HV	0	0	0	0	0	1	0	2	0	0	2	0	0	1	9	1	16	
	HV%	-	0%	0%	0%	-	1%	0%	1%	0%	0%	0%	0%	-	0%	2%	3%	1%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:30 PM	0	1	0	1	*2*	0	0	0	0	*0*	0	1	0	0	*1*
4:45 PM	0	1	1	3	*5*	0	0	0	1	*1*	2	1	3	0	*6*
5:00 PM	0	1	0	4	*5*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	0	0	1	3	*4*	0	0	0	0	*0*	1	1	1	0	*3*
Peak Hour	0	3	2	11	*16*	0	0	0	1	*1*	3	3	4	0	*10*

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - All Vehicles

Interval Start	Driveway				Hasting Ranch Dr				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	9	30	5	0	20	11	41	3	7	134	40	0	52	152	4	508	0
4:15 PM	0	10	19	9	0	16	11	45	0	5	136	38	0	63	186	4	542	0
4:30 PM	**0**	**7**	**23**	**8**	**0**	**23**	**13**	**49**	**0**	**13**	**174**	**44**	**0**	**70**	**147**	**8**	**579**	**0**
4:45 PM	**0**	**6**	**23**	**7**	**0**	**23**	**11**	**53**	**3**	**12**	**154**	**38**	**0**	**64**	**130**	**9**	**533**	**2,162**
5:00 PM	**0**	**4**	**26**	**9**	**0**	**23**	**21**	**49**	**2**	**6**	**120**	**39**	**0**	**64**	**135**	**7**	**505**	**2,159**
5:15 PM	**0**	**11**	**25**	**9**	**0**	**27**	**15**	**58**	**1**	**10**	**163**	**46**	**0**	**66**	**141**	**8**	**580**	**2,197**
5:30 PM	0	9	21	9	0	26	2	43	4	19	156	28	0	59	136	5	517	2,135
5:45 PM	0	5	19	8	0	24	10	41	3	22	103	36	0	46	101	4	422	2,024
Count Total	0	61	186	64	0	182	94	379	16	94	1,140	309	0	484	1,128	49	4,186	
Pk Hr All	**0**	**28**	**97**	**33**	**0**	**96**	**60**	**209**	**6**	**41**	**611**	**167**	**0**	**264**	**553**	**32**	**2,197**	
Pk Hr HV	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**1**	**9**	**1**	**16**	
Pk Hr HV%	**-**	**0%**	**0%**	**0%**	**-**	**1%**	**0%**	**1%**	**0%**	**0%**	**0%**	**0%**	**-**	**0%**	**2%**	**3%**	**1%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	0	0	6	3	*9*	0	0	0	0	*0*	1	1	2	0	*4*
4:15 PM	0	1	1	4	*6*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	**0**	**1**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
4:45 PM	**0**	**1**	**1**	**3**	**5**	**0**	**0**	**0**	**1**	**1**	**2**	**1**	**3**	**0**	**6**
5:00 PM	**0**	**1**	**0**	**4**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:15 PM	**0**	**0**	**1**	**3**	**4**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**0**	**3**
5:30 PM	0	0	1	2	*3*	0	0	0	0	*0*	0	0	2	0	*2*
5:45 PM	0	0	2	0	*2*	0	0	0	0	*0*	0	0	1	0	*1*
Count Total	0	4	12	20	*36*	0	0	0	1	*1*	4	4	9	0	*17*
Peak Hour	**0**	**3**	**2**	**11**	***16***	**0**	**0**	**0**	**1**	***1***	**3**	**3**	**4**	**0**	**10**

NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

Count Summaries - Heavy Vehicles

Interval Start	Driveway				Hasting Ranch Dr				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	3	0	9	0
4:15 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	1	3	0	6	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**1**	**2**	**0**	**5**	**22**
5:00 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**5**	**18**
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**0**	**4**	**16**
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	17
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	14
Count Total	0	0	0	0	0	2	0	2	0	0	12	0	0	2	17	1	36	
Pk Hr Heavy	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**1**	**9**	**1**	**16**	

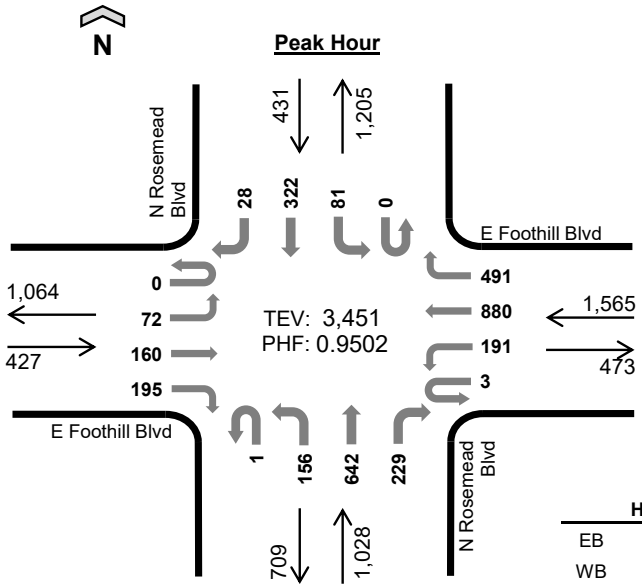
Count Summaries - Bikes

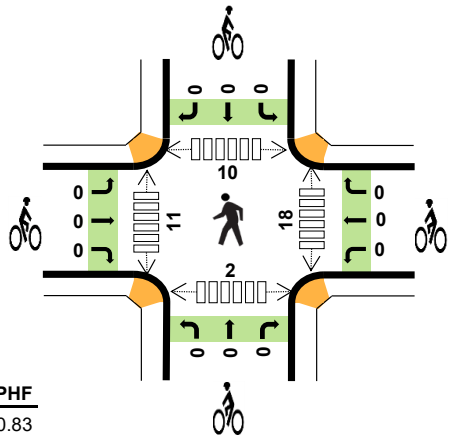
Interval Start	Driveway				Hasting Ranch Dr				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**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**	**1**	**0**	**0**	**1**	**1**
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**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**	**0**	**0**	**0**	**0**	**1**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

N Rosemead Blvd
E Foothill Blvd

Date: 2/25/2026
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV%	PHF
EB	6%	0.83
WB	2%	0.88
NB	3%	0.93
SB	3%	0.74
TOTAL	3%	0.95

Peak Hour Count Summaries

Peak Hour Interval Start		E Foothill Blvd Eastbound				E Foothill Blvd Westbound				N Rosemead Blvd Northbound				N Rosemead Blvd Southbound				15-min Total	Rolling Hour Total
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	23	32	39	0	45	226	134	0	41	163	72	0	17	60	4	856	0
8:00 AM		0	21	39	34	1	43	211	119	0	44	168	50	0	27	76	2	835	0
8:15 AM		0	17	50	62	0	65	251	129	1	36	144	54	0	13	77	9	908	0
8:30 AM		0	11	39	60	2	38	192	109	0	35	167	53	0	24	109	13	852	3,451
Pk Hr	All	0	72	160	195	3	191	880	491	1	156	642	229	0	81	322	28	3,451	
	HV	0	7	5	12	0	4	7	19	0	8	16	3	0	0	8	4	93	
	HV%	-	10%	3%	6%	0%	2%	1%	4%	0%	5%	2%	1%	-	0%	2%	14%	3%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	8	8	6	3	*25*	0	0	0	0	*0*	12	2	3	1	*18*
8:00 AM	3	7	7	2	*19*	0	0	0	0	*0*	2	4	3	1	*10*
8:15 AM	5	7	5	4	*21*	0	0	0	0	*0*	0	3	3	0	*6*
8:30 AM	8	8	9	3	*28*	0	0	0	0	*0*	4	2	1	0	*7*
Peak Hour	24	30	27	12	*93*	0	0	0	0	*0*	18	11	10	2	*41*

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - All Vehicles

Interval Start	E Foothill Blvd				E Foothill Blvd				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	7	12	39	0	34	101	53	0	20	84	83	0	8	50	2	493	0
7:15 AM	0	19	16	31	0	59	117	62	0	20	89	83	0	8	51	3	558	0
7:30 AM	0	9	26	40	0	42	165	87	0	34	184	49	0	19	71	4	730	0
7:45 AM	**0**	**23**	**32**	**39**	**0**	**45**	**226**	**134**	**0**	**41**	**163**	**72**	**0**	**17**	**60**	**4**	**856**	**2,637**
8:00 AM	**0**	**21**	**39**	**34**	**1**	**43**	**211**	**119**	**0**	**44**	**168**	**50**	**0**	**27**	**76**	**2**	**835**	**2,979**
8:15 AM	**0**	**17**	**50**	**62**	**0**	**65**	**251**	**129**	**1**	**36**	**144**	**54**	**0**	**13**	**77**	**9**	**908**	**3,329**
8:30 AM	**0**	**11**	**39**	**60**	**2**	**38**	**192**	**109**	**0**	**35**	**167**	**53**	**0**	**24**	**109**	**13**	**852**	**3,451**
8:45 AM	0	20	60	51	0	44	191	111	0	48	101	59	0	27	97	10	819	3,414
Count Total	0	127	274	356	3	370	1,454	804	1	278	1,100	503	0	143	591	47	6,051	
Pk Hr All	**0**	**72**	**160**	**195**	**3**	**191**	**880**	**491**	**1**	**156**	**642**	**229**	**0**	**81**	**322**	**28**	**3,451**	
Pk Hr HV	**0**	**7**	**5**	**12**	**0**	**4**	**7**	**19**	**0**	**8**	**16**	**3**	**0**	**0**	**8**	**4**	**93**	
Pk Hr HV%	**-**	**10%**	**3%**	**6%**	**0%**	**2%**	**1%**	**4%**	**0%**	**5%**	**2%**	**1%**	**-**	**0%**	**2%**	**14%**	**3%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	6	7	9	2	*24*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	7	5	9	3	*24*	0	0	0	0	*0*	1	0	1	0	*2*
7:30 AM	7	4	8	4	*23*	0	0	0	0	*0*	1	2	2	0	*5*
7:45 AM	**8**	**8**	**6**	**3**	**25**	**0**	**0**	**0**	**0**	**0**	**12**	**2**	**3**	**1**	**18**
8:00 AM	**3**	**7**	**7**	**2**	**19**	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**3**	**1**	**10**
8:15 AM	**5**	**7**	**5**	**4**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**3**	**0**	**6**
8:30 AM	**8**	**8**	**9**	**3**	**28**	**0**	**0**	**0**	**0**	**0**	**4**	**2**	**1**	**0**	**7**
8:45 AM	6	6	8	3	*23*	0	0	0	1	*1*	0	1	2	0	*3*
Count Total	50	52	61	24	*187*	0	0	0	1	*1*	20	14	15	2	*51*
Peak Hour	**24**	**30**	**27**	**12**	***93***	**0**	**0**	**0**	**0**	***0***	**18**	**11**	**10**	**2**	**41**

NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

Count Summaries - Heavy Vehicles

Interval Start	E Foothill Blvd				E Foothill Blvd				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	0	4	0	0	4	3	0	2	4	3	0	0	1	1	24	0
7:15 AM	0	3	1	3	0	0	3	2	0	1	3	5	0	0	3	0	24	0
7:30 AM	0	2	0	5	0	1	1	2	0	3	4	1	0	0	2	2	23	0
7:45 AM	**0**	**2**	**2**	**4**	**0**	**1**	**2**	**5**	**0**	**0**	**5**	**1**	**0**	**0**	**3**	**0**	**25**	**96**
8:00 AM	**0**	**2**	**0**	**1**	**0**	**1**	**0**	**6**	**0**	**3**	**3**	**1**	**0**	**0**	**1**	**1**	**19**	**91**
8:15 AM	**0**	**2**	**1**	**2**	**0**	**0**	**2**	**5**	**0**	**2**	**3**	**0**	**0**	**0**	**1**	**3**	**21**	**88**
8:30 AM	**0**	**1**	**2**	**5**	**0**	**2**	**3**	**3**	**0**	**3**	**5**	**1**	**0**	**0**	**3**	**0**	**28**	**93**
8:45 AM	0	1	2	3	0	0	4	2	0	5	3	0	0	0	1	2	23	91
Count Total	0	15	8	27	0	5	19	28	0	19	30	12	0	0	15	9	187	
Pk Hr Heavy	**0**	**7**	**5**	**12**	**0**	**4**	**7**	**19**	**0**	**8**	**16**	**3**	**0**	**0**	**8**	**4**	**93**	

Count Summaries - Bikes

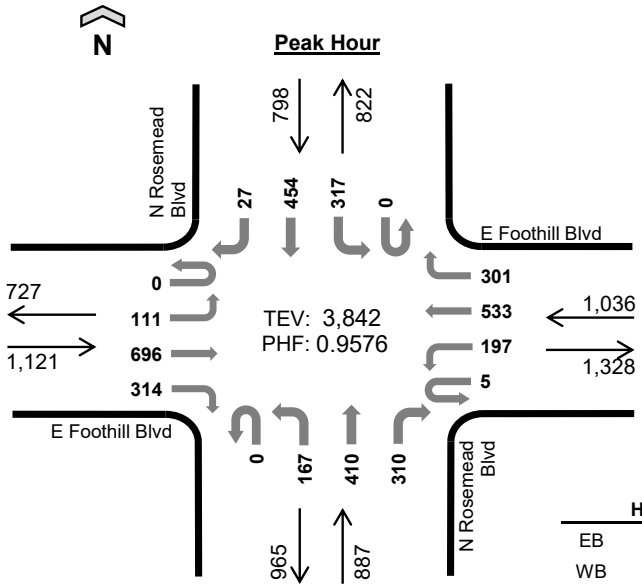
Interval Start	E Foothill Blvd				E Foothill Blvd				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	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**	**0**	**0**	**0**	**0**	**0**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**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**	**0**	**0**	**0**	**0**	**0**
8:30 AM	**0**	**0**	**0**	**0**	**0**	**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	0	0	0	0	1	0	1	1
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

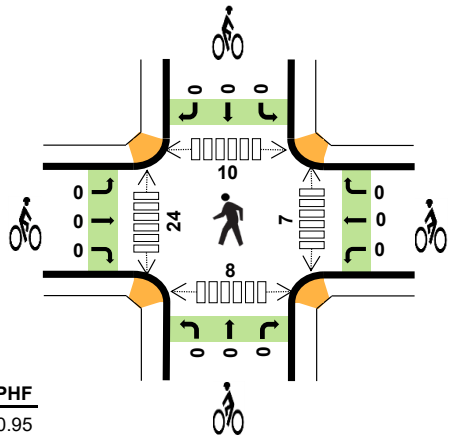
NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

N Rosemead Blvd
E Foothill Blvd

Date: 2/25/2026
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV%	PHF
EB	2%	0.95
WB	0%	0.96
NB	1%	0.92
SB	1%	0.95
TOTAL	1%	0.96

Peak Hour Count Summaries

Peak Hour Interval Start		E Foothill Blvd Eastbound				E Foothill Blvd Westbound				N Rosemead Blvd Northbound				N Rosemead Blvd Southbound				15-min Total	Rolling Hour Total
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	34	130	93	2	47	141	65	0	51	107	82	0	81	117	7	957	0
4:15 PM		0	24	191	60	2	52	137	80	0	31	87	86	0	75	107	7	939	0
4:30 PM		0	28	180	88	0	43	126	95	0	46	117	70	0	89	113	8	1,003	0
4:45 PM		0	25	195	73	1	55	129	61	0	39	99	72	0	72	117	5	943	3,842
Pk Hr	All	0	111	696	314	5	197	533	301	0	167	410	310	0	317	454	27	3,842	
	HV	0	3	8	14	0	0	1	3	0	11	2	0	0	0	6	2	50	
	HV%	-	3%	1%	4%	0%	0%	0%	1%	-	7%	0%	0%	-	0%	1%	7%	1%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	8	3	3	2	*16*	0	0	0	0	*0*	1	9	1	4	*15*
4:15 PM	7	1	4	3	*15*	0	0	0	0	*0*	2	5	2	1	*10*
4:30 PM	6	0	4	2	*12*	0	0	0	0	*0*	2	2	3	2	*9*
4:45 PM	4	0	2	1	*7*	0	0	0	0	*0*	2	8	4	1	*15*
Peak Hour	25	4	13	8	*50*	0	0	0	0	*0*	7	24	10	8	*49*

NorCal Project Manager
(415) 444-6376
norcal.projectmanager@idaxdata.com

Count Summaries - All Vehicles

Interval Start	E Foothill Blvd				E Foothill Blvd				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**34**	**130**	**93**	**2**	**47**	**141**	**65**	**0**	**51**	**107**	**82**	**0**	**81**	**117**	**7**	**957**	0
4:15 PM	**0**	**24**	**191**	**60**	**2**	**52**	**137**	**80**	**0**	**31**	**87**	**86**	**0**	**75**	**107**	**7**	**939**	**0**
4:30 PM	**0**	**28**	**180**	**88**	**0**	**43**	**126**	**95**	**0**	**46**	**117**	**70**	**0**	**89**	**113**	**8**	**1,003**	**0**
4:45 PM	**0**	**25**	**195**	**73**	**1**	**55**	**129**	**61**	**0**	**39**	**99**	**72**	**0**	**72**	**117**	**5**	**943**	**3,842**
5:00 PM	0	20	194	69	0	32	88	62	0	44	102	62	0	68	126	1	868	3,753
5:15 PM	0	34	218	89	0	50	122	73	0	37	87	90	0	55	111	4	970	3,784
5:30 PM	0	19	195	73	0	47	102	39	0	38	94	79	1	80	122	12	901	3,682
5:45 PM	0	28	200	66	1	51	117	56	0	33	82	84	0	57	98	9	882	3,621
Count Total	0	212	1,503	611	6	377	962	531	0	319	775	625	1	577	911	53	7,463	
Pk Hr All	**0**	**111**	**696**	**314**	**5**	**197**	**533**	**301**	**0**	**167**	**410**	**310**	**0**	**317**	**454**	**27**	**3,842**	
Pk Hr HV	**0**	**3**	**8**	**14**	**0**	**0**	**1**	**3**	**0**	**11**	**2**	**0**	**0**	**0**	**6**	**2**	**50**	
Pk Hr HV%	**-**	**3%**	**1%**	**4%**	**0%**	**0%**	**0%**	**1%**	**-**	**7%**	**0%**	**0%**	**-**	**0%**	**1%**	**7%**	**1%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	**8**	**3**	**3**	**2**	**16**	**0**	**0**	**0**	**0**	**0**	**1**	**9**	**1**	**4**	**15**
4:15 PM	**7**	**1**	**4**	**3**	**15**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**2**	**1**	**10**
4:30 PM	**6**	**0**	**4**	**2**	**12**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**3**	**2**	**9**
4:45 PM	**4**	**0**	**2**	**1**	**7**	**0**	**0**	**0**	**0**	**0**	**2**	**8**	**4**	**1**	**15**
5:00 PM	4	0	4	0	*8*	0	0	0	0	*0*	3	6	3	3	*15*
5:15 PM	3	0	6	5	*14*	0	0	0	0	*0*	1	6	4	3	*14*
5:30 PM	3	1	1	0	*5*	0	0	0	0	*0*	2	0	7	0	*9*
5:45 PM	2	1	0	2	*5*	0	0	0	0	*0*	3	2	5	0	*10*
Count Total	37	6	24	15	*82*	0	0	0	0	*0*	16	38	29	14	*97*
Peak Hour	**25**	**4**	**13**	**8**	***50***	**0**	**0**	**0**	**0**	***0***	**7**	**24**	**10**	**8**	**49**

NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

Count Summaries - Heavy Vehicles

Interval Start	E Foothill Blvd				E Foothill Blvd				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**1**	**1**	**6**	**0**	**0**	**0**	**3**	**0**	**1**	**2**	**0**	**0**	**0**	**2**	**0**	**16**	0
4:15 PM	**0**	**1**	**4**	**2**	**0**	**0**	**1**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**3**	**0**	**15**	**0**
4:30 PM	**0**	**0**	**2**	**4**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**1**	**1**	**12**	**0**
4:45 PM	**0**	**1**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**7**	**50**
5:00 PM	0	1	2	1	0	0	0	0	0	3	0	1	0	0	0	0	8	42
5:15 PM	0	1	1	1	0	0	0	0	0	6	0	0	0	5	0	0	14	41
5:30 PM	0	0	1	2	0	0	1	0	0	1	0	0	0	0	0	0	5	34
5:45 PM	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2	5	32
Count Total	0	5	13	19	0	0	3	3	0	21	2	1	0	5	6	4	82	
Pk Hr Heavy	**0**	**3**	**8**	**14**	**0**	**0**	**1**	**3**	**0**	**11**	**2**	**0**	**0**	**0**	**6**	**2**	**50**	

Count Summaries - Bikes

Interval Start	E Foothill Blvd				E Foothill Blvd				N Rosemead Blvd				N Rosemead Blvd				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**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**	**0**	**0**	**0**	**0**	**0**
4:30 PM	**0**	**0**	**0**	**0**	**0**	**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**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	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	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	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	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

NorCal Project Manager
(415) 444-6376

norcal.projectmanager@idaxdata.com

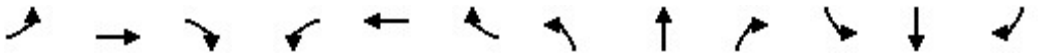
Location: Greenhill Rd, Between Cliff Dr & Hastings Ranch Dr
Date Range: 2/25/2026 - 3/3/2026
Site Code: 1

Time	Wednesday 2/25/2026			Thursday 2/26/2026			Friday 2/27/2026			Saturday 2/28/2026			Sunday 3/1/2026			Monday 3/2/2026			Tuesday 3/3/2026			Mid-Week Average		
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
1:00 AM	2	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	3
2:00 AM	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
3:00 AM	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
4:00 AM	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
5:00 AM	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2
6:00 AM	1	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	6	7
7:00 AM	19	59	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	59	78
8:00 AM	22	**121**	**143**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	**121**	**143**
9:00 AM	28	24	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	24	52
10:00 AM	24	26	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	26	50
11:00 AM	**40**	35	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**40**	35	75
12:00 PM	40	31	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	31	71
1:00 PM	43	28	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	28	71
2:00 PM	55	32	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	32	87
3:00 PM	124	**68**	192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	124	**68**	192
4:00 PM	175	**68**	243	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175	**68**	243
5:00 PM	**199**	52	**251**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**199**	52	**251**
6:00 PM	124	29	153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	124	29	153
7:00 PM	25	23	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	23	48
8:00 PM	22	7	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	7	29
9:00 PM	8	3	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	3	11
10:00 PM	3	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	4
11:00 PM	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0	2
Total	**958**	**615**	**1,573**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**958**	**615**	**1,573**
Percent	**61%**	**39%**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**61%**	**39%**	-
AM Peak	11:00	08:00	08:00																			11:00	08:00	08:00
Vol.	40	121	143																			40	121	143
PM Peak	17:00	15:00	17:00																			17:00	15:00	17:00
Vol.	199	68	251																			199	68	251

1. Mid-week average includes data between Tuesday and Thursday.

APPENDIX B – LOS CALCULATION SHEETS

Existing Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	211	81	15	646	739	93	287	23	208	294	24
Future Volume (vph)	21	211	81	15	646	739	93	287	23	208	294	24
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.95		0.91	0.91	
Frt	1.00	0.96		1.00	1.00	0.85		0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.99	
Satd. Flow (prot)	1568	3182		1568	3320	1485		3286		1441	3162	
Flt Permitted	0.29	1.00		0.56	1.00	1.00		0.76		0.95	0.99	
Satd. Flow (perm)	483	3182		917	3320	1485		2516		1441	3162	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	23	227	87	16	695	795	100	309	25	224	316	26
RTOR Reduction (vph)	0	32	0	0	0	409	0	5	0	0	6	0
Lane Group Flow (vph)	23	282	0	16	695	386	0	429	0	184	376	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Split	NA	
Protected Phases		4			4			3		2	2	
Permitted Phases	4			4		4	3					
Actuated Green, G (s)	39.6	39.6		39.6	39.6	39.6		23.5		20.2	20.2	
Effective Green, g (s)	39.6	39.6		39.6	39.6	39.6		23.5		20.2	20.2	
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40		0.24		0.20	0.20	
Clearance Time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Grp Cap (vph)	191	1260		363	1314	588		591		291	638	
v/s Ratio Prot		0.09			0.21					c0.13	0.12	
v/s Ratio Perm	0.05			0.02		c0.26		c0.17				
v/c Ratio	0.12	0.22		0.04	0.53	0.66		0.73		0.63	0.59	
Uniform Delay, d1	19.2	20.0		18.6	23.1	24.7		35.3		36.5	36.1	
Progression Factor	1.00	1.00		1.15	0.94	1.70		1.00		1.00	1.00	
Incremental Delay, d2	1.3	0.4		0.2	1.3	4.8		4.7		5.0	1.7	
Delay (s)	20.4	20.4		21.6	23.0	46.8		40.0		41.5	37.8	
Level of Service	C	C		C	C	D		D		D	D	
Approach Delay (s)		20.4			35.5			40.0			39.0	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.7
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	243	50	169	820	34	261	388	281	39	275	87
Future Volume (veh/h)	44	243	50	169	820	34	261	388	281	39	275	87
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	1660	1758	1758	1575	1772	1772	1550	1744	1744	1660	1758	1758
Adj Flow Rate, veh/h	45	251	52	174	845	35	269	400	290	40	284	90
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	2	2	2	4	4	4	3	3	3
Cap, veh/h	94	844	172	293	1143	47	370	815	512	99	451	140
Arrive On Green	0.06	0.31	0.31	0.10	0.35	0.35	0.13	0.25	0.25	0.06	0.18	0.18
Sat Flow, veh/h	1581	2763	563	2910	3294	136	2864	3313	1478	1581	2509	779
Grp Volume(v), veh/h	45	150	153	174	432	448	269	400	290	40	187	187
Grp Sat Flow(s),veh/h/ln	1581	1670	1657	1455	1683	1747	1432	1657	1478	1581	1670	1618
Q Serve(g_s), s	1.8	4.6	4.7	3.8	15.0	15.0	6.0	6.9	10.6	1.6	6.9	7.1
Cycle Q Clear(g_c), s	1.8	4.6	4.7	3.8	15.0	15.0	6.0	6.9	10.6	1.6	6.9	7.1
Prop In Lane	1.00		0.34	1.00		0.08	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	94	510	506	293	584	606	370	815	512	99	300	291
V/C Ratio(X)	0.48	0.29	0.30	0.59	0.74	0.74	0.73	0.49	0.57	0.40	0.62	0.64
Avail Cap(c_a), veh/h	209	1094	1085	559	1204	1250	764	1774	940	209	669	648
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	30.4	17.7	17.7	28.7	19.1	19.1	27.9	21.6	17.7	30.1	25.3	25.4
Incr Delay (d2), s/veh	3.8	0.3	0.3	1.9	1.9	1.8	2.8	0.5	1.0	2.6	2.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.7	1.7	1.3	5.5	5.7	2.1	2.6	3.5	0.7	2.8	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.1	18.0	18.1	30.6	21.0	20.9	30.7	22.0	18.7	32.7	27.4	27.7
LnGrp LOS	C	B	B	C	C	C	C	C	B	C	C	C
Approach Vol, veh/h		348			1054			959			414	
Approach Delay, s/veh		20.1			22.5			23.4			28.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	25.7	12.8	17.3	8.2	28.4	8.4	21.7
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3
Max Green Setting (Gmax), s	* 13	43.7	* 18	26.7	* 8.8	47.7	* 8.8	35.7
Max Q Clear Time (g_c+I1), s	5.8	6.7	8.0	9.1	3.8	17.0	3.6	12.6
Green Ext Time (p_c), s	0.3	1.8	0.6	2.0	0.0	6.1	0.0	3.8

Intersection Summary	
HCM 6th Ctrl Delay	23.4
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 (vph)	23	375	35	56	1205	9	49	36	27	16	40	151
Future Volume (vph)	23	375	35	56	1205	9	49	36	27	16	40	151
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.88	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3353	1500	1568	3320	1485	1568	1636		1615	1587	
Flt Permitted	0.17	1.00	1.00	0.51	1.00	1.00	0.39	1.00		0.71	1.00	
Satd. Flow (perm)	275	3353	1500	850	3320	1485	642	1636		1212	1587	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	25	403	38	60	1296	10	53	39	29	17	43	162
RTOR Reduction (vph)	0	0	13	0	0	3	0	25	0	0	63	0
Lane Group Flow (vph)	25	403	25	60	1296	7	53	43	0	17	142	0
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	0%	0%	0%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2		2	4			4		
Actuated Green, G (s)	66.2	66.2	66.2	66.2	66.2	66.2	14.8	14.8		14.8	14.8	
Effective Green, g (s)	66.2	66.2	66.2	66.2	66.2	66.2	14.8	14.8		14.8	14.8	
Actuated g/C Ratio	0.66	0.66	0.66	0.66	0.66	0.66	0.15	0.15		0.15	0.15	
Clearance Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	182	2219	993	562	2197	983	95	242		179	234	
v/s Ratio Prot		0.12			c0.39			0.03			c0.09	
v/s Ratio Perm	0.09		0.02	0.07		0.00	0.08			0.01		
v/c Ratio	0.14	0.18	0.03	0.11	0.59	0.01	0.56	0.18		0.09	0.61	
Uniform Delay, d1	6.3	6.5	5.8	6.1	9.4	5.7	39.6	37.3		36.8	39.9	
Progression Factor	1.23	1.10	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.2	0.0	0.4	1.2	0.0	6.9	0.4		0.2	4.4	
Delay (s)	9.2	7.3	5.9	6.5	10.5	5.8	46.5	37.6		37.0	44.3	
Level of Service	A	A	A	A	B	A	D	D		D	D	
Approach Delay (s)		7.3			10.3			41.5			43.7	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

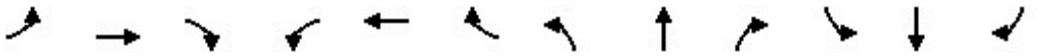
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	316	58	68	898	36	94	19	41	13	37	45
Future Volume (veh/h)	102	316	58	68	898	36	94	19	41	13	37	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1620	1716	1716	1673	1772	1772	1673	1772	1772	1647	1744	1744
Adj Flow Rate, veh/h	104	322	59	69	916	37	96	19	42	13	38	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	2	2	2	2	2	2	4	4	4
Cap, veh/h	331	1031	187	525	1178	48	395	101	223	310	82	99
Arrive On Green	0.10	0.37	0.37	0.08	0.36	0.36	0.12	0.21	0.21	0.03	0.11	0.11
Sat Flow, veh/h	1543	2757	499	1594	3298	133	1594	491	1085	1569	718	869
Grp Volume(v), veh/h	104	189	192	69	468	485	96	0	61	13	0	84
Grp Sat Flow(s),veh/h/ln	1543	1630	1626	1594	1683	1748	1594	0	1577	1569	0	1587
Q Serve(g_s), s	2.3	4.8	4.9	1.5	14.6	14.6	2.8	0.0	1.9	0.4	0.0	2.9
Cycle Q Clear(g_c), s	2.3	4.8	4.9	1.5	14.6	14.6	2.8	0.0	1.9	0.4	0.0	2.9
Prop In Lane	1.00		0.31	1.00		0.08	1.00		0.69	1.00		0.55
Lane Grp Cap(c), veh/h	331	609	608	525	601	624	395	0	325	310	0	181
V/C Ratio(X)	0.31	0.31	0.32	0.13	0.78	0.78	0.24	0.00	0.19	0.04	0.00	0.46
Avail Cap(c_a), veh/h	386	766	764	608	791	822	467	0	706	525	0	711
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	11.6	13.1	13.1	9.9	16.9	16.9	17.0	0.0	19.3	21.8	0.0	24.4
Incr Delay (d2), s/veh	0.5	0.3	0.3	0.1	3.6	3.5	0.3	0.0	0.3	0.1	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	0.7	1.6	1.6	0.5	5.4	5.6	1.0	0.0	0.7	0.2	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	13.3	13.4	10.0	20.5	20.4	17.3	0.0	19.6	21.9	0.0	26.3
LnGrp LOS	B	B	B	A	C	C	B	A	B	C	A	C
Approach Vol, veh/h		485			1022			157			97	
Approach Delay, s/veh		13.1			19.7			18.2			25.7	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	27.3	11.3	11.3	9.9	26.3	5.9	16.7
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	4.6	* 4.2	5.3	* 4.2	4.6
Max Green Setting (Gmax), s	* 7.8	27.7	* 9.8	26.4	* 7.8	27.7	* 9.8	26.4
Max Q Clear Time (g_c+I1), s	3.5	6.9	4.8	4.9	4.3	16.6	2.4	3.9
Green Ext Time (p_c), s	0.0	2.1	0.1	0.4	0.1	4.5	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	18.1
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 (vph)	8	16	7	192	35	301	32	1020	143	83	228	6
Future Volume (vph)	8	16	7	192	35	301	32	1020	143	83	228	6
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1725		1583	1765	1500	1568	3320	1485	1583	3341	
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1725		1583	1765	1500	1568	3320	1485	1583	3341	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	17	7	202	37	317	34	1074	151	87	240	6
RTOR Reduction (vph)	0	7	0	0	0	232	0	0	54	0	1	0
Lane Group Flow (vph)	0	25	0	202	37	85	34	1074	97	87	245	0
Heavy Vehicles (%)	0%	0%	0%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8	5	1	6		5	2	
Permitted Phases						8			6			
Actuated Green, G (s)		5.6		20.6	20.6	32.1	5.4	61.4	61.4	11.5	67.5	
Effective Green, g (s)		5.6		20.6	20.6	32.1	5.4	61.4	61.4	11.5	67.5	
Actuated g/C Ratio		0.05		0.17	0.17	0.27	0.05	0.51	0.51	0.10	0.56	
Clearance Time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Vehicle Extension (s)		3.0		3.0	3.0	2.5	2.5	4.5	4.5	2.5	4.5	
Lane Grp Cap (vph)		80		271	302	401	70	1698	759	151	1879	
v/s Ratio Prot		c0.01		c0.13	0.02	0.02	0.02	c0.32		c0.05	0.07	
v/s Ratio Perm						0.04			0.07			
v/c Ratio		0.32		0.75	0.12	0.21	0.49	0.63	0.13	0.58	0.13	
Uniform Delay, d1		55.3		47.2	42.1	34.1	55.9	21.2	15.3	51.9	12.4	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.07	1.53	1.00	1.00	
Incremental Delay, d2		2.3		10.6	0.2	0.2	3.1	1.5	0.3	4.3	0.1	
Delay (s)		57.6		57.8	42.2	34.3	59.2	24.1	23.7	56.2	12.5	
Level of Service		E		E	D	C	E	C	C	E	B	
Approach Delay (s)		57.6			43.4			25.0			24.0	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.9
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

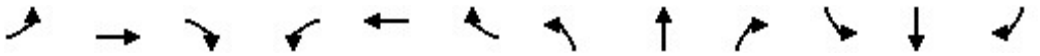
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	160	195	194	880	491	157	642	229	81	322	28
Future Volume (veh/h)	72	160	195	194	880	491	157	642	229	81	322	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1620	1716	1716	1673	1772	1772	1660	1758	1758	1660	1758	1758
Adj Flow Rate, veh/h	76	168	205	204	926	517	165	676	241	85	339	29
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, %	6	6	6	2	2	2	3	3	3	3	3	3
Cap, veh/h	130	831	544	228	1055	600	188	1161	731	136	1052	469
Arrive On Green	0.08	0.25	0.25	0.14	0.31	0.31	0.12	0.35	0.35	0.17	0.63	0.63
Sat Flow, veh/h	1543	3260	1454	1594	3367	1502	1581	3340	1490	1581	3340	1490
Grp Volume(v), veh/h	76	168	205	204	926	517	165	676	241	85	339	29
Grp Sat Flow(s),veh/h/ln	1543	1630	1454	1594	1683	1502	1581	1670	1490	1581	1670	1490
Q Serve(g_s), s	5.7	4.9	12.3	15.1	31.3	37.6	12.3	19.9	11.8	6.0	5.7	0.9
Cycle Q Clear(g_c), s	5.7	4.9	12.3	15.1	31.3	37.6	12.3	19.9	11.8	6.0	5.7	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	831	544	228	1055	600	188	1161	731	136	1052	469
V/C Ratio(X)	0.58	0.20	0.38	0.90	0.88	0.86	0.88	0.58	0.33	0.62	0.32	0.06
Avail Cap(c_a), veh/h	171	886	568	243	1055	600	202	1161	731	228	1052	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	52.9	35.1	27.4	50.6	39.0	33.0	52.0	32.0	18.6	47.8	16.3	15.4
Incr Delay (d2), s/veh	3.0	0.2	0.6	30.3	8.8	12.6	30.4	2.1	1.2	3.2	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	2.3	1.9	4.3	7.9	13.9	15.4	6.4	8.1	4.2	2.3	2.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.9	35.3	28.0	80.9	47.8	45.5	82.4	34.1	19.8	51.0	17.0	15.6
LnGrp LOS	E	D	C	F	D	D	F	C	B	D	B	B
Approach Vol, veh/h		449			1647			1082			453	
Approach Delay, s/veh		35.4			51.2			38.3			23.3	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	47.1	21.8	36.0	19.0	43.2	14.8	43.0
Change Period (Y+Rc), s	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4
Max Green Setting (Gmax), s	* 13	31.6	* 18	32.6	* 15	33.6	* 13	37.6
Max Q Clear Time (g_c+I1), s	8.0	21.9	17.1	14.3	14.3	7.7	7.7	39.6
Green Ext Time (p_c), s	0.1	4.7	0.1	2.3	0.0	3.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.9
HCM 6th LOS	D

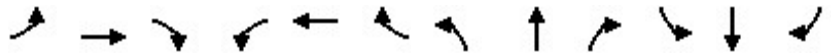
Notes

* 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 (vph)	21	629	121	25	479	409	105	330	22	336	263	27
Future Volume (vph)	21	629	121	25	479	409	105	330	22	336	263	27
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.95		0.91	0.91	
Frt	1.00	0.98		1.00	1.00	0.85		0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.98	
Satd. Flow (prot)	1583	3272		1599	3386	1515		3324		1455	3163	
Flt Permitted	0.40	1.00		0.23	1.00	1.00		0.74		0.95	0.98	
Satd. Flow (perm)	670	3272		382	3386	1515		2486		1455	3163	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	22	655	126	26	499	426	109	344	23	350	274	28
RTOR Reduction (vph)	0	13	0	0	0	271	0	4	0	0	5	0
Lane Group Flow (vph)	22	768	0	26	499	155	0	472	0	213	434	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Split	NA	
Protected Phases		4			4			3		2	2	
Permitted Phases	4			4		4	3					
Actuated Green, G (s)	36.3	36.3		36.3	36.3	36.3		24.7		22.3	22.3	
Effective Green, g (s)	36.3	36.3		36.3	36.3	36.3		24.7		22.3	22.3	
Actuated g/C Ratio	0.36	0.36		0.36	0.36	0.36		0.25		0.22	0.22	
Clearance Time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Grp Cap (vph)	243	1187		138	1229	549		614		324	705	
v/s Ratio Prot		c0.23			0.15					c0.15	0.14	
v/s Ratio Perm	0.03			0.07		0.10		c0.19				
v/c Ratio	0.09	0.65		0.19	0.41	0.28		0.77		0.66	0.61	
Uniform Delay, d1	21.0	26.5		21.8	23.8	22.6		35.0		35.4	35.0	
Progression Factor	1.00	1.00		1.08	0.96	1.84		1.00		1.00	1.00	
Incremental Delay, d2	0.7	2.7		2.9	0.9	1.2		6.1		5.3	1.8	
Delay (s)	21.7	29.2		26.4	23.8	42.8		41.1		40.6	36.8	
Level of Service	C	C		C	C	D		D		D	D	
Approach Delay (s)		29.0			32.4			41.1			38.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.7
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



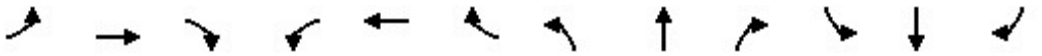
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	726	63	249	653	55	150	397	399	82	270	63
Future Volume (veh/h)	131	726	63	249	653	55	150	397	399	82	270	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1687	1786	1786	1588	1786	1786	1588	1786	1786	1687	1786	1786
Adj Flow Rate, veh/h	135	748	65	257	673	57	155	409	411	85	278	65
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	167	946	82	342	988	84	272	936	594	132	727	167
Arrive On Green	0.10	0.30	0.30	0.12	0.31	0.31	0.09	0.28	0.28	0.08	0.27	0.27
Sat Flow, veh/h	1606	3159	274	2933	3166	268	2933	3393	1514	1606	2739	630
Grp Volume(v), veh/h	135	402	411	257	360	370	155	409	411	85	170	173
Grp Sat Flow(s),veh/h/ln	1606	1697	1737	1467	1697	1738	1467	1697	1514	1606	1697	1673
Q Serve(g_s), s	6.9	18.3	18.3	7.1	15.6	15.6	4.3	8.3	19.0	4.3	6.9	7.1
Cycle Q Clear(g_c), s	6.9	18.3	18.3	7.1	15.6	15.6	4.3	8.3	19.0	4.3	6.9	7.1
Prop In Lane	1.00		0.16	1.00		0.15	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	167	508	520	342	529	542	272	936	594	132	450	444
V/C Ratio(X)	0.81	0.79	0.79	0.75	0.68	0.68	0.57	0.44	0.69	0.64	0.38	0.39
Avail Cap(c_a), veh/h	359	801	820	761	862	883	377	1078	657	245	579	571
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	36.8	27.0	27.0	36.0	25.2	25.3	36.5	25.1	21.3	37.4	25.2	25.3
Incr Delay (d2), s/veh	8.9	2.8	2.8	3.4	1.5	1.5	1.9	0.3	2.8	5.2	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	7.4	7.5	2.6	6.2	6.3	1.6	3.3	6.8	1.9	2.8	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	29.8	29.8	39.3	26.8	26.8	38.4	25.4	24.1	42.6	25.7	25.8
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		948			987			975			428	
Approach Delay, s/veh		32.1			30.1			26.9			29.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	30.5	12.0	27.6	12.9	31.5	11.1	28.5
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3
Max Green Setting (Gmax), s	* 23	39.7	* 11	28.7	* 19	42.7	* 13	26.7
Max Q Clear Time (g_c+I1), s	9.1	20.3	6.3	9.1	8.9	17.6	6.3	21.0
Green Ext Time (p_c), s	0.7	4.9	0.2	1.9	0.2	4.6	0.1	2.1

Intersection Summary	
HCM 6th Ctrl Delay	29.6
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 (vph)	153	791	67	66	702	17	132	114	94	19	50	56
Future Volume (vph)	153	791	67	66	702	17	132	114	94	19	50	56
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3353	1500	1599	3386	1515	1615	1678		1599	1641	
Flt Permitted	0.33	1.00	1.00	0.29	1.00	1.00	0.67	1.00		0.41	1.00	
Satd. Flow (perm)	547	3353	1500	485	3386	1515	1139	1678		685	1641	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	168	869	74	73	771	19	145	125	103	21	55	62
RTOR Reduction (vph)	0	0	28	0	0	7	0	36	0	0	50	0
Lane Group Flow (vph)	168	869	46	73	771	12	145	192	0	21	67	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2		2	4			4		
Actuated Green, G (s)	62.0	62.0	62.0	62.0	62.0	62.0	19.0	19.0		19.0	19.0	
Effective Green, g (s)	62.0	62.0	62.0	62.0	62.0	62.0	19.0	19.0		19.0	19.0	
Actuated g/C Ratio	0.62	0.62	0.62	0.62	0.62	0.62	0.19	0.19		0.19	0.19	
Clearance Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	339	2078	930	300	2099	939	216	318		130	311	
v/s Ratio Prot		0.26			0.23			0.11			0.04	
v/s Ratio Perm	c0.31		0.03	0.15		0.01	c0.13			0.03		
v/c Ratio	0.50	0.42	0.05	0.24	0.37	0.01	0.67	0.60		0.16	0.21	
Uniform Delay, d1	10.4	9.7	7.4	8.5	9.3	7.3	37.6	37.0		33.8	34.2	
Progression Factor	1.06	0.99	2.25	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.3	0.5	0.1	1.9	0.5	0.0	7.9	3.2		0.6	0.3	
Delay (s)	15.4	10.1	16.9	10.4	9.8	7.3	45.5	40.2		34.4	34.5	
Level of Service	B	B	B	B	A	A	D	D		C	C	
Approach Delay (s)		11.4			9.8			42.3			34.5	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	951	85	54	630	74	72	35	62	170	39	165
Future Volume (veh/h)	115	951	85	54	630	74	72	35	62	170	39	165
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	1687	1786	1786	1673	1772	1772	1687	1786	1786	1687	1786	1786
Adj Flow Rate, veh/h	122	1012	90	57	670	79	77	37	66	181	41	176
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	372	1186	105	257	1063	125	323	86	154	430	52	224
Arrive On Green	0.09	0.38	0.38	0.07	0.35	0.35	0.10	0.15	0.15	0.13	0.18	0.18
Sat Flow, veh/h	1606	3152	280	1594	3034	357	1606	575	1026	1606	294	1264
Grp Volume(v), veh/h	122	545	557	57	371	378	77	0	103	181	0	217
Grp Sat Flow(s),veh/h/ln	1606	1697	1736	1594	1683	1708	1606	0	1601	1606	0	1558
Q Serve(g_s), s	3.0	19.6	19.6	1.4	12.2	12.3	2.5	0.0	3.9	6.1	0.0	8.9
Cycle Q Clear(g_c), s	3.0	19.6	19.6	1.4	12.2	12.3	2.5	0.0	3.9	6.1	0.0	8.9
Prop In Lane	1.00		0.16	1.00		0.21	1.00		0.64	1.00		0.81
Lane Grp Cap(c), veh/h	372	638	653	257	590	598	323	0	240	430	0	277
V/C Ratio(X)	0.33	0.85	0.85	0.22	0.63	0.63	0.24	0.00	0.43	0.42	0.00	0.78
Avail Cap(c_a), veh/h	409	707	723	334	701	711	394	0	635	457	0	618
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	12.5	19.1	19.1	14.4	18.0	18.0	19.9	0.0	25.7	19.6	0.0	26.1
Incr Delay (d2), s/veh	0.5	9.2	9.1	0.4	1.4	1.3	0.4	0.0	1.2	0.7	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.4	8.6	0.5	4.5	4.5	0.9	0.0	1.5	2.2	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	28.3	28.1	14.8	19.4	19.4	20.3	0.0	26.9	20.2	0.0	31.0
LnGrp LOS	B	C	C	B	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1224			806			180			398	
Approach Delay, s/veh		26.7			19.0			24.1			26.1	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	30.3	11.0	16.4	10.5	28.6	12.9	14.6
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	4.6	* 4.2	5.3	* 4.2	4.6
Max Green Setting (Gmax), s	* 7.8	27.7	* 9.8	26.4	* 7.8	27.7	* 9.8	26.4
Max Q Clear Time (g_c+I1), s	3.4	21.6	4.5	10.9	5.0	14.3	8.1	5.9
Green Ext Time (p_c), s	0.0	3.4	0.1	1.2	0.1	3.8	0.1	0.5

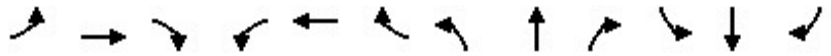
Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

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 (vph)	28	97	33	96	60	209	47	611	167	264	553	32
Future Volume (vph)	28	97	33	96	60	209	47	611	167	264	553	32
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1734		1599	1782	1515	1615	3420	1530	1599	3358	
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1734		1599	1782	1515	1615	3420	1530	1599	3358	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	29	102	35	101	63	220	49	643	176	278	582	34
RTOR Reduction (vph)	0	9	0	0	0	126	0	0	98	0	2	0
Lane Group Flow (vph)	0	157	0	101	63	94	49	643	78	278	614	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Split	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8	5	1	6		5	2	
Permitted Phases						8			6			
Actuated Green, G (s)		16.2		13.0	13.0	51.1	7.5	31.8	31.8	38.1	62.4	
Effective Green, g (s)		16.2		13.0	13.0	51.1	7.5	31.8	31.8	38.1	62.4	
Actuated g/C Ratio		0.13		0.11	0.11	0.43	0.06	0.27	0.27	0.32	0.52	
Clearance Time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Vehicle Extension (s)		3.0		3.0	3.0	2.5	2.5	4.5	4.5	2.5	4.5	
Lane Grp Cap (vph)		234		173	193	645	100	906	405	507	1746	
v/s Ratio Prot		c0.09		c0.06	0.04	0.05	0.03	c0.19		c0.17	0.18	
v/s Ratio Perm						0.02			0.05			
v/c Ratio		0.67		0.58	0.33	0.15	0.49	0.71	0.19	0.55	0.35	
Uniform Delay, d1		49.4		50.9	49.5	21.1	54.4	39.9	34.2	33.8	16.9	
Progression Factor		1.00		1.00	1.00	1.00	0.86	1.34	2.19	1.00	1.00	
Incremental Delay, d2		7.4		4.9	1.0	0.1	2.5	4.3	1.0	1.0	0.6	
Delay (s)		56.8		55.9	50.4	21.2	49.3	57.9	75.9	34.8	17.5	
Level of Service		E		E	D	C	D	E	E	C	B	
Approach Delay (s)		56.8			35.1			61.0			22.9	
Approach LOS		E			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.9
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	696	314	202	533	301	167	410	310	317	454	27
Future Volume (veh/h)	111	696	314	202	533	301	167	410	310	317	454	27
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	1673	1772	1772	1700	1800	1800	1687	1786	1786	1687	1786	1786
Adj Flow Rate, veh/h	116	725	327	210	555	314	174	427	323	330	473	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	0	0	1	1	1	1	1	1
Cap, veh/h	143	850	564	193	964	701	198	959	608	285	1143	510
Arrive On Green	0.09	0.25	0.25	0.12	0.28	0.28	0.12	0.28	0.28	0.35	0.67	0.67
Sat Flow, veh/h	1594	3367	1502	1619	3420	1525	1606	3393	1514	1606	3393	1514
Grp Volume(v), veh/h	116	725	327	210	555	314	174	427	323	330	473	28
Grp Sat Flow(s),veh/h/ln	1594	1683	1502	1619	1710	1525	1606	1697	1514	1606	1697	1514
Q Serve(g_s), s	8.6	24.6	20.9	14.3	16.7	16.8	12.8	12.4	19.5	21.3	7.6	0.8
Cycle Q Clear(g_c), s	8.6	24.6	20.9	14.3	16.7	16.8	12.8	12.4	19.5	21.3	7.6	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	850	564	193	964	701	198	959	608	285	1143	510
V/C Ratio(X)	0.81	0.85	0.58	1.09	0.58	0.45	0.88	0.45	0.53	1.16	0.41	0.05
Avail Cap(c_a), veh/h	177	915	593	193	964	701	218	959	608	285	1143	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	53.6	42.7	29.9	52.8	36.9	22.1	51.7	35.3	27.3	38.7	14.2	13.1
Incr Delay (d2), s/veh	12.5	5.1	1.0	90.4	1.0	0.6	28.6	1.5	3.3	101.1	1.0	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	3.9	10.7	7.6	10.6	7.0	6.0	6.6	5.2	7.5	14.8	2.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	47.9	31.0	143.2	38.0	22.7	80.3	36.8	30.6	139.8	15.2	13.3
LnGrp LOS	E	D	C	F	D	C	F	D	C	F	B	B
Approach Vol, veh/h		1168			1079			924			831	
Approach Delay, s/veh		45.0			54.0			42.8			64.6	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	39.3	19.0	35.7	19.5	45.8	15.5	39.2
Change Period (Y+Rc), s	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4
Max Green Setting (Gmax), s	* 21	31.6	* 14	32.6	* 16	36.6	* 13	33.6
Max Q Clear Time (g_c+I1), s	23.3	21.5	16.3	26.6	14.8	9.6	10.6	18.8
Green Ext Time (p_c), s	0.0	3.8	0.0	3.7	0.1	4.6	0.0	5.7

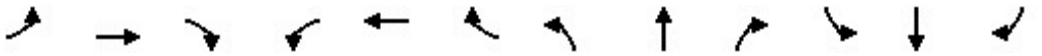
Intersection Summary	
HCM 6th Ctrl Delay	51.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

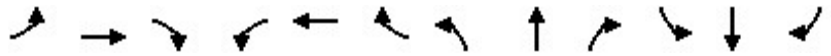
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Existing with Project Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	213	81	15	652	744	93	287	23	210	294	24
Future Volume (vph)	21	213	81	15	652	744	93	287	23	210	294	24
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.95		0.91	0.91	
Frt	1.00	0.96		1.00	1.00	0.85		0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.99	
Satd. Flow (prot)	1568	3183		1568	3320	1485		3286		1441	3162	
Flt Permitted	0.29	1.00		0.55	1.00	1.00		0.76		0.95	0.99	
Satd. Flow (perm)	477	3183		914	3320	1485		2515		1441	3162	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	23	229	87	16	701	800	100	309	25	226	316	26
RTOR Reduction (vph)	0	31	0	0	0	409	0	5	0	0	6	0
Lane Group Flow (vph)	23	285	0	16	701	391	0	429	0	185	377	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Split	NA	
Protected Phases		4			4			3		2	2	
Permitted Phases	4			4		4	3					
Actuated Green, G (s)	39.6	39.6		39.6	39.6	39.6		23.5		20.2	20.2	
Effective Green, g (s)	39.6	39.6		39.6	39.6	39.6		23.5		20.2	20.2	
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40		0.24		0.20	0.20	
Clearance Time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Grp Cap (vph)	188	1260		361	1314	588		591		291	638	
v/s Ratio Prot		0.09			0.21					c0.13	0.12	
v/s Ratio Perm	0.05			0.02		c0.26		c0.17				
v/c Ratio	0.12	0.23		0.04	0.53	0.67		0.73		0.64	0.59	
Uniform Delay, d1	19.2	20.0		18.6	23.1	24.8		35.3		36.5	36.2	
Progression Factor	1.00	1.00		1.15	0.94	1.68		1.00		1.00	1.00	
Incremental Delay, d2	1.3	0.4		0.2	1.3	4.9		4.7		5.0	1.7	
Delay (s)	20.5	20.4		21.6	23.0	46.5		40.0		41.6	37.9	
Level of Service	C	C		C	C	D		D		D	D	
Approach Delay (s)		20.5			35.4			40.0			39.1	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.7
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	245	50	172	826	34	261	388	282	39	275	87
Future Volume (veh/h)	44	245	50	172	826	34	261	388	282	39	275	87
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	1660	1758	1758	1575	1772	1772	1550	1744	1744	1660	1758	1758
Adj Flow Rate, veh/h	45	253	52	177	852	35	269	400	291	40	284	90
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	2	2	2	4	4	4	3	3	3
Cap, veh/h	94	851	172	292	1150	47	369	816	512	99	452	140
Arrive On Green	0.06	0.31	0.31	0.10	0.35	0.35	0.13	0.25	0.25	0.06	0.18	0.18
Sat Flow, veh/h	1581	2768	560	2910	3296	135	2864	3313	1478	1581	2509	779
Grp Volume(v), veh/h	45	151	154	177	435	452	269	400	291	40	187	187
Grp Sat Flow(s),veh/h/ln	1581	1670	1657	1455	1683	1748	1432	1657	1478	1581	1670	1618
Q Serve(g_s), s	1.8	4.6	4.8	3.9	15.2	15.2	6.1	6.9	10.8	1.6	6.9	7.2
Cycle Q Clear(g_c), s	1.8	4.6	4.8	3.9	15.2	15.2	6.1	6.9	10.8	1.6	6.9	7.2
Prop In Lane	1.00		0.34	1.00		0.08	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	94	514	510	292	587	610	369	816	512	99	301	291
V/C Ratio(X)	0.48	0.29	0.30	0.61	0.74	0.74	0.73	0.49	0.57	0.40	0.62	0.64
Avail Cap(c_a), veh/h	207	1087	1079	555	1196	1242	760	1763	935	207	664	644
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	30.6	17.7	17.7	28.9	19.2	19.2	28.1	21.7	17.8	30.2	25.4	25.5
Incr Delay (d2), s/veh	3.8	0.3	0.3	2.0	1.9	1.8	2.8	0.5	1.0	2.6	2.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.7	1.7	1.4	5.6	5.8	2.1	2.6	3.5	0.7	2.8	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.3	18.0	18.1	30.9	21.1	21.0	30.9	22.1	18.8	32.9	27.5	27.9
LnGrp LOS	C	B	B	C	C	C	C	C	B	C	C	C
Approach Vol, veh/h		350			1064			960			414	
Approach Delay, s/veh		20.1			22.7			23.6			28.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	25.9	12.8	17.4	8.2	28.7	8.4	21.8
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3
Max Green Setting (Gmax), s	* 13	43.7	* 18	26.7	* 8.8	47.7	* 8.8	35.7
Max Q Clear Time (g_c+I1), s	5.9	6.8	8.1	9.2	3.8	17.2	3.6	12.8
Green Ext Time (p_c), s	0.3	1.8	0.6	2.0	0.0	6.2	0.0	3.8

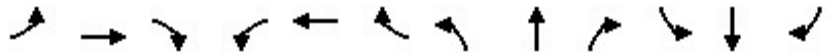
Intersection Summary	
HCM 6th Ctrl Delay	23.5
HCM 6th LOS	C

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 (vph)	26	383	44	56	1207	9	52	36	27	16	40	152
Future Volume (vph)	26	383	44	56	1207	9	52	36	27	16	40	152
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.88	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3353	1500	1568	3320	1485	1568	1636		1615	1586	
Flt Permitted	0.16	1.00	1.00	0.51	1.00	1.00	0.39	1.00		0.71	1.00	
Satd. Flow (perm)	274	3353	1500	842	3320	1485	637	1636		1212	1586	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	28	412	47	60	1298	10	56	39	29	17	43	163
RTOR Reduction (vph)	0	0	16	0	0	3	0	25	0	0	63	0
Lane Group Flow (vph)	28	412	31	60	1298	7	56	43	0	17	143	0
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	0%	0%	0%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2		2	4			4		
Actuated Green, G (s)	66.2	66.2	66.2	66.2	66.2	66.2	14.8	14.8		14.8	14.8	
Effective Green, g (s)	66.2	66.2	66.2	66.2	66.2	66.2	14.8	14.8		14.8	14.8	
Actuated g/C Ratio	0.66	0.66	0.66	0.66	0.66	0.66	0.15	0.15		0.15	0.15	
Clearance Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	181	2219	993	557	2197	983	94	242		179	234	
v/s Ratio Prot		0.12			c0.39			0.03			c0.09	
v/s Ratio Perm	0.10		0.02	0.07		0.00	0.09			0.01		
v/c Ratio	0.15	0.19	0.03	0.11	0.59	0.01	0.60	0.18		0.09	0.61	
Uniform Delay, d1	6.4	6.5	5.8	6.2	9.4	5.7	39.8	37.3		36.8	39.9	
Progression Factor	1.22	1.10	11.05	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.2	0.1	0.4	1.2	0.0	9.7	0.4		0.2	4.7	
Delay (s)	9.5	7.3	64.5	6.5	10.6	5.8	49.6	37.6		37.0	44.6	
Level of Service	A	A	E	A	B	A	D	D		D	D	
Approach Delay (s)		13.0			10.3			43.0			44.0	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	316	58	68	898	36	94	19	41	13	37	54
Future Volume (veh/h)	105	316	58	68	898	36	94	19	41	13	37	54
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	1620	1716	1716	1673	1772	1772	1673	1772	1772	1647	1744	1744
Adj Flow Rate, veh/h	107	322	59	69	916	37	96	19	42	13	38	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	2	2	2	2	2	2	4	4	4
Cap, veh/h	330	1029	186	522	1174	47	391	103	228	315	76	111
Arrive On Green	0.10	0.37	0.37	0.08	0.36	0.36	0.12	0.21	0.21	0.03	0.12	0.12
Sat Flow, veh/h	1543	2757	499	1594	3298	133	1594	491	1085	1569	644	932
Grp Volume(v), veh/h	107	189	192	69	468	485	96	0	61	13	0	93
Grp Sat Flow(s),veh/h/ln	1543	1630	1626	1594	1683	1748	1594	0	1577	1569	0	1576
Q Serve(g_s), s	2.4	4.9	5.0	1.5	14.7	14.7	2.8	0.0	1.9	0.4	0.0	3.3
Cycle Q Clear(g_c), s	2.4	4.9	5.0	1.5	14.7	14.7	2.8	0.0	1.9	0.4	0.0	3.3
Prop In Lane	1.00		0.31	1.00		0.08	1.00		0.69	1.00		0.59
Lane Grp Cap(c), veh/h	330	609	607	522	599	622	391	0	331	315	0	187
V/C Ratio(X)	0.32	0.31	0.32	0.13	0.78	0.78	0.25	0.00	0.18	0.04	0.00	0.50
Avail Cap(c_a), veh/h	382	759	757	604	784	814	462	0	699	527	0	699
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	11.8	13.2	13.2	10.0	17.1	17.1	17.0	0.0	19.3	21.8	0.0	24.6
Incr Delay (d2), s/veh	0.6	0.3	0.3	0.1	3.8	3.6	0.3	0.0	0.3	0.1	0.0	2.0
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	0.7	1.6	1.6	0.5	5.5	5.7	1.0	0.0	0.7	0.2	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	13.5	13.5	10.2	20.9	20.7	17.3	0.0	19.6	21.8	0.0	26.6
LnGrp LOS	B	B	B	B	C	C	B	A	B	C	A	C
Approach Vol, veh/h		488			1022			157			106	
Approach Delay, s/veh		13.3			20.1			18.2			26.0	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	27.5	11.4	11.7	10.0	26.5	5.9	17.1
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	4.6	* 4.2	5.3	* 4.2	4.6
Max Green Setting (Gmax), s	* 7.8	27.7	* 9.8	26.4	* 7.8	27.7	* 9.8	26.4
Max Q Clear Time (g_c+I1), s	3.5	7.0	4.8	5.3	4.4	16.7	2.4	3.9
Green Ext Time (p_c), s	0.0	2.1	0.1	0.5	0.1	4.4	0.0	0.3

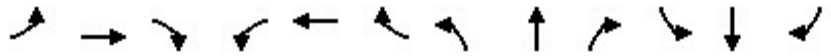
Intersection Summary	
HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	16	7	192	35	301	32	1022	143	83	236	6
Future Volume (vph)	8	16	7	192	35	301	32	1022	143	83	236	6
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1725		1583	1765	1500	1568	3320	1485	1583	3341	
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1725		1583	1765	1500	1568	3320	1485	1583	3341	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	17	7	202	37	317	34	1076	151	87	248	6
RTOR Reduction (vph)	0	7	0	0	0	232	0	0	54	0	1	0
Lane Group Flow (vph)	0	25	0	202	37	85	34	1076	97	87	253	0
Heavy Vehicles (%)	0%	0%	0%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8	5	1	6		5	2	
Permitted Phases						8			6			
Actuated Green, G (s)		5.6		20.6	20.6	32.1	5.4	61.4	61.4	11.5	67.5	
Effective Green, g (s)		5.6		20.6	20.6	32.1	5.4	61.4	61.4	11.5	67.5	
Actuated g/C Ratio		0.05		0.17	0.17	0.27	0.05	0.51	0.51	0.10	0.56	
Clearance Time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Vehicle Extension (s)		3.0		3.0	3.0	2.5	2.5	4.5	4.5	2.5	4.5	
Lane Grp Cap (vph)		80		271	302	401	70	1698	759	151	1879	
v/s Ratio Prot		c0.01		c0.13	0.02	0.02	0.02	c0.32		c0.05	0.08	
v/s Ratio Perm						0.04			0.07			
v/c Ratio		0.32		0.75	0.12	0.21	0.49	0.63	0.13	0.58	0.13	
Uniform Delay, d1		55.3		47.2	42.1	34.1	55.9	21.2	15.3	51.9	12.4	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.08	1.56	1.00	1.00	
Incremental Delay, d2		2.3		10.6	0.2	0.2	3.1	1.5	0.3	4.3	0.1	
Delay (s)		57.6		57.8	42.2	34.3	59.0	24.4	24.2	56.2	12.6	
Level of Service		E		E	D	C	E	C	C	E	B	
Approach Delay (s)		57.6			43.4			25.3			23.7	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.9
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



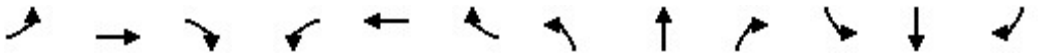
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	160	195	194	880	493	157	643	229	84	327	28
Future Volume (veh/h)	72	160	195	194	880	493	157	643	229	84	327	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1620	1716	1716	1673	1772	1772	1660	1758	1758	1660	1758	1758
Adj Flow Rate, veh/h	76	168	205	204	926	519	165	677	241	88	344	29
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, %	6	6	6	2	2	2	3	3	3	3	3	3
Cap, veh/h	130	831	544	228	1055	601	188	1159	730	137	1052	469
Arrive On Green	0.08	0.25	0.25	0.14	0.31	0.31	0.12	0.35	0.35	0.17	0.63	0.63
Sat Flow, veh/h	1543	3260	1454	1594	3367	1502	1581	3340	1490	1581	3340	1490
Grp Volume(v), veh/h	76	168	205	204	926	519	165	677	241	88	344	29
Grp Sat Flow(s),veh/h/ln	1543	1630	1454	1594	1683	1502	1581	1670	1490	1581	1670	1490
Q Serve(g_s), s	5.7	4.9	12.3	15.1	31.3	37.6	12.3	19.9	11.8	6.2	5.8	0.9
Cycle Q Clear(g_c), s	5.7	4.9	12.3	15.1	31.3	37.6	12.3	19.9	11.8	6.2	5.8	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	831	544	228	1055	601	188	1159	730	137	1052	469
V/C Ratio(X)	0.58	0.20	0.38	0.90	0.88	0.86	0.88	0.58	0.33	0.64	0.33	0.06
Avail Cap(c_a), veh/h	171	886	568	243	1055	601	202	1159	730	228	1052	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	52.9	35.1	27.4	50.6	39.0	33.0	52.0	32.1	18.6	47.8	16.3	15.4
Incr Delay (d2), s/veh	3.0	0.2	0.6	30.3	8.8	12.8	30.4	2.2	1.2	3.4	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	2.3	1.9	4.3	7.9	13.9	15.5	6.4	8.2	4.2	2.4	2.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.9	35.3	28.0	80.9	47.8	45.8	82.4	34.2	19.8	51.2	17.1	15.6
LnGrp LOS	E	D	C	F	D	D	F	C	B	D	B	B
Approach Vol, veh/h		449			1649			1083			461	
Approach Delay, s/veh		35.4			51.3			38.4			23.5	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	47.1	21.8	36.0	19.0	43.2	14.8	43.0
Change Period (Y+Rc), s	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4
Max Green Setting (Gmax), s	* 13	31.6	* 18	32.6	* 15	33.6	* 13	37.6
Max Q Clear Time (g_c+I1), s	8.2	21.9	17.1	14.3	14.3	7.8	7.7	39.6
Green Ext Time (p_c), s	0.1	4.7	0.1	2.3	0.0	3.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.0
HCM 6th LOS	D

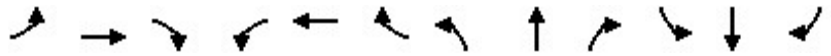
Notes

* 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 (vph)	21	636	121	25	483	412	105	330	22	342	263	27
Future Volume (vph)	21	636	121	25	483	412	105	330	22	342	263	27
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.95		0.91	0.91	
Frt	1.00	0.98		1.00	1.00	0.85		0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.98	
Satd. Flow (prot)	1583	3273		1599	3386	1515		3324		1455	3163	
Flt Permitted	0.40	1.00		0.22	1.00	1.00		0.74		0.95	0.98	
Satd. Flow (perm)	664	3273		373	3386	1515		2484		1455	3163	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	22	662	126	26	503	429	109	344	23	356	274	28
RTOR Reduction (vph)	0	13	0	0	0	274	0	4	0	0	5	0
Lane Group Flow (vph)	22	776	0	26	503	155	0	472	0	217	436	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Split	NA	
Protected Phases		4			4			3		2	2	
Permitted Phases	4			4		4	3					
Actuated Green, G (s)	36.1	36.1		36.1	36.1	36.1		24.7		22.5	22.5	
Effective Green, g (s)	36.1	36.1		36.1	36.1	36.1		24.7		22.5	22.5	
Actuated g/C Ratio	0.36	0.36		0.36	0.36	0.36		0.25		0.22	0.22	
Clearance Time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Grp Cap (vph)	239	1181		134	1222	546		613		327	711	
v/s Ratio Prot		c0.24			0.15					c0.15	0.14	
v/s Ratio Perm	0.03			0.07		0.10		c0.19				
v/c Ratio	0.09	0.66		0.19	0.41	0.28		0.77		0.66	0.61	
Uniform Delay, d1	21.1	26.8		22.0	24.0	22.7		35.0		35.3	34.8	
Progression Factor	1.00	1.00		1.14	1.00	2.06		1.00		1.00	1.00	
Incremental Delay, d2	0.8	2.9		3.0	1.0	1.2		6.3		5.5	1.8	
Delay (s)	21.9	29.6		28.0	25.0	48.0		41.3		40.8	36.6	
Level of Service	C	C		C	C	D		D		D	D	
Approach Delay (s)		29.4			35.4			41.3			38.0	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.7
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



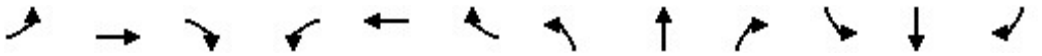
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	733	63	251	657	55	150	397	403	82	270	63
Future Volume (veh/h)	131	733	63	251	657	55	150	397	403	82	270	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1687	1786	1786	1588	1786	1786	1588	1786	1786	1687	1786	1786
Adj Flow Rate, veh/h	135	756	65	259	677	57	155	409	415	85	278	65
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	167	952	82	343	996	84	269	939	596	131	730	168
Arrive On Green	0.10	0.30	0.30	0.12	0.31	0.31	0.09	0.28	0.28	0.08	0.27	0.27
Sat Flow, veh/h	1606	3162	272	2933	3168	267	2933	3393	1514	1606	2739	630
Grp Volume(v), veh/h	135	406	415	259	362	372	155	409	415	85	170	173
Grp Sat Flow(s),veh/h/ln	1606	1697	1737	1467	1697	1738	1467	1697	1514	1606	1697	1673
Q Serve(g_s), s	7.0	18.6	18.7	7.3	15.8	15.8	4.3	8.4	19.5	4.4	7.0	7.2
Cycle Q Clear(g_c), s	7.0	18.6	18.7	7.3	15.8	15.8	4.3	8.4	19.5	4.4	7.0	7.2
Prop In Lane	1.00		0.16	1.00		0.15	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	167	511	523	343	533	546	269	939	596	131	452	446
V/C Ratio(X)	0.81	0.79	0.79	0.76	0.68	0.68	0.58	0.44	0.70	0.65	0.38	0.39
Avail Cap(c_a), veh/h	356	793	812	753	853	874	373	1067	653	242	574	565
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	37.2	27.2	27.2	36.3	25.4	25.4	37.0	25.3	21.5	37.8	25.4	25.5
Incr Delay (d2), s/veh	9.0	3.1	3.0	3.4	1.5	1.5	1.9	0.3	2.9	5.3	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	7.6	7.7	2.7	6.2	6.4	1.6	3.3	7.0	1.9	2.8	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	30.3	30.3	39.7	26.9	26.9	38.9	25.6	24.4	43.1	25.9	26.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		956			993			979			428	
Approach Delay, s/veh		32.5			30.2			27.2			29.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.1	30.9	12.0	27.9	13.0	32.0	11.1	28.8
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3
Max Green Setting (Gmax), s	* 23	39.7	* 11	28.7	* 19	42.7	* 13	26.7
Max Q Clear Time (g_c+I1), s	9.3	20.7	6.3	9.2	9.0	17.8	6.4	21.5
Green Ext Time (p_c), s	0.7	4.9	0.2	1.9	0.2	4.7	0.1	2.0

Intersection Summary	
HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

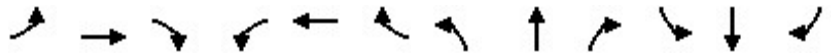
Notes

* 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 (vph)	155	796	73	66	711	17	143	114	94	19	50	60
Future Volume (vph)	155	796	73	66	711	17	143	114	94	19	50	60
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3353	1500	1599	3386	1515	1615	1678		1599	1636	
Flt Permitted	0.32	1.00	1.00	0.28	1.00	1.00	0.66	1.00		0.42	1.00	
Satd. Flow (perm)	536	3353	1500	477	3386	1515	1128	1678		713	1636	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	170	875	80	73	781	19	157	125	103	21	55	66
RTOR Reduction (vph)	0	0	31	0	0	7	0	36	0	0	53	0
Lane Group Flow (vph)	170	875	49	73	781	12	157	192	0	21	68	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2		2	4			4		
Actuated Green, G (s)	60.9	60.9	60.9	60.9	60.9	60.9	20.1	20.1		20.1	20.1	
Effective Green, g (s)	60.9	60.9	60.9	60.9	60.9	60.9	20.1	20.1		20.1	20.1	
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61	0.61	0.20	0.20		0.20	0.20	
Clearance Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	326	2041	913	290	2062	922	226	337		143	328	
v/s Ratio Prot		0.26			0.23			0.11			0.04	
v/s Ratio Perm	c0.32		0.03	0.15		0.01	c0.14			0.03		
v/c Ratio	0.52	0.43	0.05	0.25	0.38	0.01	0.69	0.57		0.15	0.21	
Uniform Delay, d1	11.2	10.3	7.9	9.0	9.9	7.7	37.1	36.0		32.9	33.3	
Progression Factor	1.06	0.99	2.05	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.9	0.6	0.1	2.1	0.5	0.0	8.9	2.2		0.5	0.3	
Delay (s)	16.9	10.8	16.3	11.1	10.5	7.7	46.0	38.3		33.4	33.6	
Level of Service	B	B	B	B	B	A	D	D		C	C	
Approach Delay (s)		12.1			10.5			41.4			33.6	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	951	85	54	630	74	72	35	62	170	39	171
Future Volume (veh/h)	126	951	85	54	630	74	72	35	62	170	39	171
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	1687	1786	1786	1673	1772	1772	1687	1786	1786	1687	1786	1786
Adj Flow Rate, veh/h	134	1012	90	57	670	79	77	37	66	181	41	182
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	371	1181	105	254	1054	124	321	89	158	434	52	231
Arrive On Green	0.10	0.37	0.37	0.07	0.35	0.35	0.10	0.15	0.15	0.13	0.18	0.18
Sat Flow, veh/h	1606	3152	280	1594	3034	357	1606	575	1026	1606	286	1271
Grp Volume(v), veh/h	134	545	557	57	371	378	77	0	103	181	0	223
Grp Sat Flow(s),veh/h/ln	1606	1697	1736	1594	1683	1708	1606	0	1601	1606	0	1557
Q Serve(g_s), s	3.4	19.8	19.8	1.5	12.4	12.4	2.5	0.0	3.9	6.1	0.0	9.2
Cycle Q Clear(g_c), s	3.4	19.8	19.8	1.5	12.4	12.4	2.5	0.0	3.9	6.1	0.0	9.2
Prop In Lane	1.00		0.16	1.00		0.21	1.00		0.64	1.00		0.82
Lane Grp Cap(c), veh/h	371	636	651	254	585	593	321	0	247	434	0	283
V/C Ratio(X)	0.36	0.86	0.86	0.22	0.64	0.64	0.24	0.00	0.42	0.42	0.00	0.79
Avail Cap(c_a), veh/h	404	701	717	331	695	705	392	0	630	460	0	613
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	12.8	19.3	19.3	14.6	18.3	18.3	19.9	0.0	25.6	19.5	0.0	26.2
Incr Delay (d2), s/veh	0.6	9.6	9.4	0.4	1.4	1.4	0.4	0.0	1.1	0.6	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	8.5	8.7	0.5	4.5	4.6	0.9	0.0	1.5	2.2	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	28.9	28.7	15.0	19.8	19.8	20.3	0.0	26.7	20.1	0.0	31.1
LnGrp LOS	B	C	C	B	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1236			806			180			404	
Approach Delay, s/veh		27.1			19.4			24.0			26.2	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	30.4	11.1	16.8	10.6	28.6	12.9	14.9
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	4.6	* 4.2	5.3	* 4.2	4.6
Max Green Setting (Gmax), s	* 7.8	27.7	* 9.8	26.4	* 7.8	27.7	* 9.8	26.4
Max Q Clear Time (g_c+I1), s	3.5	21.8	4.5	11.2	5.4	14.4	8.1	5.9
Green Ext Time (p_c), s	0.0	3.3	0.1	1.2	0.1	3.8	0.1	0.5

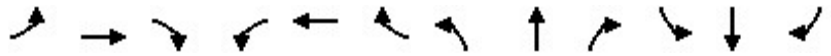
Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

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 (vph)	28	97	33	96	60	209	47	620	167	264	558	32
Future Volume (vph)	28	97	33	96	60	209	47	620	167	264	558	32
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1734		1599	1782	1515	1615	3420	1530	1599	3358	
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1734		1599	1782	1515	1615	3420	1530	1599	3358	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	29	102	35	101	63	220	49	653	176	278	587	34
RTOR Reduction (vph)	0	9	0	0	0	126	0	0	96	0	2	0
Lane Group Flow (vph)	0	157	0	101	63	94	49	653	80	278	619	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Split	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8	5	1	6		5	2	
Permitted Phases						8			6			
Actuated Green, G (s)		16.2		13.0	13.0	51.1	7.5	31.8	31.8	38.1	62.4	
Effective Green, g (s)		16.2		13.0	13.0	51.1	7.5	31.8	31.8	38.1	62.4	
Actuated g/C Ratio		0.13		0.11	0.11	0.43	0.06	0.27	0.27	0.32	0.52	
Clearance Time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Vehicle Extension (s)		3.0		3.0	3.0	2.5	2.5	4.5	4.5	2.5	4.5	
Lane Grp Cap (vph)		234		173	193	645	100	906	405	507	1746	
v/s Ratio Prot		c0.09		c0.06	0.04	0.05	0.03	c0.19		c0.17	0.18	
v/s Ratio Perm						0.02			0.05			
v/c Ratio		0.67		0.58	0.33	0.15	0.49	0.72	0.20	0.55	0.35	
Uniform Delay, d1		49.4		50.9	49.5	21.1	54.4	40.1	34.2	33.8	16.9	
Progression Factor		1.00		1.00	1.00	1.00	0.86	1.33	2.14	1.00	1.00	
Incremental Delay, d2		7.4		4.9	1.0	0.1	2.5	4.5	1.0	1.0	0.6	
Delay (s)		56.8		55.9	50.4	21.2	49.0	57.9	74.3	34.8	17.5	
Level of Service		E		E	D	C	D	E	E	C	B	
Approach Delay (s)		56.8			35.1			60.7			22.9	
Approach LOS		E			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.9
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	696	314	202	533	308	167	412	310	319	457	27
Future Volume (veh/h)	111	696	314	202	533	308	167	412	310	319	457	27
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	1673	1772	1772	1700	1800	1800	1687	1786	1786	1687	1786	1786
Adj Flow Rate, veh/h	116	725	327	210	555	321	174	429	323	332	476	28
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	0	0	1	1	1	1	1	1
Cap, veh/h	143	850	564	193	964	701	198	959	608	285	1143	510
Arrive On Green	0.09	0.25	0.25	0.12	0.28	0.28	0.12	0.28	0.28	0.35	0.67	0.67
Sat Flow, veh/h	1594	3367	1502	1619	3420	1525	1606	3393	1514	1606	3393	1514
Grp Volume(v), veh/h	116	725	327	210	555	321	174	429	323	332	476	28
Grp Sat Flow(s),veh/h/ln	1594	1683	1502	1619	1710	1525	1606	1697	1514	1606	1697	1514
Q Serve(g_s), s	8.6	24.6	20.9	14.3	16.7	17.3	12.8	12.5	19.5	21.3	7.6	0.8
Cycle Q Clear(g_c), s	8.6	24.6	20.9	14.3	16.7	17.3	12.8	12.5	19.5	21.3	7.6	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	850	564	193	964	701	198	959	608	285	1143	510
V/C Ratio(X)	0.81	0.85	0.58	1.09	0.58	0.46	0.88	0.45	0.53	1.16	0.42	0.05
Avail Cap(c_a), veh/h	177	915	593	193	964	701	218	959	608	285	1143	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	53.6	42.7	29.9	52.8	36.9	22.2	51.7	35.3	27.3	38.7	14.2	13.1
Incr Delay (d2), s/veh	12.5	5.1	1.0	90.4	1.0	0.7	28.6	1.5	3.3	103.6	1.0	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	3.9	10.7	7.6	10.6	7.0	6.2	6.6	5.3	7.5	15.0	2.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	47.9	31.0	143.2	38.0	22.9	80.3	36.9	30.6	142.3	15.3	13.3
LnGrp LOS	E	D	C	F	D	C	F	D	C	F	B	B
Approach Vol, veh/h		1168			1086			926			836	
Approach Delay, s/veh		45.0			53.9			42.8			65.7	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	39.3	19.0	35.7	19.5	45.8	15.5	39.2
Change Period (Y+Rc), s	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4
Max Green Setting (Gmax), s	* 21	31.6	* 14	32.6	* 16	36.6	* 13	33.6
Max Q Clear Time (g_c+I1), s	23.3	21.5	16.3	26.6	14.8	9.6	10.6	19.3
Green Ext Time (p_c), s	0.0	3.8	0.0	3.7	0.1	4.7	0.0	5.7

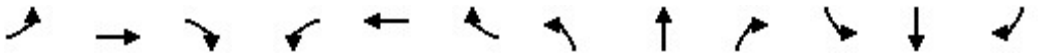
Intersection Summary	
HCM 6th Ctrl Delay	51.2
HCM 6th LOS	D

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.

Future Baseline Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	216	83	16	659	754	95	293	24	213	300	25
Future Volume (vph)	22	216	83	16	659	754	95	293	24	213	300	25
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.95		0.91	0.91	
Frt	1.00	0.96		1.00	1.00	0.85		0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	1.00	
Satd. Flow (prot)	1568	3182		1568	3320	1485		3286		1441	3162	
Flt Permitted	0.28	1.00		0.55	1.00	1.00		0.75		0.95	1.00	
Satd. Flow (perm)	463	3182		905	3320	1485		2508		1441	3162	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	24	232	89	17	709	811	102	315	26	229	323	27
RTOR Reduction (vph)	0	32	0	0	0	412	0	5	0	0	6	0
Lane Group Flow (vph)	24	289	0	17	709	399	0	438	0	190	383	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Split	NA	
Protected Phases		4			4			3		2	2	
Permitted Phases	4			4		4	3					
Actuated Green, G (s)	38.8	38.8		38.8	38.8	38.8		23.9		20.6	20.6	
Effective Green, g (s)	38.8	38.8		38.8	38.8	38.8		23.9		20.6	20.6	
Actuated g/C Ratio	0.39	0.39		0.39	0.39	0.39		0.24		0.21	0.21	
Clearance Time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Grp Cap (vph)	179	1234		351	1288	576		599		296	651	
v/s Ratio Prot		0.09			0.21					c0.13	0.12	
v/s Ratio Perm	0.05			0.02		c0.27		c0.17				
v/c Ratio	0.13	0.23		0.05	0.55	0.69		0.73		0.64	0.59	
Uniform Delay, d1	19.8	20.6		19.1	23.8	25.6		35.1		36.3	35.9	
Progression Factor	1.00	1.00		1.18	0.95	1.64		1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.4		0.2	1.4	5.6		4.9		5.2	1.6	
Delay (s)	21.3	21.0		22.7	24.1	47.6		40.0		41.6	37.5	
Level of Service	C	C		C	C	D		D		D	D	
Approach Delay (s)		21.1			36.5			40.0			38.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.7
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

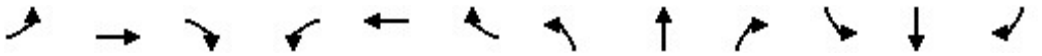
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	248	52	173	837	35	267	396	287	40	281	89
Future Volume (veh/h)	45	248	52	173	837	35	267	396	287	40	281	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1660	1758	1758	1575	1772	1772	1550	1744	1744	1660	1758	1758
Adj Flow Rate, veh/h	46	256	54	178	863	36	275	408	296	41	290	92
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	2	2	2	4	4	4	3	3	3
Cap, veh/h	94	859	178	287	1156	48	373	824	513	100	455	142
Arrive On Green	0.06	0.31	0.31	0.10	0.35	0.35	0.13	0.25	0.25	0.06	0.18	0.18
Sat Flow, veh/h	1581	2754	571	2910	3293	137	2864	3313	1478	1581	2508	780
Grp Volume(v), veh/h	46	154	156	178	441	458	275	408	296	41	191	191
Grp Sat Flow(s),veh/h/ln	1581	1670	1655	1455	1683	1747	1432	1657	1478	1581	1670	1617
Q Serve(g_s), s	1.9	4.8	4.9	4.0	15.8	15.8	6.3	7.2	11.2	1.7	7.2	7.5
Cycle Q Clear(g_c), s	1.9	4.8	4.9	4.0	15.8	15.8	6.3	7.2	11.2	1.7	7.2	7.5
Prop In Lane	1.00		0.35	1.00		0.08	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	94	521	516	287	591	613	373	824	513	100	303	294
V/C Ratio(X)	0.49	0.29	0.30	0.62	0.75	0.75	0.74	0.50	0.58	0.41	0.63	0.65
Avail Cap(c_a), veh/h	203	1066	1056	544	1172	1217	744	1727	916	203	651	631
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	31.2	17.9	17.9	29.6	19.5	19.5	28.6	22.0	18.2	30.8	25.9	26.0
Incr Delay (d2), s/veh	3.9	0.3	0.3	2.2	1.9	1.8	2.8	0.5	1.0	2.7	2.2	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.7	1.8	1.4	5.8	6.0	2.2	2.7	3.7	0.7	2.9	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	18.2	18.2	31.8	21.4	21.4	31.5	22.5	19.3	33.5	28.1	28.4
LnGrp LOS	D	B	B	C	C	C	C	C	B	C	C	C
Approach Vol, veh/h		356			1077			979			423	
Approach Delay, s/veh		20.4			23.1			24.0			28.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	26.7	13.1	17.7	8.3	29.3	8.5	22.3
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3
Max Green Setting (Gmax), s	* 13	43.7	* 18	26.7	* 8.8	47.7	* 8.8	35.7
Max Q Clear Time (g_c+I1), s	6.8	6.9	8.3	9.5	3.9	17.8	3.7	13.2
Green Ext Time (p_c), s	0.3	1.9	0.7	2.1	0.0	6.3	0.0	3.8

Intersection Summary	
HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

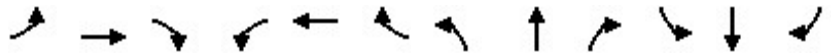
Notes

* 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 (vph)	24	383	36	58	1230	10	50	37	28	17	41	155
Future Volume (vph)	24	383	36	58	1230	10	50	37	28	17	41	155
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.88	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3353	1500	1568	3320	1485	1568	1635		1615	1586	
Flt Permitted	0.16	1.00	1.00	0.51	1.00	1.00	0.38	1.00		0.71	1.00	
Satd. Flow (perm)	262	3353	1500	842	3320	1485	628	1635		1209	1586	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	26	412	39	62	1323	11	54	40	30	18	44	167
RTOR Reduction (vph)	0	0	13	0	0	4	0	25	0	0	61	0
Lane Group Flow (vph)	26	412	26	62	1323	7	54	45	0	18	150	0
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	0%	0%	0%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2		2	4			4		
Actuated Green, G (s)	65.8	65.8	65.8	65.8	65.8	65.8	15.2	15.2		15.2	15.2	
Effective Green, g (s)	65.8	65.8	65.8	65.8	65.8	65.8	15.2	15.2		15.2	15.2	
Actuated g/C Ratio	0.66	0.66	0.66	0.66	0.66	0.66	0.15	0.15		0.15	0.15	
Clearance Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	172	2206	987	554	2184	977	95	248		183	241	
v/s Ratio Prot		0.12			c0.40			0.03			c0.09	
v/s Ratio Perm	0.10		0.02	0.07		0.00	0.09			0.01		
v/c Ratio	0.15	0.19	0.03	0.11	0.61	0.01	0.57	0.18		0.10	0.62	
Uniform Delay, d1	6.5	6.7	5.9	6.3	9.7	5.9	39.4	37.0		36.5	39.7	
Progression Factor	1.22	1.12	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	0.2	0.0	0.4	1.3	0.0	7.6	0.3		0.2	4.9	
Delay (s)	9.7	7.6	6.0	6.7	11.0	5.9	46.9	37.3		36.7	44.6	
Level of Service	A	A	A	A	B	A	D	D		D	D	
Approach Delay (s)		7.6			10.8			41.5			44.0	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



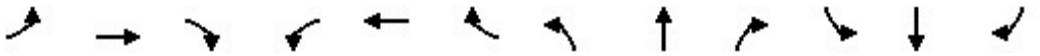
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	323	60	70	917	37	96	20	42	14	38	46
Future Volume (veh/h)	105	323	60	70	917	37	96	20	42	14	38	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1620	1716	1716	1673	1772	1772	1673	1772	1772	1647	1744	1744
Adj Flow Rate, veh/h	107	330	61	71	936	38	98	20	43	14	39	47
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	2	2	2	2	2	2	4	4	4
Cap, veh/h	328	1038	190	523	1190	48	392	102	220	312	82	99
Arrive On Green	0.10	0.38	0.38	0.08	0.36	0.36	0.12	0.20	0.20	0.03	0.11	0.11
Sat Flow, veh/h	1543	2752	503	1594	3297	134	1594	501	1077	1569	720	868
Grp Volume(v), veh/h	107	194	197	71	478	496	98	0	63	14	0	86
Grp Sat Flow(s),veh/h/ln	1543	1630	1625	1594	1683	1748	1594	0	1578	1569	0	1588
Q Serve(g_s), s	2.4	5.0	5.1	1.6	15.1	15.1	2.9	0.0	2.0	0.5	0.0	3.0
Cycle Q Clear(g_c), s	2.4	5.0	5.1	1.6	15.1	15.1	2.9	0.0	2.0	0.5	0.0	3.0
Prop In Lane	1.00		0.31	1.00		0.08	1.00		0.68	1.00		0.55
Lane Grp Cap(c), veh/h	328	615	613	523	608	631	392	0	322	312	0	182
V/C Ratio(X)	0.33	0.32	0.32	0.14	0.79	0.79	0.25	0.00	0.20	0.04	0.00	0.47
Avail Cap(c_a), veh/h	379	756	753	602	780	810	461	0	697	520	0	701
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	11.8	13.2	13.2	9.9	17.0	17.0	17.2	0.0	19.7	22.0	0.0	24.8
Incr Delay (d2), s/veh	0.6	0.3	0.3	0.1	4.1	4.0	0.3	0.0	0.3	0.1	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.6	1.7	0.5	5.7	5.9	1.0	0.0	0.7	0.2	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	13.4	13.5	10.0	21.1	21.0	17.6	0.0	20.0	22.1	0.0	26.7
LnGrp LOS	B	B	B	B	C	C	B	A	C	C	A	C
Approach Vol, veh/h		498			1045			161			100	
Approach Delay, s/veh		13.2			20.3			18.5			26.0	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	27.8	11.4	11.4	10.0	26.9	6.1	16.8
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	4.6	* 4.2	5.3	* 4.2	4.6
Max Green Setting (Gmax), s	* 7.8	27.7	* 9.8	26.4	* 7.8	27.7	* 9.8	26.4
Max Q Clear Time (g_c+I1), s	3.6	7.1	4.9	5.0	4.4	17.1	2.5	4.0
Green Ext Time (p_c), s	0.0	2.2	0.1	0.4	0.1	4.4	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	18.5
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 (vph)	9	17	8	196	36	308	33	1041	146	85	233	7
Future Volume (vph)	9	17	8	196	36	308	33	1041	146	85	233	7
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1583	1765	1500	1568	3320	1485	1583	3339	
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1722		1583	1765	1500	1568	3320	1485	1583	3339	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	18	8	206	38	324	35	1096	154	89	245	7
RTOR Reduction (vph)	0	8	0	0	0	236	0	0	55	0	1	0
Lane Group Flow (vph)	0	27	0	206	38	88	35	1096	99	89	251	0
Heavy Vehicles (%)	0%	0%	0%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8	5	1	6		5	2	
Permitted Phases						8			6			
Actuated Green, G (s)		5.6		20.9	20.9	32.5	5.4	61.0	61.0	11.6	67.2	
Effective Green, g (s)		5.6		20.9	20.9	32.5	5.4	61.0	61.0	11.6	67.2	
Actuated g/C Ratio		0.05		0.17	0.17	0.27	0.05	0.51	0.51	0.10	0.56	
Clearance Time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Vehicle Extension (s)		3.0		3.0	3.0	2.5	2.5	4.5	4.5	2.5	4.5	
Lane Grp Cap (vph)		80		275	307	406	70	1687	754	153	1869	
v/s Ratio Prot		c0.02		c0.13	0.02	0.02	0.02	c0.33		c0.06	0.08	
v/s Ratio Perm						0.04			0.07			
v/c Ratio		0.34		0.75	0.12	0.22	0.50	0.65	0.13	0.58	0.13	
Uniform Delay, d1		55.4		47.1	41.8	33.9	56.0	21.7	15.5	51.9	12.6	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.08	1.54	1.00	1.00	
Incremental Delay, d2		2.6		10.6	0.2	0.2	3.2	1.5	0.3	4.6	0.1	
Delay (s)		58.0		57.7	42.0	34.1	59.4	24.9	24.2	56.5	12.7	
Level of Service		E		E	D	C	E	C	C	E	B	
Approach Delay (s)		58.0			43.2			25.7			24.1	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.9
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

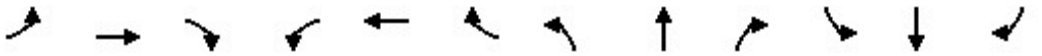
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	164	199	198	898	501	161	655	234	83	329	29
Future Volume (veh/h)	74	164	199	198	898	501	161	655	234	83	329	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1620	1716	1716	1673	1772	1772	1660	1758	1758	1660	1758	1758
Adj Flow Rate, veh/h	78	173	209	208	945	527	169	689	246	87	346	31
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, %	6	6	6	2	2	2	3	3	3	3	3	3
Cap, veh/h	131	825	545	231	1055	601	192	1158	733	137	1042	465
Arrive On Green	0.08	0.25	0.25	0.15	0.31	0.31	0.12	0.35	0.35	0.17	0.62	0.62
Sat Flow, veh/h	1543	3260	1454	1594	3367	1502	1581	3340	1490	1581	3340	1490
Grp Volume(v), veh/h	78	173	209	208	945	527	169	689	246	87	346	31
Grp Sat Flow(s),veh/h/ln	1543	1630	1454	1594	1683	1502	1581	1670	1490	1581	1670	1490
Q Serve(g_s), s	5.8	5.0	12.6	15.4	32.2	37.6	12.6	20.4	12.1	6.1	5.9	1.0
Cycle Q Clear(g_c), s	5.8	5.0	12.6	15.4	32.2	37.6	12.6	20.4	12.1	6.1	5.9	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	131	825	545	231	1055	601	192	1158	733	137	1042	465
V/C Ratio(X)	0.60	0.21	0.38	0.90	0.90	0.88	0.88	0.59	0.34	0.64	0.33	0.07
Avail Cap(c_a), veh/h	171	886	572	243	1055	601	202	1158	733	228	1042	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	52.9	35.4	27.4	50.4	39.3	33.3	51.8	32.2	18.5	47.8	16.6	15.7
Incr Delay (d2), s/veh	3.1	0.2	0.6	31.1	10.3	14.2	31.5	2.3	1.2	3.3	0.8	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	2.4	2.0	4.4	8.1	14.5	16.1	6.6	8.4	4.3	2.4	2.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	35.5	28.0	81.6	49.6	47.5	83.3	34.5	19.8	51.2	17.4	16.0
LnGrp LOS	E	D	C	F	D	D	F	C	B	D	B	B
Approach Vol, veh/h		460			1680			1104			464	
Approach Delay, s/veh		35.6			52.9			38.7			23.7	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	47.0	22.1	35.8	19.3	42.8	14.9	43.0
Change Period (Y+Rc), s	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4
Max Green Setting (Gmax), s	* 13	31.6	* 18	32.6	* 15	33.6	* 13	37.6
Max Q Clear Time (g_c+I1), s	8.1	22.4	17.4	14.6	14.6	7.9	7.8	39.6
Green Ext Time (p_c), s	0.1	4.6	0.0	2.4	0.0	3.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.9
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 (vph)	22	642	124	26	489	418	108	337	23	343	269	28
Future Volume (vph)	22	642	124	26	489	418	108	337	23	343	269	28
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.95		0.91	0.91	
Frt	1.00	0.98		1.00	1.00	0.85		0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.98	
Satd. Flow (prot)	1583	3272		1599	3386	1515		3323		1455	3163	
Flt Permitted	0.39	1.00		0.21	1.00	1.00		0.73		0.95	0.98	
Satd. Flow (perm)	653	3272		358	3386	1515		2470		1455	3163	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	23	669	129	27	509	435	112	351	24	357	280	29
RTOR Reduction (vph)	0	14	0	0	0	281	0	4	0	0	5	0
Lane Group Flow (vph)	23	784	0	27	509	154	0	484	0	218	443	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Split	NA	
Protected Phases		4			4			3		2	2	
Permitted Phases	4			4		4	3					
Actuated Green, G (s)	35.5	35.5		35.5	35.5	35.5		25.1		22.7	22.7	
Effective Green, g (s)	35.5	35.5		35.5	35.5	35.5		25.1		22.7	22.7	
Actuated g/C Ratio	0.36	0.36		0.36	0.36	0.36		0.25		0.23	0.23	
Clearance Time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Grp Cap (vph)	231	1161		127	1202	537		619		330	718	
v/s Ratio Prot		c0.24			0.15					c0.15	0.14	
v/s Ratio Perm	0.04			0.08		0.10		c0.20				
v/c Ratio	0.10	0.68		0.21	0.42	0.29		0.78		0.66	0.62	
Uniform Delay, d1	21.6	27.4		22.5	24.5	23.2		34.9		35.1	34.7	
Progression Factor	1.00	1.00		1.09	0.97	1.94		1.00		1.00	1.00	
Incremental Delay, d2	0.9	3.2		3.6	1.0	1.3		6.8		5.4	1.8	
Delay (s)	22.4	30.5		28.0	24.9	46.1		41.7		40.5	36.5	
Level of Service	C	C		C	C	D		D		D	D	
Approach Delay (s)		30.3			34.5			41.7			37.8	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.7
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

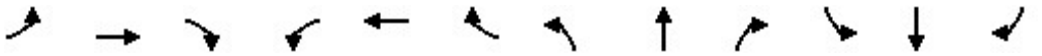
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	741	65	255	667	57	154	405	408	84	276	65
Future Volume (veh/h)	134	741	65	255	667	57	154	405	408	84	276	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1687	1786	1786	1588	1786	1786	1588	1786	1786	1687	1786	1786
Adj Flow Rate, veh/h	138	764	67	263	688	59	159	418	421	87	285	67
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	170	956	84	346	997	85	266	943	599	130	734	170
Arrive On Green	0.11	0.30	0.30	0.12	0.32	0.32	0.09	0.28	0.28	0.08	0.27	0.27
Sat Flow, veh/h	1606	3156	277	2933	3163	271	2933	3393	1514	1606	2736	633
Grp Volume(v), veh/h	138	411	420	263	369	378	159	418	421	87	175	177
Grp Sat Flow(s),veh/h/ln	1606	1697	1736	1467	1697	1737	1467	1697	1514	1606	1697	1672
Q Serve(g_s), s	7.3	19.2	19.2	7.5	16.4	16.4	4.5	8.8	20.1	4.5	7.3	7.5
Cycle Q Clear(g_c), s	7.3	19.2	19.2	7.5	16.4	16.4	4.5	8.8	20.1	4.5	7.3	7.5
Prop In Lane	1.00		0.16	1.00		0.16	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	170	514	526	346	535	548	266	943	599	130	455	449
V/C Ratio(X)	0.81	0.80	0.80	0.76	0.69	0.69	0.60	0.44	0.70	0.67	0.38	0.39
Avail Cap(c_a), veh/h	350	780	799	741	839	859	367	1050	647	238	564	556
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	37.8	27.7	27.7	36.9	25.9	25.9	37.7	25.7	21.8	38.5	25.8	25.8
Incr Delay (d2), s/veh	9.0	3.4	3.4	3.5	1.6	1.6	2.2	0.3	3.2	5.8	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	7.9	8.0	2.8	6.5	6.7	1.7	3.5	7.3	2.0	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	31.1	31.0	40.4	27.5	27.4	39.9	26.0	25.0	44.3	26.3	26.4
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		969			1010			998			439	
Approach Delay, s/veh		33.3			30.8			27.8			29.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	31.5	12.0	28.5	13.3	32.5	11.2	29.3
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3
Max Green Setting (Gmax), s	* 23	39.7	* 11	28.7	* 19	42.7	* 13	26.7
Max Q Clear Time (g_c+I1), s	9.5	21.2	6.5	9.5	9.3	18.4	6.5	22.1
Green Ext Time (p_c), s	0.7	4.9	0.2	2.0	0.2	4.7	0.1	1.9

Intersection Summary	
HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C

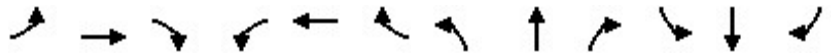
Notes

* 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 (vph)	157	807	69	68	717	18	135	117	96	20	52	58
Future Volume (vph)	157	807	69	68	717	18	135	117	96	20	52	58
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3353	1500	1599	3386	1515	1615	1679		1599	1641	
Flt Permitted	0.32	1.00	1.00	0.28	1.00	1.00	0.66	1.00		0.40	1.00	
Satd. Flow (perm)	534	3353	1500	472	3386	1515	1124	1679		670	1641	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	173	887	76	75	788	20	148	129	105	22	57	64
RTOR Reduction (vph)	0	0	29	0	0	8	0	36	0	0	50	0
Lane Group Flow (vph)	173	887	47	75	788	12	148	198	0	22	71	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2		2	4			4		
Actuated Green, G (s)	61.7	61.7	61.7	61.7	61.7	61.7	19.3	19.3		19.3	19.3	
Effective Green, g (s)	61.7	61.7	61.7	61.7	61.7	61.7	19.3	19.3		19.3	19.3	
Actuated g/C Ratio	0.62	0.62	0.62	0.62	0.62	0.62	0.19	0.19		0.19	0.19	
Clearance Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	329	2068	925	291	2089	934	216	324		129	316	
v/s Ratio Prot		0.26			0.23			0.12			0.04	
v/s Ratio Perm	c0.32		0.03	0.16		0.01	c0.13			0.03		
v/c Ratio	0.53	0.43	0.05	0.26	0.38	0.01	0.69	0.61		0.17	0.22	
Uniform Delay, d1	10.9	10.0	7.6	8.7	9.6	7.4	37.5	36.9		33.7	34.0	
Progression Factor	1.12	1.03	2.20	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.9	0.5	0.1	2.1	0.5	0.0	8.7	3.4		0.6	0.4	
Delay (s)	17.0	10.8	16.8	10.9	10.1	7.4	46.2	40.3		34.3	34.4	
Level of Service	B	B	B	B	B	A	D	D		C	C	
Approach Delay (s)		12.2			10.1			42.6			34.4	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	971	87	56	643	76	74	36	64	174	40	169
Future Volume (veh/h)	118	971	87	56	643	76	74	36	64	174	40	169
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	1687	1786	1786	1673	1772	1772	1687	1786	1786	1687	1786	1786
Adj Flow Rate, veh/h	126	1033	93	60	684	81	79	38	68	185	43	180
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	366	1188	107	252	1072	127	320	89	159	429	54	228
Arrive On Green	0.09	0.38	0.38	0.07	0.35	0.35	0.10	0.16	0.16	0.13	0.18	0.18
Sat Flow, veh/h	1606	3148	283	1594	3032	359	1606	574	1027	1606	301	1259
Grp Volume(v), veh/h	126	557	569	60	379	386	79	0	106	185	0	223
Grp Sat Flow(s),veh/h/ln	1606	1697	1735	1594	1683	1707	1606	0	1601	1606	0	1559
Q Serve(g_s), s	3.2	20.7	20.7	1.5	12.8	12.8	2.6	0.0	4.1	6.3	0.0	9.3
Cycle Q Clear(g_c), s	3.2	20.7	20.7	1.5	12.8	12.8	2.6	0.0	4.1	6.3	0.0	9.3
Prop In Lane	1.00		0.16	1.00		0.21	1.00		0.64	1.00		0.81
Lane Grp Cap(c), veh/h	366	640	655	252	595	604	320	0	249	429	0	282
V/C Ratio(X)	0.34	0.87	0.87	0.24	0.64	0.64	0.25	0.00	0.43	0.43	0.00	0.79
Avail Cap(c_a), veh/h	401	691	707	323	686	696	386	0	622	454	0	606
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	12.8	19.6	19.6	14.8	18.3	18.3	20.1	0.0	26.0	19.9	0.0	26.6
Incr Delay (d2), s/veh	0.6	10.9	10.8	0.5	1.6	1.6	0.4	0.0	1.2	0.7	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.1	9.3	0.5	4.7	4.8	1.0	0.0	1.6	2.3	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	30.6	30.4	15.3	19.9	19.9	20.5	0.0	27.1	20.5	0.0	31.5
LnGrp LOS	B	C	C	B	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1252			825			185			408	
Approach Delay, s/veh		28.8			19.6			24.3			26.5	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	30.9	11.2	16.9	10.6	29.3	12.9	15.2
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	4.6	* 4.2	5.3	* 4.2	4.6
Max Green Setting (Gmax), s	* 7.8	27.7	* 9.8	26.4	* 7.8	27.7	* 9.8	26.4
Max Q Clear Time (g_c+I1), s	3.5	22.7	4.6	11.3	5.2	14.8	8.3	6.1
Green Ext Time (p_c), s	0.0	3.0	0.1	1.2	0.1	3.8	0.1	0.5

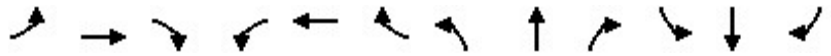
Intersection Summary	
HCM 6th Ctrl Delay	25.3
HCM 6th LOS	C

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 (vph)	29	99	34	98	62	214	48	624	171	270	565	33
Future Volume (vph)	29	99	34	98	62	214	48	624	171	270	565	33
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1733		1599	1782	1515	1615	3420	1530	1599	3358	
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1733		1599	1782	1515	1615	3420	1530	1599	3358	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	104	36	103	65	225	51	657	180	284	595	35
RTOR Reduction (vph)	0	9	0	0	0	128	0	0	99	0	2	0
Lane Group Flow (vph)	0	162	0	103	65	97	51	657	81	284	628	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Split	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8	5	1	6		5	2	
Permitted Phases						8			6			
Actuated Green, G (s)		16.5		13.1	13.1	51.7	7.7	30.9	30.9	38.6	61.8	
Effective Green, g (s)		16.5		13.1	13.1	51.7	7.7	30.9	30.9	38.6	61.8	
Actuated g/C Ratio		0.14		0.11	0.11	0.43	0.06	0.26	0.26	0.32	0.51	
Clearance Time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Vehicle Extension (s)		3.0		3.0	3.0	2.5	2.5	4.5	4.5	2.5	4.5	
Lane Grp Cap (vph)		238		174	194	652	103	880	393	514	1729	
v/s Ratio Prot		c0.09		c0.06	0.04	0.05	0.03	c0.19		c0.18	0.19	
v/s Ratio Perm						0.02			0.05			
v/c Ratio		0.68		0.59	0.34	0.15	0.50	0.75	0.21	0.55	0.36	
Uniform Delay, d1		49.3		50.9	49.4	20.8	54.3	41.0	34.9	33.6	17.4	
Progression Factor		1.00		1.00	1.00	1.00	0.86	1.33	2.13	1.00	1.00	
Incremental Delay, d2		7.8		5.3	1.0	0.1	2.5	5.3	1.1	1.0	0.6	
Delay (s)		57.1		56.2	50.4	20.8	48.9	59.5	75.6	34.6	18.0	
Level of Service		E		E	D	C	D	E	E	C	B	
Approach Delay (s)		57.1			35.0			62.2			23.1	
Approach LOS		E			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.9
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	710	321	207	544	308	171	419	317	324	464	28
Future Volume (veh/h)	114	710	321	207	544	308	171	419	317	324	464	28
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	1673	1772	1772	1700	1800	1800	1687	1786	1786	1687	1786	1786
Adj Flow Rate, veh/h	119	740	334	216	567	321	178	436	330	338	483	29
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	0	0	1	1	1	1	1	1
Cap, veh/h	143	859	572	193	972	704	202	950	604	285	1126	502
Arrive On Green	0.09	0.26	0.26	0.12	0.28	0.28	0.13	0.28	0.28	0.35	0.66	0.66
Sat Flow, veh/h	1594	3367	1502	1619	3420	1525	1606	3393	1514	1606	3393	1514
Grp Volume(v), veh/h	119	740	334	216	567	321	178	436	330	338	483	29
Grp Sat Flow(s),veh/h/ln	1594	1683	1502	1619	1710	1525	1606	1697	1514	1606	1697	1514
Q Serve(g_s), s	8.8	25.2	21.3	14.3	17.1	17.2	13.1	12.7	20.1	21.3	8.0	0.8
Cycle Q Clear(g_c), s	8.8	25.2	21.3	14.3	17.1	17.2	13.1	12.7	20.1	21.3	8.0	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	859	572	193	972	704	202	950	604	285	1126	502
V/C Ratio(X)	0.83	0.86	0.58	1.12	0.58	0.46	0.88	0.46	0.55	1.19	0.43	0.06
Avail Cap(c_a), veh/h	177	915	597	193	972	704	218	950	604	285	1126	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	53.7	42.7	29.6	52.8	36.8	22.0	51.6	35.7	27.7	38.7	14.8	13.6
Incr Delay (d2), s/veh	14.3	5.4	1.0	100.5	1.1	0.7	29.6	1.6	3.5	111.5	1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	10.9	7.7	11.1	7.2	6.2	6.8	5.4	7.7	15.6	2.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.0	48.1	30.6	153.4	37.9	22.7	81.1	37.3	31.2	150.2	15.9	13.8
LnGrp LOS	E	D	C	F	D	C	F	D	C	F	B	B
Approach Vol, veh/h		1193			1104			944			850	
Approach Delay, s/veh		45.2			56.1			43.4			69.3	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	39.0	19.0	36.0	19.8	45.2	15.5	39.5
Change Period (Y+Rc), s	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4
Max Green Setting (Gmax), s	* 21	31.6	* 14	32.6	* 16	36.6	* 13	33.6
Max Q Clear Time (g_c+I1), s	23.3	22.1	16.3	27.2	15.1	10.0	10.8	19.2
Green Ext Time (p_c), s	0.0	3.7	0.0	3.4	0.0	4.7	0.0	5.8

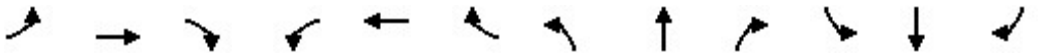
Intersection Summary	
HCM 6th Ctrl Delay	52.7
HCM 6th LOS	D

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.

Future with Project Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	218	83	16	665	759	95	293	24	215	300	25
Future Volume (vph)	22	218	83	16	665	759	95	293	24	215	300	25
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.95		0.91	0.91	
Frt	1.00	0.96		1.00	1.00	0.85		0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.99	
Satd. Flow (prot)	1568	3183		1568	3320	1485		3286		1441	3162	
Flt Permitted	0.28	1.00		0.55	1.00	1.00		0.75		0.95	0.99	
Satd. Flow (perm)	458	3183		902	3320	1485		2505		1441	3162	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	24	234	89	17	715	816	102	315	26	231	323	27
RTOR Reduction (vph)	0	32	0	0	0	412	0	5	0	0	6	0
Lane Group Flow (vph)	24	291	0	17	715	404	0	438	0	189	386	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Split	NA	
Protected Phases		4			4			3		2	2	
Permitted Phases	4			4		4	3					
Actuated Green, G (s)	38.8	38.8		38.8	38.8	38.8		23.9		20.6	20.6	
Effective Green, g (s)	38.8	38.8		38.8	38.8	38.8		23.9		20.6	20.6	
Actuated g/C Ratio	0.39	0.39		0.39	0.39	0.39		0.24		0.21	0.21	
Clearance Time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Grp Cap (vph)	177	1235		349	1288	576		598		296	651	
v/s Ratio Prot		0.09			0.22					c0.13	0.12	
v/s Ratio Perm	0.05			0.02		c0.27		c0.17				
v/c Ratio	0.14	0.24		0.05	0.56	0.70		0.73		0.64	0.59	
Uniform Delay, d1	19.8	20.6		19.1	23.9	25.7		35.1		36.3	35.9	
Progression Factor	1.00	1.00		1.17	0.95	1.65		1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.4		0.2	1.4	5.8		4.9		5.0	1.7	
Delay (s)	21.4	21.1		22.6	24.2	48.2		40.0		41.3	37.6	
Level of Service	C	C		C	C	D		D		D	D	
Approach Delay (s)		21.1			36.9			40.0			38.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.7
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

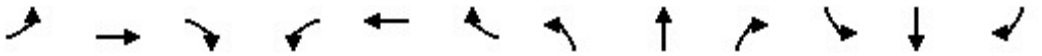
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	250	52	176	843	35	267	396	288	40	281	89
Future Volume (veh/h)	45	250	52	176	843	35	267	396	288	40	281	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1660	1758	1758	1575	1772	1772	1550	1744	1744	1660	1758	1758
Adj Flow Rate, veh/h	46	258	54	181	869	36	275	408	297	41	290	92
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	2	2	2	4	4	4	3	3	3
Cap, veh/h	94	865	178	287	1162	48	373	825	513	100	456	142
Arrive On Green	0.06	0.31	0.31	0.10	0.35	0.35	0.13	0.25	0.25	0.06	0.18	0.18
Sat Flow, veh/h	1581	2758	568	2910	3294	136	2864	3313	1478	1581	2508	780
Grp Volume(v), veh/h	46	155	157	181	444	461	275	408	297	41	191	191
Grp Sat Flow(s),veh/h/ln	1581	1670	1656	1455	1683	1747	1432	1657	1478	1581	1670	1617
Q Serve(g_s), s	1.9	4.8	5.0	4.1	16.0	16.0	6.4	7.3	11.3	1.7	7.3	7.5
Cycle Q Clear(g_c), s	1.9	4.8	5.0	4.1	16.0	16.0	6.4	7.3	11.3	1.7	7.3	7.5
Prop In Lane	1.00		0.34	1.00		0.08	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	94	524	519	287	594	616	373	825	513	100	304	294
V/C Ratio(X)	0.49	0.30	0.30	0.63	0.75	0.75	0.74	0.49	0.58	0.41	0.63	0.65
Avail Cap(c_a), veh/h	202	1060	1051	541	1166	1210	740	1718	912	202	647	627
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	31.4	17.9	17.9	29.8	19.6	19.6	28.8	22.2	18.4	31.0	26.0	26.1
Incr Delay (d2), s/veh	3.9	0.3	0.3	2.3	1.9	1.8	2.9	0.5	1.0	2.7	2.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.7	1.8	1.5	5.9	6.1	2.2	2.7	3.7	0.7	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	18.2	18.3	32.1	21.5	21.4	31.7	22.6	19.4	33.7	28.2	28.5
LnGrp LOS	D	B	B	C	C	C	C	C	B	C	C	C
Approach Vol, veh/h		358			1086			980			423	
Approach Delay, s/veh		20.4			23.3			24.2			28.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	26.9	13.2	17.8	8.3	29.6	8.5	22.4
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3
Max Green Setting (Gmax), s	* 13	43.7	* 18	26.7	* 8.8	47.7	* 8.8	35.7
Max Q Clear Time (g_c+I1), s	6.1	7.0	8.4	9.5	3.9	18.0	3.7	13.3
Green Ext Time (p_c), s	0.3	1.9	0.7	2.1	0.0	6.3	0.0	3.8

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

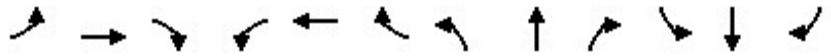
Notes

* 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 (vph)	27	391	45	58	1232	10	53	37	28	17	41	156
Future Volume (vph)	27	391	45	58	1232	10	53	37	28	17	41	156
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.88	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3353	1500	1568	3320	1485	1568	1635		1615	1586	
Flt Permitted	0.16	1.00	1.00	0.51	1.00	1.00	0.38	1.00		0.71	1.00	
Satd. Flow (perm)	261	3353	1500	836	3320	1485	627	1635		1209	1586	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	29	420	48	62	1325	11	57	40	30	18	44	168
RTOR Reduction (vph)	0	0	16	0	0	4	0	25	0	0	60	0
Lane Group Flow (vph)	29	420	32	62	1325	7	57	45	0	18	152	0
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	3%	3%	3%	0%	0%	0%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2		2	4			4		
Actuated Green, G (s)	65.7	65.7	65.7	65.7	65.7	65.7	15.3	15.3		15.3	15.3	
Effective Green, g (s)	65.7	65.7	65.7	65.7	65.7	65.7	15.3	15.3		15.3	15.3	
Actuated g/C Ratio	0.66	0.66	0.66	0.66	0.66	0.66	0.15	0.15		0.15	0.15	
Clearance Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	171	2202	985	549	2181	975	95	250		184	242	
v/s Ratio Prot		0.13			c0.40			0.03			c0.10	
v/s Ratio Perm	0.11		0.02	0.07		0.00	0.09			0.01		
v/c Ratio	0.17	0.19	0.03	0.11	0.61	0.01	0.60	0.18		0.10	0.63	
Uniform Delay, d1	6.6	6.7	6.0	6.4	9.8	5.9	39.5	36.9		36.4	39.7	
Progression Factor	1.23	1.13	10.29	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.0	0.2	0.1	0.4	1.3	0.0	9.8	0.3		0.2	5.0	
Delay (s)	10.2	7.8	61.9	6.8	11.1	5.9	49.3	37.2		36.6	44.7	
Level of Service	B	A	E	A	B	A	D	D		D	D	
Approach Delay (s)		13.1			10.8			42.6			44.1	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	323	60	70	917	37	96	20	42	14	38	55
Future Volume (veh/h)	108	323	60	70	917	37	96	20	42	14	38	55
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	1620	1716	1716	1673	1772	1772	1673	1772	1772	1647	1744	1744
Adj Flow Rate, veh/h	110	330	61	71	936	38	98	20	43	14	39	56
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	2	2	2	2	2	2	4	4	4
Cap, veh/h	326	1037	189	521	1186	48	388	104	224	316	77	110
Arrive On Green	0.10	0.38	0.38	0.08	0.36	0.36	0.12	0.21	0.21	0.03	0.12	0.12
Sat Flow, veh/h	1543	2752	503	1594	3297	134	1594	501	1077	1569	647	929
Grp Volume(v), veh/h	110	194	197	71	478	496	98	0	63	14	0	95
Grp Sat Flow(s),veh/h/ln	1543	1630	1625	1594	1683	1748	1594	0	1578	1569	0	1577
Q Serve(g_s), s	2.5	5.1	5.2	1.6	15.3	15.3	2.9	0.0	2.0	0.5	0.0	3.4
Cycle Q Clear(g_c), s	2.5	5.1	5.2	1.6	15.3	15.3	2.9	0.0	2.0	0.5	0.0	3.4
Prop In Lane	1.00		0.31	1.00		0.08	1.00		0.68	1.00		0.59
Lane Grp Cap(c), veh/h	326	614	612	521	606	629	388	0	328	316	0	187
V/C Ratio(X)	0.34	0.32	0.32	0.14	0.79	0.79	0.25	0.00	0.19	0.04	0.00	0.51
Avail Cap(c_a), veh/h	375	749	746	598	773	803	455	0	691	522	0	690
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	12.0	13.3	13.3	10.0	17.3	17.3	17.3	0.0	19.7	22.0	0.0	24.9
Incr Delay (d2), s/veh	0.6	0.3	0.3	0.1	4.3	4.1	0.3	0.0	0.3	0.1	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	0.8	1.7	1.7	0.5	5.8	6.0	1.0	0.0	0.7	0.2	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	13.6	13.6	10.2	21.5	21.4	17.6	0.0	20.0	22.0	0.0	27.0
LnGrp LOS	B	B	B	B	C	C	B	A	B	C	A	C
Approach Vol, veh/h		501			1045			161			109	
Approach Delay, s/veh		13.4			20.7			18.5			26.4	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	28.0	11.5	11.8	10.1	27.0	6.1	17.1
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	4.6	* 4.2	5.3	* 4.2	4.6
Max Green Setting (Gmax), s	* 7.8	27.7	* 9.8	26.4	* 7.8	27.7	* 9.8	26.4
Max Q Clear Time (g_c+I1), s	3.6	7.2	4.9	5.4	4.5	17.3	2.5	4.0
Green Ext Time (p_c), s	0.0	2.2	0.1	0.5	0.1	4.4	0.0	0.3

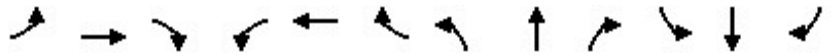
Intersection Summary	
HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

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 (vph)	9	17	8	196	36	308	33	1043	146	85	241	7
Future Volume (vph)	9	17	8	196	36	308	33	1043	146	85	241	7
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1583	1765	1500	1568	3320	1485	1583	3339	
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1722		1583	1765	1500	1568	3320	1485	1583	3339	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	18	8	206	38	324	35	1098	154	89	254	7
RTOR Reduction (vph)	0	8	0	0	0	236	0	0	55	0	1	0
Lane Group Flow (vph)	0	27	0	206	38	88	35	1098	99	89	260	0
Heavy Vehicles (%)	0%	0%	0%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8	5	1	6		5	2	
Permitted Phases						8			6			
Actuated Green, G (s)		5.6		20.9	20.9	32.5	5.4	61.0	61.0	11.6	67.2	
Effective Green, g (s)		5.6		20.9	20.9	32.5	5.4	61.0	61.0	11.6	67.2	
Actuated g/C Ratio		0.05		0.17	0.17	0.27	0.05	0.51	0.51	0.10	0.56	
Clearance Time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Vehicle Extension (s)		3.0		3.0	3.0	2.5	2.5	4.5	4.5	2.5	4.5	
Lane Grp Cap (vph)		80		275	307	406	70	1687	754	153	1869	
v/s Ratio Prot		c0.02		c0.13	0.02	0.02	0.02	c0.33		c0.06	0.08	
v/s Ratio Perm						0.04			0.07			
v/c Ratio		0.34		0.75	0.12	0.22	0.50	0.65	0.13	0.58	0.14	
Uniform Delay, d1		55.4		47.1	41.8	33.9	56.0	21.7	15.5	51.9	12.6	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.09	1.58	1.00	1.00	
Incremental Delay, d2		2.6		10.6	0.2	0.2	3.2	1.5	0.3	4.6	0.2	
Delay (s)		58.0		57.7	42.0	34.1	59.1	25.2	24.9	56.5	12.8	
Level of Service		E		E	D	C	E	C	C	E	B	
Approach Delay (s)		58.0			43.2			26.1			23.9	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.9
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



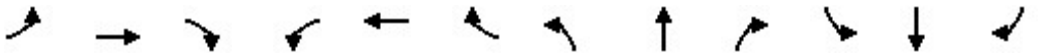
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	164	199	198	898	503	161	656	234	86	334	29
Future Volume (veh/h)	74	164	199	198	898	503	161	656	234	86	334	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1620	1716	1716	1673	1772	1772	1660	1758	1758	1660	1758	1758
Adj Flow Rate, veh/h	78	173	209	208	945	529	169	691	246	91	352	31
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, %	6	6	6	2	2	2	3	3	3	3	3	3
Cap, veh/h	131	825	545	231	1055	602	192	1156	732	138	1042	465
Arrive On Green	0.08	0.25	0.25	0.15	0.31	0.31	0.12	0.35	0.35	0.17	0.62	0.62
Sat Flow, veh/h	1543	3260	1454	1594	3367	1502	1581	3340	1490	1581	3340	1490
Grp Volume(v), veh/h	78	173	209	208	945	529	169	691	246	91	352	31
Grp Sat Flow(s),veh/h/ln	1543	1630	1454	1594	1683	1502	1581	1670	1490	1581	1670	1490
Q Serve(g_s), s	5.8	5.0	12.6	15.4	32.2	37.6	12.6	20.5	12.1	6.4	6.0	1.0
Cycle Q Clear(g_c), s	5.8	5.0	12.6	15.4	32.2	37.6	12.6	20.5	12.1	6.4	6.0	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	131	825	545	231	1055	602	192	1156	732	138	1042	465
V/C Ratio(X)	0.60	0.21	0.38	0.90	0.90	0.88	0.88	0.60	0.34	0.66	0.34	0.07
Avail Cap(c_a), veh/h	171	886	572	243	1055	602	202	1156	732	228	1042	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	52.9	35.4	27.4	50.4	39.3	33.3	51.8	32.3	18.6	47.9	16.7	15.7
Incr Delay (d2), s/veh	3.1	0.2	0.6	31.1	10.3	14.4	31.5	2.3	1.2	3.6	0.8	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	2.4	2.0	4.4	8.1	14.5	16.2	6.6	8.4	4.3	2.5	2.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	35.5	28.0	81.6	49.6	47.7	83.3	34.6	19.8	51.5	17.5	16.0
LnGrp LOS	E	D	C	F	D	D	F	C	B	D	B	B
Approach Vol, veh/h		460			1682			1106			474	
Approach Delay, s/veh		35.6			53.0			38.8			23.9	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.2	46.9	22.1	35.8	19.3	42.8	14.9	43.0
Change Period (Y+Rc), s	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4
Max Green Setting (Gmax), s	* 13	31.6	* 18	32.6	* 15	33.6	* 13	37.6
Max Q Clear Time (g_c+I1), s	8.4	22.5	17.4	14.6	14.6	8.0	7.8	39.6
Green Ext Time (p_c), s	0.1	4.6	0.0	2.4	0.0	3.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.9
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 (vph)	22	649	124	26	493	421	108	337	23	349	269	28
Future Volume (vph)	22	649	124	26	493	421	108	337	23	349	269	28
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.95		0.91	0.91	
Frt	1.00	0.98		1.00	1.00	0.85		0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.98	
Satd. Flow (prot)	1583	3272		1599	3386	1515		3323		1455	3162	
Flt Permitted	0.39	1.00		0.21	1.00	1.00		0.73		0.95	0.98	
Satd. Flow (perm)	645	3272		349	3386	1515		2467		1455	3162	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	23	676	129	27	514	439	112	351	24	364	280	29
RTOR Reduction (vph)	0	14	0	0	0	284	0	4	0	0	5	0
Lane Group Flow (vph)	23	791	0	27	514	155	0	484	0	222	446	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Split	NA	
Protected Phases		4			4			3		2	2	
Permitted Phases	4			4		4	3					
Actuated Green, G (s)	35.3	35.3		35.3	35.3	35.3		25.1		22.9	22.9	
Effective Green, g (s)	35.3	35.3		35.3	35.3	35.3		25.1		22.9	22.9	
Actuated g/C Ratio	0.35	0.35		0.35	0.35	0.35		0.25		0.23	0.23	
Clearance Time (s)	5.7	5.7		5.7	5.7	5.7		5.3		5.7	5.7	
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Grp Cap (vph)	227	1155		123	1195	534		619		333	724	
v/s Ratio Prot		c0.24			0.15					c0.15	0.14	
v/s Ratio Perm	0.04			0.08		0.10		c0.20				
v/c Ratio	0.10	0.69		0.22	0.43	0.29		0.78		0.67	0.62	
Uniform Delay, d1	21.7	27.6		22.7	24.7	23.3		34.9		35.1	34.6	
Progression Factor	1.00	1.00		1.14	1.01	2.15		1.00		1.00	1.00	
Incremental Delay, d2	0.9	3.3		3.8	1.1	1.3		6.8		5.5	1.8	
Delay (s)	22.6	30.9		29.8	26.1	51.4		41.7		40.5	36.4	
Level of Service	C	C		C	C	D		D		D	D	
Approach Delay (s)		30.7			37.5			41.7			37.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	36.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.7
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

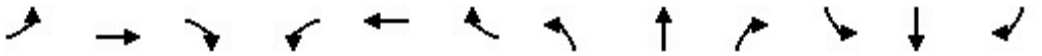
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	748	65	257	671	57	154	405	412	84	276	65
Future Volume (veh/h)	134	748	65	257	671	57	154	405	412	84	276	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1687	1786	1786	1588	1786	1786	1588	1786	1786	1687	1786	1786
Adj Flow Rate, veh/h	138	771	67	265	692	59	159	418	425	87	285	67
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	170	962	84	347	1004	85	264	945	601	130	737	170
Arrive On Green	0.11	0.30	0.30	0.12	0.32	0.32	0.09	0.28	0.28	0.08	0.27	0.27
Sat Flow, veh/h	1606	3159	274	2933	3164	270	2933	3393	1514	1606	2736	633
Grp Volume(v), veh/h	138	414	424	265	371	380	159	418	425	87	175	177
Grp Sat Flow(s),veh/h/ln	1606	1697	1737	1467	1697	1737	1467	1697	1514	1606	1697	1672
Q Serve(g_s), s	7.3	19.6	19.6	7.6	16.6	16.7	4.5	8.8	20.5	4.6	7.3	7.5
Cycle Q Clear(g_c), s	7.3	19.6	19.6	7.6	16.6	16.7	4.5	8.8	20.5	4.6	7.3	7.5
Prop In Lane	1.00		0.16	1.00		0.16	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	170	517	529	347	538	551	264	945	601	130	457	450
V/C Ratio(X)	0.81	0.80	0.80	0.76	0.69	0.69	0.60	0.44	0.71	0.67	0.38	0.39
Avail Cap(c_a), veh/h	347	773	791	734	832	852	364	1040	643	236	559	551
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	38.1	27.9	27.9	37.2	26.0	26.0	38.1	25.9	22.0	38.9	25.9	26.0
Incr Delay (d2), s/veh	9.0	3.7	3.6	3.5	1.6	1.6	2.2	0.3	3.3	5.9	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	8.0	8.2	2.8	6.6	6.8	1.7	3.5	7.5	2.0	3.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	31.5	31.5	40.7	27.6	27.6	40.4	26.2	25.4	44.8	26.5	26.6
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		976			1016			1002			439	
Approach Delay, s/veh		33.7			31.0			28.1			30.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	31.8	12.0	28.8	13.4	32.9	11.2	29.6
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3
Max Green Setting (Gmax), s	* 23	39.7	* 11	28.7	* 19	42.7	* 13	26.7
Max Q Clear Time (g_c+I1), s	9.6	21.6	6.5	9.5	9.3	18.7	6.6	22.5
Green Ext Time (p_c), s	0.7	4.9	0.2	2.0	0.2	4.7	0.1	1.7

Intersection Summary	
HCM 6th Ctrl Delay	30.8
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 (vph)	159	812	75	68	726	18	146	117	96	20	52	62
Future Volume (vph)	159	812	75	68	726	18	146	117	96	20	52	62
Ideal Flow (vphpl)	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1583	3353	1500	1599	3386	1515	1615	1679		1599	1637	
Flt Permitted	0.31	1.00	1.00	0.28	1.00	1.00	0.66	1.00		0.41	1.00	
Satd. Flow (perm)	523	3353	1500	464	3386	1515	1114	1679		698	1637	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	175	892	82	75	798	20	160	129	105	22	57	68
RTOR Reduction (vph)	0	0	32	0	0	8	0	36	0	0	53	0
Lane Group Flow (vph)	175	892	50	75	798	12	160	198	0	22	72	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2		2	4			4		
Actuated Green, G (s)	60.6	60.6	60.6	60.6	60.6	60.6	20.4	20.4		20.4	20.4	
Effective Green, g (s)	60.6	60.6	60.6	60.6	60.6	60.6	20.4	20.4		20.4	20.4	
Actuated g/C Ratio	0.61	0.61	0.61	0.61	0.61	0.61	0.20	0.20		0.20	0.20	
Clearance Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.3	5.3		5.3	5.3	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	316	2031	909	281	2051	918	227	342		142	333	
v/s Ratio Prot		0.27			0.24			0.12			0.04	
v/s Ratio Perm	c0.33		0.03	0.16		0.01	c0.14			0.03		
v/c Ratio	0.55	0.44	0.05	0.27	0.39	0.01	0.70	0.58		0.15	0.22	
Uniform Delay, d1	11.7	10.6	8.0	9.3	10.2	7.8	37.0	35.9		32.7	33.2	
Progression Factor	1.09	1.04	2.04	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.7	0.6	0.1	2.3	0.6	0.0	9.5	2.4		0.5	0.3	
Delay (s)	18.4	11.5	16.5	11.6	10.7	7.9	46.5	38.3		33.2	33.5	
Level of Service	B	B	B	B	B	A	D	D		C	C	
Approach Delay (s)		13.0			10.7			41.7			33.4	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	971	87	56	643	76	74	36	64	174	40	175
Future Volume (veh/h)	129	971	87	56	643	76	74	36	64	174	40	175
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	1687	1786	1786	1673	1772	1772	1687	1786	1786	1687	1786	1786
Adj Flow Rate, veh/h	137	1033	93	60	684	81	79	38	68	185	43	186
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	1	1	1
Cap, veh/h	365	1184	107	250	1064	126	318	92	164	433	54	234
Arrive On Green	0.09	0.38	0.38	0.07	0.35	0.35	0.10	0.16	0.16	0.13	0.19	0.19
Sat Flow, veh/h	1606	3148	283	1594	3032	359	1606	574	1027	1606	293	1266
Grp Volume(v), veh/h	137	557	569	60	379	386	79	0	106	185	0	229
Grp Sat Flow(s),veh/h/ln	1606	1697	1735	1594	1683	1707	1606	0	1601	1606	0	1558
Q Serve(g_s), s	3.5	20.9	20.9	1.6	12.9	13.0	2.6	0.0	4.1	6.4	0.0	9.6
Cycle Q Clear(g_c), s	3.5	20.9	20.9	1.6	12.9	13.0	2.6	0.0	4.1	6.4	0.0	9.6
Prop In Lane	1.00		0.16	1.00		0.21	1.00		0.64	1.00		0.81
Lane Grp Cap(c), veh/h	365	638	652	250	591	599	318	0	256	433	0	288
V/C Ratio(X)	0.38	0.87	0.87	0.24	0.64	0.64	0.25	0.00	0.41	0.43	0.00	0.79
Avail Cap(c_a), veh/h	396	686	702	320	681	691	384	0	617	458	0	601
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	13.1	19.8	19.9	15.0	18.6	18.6	20.1	0.0	25.9	19.8	0.0	26.7
Incr Delay (d2), s/veh	0.6	11.3	11.2	0.5	1.7	1.7	0.4	0.0	1.1	0.7	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	9.3	9.5	0.5	4.8	4.9	1.0	0.0	1.6	2.3	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	31.2	31.0	15.5	20.3	20.3	20.5	0.0	27.0	20.5	0.0	31.6
LnGrp LOS	B	C	C	B	C	C	C	A	C	C	A	C
Approach Vol, veh/h		1263			825			185			414	
Approach Delay, s/veh		29.2			19.9			24.2			26.6	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	31.0	11.2	17.3	10.7	29.3	12.9	15.5
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	4.6	* 4.2	5.3	* 4.2	4.6
Max Green Setting (Gmax), s	* 7.8	27.7	* 9.8	26.4	* 7.8	27.7	* 9.8	26.4
Max Q Clear Time (g_c+I1), s	13.6	22.9	4.6	11.6	5.5	15.0	8.4	6.1
Green Ext Time (p_c), s	0.0	2.9	0.1	1.2	0.1	3.8	0.1	0.5

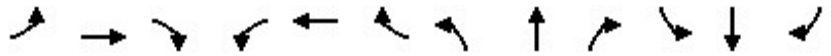
Intersection Summary	
HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C

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 (vph)	29	99	34	98	62	214	48	633	171	270	570	33
Future Volume (vph)	29	99	34	98	62	214	48	633	171	270	570	33
Ideal Flow (vphpl)	1800	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Total Lost time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Lane Util. Factor		1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1733		1599	1782	1515	1615	3420	1530	1599	3358	
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1733		1599	1782	1515	1615	3420	1530	1599	3358	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	31	104	36	103	65	225	51	666	180	284	600	35
RTOR Reduction (vph)	0	9	0	0	0	128	0	0	97	0	2	0
Lane Group Flow (vph)	0	162	0	103	65	97	51	666	83	284	633	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Split	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8	5	1	6		5	2	
Permitted Phases						8			6			
Actuated Green, G (s)		16.5		13.1	13.1	51.7	7.7	30.9	30.9	38.6	61.8	
Effective Green, g (s)		16.5		13.1	13.1	51.7	7.7	30.9	30.9	38.6	61.8	
Actuated g/C Ratio		0.14		0.11	0.11	0.43	0.06	0.26	0.26	0.32	0.51	
Clearance Time (s)		5.3		5.3	5.3	4.6	4.6	5.7	5.7	4.6	5.7	
Vehicle Extension (s)		3.0		3.0	3.0	2.5	2.5	4.5	4.5	2.5	4.5	
Lane Grp Cap (vph)		238		174	194	652	103	880	393	514	1729	
v/s Ratio Prot		c0.09		c0.06	0.04	0.05	0.03	c0.19		c0.18	0.19	
v/s Ratio Perm						0.02			0.05			
v/c Ratio		0.68		0.59	0.34	0.15	0.50	0.76	0.21	0.55	0.37	
Uniform Delay, d1		49.3		50.9	49.4	20.8	54.3	41.1	35.0	33.6	17.4	
Progression Factor		1.00		1.00	1.00	1.00	0.86	1.32	2.09	1.00	1.00	
Incremental Delay, d2		7.8		5.3	1.0	0.1	2.5	5.5	1.1	1.0	0.6	
Delay (s)		57.1		56.2	50.4	20.8	49.1	59.6	74.2	34.6	18.0	
Level of Service		E		E	D	C	D	E	E	C	B	
Approach Delay (s)		57.1			35.0			62.0			23.1	
Approach LOS		E			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.9
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	710	321	207	544	315	171	421	317	326	467	28
Future Volume (veh/h)	114	710	321	207	544	315	171	421	317	326	467	28
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	1673	1772	1772	1700	1800	1800	1687	1786	1786	1687	1786	1786
Adj Flow Rate, veh/h	119	740	334	216	567	328	178	439	330	340	486	29
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	0	0	1	1	1	1	1	1
Cap, veh/h	143	859	572	193	972	704	202	950	604	285	1126	502
Arrive On Green	0.09	0.26	0.26	0.12	0.28	0.28	0.13	0.28	0.28	0.35	0.66	0.66
Sat Flow, veh/h	1594	3367	1502	1619	3420	1525	1606	3393	1514	1606	3393	1514
Grp Volume(v), veh/h	119	740	334	216	567	328	178	439	330	340	486	29
Grp Sat Flow(s),veh/h/ln	1594	1683	1502	1619	1710	1525	1606	1697	1514	1606	1697	1514
Q Serve(g_s), s	8.8	25.2	21.3	14.3	17.1	17.7	13.1	12.8	20.1	21.3	8.1	0.8
Cycle Q Clear(g_c), s	8.8	25.2	21.3	14.3	17.1	17.7	13.1	12.8	20.1	21.3	8.1	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	859	572	193	972	704	202	950	604	285	1126	502
V/C Ratio(X)	0.83	0.86	0.58	1.12	0.58	0.47	0.88	0.46	0.55	1.19	0.43	0.06
Avail Cap(c_a), veh/h	177	915	597	193	972	704	218	950	604	285	1126	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	53.7	42.7	29.6	52.8	36.8	22.1	51.6	35.7	27.7	38.7	14.8	13.6
Incr Delay (d2), s/veh	14.3	5.4	1.0	100.5	1.1	0.7	29.6	1.6	3.5	114.2	1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	10.9	7.7	11.1	7.2	6.3	6.8	5.4	7.7	15.8	2.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.0	48.1	30.6	153.4	37.9	22.8	81.1	37.3	31.2	152.9	16.0	13.8
LnGrp LOS	E	D	C	F	D	C	F	D	C	F	B	B
Approach Vol, veh/h		1193			1111			947			855	
Approach Delay, s/veh		45.2			55.9			43.4			70.3	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	39.0	19.0	36.0	19.8	45.2	15.5	39.5
Change Period (Y+Rc), s	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4	* 4.7	5.4
Max Green Setting (Gmax), s	* 21	31.6	* 14	32.6	* 16	36.6	* 13	33.6
Max Q Clear Time (g_c+I1), s	23.3	22.1	16.3	27.2	15.1	10.1	10.8	19.7
Green Ext Time (p_c), s	0.0	3.7	0.0	3.4	0.0	4.8	0.0	5.7

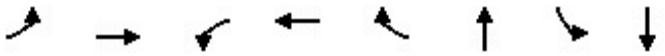
Intersection Summary	
HCM 6th Ctrl Delay	52.9
HCM 6th LOS	D

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.

APPENDIX C – QUEUING CALCULATION SHEETS



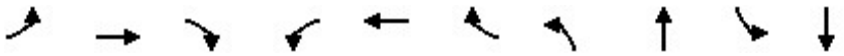
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	24	321	17	709	811	443	190	389
v/c Ratio	0.13	0.25	0.05	0.55	0.82	0.73	0.64	0.59
Control Delay	28.4	20.3	30.3	27.0	16.2	41.7	45.5	38.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.4	20.3	30.3	27.0	16.2	41.7	45.5	38.2
Queue Length 50th (ft)	10	58	5	115	41	136	123	122
Queue Length 95th (ft)	36	115	m16	#320	#377	175	184	156
Internal Link Dist (ft)		624		670		544		835
Turn Bay Length (ft)	60		100		150		125	
Base Capacity (vph)	180	1267	350	1288	988	775	407	900
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.25	0.05	0.55	0.82	0.57	0.47	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	310	178	899	275	408	296	41	382
v/c Ratio	0.30	0.34	0.48	0.70	0.59	0.38	0.32	0.25	0.61
Control Delay	49.8	23.3	44.5	27.1	42.3	27.7	3.3	48.5	36.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.8	23.3	44.5	27.1	42.3	27.7	3.3	48.5	36.1
Queue Length 50th (ft)	25	62	48	229	75	104	0	22	97
Queue Length 95th (ft)	72	113	103	357	145	178	50	67	174
Internal Link Dist (ft)		753		311		722			535
Turn Bay Length (ft)	100		150		325		175	75	
Base Capacity (vph)	174	1795	467	2010	637	1483	952	174	1101
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.17	0.38	0.45	0.43	0.28	0.31	0.24	0.35

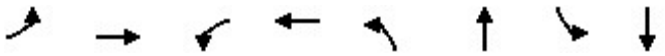
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	26	412	39	62	1323	11	54	70	18	211
v/c Ratio	0.15	0.19	0.04	0.11	0.61	0.01	0.57	0.26	0.10	0.70
Control Delay	13.2	8.6	3.3	8.6	12.2	0.0	60.2	23.9	34.2	37.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	8.6	3.3	8.6	12.2	0.0	60.2	23.9	34.2	37.8
Queue Length 50th (ft)	9	79	2	13	221	0	33	23	10	85
Queue Length 95th (ft)	m22	105	m12	38	371	0	68	57	28	148
Internal Link Dist (ft)		644			735			636		385
Turn Bay Length (ft)	100		75	100		100	120		100	
Base Capacity (vph)	172	2206	1018	554	2185	1008	192	523	371	536
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.19	0.04	0.11	0.61	0.01	0.28	0.13	0.05	0.39

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



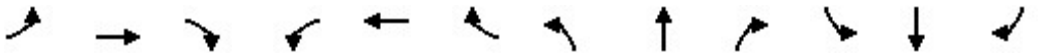
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	107	391	71	974	98	63	14	86
v/c Ratio	0.31	0.24	0.12	0.58	0.30	0.16	0.04	0.30
Control Delay	10.5	14.3	8.2	19.4	22.0	12.5	17.2	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.5	14.3	8.2	19.4	22.0	12.5	17.2	18.9
Queue Length 50th (ft)	20	56	13	190	31	6	4	16
Queue Length 95th (ft)	45	95	32	276	65	40	16	55
Internal Link Dist (ft)		394		1810		563		1106
Turn Bay Length (ft)	100		80				200	
Base Capacity (vph)	346	1620	596	1686	339	734	385	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.24	0.12	0.58	0.29	0.09	0.04	0.12

Intersection Summary

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	35	206	38	324	35	1096	154	89	252
v/c Ratio	0.25	0.75	0.12	0.47	0.33	0.63	0.18	0.58	0.13
Control Delay	47.4	63.3	40.1	4.9	59.5	27.2	12.0	66.1	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	63.3	40.1	4.9	59.5	27.2	12.0	66.1	14.9
Queue Length 50th (ft)	20	153	25	0	26	290	15	67	51
Queue Length 95th (ft)	53	222	53	54	m44	#473	80	118	92
Internal Link Dist (ft)	152		621			485			999
Turn Bay Length (ft)		150			120		140	300	
Base Capacity (vph)	403	404	451	718	175	1745	833	185	1980
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.51	0.08	0.45	0.20	0.63	0.18	0.48	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

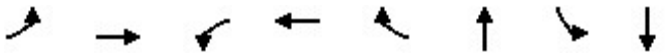


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	78	173	209	208	945	527	169	689	246	87	346	31
v/c Ratio	0.52	0.22	0.29	0.87	0.88	0.67	0.87	0.62	0.27	0.53	0.33	0.05
Control Delay	64.1	36.1	4.0	82.4	49.9	21.5	88.9	38.4	3.0	49.8	41.0	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.1	36.1	4.0	82.4	49.9	21.5	88.9	38.4	3.0	49.8	41.0	1.6
Queue Length 50th (ft)	59	54	1	156	347	213	130	249	0	69	133	0
Queue Length 95th (ft)	110	85	45	#295	#487	334	#253	331	44	81	181	m4
Internal Link Dist (ft)		1810			798			864			485	
Turn Bay Length (ft)	220		220	200			200			240		220
Base Capacity (vph)	168	876	718	249	1085	836	202	1111	911	226	1061	576
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.20	0.29	0.84	0.87	0.63	0.84	0.62	0.27	0.38	0.33	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



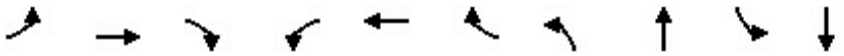
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	23	798	27	509	435	488	218	448
v/c Ratio	0.10	0.68	0.21	0.42	0.53	0.78	0.66	0.62
Control Delay	28.7	32.9	36.3	27.5	8.8	43.7	44.1	37.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	32.9	36.3	27.5	8.8	43.7	44.1	37.3
Queue Length 50th (ft)	10	224	9	102	11	148	139	139
Queue Length 95th (ft)	34	#392	39	198	116	202	205	174
Internal Link Dist (ft)		624		670		544		835
Turn Bay Length (ft)	60		100		150		125	
Base Capacity (vph)	231	1173	127	1200	818	713	440	963
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.68	0.21	0.42	0.53	0.68	0.50	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	138	831	263	747	159	418	421	87	352
v/c Ratio	0.59	0.77	0.57	0.67	0.50	0.55	0.57	0.47	0.54
Control Delay	51.2	34.3	43.5	30.2	48.9	38.0	18.8	52.6	35.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.2	34.3	43.5	30.2	48.9	38.0	18.8	52.6	35.6
Queue Length 50th (ft)	74	218	72	189	44	117	132	47	90
Queue Length 95th (ft)	166	365	137	310	97	205	271	118	161
Internal Link Dist (ft)		753		311		722			535
Turn Bay Length (ft)	100		150		325		175	75	
Base Capacity (vph)	343	1521	727	1635	360	1032	866	233	1092
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.55	0.36	0.46	0.44	0.41	0.49	0.37	0.32

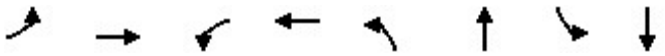
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	173	887	76	75	788	20	148	234	22	121
v/c Ratio	0.53	0.43	0.08	0.26	0.38	0.02	0.68	0.65	0.17	0.33
Control Delay	21.7	12.2	4.4	14.2	11.3	0.1	52.0	37.1	33.0	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	12.2	4.4	14.2	11.3	0.1	52.0	37.1	33.0	18.6
Queue Length 50th (ft)	47	124	5	20	120	0	89	112	12	32
Queue Length 95th (ft)	m109	192	m16	61	207	0	138	169	30	72
Internal Link Dist (ft)		644			735			636		385
Turn Bay Length (ft)	100		75	100		100	120		100	
Base Capacity (vph)	328	2068	960	291	2088	969	390	611	232	609
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.43	0.08	0.26	0.38	0.02	0.38	0.38	0.09	0.20

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	126	1126	60	765	79	106	185	223
v/c Ratio	0.35	0.76	0.22	0.58	0.23	0.35	0.53	0.55
Control Delay	11.6	23.4	10.5	19.8	18.6	16.6	24.3	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	23.4	10.5	19.8	18.6	16.6	24.3	13.9
Queue Length 50th (ft)	25	233	11	138	25	15	62	17
Queue Length 95th (ft)	57	#406	31	217	53	57	112	79
Internal Link Dist (ft)		394		1810		563		1106
Turn Bay Length (ft)	100		80				200	
Base Capacity (vph)	365	1476	284	1431	360	702	349	750
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.76	0.21	0.53	0.22	0.15	0.53	0.30

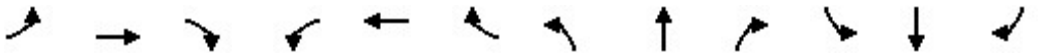
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	171	103	65	225	51	657	180	284	630
v/c Ratio	0.69	0.59	0.34	0.27	0.42	0.75	0.37	0.55	0.36
Control Delay	60.5	63.9	52.7	3.4	54.3	59.8	26.2	41.2	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.5	63.9	52.7	3.4	54.3	59.8	26.2	41.2	20.1
Queue Length 50th (ft)	121	77	47	0	40	220	28	191	149
Queue Length 95th (ft)	186	130	89	44	m77	#310	104	301	247
Internal Link Dist (ft)	152		621			485			999
Turn Bay Length (ft)		150			120		140	300	
Base Capacity (vph)	407	409	455	838	180	895	498	515	1758
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.25	0.14	0.27	0.28	0.73	0.36	0.55	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



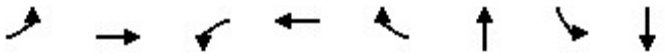
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	119	740	334	216	567	321	178	436	330	338	483	29
v/c Ratio	0.64	0.85	0.46	0.68	0.49	0.34	0.86	0.71	0.47	1.09	0.58	0.06
Control Delay	65.6	53.0	16.4	57.5	34.2	8.1	85.5	52.6	18.7	115.6	33.6	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.6	53.0	16.4	57.5	34.2	8.1	85.5	52.6	18.7	115.6	33.6	1.4
Queue Length 50th (ft)	89	282	105	155	176	53	136	168	119	~320	185	1
Queue Length 95th (ft)	149	358	185	#304	260	130	#257	213	202	#483	232	m6
Internal Link Dist (ft)		1810			798			864			485	
Turn Bay Length (ft)	220		220	200			200			240		220
Base Capacity (vph)	197	910	728	318	1152	952	218	891	703	311	1032	536
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.81	0.46	0.68	0.49	0.34	0.82	0.49	0.47	1.09	0.47	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



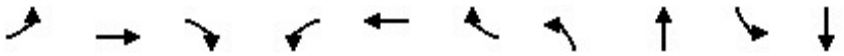
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	24	323	17	715	816	443	189	392
v/c Ratio	0.14	0.25	0.05	0.56	0.83	0.73	0.64	0.60
Control Delay	28.5	20.4	30.2	27.2	16.7	41.8	45.3	38.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	20.4	30.2	27.2	16.7	41.8	45.3	38.3
Queue Length 50th (ft)	10	58	5	120	42	136	123	123
Queue Length 95th (ft)	37	116	m16	#323	#387	175	184	156
Internal Link Dist (ft)		624		670		544		835
Turn Bay Length (ft)	60		100		150		125	
Base Capacity (vph)	177	1268	349	1288	988	773	407	900
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.25	0.05	0.56	0.83	0.57	0.46	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	312	181	905	275	408	297	41	382
v/c Ratio	0.30	0.34	0.49	0.70	0.59	0.38	0.33	0.25	0.61
Control Delay	49.9	23.3	44.7	27.1	42.5	27.7	3.3	48.7	36.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.9	23.3	44.7	27.1	42.5	27.7	3.3	48.7	36.2
Queue Length 50th (ft)	25	63	50	232	75	104	0	22	97
Queue Length 95th (ft)	73	114	105	360	146	179	50	67	175
Internal Link Dist (ft)		753		311		722			535
Turn Bay Length (ft)	100		150		325		175	75	
Base Capacity (vph)	174	1791	466	2005	636	1479	952	174	1099
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.17	0.39	0.45	0.43	0.28	0.31	0.24	0.35

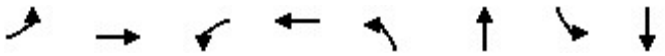
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	29	420	48	62	1325	11	57	70	18	212
v/c Ratio	0.17	0.19	0.05	0.11	0.61	0.01	0.60	0.25	0.10	0.70
Control Delay	13.7	8.7	3.9	8.7	12.3	0.0	62.7	23.8	34.1	38.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.7	8.7	3.9	8.7	12.3	0.0	62.7	23.8	34.1	38.1
Queue Length 50th (ft)	10	80	4	13	223	0	35	23	10	86
Queue Length 95th (ft)	m26	107	m15	38	373	0	72	57	28	149
Internal Link Dist (ft)		644			735			636		385
Turn Bay Length (ft)	100		75	100		100	120		100	
Base Capacity (vph)	172	2203	1016	548	2182	1007	192	523	371	536
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.19	0.05	0.11	0.61	0.01	0.30	0.13	0.05	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



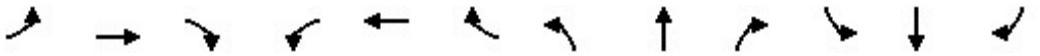
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	110	391	71	974	98	63	14	95
v/c Ratio	0.32	0.24	0.12	0.58	0.30	0.16	0.04	0.32
Control Delay	10.7	14.3	8.3	19.5	21.9	12.5	17.2	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.7	14.3	8.3	19.5	21.9	12.5	17.2	18.0
Queue Length 50th (ft)	21	56	13	190	31	6	4	16
Queue Length 95th (ft)	46	95	32	278	65	40	16	56
Internal Link Dist (ft)		394		1810		563		1106
Turn Bay Length (ft)	100		80				200	
Base Capacity (vph)	346	1619	596	1685	339	733	385	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.24	0.12	0.58	0.29	0.09	0.04	0.13

Intersection Summary

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	35	206	38	324	35	1098	154	89	261
v/c Ratio	0.25	0.75	0.12	0.47	0.33	0.63	0.18	0.58	0.13
Control Delay	47.4	63.3	40.1	4.9	59.2	27.5	12.3	66.1	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	63.3	40.1	4.9	59.2	27.5	12.3	66.1	14.9
Queue Length 50th (ft)	20	153	25	0	26	294	15	67	53
Queue Length 95th (ft)	53	222	53	54	m44	#479	82	118	95
Internal Link Dist (ft)	152		621			485			999
Turn Bay Length (ft)		150			120		140	300	
Base Capacity (vph)	403	404	451	718	175	1745	833	185	1980
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.51	0.08	0.45	0.20	0.63	0.18	0.48	0.13

Intersection Summary

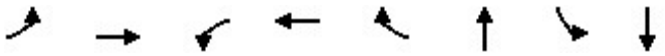
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	78	173	209	208	945	529	169	691	246	91	352	31
v/c Ratio	0.52	0.22	0.29	0.87	0.89	0.67	0.87	0.62	0.27	0.54	0.34	0.05
Control Delay	64.1	36.1	4.2	82.8	50.0	21.4	88.9	38.7	3.0	50.2	40.6	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.1	36.1	4.2	82.8	50.0	21.4	88.9	38.7	3.0	50.2	40.6	1.5
Queue Length 50th (ft)	59	54	3	156	348	214	130	250	0	72	135	0
Queue Length 95th (ft)	110	85	47	#295	#487	333	#253	334	44	82	183	m4
Internal Link Dist (ft)		1810			798			864			485	
Turn Bay Length (ft)	220		220	200			200			240		220
Base Capacity (vph)	168	876	716	248	1084	836	202	1107	909	226	1061	576
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.20	0.29	0.84	0.87	0.63	0.84	0.62	0.27	0.40	0.33	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



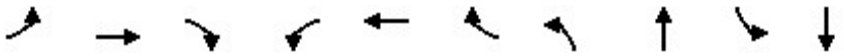
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	23	805	27	514	439	488	222	451
v/c Ratio	0.10	0.69	0.22	0.43	0.54	0.78	0.67	0.62
Control Delay	28.9	33.3	38.6	28.8	9.5	43.7	44.4	37.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	33.3	38.6	28.8	9.5	43.7	44.4	37.2
Queue Length 50th (ft)	10	227	9	103	11	148	141	140
Queue Length 95th (ft)	34	#397	m41	208	128	202	208	175
Internal Link Dist (ft)		624		670		544		835
Turn Bay Length (ft)	60		100		150		125	
Base Capacity (vph)	227	1167	123	1194	818	712	440	963
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.69	0.22	0.43	0.54	0.69	0.50	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	138	838	265	751	159	418	425	87	352
v/c Ratio	0.59	0.77	0.57	0.67	0.50	0.55	0.58	0.47	0.54
Control Delay	51.5	34.5	43.6	30.2	49.1	38.1	19.2	52.8	35.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	34.5	43.6	30.2	49.1	38.1	19.2	52.8	35.7
Queue Length 50th (ft)	75	222	73	191	44	117	136	47	91
Queue Length 95th (ft)	167	370	138	312	97	205	277	119	161
Internal Link Dist (ft)		753		311		722			535
Turn Bay Length (ft)	100		150		325		175	75	
Base Capacity (vph)	342	1515	724	1629	358	1028	863	233	1088
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.55	0.37	0.46	0.44	0.41	0.49	0.37	0.32

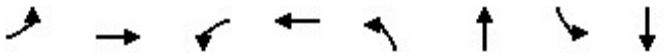
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	175	892	82	75	798	20	160	234	22	125
v/c Ratio	0.55	0.44	0.09	0.27	0.39	0.02	0.70	0.62	0.15	0.32
Control Delay	23.4	12.9	5.0	15.1	12.0	0.1	52.3	35.0	31.4	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	12.9	5.0	15.1	12.0	0.1	52.3	35.0	31.4	17.5
Queue Length 50th (ft)	48	126	5	21	126	0	96	110	12	31
Queue Length 95th (ft)	m110	195	m19	63	216	0	147	165	29	71
Internal Link Dist (ft)		644			735			636		385
Turn Bay Length (ft)	100		75	100		100	120		100	
Base Capacity (vph)	317	2033	945	282	2053	954	386	611	242	610
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.44	0.09	0.27	0.39	0.02	0.41	0.38	0.09	0.20

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	137	1126	60	765	79	106	185	229
v/c Ratio	0.38	0.76	0.22	0.58	0.23	0.35	0.53	0.56
Control Delay	12.1	23.4	10.6	19.9	18.6	16.5	24.2	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	23.4	10.6	19.9	18.6	16.5	24.2	13.8
Queue Length 50th (ft)	27	233	11	138	25	15	62	17
Queue Length 95th (ft)	62	#408	31	218	53	57	112	79
Internal Link Dist (ft)		394		1810		563		1106
Turn Bay Length (ft)	100		80				200	
Base Capacity (vph)	365	1475	284	1430	356	701	349	752
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.76	0.21	0.53	0.22	0.15	0.53	0.30

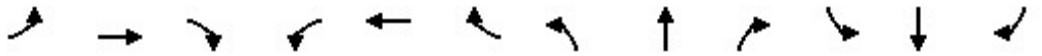
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	171	103	65	225	51	666	180	284	635
v/c Ratio	0.69	0.59	0.34	0.27	0.42	0.76	0.37	0.55	0.36
Control Delay	60.5	63.9	52.7	3.4	54.5	59.7	26.3	41.2	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.5	63.9	52.7	3.4	54.5	59.7	26.3	41.2	20.1
Queue Length 50th (ft)	121	77	47	0	40	224	28	191	151
Queue Length 95th (ft)	186	130	89	44	m77	#318	105	301	250
Internal Link Dist (ft)	152		621			485			999
Turn Bay Length (ft)		150			120		140	300	
Base Capacity (vph)	407	409	455	837	180	895	497	514	1758
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.25	0.14	0.27	0.28	0.74	0.36	0.55	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



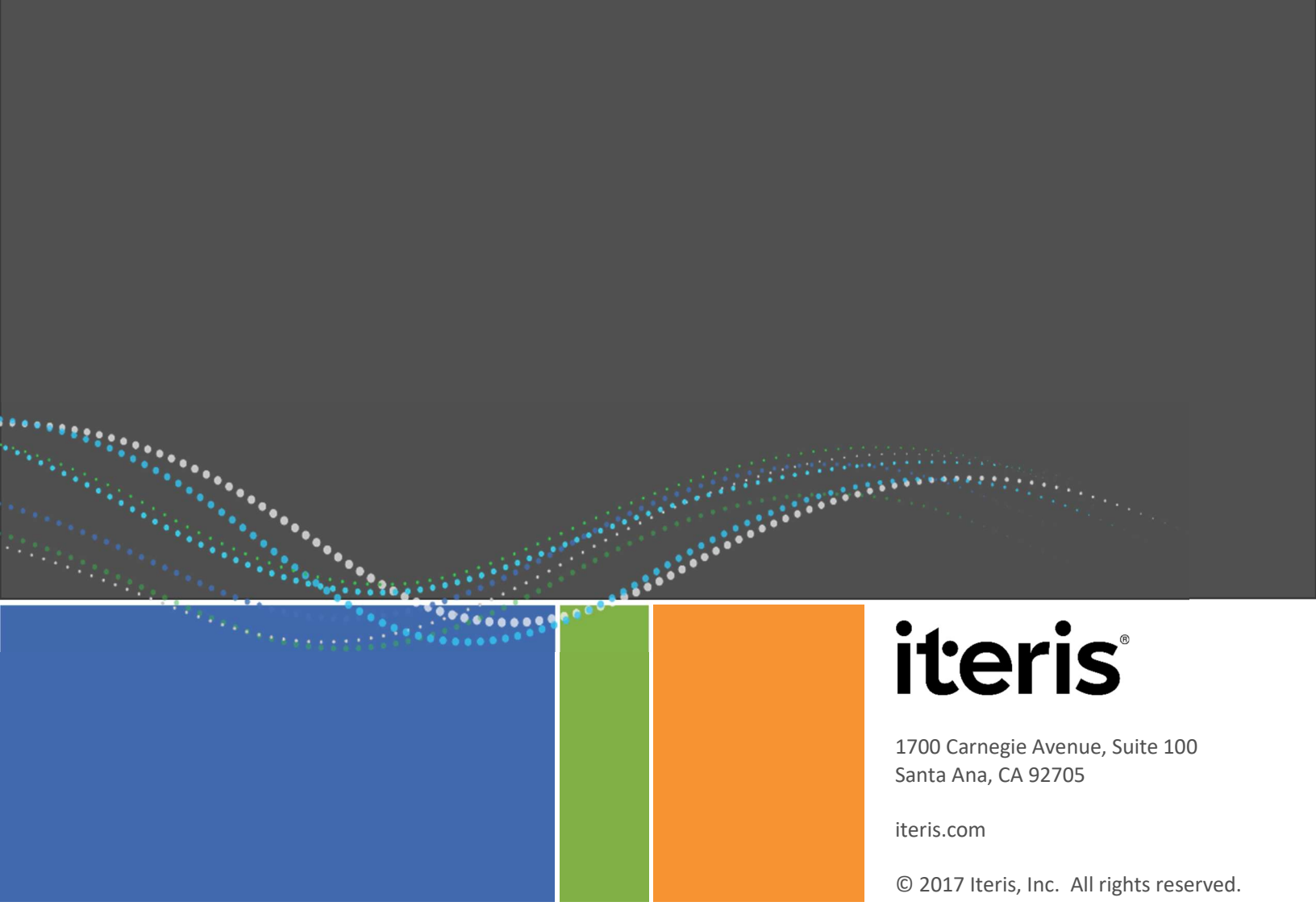
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	119	740	334	216	567	328	178	439	330	340	486	29
v/c Ratio	0.64	0.85	0.46	0.68	0.49	0.34	0.86	0.71	0.47	1.10	0.58	0.06
Control Delay	65.6	53.0	16.5	57.7	34.2	8.4	85.5	52.6	18.7	118.0	33.5	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.6	53.0	16.5	57.7	34.2	8.4	85.5	52.6	18.7	118.0	33.5	1.3
Queue Length 50th (ft)	89	282	106	156	177	57	136	170	119	~323	187	0
Queue Length 95th (ft)	149	358	186	#305	260	136	#257	214	202	#486	233	m5
Internal Link Dist (ft)		1810			798			864			485	
Turn Bay Length (ft)	220		220	200			200			240		220
Base Capacity (vph)	197	910	728	317	1151	951	218	891	703	310	1032	536
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.81	0.46	0.68	0.49	0.34	0.82	0.49	0.47	1.10	0.47	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



iteris®

1700 Carnegie Avenue, Suite 100
Santa Ana, CA 92705

iteris.com