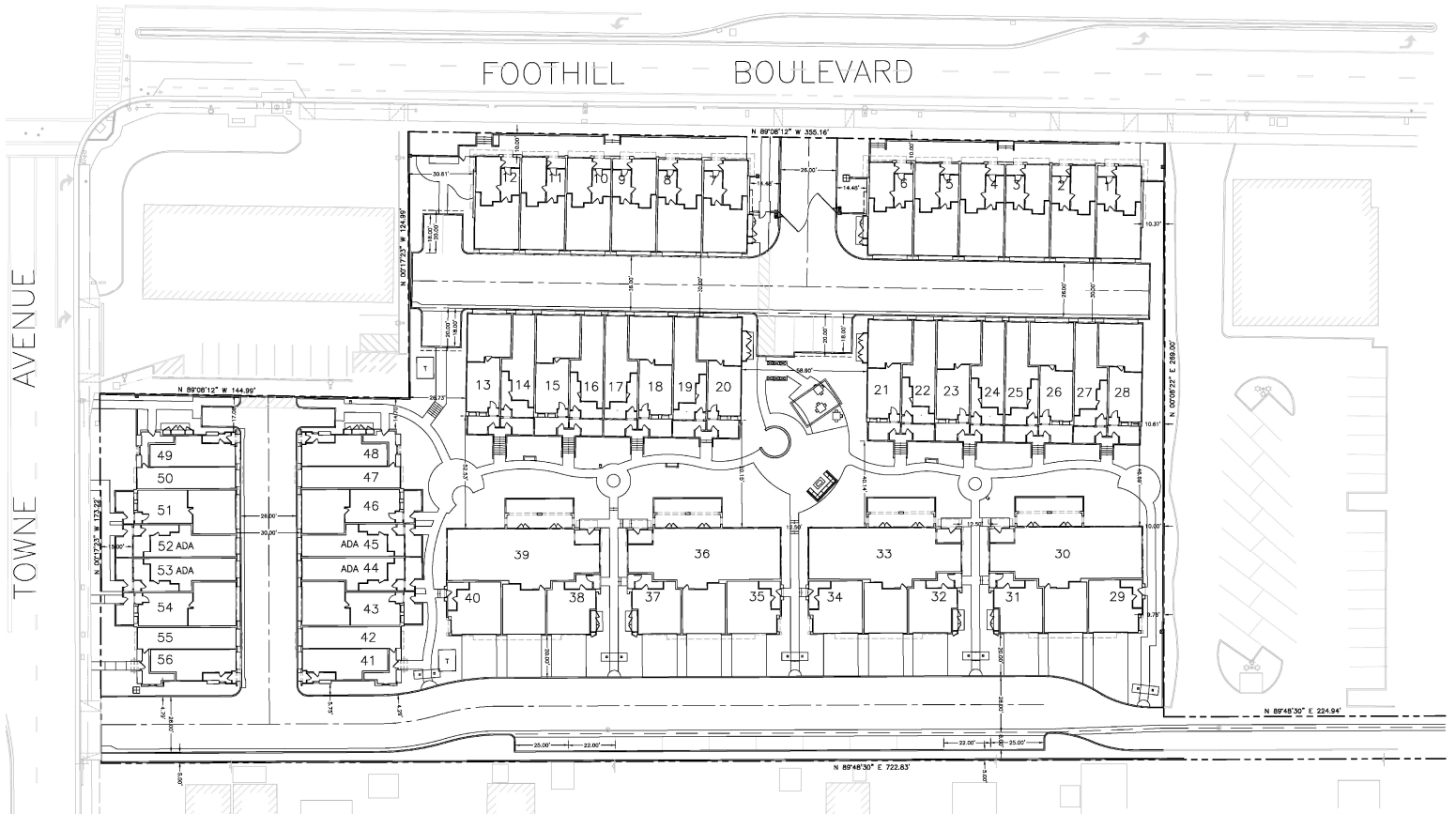


FOOTHILL AND TOWNE RESIDENTIAL DEVELOPMENT TRAFFIC IMPACT STUDY City of Claremont, California



FOOTHILL AND TOWNE RESIDENTIAL DEVELOPMENT TRAFFIC IMPACT ANALYSIS City of Claremont, California

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April 14, 2023
(Update to the March 1, 2023 Report)

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1.0 Introduction

1.1 Purpose of Report and Study Objectives

The purpose of this traffic impact analysis and report is to evaluate and assess the proposed Foothill and Towne Residential Project (hereinafter referred to as “project”) from a traffic and circulation perspective. Furthermore, this analysis will determine whether the proposed project will significantly impact the environment.

This study has been conducted pursuant to the *City of Claremont Draft Transportation Study Guidelines for Vehicles Miles Traveled and Level of Service Assessment*, dated August 2020, and the California Environmental Quality Act (CEQA). This study evaluates the potential traffic and environmental impacts associated with the proposed project in accordance with the thresholds of significance.

1.2 Site Location & Project Description

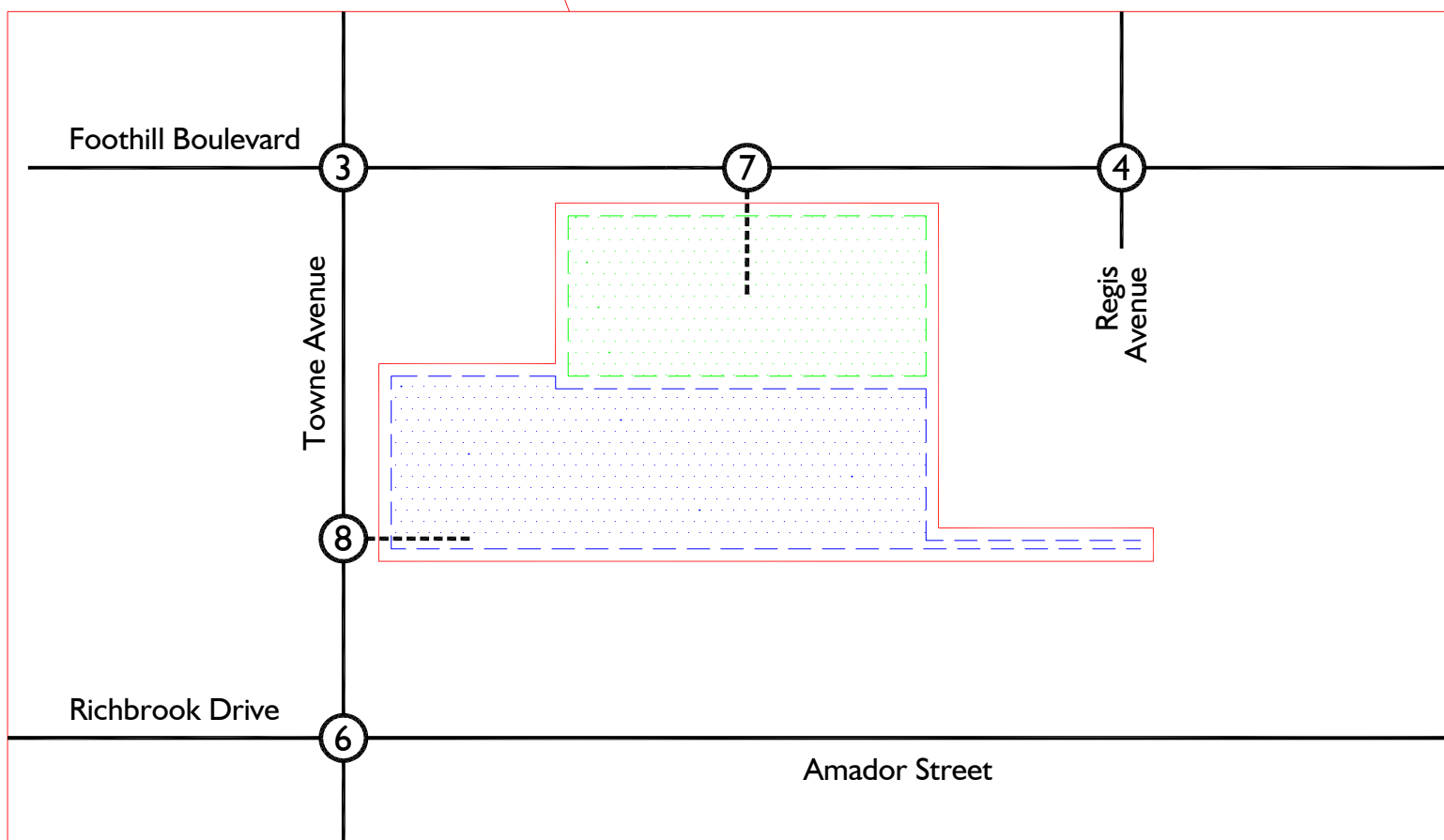
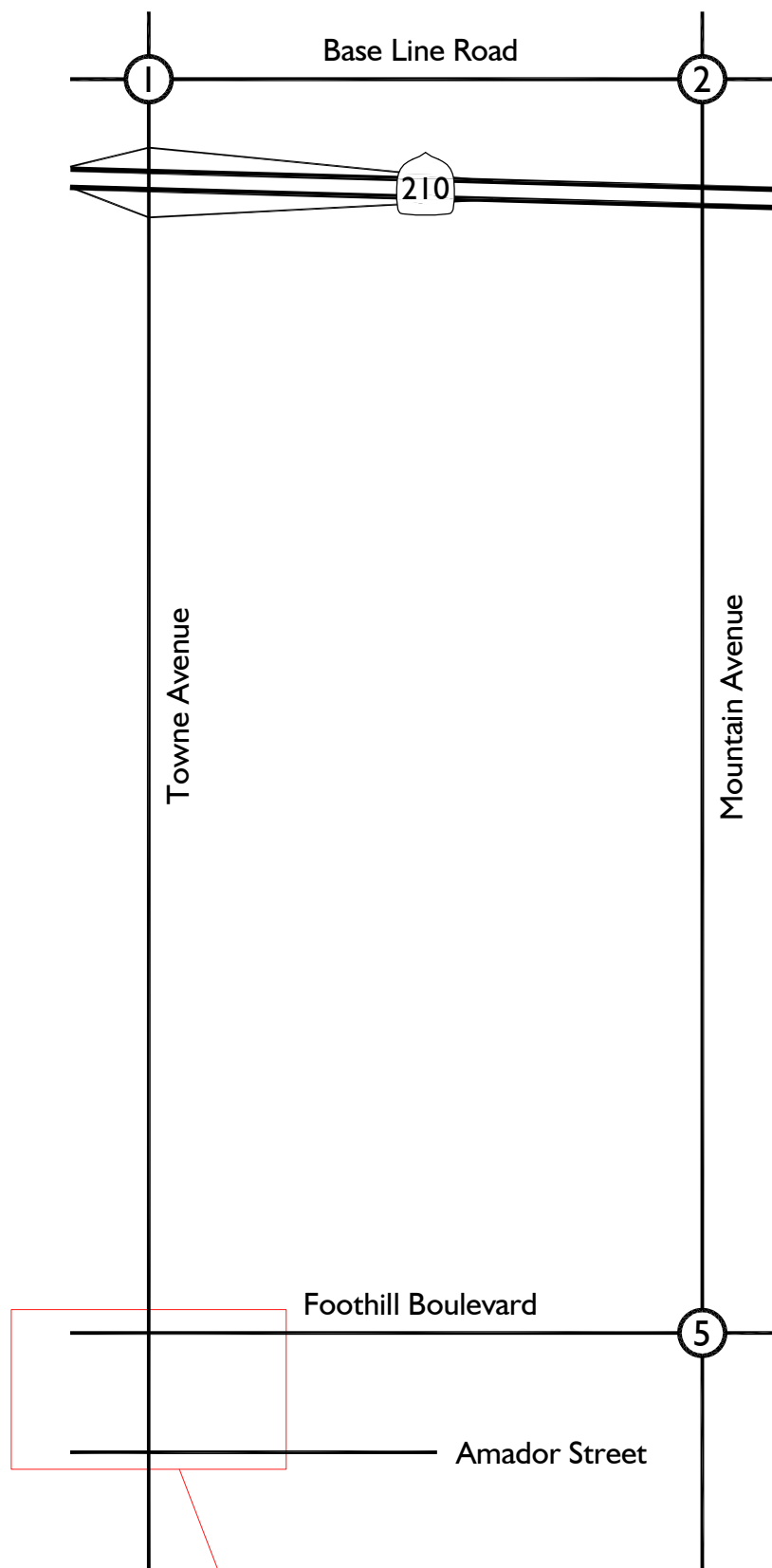
The proposed project is located at 1030 W. Foothill Boulevard near the southeast corner of Towne Avenue and Foothill Boulevard in the City of Claremont. The project site is currently vacant and was previously occupied by a Marie Callender’s Restaurant that has since been demolished.

The project consists of constructing fifty-six (56) residential single-family attached dwelling units, inclusive of four (4) low income-units and twelve (12) live/work units. The site is divided in half by a communal lawn area and is herein referred to as the “North Units” and “South Units” respectively. Specifically, the North Units consist of twelve (12) live/work units and sixteen (16) single-family attached dwelling units. The South Units consist of the remaining twenty-eight (28) single-family attached dwelling units.

Access to the North Units is proposed via one (1) existing right-in/right-out only unsignalized driveway along W. Foothill Boulevard (i.e., Project Access No. 1). Access to the South Units is proposed via one (1) existing right-in/right-out only unsignalized driveway located along Towne Avenue (i.e., Project Access No. 2).

It should be noted that the existing alleyway along the southern portion of the site also provides access to adjacent parcels, east of the project. The project is planned to open in 2024 and will be fully occupied by 2025. The project will be evaluated in one (1) single phase.

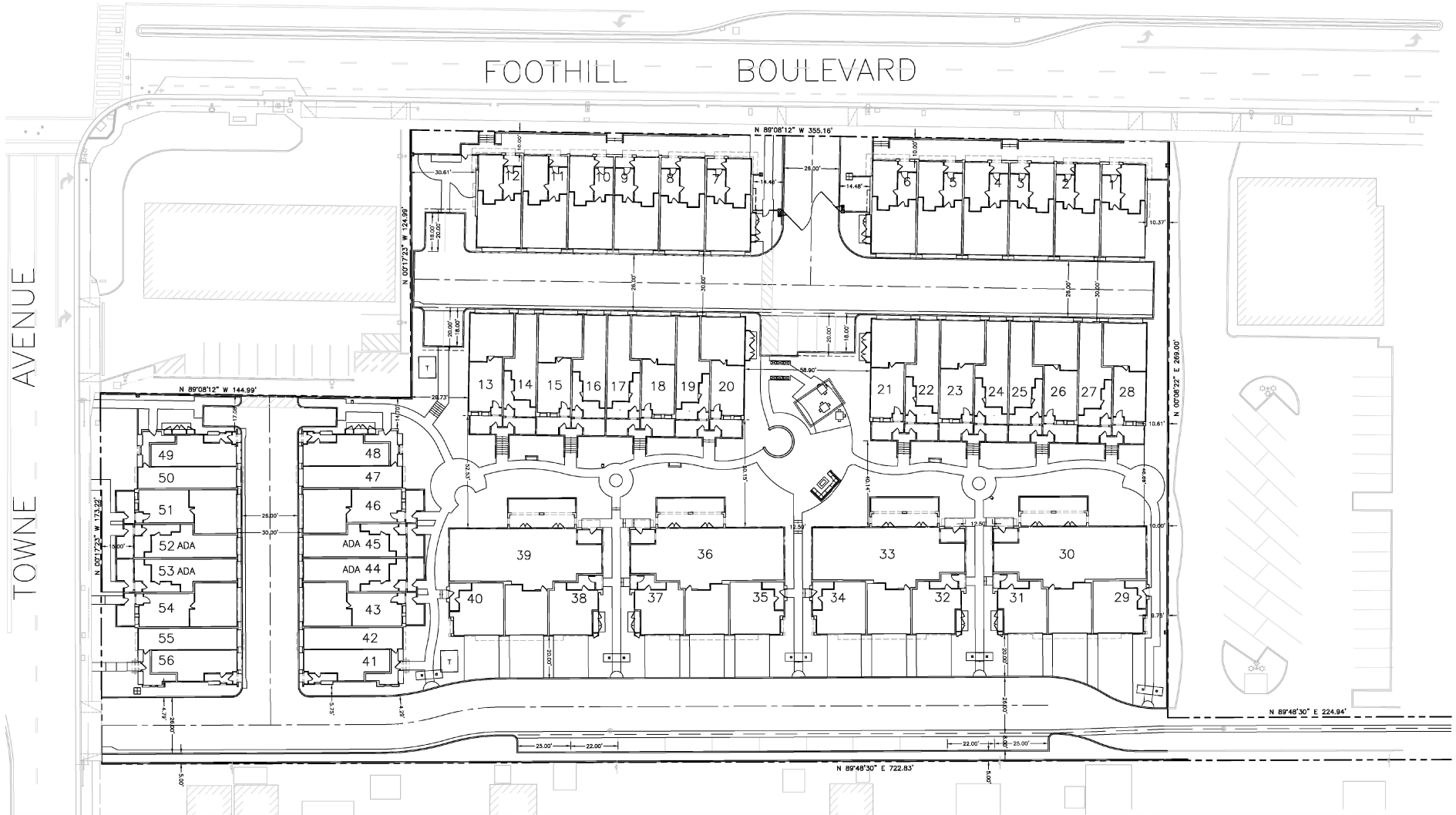
The project site location map is shown in Exhibit 1-1. Exhibit 1-2 shows the proposed project’s site plan.



Legend:

- ① = Study Area Intersection
- = Project Access Driveway
- = Project Site Boundary
- = North Units
- = South Units





1.3 Traffic Study Area & Analysis Scenarios

Exhibit 1-1 illustrates the project site's location map and traffic analysis study area.

The study area included in this analysis has been determined based on existing and future transportation facilities within the vicinity of the site where the project may contribute a significant amount of traffic.

The study area consists of the following eight (8) intersections listed below. The jurisdiction(s) where each study intersection is located is also identified.

1. Towne Avenue (NS) at Base Line Road (EW) [City of Claremont]
2. Mountain Avenue (NS) at Base Line Road (EW) [City of Claremont]
3. Towne Avenue (NS) at Foothill Boulevard (EW) [City of Claremont/City of Pomona]
4. Regis Avenue (NS) at Foothill Boulevard (EW) [City of Claremont]
5. Mountain Avenue (NS) at Foothill Boulevard (EW) [City of Claremont]
6. Towne Avenue (NS) at Richbrook Drive / Amador Street (EW) [City of Claremont/City of Pomona]
7. Project Access No.1 (North Units) (NS) at Foothill Boulevard (EW) [City of Claremont]
8. Towne Avenue (NS) at Project Access No.2 (South Units) (EW) [City of Claremont/City of Pomona]

The analysis evaluates traffic conditions of the study area under the following scenarios during the weekday AM (7:00 AM to 9:00 AM) and weekday PM (4:00 PM to 6:00 PM) peak hour conditions:

- Existing Conditions;
- Project Opening Year (2025) With Cumulative Projects Without Project Conditions;
- Project Opening Year (2025) With Cumulative Projects With Project Conditions;
- Horizon Year (2040) Without Project Conditions; and
- Horizon Year (2040) With Project Conditions.

2.0 Analysis Methodology

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report in accordance with the City of Claremont requirements. This section also discusses the agency-established applicable performance criteria and thresholds of significance for the study facilities.

2.1 Study Intersection Peak Hour Level of Service Analysis Methodology

In accordance with the *City of Claremont Draft Transportation Study Guidelines for Vehicles Miles Traveled and Level of Service Assessment*, dated August 2020, the Highway Capacity Manual Sixth Edition (HCM 6) is utilized as the technical guide in the evaluation of traffic operations.

The HCM defines level of service as a qualitative measure that describes operational conditions within a traffic stream, generally in terms of factors such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS (Level of Service) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted.

The definitions of level of service for interrupted flow (flow regulated by the existence of traffic control devices) are:

- **LOS A** (Free Flow / Insignificant Delays) describes traffic operations in which progression is exceptionally favorable or the cycle length is extremely short. Generally, LOS A operations for signalized intersections tend to result in most vehicles arriving during the green phase and traveling through the intersection without stopping.
- **LOS B** (Stable Operation / Minimal Delays) describes traffic operations in which progression slightly diminishes but is still considered highly favorable and the cycle length is short. Vehicles stop more often causing a marginal increase in average delay.
- **LOS C** (Stable Operation / Acceptable Delays) describes traffic operations in which progression is favorable and the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Many vehicles still pass through the intersection but a significant number of vehicles are stopping. Average delay is fair.

- **LOS D** (Approaching Unstable / Tolerable Delays) describes traffic operations in which progression is ineffective and/or cycle length is long. A considerable amount of vehicles stop and individual cycle failures are noticeable. Average delay is adequate.
- **LOS E** (Unstable Operation / Significant Delays) describes traffic operations in which progression is unfavorable and the cycle length is exceedingly long. Individual cycle failures are frequent. Average delay is high.
- **LOS F** (Forced Flow / Excessive Delays) describes traffic operations in which progression is extremely poor and the cycle length is extremely long. Most cycles fail to clear the queue. Average delay is vast.

2.1.1 HCM (6th Edition) Methodology

Level of service is typically dependent on the quality of traffic flow at the intersection along a roadway. The HCM methodology expresses the level of service at an intersection in terms of delay time for various intersection approaches. The HCM uses different procedures depending on the type of intersection control. The levels of service determined in this study are calculated using the HCM methodology.

For signalized intersections, average control delay per vehicle is used to determine the level of service. Levels of service at signalized study intersections have been evaluated using the HCM intersection analysis program.

For all-way stop-controlled intersections, average control delay per vehicle is used to determine the level of service.

For intersections with stop control on the minor approach only, the calculation of level of service is dependent on the occurrence of gaps occurring in the free-flow traffic movement of the major street, and the level of service is determined based on the worst individual movement on the stop-controlled minor approach or movements sharing a single lane on the stop-controlled minor approach.

Table 2-1 shows the level of service criteria based on the HCM methodology.

**Table 2-1
HCM Intersection LOS & Delay Ranges**

LOS	Average Control Delay Per Vehicle (Seconds)	
	Signalized	Unsignalized
A	0.00 - 10.00	0.00 - 10.00
B	10.01 - 20.00	10.01 - 15.00
C	20.01 - 35.00	15.01 - 25.00
D	35.01 - 55.00	25.01 - 35.00
E	55.01 - 80.00	35.01 - 50.00
F	>80.00	>50.00

2.1.2 Analysis Parameters

In this report, the HCM levels of service have been evaluated utilizing the HCM 6 methodology and the PTV Vistro analysis software. All analysis parameters utilized in this analysis are in accordance with the City of Claremont TIA guidelines. Existing peak hour factors have been calculated based on the manual turning movement counts collected at the study area intersections.

2.2 LOS Performance Criteria & Thresholds for Requiring LOS Improvements

The eight (8) key study intersections span over the following jurisdictions:

- The City of Claremont; and
- The City of Pomona.

Hence, this study evaluates the potential traffic impacts associated with the proposed project for each study intersection based on the performance criteria and thresholds of significance set forth by the respective jurisdiction(s).

2.2.1 City of Claremont

According to the TIA guidelines set forth by the City of Claremont, the acceptable LOS for intersections is established in the City’s General Plan’s Mobility Element Table 4-2 as shown below.

**Table 4-2
Circulation System Performance Criteria**

Peak Hour Intersection Level of Service

Major Arterial	LOS E Minimum acceptable operations
Secondary Arterial	LOS D Minimum acceptable operations
Rural Secondary Arterial	LOS D Minimum acceptable operations
Collector	LOS C Minimum acceptable operations
Local Street	LOS B Minimum acceptable operations

Note: For roadway segments, these standards are applied to mid-block conditions. For intersections, the LOS standard applicable to the largest intersecting street is applied. If the intersection operates at a deficient level of service, the existing level of service shall be maintained.

For intersections, the LOS applicable to the largest intersecting street is applied. When an acceptable level of service cannot be maintained with a proposed development, improvements shall be required to meet the City’s standards for LOS.

Signalized Intersections

Signalized intersections will require improvements **if one of the following** conditions is met:

1. Any study intersection that is operating at a minimum level of service as stated in the City’s General Plan’s Mobility Element Table 4-2 or better for any study scenario without project traffic in which the addition of project traffic causes the intersection to degrade operation, shall improve the deficiency so as to bring the intersection back to at least a minimum acceptable LOS as shown in the City’s General Plan’s Mobility Element Table 4-2.
2. Any study intersection that is operating at an existing deficient LOS for any study scenario without project traffic shall improve any deficiencies so as to bring the intersection back to the overall level of delay established prior to project traffic being added.

Unsignalized Intersections

Unsignalized intersections will require improvements if both of the following conditions are met:

A deficient intersection requires improvements if the study determines that either section a) **or** both sections b) and c) occur.

- a) The addition of project related traffic causes the intersection to move from the minimum acceptable LOS or better to an unacceptable operation LOS per the City's General Plan's Mobility Element Table 4-2.

OR

- b) The project contributes additional traffic to an intersection that is already projected to operate at an unacceptable LOS with background traffic.

AND

- c) One or both of the following conditions are met:
 - 1) The project adds ten (10) or more trips to any approach.
 - 2) The intersection meets the peak hour traffic signal warrant after the addition of project traffic.

2.2.2 City of Pomona

The City of Pomona adheres to the *City of Pomona Transportation Study Guidelines for Vehicles Miles Traveled and Levels of Service Assessment*, dated October 2020, in the evaluation of traffic operations.

According to the City of Pomona guidelines, the acceptable LOS for intersections is LOS D or better as established in the City of Pomona's General Plan. Any intersection operating at LOS E or worse is considered deficient.

The conditions for requiring intersection improvements for signalized and unsignalized intersections follow the same criteria previously identified for the City of Claremont.

2.2.3 Minimum Acceptable LOS Thresholds

Based on the above-mentioned level of service performance criteria, intersection arterial type, and jurisdiction(s) of each study intersection, the minimum acceptable LOS at the eight (8) key study intersections are identified respectively:

1. Towne Avenue (NS) at Base Line Road (EW) [LOS E]
2. Mountain Avenue (NS) at Base Line Road (EW) [LOS E]
3. Towne Avenue (NS) at Foothill Boulevard (EW) [LOS D]
4. Regis Avenue (NS) at Foothill Boulevard (EW) [LOS E]
5. Mountain Avenue (NS) at Foothill Boulevard (EW) [LOS E]
6. Towne Avenue (NS) at Richbrook Drive / Amador Street (EW) [LOS D]
7. Project Access No.1 (North Units) (NS) at Foothill Boulevard (EW) [LOS E]
8. Towne Avenue (NS) at Project Access No.2 (South Units) (EW) [LOS D]

3.0 Existing Conditions & Circulation System

3.1 Existing Traffic Controls & Intersection Geometrics

RK conducted a field review of the study area on Wednesday, August 17th, 2022. Exhibit 3-1 identifies the existing roadway conditions within the study area. The number of through traffic lanes for existing roadways and existing intersection controls has been identified. The type of traffic control and the number of lanes at an intersection are key inputs for the calculation of level of service.

3.2 Existing Conditions Traffic Volumes

During the time of the preparation of this traffic study, local schools were released for summer break. Thus, the collection of any new traffic count data would not fully reflect “typical” conditions.

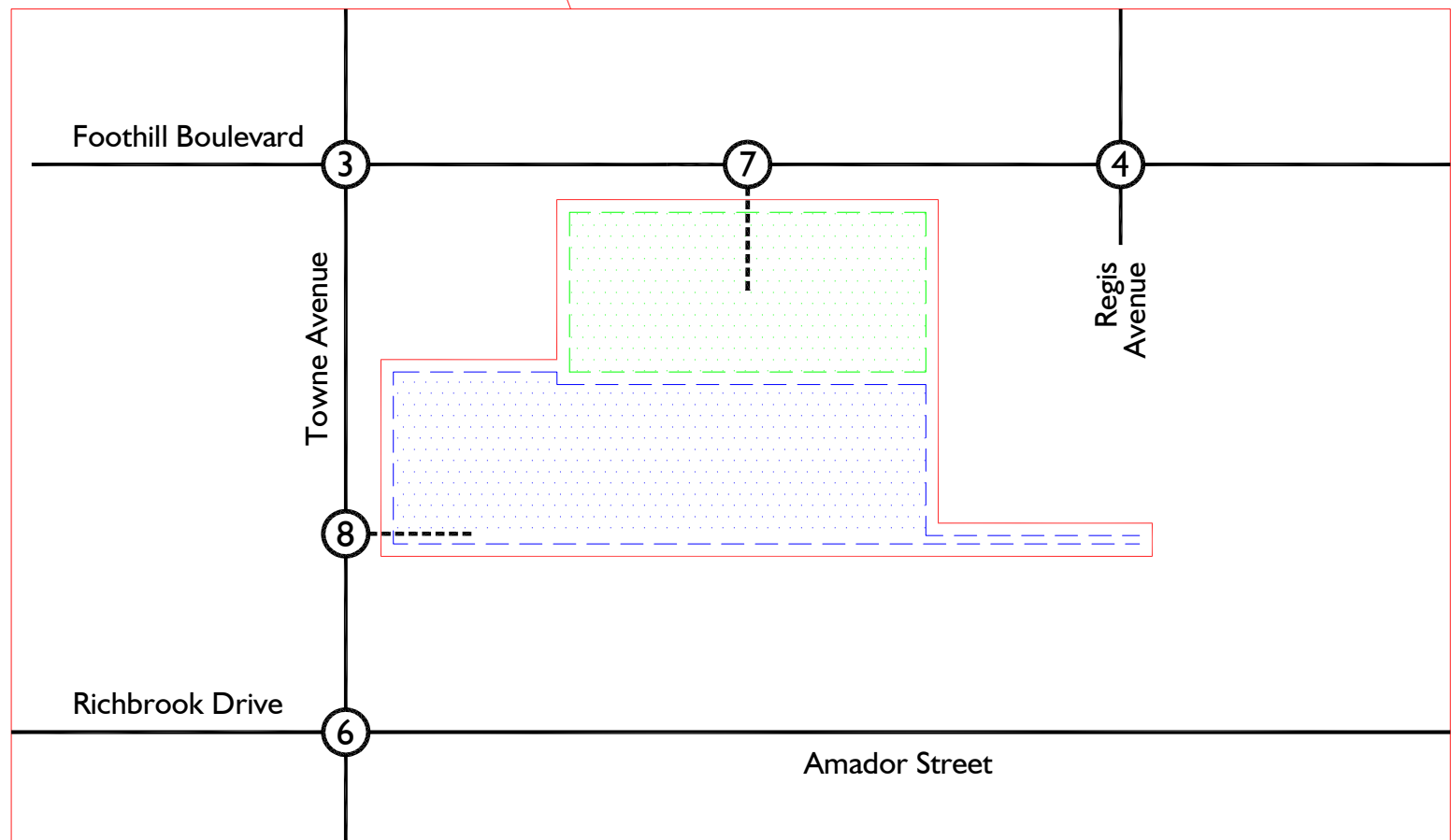
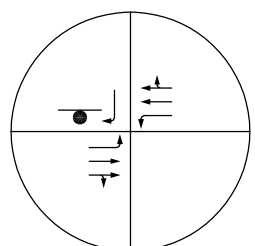
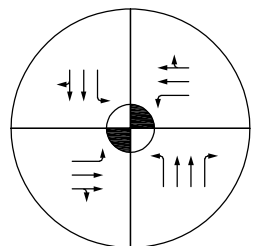
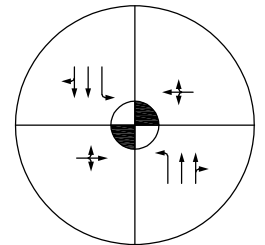
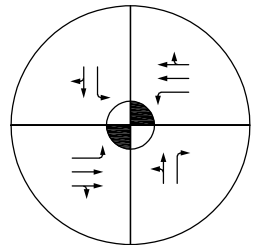
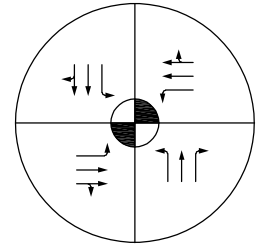
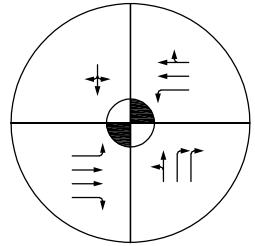
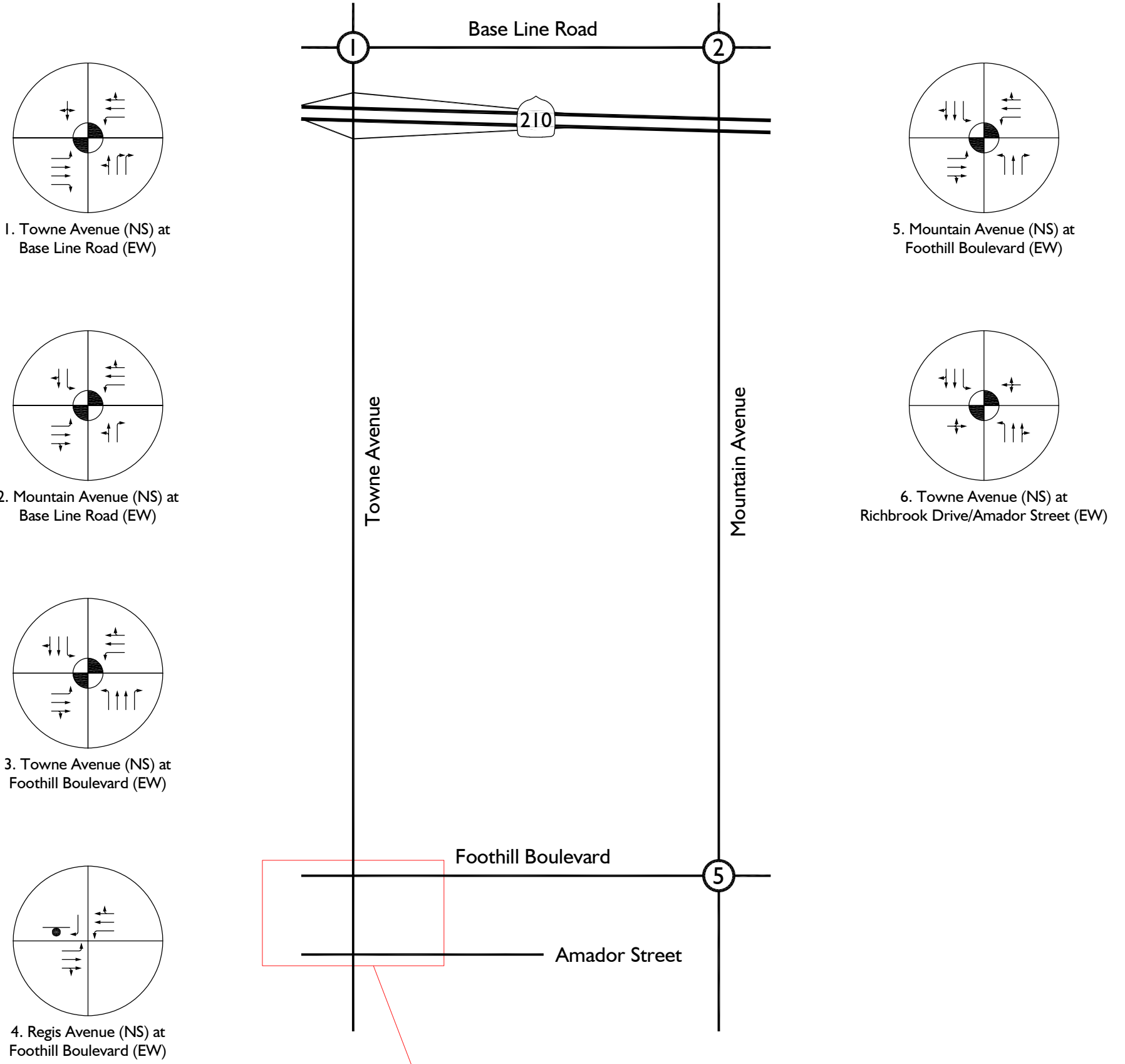
Historical traffic count data was researched within the study area and historical count data was available for the following study intersections which were collected on Wednesday, June 1st, 2016, while local schools were in session:

- Int #3 – Towne Avenue (NS) at Foothill Boulevard (EW); and
- Int # 5 – Mountain Avenue (NS) at Foothill Boulevard (EW).

Historical data, while local schools were in session, could not be identified for the other study intersections. As a result, per the approved scope of work, the following methodology was utilized to establish baseline Year 2022 traffic volumes:

1. The Year 2016 historical traffic counts at study intersections #3 and #5 were grown by applying a linear annual growth rate of two percent (2%) per year for six (6) years (i.e., 12% total growth) to establish baseline (2022) traffic conditions.
2. New 2022 summer traffic counts were collected at all six (6) existing study intersections. New traffic counts for all six (6) study intersections were collected on Tuesday, July 26th, 2022. Specifically, the weekday AM and PM peak period traffic volumes were collected between 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM respectively.

Existing Traffic Controls & Intersection Geometrics



- Legend:**
- ① = Study Area Intersection
 - = Project Access Driveway
 - ⊙ = Traffic Signal
 - = Stop Sign
 - = Project Site Boundary
 - - - = North Units
 - - - = South Units

3. Considering that the new summer 2022 traffic count data does not account for local school traffic, the new summer 2022 traffic count data has been grown by a factor of 2.376 during the weekday AM peak hour and 1.413 during the PM peak hour to establish baseline Year 2022 existing traffic volumes. These growth factors were calculated by comparing the grown Year 2016 historical traffic counts at intersections #3 and #5 to the new summer 2022 traffic volumes collected at intersections #3 and #5. The higher factors between intersections #3 and #5 were ultimately utilized.

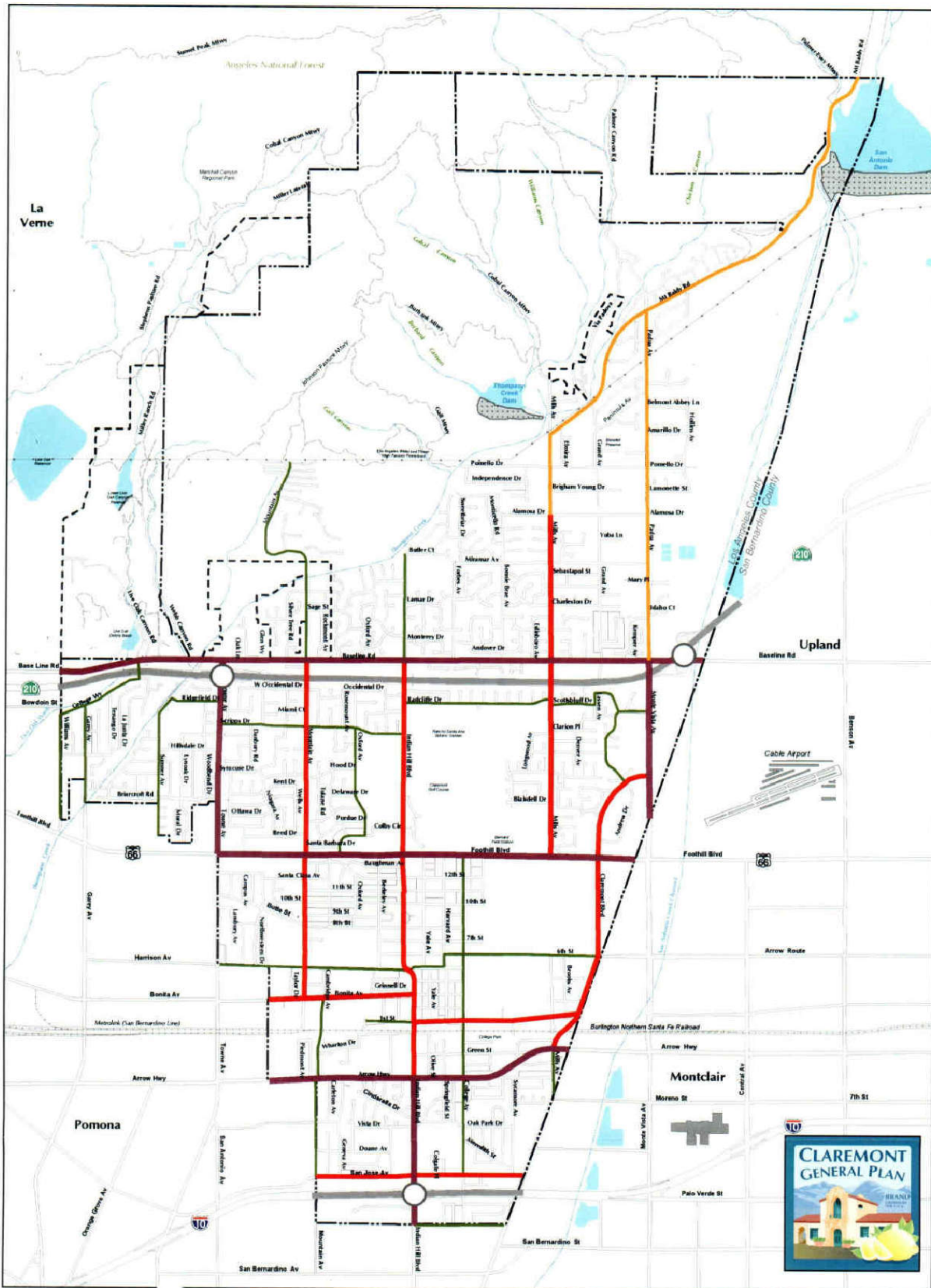
The existing conditions traffic volumes for the study area intersections are shown in Exhibit 3-2.

The peak hour traffic count worksheets as well as the growth factor worksheet (i.e. Summer vs. Historical counts) are included in Appendix A.

3.3 City of Claremont Circulation Element

The City of Claremont Master Plan of Roadways is shown in Exhibit 3-3.

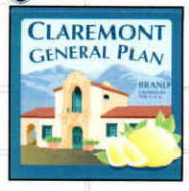
City of Claremont Master Plan of Roadways



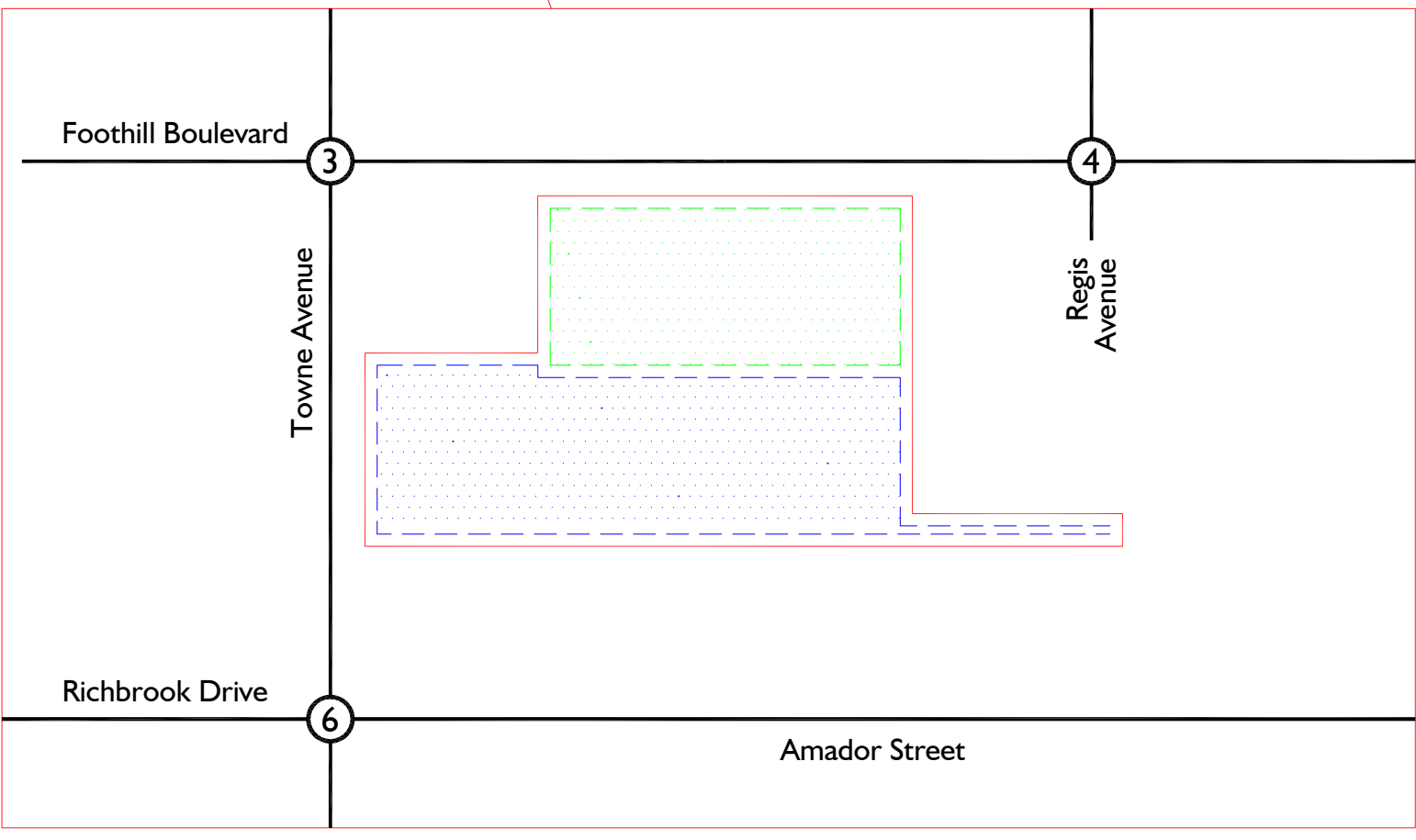
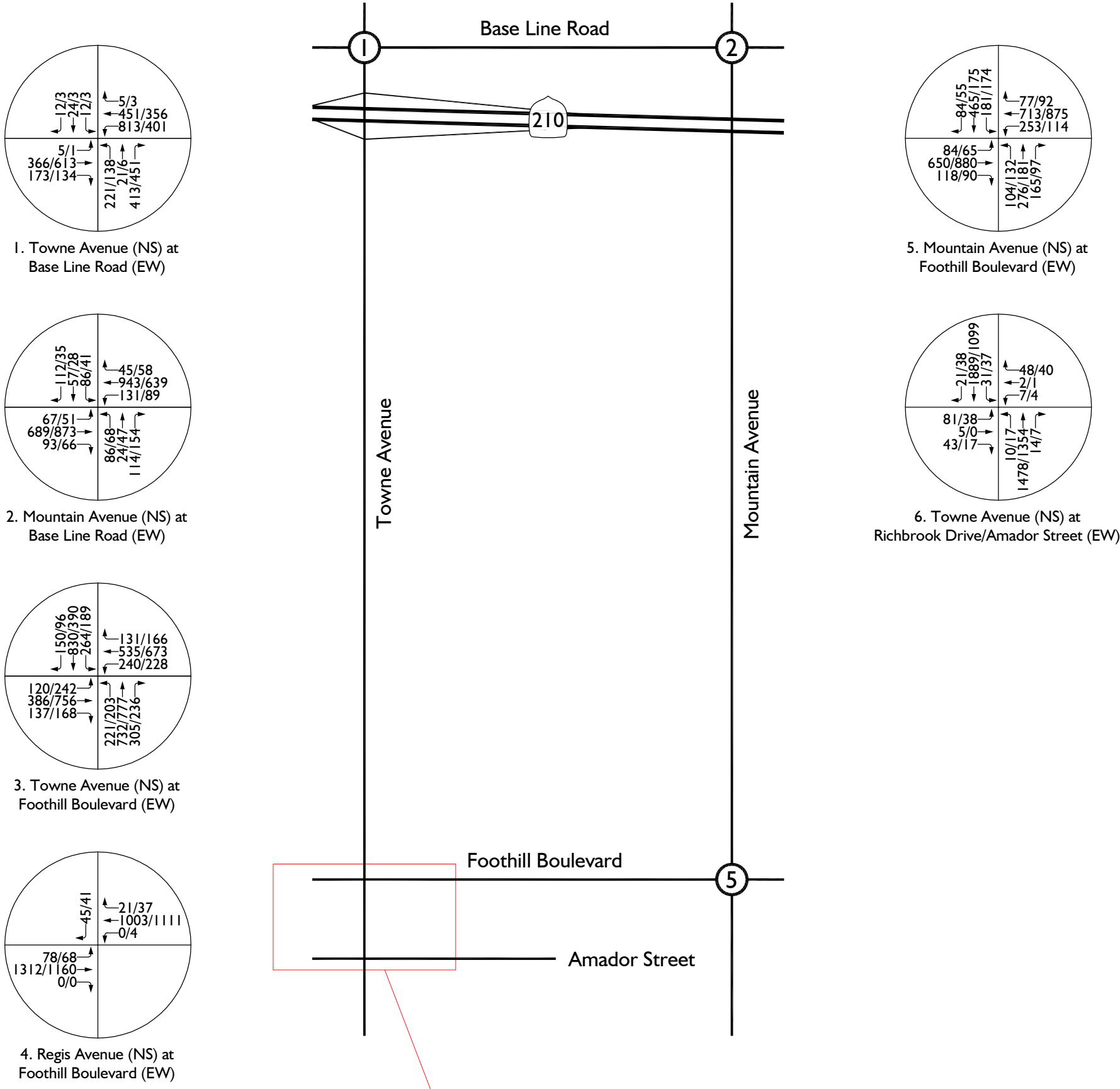
- Roadway Classification**
- Major Arterial
 - Secondary Arterial
 - Rural Secondary Arterial
 - Collector Roadway
 - Local Streets

- Freeway
- Freeway Offramps

- Base Map Features**
- Claremont City Boundary
 - Claremont Sphere of Influence
 - Water
 - Streams/Water Courses



Existing Conditions Traffic Volumes



Legend:

- 10/20 = AM/PM Peak Hour Volumes
- ⊙ = Study Area Intersection
- = Project Site Boundary
- - - = North Units
- - - = South Units



4.0 Projected & Future Traffic Volumes

This section of the report provides a discussion on methodologies utilized to derive future traffic volumes for the study area.

4.1 Project Traffic Conditions

4.1.1 Project Trip Generation

Trip generation represents the amount of traffic that is attracted and produced by a development. The trip generation for the proposed project is based on the specific land uses that have been planned for the development.

Trip generation rates for the proposed development are shown in Table 4-1 and are from the *Institute of Transportation Engineers (ITE) Trip Generation Manual* (11th Edition, 2021). This publication provides a comprehensive evaluation of trip generation rates for a variety of land uses.

The project is proposing to develop fifty-six (56) residential single-family attached dwelling units, inclusive of four (4) low income-units and twelve (12) live/work units. As such, ITE Land Use 215: Single Family Attached Housing and ITE Land Use 230: Low-Rise Residential with Ground-Floor Commercial (1-25K GFA) trip rates are the most appropriate for the proposed project. Conservatively, the ITE Land Use 215 trip rates have also been utilized for the four (4) low-income units in addition to the forty (40) market-rate units since the ITE Land Use 223: Affordable Housing trip rates are slightly less.

Table 4-1 shows the ITE trip generation rates for the trip generation analysis of the project land uses.

Utilizing the trip generation rates from Table 4-1, Table 4-2 summarizes the daily and peak hour trip generation for weekday conditions for the proposed project.

As shown in Table 4-2, the North Units are forecast to generate approximately 156 daily trips which include 14 AM peak hour trips and 13 PM peak hour trips. Furthermore, the South Units are forecast to generate approximately 202 daily trips which include 13 AM peak hour trips and 16 PM peak hour trips.

As shown at the bottom of Table 4-2, the total proposed project (North Units + South Units) is proposed to generate approximately 358 daily trips which include 27 AM peak hour trips and 29 PM peak hour trips.

Table 4-1
ITE Trip Generation Rates¹

Land Use	ITE Code	Units ²	AM			PM			Daily
			In	Out	Total	In	Out	Total	
Single Family Attached Housing	215	TSF	0.15	0.33	0.48	0.32	0.25	0.57	7.20
Low-Rise Residential with Ground-Floor Commercial - 1-25K G.F.A.	230	TSF	0.10	0.34	0.44	0.26	0.10	0.36	3.44

¹ Source: *ITE Trip Generation Manual* (11th Edition, 2021).

² DU = Dwelling Units

**Table 4-2
Project Trip Generation¹**

Land Use (ITE Code)	Quantity	Units ²	AM			PM			Daily
			In	Out	Total	In	Out	Total	
North Units									
Single Family Attached Housing (215)	16	DU	3	6	9	5	4	9	115
Low-Rise Residential with Ground-Floor Commercial - 1-25K G.F.A. (230)	12	DU	1	4	5	3	1	4	41
North Units Trip Generation Sub-Total [A]			4	10	14	8	5	13	156
South Units									
Single Family Attached Housing (215)	28	DU	4	9	13	9	7	16	202
South Units Trip Generation Sub-Total [B]			4	9	13	9	7	16	202
Total Trip Generation [A] + [B]			8	19	27	17	12	29	358

¹ Source: *ITE Trip Generation Manual* (11th Edition, 2021).

² DU = Dwelling Units.

4.1.2 Project Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site and the proximity to the regional freeway system. The directional orientation of traffic was determined by evaluating existing and proposed land uses and highways within the study area.

The outbound and inbound project trip distributions for the proposed project have been developed for both the North and South portions of the site.

Exhibit 4-1 and Exhibit 4-2 show the outbound and inbound project trip distribution for the North Units, respectively.

Exhibit 4-3 and Exhibit 4-4 show the outbound and inbound project trip distribution for the South Units, respectively.

4.1.3 Modal Split

Modal split denotes the proportion of traffic generated by a project that would use any of the transportation modes, namely buses, cars, bicycles, motorcycles, trains, carpools, etc. The traffic-reducing potential of public transit and other modes is significant. However, the traffic projections in this study are conservative as modal split reductions to the traffic volumes via the use of public transit and alternative transportation are not applied to the projections. With the implementation of transit services and the provision of alternative transportation ideas and incentives, the automobile traffic demand can be reduced significantly.

4.1.4 Project Traffic Volumes/Assignment

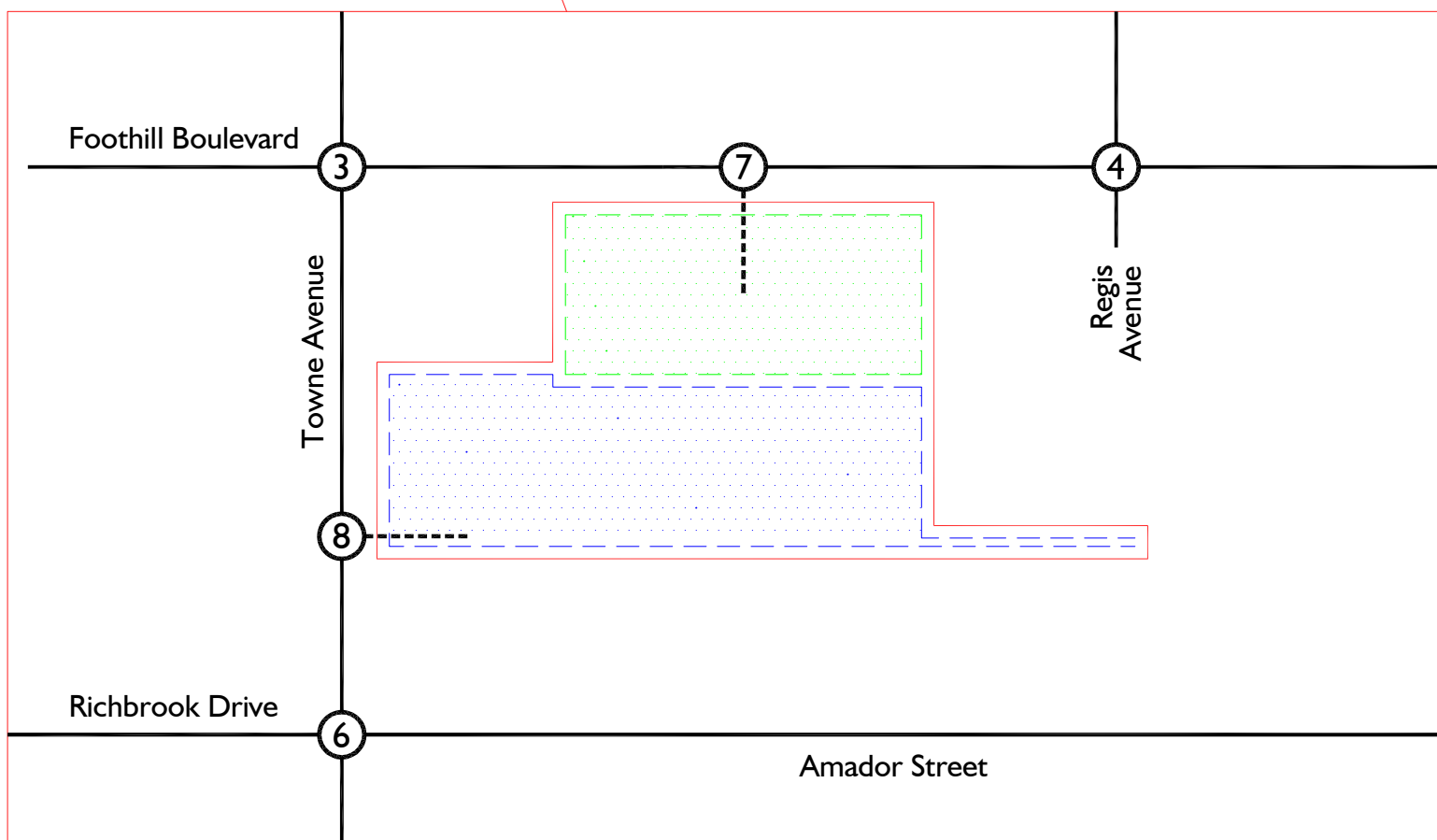
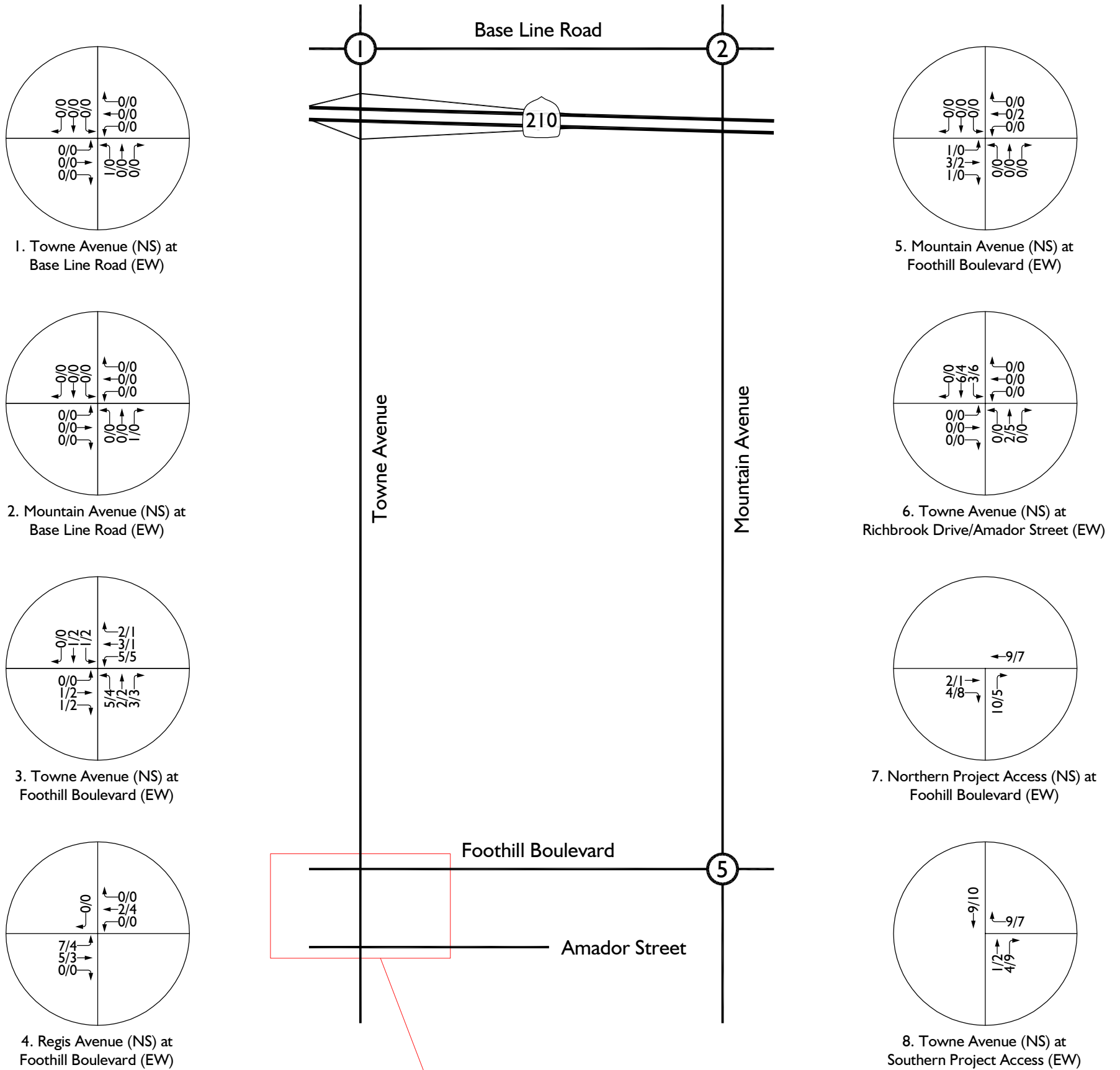
The assignment of project traffic to the adjoining roadway system is based upon the project's trip generation, trip distribution, and arterial highway and local street systems that would be in place by the time of initial occupancy of the site.

Project traffic volumes are shown in Exhibit 4-5.

Exhibit 4-5 shows the number of vehicular trips generated by the proposed project during the AM and PM peak hours.

4.2 Background Traffic

4.2.1 Method of Projection

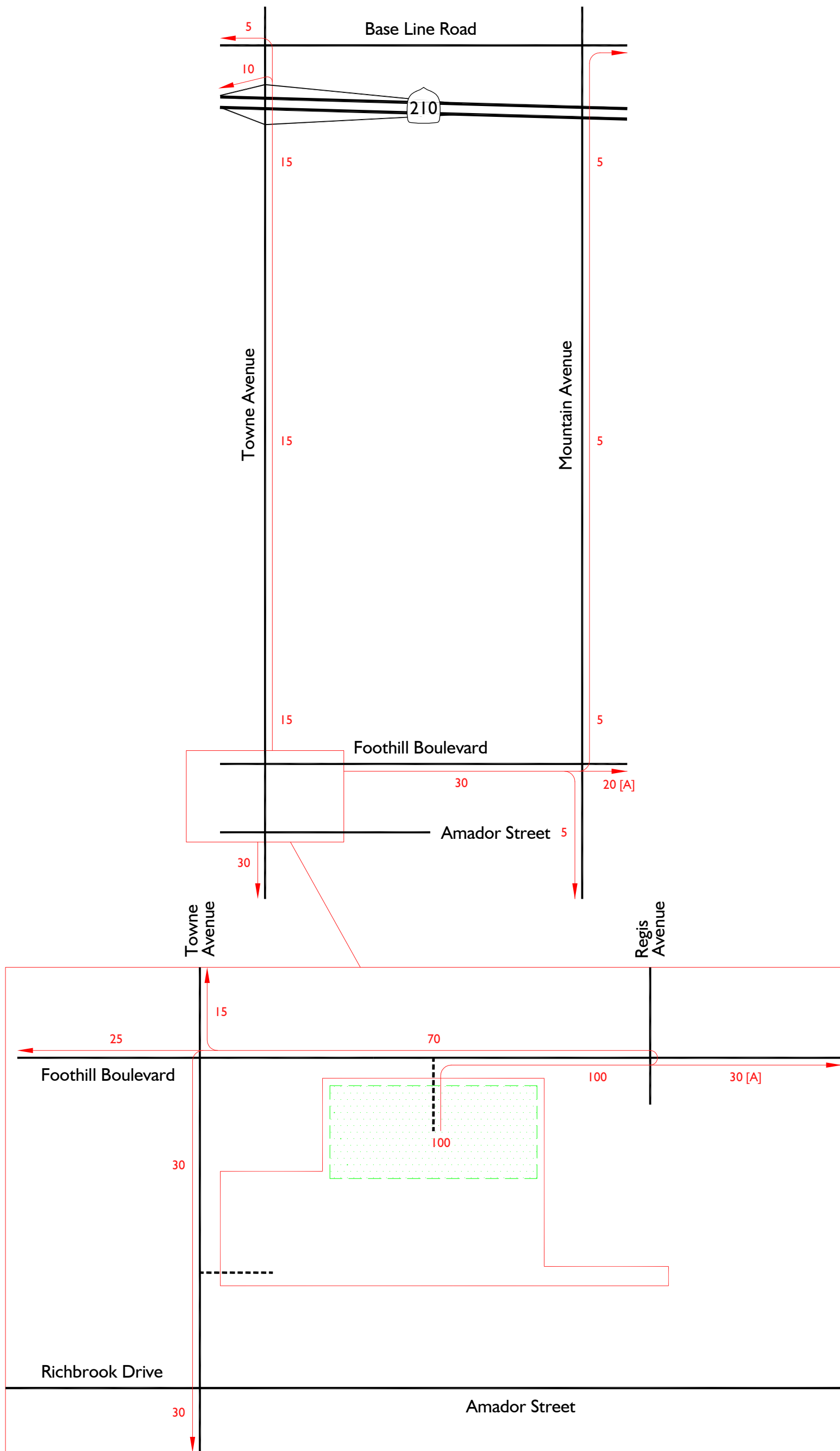


Legend:

- 10/20 = AM/PM Peak Hour Volumes
- ① = Study Area Intersection
- = Project Access Driveway
- = Project Site Boundary
- - - = North Units
- - - = South Units



Outbound Project Trip Distribution (North Units)



Legend:

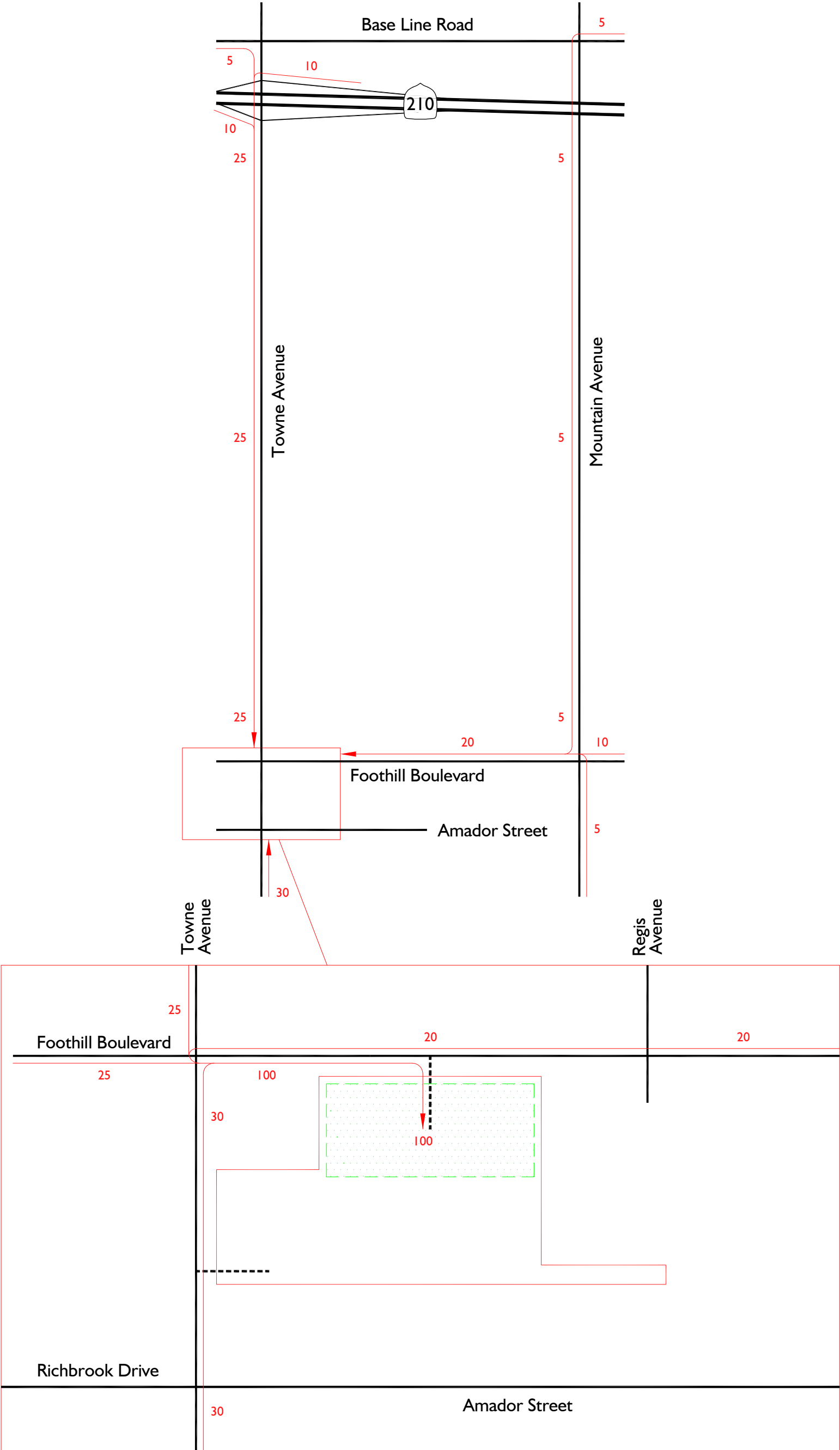
- 10 = Percent from Project
- = Project Access Driveway
- = Project Site Boundary
- - - = North Units

Note:

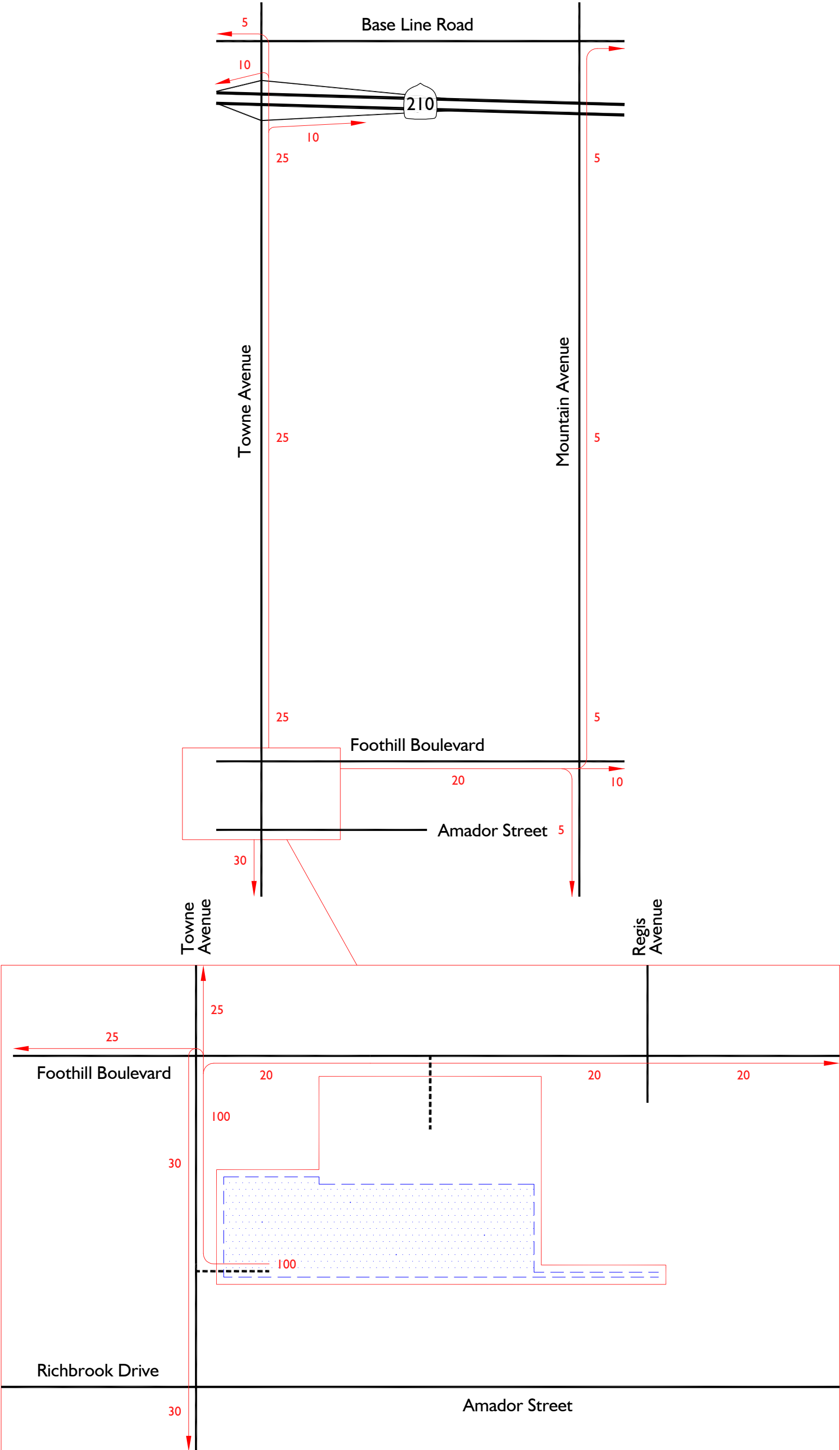
[A] 10% to SR-210 via Monte Vista Avenue.



Inbound Project Trip Distribution (North Units)



Outbound Project Trip Distribution (South Units)

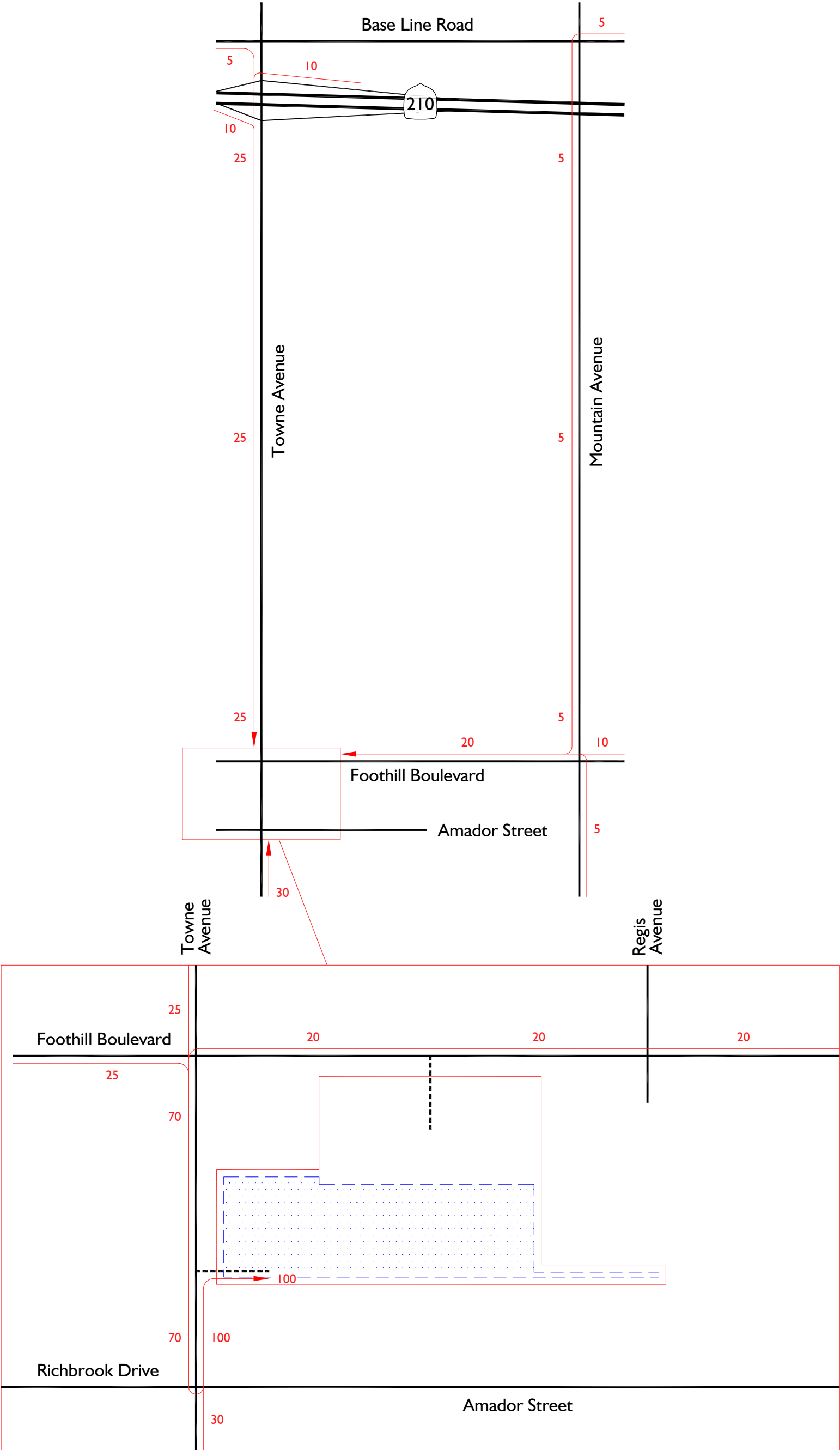


Legend:

- 10 = Percent from Project
- = Project Access Driveway
- = Project Site Boundary
- - - = South Units



Inbound Project Trip Distribution (South Units)



To assess future conditions, project traffic is combined with existing traffic and area-wide growth. As directed by City staff, to account for area-wide/ambient growth in the study area, an annual growth rate of two percent (2%) per year has been applied to the existing (2022) traffic volumes over a 3-year period to opening year 2025 conditions (i.e., 6% total growth).

4.2.2 Cumulative Projects Traffic

Information on future projects in the vicinity of the study area has been provided by the Cities of Claremont, La Verne, and Pomona staff respectively, for inclusion in this analysis and is shown in Table 4-3. Cumulative projects were organized into traffic analysis zones based on their land use types and locations.

Table 4-3 shows the land uses and their corresponding weekday daily and peak hour trip generation for the nearby cumulative projects provided by the public agencies.

A location map of the cumulative projects is shown in Exhibit 4-6.

Furthermore, TAZ trip distributions were developed to illustrate how the cumulative project trips will be distributed throughout the surrounding transportation network. TAZ trip distributions were influenced by the cumulative project's proximity to highways, transit, and major roadway connections.

The TAZ trip distributions are provided in Appendix B.

Cumulative projects traffic volumes are shown in Exhibit 4-7.

In reality, some of the cumulative projects may be downsized, may have already been partially constructed, or may not be developed by project opening year 2025. In addition, many of the related projects have been or will be subject to a variety of mitigation measures that will reduce the potential environmental impacts associated with those projects. However, those mitigation measures have not been considered in projecting the environmental impact of the related projects.

Therefore, the cumulative analyses set forth below are conservative and could result in greater impacts than anticipated. Additionally, the analysis utilizes a growth rate of two percent (6%) per year for project opening year (2025) conditions (i.e., 6% total growth), which would already capture and account for most projects in the area. The growth rate methodology is considered conservative since it is applied to all movements in all the study intersections.

**Table 4-3
Cumulative Projects Trip Generation¹**

ID No.	Jurisdiction	Project Name / Case Number	Land Use (ITE Code)	Quantity	Units ²	Weekday						Daily
						AM Peak Hour			PM Peak Hour			
						In	Out	Total	In	Out	Total	
TAZ 1												
C1	City of Claremont	Clara Oaks Residential Development	Single Family Detached Housing (210)	40	DU	7	21	28	24	14	38	377
TAZ 1 Total						7	21	28	24	14	38	377
TAZ 2												
LV1	City of La Verne	Annex	Single Family Detached Housing (210)	7	DU	1	4	5	4	2	6	66
LV2	City of La Verne	Verdana	Single Family Attached Housing (215)	58	DU	9	19	28	19	14	33	418
LV3	City of La Verne	Oakcrest	Single Family Detached Housing (210)	42	DU	8	22	30	25	15	40	396
TAZ 2 Total						18	45	63	48	31	79	880
TAZ 3												
C2	City of Claremont	Senior Low Income Housing	Senior Adult Housing - Multifamily (252)	15	DU	1	2	3	2	2	4	49
TAZ 3 Total						1	2	3	2	2	4	49
TAZ 4												
C3	City of Claremont	Doubletree Hotel / Old School House Specific Plan	Multifamily Housing (Low-Rise) (220)	126	DU	12	38	50	40	24	64	849
TAZ 4 Total						12	38	50	40	24	64	849
TAZ 5												
C4	City of Claremont	Keck Science Center Expansion	University/College (550)	10	EMP	6	2	8	3	5	8	89
C5	City of Claremont	Claremont McKenna College Master Plan	University/College (550)	250	STU	29	8	37	12	26	38	390
C7	City of Claremont	Pomona College 2015 Master Plan	University/College (550)	50	STU	6	2	8	2	5	7	78
TAZ 5 Total						41	12	53	17	36	53	557
TAZ 6												
C6	City of Claremont	Mt San Antonio Gardens Master Plan	Senior Adult Housing - Single-Family (251)	19	DU	2	3	5	3	2	5	82
C8	City of Claremont		TTM62814	Senior Adult Housing - Multifamily Housing (252)	46	DU	3	6	9	6	5	11
C8	City of Claremont	TTM62814	Multifamily Housing (Low-Rise) (220)	13	DU	1	4	5	4	2	6	88
TAZ 6 Total						6	13	19	13	9	22	319
TAZ 7												
LV4	City of La Verne	1941 White Avenue	Multifamily Housing (Low-Rise) (220)	353	DU	34	107	141	113	67	180	2,379
			Strip Retail Plaza (<-40k) (822)	1,500	TSF	2	1	3	5	5	10	82
TAZ 7 Total						36	108	144	118	72	190	2,461
TAZ 8												
C9	City of Claremont	Knights Inn Redevelopment	Hotel (310)	120	RM	31	24	55	36	35	71	959
TAZ 8 Total						31	24	55	36	35	71	959
TAZ 9												
P1	City of Pomona	CUP-018542-2022	Fast Food With Drive Thru Window (934) ³	2,800	TSF	32	31	63	26	24	50	655
TAZ 9 Total						32	31	63	26	24	50	655
TAZ 10												
P2	City of Pomona	DPR-006897-2017	Hotel (310)	132	RM	34	27	61	40	38	78	1,055
TAZ 10 Total						34	27	61	40	38	78	1,055
TAZ 11												
P3	City of Pomona	DPR-018998-2022	Multifamily Housing (Mid-Rise) (221)	289	DU	25	82	107	69	44	113	1,312
TAZ 11 Total						25	82	107	69	44	113	1,312
TAZ 12												
P4	City of Pomona	TRACTMAP-015269-2021	Single Family Detached Housing (210)	38	DU	7	20	27	23	13	36	358
TAZ 12 Total						7	20	27	23	13	36	358
TAZ 13												
P5	City of Pomona	DPR-005713-2016	Multifamily Housing (Low-Rise) (220)	20	DU	2	6	8	6	4	10	135
P6	City of Pomona	DPR-018805-2022	Multifamily Housing (Low-Rise) (220)	8	DU	1	2	3	3	2	5	54
TAZ 13 Total						3	8	11	9	6	15	189
Total Cumulative Projects Trip Generation						253	431	684	465	348	813	10,020

¹ Cumulative Projects information provided by City of Claremont & City of La Verne staff.

² TSF = Thousand Square Feet;

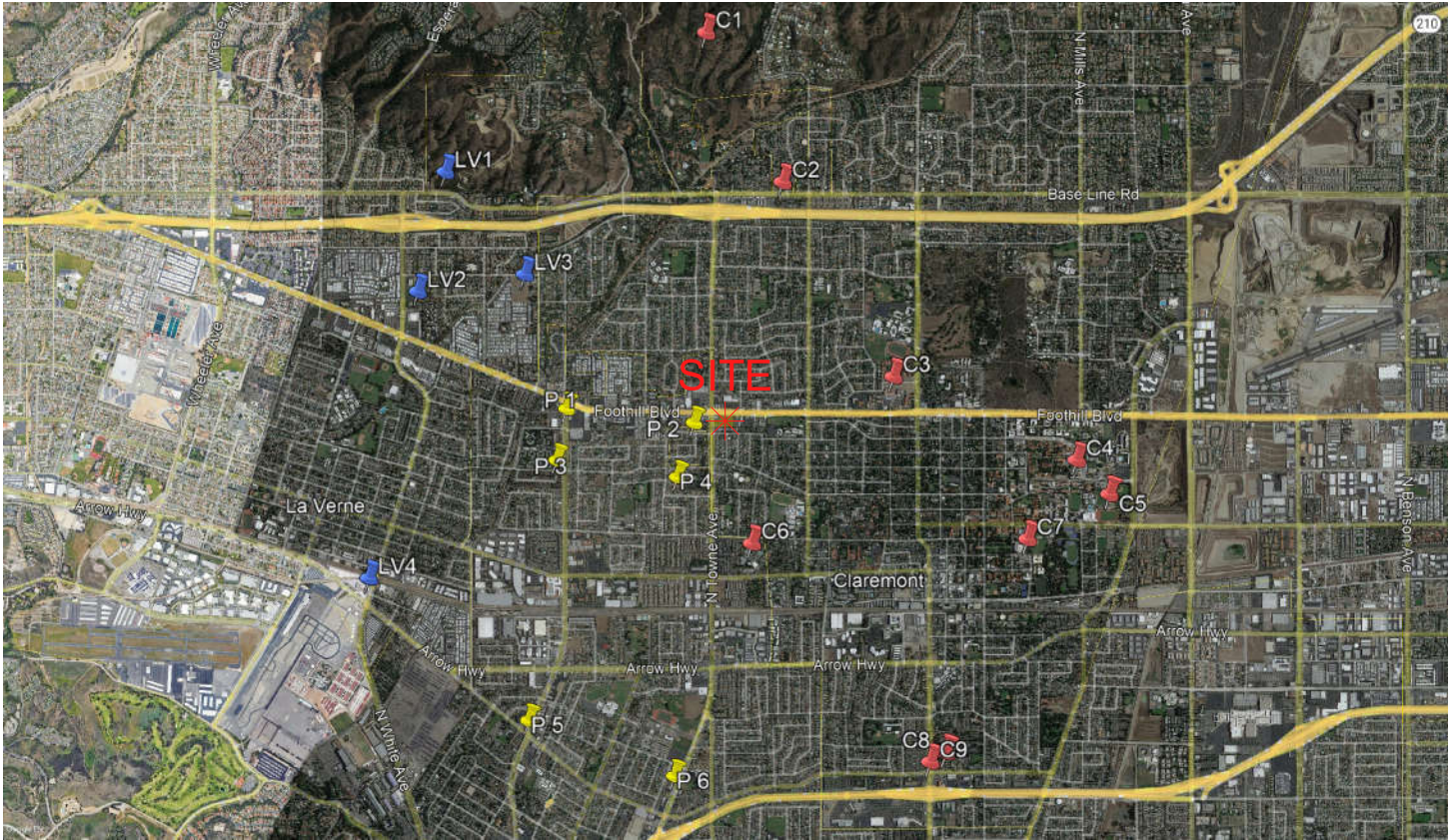
RM = Rooms;

DU = Dwelling Units;

STU = Students; and




EMP = Employees.

Exhibit 4-6
Cumulative Projects Location Map



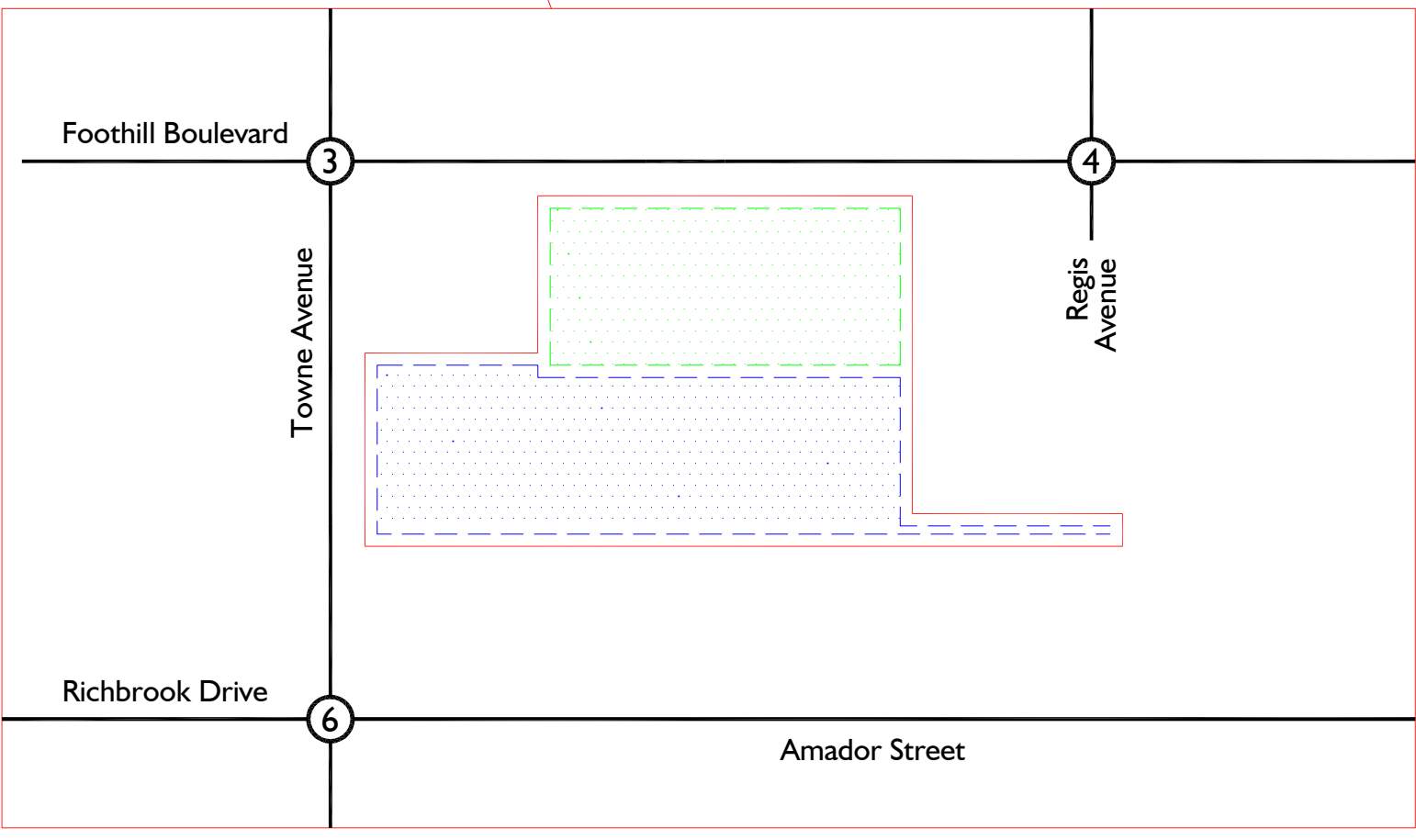
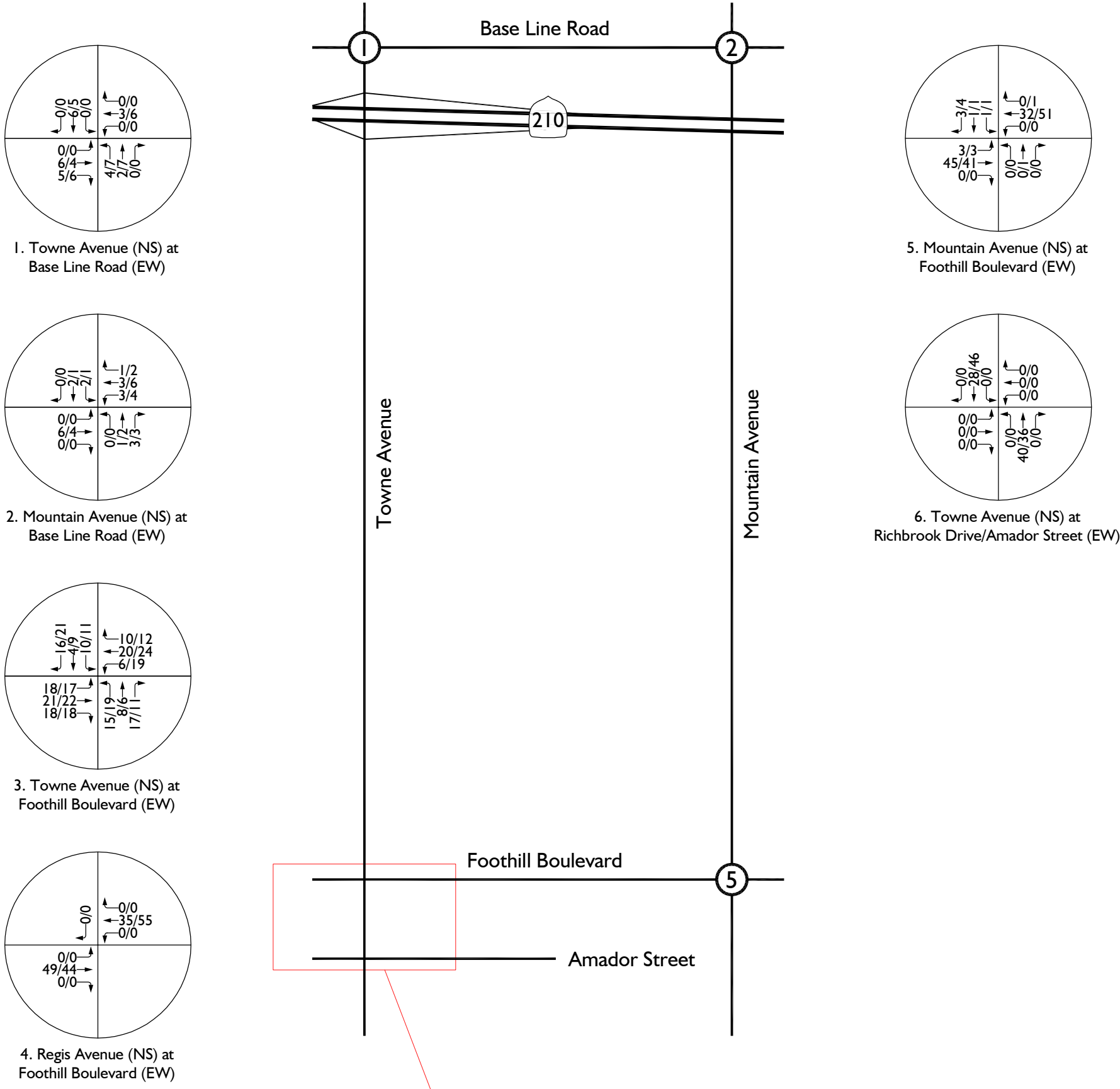
NOTE: See report for full list of cumulative projects and traffic analysis zones (TAZ).

Legend:

-  = City of Claremont Cumulative Project
-  = City of La Verne Cumulative Project
-  = City of Pomona Cumulative Project



Cumulative Projects Traffic Volumes



Legend:

- 10/20 = AM/PM Peak Hour Volumes
- ① = Study Area Intersection
- = Project Site Boundary
- - - = North Units
- - - = South Units



4.3 Project Opening Year (2025) With Cumulative Projects Without Project Conditions Traffic Volumes

Project Opening Year (2025) With Cumulative Projects Without Project Conditions traffic volumes consist of three (3) years of annual growth on top of existing (2022) traffic volumes at two percent (2%) per year (i.e., 6% total growth), plus traffic generated by the cumulative projects.

Project Opening Year (2025) With Cumulative Projects Without Project Conditions traffic volumes are shown in Exhibit 4-8.

4.4 Project Opening Year (2025) With Cumulative Projects With Project Conditions Traffic Volumes

Project Opening Year (2025) With Cumulative Projects With Project Conditions consist of three (3) years of annual growth on top of existing (2022) traffic volumes at two percent (2%) per year (i.e., 6% total growth), plus traffic generated by the cumulative projects and the proposed project.

Project Opening Year (2025) With Cumulative Projects With Project Conditions traffic volumes are shown in Exhibit 4-9.

4.5 Horizon Year (2040) Without Project Conditions Traffic Volumes

Horizon Year (2040) model projections from the Southern California Association of Governments (SCAG) 2016 RTP/SCS traffic model were utilized as a basis for determining peak hour turning movements to be used in the Horizon Year (2040) analysis scenarios. Model plots were prepared by Translutions, Inc.

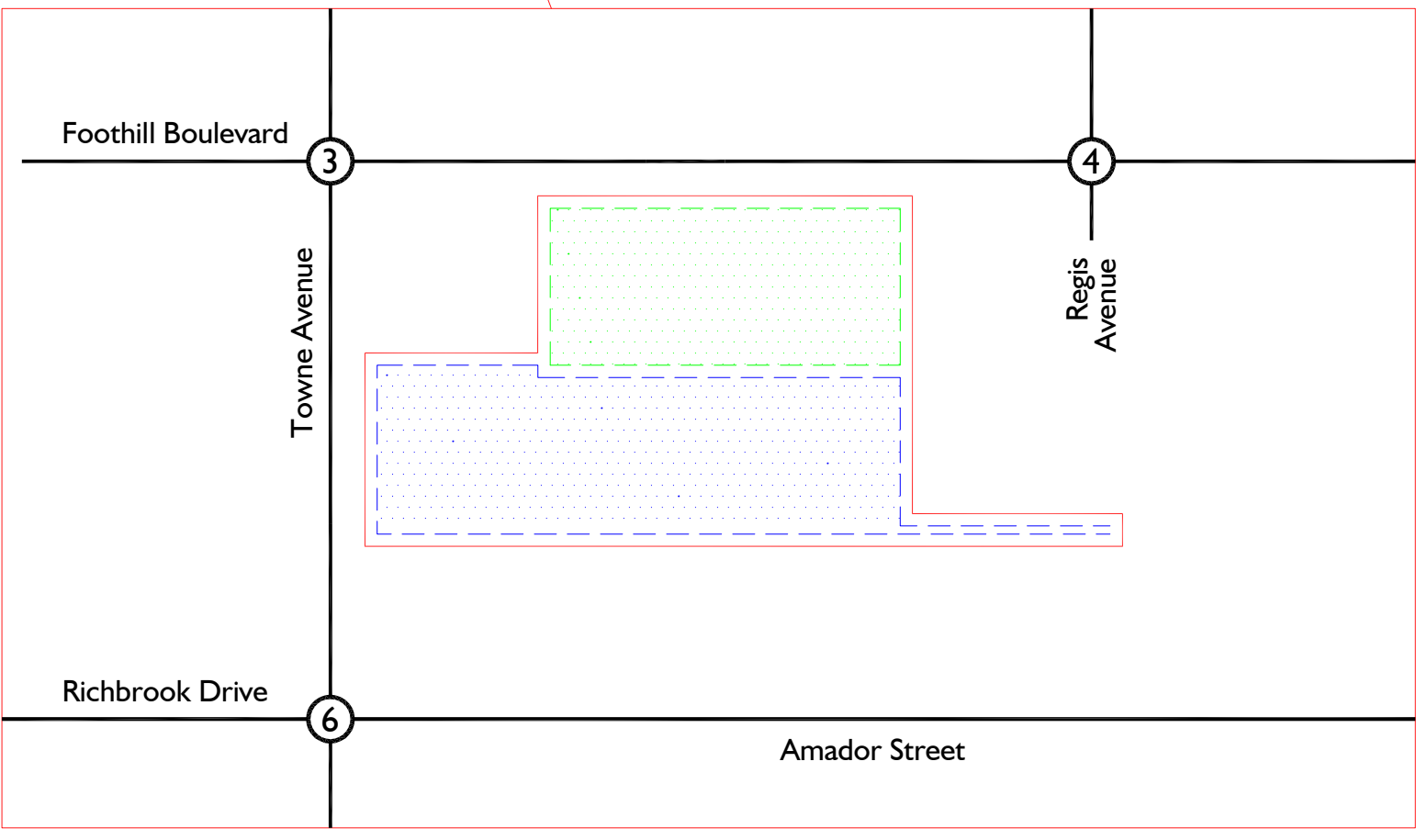
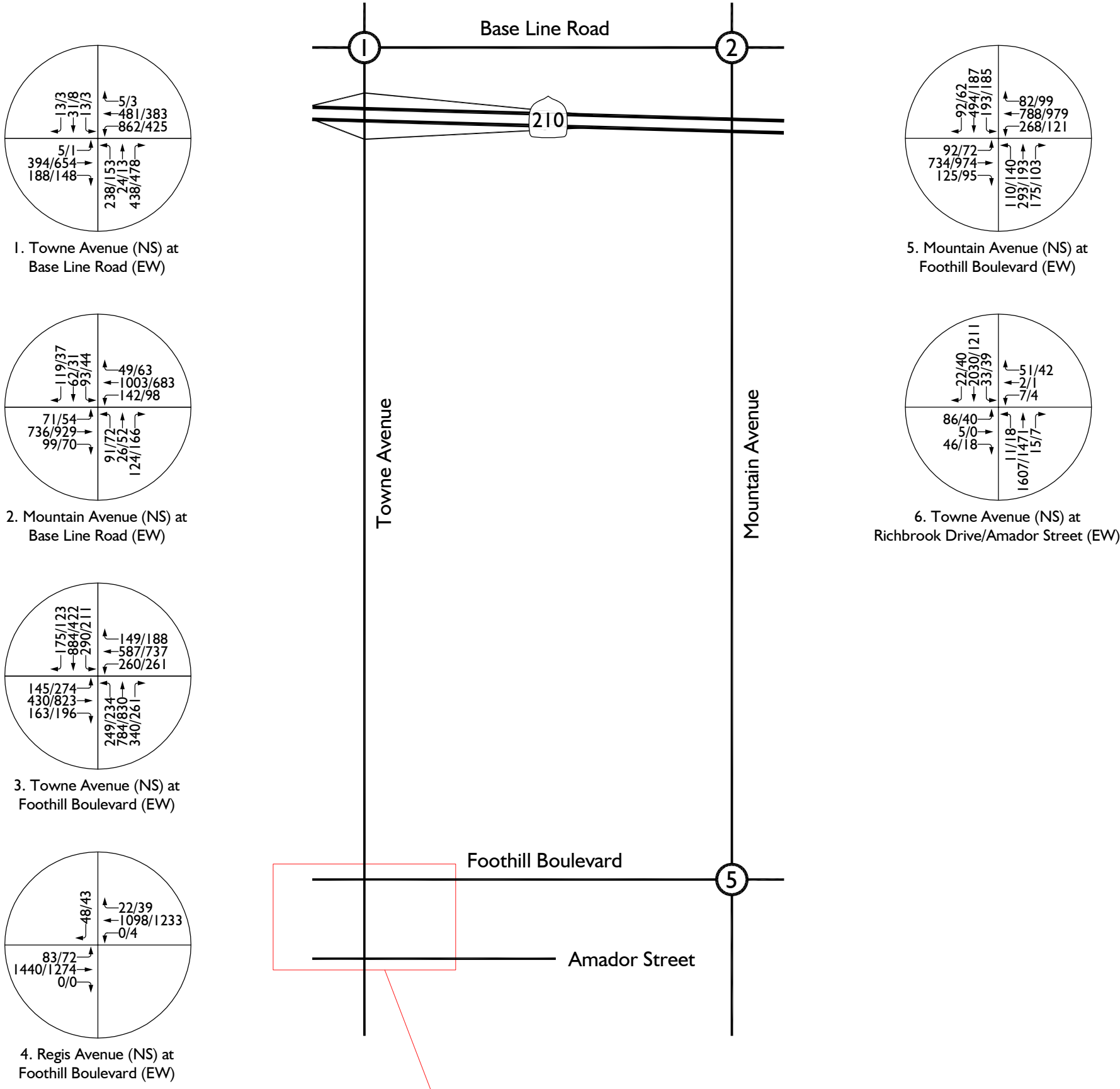
A post-processing methodology from the National Cooperative Highway Research Program (NCHRP) was applied to calculate the horizon year AM and PM peak hour turning movement volumes from the model plot link volumes.

The post-processed horizon year turning volumes were reviewed for reasonableness on a movement-by-movement basis and were increased as necessary.

A copy of the SCAG 2016 RTP/SCS model plots, post-processed turning movement volumes via the NCHRP methodology, and adjusted Horizon Year (2040) traffic volumes are shown in Appendix C.

Horizon Year (2040) Without Project Conditions traffic volumes are shown in Exhibit 4-10.

Project Opening Year (2025) With Cumulative Projects Without Project Conditions Traffic Volumes

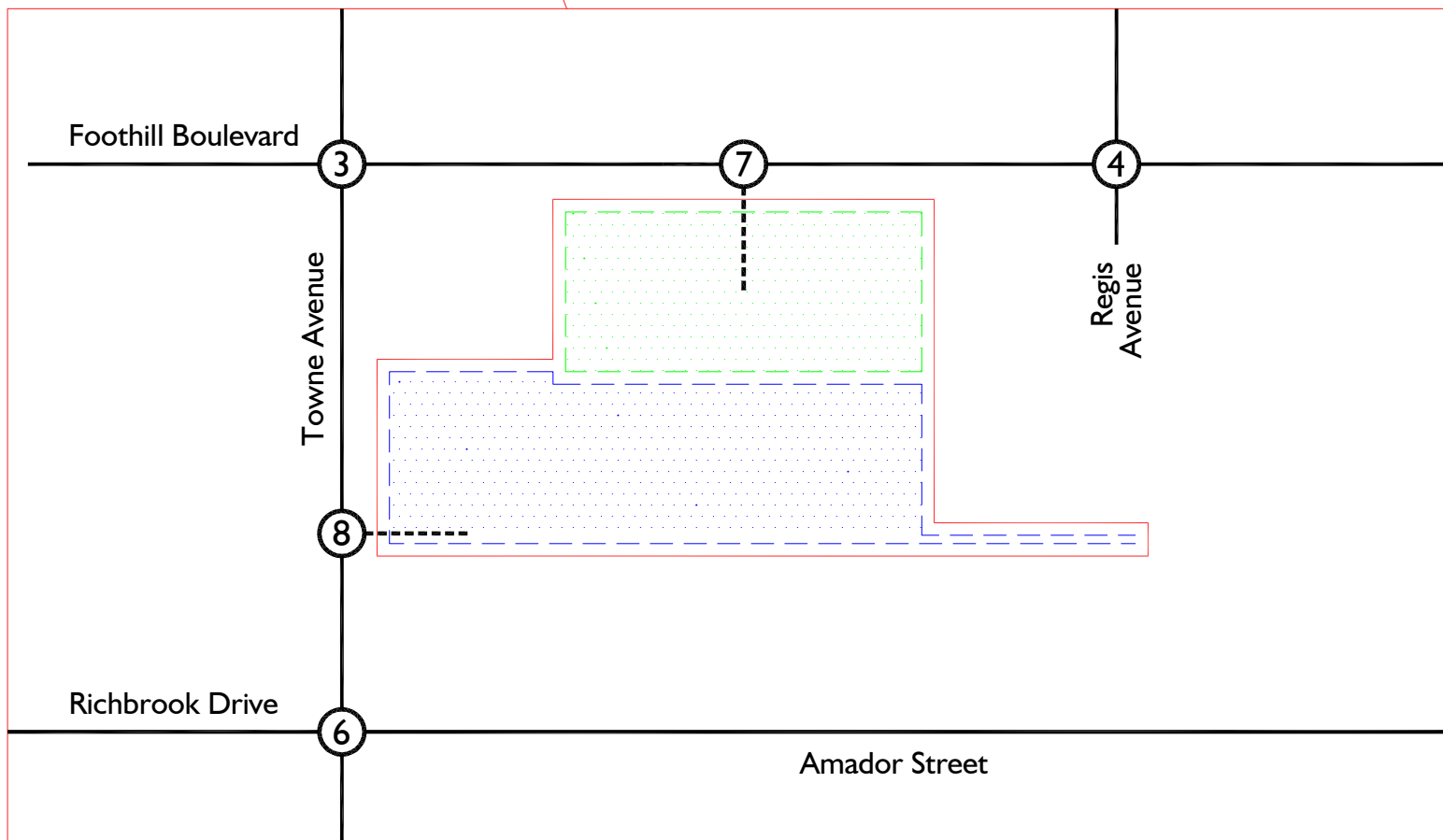
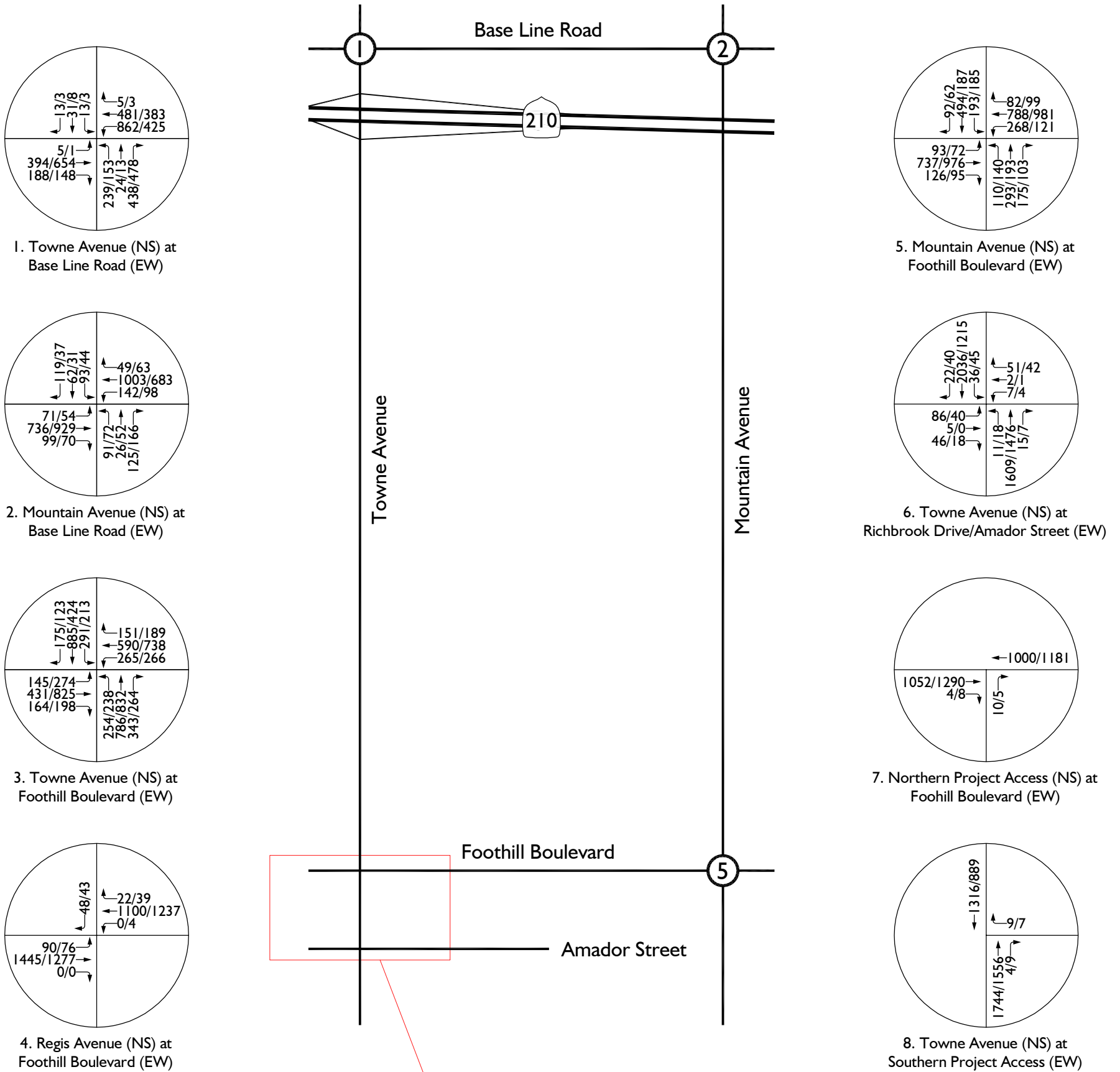


Legend:

- 10/20 = AM/PM Peak Hour Volumes
- ⊙ = Study Area Intersection
- = Project Site Boundary
- - - = North Units
- - - = South Units



Project Opening Year (2025) With Cumulative Projects With Project Conditions Traffic Volumes



Legend:

- 10/20 = AM/PM Peak Hour Volumes
- ① = Study Area Intersection
- = Project Access Driveway
- = Project Site Boundary
- - - = North Units
- - - = South Units

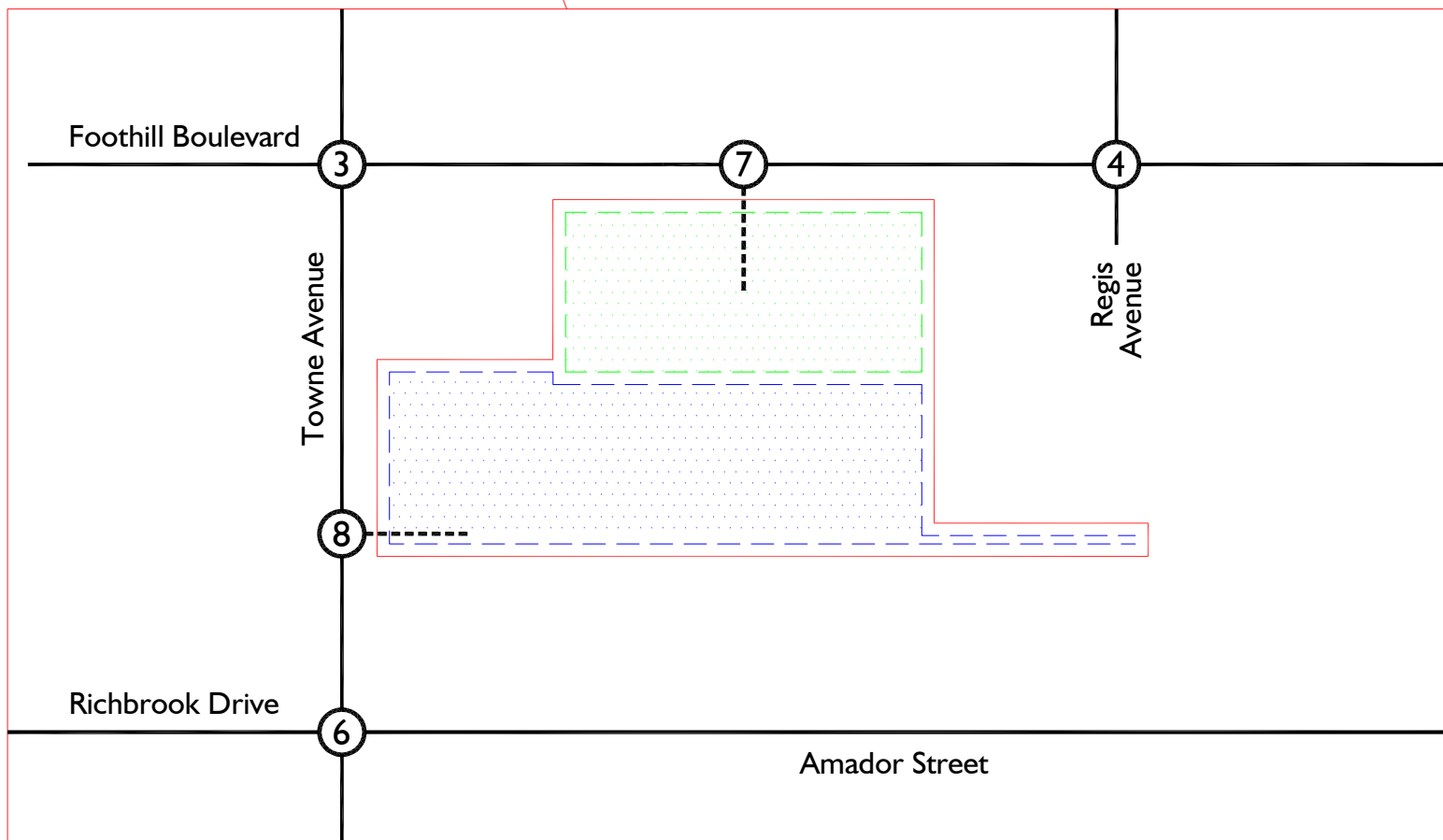
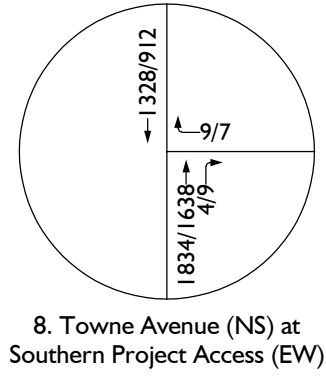
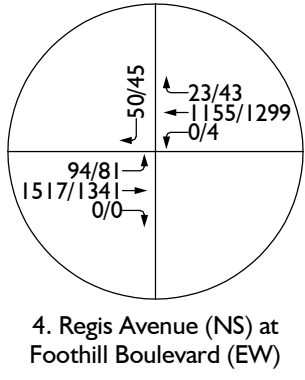
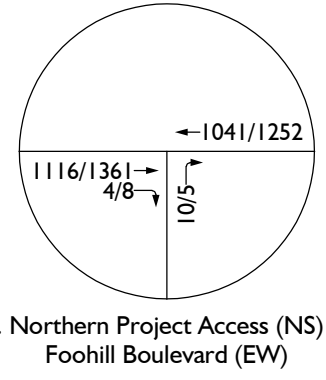
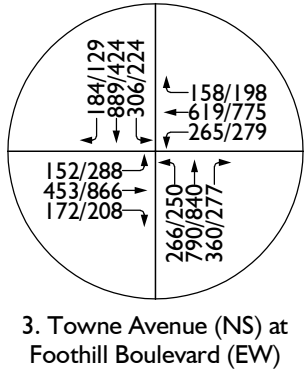
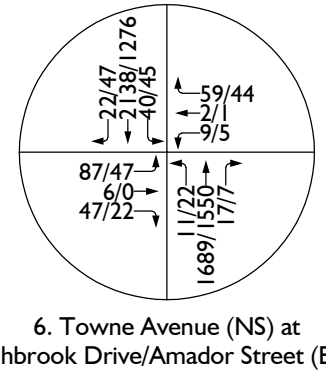
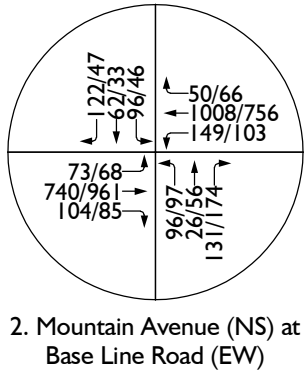
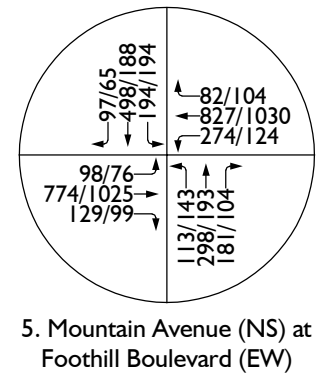
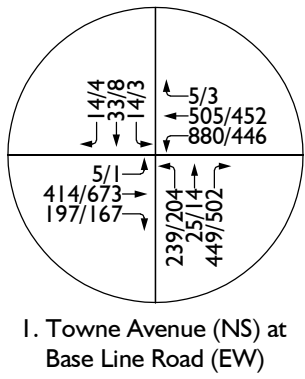
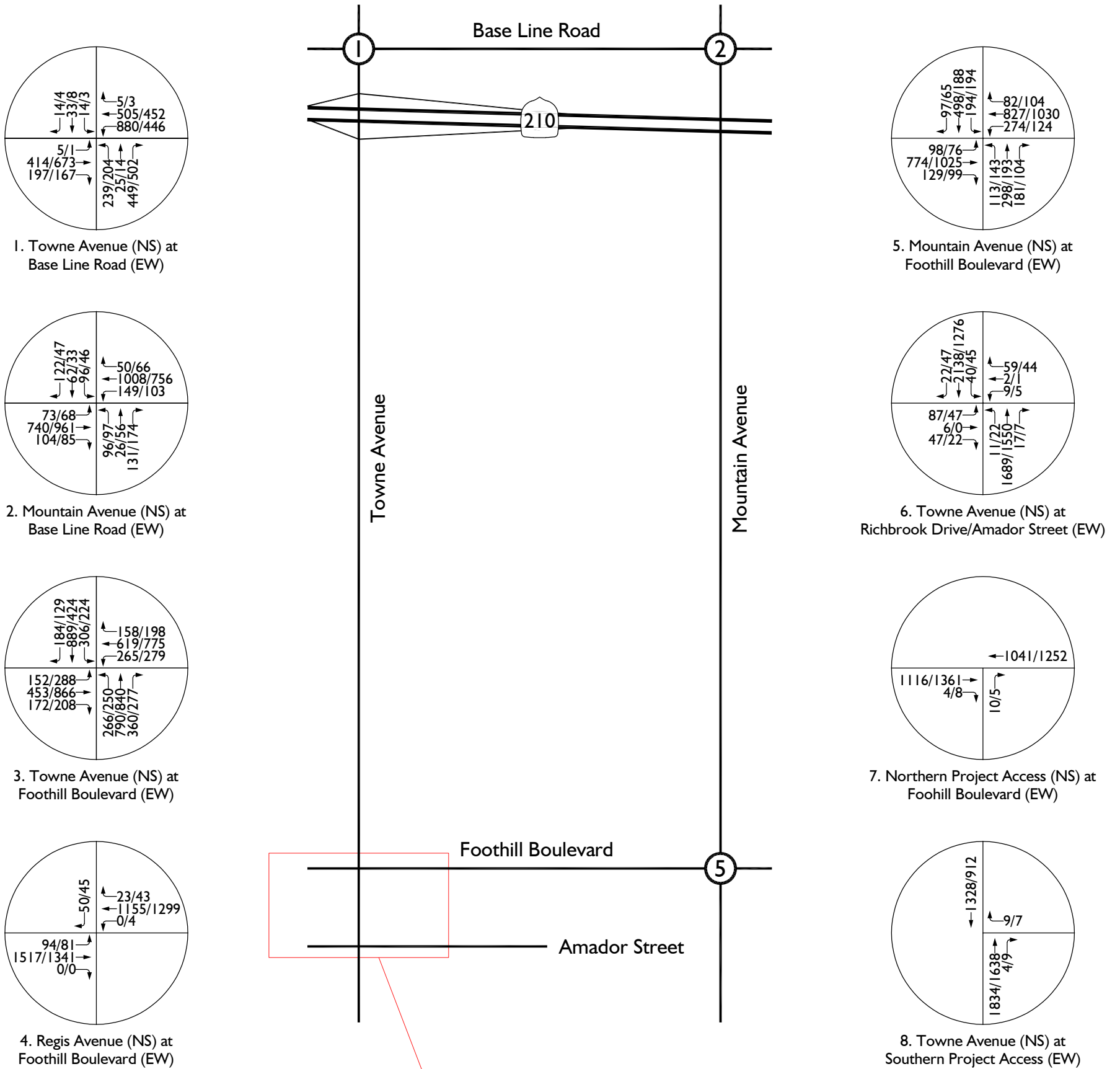


4.6 Horizon Year (2040) With Project Conditions Traffic Volumes

Horizon Year (2040) With Project Conditions consist of the Horizon Year (2040) traffic volumes shown in Exhibit 4-10 plus the traffic generated by the proposed project.

Horizon Year (2040) With Project Conditions traffic volumes are shown in Exhibit 4-11.

Horizon Year (2040) With Project Conditions Traffic Volumes



Legend:

- 10/20 = AM/PM Peak Hour Volumes
- ① = Study Area Intersection
- = Project Access Driveway
- = Project Site Boundary
- - - = North Units
- - - = South Units



5.0 Study Intersection Peak Hour LOS Analysis

This section of the report provides a discussion on the study intersection peak hour LOS analysis and findings.

The minimum acceptable LOS thresholds for each study intersection are detailed in Section 2.2.3 of this report. Furthermore, operational improvements shall be identified for the study area intersections in which the LOS performance criteria discussed in Section 2.2 of this report are met.

5.1 Existing Conditions Level of Service

Existing Conditions LOS calculations for the six (6) existing study intersections are shown in Table 5-1 and are based on the existing traffic volumes shown in Exhibit 3-2 and the existing lane geometry shown in Exhibit 3-1.

As shown in Table 5-1, all existing study intersections are currently operating at an acceptable LOS (D or better) during the AM and PM peak hours under Existing Conditions except for the following one (1) study intersection:

Deficient Intersection:

1. Towne Avenue (NS) at Base Line Road (EW)
 - AM Peak Hour – LOS F (122.5 seconds per vehicle)

Detailed LOS analysis worksheets for Existing Conditions are included in Appendix D.

5.2 Project Opening Year (2025) With Cumulative Projects Without Project Conditions Level of Service

Project Opening Year (2025) With Cumulative Projects Without Project Conditions LOS calculations for the six (6) existing study intersections are shown in Table 5-2 and are based on the Project Opening Year (2025) With Cumulative Projects Without Project Conditions traffic volumes shown in Exhibit 4-8 and the existing lane geometry shown in Exhibit 3-1.

**Table 5-1
Study Intersection LOS Analysis Summary
Existing Conditions**

Study Intersection		Traffic Control ¹	Methodology	Acceptable LOS	Delay (sec/veh) ^{2,3}		Level of Service	
					AM	PM	AM	PM
1.	Towne Avenue (NS) at Base Line Road (EW)	TS	HCM 6	E	122.5	44.1	F	D
2.	Mountain Avenue (NS) / Base Line Road (EW)	TS	HCM 6	E	32.2	29.4	C	C
3.	Towne Avenue (NS) at Foothill Boulevard (EW)	TS	HCM 6	D	39.1	40.2	D	D
4.	Regis Avenue (NS) at Foothill Boulevard (EW)	CSS	HCM 6	E	14.0	13.8	B	B
5.	Mountain Avenue (NS) at Foothill Boulevard (EW)	TS	HCM 6	E	34.2	32.4	C	C
6.	Towne Avenue (NS) at Amador Street / Richbrook Drive (EW)	TS	HCM 6	D	8.4	3.9	A	A
7.	Project Access No. 1 (North Units) (NS) at Foothill Boulevard (EW)	<i>Does Not Currently Exist</i>						
8.	Towne Avenue (NS) at Project Access No. 2 (South Units) (EW)	<i>Does Not Currently Exist</i>						

¹ TS = Traffic Signal

CSS = Cross-Street Stop

² Deficient operation shown in **Bold**.

³ HCM Analysis Software: PTV Vistro, Version 2023

**Table 5-2
Study Intersection LOS Analysis Summary
Project Opening Year (2025) With Cumulative Project Conditions**

Study Intersection		Traffic Control ¹	Methodology	Acceptable LOS	Without Project				With Project							
					Delay (sec/veh) ^{2,3}		Level of Service		Delay (sec/veh) ^{2,3}		Increase in Delay		Level of Service		Requires LOS Improvement?	
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1.	Towne Avenue (NS) at Base Line Road (EW)	TS	HCM 6	E	134.7	45.4	F	D	134.7	45.4	0.0	0.0	F	D	No ⁴	No
2.	Mountain Avenue (NS) / Base Line Road (EW)	TS	HCM 6	E	33.8	30.8	C	C	33.8	30.8	0.0	0.0	C	C	No	No
3.	Towne Avenue (NS) at Foothill Boulevard (EW)	TS	HCM 6	D	50.7	47.4	D	D	51.4	47.8	0.7	0.4	D	D	No	No
4.	Regis Avenue (NS) at Foothill Boulevard (EW)	CSS	HCM 6	E	15.0	14.9	B	B	15.0	14.9	0.0	0.0	B	B	No	No
5.	Mountain Avenue (NS) at Foothill Boulevard (EW)	TS	HCM 6	E	40.7	34.2	D	C	40.8	34.2	0.1	0.0	D	C	No	No
6.	Towne Avenue (NS) at Amador Street / Richbrook Drive (EW)	TS	HCM 6	D	9.6	4.2	A	A	9.6	4.2	0.0	0.0	A	A	No	No
7.	Project Access No. 1 (North Units) (NS) at Foothill Boulevard (EW)	CSS	HCM 6	E	--	--	--	--	12.8	14.3	--	--	B	B	No	No
8.	Towne Avenue (NS) at Project Access No. 2 (South Units) (EW)	CSS	HCM 6	D	--	--	--	--	18.6	16.6	--	--	C	C	No	No

¹ TS = Traffic Signal

CSS = Cross-Street Stop

² Deficient operation shown in **Bold**.

³ HCM Analysis Software: PTV Vistro, Version 2023

⁴ Although the study intersection is forecast to operate at a deficient LOS (LOS F), the addition of project traffic does not increase the overall intersection delay. As such, the study intersection is not considered to be impacted by the proposed project and as a result, no improvements are required.

As shown in Table 5-2, all existing study intersections are forecasted to operate at an acceptable LOS (LOS D or better) during the AM and PM peak hours under Project Opening Year (2025) With Cumulative Projects Without Project Conditions except for the following one (1) study intersection:

Deficient Intersection:

1. Towne Avenue (NS) at Base Line Road (EW)
 - AM Peak Hour – LOS F (134.7 seconds per vehicle)

Detailed LOS analysis worksheets for Project Opening Year (2025) With Cumulative Projects Without Project Conditions are included in Appendix E.

5.3 Project Opening Year (2025) With Cumulative Projects With Project Conditions Level of Service

Project Opening Year (2025) With Cumulative Projects With Project Conditions LOS calculations for all study intersections are also shown in Table 5-2 and are based on the Project Opening Year (2025) With Cumulative Projects With Project Conditions traffic volumes shown in Exhibit 4-9 and the existing lane geometry shown in Exhibit 3-1.

As shown in Table 5-2, all study intersections are forecasted to operate at an acceptable LOS (LOS D or better) during the AM and PM peak hours under Project Opening Year (2025) With Cumulative Projects With Project Conditions except for the following one (1) study intersection:

Deficient Intersection:

1. Towne Avenue (NS) at Base Line Road (EW)
 - AM Peak Hour – LOS F (134.7 seconds per vehicle)

As shown in Table 5-2, the addition of project traffic does not increase the overall intersection delay at the study intersection of Towne Avenue (NS) at Base Line Road (EW) (i.e., Int. #1) during the Project Opening Year (2025) With Cumulative Projects scenario. The proposed project is expected to generate at most 1 trip at this study intersection

during the AM and PM peak hours. As such, study intersection #1 is not considered to be impacted by the proposed project and as a result, no improvements are required.

Detailed LOS analysis worksheets for Project Opening Year (2025) With Cumulative Projects With Project Conditions are included in Appendix F.

5.4 Horizon Year (2040) Without Project Conditions Level of Service

Horizon Year (2040) Without Project Conditions LOS calculations for the six (6) existing study intersections are shown in Table 5-3 and are based on the Horizon Year (2040) Without Project Conditions traffic volumes shown in Exhibit 4-10 and the existing lane geometry shown in Exhibit 3-1.

As shown in Table 5-3, all existing study intersections are forecasted to operate at an acceptable LOS (LOS D or better) during peak hours under Horizon Year (2040) Without Project Conditions except for the following one (1) study intersection:

Deficient Intersection:

1. Towne Avenue (NS) at Base Line Road (EW)
 - AM Peak Hour – LOS F (138.9 seconds per vehicle)

Detailed LOS analysis worksheets for Horizon Year (2040) Without Project Conditions are included in Appendix G.

5.5 Horizon Year (2040) With Project Conditions Level of Service

Horizon Year (2040) With Project Conditions LOS calculations for the six (6) existing study intersections are shown in Table 5-3 and are based on the Horizon Year (2040) With Project Conditions traffic volumes shown in Exhibit 4-11 and the existing lane geometry shown in Exhibit 3-1.

As shown in Table 5-3, all study intersections are forecasted to operate at an acceptable LOS (LOS D or better) during peak hours under Horizon Year (2040) With Project Conditions except for the following one (1) study intersection:

**Table 5-3
Study Intersection LOS Analysis Summary
Horizon Year (2040) Conditions**

Study Intersection		Traffic Control ¹	Methodology	Acceptable LOS	Without Project				With Project							
					Delay (sec/veh) ^{2,3}		Level of Service		Delay (sec/veh) ^{2,3}		Increase in Delay		Level of Service		Requires LOS Improvement?	
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1.	Towne Avenue (NS) at Base Line Road (EW)	TS	HCM 6	E	138.9	46.6	F	D	138.9	46.6	0.0	0.0	F	D	No ⁴	No
2.	Mountain Avenue (NS) / Base Line Road (EW)	TS	HCM 6	E	34.3	30.8	C	C	34.3	30.8	0.0	0.0	C	C	No	No
3.	Towne Avenue (NS) at Foothill Boulevard (EW)	TS	HCM 6	D	53.1	48.8	D	D	54.4	49.3	1.3	0.5	D	D	No	No
4.	Regis Avenue (NS) at Foothill Boulevard (EW)	CSS	HCM 6	E	15.6	15.5	C	C	15.6	15.5	0.0	0.0	C	C	No	No
5.	Mountain Avenue (NS) at Foothill Boulevard (EW)	TS	HCM 6	E	41.8	35.4	D	D	41.9	35.4	0.1	0.0	D	D	No	No
6.	Towne Avenue (NS) at Amador Street / Richbrook Drive (EW)	TS	HCM 6	D	10.8	4.6	B	A	10.9	4.6	0.1	0.0	B	A	No	No
7.	Project Access No. 1 (North Units) (NS) at Foothill Boulevard (EW)	CSS	HCM 6	E	--	--	--	--	13.2	14.9	--	--	B	B	No	No
8.	Towne Avenue (NS) at Project Access No. 2 (South Units) (EW)	CSS	HCM 6	D	--	--	--	--	19.7	17.4	--	--	C	C	No	No

¹ TS = Traffic Signal

CSS = Cross-Street Stop

² Deficient operation shown in **Bold**.

³ HCM Analysis Software: PTV Vistro, Version 2023

⁴ Although the study intersection is forecast to operate at a deficient LOS (LOS F), the addition of project traffic does not increase the overall intersection delay. As such, the study intersection is not considered to be impacted by the proposed project and as a result, no improvements are required.

Deficient Intersection:

1. Towne Avenue (NS) at Base Line Road (EW)
 - AM Peak Hour – LOS F (138.9 seconds per vehicle)

As shown in Table 5-3, the addition of project traffic does not increase the overall intersection delay at the study intersection of Towne Avenue (NS) at Base Line Road (EW) (i.e., Int. #1) during the Horizon Year (2040) scenario. The proposed project is expected to generate at most 1 trip at this study intersection during the AM and PM peak hours. As such, study intersection #1 is not considered to be impacted by the proposed project and as a result, no improvements are required.

Detailed LOS analysis worksheets for Horizon Year (2040) With Project Conditions are included in Appendix H.

6.0 Intersection Queuing Analysis

As identified in the approved scope of work, a queue evaluation has been performed at three (3) of the study intersections for each analysis scenario. The purpose of this analysis is to determine whether adequate storage capacity is provided without and with the proposed project.

The queue analysis has been performed utilizing the HCM 6 95th percentile queue evaluation methodology. Queue lengths have been reported for the following six (6) turning movements:

Intersection #3 – Towne Avenue (NS) at Foothill Boulevard (EW)

- Northbound Left-Turn
- Northbound Through
- Northbound Right-Turn
- Westbound Left-Turn

Intersection #4 – Regis Avenue (NS) at Foothill Boulevard (EW)

- Eastbound Left-Turn

Intersection #6 – Towne Avenue (NS) at Richbrook Drive/Amador Street (EW)

- Southbound Left-Turn

6.1 Existing Conditions Queue Analysis

The queue analysis under Existing Conditions has been performed for the six (6) turning movements previously identified. Table 6-1 shows the results of the queue analysis under Existing Conditions.

As shown in Table 6-1, the 95th percentile queues are satisfied for all turning movements except for the following two (2) turning movements:

Intersection #3 – Towne Avenue (NS) at Foothill Boulevard (EW)

- Northbound Right-Turn (AM & PM Peak Hour)
- Westbound Left-Turn (AM & PM Peak Hour)

Table 6-1
Study Intersection HCM 95th Percentile Vehicular Queue Analysis Summary¹
Existing Conditions

Intersection	Movement	Storage Length (Feet) ²	HCM 95th Percentile Queue Length (Feet)		Adequate Storage Provided?	
			AM	PM	AM	PM
3. Towne Avenue (NS) at Foothill Boulevard (EW)	Northbound Left-Turn	225	193	160	YES	YES
	Northbound Through	400	352	356	YES	YES
	Northbound Right-Turn	80	310	226	NO	NO
	Westbound Left-Turn	240	337	286	NO	NO
4. Regis Avenue (NS) at Foothill Boulevard (EW)	Eastbound Left-Turn	150	25 ³	25 ³	YES	YES
6. Towne Avenue (NS) at Richbrook Drive/Amador Street (EW)	Southbound Left-Turn	50	25 ³	25 ³	YES	YES

¹ HCM Analysis Software: Vistro, Version 2023.

² Storage length for through movements and turning movements without dedicated turn lanes is measured as the distance to the next intersection.

³ Although the calculated queue length is less, a minimum vehicle length of 25 feet is assumed for the purposes of this analysis.

The remaining four (4) turning movements have queues that are adequately accommodated by the storage space provided under Existing Conditions.

6.2 Project Opening Year (2025) With Cumulative Projects Without Project Conditions Queue Analysis

The queue analysis under Project Opening Year (2025) With Cumulative Projects Without Project Conditions has been performed for all six (6) turning movements previously identified. Table 6-2 shows the results of the queue analysis under Project Opening Year (2025) With Cumulative Projects Without Project Conditions.

As shown in Table 6-2, the 95th percentile queues are satisfied for all turning movements except for the following four (4) turning movements:

Intersection #3 – Towne Avenue (NS) at Foothill Boulevard (EW)

- Northbound Left-Turn (AM & PM Peak Hour)
- Northbound Through (AM & PM Peak Hour)
- Northbound Right-Turn (AM & PM Peak Hour)
- Westbound Left-Turn (AM & PM Peak Hour)

The remaining two (2) turning movements have queues that are adequately accommodated by the storage space provided under Project Opening Year (2025) With Cumulative Projects Without Project Conditions.

6.3 Project Opening Year (2025) With Cumulative Projects With Project Conditions Queue Analysis

The queue analysis under Project Opening Year (2025) With Cumulative Projects With Project Conditions has been performed for all six (6) turning movements previously identified. Table 6-2 also shows the results of the queue analysis under Project Opening Year (2025) With Cumulative Projects With Project Conditions.

As shown in Table 6-2, the 95th percentile queues are satisfied for all turning movements except for the following four (4) turning movements:

Intersection #3 – Towne Avenue (NS) at Foothill Boulevard (EW)

- Northbound Left-Turn (AM & PM Peak Hour)

Table 6-2
Study Intersection HCM 95th Percentile Vehicular Queue Analysis Summary¹
Project Opening Year (2025) With Cumulative Projects

Intersection		Movement	Storage Length (Feet) ²	Without Project				With Project			
				HCM 95th Percentile Queue Length (Feet)		Adequate Storage Provided?		HCM 95th Percentile Queue Length (Feet)		Adequate Storage Provided?	
				AM	PM	AM	PM	AM	PM	AM	PM
3.	Towne Avenue (NS) at Foothill Boulevard (EW)	Northbound Left-Turn	225	298	222	NO	YES	309	227	NO	NO
		Northbound Through	400	425	445	NO	NO	426	448	NO	NO
		Northbound Right-Turn	80	391	286	NO	NO	397	290	NO	NO
		Westbound Left-Turn	240	381	356	NO	NO	397	369	NO	NO
4.	Regis Avenue (NS) at Foothill Boulevard (EW)	Eastbound Left-Turn	150	25 ³	25 ³	YES	YES	25 ³	25 ³	YES	YES
6.	Towne Avenue (NS) at Richbrook Drive/Amador Street (EW)	Southbound Left-Turn	50	25 ³	25 ³	YES	YES	25 ³	25 ³	YES	YES

¹ HCM Analysis Software: Vistro, Version 2023.

² Storage length for through movements and turning movements without dedicated turn lanes is measured as the distance to the next intersection.

³ Although the calculated queue length is less, a minimum vehicle length of 25 feet is assumed for the purposes of this analysis.

- Northbound Through (AM & PM Peak Hour)
- Northbound Right-Turn (AM & PM Peak Hour)
- Westbound Left-Turn (AM & PM Peak Hour)

The remaining two (2) turning movements have queues that are adequately accommodated by the storage space provided under Project Opening Year (2025) With Cumulative Projects With Project Conditions.

6.4 Horizon Year (2040) Without Project Conditions Queue Analysis

The queue analysis under Horizon Year (2040) Without Project Conditions has been performed for all six (6) turning movements previously identified. Table 6-3 shows the results of the queue analysis under Horizon Year (2040) Without Project Conditions.

As shown in Table 6-3, the 95th percentile queues are satisfied for all turning movements except for the following four (4) turning movements:

Intersection #3 – Towne Avenue (NS) at Foothill Boulevard (EW)

- Northbound Left-Turn (AM Peak Hour)
- Northbound Through (AM & PM Peak Hour)
- Northbound Right-Turn (AM & PM Peak Hour)
- Westbound Left-Turn (AM & PM Peak Hour)

The remaining two (2) turning movements have queues that are adequately accommodated by the storage space provided under Horizon Year (2040) Without Project Conditions.

6.5 Horizon Year (2040) With Project Conditions Queue Analysis

The queue analysis under Horizon Year (2040) With Project Conditions has been performed for all six (6) turning movements previously identified. Table 6-3 also shows the results of the queue analysis under Horizon Year (2040) With Project Conditions.

As shown in Table 6-3, the 95th percentile queues are satisfied for all turning movements except for the following four (4) turning movements:

Table 6-3
Study Intersection HCM 95th Percentile Vehicular Queue Analysis Summary¹
Horizon Year (2040) Conditions

Intersection		Movement	Storage Length (Feet) ²	Without Project				With Project			
				HCM 95th Percentile Queue Length (Feet)		Adequate Storage Provided?		HCM 95th Percentile Queue Length (Feet)		Adequate Storage Provided?	
				AM	PM	AM	PM	AM	PM	AM	PM
3.	Towne Avenue (NS) at Foothill Boulevard (EW)	Northbound Left-Turn	225	344	224	NO	YES	364	228	NO	NO
		Northbound Through	400	456	443	NO	NO	459	446	NO	NO
		Northbound Right-Turn	80	452	294	NO	NO	461	298	NO	NO
		Westbound Left-Turn	240	474	346	NO	NO	499	359	NO	NO
4.	Regis Avenue (NS) at Foothill Boulevard (EW)	Eastbound Left-Turn	150	25 ³	25 ³	YES	YES	25 ³	25 ³	YES	YES
6.	Towne Avenue (NS) at Richbrook Drive/Amador Street (EW)	Southbound Left-Turn	50	28	25 ³	YES	YES	31	25 ³	YES	YES

¹ HCM Analysis Software: Vistro, Version 2023.

² Storage length for through movements and turning movements without dedicated turn lanes is measured as the distance to the next intersection.

³ Although the calculated queue length is less, a minimum vehicle length of 25 feet is assumed for the purposes of this analysis.

Intersection #3 – Towne Avenue (NS) at Foothill Boulevard (EW)

- Northbound Left-Turn (AM & PM Peak Hour)
- Northbound Through (AM & PM Peak Hour)
- Northbound Right-Turn (AM & PM Peak Hour)
- Westbound Left-Turn (AM & PM Peak Hour)

The remaining two (2) turning movements have queues that are adequately accommodated by the storage space provided under Horizon Year (2040) With Project Conditions.

6.6 Queue Analysis Findings and Recommendations

Based on the results of the queue evaluation, the following turning movements at the key study intersection of Towne Avenue (NS) at Foothill Boulevard (EW) (i.e., Int. #3) do not provide adequate storage capacity:

Intersection #1 – Towne Avenue (NS) at Foothill Boulevard (EW)

- Northbound Left-Turn (AM & PM Peak Hour)
- Northbound Through (AM & PM Peak Hour)
- Northbound Right-Turn (AM & PM Peak Hour)
- Westbound Left-Turn (AM & PM Peak Hour)

As shown in Tables 6-2 & 6-3, these deficiencies occur in “Without Project” Conditions and the proposed project is estimated to only contribute at most 1 vehicle (i.e., 25 ft) of queuing to any of these four (4) turning movements. Therefore, this increase in queue length by the proposed project is considered to be nominal and thus the project’s impact is insignificant.

Although the proposed project’s impact on queuing is considered insignificant, RK recommends the following improvements to help facilitate ingress/egress to/from the proposed project:

Recommended Improvement #1

Install/stripe a "KEEP CLEAR" marking along Towne Avenue at the entrance to Project Access No. 2. Based on existing lane geometrics along Towne Avenue, no additional capacity can be provided to alleviate these existing and background queuing issues. As such, this "KEEP CLEAR" marking will provide a buffer (South Units) to help facilitate adequate egress.

Recommended Improvement #2

Install a stop sign and limit line for outbound traffic Project Access No. 2 (Alleyway/Towne Avenue).

7.0 CEQA Vehicle Miles Traveled (VMT) Analysis

The following section provides a discussion on the vehicle miles traveled (VMT) analysis and findings.

The proposed project is subject to a VMT analysis and will adhere to the methodologies and practices described in the *City of Claremont Draft Transportation Study Guidelines for Vehicles Miles Traveled and Level of Service Assessment*, dated August 2020. As per the City of Claremont traffic study guidelines, three (3) types of screening criteria may be applied to effectively screen projects from project-level assessment:

1. Transit Priority Area (TPA) Screening
2. Low VMT Area Screening
3. Project Type Screening

The following subsections summarize and discuss the applicability of each screening criterion to the proposed project.

7.1 Transit Priority Area (TPA) Screening

The City of Claremont guidelines indicates that projects located within a transit priority area (TPA) may be presumed to have a less than significant impact absent substantial evidence to the contrary. A TPA is defined as a half-mile area around an existing major transit stop¹ or an existing stop along a high-quality transit corridor².

Foothill Transit bus routes 188 & 292 operate in the vicinity of the project site at the intersection of Towne Avenue at Foothill Boulevard. A review of these bus routes' schedules indicates service intervals that exceed 15 minutes during peak commute periods.

Thus, the proposed project does not satisfy the Transit Priority Area Screening criteria.

¹ A "major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service of 15 minutes or less during peak commute periods.

² A "high-quality transit corridor" is defined as a corridor with fixed bus service with service intervals no longer than 15 minutes during peak commute periods.

7.2 Low VMT Area Screening

As stated in the City of Claremont guidelines, Residential projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

To identify whether a project is in a low VMT-generating area, the San Gabriel Valley Council of Governments (SGVCOG) VMT assessment tool was utilized. The SGVCOG tool identifies the home-based VMT per capita for the traffic analysis zone (TAZ) in which the project is located and compares it to the appropriate City of Claremont Threshold of Significance.

The results of the VMT screening analysis are summarized in Table 7-1.

Table 7-1
Low VMT Area Screening Analysis¹

Project TAZ	Baseline Year	Home-Based VMT / Capita
22445400	2023	16.4
City of Claremont Threshold of Significance ²		15.3
Percent above Threshold of Significance		6.7%
Project located in a low VMT area? (Yes / No)		No

¹ San Gabriel Valley Council of Governments (SGVCOG) Vehicle Miles Traveled Evaluation Tool. Website: <https://apps.fehrandpeers.com/SGVCOGVMT/>. Accessed: February 2023.

² Threshold of Significance value indicates 15% below the SGVCOG Northeast Subarea baseline VMT per service population indicated in the City of Claremont's guidelines.

Based on the results of the SGVCOG VMT assessment tool, (as provided in Appendix I), the proposed project's TAZ VMT is calculated to be 16.4 home-based VMT per capita. Since the proposed project's TAZ VMT is greater than the City of Claremont's threshold of significance of 15.3 home-based VMT per capita, the proposed project does not satisfy the Low VMT Area Screening criteria.

7.3 Project Type Screening

The City of Claremont guidelines specifies that certain project types have been identified as having the presumption of a less than significant impact. The following uses can be

presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature. Local-serving K-12 schools.

- Local parks
- Day care centers
- Local-serving retail
- Local-serving Hotels
- Local-serving assembly uses
- Community institutions
- Affordable, supportive, or transitional housing
- Assisted living facilities
- Senior housing
- Local-serving community colleges that are consistent with the assumptions noted in the Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS)
- Student housing projects on or adjacent to a college campus
- Other local-serving uses as approved by the City Traffic Engineer
- Projects generating less than 110 daily vehicle trips

Based on the list of local-serving land uses identified above, the proposed project is not classified as a local serving project and therefore does not satisfy the Project Type Screening Criteria.

7.4 VMT Reduction Measures

The project includes several project design features that will help reduce its VMT compared to the baseline TAZ VMT shown in the SGVCOG tool. In particular, the project will be designed with a higher density than the average residential density surrounding the site which has been shown to significantly reduce VMT.

The California Air Pollution Control Officers Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, Designed for Local Governments, Communities, and Project Developers, Final Draft, December 2021 (CAPCOA Handbook) has been used to calculate the VMT reduction achieved by the project design.

The following CAPCOA VMT reduction measures are applicable to the project.

T-1 Increase Residential Density. This measure accounts for the VMT reduction achieved by a project that is designed with a higher density of dwelling units (du) compared to the average residential density in the U.S. Increased densities affect the distance people travel and provide greater options for the mode of travel they choose. Increasing residential density results in shorter and fewer trips by single-occupancy vehicles and thus a reduction in GHG emissions. This measure is best quantified when applied to larger developments and developments where the density is somewhat similar to the surrounding area due to the underlying research being founded in data from the neighborhood level.

Table 7-2 summarizes the project VMT reduction measures.

**Table 7-2
VMT Reduction Measures**

Project TAZ	Baseline Year	Home-Based VMT / Capita ¹
22445400	2023	16.4
<i>VMT reduction (%) achieved from Measure T-1²</i>		-22.2%
Adjusted Project VMT with Measure T-1		12.8
City of Claremont Threshold of Significance		15.3
Significant Impact? (Yes / No)		No

¹ San Gabriel Valley Council of Governments (SGVCOG) Vehicle Miles Traveled Evaluation Tool. Website: <https://apps.fehrandpeers.com/SGVCOGVMT/>. Accessed: February 2023.

² See Appendix I for CAPCOA VMT reduction calculations.

It should be noted that when assessing the VMT reduction from the increased density of a project, CAPCOA recommends comparing the increase to an average residential density in the U.S of 9.1 du/acre, unless the baseline project VMT was derived from a travel demand forecasting model, in which case the residential density of the TAZ should be used instead of CAPCOA’s value for a typical development.

For this project, the baseline VMT was derived from the SGVCOG subregional model, hence RK reviewed the baseline density within the project TAZ (22445400). Within this TAZ, the residential land uses are comprised almost entirely of single-family homes with a maximum density of 6 dwelling units per acre (du/acre), with the exception of six parcels (totaling approximately 1.76 acres) located near the northeast corner of Towne Avenue and Harrison

Avenue that are designated Residential 22, and have a maximum density of 22 du/acre, according to the City of Claremont General Plan Land Use Map.

Given the overall size of TAZ 22445400, the average residential density within this zone is approximately 6 du/acre. However, to be conservative, RK has utilized the CAPCOA average residential density of 9.1 du/acre for reduction calculation purposes. For more details regarding the VMT reduction calculations, please see Appendix I.

Given the VMT reduction achieved by the density of the site, the project generated VMT is expected to be below the City of Claremont threshold of significance, as shown in Table 7-2.

The project's impact to VMT is considered less than significant.

8.0 Sight Distance Analysis

A corner sight distance analysis has been conducted for the existing project access driveway along Towne Avenue. The purpose of this analysis is to ensure that the intersection provides adequate sight distance for drivers to safely turn onto the major road (i.e., Towne Avenue). The corner sight distance was conducted following the procedures specified in the Caltrans Highway Design Manual.

As per the Caltrans Highway Design Manual, the minimum corner sight distance (feet) is determined by the equation $(1.47 \times V_m \times T_g)$, where V_m is the design speed (mph) of the major road and T_g is the time gap (seconds) for the vehicle along the minor road to enter the major road.

Design speed refers to the selected speed used to determine the various geometric design features of the roadway. Generally, the design speed of a roadway is equal to or exceeds the posted speed limit of a roadway facility. For purposes of this analysis, the posted speed limit of 40 mph ($V_m=40$) along Towne Avenue has been utilized.

For a passenger vehicle performing a right turn maneuver from a stopped position, a time gap of 6.5 seconds ($T_g=6.5$) is assumed.

To ensure safe turns onto Towne Avenue, a clear line of sight of at least 385 feet should be maintained between the driver on the minor road and the approaching driver on the major road, as per the corner sight distance equation. The visibility required to perform the analyzed maneuvers forms a clear sight triangle with the corner sight distance of dimension "b" and the crossing distance "a₁". The dimension "a₁" is the set back that drivers on the minor road should have which is at a minimum of 10 feet plus the shoulder width of the major road, but not less than 15 feet.

Figure 405.1 of the Caltrans Highway Design Manual provides an example of corner sight distance at a two-lane two-way highway.

Figure 405.1 Corner Sight Distance (b)

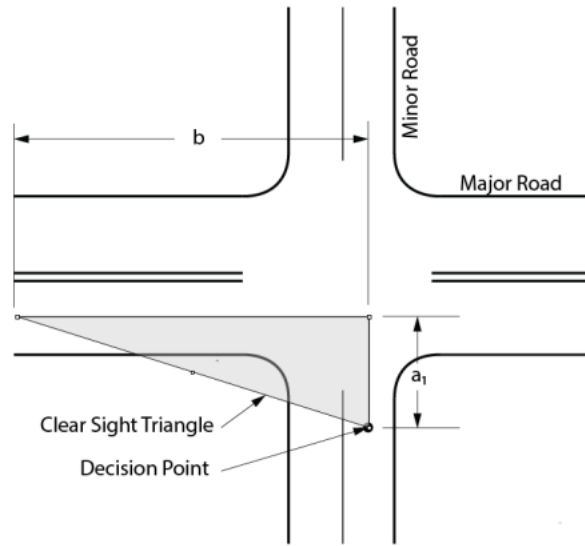


Exhibit 8-1 illustrates the clear sight triangle required for vehicles performing a right turn maneuver from the project access driveway along Towne Avenue. This analysis utilizes the following dimensions: " a_1 " = 20 feet; " b " = 385 feet.

As shown in Exhibit 8-1, the hatched region refers to the limited-use area of the clear sight triangle. This limited-use area is bounded by the sight lines and centerlines of the nearest approaching traffic lanes. It is recommended that the limited-use area should be clear of all obstructions more than 18 inches above the road surface including vegetation. Selected plant materials shall have a mature height of less than 12" without trimming.

It should be noted that within the limited use area several vertical obstructions are present. This includes the adjacent residential wall, power poles, and trees.

Corner Sight Distance Analysis Towne Avenue at Southern Project Access






Standards for Corner Sight Distance adhere to Topic 405.1 (2)(a) of the CALTRANS Highway Design Manual, 7th Edition.

- The limited use area is bounded by sight lines and centerlines of the nearest approaching traffic lanes. This area should be clear of all obstructions more than 18 inches above the road surface including vegetation. Selected plant materials shall have a mature height of less than 12" without trimming.

Scale - 1":40'

Legend:

-  = Limited Use Area
-  = Existing Curbs
-  = Existing Wall



9.0 Findings, Conclusions & Recommendations

9.1 Project Summary

The proposed project is located at 1030 W. Foothill Boulevard near the southeast corner of Towne Avenue and Foothill Boulevard in the City of Claremont. The project site is currently vacant and was previously occupied by a Marie Callender's Restaurant that has since been demolished.

The project consists of constructing fifty-six (56) residential single-family attached dwelling units, inclusive of four (4) low income-units and twelve (12) live/work units. The site is divided in half by a communal lawn area and is herein referred to as the "North Units" and "South Units" respectively. Specifically, the North Units consist of twelve (12) live/work units and sixteen (16) single-family attached dwelling units. The South Units consist of the remaining twenty-eight (28) single-family attached dwelling units.

Access to the North Units is proposed via one (1) right-in/right-out only unsignalized driveway along W. Foothill Boulevard (i.e., Project Access No. 1). Access to the South Units is proposed via one (1) right-in/right-out only unsignalized driveway located along Towne Avenue (i.e., Project Access No. 2).

Secondary access is proposed via the existing alley located at the southeast corner of the site. However, for the purposes of this analysis, this secondary access is assumed to not provide direct project ingress or egress.

The project is planned to open in 2024 and will be fully occupied by 2025. The project will be evaluated in one (1) single phase.

The North Units are forecast to generate approximately 156 daily trips which include 14 AM peak hour trips and 13 PM peak hour trips. Furthermore, the South Units are forecast to generate approximately 202 daily trips which include 13 AM peak hour trips and 16 PM peak hour trips.

The total proposed project (North Units + South Units) is proposed to generate approximately 358 daily trips which include 27 AM peak hour trips and 29 PM peak hour trips.

9.2 Traffic Study Area & Analysis Scenarios

The study area consists of the following eight (8) intersections listed below. The jurisdiction(s) where each study intersection is located is also identified.

1. Towne Avenue (NS) at Base Line Road (EW) [City of Claremont]
2. Mountain Avenue (NS) at Base Line Road (EW) [City of Claremont]
3. Towne Avenue (NS) at Foothill Boulevard (EW) [City of Claremont/City of Pomona]
4. Regis Avenue (NS) at Foothill Boulevard (EW) [City of Claremont]
5. Mountain Avenue (NS) at Foothill Boulevard (EW) [City of Claremont]
6. Towne Avenue (NS) at Richbrook Drive / Amador Street (EW) [City of Claremont/City of Pomona]
7. Project Access No.1 (North Units) (NS) at Foothill Boulevard (EW) [City of Claremont]
8. Towne Avenue (NS) at Project Access No.2 (South Units) (EW) [City of Claremont/City of Pomona]

The analysis evaluates traffic conditions of the study area under the following scenarios during the weekday AM (7:00 AM to 9:00 AM) and weekday PM (4:00 PM to 6:00 PM) peak hour conditions:

- Existing Conditions;
- Project Opening Year (2025) With Cumulative Projects Without Project Conditions;
- Project Opening Year (2025) With Cumulative Projects With Project Conditions;
- Horizon Year (2040) Without Project Conditions; and
- Horizon Year (2040) With Project Conditions.

9.3 Intersection LOS Analysis Summary

The intersection level of service analysis has been performed at eight (8) study intersections within the vicinity of the site where the project may contribute a significant amount of traffic. Project deficiencies have been evaluated within the study area based on peak hour level of service criteria.

The following study area intersection has been identified to operate deficiently under all analysis scenarios.

1. Towne Avenue (NS) at Base Line Road (EW)

However, as previously discussed in Section 5.0 of this report, the addition of project traffic does not increase the overall intersection delay at the study intersection of Towne Avenue (NS) at Base Line Road (EW) (i.e., Int. #1) during the analysis scenario with project conditions. The proposed project is expected to generate at most 1 trip at this study intersection during the AM and PM peak hours. As such, study intersection #1 is not considered to be impacted by the proposed project and as a result, no improvements are required.

9.4 Intersection Queuing Analysis Summary

The queue analysis has been performed utilizing the HCM 6 95th percentile queue evaluation methodology. Queue lengths have been reported for the following six (6) turning movements:

Intersection #3 – Towne Avenue (NS) at Foothill Boulevard (EW)

- Northbound Left-Turn
- Northbound Through
- Northbound Right-Turn
- Westbound Left-Turn

Intersection #4 – Regis Avenue (NS) at Foothill Boulevard (EW)

- Eastbound Left-Turn

Intersection #6 – Towne Avenue (NS) at Richbrook Drive/Amador Street (EW)

- Southbound Left-Turn

Based on the results of the queue evaluation, the following turning movements at the key study intersection of Towne Avenue (NS) at Foothill Boulevard (EW) (i.e., Int. #3) do not provide adequate storage capacity:

Intersection #1 – Towne Avenue (NS) at Foothill Boulevard (EW)

- Northbound Left-Turn (AM & PM Peak Hour)
- Northbound Through (AM & PM Peak Hour)
- Northbound Right-Turn (AM & PM Peak Hour)
- Westbound Left-Turn (AM & PM Peak Hour)

These deficiencies occur in “Without Project” Conditions and the proposed project is estimated to only contribute at most 1 vehicle (i.e., 25 ft) of queuing to any of these four (4) turning movements. Therefore, this increase in queue length by the proposed project is considered to be nominal and thus the project’s impact is insignificant.

Although the proposed project’s impact on queuing is considered insignificant, RK recommends the following improvements to help facilitate ingress/egress to/from the proposed project:

Recommended Improvement #1

Install/stripe a “KEEP CLEAR” marking along Towne Avenue at the entrance to Project Access No. 2. Based on existing lane geometrics along Towne Avenue, no additional capacity can be provided to alleviate these existing and background queuing issues. As such, this “KEEP CLEAR” marking will provide a buffer (South Units) to help facilitate adequate egress.

Recommended Improvement #2

Install a stop sign and limit line for outbound traffic Project Access No. 2 (Alleyway/Towne Avenue).

9.5 Vehicles Miles Traveled (VMT) Analysis Summary

The proposed project is subject to a VMT analysis and will adhere to the methodologies and practices described in the *City of Claremont Draft Transportation Study Guidelines for Vehicles Miles Traveled and Level of Service Assessment*, dated August 2020. As per the City of Claremont traffic study guidelines, three (3) types of screening criteria may be applied to effectively screen projects from project-level assessment:

1. Transit Priority Area (TPA) Screening
2. Low VMT Area Screening
3. Project Type Screening

After utilizing the SGVCOG VMT assessment tool, the proposed project does not satisfy any of the three (3) VMT screening criteria. However, the project includes several project design features that will help reduce its VMT compared to the baseline TAZ VMT shown in the SGVCOG tool. In particular, the project will be designed with a higher density than the average residential density surrounding the site, and the increased density has been shown to significantly reduce VMT.

The proposed project's TAZ VMT is calculated to be 16.4 Home-Based VMT per Capita. The City of Claremont's threshold of significance is 15.3 Home-Based VMT per Capita. In order to reduce the project VMT to levels considered less than significant, the project would require a 6.7% decrease in overall VMT. With the VMT reduction achieved from the increased density, the project would reduce its VMT by 22.2% compared to the TAZ average, and the project generated VMT would be below the City of Claremont threshold of significance. **The project's impact to VMT is considered less than significant.**

9.6 Sight Distance Analysis Summary

A corner sight distance analysis has been conducted for the existing project access driveway along Towne Avenue. The purpose of this analysis is to ensure that the intersection provides adequate sight distance for drivers to safely turn onto the major road (i.e., Towne Avenue). The corner sight distance was conducted following the procedures specified in the Caltrans Highway Design Manual.

As per the Caltrans Highway Design Manual, the minimum corner sight distance (feet) is determined by the equation $(1.47 \times V_m \times T_g)$, where V_m is the design speed (mph) of the major road and T_g is the time gap (seconds) for the vehicle along the minor road to enter the major road. For purposes of this analysis, the posted speed limit of 40 mph ($V_m=40$) along Towne Avenue has been utilized. For a passenger vehicle performing a right turn maneuver from a stopped position, a time gap of 6.5 seconds ($T_g=6.5$) is assumed.

As per the corner sight distance equation, a clear line of sight of 385 feet should be maintained between the driver on the minor road and the approaching driver on the major road. Exhibit 8-1 illustrates the clear sight triangle required for vehicles performing a right turn maneuver from the project access driveway along Towne Avenue.

As shown in Exhibit 8-1, the hatched region refers to the limited-use area of the clear sight triangle. This limited-use area is bounded by the sight lines and centerlines of the nearest approaching traffic lanes. It is recommended that the limited-use area should be clear of all obstructions more than 18 inches above the road surface including vegetation. Selected plant materials shall have a mature height of less than 12" without trimming.

It should be noted that within the limited use area several vertical obstructions are present. This includes the adjacent residential wall, power poles, and trees.

Appendices

Appendix A

Traffic Count Worksheets &
Growth Factor Worksheet

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: Historical

Day: Wednesday

City: Claremont

Date: 6/1/2016

AM													
NS/EW Streets:	Towne Ave			Towne Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	1	1	2	0	1	2	0	1	2	0	
7:00 AM	28	84	17	24	122	29	19	33	20	22	64	13	475
7:15 AM	27	74	33	43	126	22	19	49	32	40	94	20	579
7:30 AM	46	178	81	56	186	33	23	93	24	46	105	28	899
7:45 AM	55	202	80	66	225	27	31	98	41	70	122	35	1052
8:00 AM	62	171	68	53	179	35	28	93	27	57	144	26	943
8:15 AM	34	103	43	61	151	39	25	61	30	41	107	28	723
8:30 AM	38	86	34	55	115	32	23	78	18	21	101	20	621
8:45 AM	53	87	27	53	137	29	24	97	22	53	79	26	687
TOTAL VOLUMES :	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
APPROACH %'s :	343	985	383	411	1241	246	192	602	214	350	816	196	5979
	20.05%	57.57%	22.38%	21.65%	65.38%	12.96%	19.05%	59.72%	21.23%	25.70%	59.91%	14.39%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	197	654	272	236	741	134	107	345	122	214	478	117	3617
PEAK HR FACTOR :	0.833			0.873			0.844			0.891			0.860

UTURNS			
NB	SB	EB	WB
1	0	1	1
2	0	1	1
4	0	0	1
0	0	0	2
1	0	4	2
0	0	0	6
4	0	0	0
1	0	1	2
NB	SB	EB	WB
13	0	7	15

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: Historical

Day: Wednesday

City: Claremont

Date: 6/1/2016

NS/EW Streets:	PM												TOTAL
	Towne Ave			Towne Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	
4:00 PM	51	144	56	43	104	30	49	157	49	53	114	33	883
4:15 PM	48	162	60	37	70	24	53	165	30	44	143	32	868
4:30 PM	49	168	49	50	88	24	50	166	34	59	137	38	912
4:45 PM	35	164	54	45	98	19	59	186	42	50	152	39	943
5:00 PM	49	200	48	37	92	19	54	158	44	51	169	39	960
5:15 PM	50	155	39	54	67	31	39	157	35	43	135	41	846
5:30 PM	50	150	51	41	67	30	48	142	30	56	124	37	826
5:45 PM	51	159	57	35	69	23	52	146	26	46	117	34	815
TOTAL VOLUMES :	383	1302	414	342	655	200	404	1277	290	402	1091	293	7053
APPROACH %'s :	18.25%	62.03%	19.72%	28.57%	54.72%	16.71%	20.50%	64.79%	14.71%	22.51%	61.09%	16.41%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	181	694	211	169	348	86	216	675	150	204	601	148	3683
PEAK HR FACTOR :	0.914			0.931			0.907			0.920			0.959

UTURNS			
NB	SB	EB	WB
1	0	2	5
1	0	2	4
4	0	5	6
3	0	1	4
1	0	4	5
1	0	1	3
1	0	0	7
1	0	1	4
NB	SB	EB	WB
13	0	16	38

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

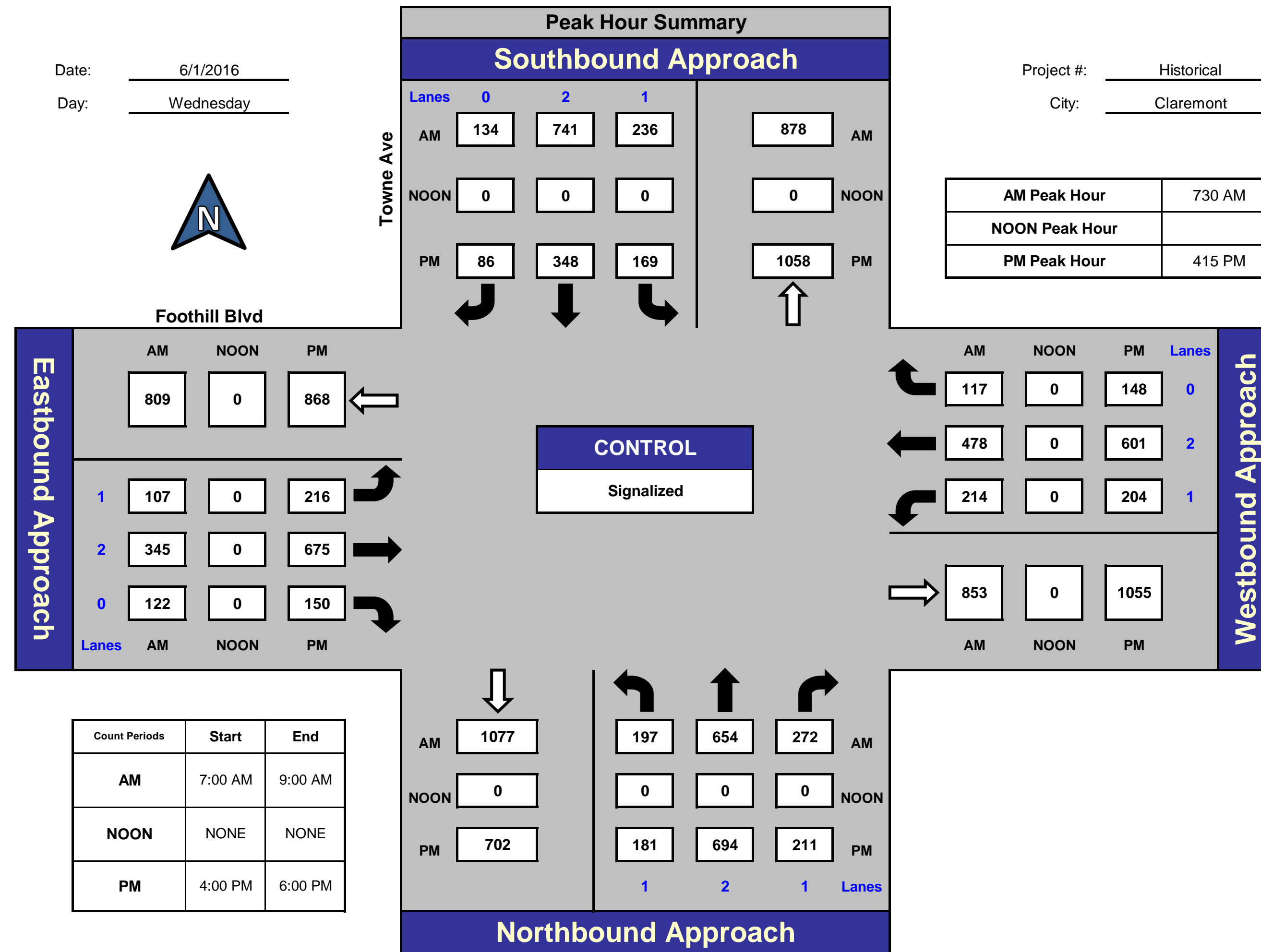
Towne Ave and Foothill Blvd, Claremont

Date: 6/1/2016

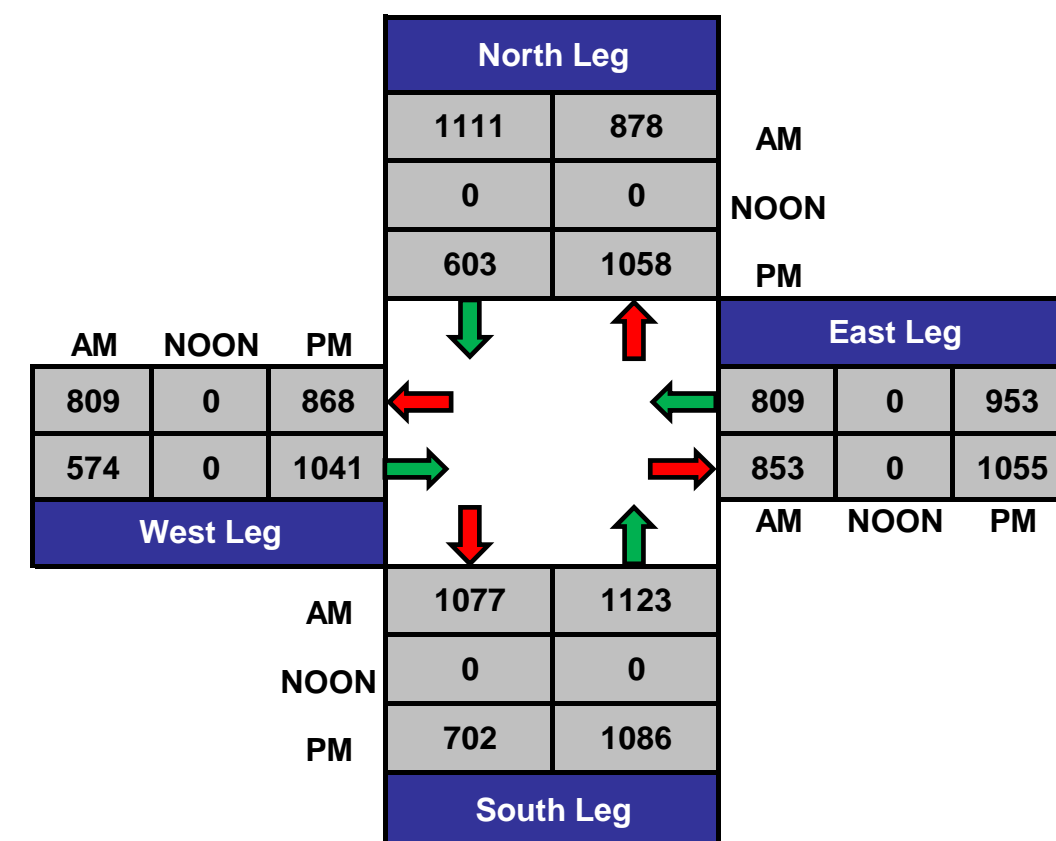
Day: Wednesday

Project #: Historical

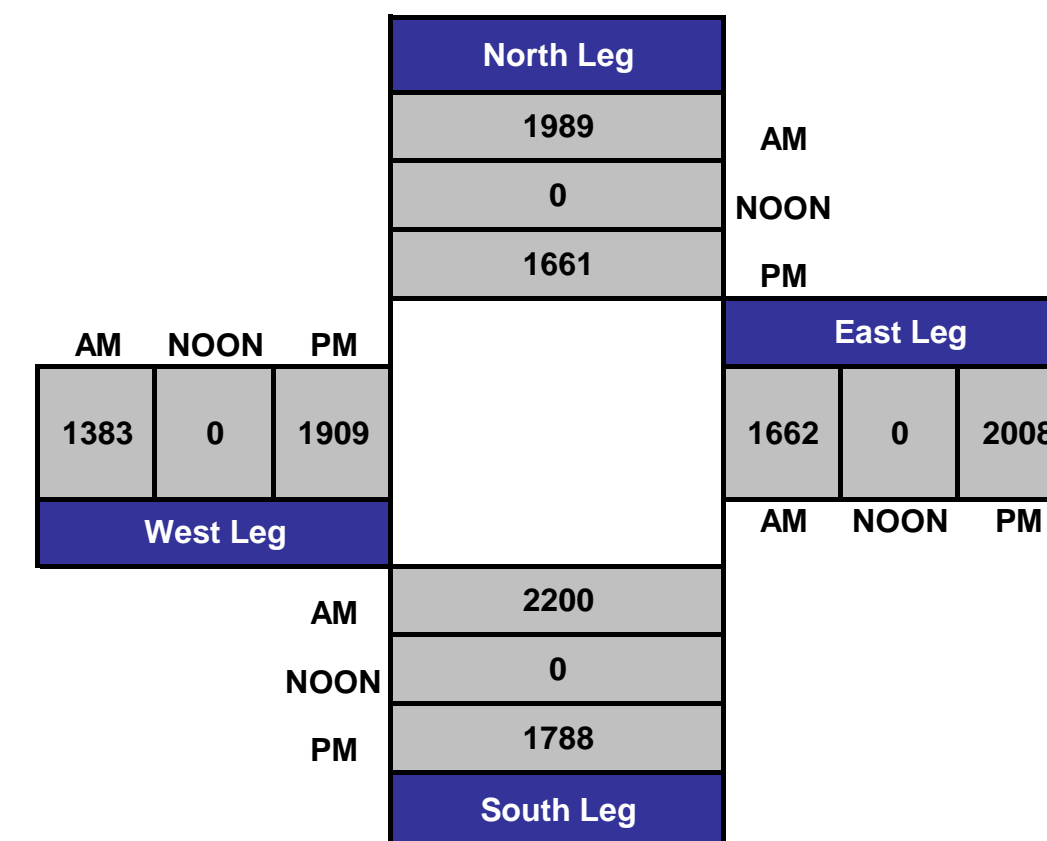
City: Claremont



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: Historical

Day: Wednesday

City: Claremont

Date: 6/1/2016

AM													
NS/EW Streets:	Mountain Ave			Mountain Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	1	1	2	0	1	2	0	1	2	0	
7:00 AM	5	7	9	4	19	5	5	63	4	10	94	2	227
7:15 AM	12	16	16	21	40	10	9	86	6	28	131	7	382
7:30 AM	19	67	35	28	85	14	23	122	29	60	138	10	630
7:45 AM	24	76	56	37	185	19	25	187	42	86	189	25	951
8:00 AM	23	87	30	55	100	19	23	144	25	66	163	25	760
8:15 AM	27	16	26	42	45	23	4	127	9	14	147	9	489
8:30 AM	17	20	9	26	33	8	10	134	11	14	103	5	390
8:45 AM	28	16	11	34	37	7	9	135	12	25	129	16	459
TOTAL VOLUMES :	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
APPROACH %'s :	155	305	192	247	544	105	108	998	138	303	1094	99	4288
	23.77%	46.78%	29.45%	27.57%	60.71%	11.72%	8.68%	80.23%	11.09%	20.25%	73.13%	6.62%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	93	246	147	162	415	75	75	580	105	226	637	69	2830
PEAK HR FACTOR :	0.779			0.676			0.748			0.777			0.744

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	1
0	0	0	1
0	0	0	0
0	0	0	1
0	0	0	1
0	0	0	5

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: Historical

Day: Wednesday

City: Claremont

Date: 6/1/2016

NS/EW Streets:	PM												TOTAL
	Mountain Ave			Mountain Ave			Foothill Blvd			Foothill Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	28	35	21	32	35	14	13	178	23	14	178	15	586
4:15 PM	27	32	21	28	24	12	14	206	17	19	184	13	597
4:30 PM	23	35	20	28	33	12	14	181	18	27	172	15	578
4:45 PM	27	30	20	37	42	15	18	210	22	32	207	17	677
5:00 PM	34	35	24	44	29	12	9	201	17	25	212	21	663
5:15 PM	33	46	28	38	48	10	8	195	23	26	173	18	646
5:30 PM	24	51	15	36	37	12	23	180	18	19	189	26	630
5:45 PM	27	27	15	39	40	8	10	197	19	25	153	19	579
TOTAL VOLUMES :	223	291	164	282	288	95	109	1548	157	187	1468	144	4956
APPROACH %'s :	32.89%	42.92%	24.19%	42.41%	43.31%	14.29%	6.01%	85.34%	8.65%	10.39%	81.60%	8.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	118	162	87	155	156	49	58	786	80	102	781	82	2616
PEAK HR FACTOR :	0.857			0.938			0.924			0.935			0.966

UTURNS			
NB	SB	EB	WB
0	0	1	2
0	0	1	2
0	0	1	1
0	0	0	3
0	0	0	1
0	0	0	4
0	0	0	0
0	0	0	7
NB	SB	EB	WB
0	0	3	20

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

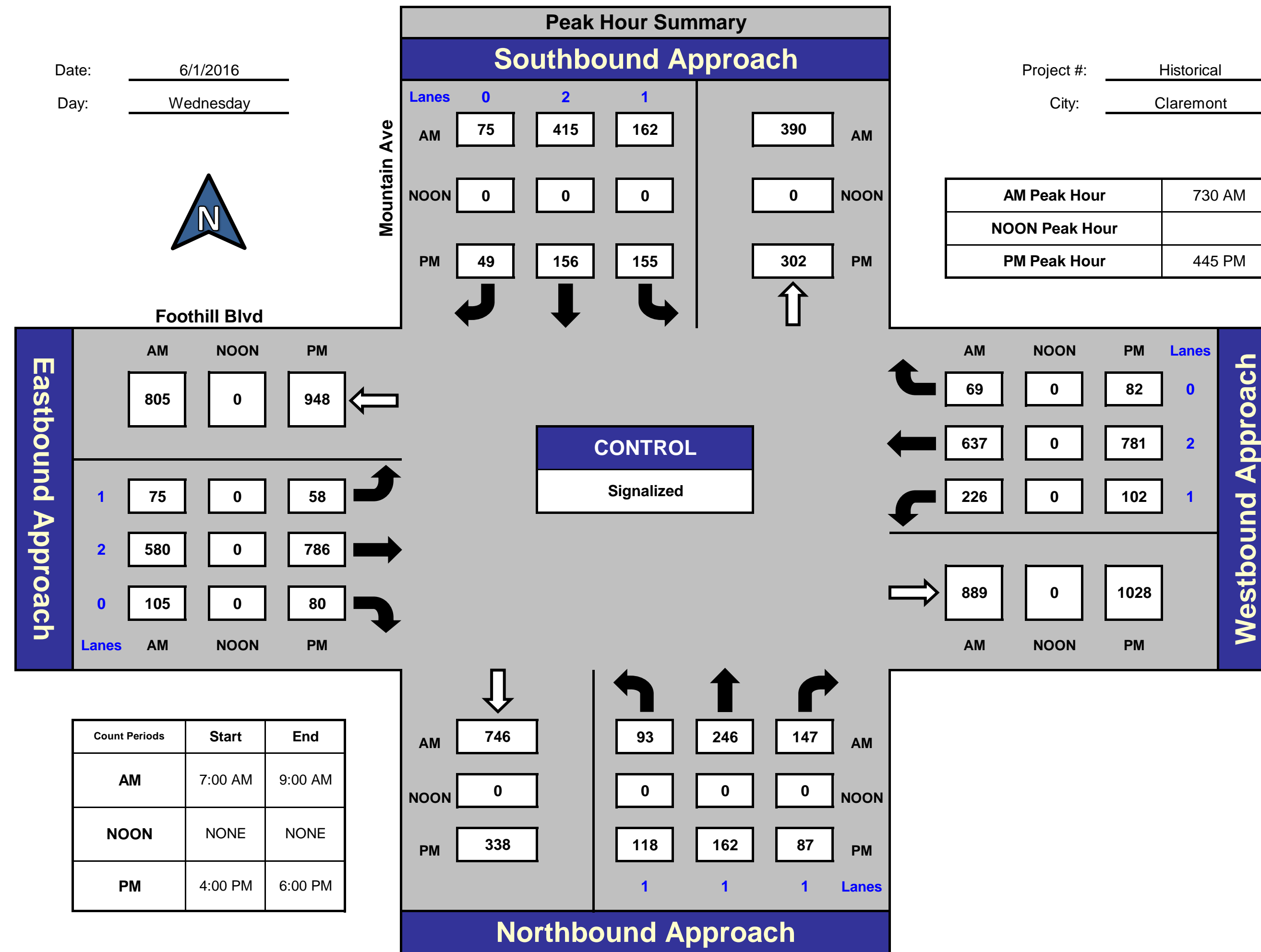
Mountain Ave and Foothill Blvd, Claremont

Date: 6/1/2016

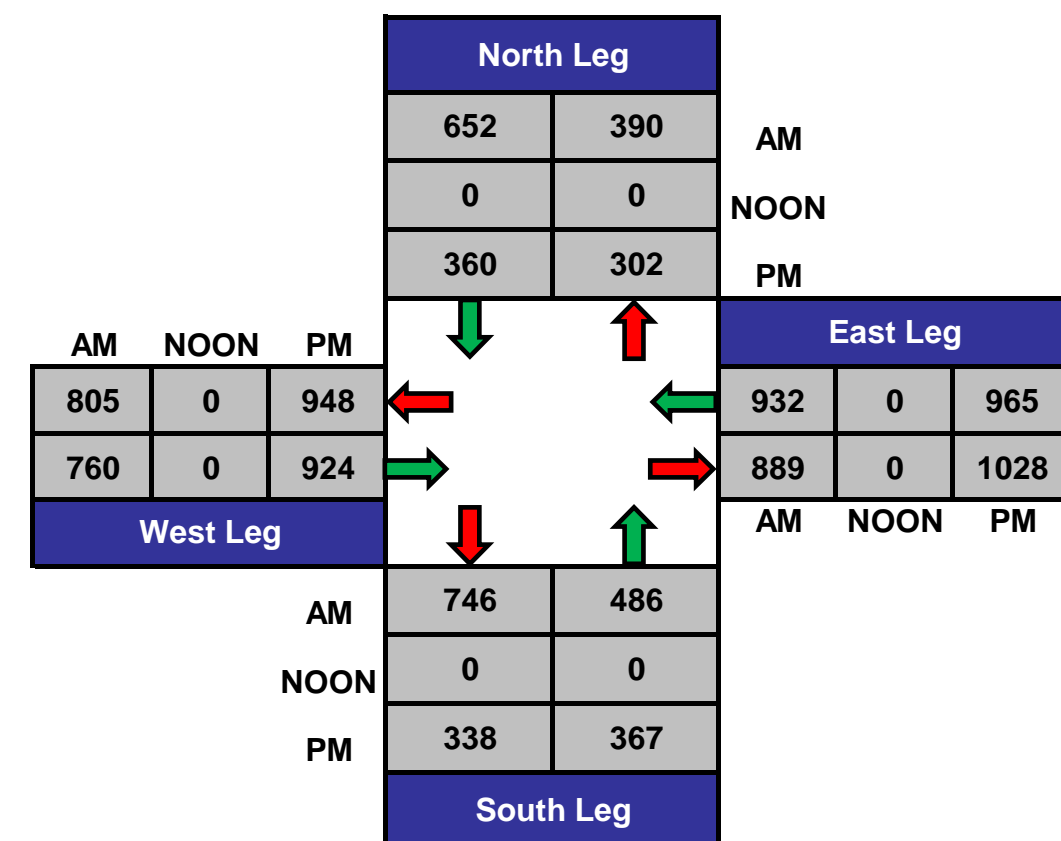
Day: Wednesday

Project #: Historical

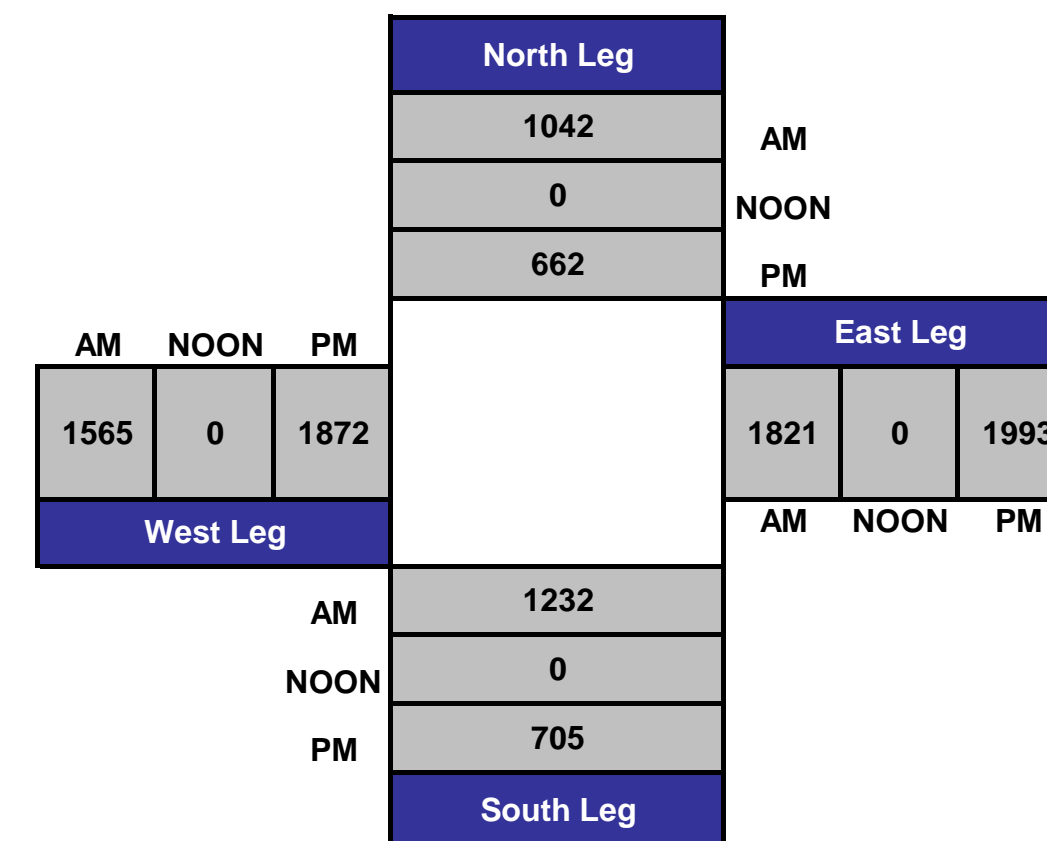
City: Claremont



Total Ins & Outs



Total Volume Per Leg



National Data & Surveying Services Intersection Turning Movement Count

Location: Towne Ave & Base Line Rd
City: Claremont
Control: Signalized

Project ID: 22-020233-006
Date: 8/9/2022

Data - Totals

NS/EW Streets:	Towne Ave				Towne Ave				Base Line Rd				Base Line Rd				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0.5 NL	0.5 NT	2 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	1 ER	0 EU	1 WL	2 WT	0 WR	0 WU	TOTAL
7:00 AM	30	3	20	0	0	0	1	0	1	11	14	0	78	45	2	0	205
7:15 AM	13	0	24	0	0	1	0	0	2	12	17	0	69	34	0	0	172
7:30 AM	18	2	27	0	0	3	0	0	0	31	22	0	89	37	0	0	229
7:45 AM	30	4	43	0	1	1	2	0	0	26	19	0	88	61	0	0	275
8:00 AM	25	3	48	0	1	6	1	0	1	38	17	0	82	46	0	0	268
8:15 AM	12	3	44	1	1	2	2	0	1	30	11	0	84	50	1	0	242
8:30 AM	22	0	36	2	1	2	1	0	0	36	26	0	89	45	0	0	260
8:45 AM	29	3	46	2	2	0	1	0	0	50	19	0	86	49	1	1	289
TOTAL VOLUMES :	NL 179	NT 18	NR 288	NU 5	SL 6	ST 15	SR 8	SU 0	EL 5	ET 234	ER 145	EU 0	WL 665	WT 367	WR 4	WU 1	TOTAL 1940
APPROACH %'s :	36.53%	3.67%	58.78%	1.02%	20.69%	51.72%	27.59%	0.00%	1.30%	60.94%	37.76%	0.00%	64.13%	35.39%	0.39%	0.10%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	88	9	174	5	5	10	5	0	2	154	73	0	341	190	2	1	1059
PEAK HR FACTOR :	0.759	0.750	0.906	0.625	0.625	0.417	0.625	0.000	0.500	0.770	0.702	0.000	0.958	0.950	0.500	0.250	0.916
	0.863				0.625				0.830				0.974				
PM	0.5 NL	0.5 NT	2 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	1 ER	0 EU	1 WL	2 WT	0 WR	0 WU	TOTAL
4:00 PM	23	0	70	1	2	0	0	0	1	90	25	0	45	36	0	0	293
4:15 PM	19	0	81	0	0	0	0	0	0	111	23	0	44	71	1	0	350
4:30 PM	21	0	70	0	0	2	0	0	0	121	29	0	61	48	0	0	352
4:45 PM	18	0	72	1	0	2	0	0	0	120	21	0	66	59	2	0	361
5:00 PM	21	0	83	0	1	0	1	0	0	99	26	0	63	77	0	0	371
5:15 PM	21	2	84	1	0	1	0	0	0	119	19	0	76	62	0	0	385
5:30 PM	37	2	72	0	1	0	1	0	1	101	29	0	71	59	2	0	376
5:45 PM	18	0	80	0	0	1	0	0	0	115	21	0	74	54	0	0	363
TOTAL VOLUMES :	NL 178	NT 4	NR 612	NU 3	SL 4	ST 6	SR 2	SU 0	EL 2	ET 876	ER 193	EU 0	WL 500	WT 466	WR 5	WU 0	TOTAL 2851
APPROACH %'s :	22.33%	0.50%	76.79%	0.38%	33.33%	50.00%	16.67%	0.00%	0.19%	81.79%	18.02%	0.00%	51.49%	47.99%	0.51%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	97	4	319	1	2	2	2	0	1	434	95	0	284	252	2	0	1495
PEAK HR FACTOR :	0.655	0.500	0.949	0.250	0.500	0.500	0.500	0.000	0.250	0.912	0.819	0.000	0.934	0.818	0.250	0.000	0.971
	0.948				0.750				0.960				0.961				

Location: Mountain Ave & Base Line Rd
City: Claremont
Control: Signalized

Project ID: 22-020233-005
Date: 7/26/2022

Data - Totals

NS/EW Streets:	Mountain Ave				Mountain Ave				Base Line Rd				Base Line Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	1 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	4	1	7	0	3	1	9	0	4	26	6	0	2	60	3	0	126
7:15 AM	6	2	5	0	4	5	8	0	3	28	2	0	8	90	2	0	163
7:30 AM	7	4	9	0	4	4	8	0	7	45	4	0	4	108	2	1	207
7:45 AM	8	2	6	0	6	7	14	0	5	74	7	0	13	100	3	1	246
8:00 AM	4	1	10	0	10	7	12	0	9	75	8	0	15	82	7	0	240
8:15 AM	8	4	10	0	8	4	11	0	6	72	14	0	12	99	3	0	251
8:30 AM	16	3	22	0	12	6	10	0	7	69	10	1	14	116	6	0	292
8:45 AM	13	3	11	0	9	4	8	0	2	60	9	0	19	98	5	0	241
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	66	20	80	0	56	38	80	0	43	449	60	1	87	753	31	2	1766
	39.76%	12.05%	48.19%	0.00%	32.18%	21.84%	45.98%	0.00%	7.78%	81.19%	10.85%	0.18%	9.97%	86.25%	3.55%	0.23%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	36	10	48	0	36	24	47	0	27	290	39	1	54	397	19	1	1029
PEAK HR FACTOR :	0.563	0.625	0.545	0.000	0.750	0.857	0.839	0.000	0.750	0.967	0.696	0.250	0.900	0.856	0.679	0.250	0.881
	0.573				0.922				0.970				0.866				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	1 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	9	4	25	0	12	2	9	0	11	112	13	0	18	115	7	1	338
4:15 PM	11	9	23	0	3	5	6	0	9	138	6	0	11	101	8	0	330
4:30 PM	6	9	30	0	6	6	7	0	6	135	9	0	14	80	6	0	314
4:45 PM	10	7	29	0	8	6	5	0	7	143	18	1	16	82	0	0	332
5:00 PM	14	7	33	0	9	6	9	0	7	140	14	0	12	96	7	0	354
5:15 PM	13	8	27	0	4	3	4	0	14	155	10	0	16	117	12	2	385
5:30 PM	10	6	23	0	8	5	3	0	5	174	10	0	21	139	10	0	414
5:45 PM	11	12	26	0	8	6	9	0	9	149	13	1	12	100	12	0	368
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	84	62	216	0	58	39	52	0	68	1146	93	2	120	830	62	3	2835
	23.20%	17.13%	59.67%	0.00%	38.93%	26.17%	34.90%	0.00%	5.19%	87.55%	7.10%	0.15%	11.82%	81.77%	6.11%	0.30%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	48	33	109	0	29	20	25	0	35	618	47	1	61	452	41	2	1521
PEAK HR FACTOR :	0.857	0.688	0.826	0.000	0.806	0.833	0.694	0.000	0.625	0.888	0.839	0.250	0.726	0.813	0.854	0.250	0.918
	0.880				0.771				0.927				0.818				

National Data & Surveying Services Intersection Turning Movement Count

Location: Towne Ave & Foothill Blvd
City: Claremont
Control: Signalized

Project ID: 22-020233-001
Date: 7/26/2022

Data - Totals

NS/EW Streets:	Towne Ave				Towne Ave				Foothill Blvd				Foothill Blvd				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1 NL	2 NT	1 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	TOTAL
7:00 AM	30	92	20	1	22	107	18	0	15	30	19	0	16	32	6	0	408
7:15 AM	27	95	23	1	23	118	23	0	14	22	20	0	17	50	2	2	437
7:30 AM	33	109	24	1	36	116	19	0	24	54	21	2	27	59	17	1	543
7:45 AM	30	85	42	5	48	159	25	0	25	71	32	2	33	71	12	1	641
8:00 AM	30	80	21	1	26	122	27	0	16	51	20	2	34	63	13	2	508
8:15 AM	41	100	28	0	54	159	35	0	12	66	24	2	25	66	12	0	624
8:30 AM	49	114	42	1	39	139	32	0	25	54	32	0	25	76	12	2	642
8:45 AM	51	119	43	1	61	119	28	0	21	73	21	1	25	65	16	2	646
TOTAL VOLUMES :	291	794	243	11	309	1039	207	0	152	421	189	9	202	482	90	10	4449
APPROACH %'s :	21.73%	59.30%	18.15%	0.82%	19.87%	66.82%	13.31%	0.00%	19.71%	54.60%	24.51%	1.17%	25.77%	61.48%	11.48%	1.28%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	171	413	134	3	180	539	122	0	74	244	97	5	109	270	53	6	2420
PEAK HR FACTOR :	0.838	0.868	0.779	0.750	0.738	0.847	0.871	0.000	0.740	0.836	0.758	0.625	0.801	0.888	0.828	0.750	0.937
	0.842				0.848				0.905				0.952				
PM	1 NL	2 NT	1 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	TOTAL
4:00 PM	54	135	56	3	38	114	13	0	27	114	50	4	55	115	35	7	820
4:15 PM	58	141	40	2	45	131	23	0	38	98	38	4	38	110	27	5	798
4:30 PM	52	158	45	2	57	117	19	0	37	118	32	2	40	120	37	3	839
4:45 PM	49	144	54	2	36	96	32	0	33	110	44	3	54	107	27	1	792
5:00 PM	27	165	46	0	35	101	31	0	50	137	50	1	47	138	33	4	865
5:15 PM	39	171	45	2	39	106	27	0	36	124	38	2	51	126	29	1	836
5:30 PM	59	155	52	2	47	142	34	0	41	126	42	0	50	100	30	3	883
5:45 PM	58	108	51	3	48	101	38	0	27	105	47	2	42	97	25	3	755
TOTAL VOLUMES :	396	1177	389	16	345	908	217	0	289	932	341	18	377	913	243	27	6588
APPROACH %'s :	20.02%	59.50%	19.67%	0.81%	23.47%	61.77%	14.76%	0.00%	18.29%	58.99%	21.58%	1.14%	24.17%	58.53%	15.58%	1.73%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	174	635	197	6	157	445	124	0	160	497	174	6	202	471	119	9	3376
PEAK HR FACTOR :	0.737	0.928	0.912	0.750	0.835	0.783	0.912	0.000	0.800	0.907	0.870	0.500	0.935	0.853	0.902	0.563	0.956
	0.944				0.814				0.879				0.902				

National Data & Surveying Services Intersection Turning Movement Count

Location: Regis Ave & Foothill Blvd
City: Claremont
Control: 1-Way Stop(SB)

Project ID: 22-020233-002
Date: 7/26/2022

Data - Totals

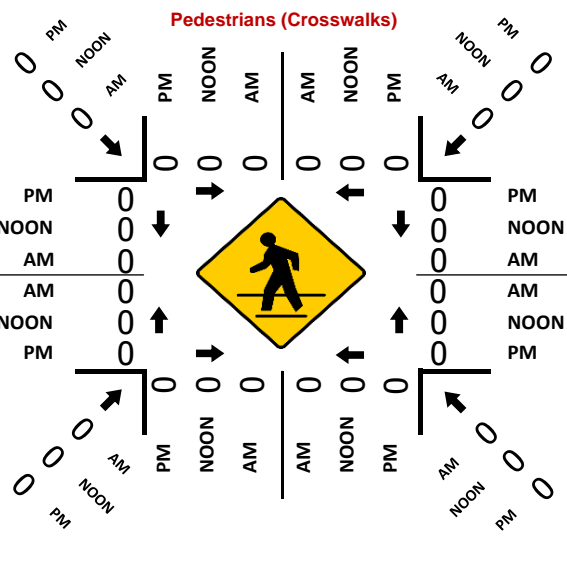
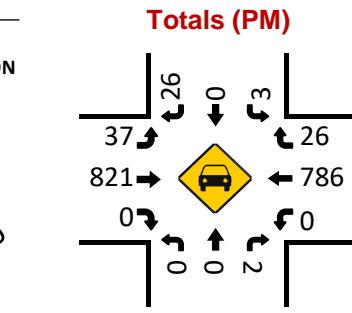
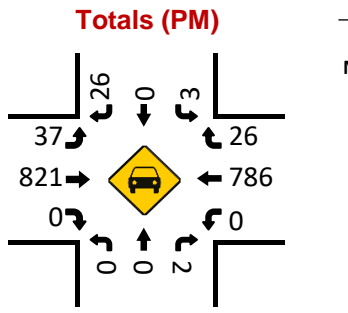
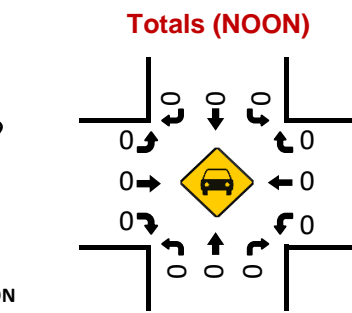
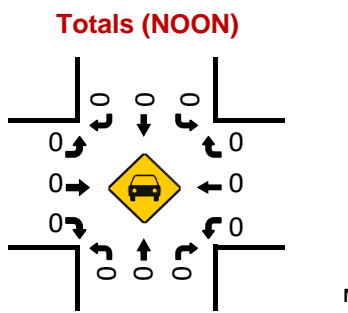
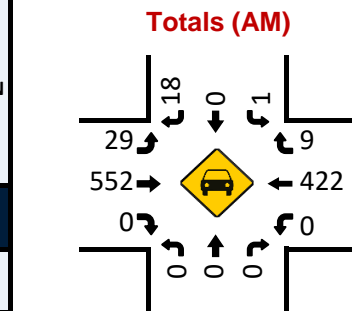
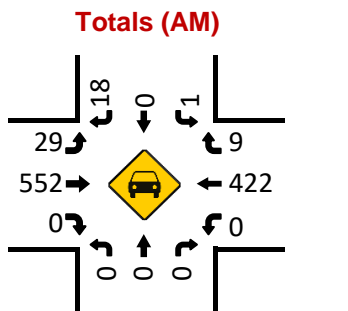
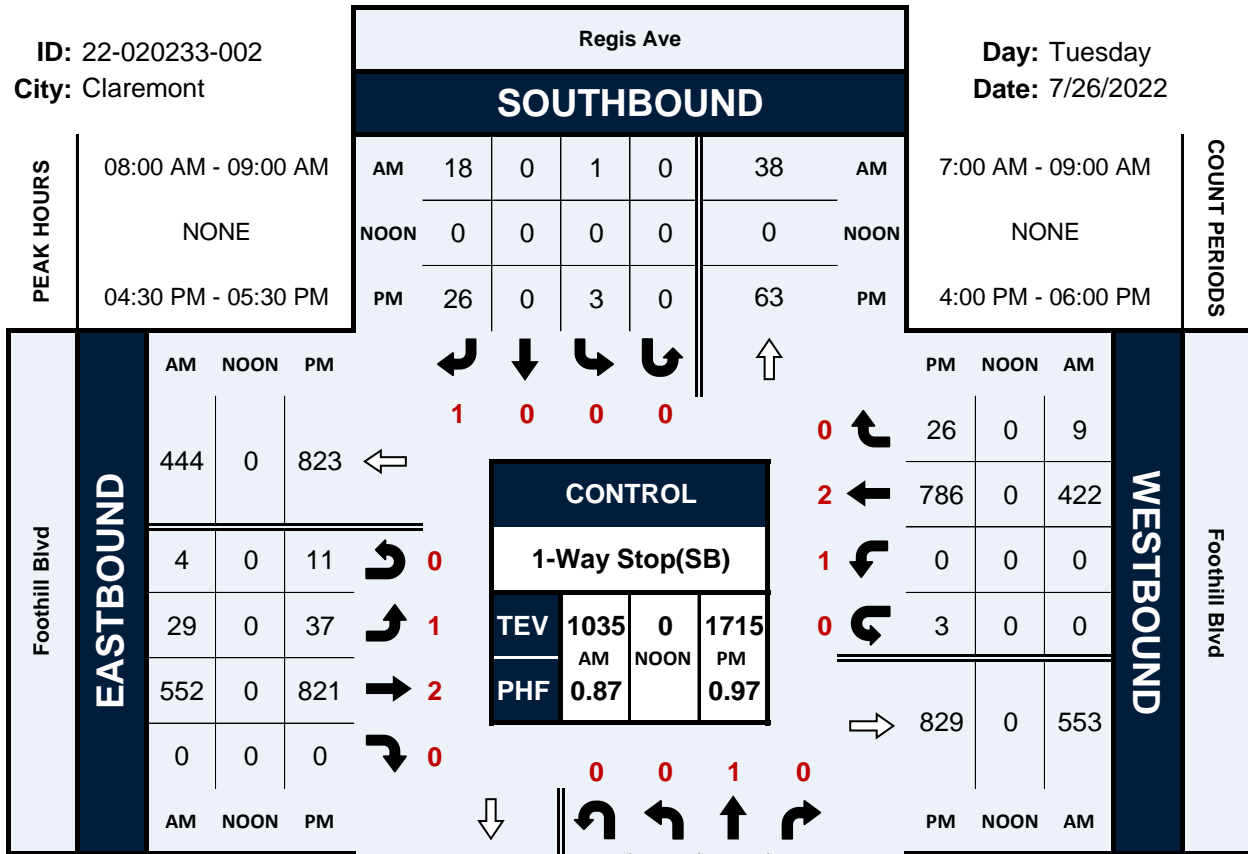
NS/EW Streets:	Regis Ave				Regis Ave				Foothill Blvd				Foothill Blvd				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	0	0	1	0	1	2	0	0	1	2	0	0	123
7:15 AM	0	0	0	0	2	0	2	0	3	70	0	3	0	72	2	0	154
7:30 AM	0	0	0	0	0	0	0	0	1	120	0	1	0	95	0	0	217
7:45 AM	0	0	0	0	1	0	3	0	8	150	0	0	0	123	2	0	287
8:00 AM	0	0	0	0	0	0	5	0	5	105	0	1	0	102	4	0	222
8:15 AM	0	0	0	0	1	0	5	0	5	138	0	1	0	110	1	0	261
8:30 AM	0	0	0	0	0	0	2	0	6	140	0	0	0	105	2	0	255
8:45 AM	0	0	0	0	0	0	6	0	13	169	0	2	0	105	2	0	297
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	0	0	0	0	4	0	25	0	44	956	0	9	0	765	13	0	1816
					13.79%	0.00%	86.21%	0.00%	4.36%	94.75%	0.00%	0.89%	0.00%	98.33%	1.67%	0.00%	
PEAK HR:	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL:	0	0	0	0	1	0	18	0	29	552	0	4	0	422	9	0	1035
PEAK HR FACTOR:	0.000	0.000	0.000	0.000	0.250	0.000	0.750	0.000	0.558	0.817	0.000	0.500	0.000	0.959	0.563	0.000	0.871
					0.792				0.795				0.971				
PM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	0	0	1	0	1	2	0	0	1	2	0	0	426
4:15 PM	0	0	0	0	4	0	8	0	13	180	0	3	0	175	9	0	392
4:30 PM	0	0	0	0	0	0	7	0	6	220	0	1	0	193	6	1	434
4:45 PM	0	0	0	0	1	0	10	0	14	187	0	3	0	188	4	0	407
5:00 PM	0	0	2	0	1	0	4	0	6	215	0	3	0	201	9	0	441
5:15 PM	0	0	0	0	1	0	5	0	11	199	0	4	0	204	7	2	433
5:30 PM	0	0	0	0	1	0	3	0	9	221	1	2	0	176	2	0	415
5:45 PM	0	0	0	0	3	0	8	0	12	199	0	3	0	165	5	1	396
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	0	0	2	0	12	0	50	0	90	1608	1	24	0	1506	47	4	3344
	0.00%	0.00%	100.00%	0.00%	19.35%	0.00%	80.65%	0.00%	5.22%	93.33%	0.06%	1.39%	0.00%	96.72%	3.02%	0.26%	
PEAK HR:	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL:	0	0	2	0	3	0	26	0	37	821	0	11	0	786	26	3	1715
PEAK HR FACTOR:	0.000	0.000	0.250	0.000	0.750	0.000	0.650	0.000	0.661	0.933	0.000	0.688	0.000	0.963	0.722	0.375	0.972
					0.250				0.659				0.957				

Regis Ave & Foothill Blvd

Peak Hour Turning Movement Count

ID: 22-020233-002
City: Claremont

Day: Tuesday
Date: 7/26/2022



National Data & Surveying Services Intersection Turning Movement Count

Location: Mountain Ave & Foothill Blvd
City: Claremont
Control: Signalized

Project ID: 22-020233-004
Date: 7/26/2022

Data - Totals

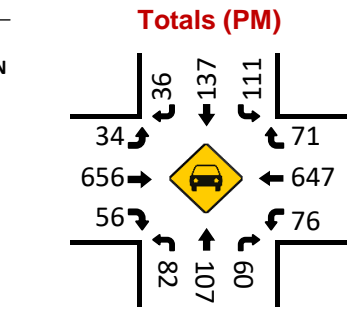
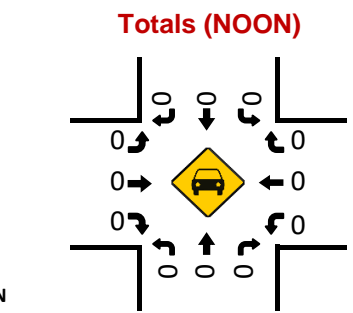
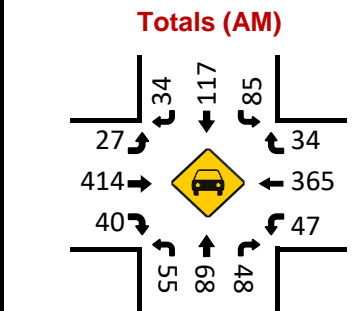
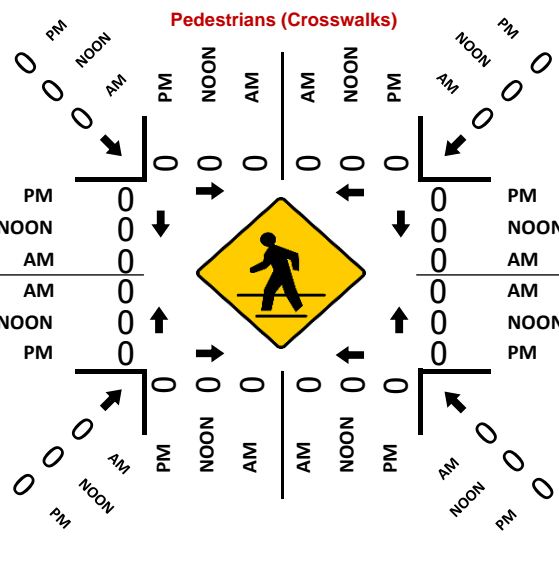
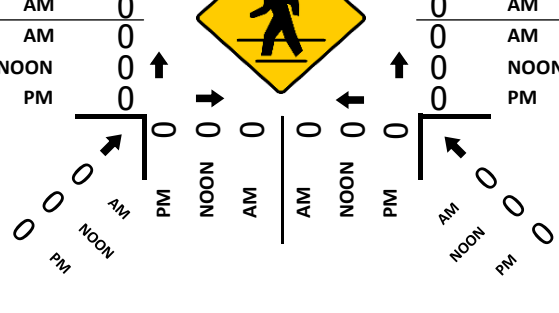
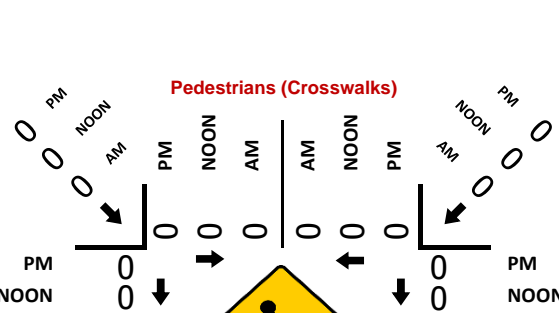
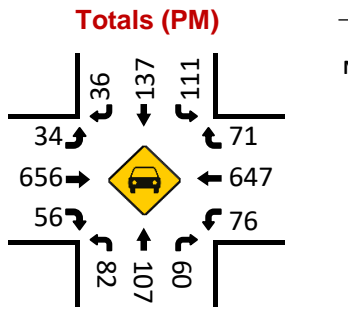
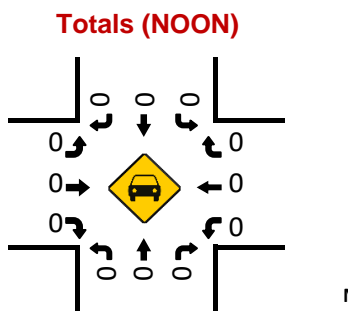
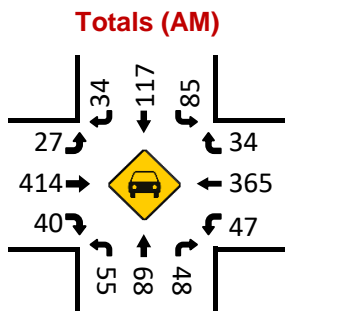
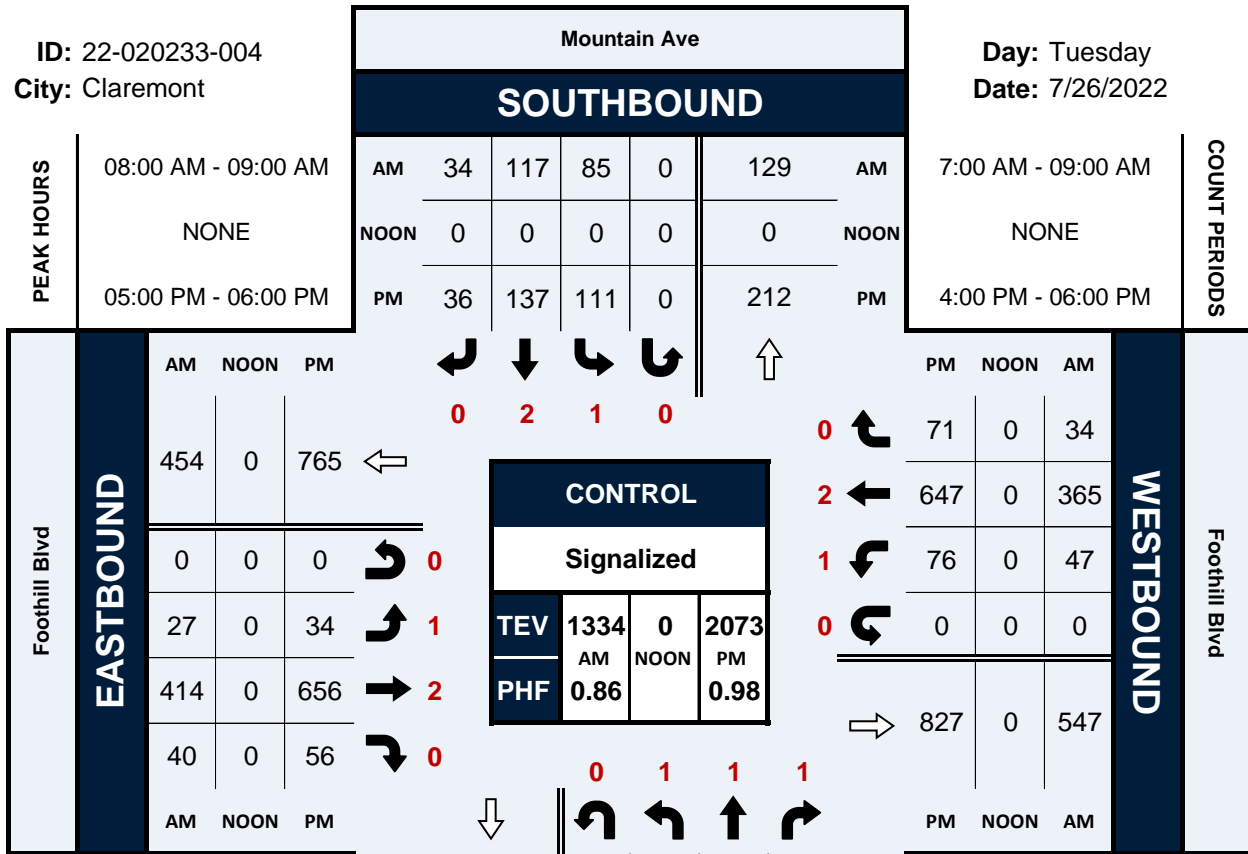
NS/EW Streets:	Mountain Ave				Mountain Ave				Foothill Blvd				Foothill Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1 NL	1 NT	1 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	TOTAL
7:00 AM	4	11	2	0	11	8	2	0	3	51	3	0	4	54	4	0	157
7:15 AM	3	7	3	0	7	11	3	0	6	53	6	0	4	72	8	0	183
7:30 AM	9	7	4	0	15	22	6	0	5	73	9	0	5	67	6	0	228
7:45 AM	12	16	12	0	14	24	12	0	6	106	10	0	10	87	11	0	320
8:00 AM	9	18	7	0	15	30	6	0	3	103	12	0	9	89	5	0	306
8:15 AM	10	16	13	0	22	25	5	0	8	95	8	0	7	89	9	0	307
8:30 AM	16	17	14	0	21	22	9	0	7	102	5	0	18	91	9	0	331
8:45 AM	20	17	14	0	27	40	14	0	9	114	15	0	13	96	11	0	390
TOTAL VOLUMES :	83	109	69	0	132	182	57	0	47	697	68	0	70	645	63	0	2222
APPROACH %'s :	31.80%	41.76%	26.44%	0.00%	35.58%	49.06%	15.36%	0.00%	5.79%	85.84%	8.37%	0.00%	9.00%	82.90%	8.10%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	55	68	48	0	85	117	34	0	27	414	40	0	47	365	34	0	1334
PEAK HR FACTOR :	0.688	0.944	0.857	0.000	0.787	0.731	0.607	0.000	0.750	0.908	0.667	0.000	0.653	0.951	0.773	0.000	0.855
	0.838				0.728				0.871				0.929				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1 NL	1 NT	1 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	TOTAL
4:00 PM	20	26	13	0	29	30	10	0	9	182	15	0	7	181	21	1	544
4:15 PM	23	24	8	0	38	18	11	0	9	143	7	0	9	157	16	0	463
4:30 PM	22	25	9	0	24	42	10	0	3	166	25	0	12	160	24	0	522
4:45 PM	14	25	17	0	33	31	3	0	10	149	16	0	10	146	25	1	480
5:00 PM	23	23	16	0	34	40	10	0	8	161	6	0	13	179	18	0	531
5:15 PM	26	23	16	0	27	25	8	0	9	179	14	0	17	163	21	0	528
5:30 PM	16	39	11	0	27	30	8	0	8	166	14	0	14	160	21	0	514
5:45 PM	17	22	17	0	23	42	10	0	9	150	22	0	32	145	11	0	500
TOTAL VOLUMES :	161	207	107	0	235	258	70	0	65	1296	119	0	114	1291	157	2	4082
APPROACH %'s :	33.89%	43.58%	22.53%	0.00%	41.74%	45.83%	12.43%	0.00%	4.39%	87.57%	8.04%	0.00%	7.29%	82.54%	10.04%	0.13%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	82	107	60	0	111	137	36	0	34	656	56	0	76	647	71	0	2073
PEAK HR FACTOR :	0.788	0.686	0.882	0.000	0.816	0.815	0.900	0.000	0.944	0.916	0.636	0.000	0.594	0.904	0.845	0.000	0.976
	0.943				0.845				0.923				0.945				

Mountain Ave & Foothill Blvd

Peak Hour Turning Movement Count

ID: 22-020233-004
City: Claremont

Day: Tuesday
Date: 7/26/2022



National Data & Surveying Services Intersection Turning Movement Count

Location: Towne Ave & Richbrook Dr/Amador St
City: Claremont
Control: Signalized

Project ID: 22-020233-003
Date: 7/26/2022

Project ID: 22-020233-003
Date: 7/26/2022

Data - Totals

NS/EW Streets:	Towne Ave				Towne Ave					Richbrook Dr/Amador St				Richbrook Dr/Amador St					TOTAL						
	NORTHBOUND				SOUTHBOUND					EASTBOUND				WESTBOUND											
AM	1	2	0	0	1	2	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	N2T2	N2R2
	NL	NT	NR	NU	SL	ST	SR	SU	ST2	EL	ET	ER	EU	WL	WT	WR	WU	WL2	N2T2	N2R2					
7:00 AM	2	140	0	0	1	146	1	0	0	5	0	4	0	0	0	0	0	0	0	0	0	0	299		
7:15 AM	0	133	0	0	1	145	2	0	0	6	0	2	0	1	0	3	0	0	0	0	0	0	293		
7:30 AM	0	158	0	1	3	166	2	1	0	11	0	6	0	1	0	2	0	0	0	0	0	0	351		
7:45 AM	2	148	1	0	3	218	1	1	0	10	1	6	0	2	0	6	0	0	0	0	0	0	399		
8:00 AM	0	116	3	0	1	178	5	2	0	12	0	4	0	0	0	5	0	0	0	2	0	0	328		
8:15 AM	1	163	1	0	3	201	0	1	0	7	1	2	0	0	1	4	0	0	0	0	2	0	387		
8:30 AM	1	195	1	0	1	198	3	1	0	5	0	6	0	1	0	3	0	0	0	0	0	1	416		
8:45 AM	1	195	0	0	0	162	3	4	0	12	0	3	0	0	0	7	0	1	0	0	0	0	388		
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	ST2	EL	ET	ER	EU	WL	WT	WR	WU	WL2	N2T2	N2R2	TOTAL				
APPROACH %'s :	7	1248	6	1	13	1414	17	10	0	68	2	33	0	5	1	30	0	1	2	3	2861				
	0.55%	98.89%	0.48%	0.08%	0.89%	97.25%	1.17%	0.69%	0.00%	66.02%	1.94%	32.04%	0.00%	13.51%	2.70%	81.08%	0.00%	2.70%	40.00%	60.00%					
PEAK HR :	07:45 AM - 08:45 AM				8	795	9	5	0	34	2	18	0	3	1	18	0	0	2	3	1530				
PEAK HR VOL :	4	622	6	0	8	795	9	5	0	34	2	18	0	3	1	18	0	0	2	3	1530				
PEAK HR FACTOR :	0.500	0.797	0.500	0.000	0.667	0.912	0.450	0.625	0.000	0.708	0.500	0.750	0.000	0.375	0.250	0.750	0.000	0.000	0.250	0.375	0.919				
			0.802				0.916					0.794				0.688									
PM	1	2	0	0	1	2	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	N2T2	N2R2
	NL	NT	NR	NU	SL	ST	SR	SU	ST2	EL	ET	ER	EU	WL	WT	WR	WU	WL2	N2T2	N2R2					
4:00 PM	1	235	1	0	4	201	8	1	1	4	0	2	0	2	0	4	0	0	0	1	0	1	465		
4:15 PM	3	233	0	0	5	194	11	2	0	8	0	1	0	1	0	3	0	0	0	0	0	0	462		
4:30 PM	2	256	1	0	1	182	10	0	0	5	0	3	0	2	1	3	0	0	0	0	0	0	466		
4:45 PM	1	243	2	1	1	183	7	1	0	6	0	4	0	0	0	5	0	0	0	2	0	0	456		
5:00 PM	3	217	1	0	5	188	7	4	1	7	0	2	0	1	0	8	0	0	0	0	0	0	444		
5:15 PM	3	249	2	0	5	189	8	0	0	8	0	3	0	2	0	6	0	0	0	1	0	0	476		
5:30 PM	3	249	0	1	7	218	5	1	1	6	0	3	0	0	1	6	0	0	0	0	1	0	502		
5:45 PM	0	211	2	0	3	189	7	3	0	8	0	0	0	0	0	5	0	0	0	0	0	0	428		
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	ST2	EL	ET	ER	EU	WL	WT	WR	WU	WL2	N2T2	N2R2	TOTAL				
APPROACH %'s :	16	1893	9	2	31	1544	63	12	3	52	0	18	0	8	2	40	0	0	4	2	3699				
	0.83%	98.59%	0.47%	0.10%	1.88%	93.41%	3.81%	0.73%	0.18%	74.29%	0.00%	25.71%	0.00%	16.00%	4.00%	80.00%	0.00%	0.00%	66.67%	33.33%					
PEAK HR :	04:45 PM - 05:45 PM				10	958	5	2		18	778	27	6	2	27	0	12	0	3	1	1878				
PEAK HR VOL :	0.833	0.962	0.625	0.500	0.643	0.892	0.844	0.375	0.500	0.844	0.000	0.750	0.000	0.375	0.250	0.781	0.000	0.000	0.375	0.250	0.935				
			0.960				0.895					0.886				0.806									

Explanation for extra leg movements

Movements entering the extra leg

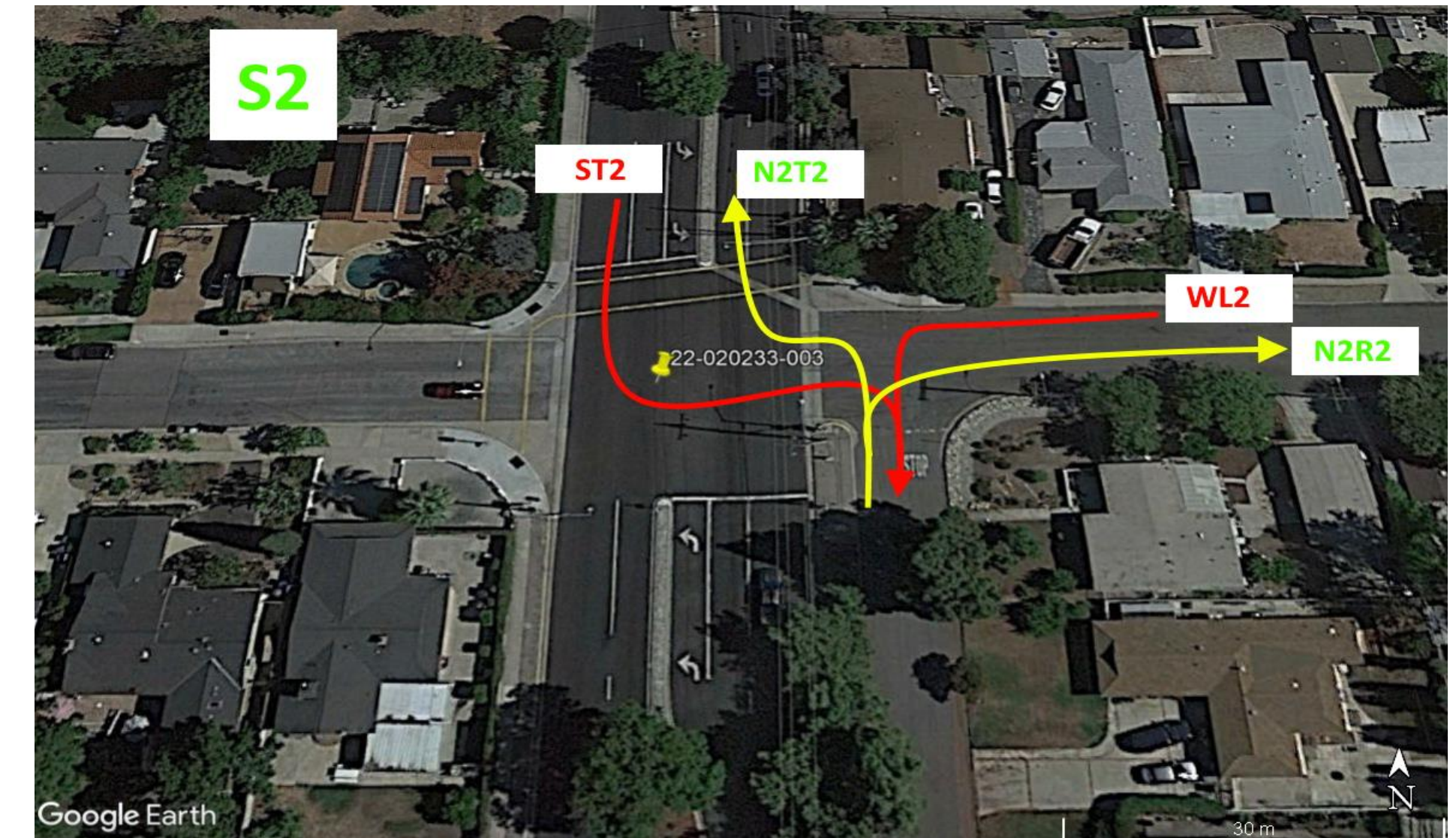
ST2 Movements coming from SB on Towne Ave entering into the Extra Leg (N Towne Ave)

WL2 Movements coming from WB on Richbrook Dr/Amador St entering into the Extra Leg (N Towne Ave)

Movements exiting the extra leg

N2T2 Movements exiting from Extra Leg (N Towne Ave) entering into Towne Ave going NB

N2R2 Movements exiting from Extra Leg (N Towne Ave) entering into Richbrook Dr/Amador St going EB

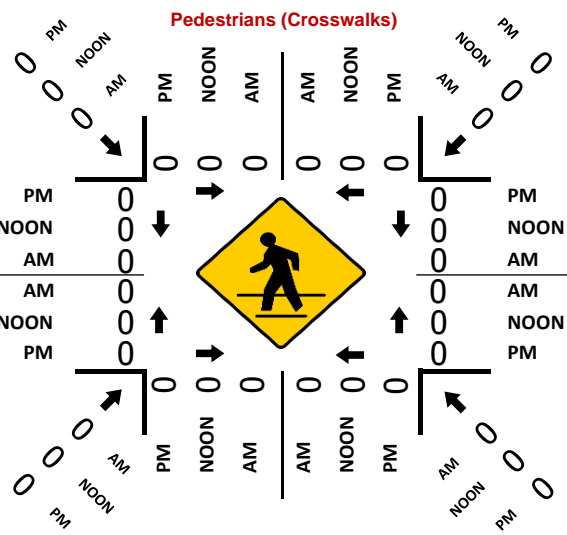
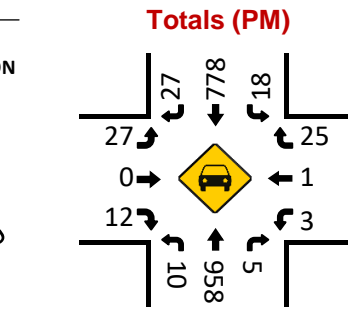
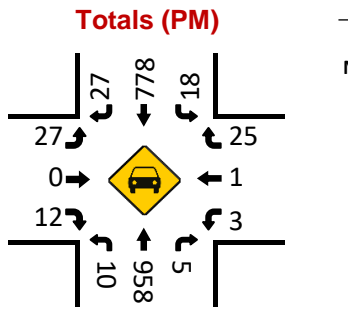
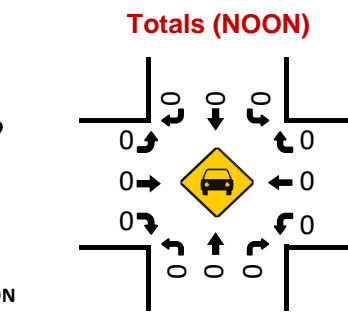
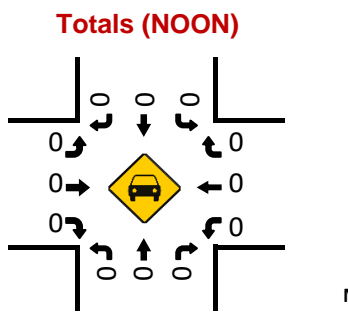
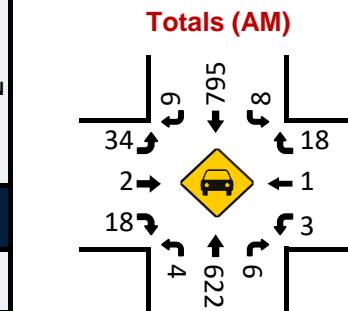
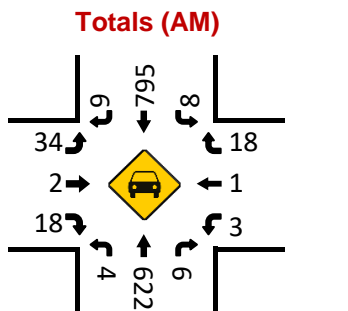
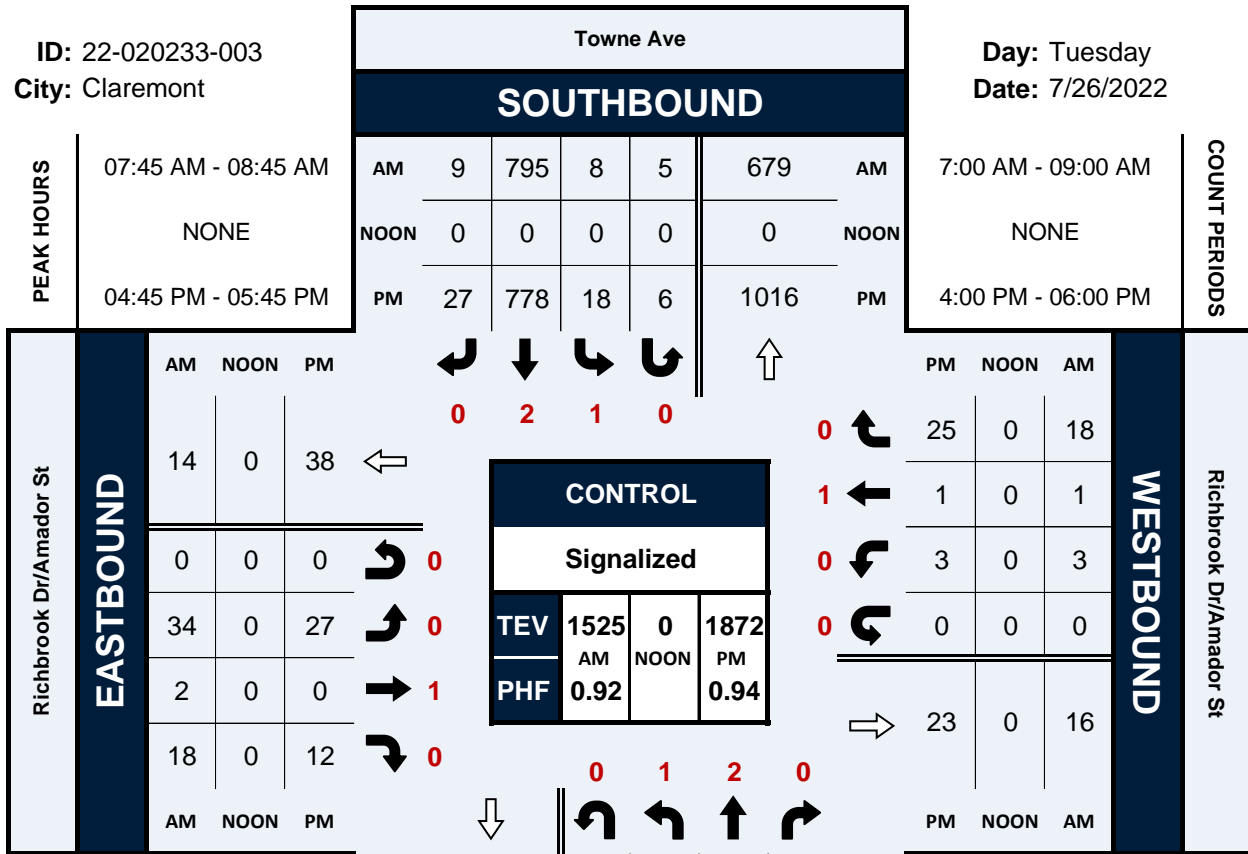


Towne Ave & Richbrook Dr/Amador St

Peak Hour Turning Movement Count

ID: 22-020233-003
City: Claremont

Day: Tuesday
Date: 7/26/2022



AM Peak Hour	Intersections	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	SUM	PHF
	1. Towne Avenue at Base Line Road	88	9	174	5	5	10	5	0	2	154	73	0	341	190	2	1	1059	0.916
	2. Mountain Avenue at Base Line Road	36	10	48	0	36	24	47	0	27	290	39	1	54	397	19	1	1029	0.881
	3. Towne Avenue at Foothill Boulevard	171	413	134	3	180	539	122	0	74	244	97	5	109	270	53	6	2420	0.937
	4. Regis Avenue at Foothill Boulevard	0	0	0	0	1	0	18	0	29	552	0	4	0	422	9	0	1035	0.871
	5. Mountain Avenue at Foothill Boulevard	55	68	48	0	85	117	34	0	27	414	40	0	47	365	34	0	1334	0.855
	6. Towne Avenue at Amador Street/Richbrook Drive	4	622	6	0	8	795	9	5	34	2	18	0	3	1	20	0	1527	0.919

PM Peak Hour	Intersections	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	SUM	PHF
	1. Towne Avenue at Base Line Road	97	4	319	1	2	2	2	0	1	434	95	0	284	252	2	0	1495	0.971
	2. Mountain Avenue at Base Line Road	48	33	109	0	29	20	25	0	35	618	47	1	61	452	41	2	1521	0.918
	3. Towne Avenue at Foothill Boulevard	174	635	197	6	157	445	124	0	160	497	174	6	202	471	119	9	3376	0.956
	4. Regis Avenue at Foothill Boulevard	0	0	2	0	3	0	26	0	37	821	0	11	0	786	26	3	1715	0.972
	5. Mountain Avenue at Foothill Boulevard	82	107	60	0	111	137	36	0	34	656	56	0	76	647	71	0	2073	0.976
	6. Towne Avenue at Amador Street/Richbrook Drive	10	958	5	2	20	778	27	6	27	0	12	0	3	1	28	0	1877	0.935

2016 Historical Data	Intersections	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Sum	PHF	
	1. Towne Avenue at Base Line Road	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2. Mountain Avenue at Base Line Road	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3. Towne Avenue at Foothill Boulevard	197	654	272	236	741	134	107	345	122	214	478	117	3617	0.860	
	4. Regis Avenue at Foothill Boulevard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5. Mountain Avenue at Foothill Boulevard	93	246	147	162	415	75	75	580	105	226	637	69	2830	0.744	
	6. Towne Avenue at Amador Street/Richbrook Drive	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Growth Factor	12%
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Forecasted 2022 Volumes	Intersections	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Sum	PHF	
	1. Towne Avenue at Base Line Road	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2. Mountain Avenue at Base Line Road	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3. Towne Avenue at Foothill Boulevard	221	732	305	264	830	150	120	386	137	240	535	131	4051	0.860	
	4. Regis Avenue at Foothill Boulevard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5. Mountain Avenue at Foothill Boulevard	104	276	165	181	465	84	84	650	118	253	713	77	3170	0.744	
	6. Towne Avenue at Amador Street/Richbrook Drive	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Observed 2022 Volumes	Intersections	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Sum	PHF
	1. Towne Avenue at Base Line Road	93	9	174	5	10	5	2	154	73	342	190	2	1059	0.916
	2. Mountain Avenue at Base Line Road	36	10	48	36	24	47	28	290	39	55	397	19	1029	0.881
	3. Towne Avenue at Foothill Boulevard	174	413	134	180	539	122	79	244	97	115	270	53	2420	0.937
	4. Regis Avenue at Foothill Boulevard	0	0	0	1	0	18	33	552	0	0	422	9	1035	0.871
	5. Mountain Avenue at Foothill Boulevard	55	68	48	85	117	34	27	414	40	47	365	34	1334	0.855
	6. Towne Avenue at Amador Street/Richbrook Drive	4	622	6	13	795	9	34	2	18	3	1	20	1527	0.919

1.674	Adjustment Factor
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2.376	Adjustment Factor
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Normalized 2022 Volumes	Intersections	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Sum	PHF
	1. Towne Avenue at Base Line Road	221	21	413	12	24	12	5	366	173	813	451	5	2516	0.916
	2. Mountain Avenue at Base Line Road	86	24	114	86	57	112	67	689	93	131	943	45	2447	0.881
	3. Towne Avenue at Foothill Boulevard	221	732	305	264	830	150	120	386	137	240	535	131	4051	0.860
	4. Regis Avenue at Foothill Boulevard	0	0	0	2	0	43	78	1312	0	0	1003	21	2459	0.871
	5. Mountain Avenue at Foothill Boulevard	104	276	165	181	465	84	84	650	118	253	713	77	3170	0.744
	6. Towne Avenue at Amador Street/Richbrook Drive	10	1478	14	31	1889	21	81	5	43	7	2	48	3629	0.919

Growth Factor	12%
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2016 Historical Data	Intersections	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Sum	PHF	
	1. Towne Avenue at Base Line Road	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2. Mountain Avenue at Base Line Road	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3. Towne Avenue at Foothill Boulevard	181	694	211	169	348	86	216	675	150	204	601	148	3683	0.959	
	4. Regis Avenue at Foothill Boulevard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5. Mountain Avenue at Foothill Boulevard	118	162	87	155	156	49	58	786	80	102	781	82	2616	0.966	
	6. Towne Avenue at Amador Street/Richbrook Drive	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Growth Factor	12%
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Forecasted 2022 Volumes	Intersections	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Sum	PHF	
	1. Towne Avenue at Base Line Road	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2. Mountain Avenue at Base Line Road	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3. Towne Avenue at Foothill Boulevard	203	777	236	189	390	96	242	756	168	228	673	166	4124	0.959	
	4. Regis Avenue at Foothill Boulevard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	5. Mountain Avenue at Foothill Boulevard	132	181	97	174	175	55	65	880	90	114	875	92	2930	0.966	
	6. Towne Avenue at Amador Street/Richbrook Drive	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Observed 2022 Volumes	Intersections	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Sum	PHF
	1. Towne Avenue at Base Line Road	98	4	319	2	2	2	1	434	95	284	252	2	1495	0.971
	2. Mountain Avenue at Base Line Road	48	33	109	29	20	25	36	618	47	63	452	41	1521	0.918
	3. Towne Avenue at Foothill Boulevard	180	635	197	157	445	124	166	497	174	211	471	119	3376	0.956
	4. Regis Avenue at Foothill Boulevard	0	0	2	3	0	26	48	821	0	3	786	26	1715	0.972
	5. Mountain Avenue at Foothill Boulevard	82	107	60	111	137	36	34	656	56	76	647	71	2073	0.976
	6. Towne Avenue at Amador Street/Richbrook Drive	12	958	5	26	778	27	27	0	12	3	1	28	1877	0.935

1.222	Adjustment Factor
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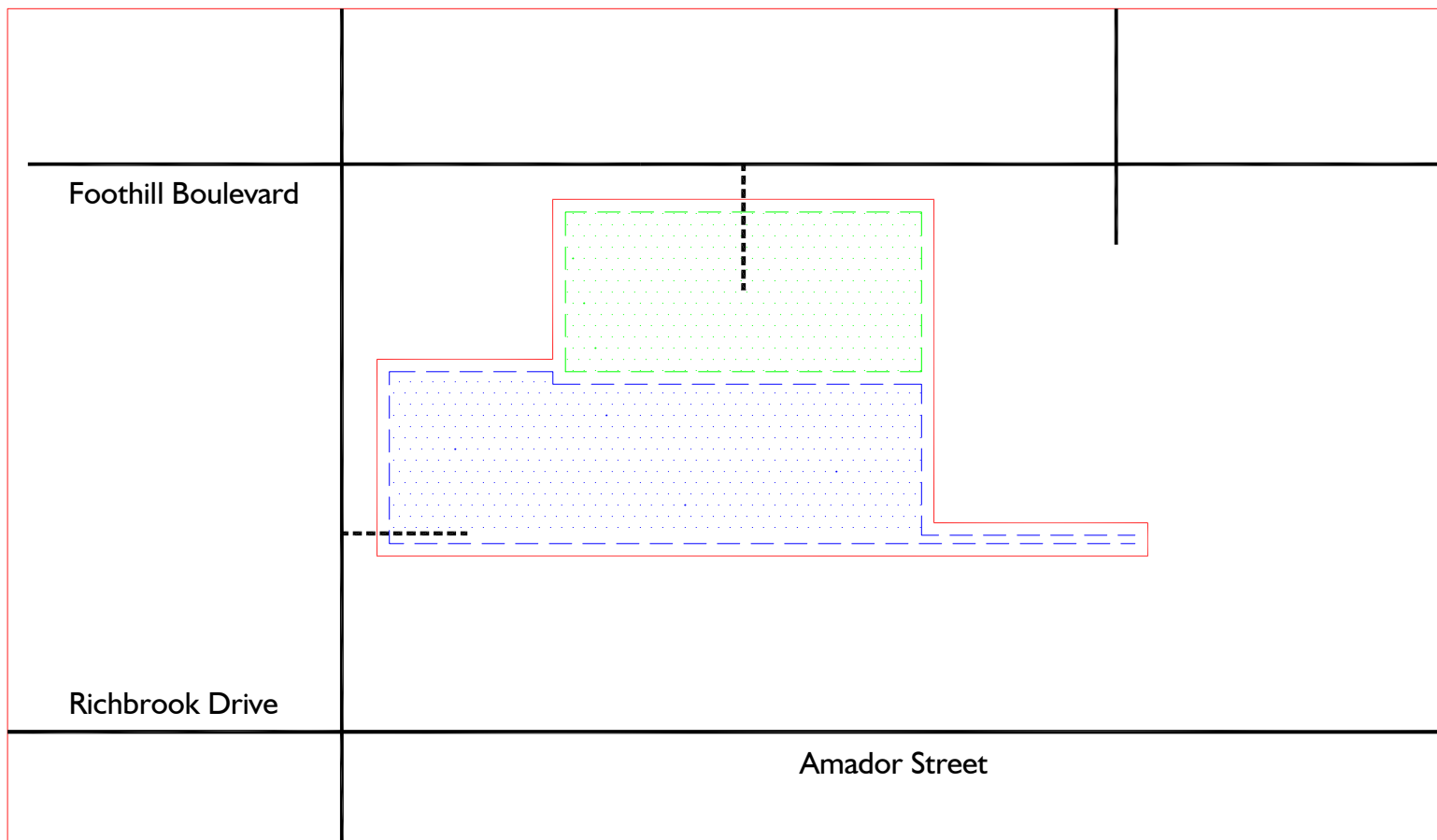
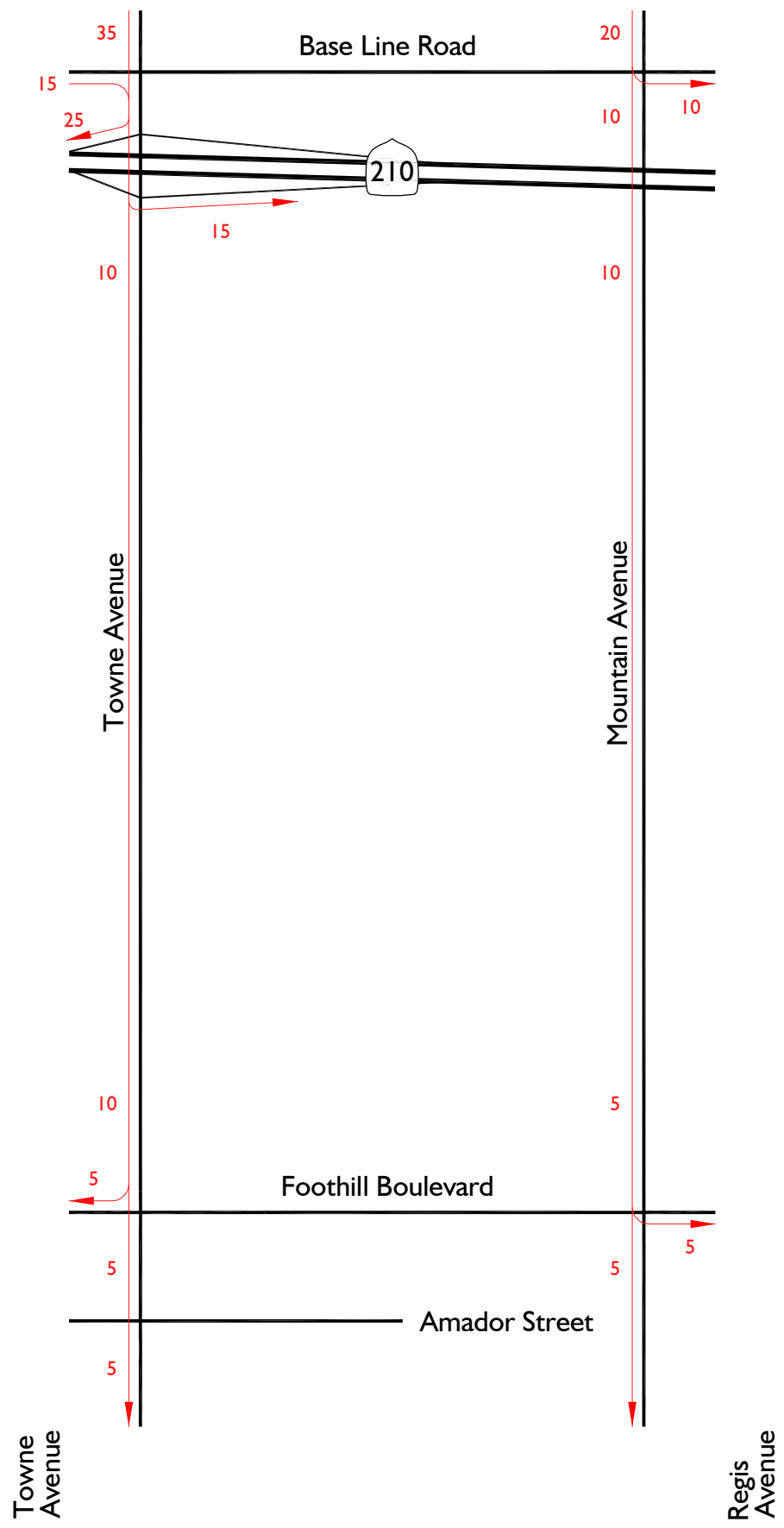
1.413	Adjustment Factor
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Normalized 2022 Volumes	Intersections	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Sum	PHF
	1. Towne Avenue at Base Line Road	138	6	451	3	3	3	1	613	134	401	356	3	2112	0.971
	2. Mountain Avenue at Base Line Road	68	47	154	41	28	35	51	873	66	89	639	58	2149	0.918
	3. Towne Avenue at Foothill Boulevard	203	777	236	189	390	96	242	756	168	228	673	166	4124	0.959
	4. Regis Avenue at Foothill Boulevard	0	0	3	4	0	37	68	1160	0	4	1111	37	2424	0.972
	5. Mountain Avenue at Foothill Boulevard	132	181	97	174	175	55	65	880	90	114	875	92	2930	0.966
	6. Towne Avenue at Amador Street/Richbrook Drive	17	1354	7	37	1099	38	38	0	17	4	1	40	2652	0.935

Growth Factor	12%
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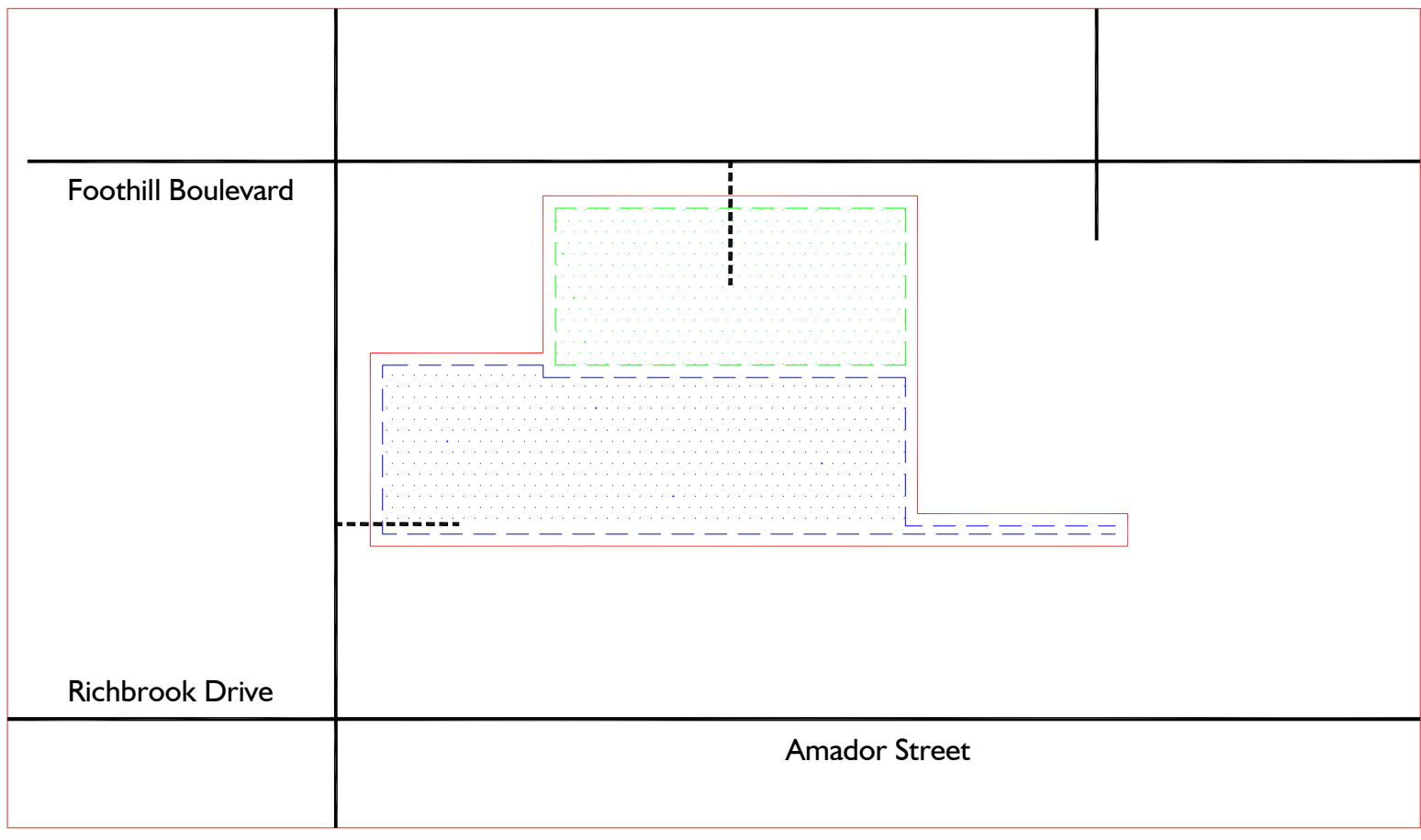
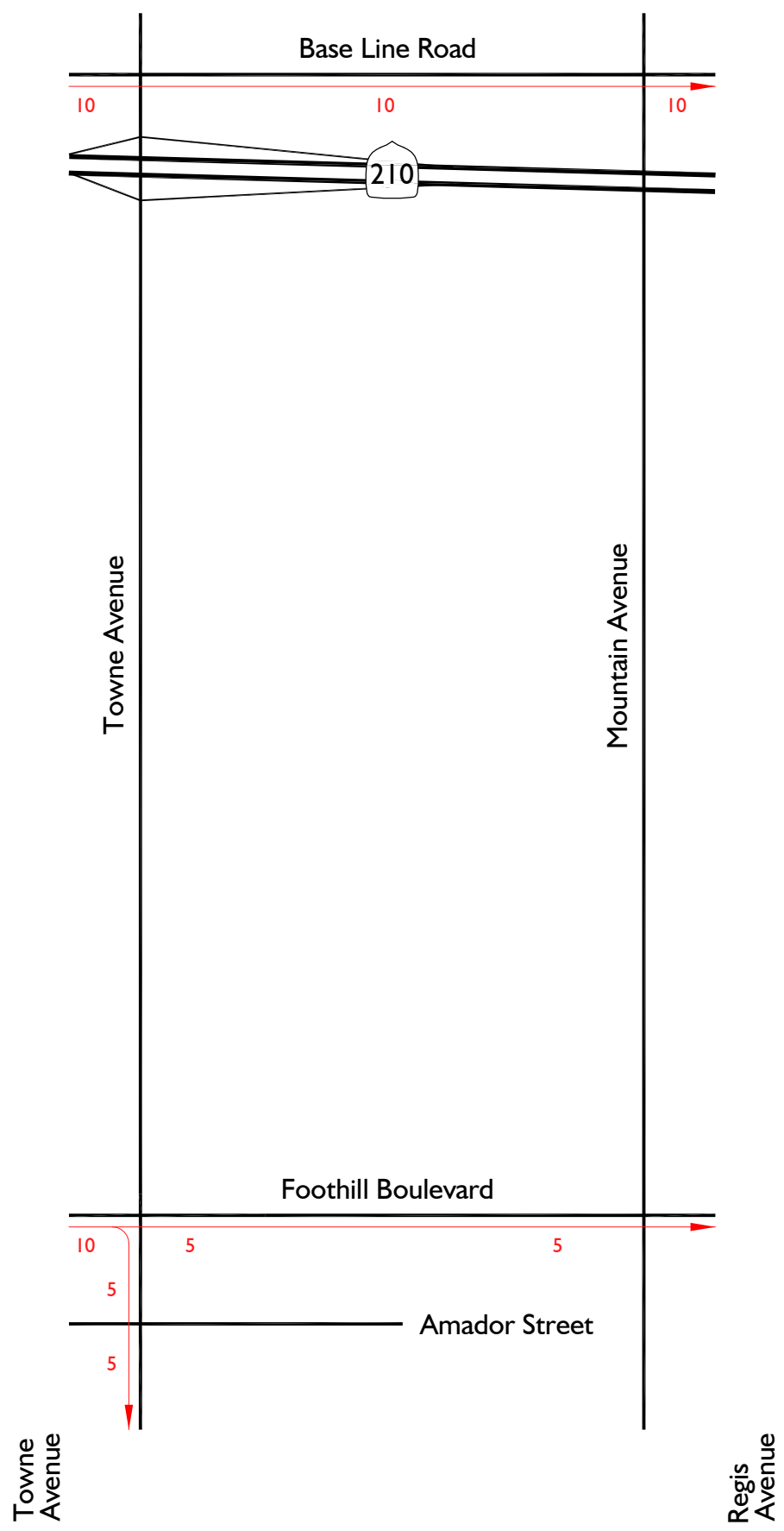
Appendix B

Traffic Analysis Zones (TAZ)
Trip Distribution Exhibits



Legend:
 10 = Percent from TAZ

Note:
 Traffic from TAZ will utilize Webb Canyon Road west of study area. Proposed cumulative project would consist of altering existing circulation network via project improvements. Extent of project improvements are unknown at this time.

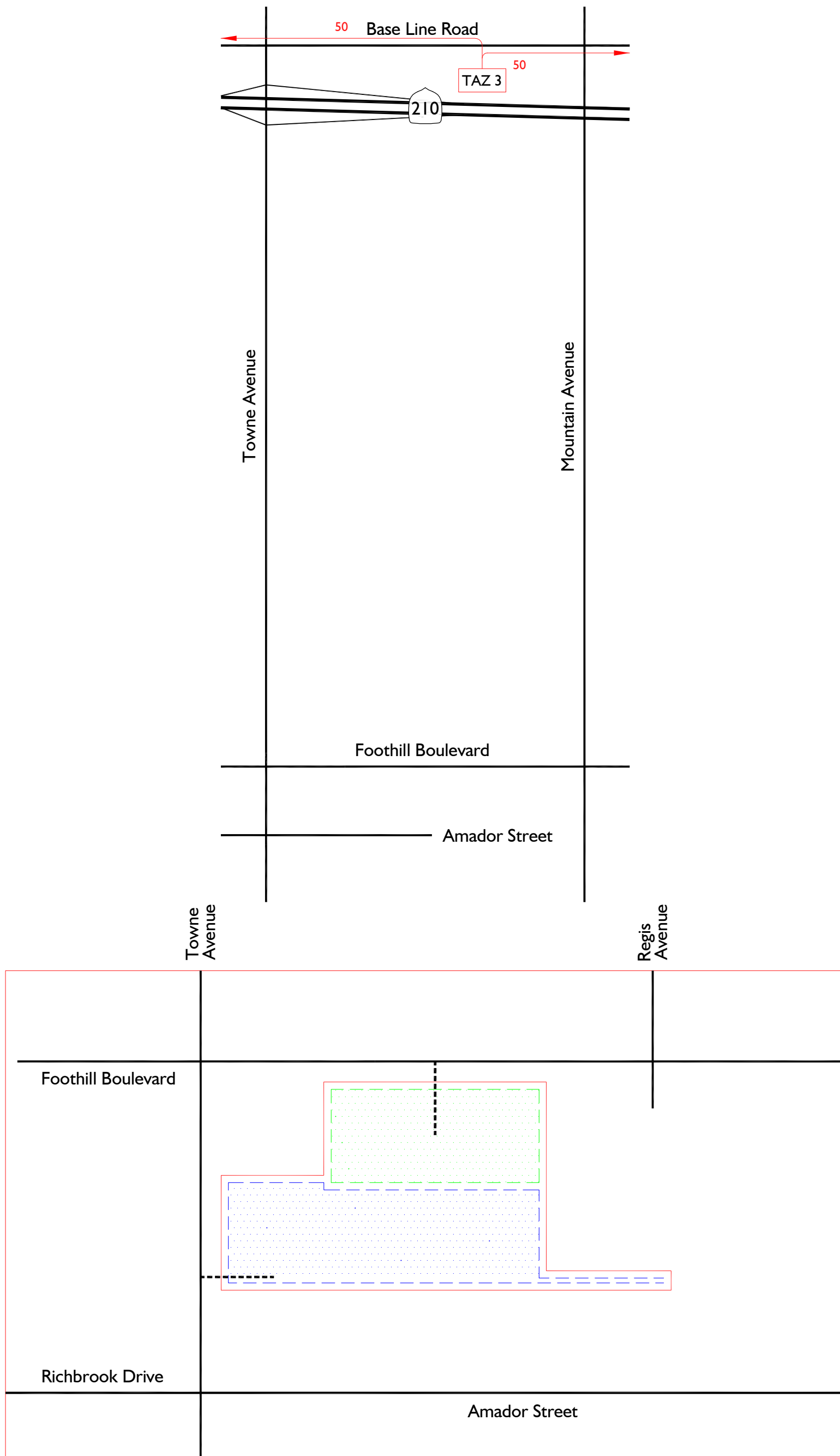


Legend:

10 = Percent from TAZ

Note:
 Majority of traffic from TAZ will utilize Fruit Street for access to the 210 Freeway.

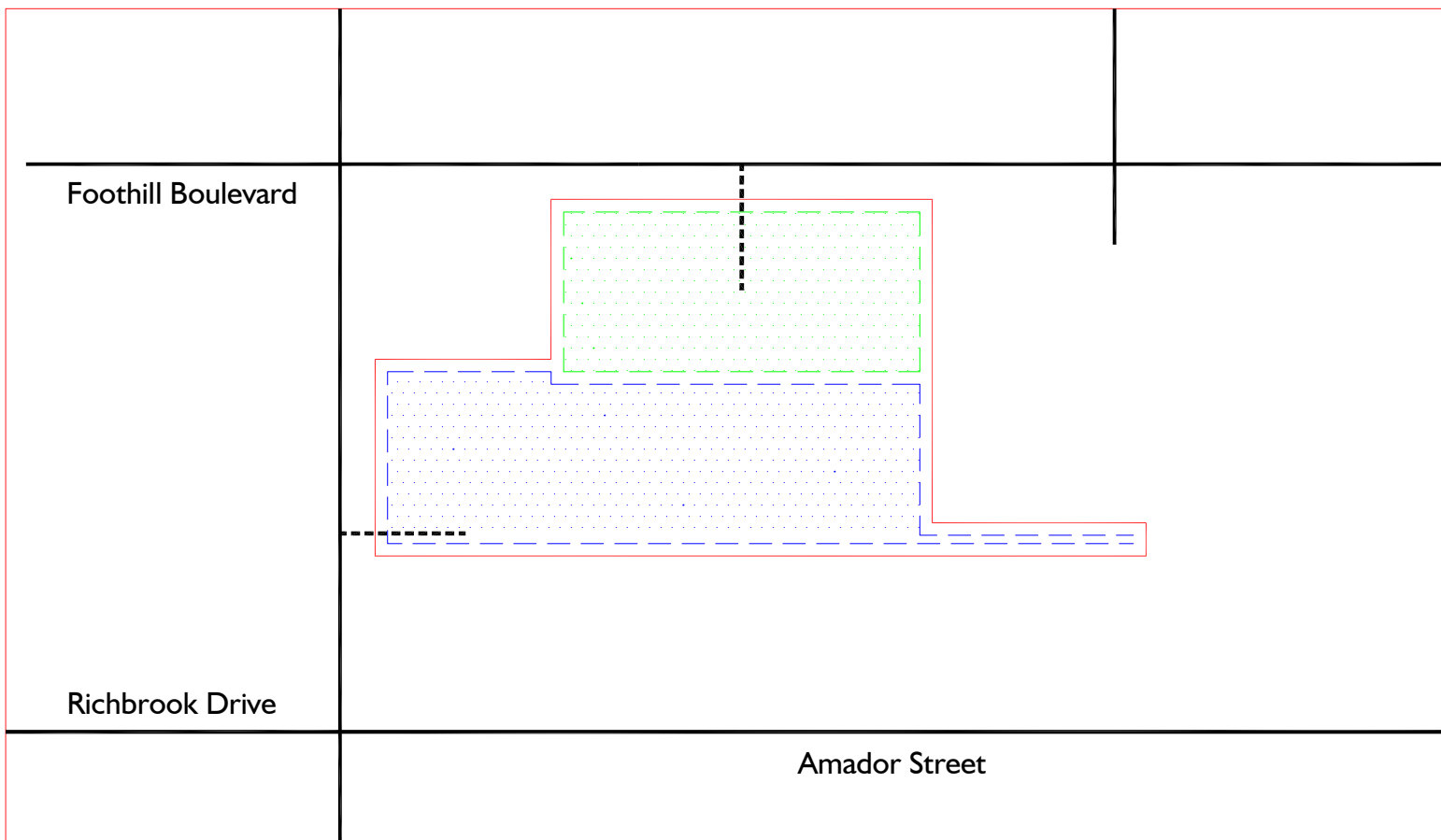
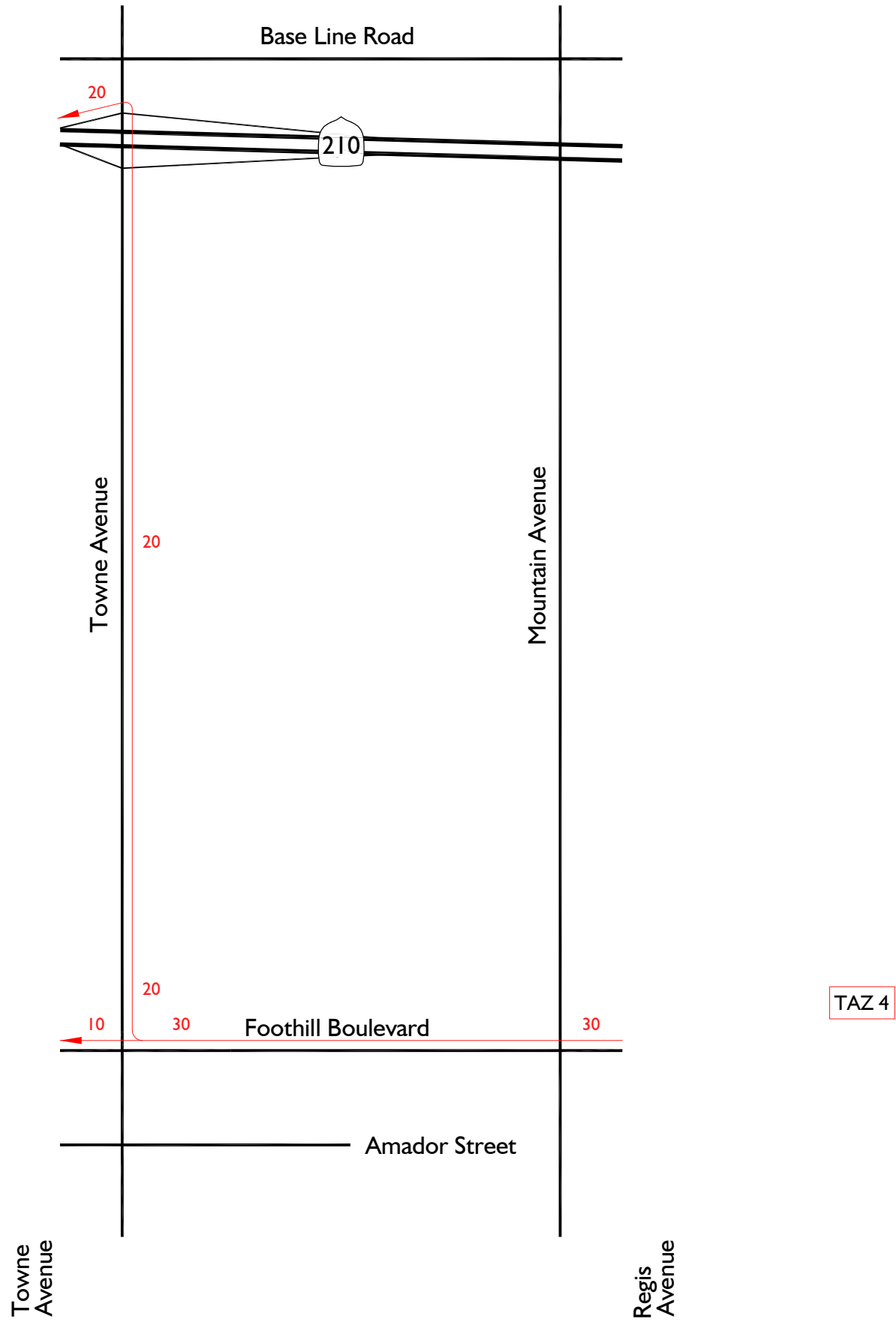




Legend:
| = Percent from TAZ



TAZ 4 Trip Distribution



Legend:

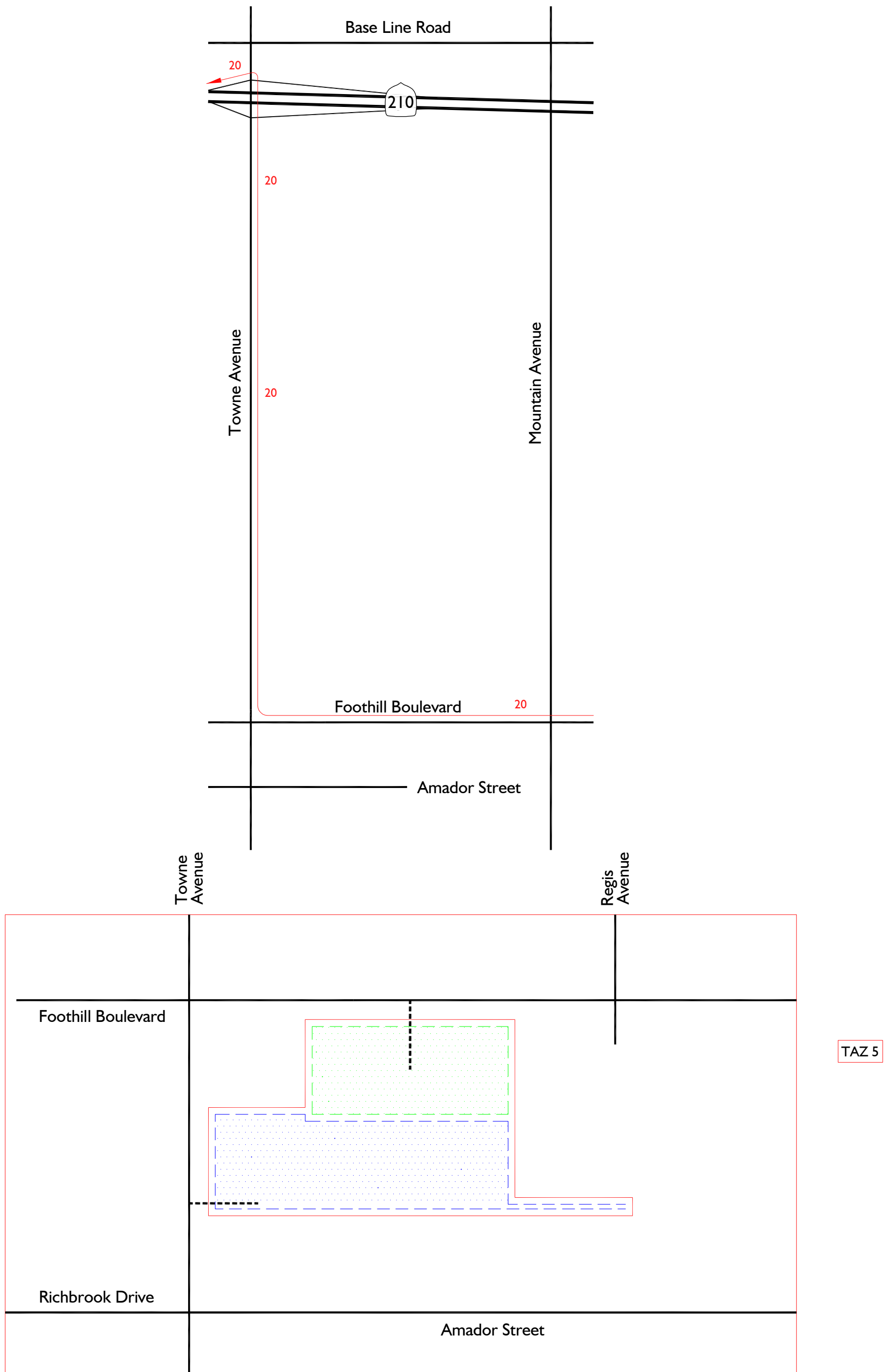
10 = Percent from TAZ

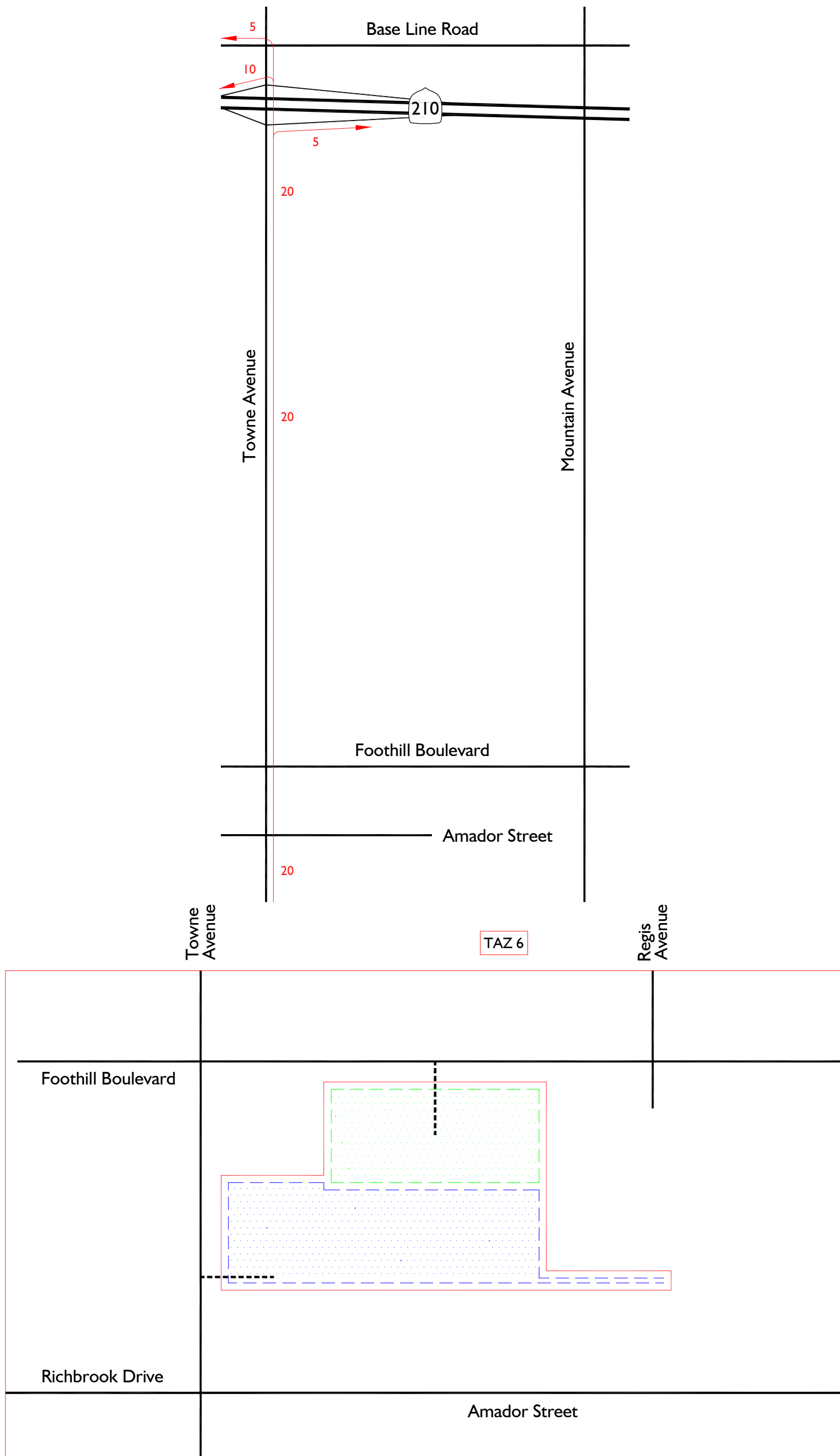
Note:

GPS route directions indicate that trips headed on the 210 EB freeway would utilize Indian Hill Boulevard to Base Line Road for access.

Trips headed towards the greater Los Angeles area would utilize the I-10 Freeway south of study area.





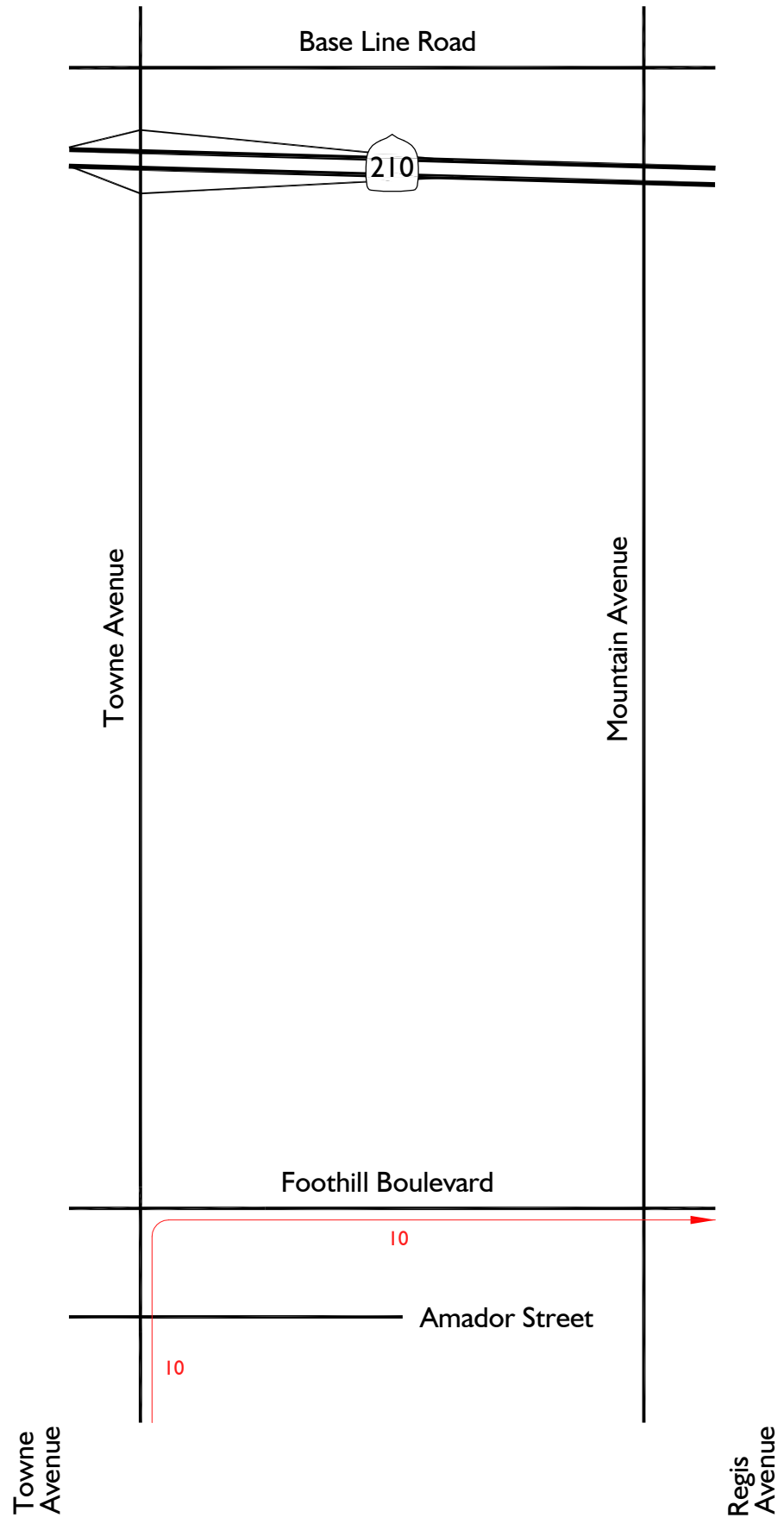


Legend:

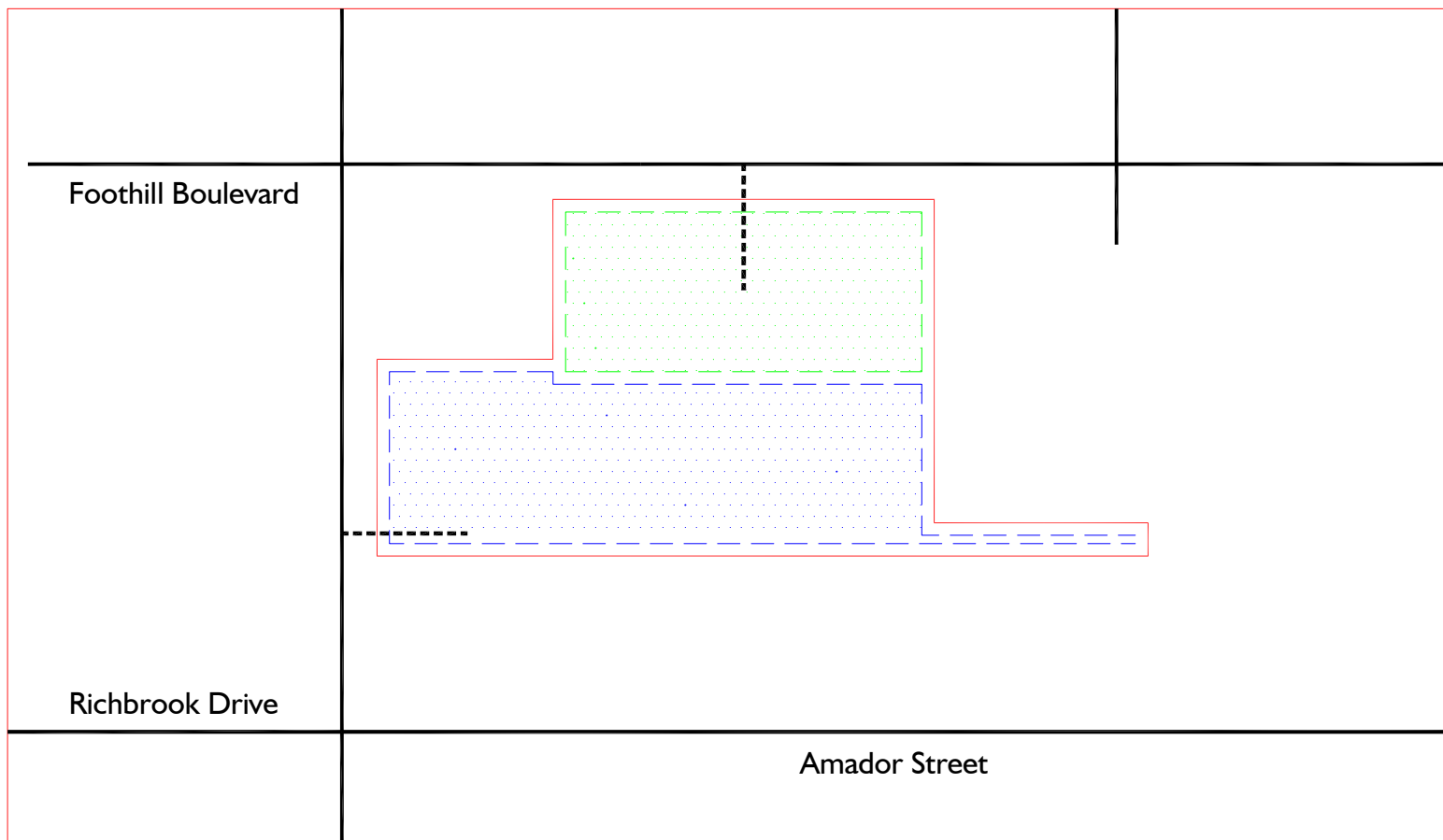
10 = Percent from TAZ

Note:

Trips headed towards the greater Los Angeles area would utilize the I-10 Freeway south of study area.



TAZ 7

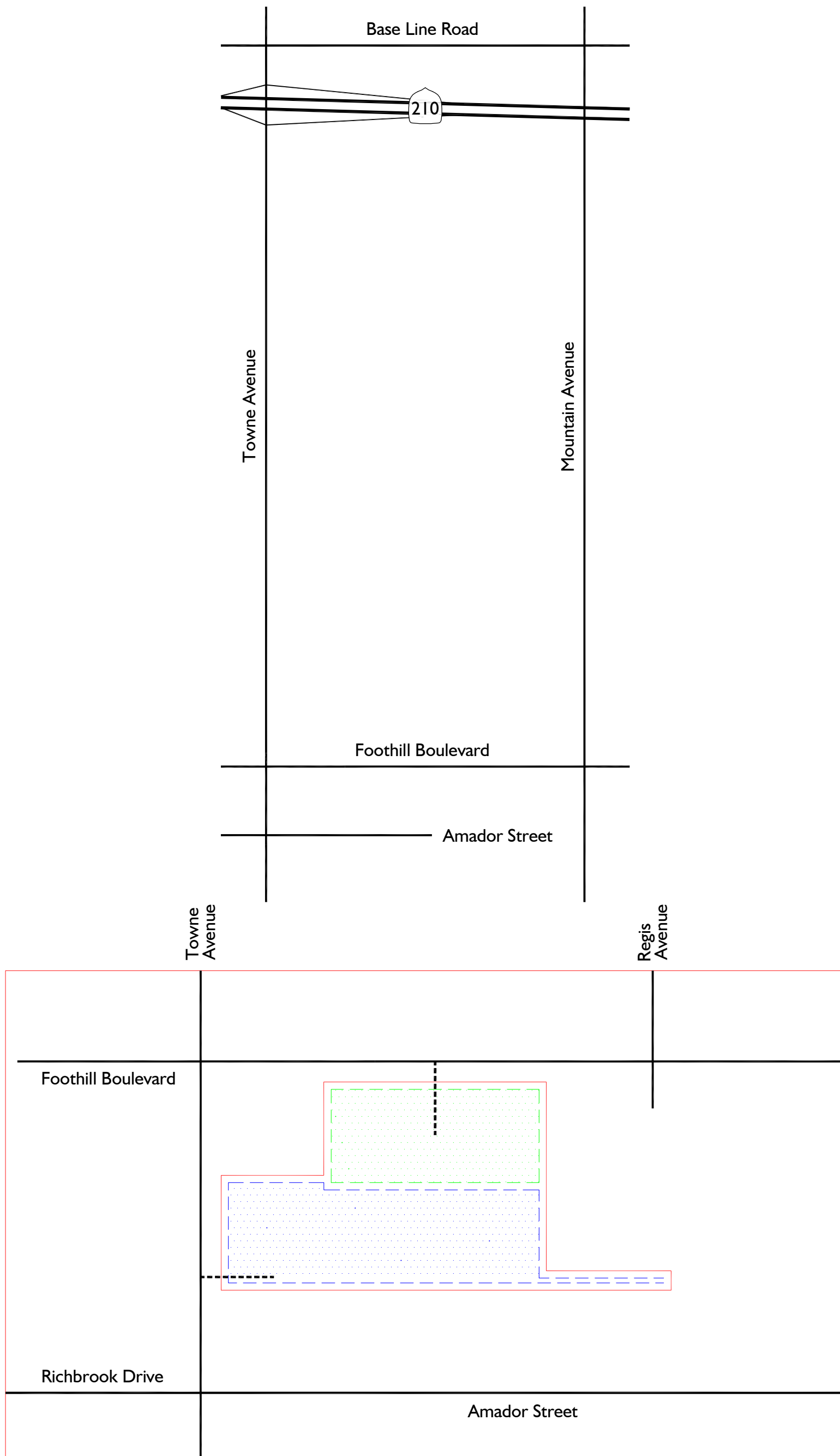


Legend:

10 = Percent from TAZ



TAZ 8 Trip Distribution



Legend:

10 = Percent from TAZ

Note:

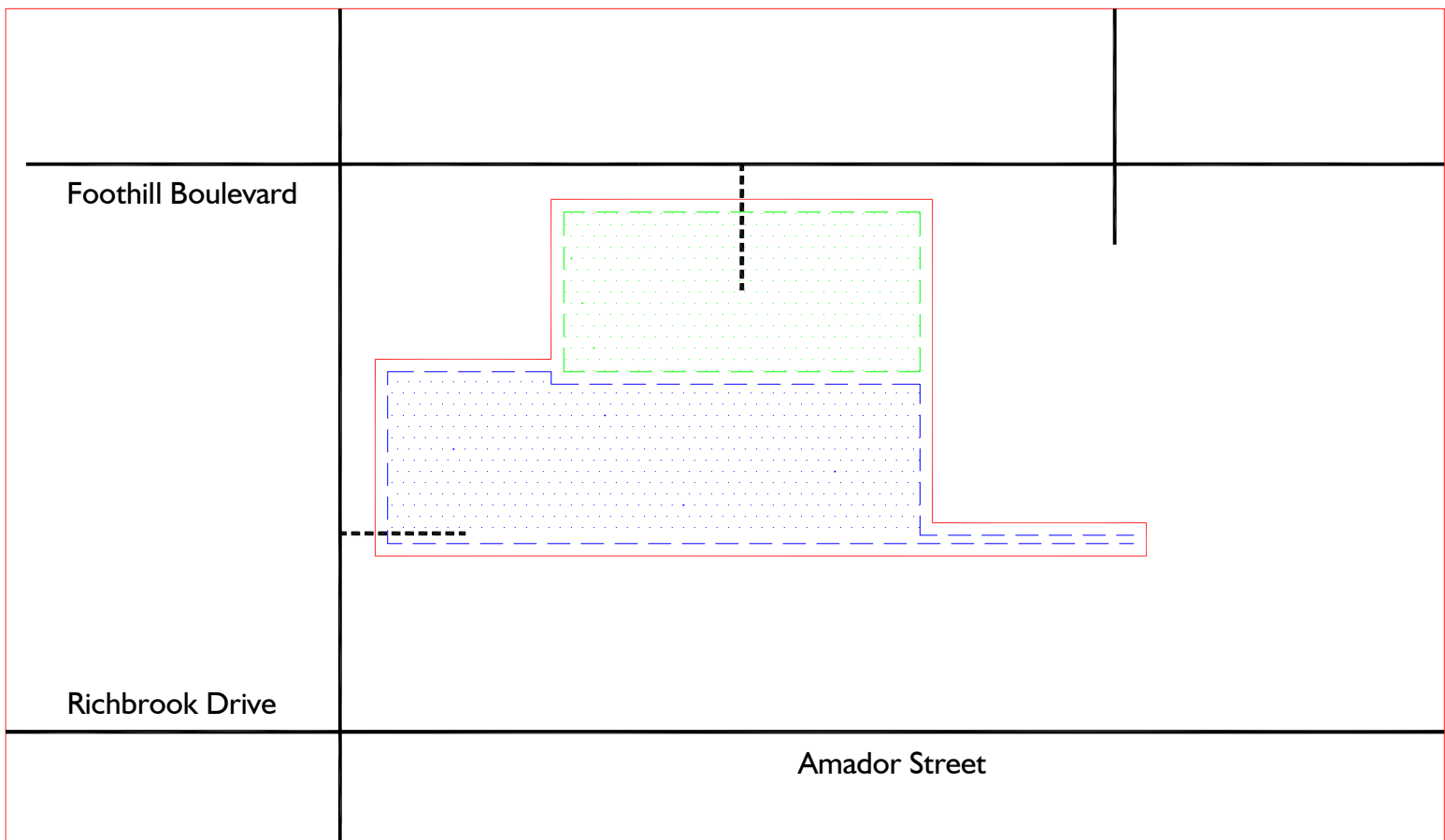
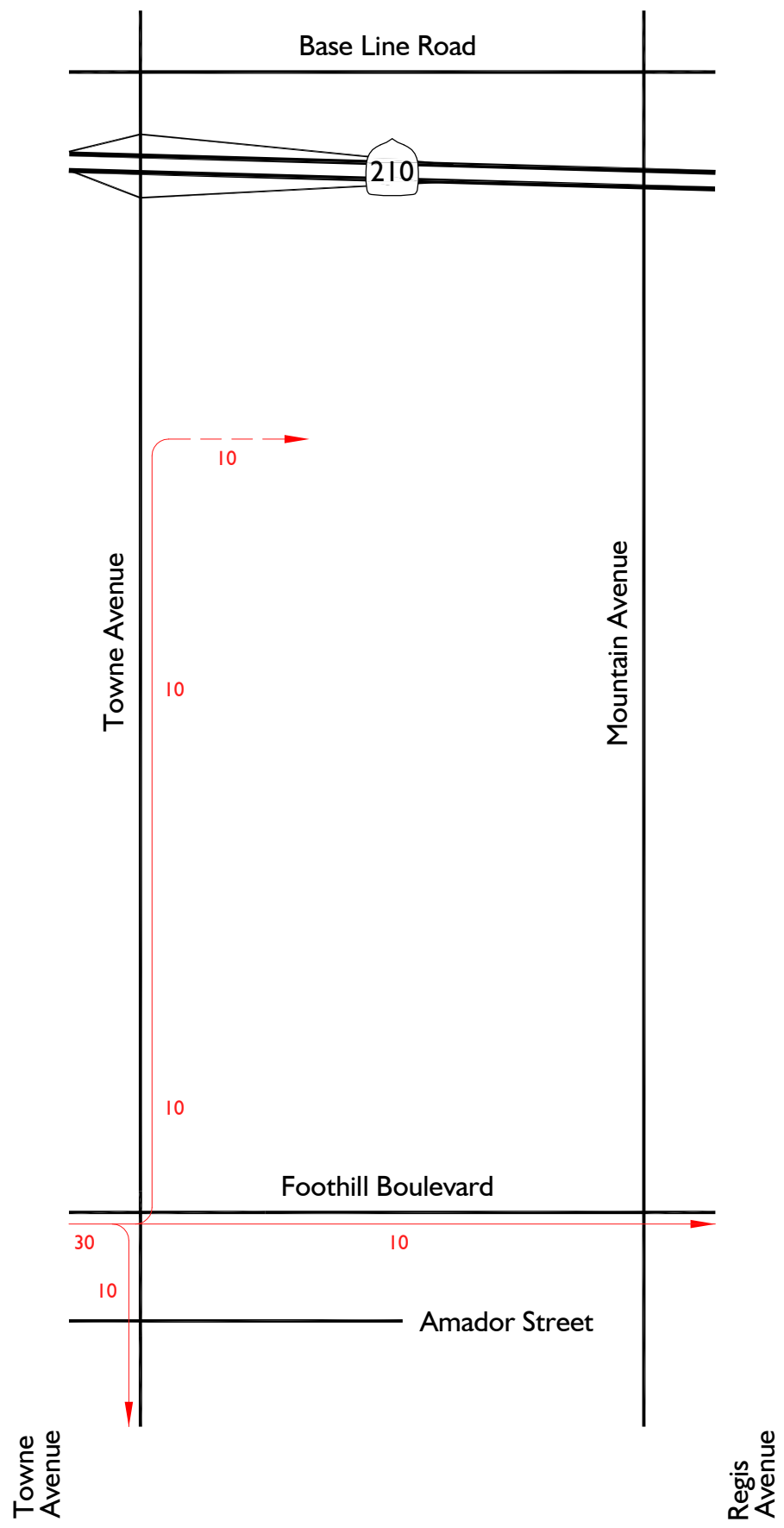
TAZ cumulative (Hotel) nearly 2-miles away southeast. Hotel traffic is not expected to reach study area based on location, and overview of attractions in the area.

TAZ 8



TAZ 9 Trip Distribution

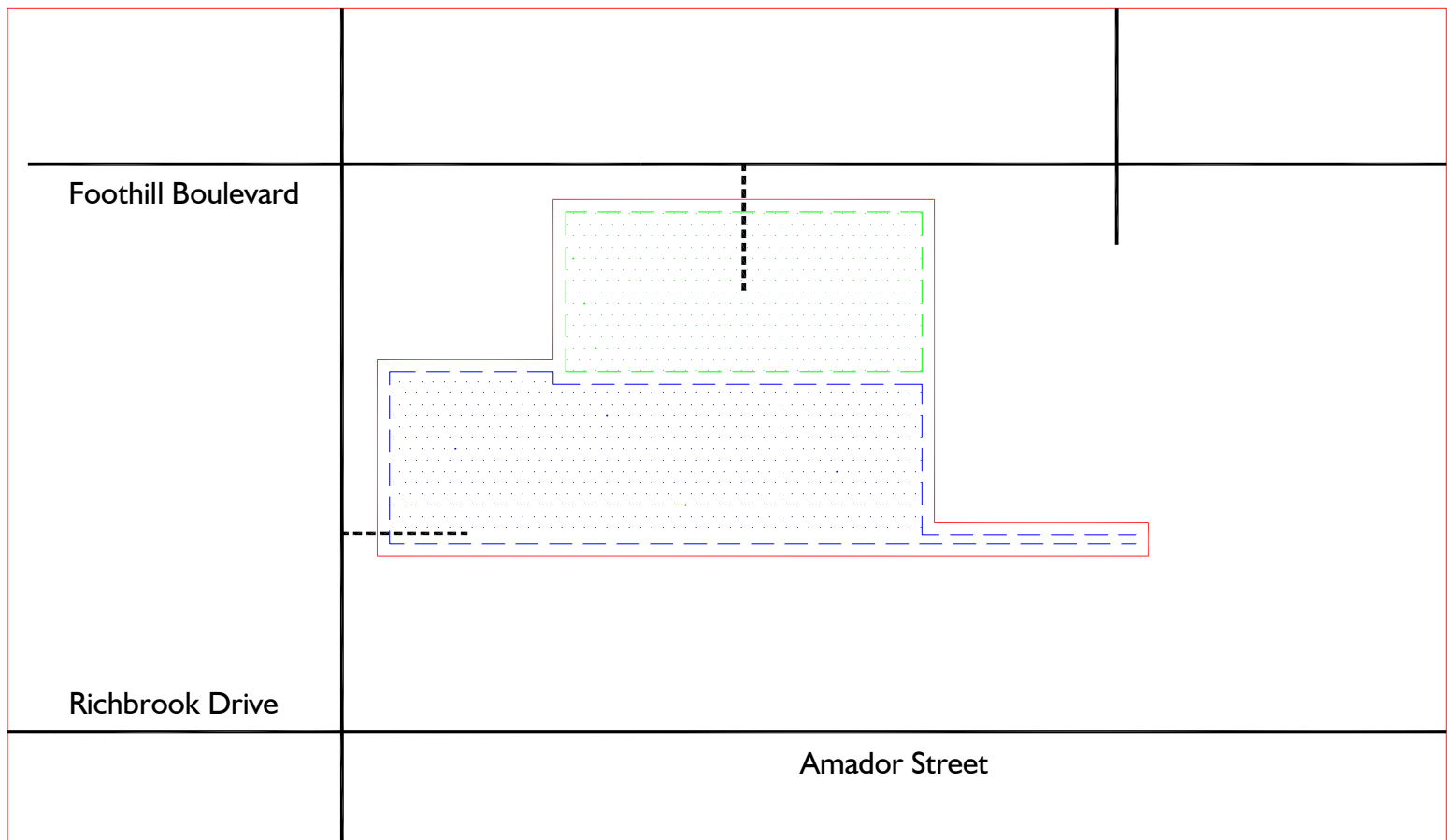
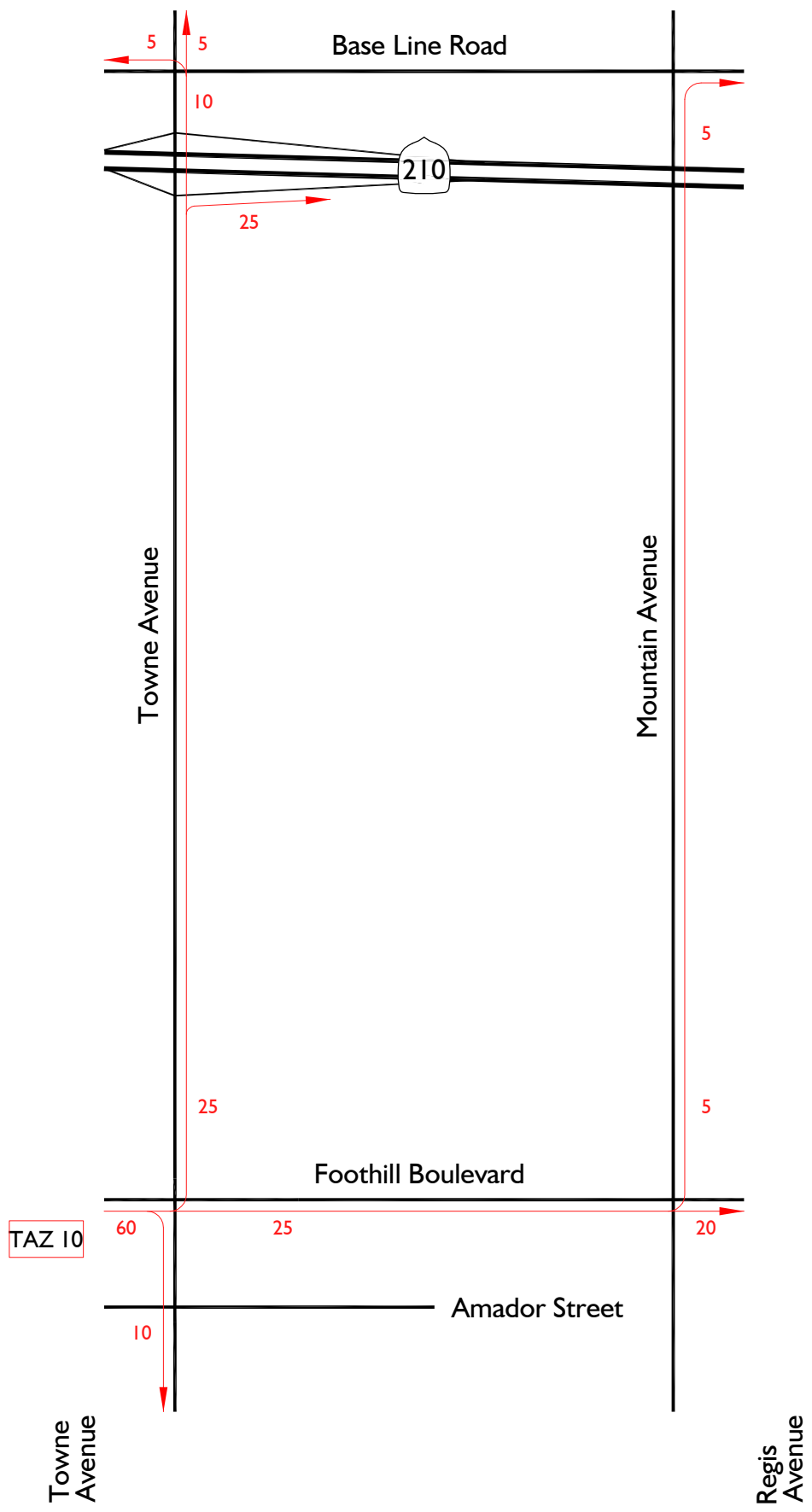
TAZ 9



Legend:

- 10 = Percent from TAZ
- - = Drop-Off Path

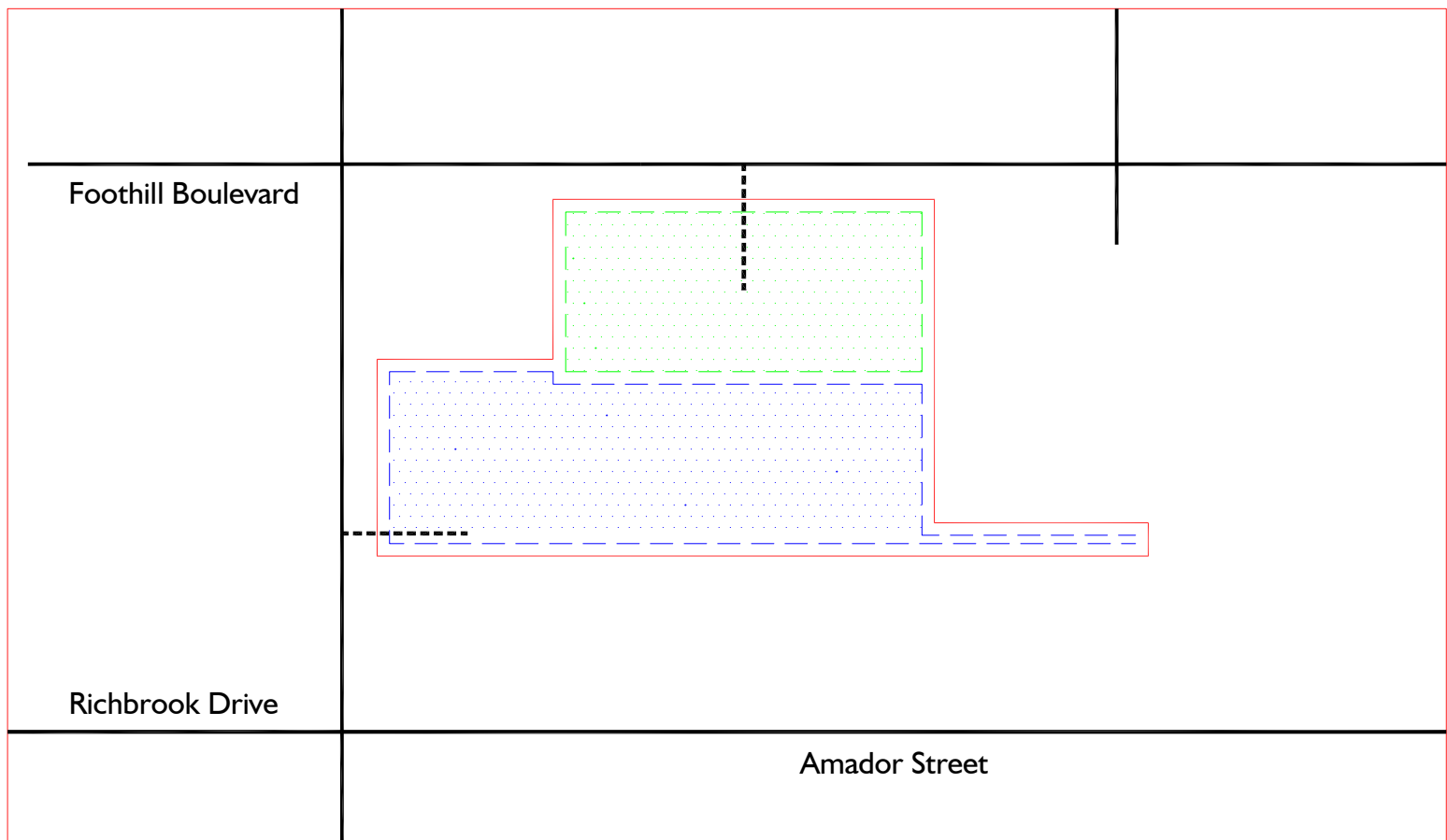
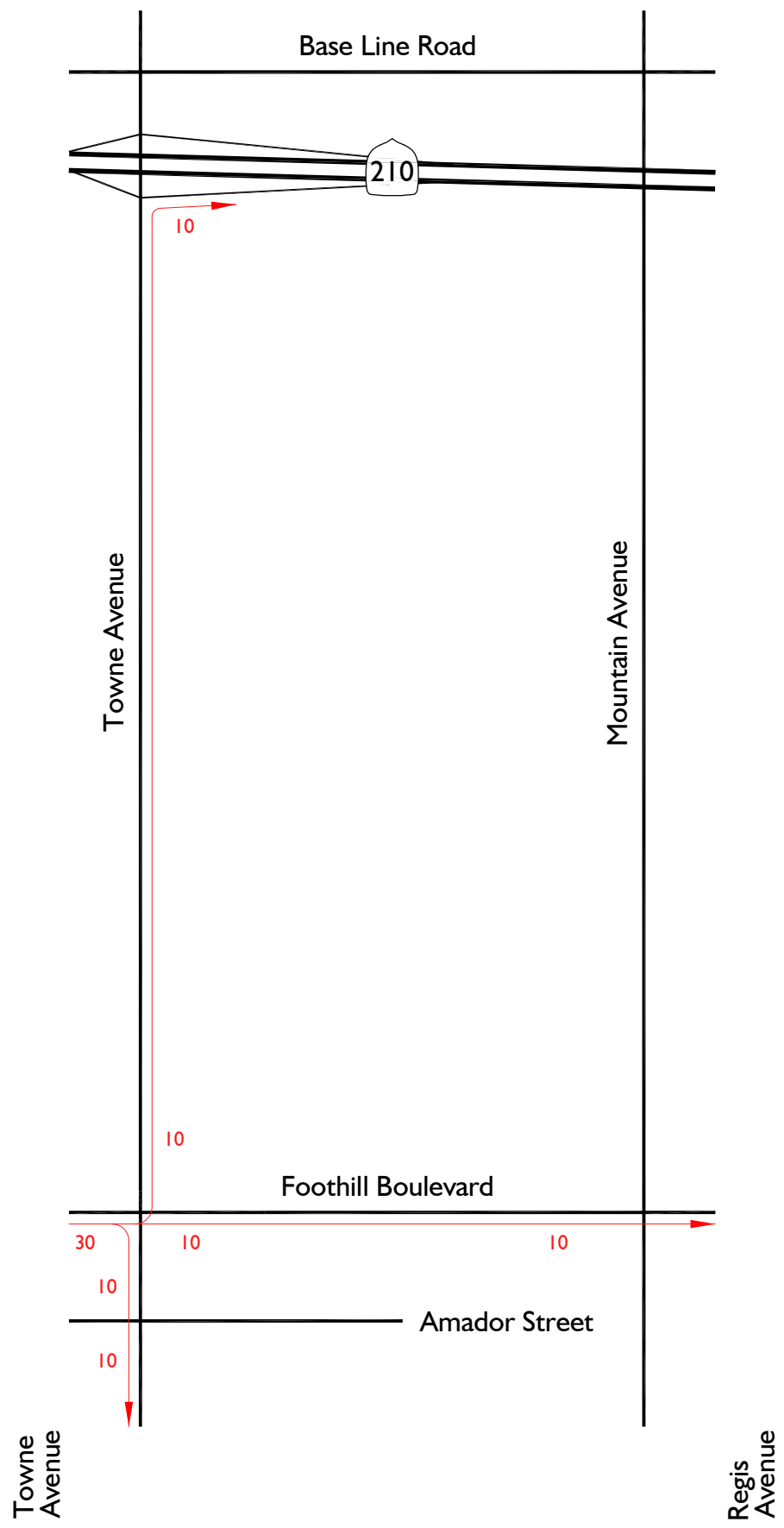




Legend:
10 = Percent from TAZ
- - - = Drop-Off Path

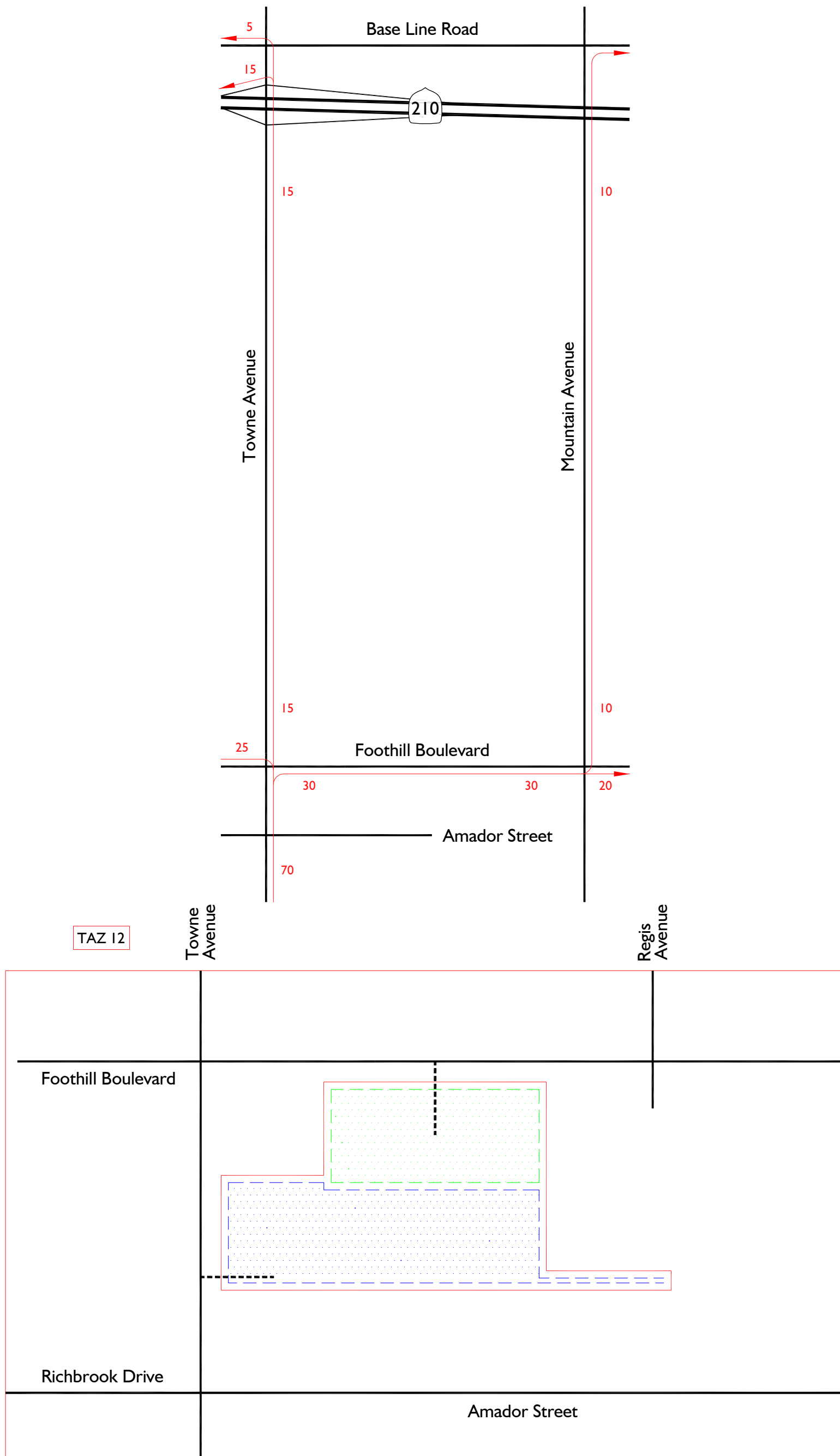


TAZ II



Legend:
 10 = Percent from TAZ





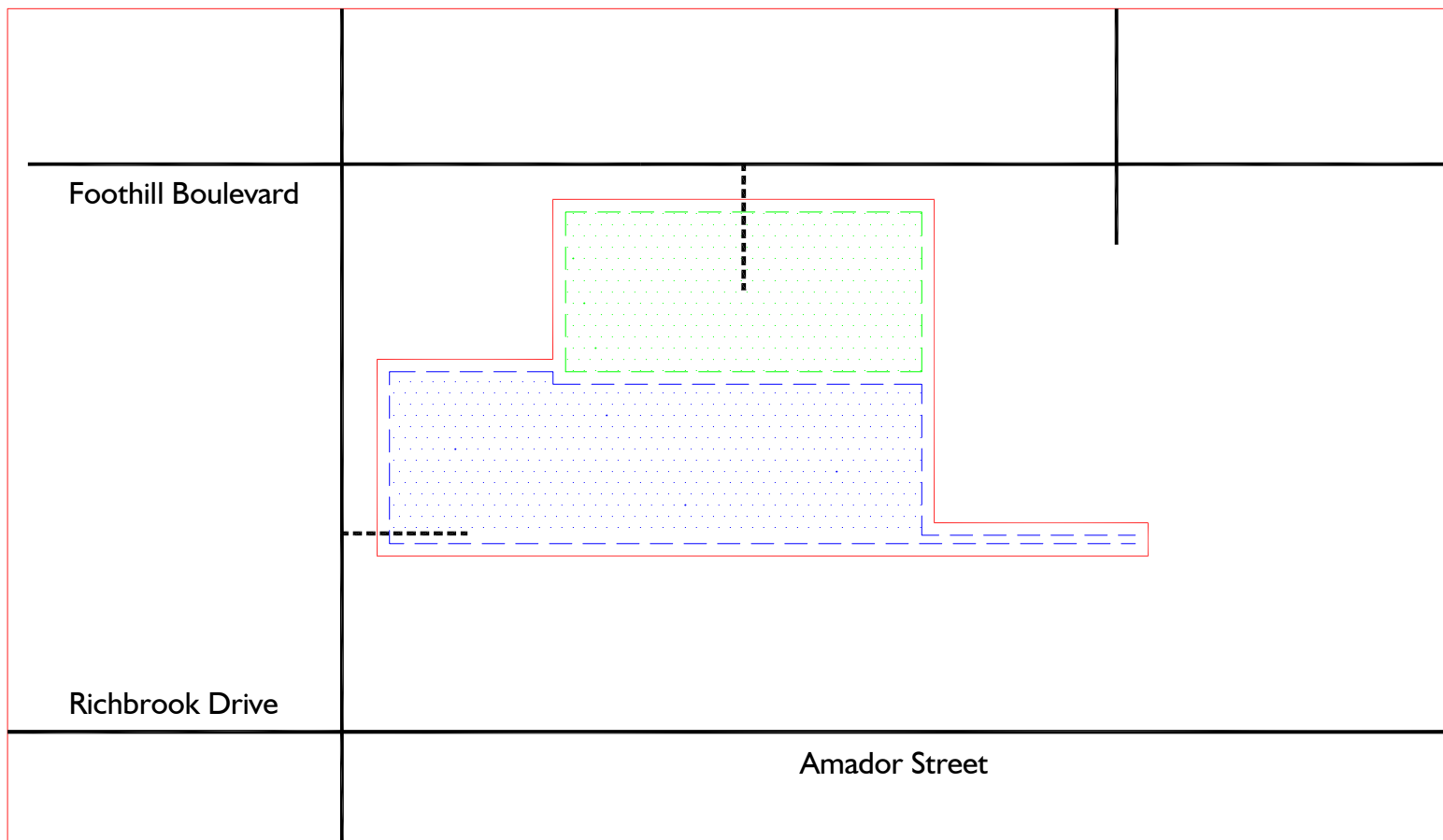
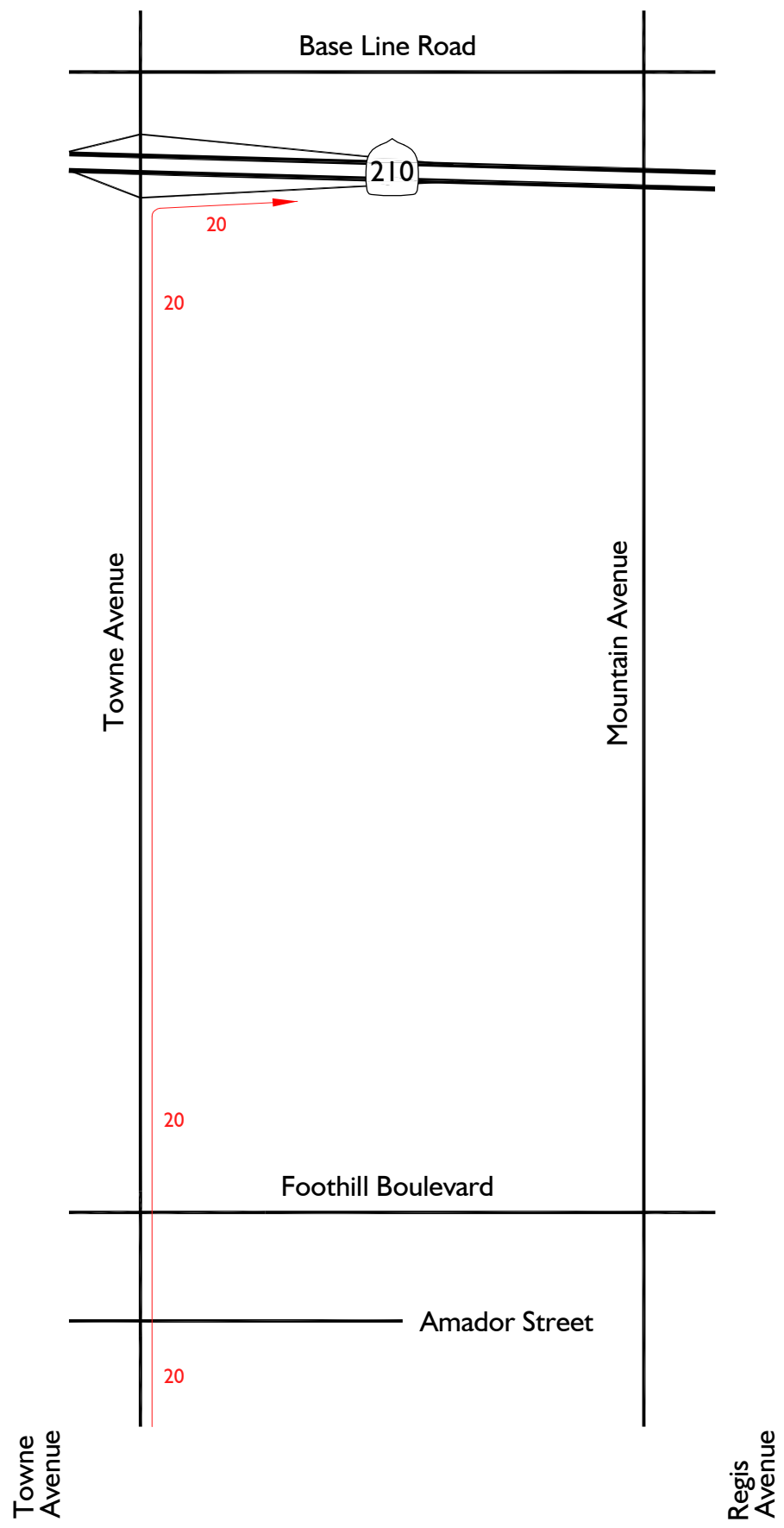
Legend:

10 = Percent from TAZ

Note:

TAZ distribution replicated using Project Trip Distribution due to similar land uses and location proximity.





TAZ 13

Legend:

10 = Percent from TAZ

Note:

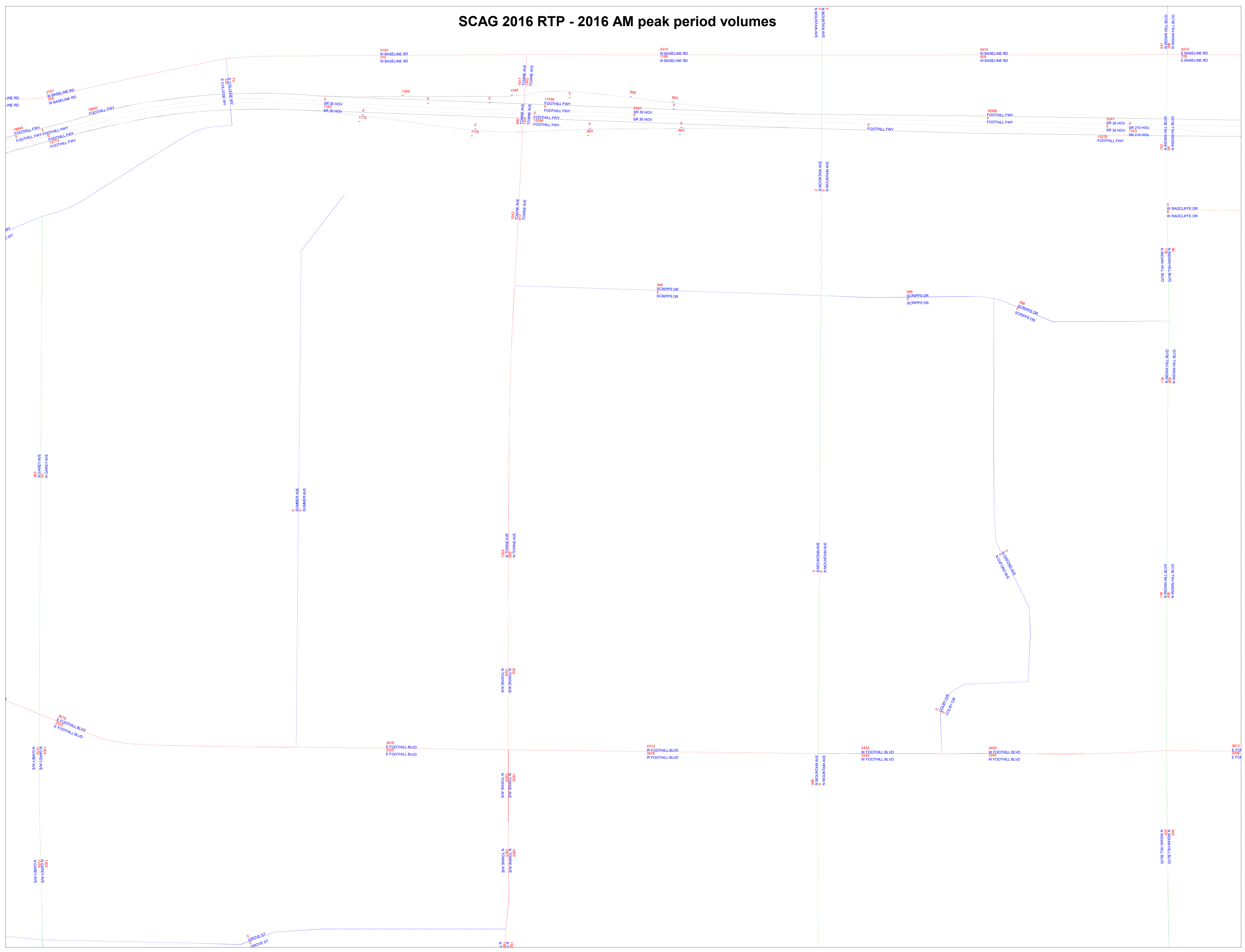
Trips headed towards the greater Los Angeles Area would utilize the I-10 Freeway south of the study area.



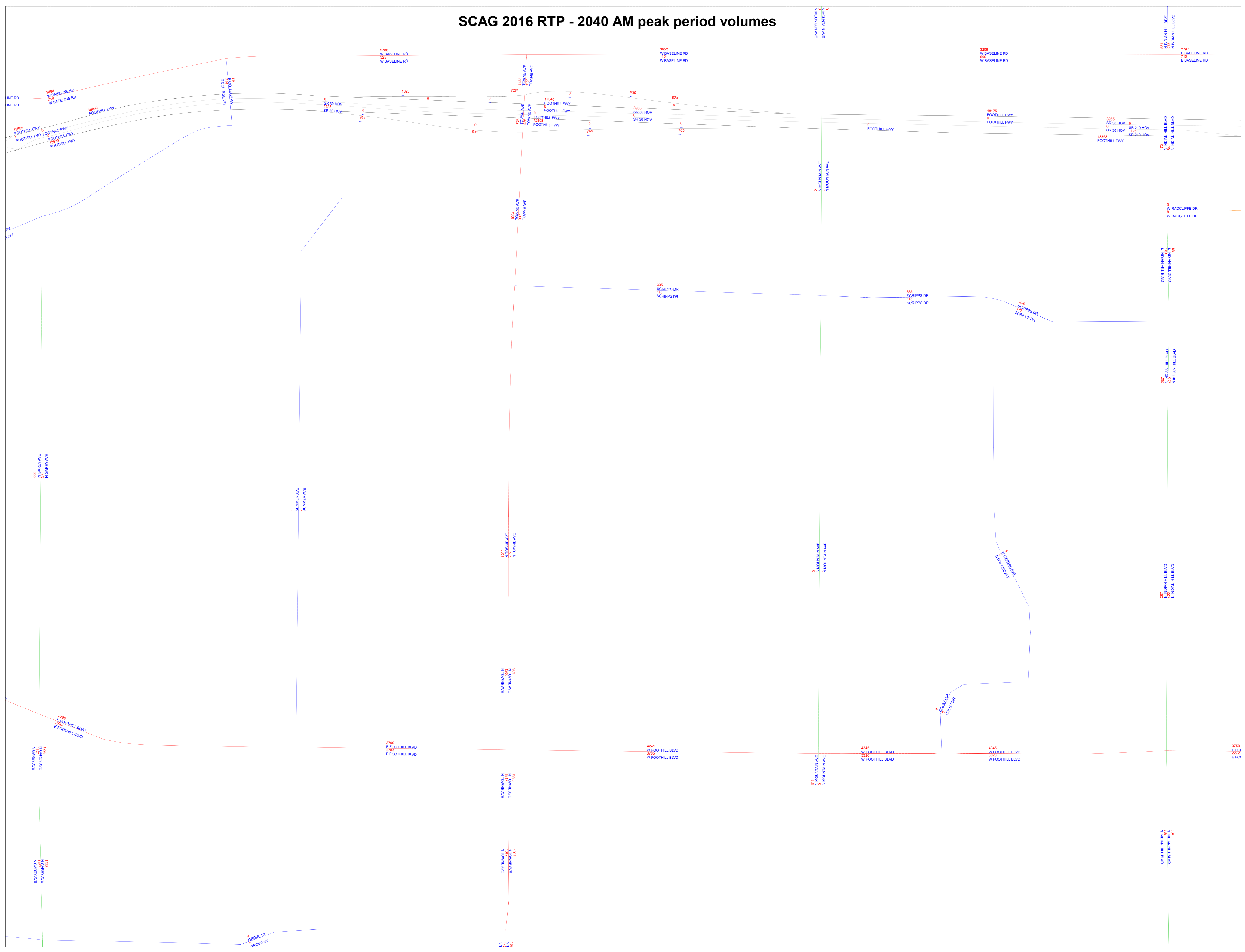
Appendix C

SCAG 2016 RTP/SCS Model Plots,
Post-Processed Turning Movement Volumes (NCHRP Methodology),
& Adjusted Horizon Year (2040) Traffic Volumes

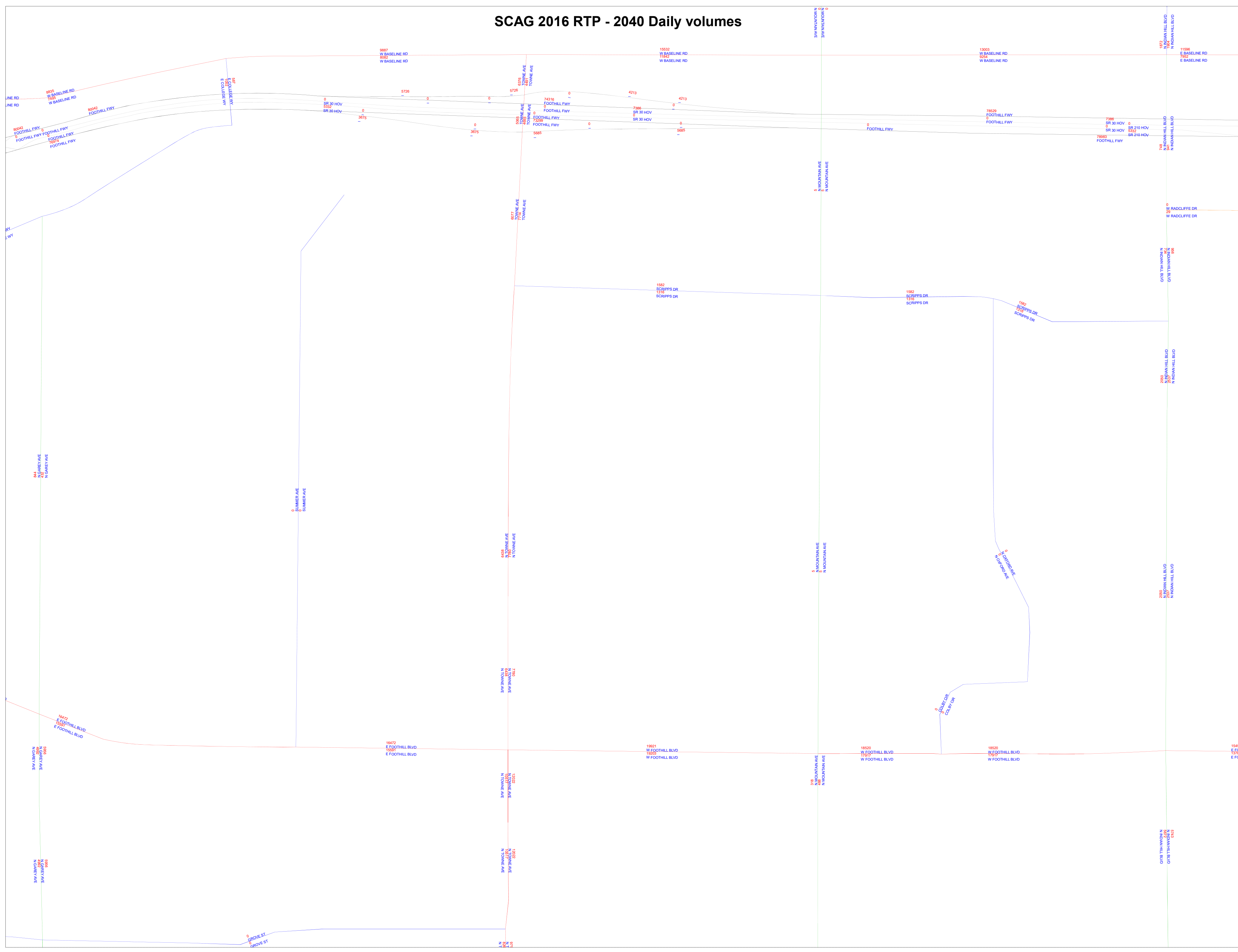
SCAG 2016 RTP - 2016 AM peak period volumes



SCAG 2016 RTP - 2040 AM peak period volumes



SCAG 2016 RTP - 2040 Daily volumes



TOWNE AVENUE (NS) AT BASE LINE ROAD (EW)
FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS											
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA						
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL		
NORTH BOUND	LEFT	221	SOUTH LEG	710	NORTH BOUND	LEFT	138	SOUTH LEG	650		
	THRU	21				THRU	6			IN ...	6
	RIGHT	413				RIGHT	451			OUT ...	580
SOUTH BOUND	LEFT	12	NORTH LEG	50	SOUTH BOUND	LEFT	3	NORTH LEG	10		
	THRU	24				THRU	3			IN ...	10
	RIGHT	12				RIGHT	3			OUT ...	10
EAST BOUND	LEFT	5	WEST LEG	580	EAST BOUND	LEFT	1	WEST LEG	800		
	THRU	366				THRU	613			IN ...	800
	RIGHT	173				RIGHT	134			OUT ...	660
WEST BOUND	LEFT	813	EAST LEG	1,370	WEST BOUND	LEFT	401	EAST LEG	820		
	THRU	451				THRU	356			IN ...	820
	RIGHT	5				RIGHT	3			OUT ...	1,150

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH BOUND	LEFT	221	238	NORTH LEG RATIO 1.8% ADT 4,500	NORTH BOUND	LEFT	138	204	NORTH LEG RATIO 0.5% ADT 4,500	
	THRU	21	20			THRU	6	6		RATIO 0.5%
	RIGHT	413	449			RIGHT	451	474		ADT 4,500
SOUTH BOUND	LEFT	12	12	SOUTH LEG RATIO 41.8% ADT 4,300	SOUTH BOUND	LEFT	3	3	SOUTH LEG RATIO 29.4% ADT 4,300	
	THRU	24	25			THRU	3	3		RATIO 29.4%
	RIGHT	12	12			RIGHT	3	4		ADT 4,300
EAST BOUND	LEFT	5	5	EAST LEG RATIO 143.7% ADT 1,541	EAST BOUND	LEFT	1	1	EAST LEG RATIO 130.7% ADT 1,541	
	THRU	366	388			THRU	613	673		RATIO 130.7%
	RIGHT	173	185			RIGHT	134	167		ADT 1,541
WEST BOUND	LEFT	813	880	WEST LEG RATIO 32.7% ADT 4,000	WEST BOUND	LEFT	401	410	WEST LEG RATIO 37.5% ADT 4,000	
	THRU	451	480			THRU	356	452		RATIO 37.5%
	RIGHT	5	5			RIGHT	3	3		ADT 4,000

MOUNTAIN AVENUE (NS) AT BASE LINE ROAD (EW)																																																																																																			
MORNING PEAK HOUR	EVENING PEAK HOUR																																																																																																		
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES: 2022 <table style="margin-left: 40px;"> <tr><td></td><td></td><td style="background-color: yellow;">112</td><td style="background-color: yellow;">57</td><td style="background-color: yellow;">86</td><td></td><td></td></tr> <tr><td></td><td></td><td><</td><td>v</td><td>></td><td></td><td></td></tr> <tr><td style="background-color: yellow;">67</td><td style="background-color: yellow;">^</td><td></td><td></td><td></td><td style="background-color: yellow;">^</td><td style="background-color: yellow;">45</td></tr> <tr><td style="background-color: yellow;">689</td><td style="background-color: yellow;">></td><td></td><td></td><td></td><td style="background-color: yellow;"><</td><td style="background-color: yellow;">943</td></tr> <tr><td style="background-color: yellow;">93</td><td style="background-color: yellow;">v</td><td></td><td></td><td></td><td style="background-color: yellow;">v</td><td style="background-color: yellow;">131</td></tr> <tr><td></td><td></td><td><</td><td style="background-color: yellow;">^</td><td>></td><td></td><td></td></tr> <tr><td></td><td></td><td style="background-color: yellow;">86</td><td style="background-color: yellow;">24</td><td style="background-color: yellow;">114</td><td></td><td></td></tr> </table>			112	57	86					<	v	>			67	^				^	45	689	>				<	943	93	v				v	131			<	^	>					86	24	114			EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES: 2022 <table style="margin-left: 40px;"> <tr><td></td><td></td><td style="background-color: yellow;">35</td><td style="background-color: yellow;">28</td><td style="background-color: yellow;">41</td><td></td><td></td></tr> <tr><td></td><td></td><td><</td><td>v</td><td>></td><td></td><td></td></tr> <tr><td style="background-color: yellow;">51</td><td style="background-color: yellow;">^</td><td></td><td></td><td></td><td style="background-color: yellow;">^</td><td style="background-color: yellow;">58</td></tr> <tr><td style="background-color: yellow;">873</td><td style="background-color: yellow;">></td><td></td><td></td><td></td><td style="background-color: yellow;"><</td><td style="background-color: yellow;">639</td></tr> <tr><td style="background-color: yellow;">66</td><td style="background-color: yellow;">v</td><td></td><td></td><td></td><td style="background-color: yellow;">v</td><td style="background-color: yellow;">89</td></tr> <tr><td></td><td></td><td><</td><td style="background-color: yellow;">^</td><td>></td><td></td><td></td></tr> <tr><td></td><td></td><td style="background-color: yellow;">68</td><td style="background-color: yellow;">47</td><td style="background-color: yellow;">154</td><td></td><td></td></tr> </table>			35	28	41					<	v	>			51	^				^	58	873	>				<	639	66	v				v	89			<	^	>					68	47	154		
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TOWNE AVENUE (NS) AT FOOTHILL BOULEVARD (EW)
FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH BOUND	LEFT	221	SOUTH LEG		NORTH BOUND	LEFT	203	SOUTH LEG	
	THRU	732	IN ...	1,360		THRU	777	IN ...	1,310
	RIGHT	305	OUT ...	1,300		RIGHT	236	OUT ...	850
SOUTH BOUND	LEFT	264	NORTH LEG		SOUTH BOUND	LEFT	189	NORTH LEG	
	THRU	830	IN ...	1,330		THRU	390	IN ...	730
	RIGHT	150	OUT ...	1,060		RIGHT	96	OUT ...	1,280
EAST BOUND	LEFT	120	WEST LEG		EAST BOUND	LEFT	242	WEST LEG	
	THRU	386	IN ...	710		THRU	756	IN ...	1,260
	RIGHT	137	OUT ...	980		RIGHT	168	OUT ...	1,050
WEST BOUND	LEFT	240	EAST LEG		WEST BOUND	LEFT	228	EAST LEG	
	THRU	535	IN ...	980		THRU	673	IN ...	1,150
	RIGHT	131	OUT ...	1,040		RIGHT	166	OUT ...	1,270

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH BOUND	LEFT	221	240	NORTH LEG	NORTH BOUND	LEFT	203	219	NORTH LEG
	THRU	732	788	RATIO 53.1%		THRU	777	838	RATIO 44.7%
	RIGHT	305	331	ADT 4,500		RIGHT	236	252	ADT 4,500
SOUTH BOUND	LEFT	264	282	SOUTH LEG	SOUTH BOUND	LEFT	189	203	SOUTH LEG
	THRU	830	888	RATIO 61.9%		THRU	390	422	RATIO 50.2%
	RIGHT	150	160	ADT 4,300		RIGHT	96	104	ADT 4,300
EAST BOUND	LEFT	120	131	EAST LEG	EAST BOUND	LEFT	242	263	EAST LEG
	THRU	386	427	RATIO 131.1%		THRU	756	815	RATIO 157.0%
	RIGHT	137	152	ADT 1,541		RIGHT	168	182	ADT 1,541
WEST BOUND	LEFT	240	260	WEST LEG	WEST BOUND	LEFT	228	245	WEST LEG
	THRU	535	579	RATIO 42.2%		THRU	673	726	RATIO 57.7%
	RIGHT	131	140	ADT 4,000		RIGHT	166	179	ADT 4,000

REGIS AVENUE (NS) AT FOOTHILL BOULEVARD (EW)
FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG		NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	0	IN ...	0		THRU	0	IN ...	0
	RIGHT	0	OUT ...	0		RIGHT	0	OUT ...	0
SOUTH BOUND	LEFT	0	NORTH LEG		SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	0	IN ...	50		THRU	0	IN ...	40
	RIGHT	45	OUT ...	110		RIGHT	41	OUT ...	120
EAST BOUND	LEFT	78	WEST LEG		EAST BOUND	LEFT	68	WEST LEG	
	THRU	1,312	IN ...	1,500		THRU	1,160	IN ...	1,320
	RIGHT	0	OUT ...	1,130		RIGHT	0	OUT ...	1,240
WEST BOUND	LEFT	0	EAST LEG		WEST BOUND	LEFT	4	EAST LEG	
	THRU	1,003	IN ...	1,100		THRU	1,111	IN ...	1,240
	RIGHT	21	OUT ...	1,410		RIGHT	37	OUT ...	1,250

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH BOUND	LEFT	0	0	NORTH LEG	NORTH BOUND	LEFT	0	0	NORTH LEG
	THRU	0	0	RATIO 3.6%		THRU	0	0	RATIO 3.6%
	RIGHT	0	0	ADT 4,500		RIGHT	0	0	ADT 4,500
SOUTH BOUND	LEFT	0	0	SOUTH LEG	SOUTH BOUND	LEFT	0	0	SOUTH LEG
	THRU	0	0	RATIO 0.0%		THRU	0	0	RATIO 0.0%
	RIGHT	45	50	ADT 4,300		RIGHT	41	40	ADT 4,300
EAST BOUND	LEFT	78	87	EAST LEG	EAST BOUND	LEFT	68	77	EAST LEG
	THRU	1,312	1,410	RATIO 163.1%		THRU	1,160	1,250	RATIO 161.8%
	RIGHT	0	0	ADT 1,541		RIGHT	0	0	ADT 1,541
WEST BOUND	LEFT	0	0	WEST LEG	WEST BOUND	LEFT	4	0	WEST LEG
	THRU	1,003	1,080	RATIO 65.7%		THRU	1,111	1,200	RATIO 64.2%
	RIGHT	21	23	ADT 4,000		RIGHT	37	43	ADT 4,000

MOUNTAIN AVENUE (NS) AT FOOTHILL BOULEVARD (EW)
FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH BOUND	LEFT	104	SOUTH LEG	590 900	NORTH BOUND	LEFT	132	SOUTH LEG	440 410
	THRU	276	IN ...			THRU	181	IN ...	
	RIGHT	165	OUT ...			RIGHT	97	OUT ...	
SOUTH BOUND	LEFT	181	NORTH LEG	780 470	SOUTH BOUND	LEFT	174	NORTH LEG	430 360
	THRU	465	IN ...			THRU	175	IN ...	
	RIGHT	84	OUT ...			RIGHT	55	OUT ...	
EAST BOUND	LEFT	84	WEST LEG	920 970	EAST BOUND	LEFT	65	WEST LEG	1,120 1,140
	THRU	650	IN ...			THRU	880	IN ...	
	RIGHT	118	OUT ...			RIGHT	90	OUT ...	
WEST BOUND	LEFT	253	EAST LEG	1,120 1,080	WEST BOUND	LEFT	114	EAST LEG	1,160 1,240
	THRU	713	IN ...			THRU	875	IN ...	
	RIGHT	77	OUT ...			RIGHT	92	OUT ...	

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH BOUND	LEFT	104	113	NORTH LEG RATIO 27.8% ADT 4,500	NORTH BOUND	LEFT	132	143	NORTH LEG RATIO 17.6% ADT 4,500
	THRU	276	298			THRU	181	193	
	RIGHT	165	181			RIGHT	97	104	
SOUTH BOUND	LEFT	181	194	SOUTH LEG RATIO 34.7% ADT 4,300	SOUTH BOUND	LEFT	174	184	SOUTH LEG RATIO 19.8% ADT 4,300
	THRU	465	498			THRU	175	188	
	RIGHT	84	90			RIGHT	55	58	
EAST BOUND	LEFT	84	90	EAST LEG RATIO 143.0% ADT 1,541	EAST BOUND	LEFT	65	70	EAST LEG RATIO 155.7% ADT 1,541
	THRU	650	705			THRU	880	952	
	RIGHT	118	128			RIGHT	90	99	
WEST BOUND	LEFT	253	274	WEST LEG RATIO 47.3% ADT 4,000	WEST BOUND	LEFT	114	124	WEST LEG RATIO 56.5% ADT 4,000
	THRU	713	767			THRU	875	939	
	RIGHT	77	82			RIGHT	92	97	

TOWNE AVENUE (NS) AT RICHBROOK DRIVE/AMADOR STREET (EW)
FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH BOUND	LEFT	10	SOUTH LEG		NORTH BOUND	LEFT	17	SOUTH LEG	
	THRU	1,478	IN ...	1,610		THRU	1,354	IN ...	1,490
	RIGHT	14	OUT ...	2,080		RIGHT	7	OUT ...	1,200
SOUTH BOUND	LEFT	31	NORTH LEG		SOUTH BOUND	LEFT	37	NORTH LEG	
	THRU	1,889	IN ...	2,080		THRU	1,099	IN ...	1,260
	RIGHT	21	OUT ...	1,730		RIGHT	38	OUT ...	1,540
EAST BOUND	LEFT	81	WEST LEG		EAST BOUND	LEFT	38	WEST LEG	
	THRU	5	IN ...	140		THRU	0	IN ...	70
	RIGHT	43	OUT ...	30		RIGHT	17	OUT ...	70
WEST BOUND	LEFT	7	EAST LEG		WEST BOUND	LEFT	4	EAST LEG	
	THRU	2	IN ...	70		THRU	1	IN ...	50
	RIGHT	48	OUT ...	60		RIGHT	40	OUT ...	40

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH BOUND	LEFT	10	9	NORTH LEG	NORTH BOUND	LEFT	17	22	NORTH LEG
	THRU	1,478	1,583	RATIO 84.7%		THRU	1,354	1,449	RATIO 62.1%
	RIGHT	14	17	ADT 4,500		RIGHT	7	7	ADT 4,500
SOUTH BOUND	LEFT	31	37	SOUTH LEG	SOUTH BOUND	LEFT	37	33	SOUTH LEG
	THRU	1,889	2,025	RATIO 85.8%		THRU	1,099	1,173	RATIO 62.3%
	RIGHT	21	19	ADT 4,300		RIGHT	38	47	ADT 4,300
EAST BOUND	LEFT	81	87	EAST LEG	EAST BOUND	LEFT	38	47	EAST LEG
	THRU	5	6	RATIO 8.4%		THRU	0	0	RATIO 5.8%
	RIGHT	43	47	ADT 1,541		RIGHT	17	22	ADT 1,541
WEST BOUND	LEFT	7	9	WEST LEG	WEST BOUND	LEFT	4	5	WEST LEG
	THRU	2	2	RATIO 4.2%		THRU	1	1	RATIO 3.5%
	RIGHT	48	59	ADT 4,000		RIGHT	40	44	ADT 4,000

Project Name	Foothill & Towne Residential
Project Number	1445-2021-14
Project Engineer	MT
Date	8/31/2022
TIA Opening Year	2025
TIA General Plan Year	2040
Additional Growth (As Needed)	5%

INTERSECTION #1						
Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	238	238	0	238	No Additional Growth	238
Nb Thru	24	20	-4	24	Add Additional Growth	25
Nb Right	438	449	11	449	No Additional Growth	449
Sb Left	13	12	-1	13	Add Additional Growth	14
Sb Thru	31	25	-6	31	Add Additional Growth	33
Sb Right	13	12	-1	13	Add Additional Growth	14
Eb Left	5	5	0	5	No Additional Growth	5
Eb Thru	394	388	-6	394	Add Additional Growth	414
Eb Right	188	185	-3	188	Add Additional Growth	197
Wb Left	862	880	18	880	No Additional Growth	880
Wb Thru	481	480	-1	481	Add Additional Growth	505
Wb Right	5	5	0	5	No Additional Growth	5
Total Vol.	2692	2700	8	2721	0	2779
INTERSECTION #2						
Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	91	90	-1	91	Add Additional Growth	96
Nb Thru	26	26	0	26	No Additional Growth	26
Nb Right	124	123	-1	124	Add Additional Growth	130
Sb Left	93	96	3	96	No Additional Growth	96
Sb Thru	62	62	0	62	No Additional Growth	62
Sb Right	119	122	3	122	No Additional Growth	122
Eb Left	71	73	2	73	No Additional Growth	73
Eb Thru	736	740	4	740	No Additional Growth	740
Eb Right	99	97	-2	99	Add Additional Growth	104
Wb Left	142	141	-1	142	Add Additional Growth	149
Wb Thru	1003	1008	5	1008	No Additional Growth	1008
Wb Right	49	50	1	50	No Additional Growth	50
Total Vol.	2615	2630	15	2634	0	2656
INTERSECTION #3						
Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	249	240	-9	249	Add Additional Growth	261
Nb Thru	784	788	4	788	No Additional Growth	788
Nb Right	340	331	-9	340	Add Additional Growth	357
Sb Left	290	282	-8	290	Add Additional Growth	305
Sb Thru	884	888	4	888	No Additional Growth	888
Sb Right	175	160	-15	175	Add Additional Growth	184
Eb Left	145	131	-14	145	Add Additional Growth	152
Eb Thru	430	427	-3	430	Add Additional Growth	452
Eb Right	163	152	-11	163	Add Additional Growth	171
Wb Left	260	260	0	260	No Additional Growth	260
Wb Thru	587	579	-8	587	Add Additional Growth	616
Wb Right	149	140	-9	149	Add Additional Growth	156
Total Vol.	4456	4380	-76	4464	0	4590
INTERSECTION #4						
Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	0	0	0	0	No Additional Growth	0
Nb Thru	0	0	0	0	No Additional Growth	0
Nb Right	0	0	0	0	No Additional Growth	0
Sb Left	0	0	0	0	No Additional Growth	0
Sb Thru	0	0	0	0	No Additional Growth	0
Sb Right	48	50	2	50	No Additional Growth	50
Eb Left	83	87	4	87	No Additional Growth	87
Eb Thru	1440	1410	-30	1440	Add Additional Growth	1512
Eb Right	0	0	0	0	No Additional Growth	0
Wb Left	0	0	0	0	No Additional Growth	0
Wb Thru	1098	1080	-18	1098	Add Additional Growth	1153
Wb Right	22	23	1	23	No Additional Growth	23
Total Vol.	2691	2650	-41	2698	0	2825
INTERSECTION #5						
Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	110	113	3	113	No Additional Growth	113
Nb Thru	293	298	5	298	No Additional Growth	298
Nb Right	175	181	6	181	No Additional Growth	181
Sb Left	193	194	1	194	No Additional Growth	194
Sb Thru	494	498	4	498	No Additional Growth	498
Sb Right	92	90	-2	92	Add Additional Growth	97

Eb Left	92	90	-2	92	Add Additional Growth	97
Eb Thru	734	705	-29	734	Add Additional Growth	771
Eb Right	125	128	3	128	No Additional Growth	128
Wb Left	268	274	6	274	No Additional Growth	274
Wb Thru	788	767	-21	788	Add Additional Growth	827
Wb Right	82	82	0	82	No Additional Growth	82
Total Vol.	3446	3420	-26	3474	0	3560

INTERSECTION #6

Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	11	9	-2	11	No Additional Growth	11
Nb Thru	1607	1583	-24	1607	Add Additional Growth	1687
Nb Right	15	17	2	17	No Additional Growth	17
Sb Left	33	37	4	37	No Additional Growth	37
Sb Thru	2030	2025	-5	2030	Add Additional Growth	2132
Sb Right	22	19	-3	22	No Additional Growth	22
Eb Left	86	87	1	87	No Additional Growth	87
Eb Thru	5	6	1	6	No Additional Growth	6
Eb Right	46	47	1	47	No Additional Growth	47
Wb Left	7	9	2	9	No Additional Growth	9
Wb Thru	2	2	0	2	No Additional Growth	2
Wb Right	51	59	8	59	No Additional Growth	59
Total Vol.	3915	3900	-15	3934	0	4116

INTERSECTION #7

Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	0	0	0	0	No Additional Growth	0
Nb Thru	0	0	0	0	No Additional Growth	0
Nb Right	0	0	0	0	No Additional Growth	0
Sb Left	0	0	0	0	No Additional Growth	0
Sb Thru	0	0	0	0	No Additional Growth	0
Sb Right	0	0	0	0	No Additional Growth	0
Eb Left	0	0	0	0	No Additional Growth	0
Eb Thru	0	0	0	0	No Additional Growth	1114
Eb Right	0	0	0	0	No Additional Growth	0
Wb Left	0	0	0	0	No Additional Growth	0
Wb Thru	0	0	0	0	No Additional Growth	1032
Wb Right	0	0	0	0	No Additional Growth	0
Total Vol.	0	0	0	0	0	2146

INTERSECTION #8

Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	0	0	0	0	No Additional Growth	0
Nb Thru	0	0	0	0	No Additional Growth	1833
Nb Right	0	0	0	0	No Additional Growth	0
Sb Left	0	0	0	0	No Additional Growth	0
Sb Thru	0	0	0	0	No Additional Growth	1319
Sb Right	0	0	0	0	No Additional Growth	0
Eb Left	0	0	0	0	No Additional Growth	0
Eb Thru	0	0	0	0	No Additional Growth	0
Eb Right	0	0	0	0	No Additional Growth	0
Wb Left	0	0	0	0	No Additional Growth	0
Wb Thru	0	0	0	0	No Additional Growth	0
Wb Right	0	0	0	0	No Additional Growth	0
Total Vol.	0	0	0	0	0	3152

Project Name	Foothill & Towne Residential
Project Number	1445-2021-14
Project Engineer	MT
Date	9/2/2022
TIA Opening Year	2025
TIA General Plan Year	2040
Additional Growth (As Needed)	5%

INTERSECTION #1						
Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	153	204	51	204	No Additional Growth	204
Nb Thru	13	6	-7	13	Add Additional Growth	14
Nb Right	478	474	-4	478	Add Additional Growth	502
Sb Left	3	3	0	3	No Additional Growth	3
Sb Thru	8	3	-5	8	Add Additional Growth	8
Sb Right	3	4	1	4	No Additional Growth	4
Eb Left	1	1	0	1	No Additional Growth	1
Eb Thru	654	673	19	673	No Additional Growth	673
Eb Right	148	167	19	167	No Additional Growth	167
Wb Left	425	410	-15	425	Add Additional Growth	446
Wb Thru	383	452	69	452	No Additional Growth	452
Wb Right	3	3	0	3	No Additional Growth	3
Total Vol.	2272	2400	128	2431	0	2477
INTERSECTION #2						
Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	72	97	25	97	No Additional Growth	97
Nb Thru	52	56	4	56	No Additional Growth	56
Nb Right	166	151	-15	166	Add Additional Growth	174
Sb Left	44	38	-6	44	Add Additional Growth	46
Sb Thru	31	30	-1	31	Add Additional Growth	33
Sb Right	37	47	10	47	No Additional Growth	47
Eb Left	54	68	14	68	No Additional Growth	68
Eb Thru	929	961	32	961	No Additional Growth	961
Eb Right	70	85	15	85	No Additional Growth	85
Wb Left	98	85	-13	98	Add Additional Growth	103
Wb Thru	683	756	73	756	No Additional Growth	756
Wb Right	63	57	-6	63	Add Additional Growth	66
Total Vol.	2299	2430	131	2471	0	2492
INTERSECTION #3						
Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	234	219	-15	234	Add Additional Growth	246
Nb Thru	830	838	8	838	No Additional Growth	838
Nb Right	261	252	-9	261	Add Additional Growth	274
Sb Left	211	203	-8	211	Add Additional Growth	222
Sb Thru	422	422	0	422	No Additional Growth	422
Sb Right	123	104	-19	123	Add Additional Growth	129
Eb Left	274	263	-11	274	Add Additional Growth	288
Eb Thru	823	815	-8	823	Add Additional Growth	864
Eb Right	196	182	-14	196	Add Additional Growth	206
Wb Left	261	245	-16	261	Add Additional Growth	274
Wb Thru	737	726	-11	737	Add Additional Growth	774
Wb Right	188	179	-9	188	Add Additional Growth	197
Total Vol.	4560	4450	-110	4569	0	4734
INTERSECTION #4						
Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	0	0	0	0	No Additional Growth	0
Nb Thru	0	0	0	0	No Additional Growth	0
Nb Right	0	0	0	0	No Additional Growth	0
Sb Left	0	0	0	0	No Additional Growth	0
Sb Thru	0	0	0	0	No Additional Growth	0
Sb Right	43	40	-3	43	Add Additional Growth	45
Eb Left	72	77	5	77	No Additional Growth	77
Eb Thru	1274	1250	-24	1274	Add Additional Growth	1338
Eb Right	0	0	0	0	No Additional Growth	0
Wb Left	4	0	-4	4	No Additional Growth	4
Wb Thru	1233	1200	-33	1233	Add Additional Growth	1295
Wb Right	39	43	4	43	No Additional Growth	43
Total Vol.	2665	2610	-55	2674	0	2802
INTERSECTION #5						
Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	140	143	3	143	No Additional Growth	143
Nb Thru	193	193	0	193	No Additional Growth	193
Nb Right	103	104	1	104	No Additional Growth	104
Sb Left	185	184	-1	185	Add Additional Growth	194
Sb Thru	187	188	1	188	No Additional Growth	188
Sb Right	62	58	-4	62	Add Additional Growth	65

Eb Left	72	70	-2	72	Add Additional Growth	76
Eb Thru	974	952	-22	974	Add Additional Growth	1023
Eb Right	95	99	4	99	No Additional Growth	99
Wb Left	121	124	3	124	No Additional Growth	124
Wb Thru	979	939	-40	979	Add Additional Growth	1028
Wb Right	99	97	-2	99	Add Additional Growth	104
Total Vol.	3210	3150	-60	3221	0	3341

INTERSECTION #6

Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	18	22	4	22	No Additional Growth	22
Nb Thru	1471	1449	-22	1471	Add Additional Growth	1545
Nb Right	7	7	0	7	No Additional Growth	7
Sb Left	39	33	-6	39	No Additional Growth	39
Sb Thru	1211	1173	-38	1211	Add Additional Growth	1272
Sb Right	40	47	7	47	No Additional Growth	47
Eb Left	40	47	7	47	No Additional Growth	47
Eb Thru	0	0	0	0	No Additional Growth	0
Eb Right	18	22	4	22	No Additional Growth	22
Wb Left	4	5	1	5	No Additional Growth	5
Wb Thru	1	1	0	1	No Additional Growth	1
Wb Right	42	44	2	44	No Additional Growth	44
Total Vol.	2891	2850	-41	2916	0	3051

INTERSECTION #7

Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	0	0	0	0	No Additional Growth	0
Nb Thru	0	0	0	0	No Additional Growth	0
Nb Right	0	0	0	0	No Additional Growth	0
Sb Left	0	0	0	0	No Additional Growth	0
Sb Thru	0	0	0	0	No Additional Growth	0
Sb Right	0	0	0	0	No Additional Growth	0
Eb Left	0	0	0	0	No Additional Growth	0
Eb Thru	0	0	0	0	No Additional Growth	1360
Eb Right	0	0	0	0	No Additional Growth	0
Wb Left	0	0	0	0	No Additional Growth	0
Wb Thru	0	0	0	0	No Additional Growth	1245
Wb Right	0	0	0	0	No Additional Growth	0
Total Vol.	0	0	0	0	0	2605

INTERSECTION #8

Movement	Year 2025 Opening Year Traffic Volumes	Year 2040 Buildout Year Traffic Volumes	Difference Between Year 2025 and Year 2040 Traffic Volumes	Adjusted Year 2040 Traffic Volumes	Additional Growth?	Final Adjusted Year 2040 Traffic Volumes
Nb Left	0	0	0	0	No Additional Growth	0
Nb Thru	0	0	0	0	No Additional Growth	1636
Nb Right	0	0	0	0	No Additional Growth	0
Sb Left	0	0	0	0	No Additional Growth	0
Sb Thru	0	0	0	0	No Additional Growth	902
Sb Right	0	0	0	0	No Additional Growth	0
Eb Left	0	0	0	0	No Additional Growth	0
Eb Thru	0	0	0	0	No Additional Growth	0
Eb Right	0	0	0	0	No Additional Growth	0
Wb Left	0	0	0	0	No Additional Growth	0
Wb Thru	0	0	0	0	No Additional Growth	0
Wb Right	0	0	0	0	No Additional Growth	0
Total Vol.	0	0	0	0	0	2538

Appendix D

Existing Conditions
LOS Analysis Worksheets

Intersection Level Of Service Report
Intersection 1: Towne Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	122.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.665

Intersection Setup

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	135.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	70.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	221	21	413	12	24	12	5	366	173	813	451	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	221	21	413	12	24	12	5	366	173	813	451	5
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	6	113	3	7	3	1	100	47	222	123	1
Total Analysis Volume [veh/h]	241	23	451	13	26	13	5	400	189	888	492	5
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	34	0	10	45	0	11	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	34	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	R	L	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	31	31	31	52	18	18	52	47	47
g / C, Green / Cycle	0.25	0.25	0.25	0.41	0.14	0.14	0.41	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.15	0.16	0.03	0.01	0.11	0.12	0.63	0.13	0.13
s, saturation flow rate [veh/h]	1788	2813	1770	953	3560	1589	1416	1870	1863
c, Capacity [veh/h]	439	691	434	388	506	226	583	697	694
d1, Uniform Delay [s]	41.76	42.39	36.68	22.25	51.84	52.23	40.56	28.39	28.39
k, delay calibration	0.50	0.50	0.50	0.11	0.11	0.11	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.99	4.76	0.56	0.01	2.82	7.98	244.34	0.31	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.65	0.12	0.01	0.79	0.84	1.52	0.36	0.36
d, Delay for Lane Group [s/veh]	47.75	47.16	37.24	22.26	54.67	60.21	284.90	28.70	28.70
Lane Group LOS	D	D	D	C	D	E	F	C	C
Critical Lane Group	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.95	6.72	1.32	0.09	6.26	6.27	54.70	5.48	5.46
50th-Percentile Queue Length [ft/ln]	198.87	168.03	32.94	2.23	156.57	156.85	1367.53	136.98	136.60
95th-Percentile Queue Length [veh/ln]	12.58	10.97	2.37	0.16	10.37	10.38	84.76	9.32	9.30
95th-Percentile Queue Length [ft/ln]	314.51	274.32	59.29	4.01	259.17	259.55	2118.92	232.95	232.44

Movement, Approach, & Intersection Results

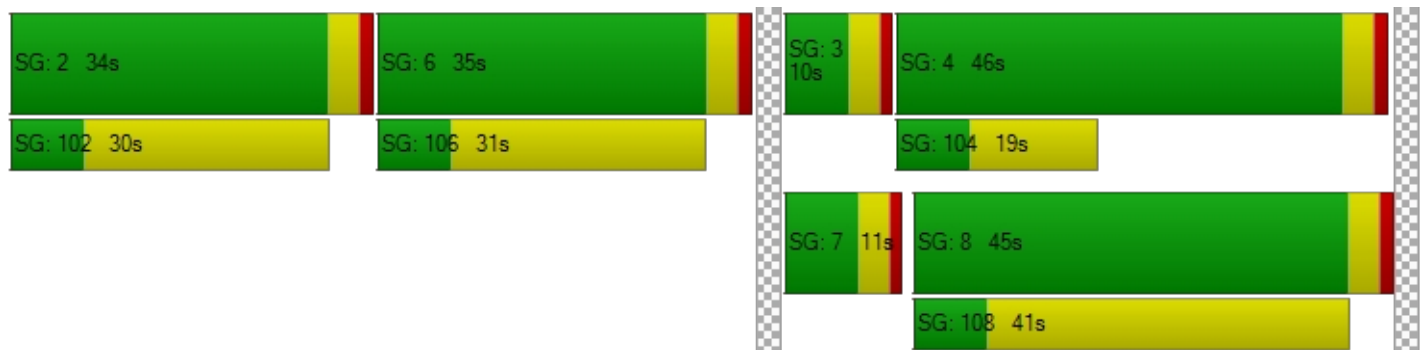
d_M, Delay for Movement [s/veh]	47.75	47.75	47.16	37.24	37.24	37.24	22.26	54.67	60.21	284.90	28.70	28.70
Movement LOS	D	D	D	D	D	D	C	D	E	F	C	C
d_A, Approach Delay [s/veh]	47.38			37.24			56.16			192.96		
Approach LOS	D			D			E			F		
d_I, Intersection Delay [s/veh]	122.51											
Intersection LOS	F											
Intersection V/C	0.665											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.99	51.99	51.99	51.99
I_p,int, Pedestrian LOS Score for Intersectio	3.166	1.775	2.686	2.754
Crosswalk LOS	C	A	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	496	480	656	672
d_b, Bicycle Delay [s]	35.35	36.11	28.23	27.57
I_b,int, Bicycle LOS Score for Intersection	2.739	1.645	2.050	2.702
Bicycle LOS	B	A	B	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: Mountain Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	32.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

Intersection Setup

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	115.00	90.00	100.00	100.00	180.00	100.00	100.00	110.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
	86	24	114	86	57	112	67	689	93	131	943	45
Base Volume Input [veh/h]	86	24	114	86	57	112	67	689	93	131	943	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	24	114	86	57	112	67	689	93	131	943	45
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	7	32	24	16	32	19	196	26	37	268	13
Total Analysis Volume [veh/h]	98	27	129	98	65	127	76	782	106	149	1070	51
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	10	36	0	14	40	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	16	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	39	39	39	39	5	25	25	9	29	29
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.06	0.30	0.30	0.10	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.12	0.08	0.08	0.11	0.04	0.24	0.24	0.08	0.30	0.30
s, saturation flow rate [veh/h]	1054	1589	1230	1675	1781	1870	1793	1781	1870	1840
c, Capacity [veh/h]	560	731	433	770	107	552	530	184	634	623
d1, Uniform Delay [s]	17.67	13.50	23.76	14.01	39.25	27.88	27.88	37.30	26.64	26.65
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.18	0.18	0.11	0.24	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.92	0.53	1.21	0.77	8.38	4.97	5.17	8.12	9.21	9.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.18	0.23	0.25	0.71	0.82	0.82	0.81	0.89	0.89
d, Delay for Lane Group [s/veh]	18.59	14.02	24.97	14.78	47.63	32.84	33.04	45.42	35.84	36.11
Lane Group LOS	B	B	C	B	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.78	1.49	1.64	2.30	1.78	9.00	8.66	3.39	11.92	11.79
50th-Percentile Queue Length [ft/ln]	44.62	37.27	41.02	57.58	44.59	224.97	216.43	84.79	297.98	294.85
95th-Percentile Queue Length [veh/ln]	3.21	2.68	2.95	4.15	3.21	13.92	13.48	6.11	17.58	17.43
95th-Percentile Queue Length [ft/ln]	80.32	67.08	73.83	103.64	80.27	347.97	337.07	152.63	439.52	435.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.59	18.59	14.02	24.97	14.78	14.78	47.63	32.93	33.04	45.42	35.97	36.11
Movement LOS	B	B	B	C	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	16.27			18.22			34.10			37.08		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	32.18											
Intersection LOS	C											
Intersection V/C	0.540											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	32.23	32.23	32.23	32.23
I_p,int, Pedestrian LOS Score for Intersectio	2.123	2.081	2.876	2.880
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	729	729	753	847
d_b, Bicycle Delay [s]	17.17	17.17	16.54	14.14
I_b,int, Bicycle LOS Score for Intersection	1.979	2.038	2.355	2.607
Bicycle LOS	A	B	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Towne Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	39.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.858

Intersection Setup

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	80.00	140.00	100.00	100.00	200.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	221	732	305	264	830	150	120	386	137	240	535	131
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	221	732	305	264	830	150	120	386	137	240	535	131
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	213	89	77	241	44	35	112	40	70	156	38
Total Analysis Volume [veh/h]	257	851	355	307	965	174	140	449	159	279	622	152
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	33	0	17	35	0	13	34	0	21	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	12	0	0	23	0	0	23	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	39	39	55	41	41	9	21	21	17	29	29
g / C, Green / Cycle	0.53	0.37	0.37	0.53	0.39	0.39	0.09	0.20	0.20	0.16	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.33	0.24	0.22	0.38	0.31	0.31	0.08	0.17	0.17	0.16	0.21	0.21
s, saturation flow rate [veh/h]	786	3560	1589	810	1870	1772	1781	1870	1705	1781	1870	1745
c, Capacity [veh/h]	374	1315	587	435	726	688	154	367	335	289	509	475
d1, Uniform Delay [s]	21.04	27.46	26.91	19.44	28.53	28.69	47.61	40.87	40.91	43.75	35.42	35.42
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.15	0.16	0.12	0.16	0.16
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.87	2.47	4.57	9.30	9.02	10.00	17.75	8.35	9.43	18.89	3.97	4.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.65	0.60	0.71	0.80	0.81	0.91	0.86	0.87	0.97	0.79	0.79
d, Delay for Lane Group [s/veh]	30.91	29.93	31.48	28.75	37.55	38.69	65.36	49.22	50.34	62.64	39.39	39.68
Lane Group LOS	C	C	C	C	D	D	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.30	9.11	7.82	5.17	14.41	14.07	4.37	8.71	8.09	8.65	9.91	9.29
50th-Percentile Queue Length [ft/ln]	107.51	227.76	195.60	129.20	360.35	351.63	109.33	217.85	202.20	216.29	247.78	232.26
95th-Percentile Queue Length [veh/ln]	7.70	14.06	12.41	8.90	20.64	20.22	7.80	13.56	12.75	13.48	15.07	14.29
95th-Percentile Queue Length [ft/ln]	192.53	351.51	310.28	222.40	516.01	505.40	195.07	338.88	318.80	336.89	376.86	357.23

Movement, Approach, & Intersection Results

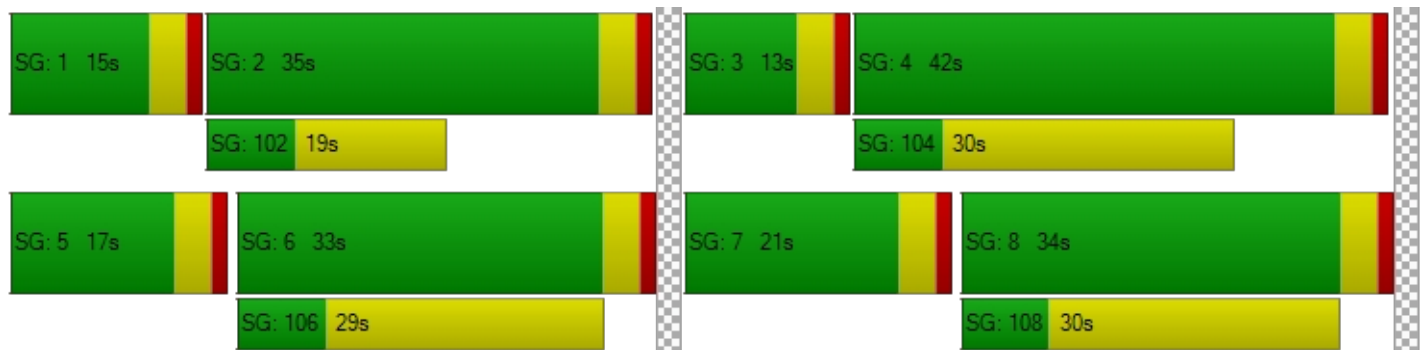
d_M, Delay for Movement [s/veh]	30.91	29.93	31.48	28.75	38.00	38.69	65.36	49.55	50.34	62.64	39.49	39.68
Movement LOS	C	C	C	C	D	D	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	30.48			36.12			52.68			45.65		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	39.13											
Intersection LOS	D											
Intersection V/C	0.858											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	42.11	42.11	42.11	42.11
I_p,int, Pedestrian LOS Score for Intersectio	3.000	2.812	2.808	2.982
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	552	590	571	723
d_b, Bicycle Delay [s]	27.53	26.10	26.81	21.40
I_b,int, Bicycle LOS Score for Intersection	2.767	2.753	2.177	2.428
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Regis Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.115

Intersection Setup

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↶			↶ ↑ ↶			↶ ↑ ↶		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	90.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	45	78	1312	0	0	1003	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	45	78	1312	0	0	1003	21
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	13	22	377	0	0	288	6
Total Analysis Volume [veh/h]	0	0	0	0	0	52	90	1506	0	0	1152	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.11	0.15	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	13.99	12.20	0.00	0.00	13.17	0.00	0.00
Movement LOS						B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.39	0.54	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	9.67	13.39	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			13.99			0.69			0.00		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	0.65											
Intersection LOS	B											

Intersection Level Of Service Report

Intersection 5: Mountain Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	55.00	100.00	115.00	40.00	100.00	100.00	190.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	104	276	165	181	465	84	84	650	118	253	713	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	276	165	181	465	84	84	650	118	253	713	77
Peak Hour Factor	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	93	55	61	156	28	28	218	40	85	240	26
Total Analysis Volume [veh/h]	140	371	222	243	625	113	113	874	159	340	958	103
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	36	0	13	36	0	16	51	0	15	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	22	0	0	19	0	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	53	40	40	53	41	41	54	39	39	54	44	44
g / C, Green / Cycle	0.46	0.35	0.35	0.46	0.36	0.36	0.47	0.34	0.34	0.47	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.15	0.20	0.14	0.23	0.20	0.20	0.16	0.28	0.28	0.42	0.29	0.29
s, saturation flow rate [veh/h]	940	1870	1589	1048	1870	1772	695	1870	1771	813	1870	1807
c, Capacity [veh/h]	352	552	469	380	573	543	333	733	694	385	817	789
d1, Uniform Delay [s]	24.00	35.64	33.20	25.73	34.70	34.70	17.96	29.69	29.71	23.34	25.61	25.68
k, delay calibration	0.14	0.50	0.50	0.50	0.50	0.50	0.17	0.24	0.24	0.41	0.19	0.20
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.91	6.41	3.40	8.02	5.91	6.23	0.97	2.98	3.18	20.84	1.64	1.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.67	0.47	0.64	0.66	0.66	0.34	0.72	0.72	0.88	0.66	0.66
d, Delay for Lane Group [s/veh]	24.92	42.04	36.60	33.75	40.61	40.93	18.93	32.67	32.88	44.18	27.25	27.44
Lane Group LOS	C	D	D	C	D	D	B	C	C	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.26	9.27	5.06	4.87	9.28	8.84	1.79	14.13	13.45	8.16	13.09	12.79
50th-Percentile Queue Length [ft/ln]	56.52	231.69	126.55	121.69	232.06	221.04	44.79	353.16	336.18	203.94	327.15	319.63
95th-Percentile Queue Length [veh/ln]	4.07	14.26	8.75	8.49	14.28	13.72	3.22	20.29	19.46	12.84	19.02	18.65
95th-Percentile Queue Length [ft/ln]	101.73	356.51	218.80	212.15	356.97	342.95	80.62	507.26	486.52	321.04	475.46	466.23

Movement, Approach, & Intersection Results

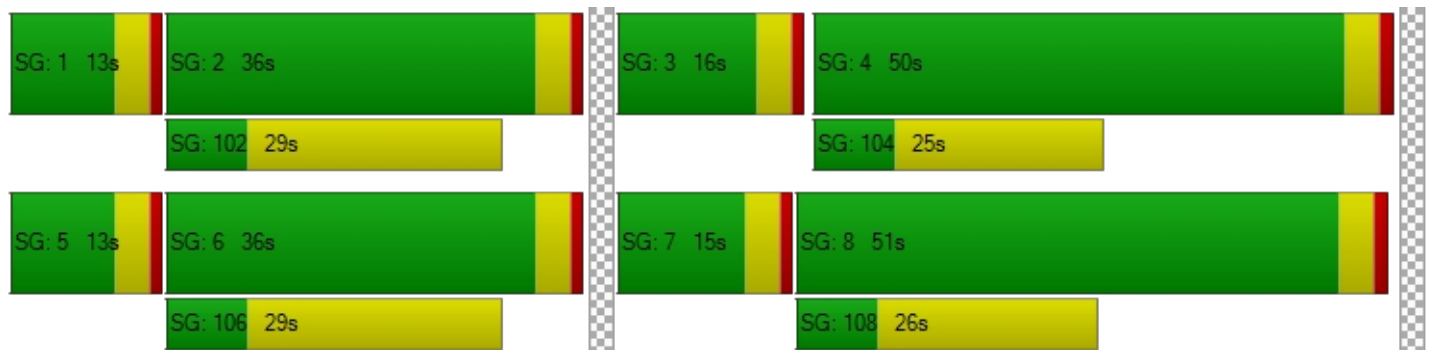
d_M, Delay for Movement [s/veh]	24.92	42.04	36.60	33.75	40.74	40.93	18.93	32.75	32.88	44.18	27.33	27.44
Movement LOS	C	D	D	C	D	D	B	C	C	D	C	C
d_A, Approach Delay [s/veh]	37.12			39.03			31.41			31.43		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	34.15											
Intersection LOS	C											
Intersection V/C	0.804											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.03	47.03	47.03	47.03
I_p,int, Pedestrian LOS Score for Intersectio	2.845	2.682	2.846	2.973
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	557	557	817	800
d_b, Bicycle Delay [s]	29.95	29.95	20.10	20.70
I_b,int, Bicycle LOS Score for Intersection	2.769	2.369	2.505	2.715
Bicycle LOS	C	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Towne Avenue (NS) at Amador Street/Richbrook Drive (EW)

Control Type:	Signalized	Delay (sec / veh):	8.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.703

Intersection Setup

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	60.00	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Base Volume Input [veh/h]	10	1478	14	31	1889	21	81	5	43	7	2	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	1478	14	31	1889	21	81	5	43	7	2	48
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	402	4	8	514	6	22	1	12	2	1	13
Total Analysis Volume [veh/h]	11	1608	15	34	2055	23	88	5	47	8	2	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	6	0	0	6	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	87	0	0	87	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	12	0	0	0	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	98	98	98	98	98	98	14	14
g / C, Green / Cycle	0.82	0.82	0.82	0.82	0.82	0.82	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.06	0.43	0.43	0.11	0.56	0.56	0.10	0.04
s, saturation flow rate [veh/h]	199	1870	1864	311	1870	1863	1427	1706
c, Capacity [veh/h]	175	1533	1528	267	1533	1527	211	228
d1, Uniform Delay [s]	11.30	3.45	3.45	7.53	4.39	4.41	52.24	48.99
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.69	1.32	1.32	0.98	2.43	2.47	3.55	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.53	0.53	0.13	0.68	0.68	0.66	0.27
d, Delay for Lane Group [s/veh]	11.99	4.76	4.77	8.52	6.82	6.88	55.80	49.63
Lane Group LOS	B	A	A	A	A	A	E	D
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.16	5.06	5.06	0.39	8.36	8.40	4.35	1.76
50th-Percentile Queue Length [ft/ln]	4.09	126.41	126.39	9.71	208.91	210.12	108.64	43.95
95th-Percentile Queue Length [veh/ln]	0.29	8.74	8.74	0.70	13.10	13.16	7.76	3.16
95th-Percentile Queue Length [ft/ln]	7.36	218.61	218.58	17.48	327.43	328.98	194.11	79.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.99	4.77	4.77	8.52	6.84	6.88	55.80	55.80	55.80	49.63	49.63	49.63
Movement LOS	B	A	A	A	A	A	E	E	E	D	D	D
d_A, Approach Delay [s/veh]	4.82			6.87			55.80			49.63		
Approach LOS	A			A			E			D		
d_I, Intersection Delay [s/veh]	8.43											
Intersection LOS	A											
Intersection V/C	0.703											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			11.0			11.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			49.49			49.49			0.00		
I_p,int, Pedestrian LOS Score for Intersectio	0.000			3.219			1.830			0.000		
Crosswalk LOS	F			C			A			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1384			1384			483			483		
d_b, Bicycle Delay [s]	5.70			5.70			34.49			34.49		
I_b,int, Bicycle LOS Score for Intersection	2.908			3.302			1.791			1.662		
Bicycle LOS	C			C			A			A		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Towne Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	44.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.607

Intersection Setup

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	135.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	70.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	138	6	451	3	3	3	1	613	134	401	356	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	138	6	451	3	3	3	1	613	134	401	356	3
Peak Hour Factor	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	2	116	1	1	1	0	158	35	103	92	1
Total Analysis Volume [veh/h]	142	6	464	3	3	3	1	631	138	413	367	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	34	0	10	45	0	11	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	34	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	R	L	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	30	30	30	53	25	25	53	49	49
g / C, Green / Cycle	0.24	0.24	0.24	0.43	0.20	0.20	0.43	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.08	0.16	0.01	0.00	0.18	0.09	0.33	0.10	0.10
s, saturation flow rate [veh/h]	1784	2813	1739	1046	3560	1589	1235	1870	1865
c, Capacity [veh/h]	427	673	416	460	708	316	491	731	729
d1, Uniform Delay [s]	39.45	43.32	36.37	20.96	48.77	43.94	29.76	25.75	25.75
k, delay calibration	0.50	0.50	0.50	0.11	0.11	0.11	0.38	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.22	5.70	0.10	0.00	4.15	0.95	12.43	0.18	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.69	0.02	0.00	0.89	0.44	0.84	0.25	0.25
d, Delay for Lane Group [s/veh]	41.67	49.02	36.46	20.96	52.92	44.89	42.18	25.93	25.93
Lane Group LOS	D	D	D	C	D	D	D	C	C
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.06	7.07	0.22	0.02	9.97	3.85	10.87	3.79	3.78
50th-Percentile Queue Length [ft/ln]	101.54	176.79	5.60	0.43	249.30	96.31	271.79	94.73	94.47
95th-Percentile Queue Length [veh/ln]	7.31	11.43	0.40	0.03	15.15	6.93	16.28	6.82	6.80
95th-Percentile Queue Length [ft/ln]	182.78	285.82	10.08	0.78	378.77	173.36	406.97	170.51	170.05

Movement, Approach, & Intersection Results

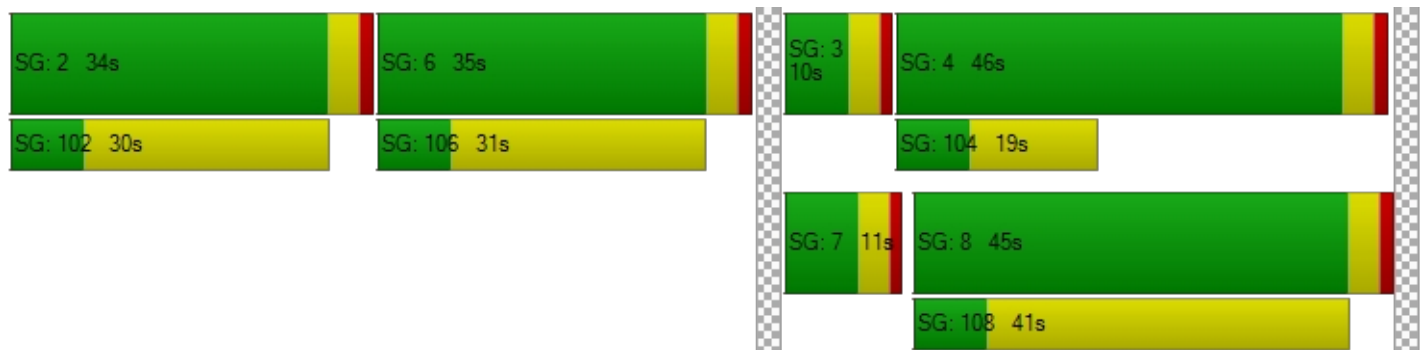
d_M, Delay for Movement [s/veh]	41.67	41.67	49.02	36.46	36.46	36.46	20.96	52.92	44.89	42.18	25.93	25.93
Movement LOS	D	D	D	D	D	D	C	D	D	D	C	C
d_A, Approach Delay [s/veh]	47.24			36.46			51.44			34.50		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	44.10											
Intersection LOS	D											
Intersection V/C	0.607											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.99	51.99	51.99	51.99
I_p,int, Pedestrian LOS Score for Intersectio	2.557	1.740	2.677	2.682
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	496	480	656	672
d_b, Bicycle Delay [s]	35.35	36.11	28.23	27.57
I_b,int, Bicycle LOS Score for Intersection	2.569	1.574	2.195	2.206
Bicycle LOS	B	A	B	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-







Intersection Level Of Service Report

Intersection 2: Mountain Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	29.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.509

Intersection Setup

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	115.00	90.00	100.00	100.00	180.00	100.00	100.00	110.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	68	47	154	41	28	35	51	873	66	89	639	58
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	47	154	41	28	35	51	873	66	89	639	58
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	13	42	11	8	10	14	238	18	24	174	16
Total Analysis Volume [veh/h]	74	51	168	45	31	38	56	951	72	97	696	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	22	40	0	10	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	16	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	40	40	40	40	4	27	27	6	28	28
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.05	0.31	0.31	0.07	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.09	0.11	0.04	0.04	0.03	0.28	0.28	0.05	0.21	0.21
s, saturation flow rate [veh/h]	1427	1589	1162	1704	1781	1870	1824	1781	1870	1816
c, Capacity [veh/h]	746	755	521	810	94	586	572	125	618	600
d1, Uniform Delay [s]	13.48	13.10	17.25	12.21	39.38	27.73	27.74	38.88	24.00	24.00
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.20	0.20	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.49	0.68	0.33	0.21	5.81	8.19	8.40	9.71	1.03	1.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.22	0.09	0.09	0.59	0.88	0.88	0.77	0.62	0.62
d, Delay for Lane Group [s/veh]	13.97	13.78	17.58	12.41	45.19	35.93	36.13	48.58	25.03	25.06
Lane Group LOS	B	B	B	B	D	D	D	D	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.48	1.93	0.60	0.73	1.28	10.88	10.65	2.30	6.44	6.27
50th-Percentile Queue Length [ft/ln]	36.95	48.18	15.05	18.24	31.99	272.07	266.29	57.40	161.07	156.63
95th-Percentile Queue Length [veh/ln]	2.66	3.47	1.08	1.31	2.30	16.29	16.00	4.13	10.61	10.37
95th-Percentile Queue Length [ft/ln]	66.50	86.72	27.10	32.83	57.59	407.32	400.10	103.32	265.14	259.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	13.97	13.97	13.78	17.58	12.41	12.41	45.19	36.02	36.13	48.58	25.04	25.06
Movement LOS	B	B	B	B	B	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	13.86			14.45			36.51			27.71		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	29.38											
Intersection LOS	C											
Intersection V/C	0.509											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	32.23			32.23			32.23			32.23		
I_p,int, Pedestrian LOS Score for Intersectio	2.097			2.029			2.770			2.754		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	729			729			847			564		
d_b, Bicycle Delay [s]	17.17			17.17			14.14			21.90		
I_b,int, Bicycle LOS Score for Intersection	2.043			1.748			2.450			2.266		
Bicycle LOS	B			A			B			B		

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Towne Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	40.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.815

Intersection Setup

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	80.00	140.00	100.00	100.00	200.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	203	777	236	189	390	96	242	756	168	228	673	166
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	203	777	236	189	390	96	242	756	168	228	673	166
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	203	62	49	102	25	63	197	44	59	175	43
Total Analysis Volume [veh/h]	212	810	246	197	407	100	252	788	175	238	702	173
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	33	0	10	29	0	23	46	0	21	44	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	12	0	0	23	0	0	23	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	49	39	39	49	35	35	17	32	32	16	31	31
g / C, Green / Cycle	0.45	0.36	0.36	0.45	0.32	0.32	0.16	0.29	0.29	0.15	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.19	0.23	0.15	0.27	0.14	0.14	0.14	0.27	0.27	0.13	0.24	0.24
s, saturation flow rate [veh/h]	1111	3560	1589	740	1870	1745	1781	1870	1754	1781	1870	1744
c, Capacity [veh/h]	491	1262	563	323	595	555	282	551	517	268	535	499
d1, Uniform Delay [s]	20.12	29.69	27.14	22.32	29.74	29.77	45.40	37.28	37.33	45.89	36.99	37.01
k, delay calibration	0.23	0.50	0.50	0.50	0.50	0.50	0.11	0.23	0.23	0.11	0.20	0.20
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.28	2.52	2.45	8.29	2.35	2.54	9.55	10.99	11.98	9.79	6.59	7.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.64	0.44	0.61	0.44	0.44	0.89	0.90	0.90	0.89	0.85	0.85
d, Delay for Lane Group [s/veh]	21.40	32.21	29.59	30.61	32.09	32.31	54.95	48.27	49.32	55.68	43.58	44.11
Lane Group LOS	C	C	C	C	C	C	D	D	D	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.55	9.26	5.28	3.85	5.84	5.51	7.46	14.30	13.61	7.07	12.28	11.55
50th-Percentile Queue Length [ft/ln]	88.79	231.51	131.99	96.32	146.09	137.78	186.39	357.38	340.33	176.86	307.12	288.69
95th-Percentile Queue Length [veh/ln]	6.39	14.25	9.05	6.94	9.81	9.36	11.93	20.50	19.66	11.44	18.03	17.12
95th-Percentile Queue Length [ft/ln]	159.82	356.28	226.20	173.38	245.20	234.03	298.34	512.39	491.61	285.91	450.83	428.01

Movement, Approach, & Intersection Results

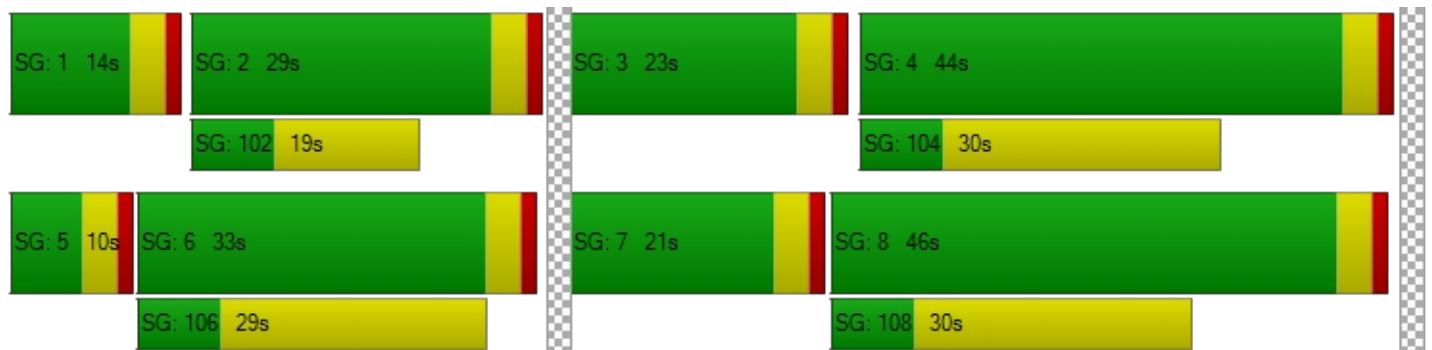
d_M, Delay for Movement [s/veh]	21.40	32.21	29.59	30.61	32.17	32.31	54.95	48.66	49.32	55.68	43.77	44.11
Movement LOS	C	C	C	C	C	C	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	29.89			31.75			50.06			46.37		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	40.16											
Intersection LOS	D											
Intersection V/C	0.815											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	44.58	44.58	44.58	44.58
I_p,int, Pedestrian LOS Score for Intersectio	2.894	2.688	2.846	2.948
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	527	454	763	727
d_b, Bicycle Delay [s]	29.85	32.86	21.04	22.29
I_b,int, Bicycle LOS Score for Intersection	2.606	2.140	2.562	2.478
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Regis Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.093

Intersection Setup

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↶			↶ ↑ ↶			↶ ↑ ↶		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	90.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	41	68	1160	0	4	1111	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	41	68	1160	0	4	1111	37
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	11	17	298	0	1	286	10
Total Analysis Volume [veh/h]	0	0	0	0	0	42	70	1193	0	4	1143	38
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.09	0.12	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	13.81	11.96	0.00	0.00	11.24	0.00	0.00
Movement LOS						B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.31	0.40	0.00	0.00	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	7.67	10.09	0.00	0.00	0.52	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			13.81			0.66			0.04		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	0.59											
Intersection LOS	B											

Intersection Level Of Service Report

Intersection 5: Mountain Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	32.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.572

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	55.00	100.00	115.00	40.00	100.00	100.00	190.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	132	181	97	174	175	55	65	880	90	114	875	92
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	132	181	97	174	175	55	65	880	90	114	875	92
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	47	25	45	45	14	17	228	23	30	226	24
Total Analysis Volume [veh/h]	137	187	100	180	181	57	67	911	93	118	906	95
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	33	0	10	33	0	10	42	0	10	42	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	22	0	0	19	0	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	48	38	38	48	38	38	39	29	29	39	30	30
g / C, Green / Cycle	0.51	0.40	0.40	0.51	0.40	0.40	0.41	0.31	0.31	0.41	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.11	0.10	0.06	0.15	0.07	0.07	0.09	0.27	0.27	0.15	0.27	0.27
s, saturation flow rate [veh/h]	1247	1870	1589	1208	1870	1720	784	1870	1810	807	1870	1808
c, Capacity [veh/h]	694	747	635	650	750	690	288	573	555	296	588	569
d1, Uniform Delay [s]	12.70	19.05	18.30	13.19	18.25	18.29	20.86	31.46	31.46	21.91	30.70	30.71
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.22	0.22	0.11	0.21	0.21
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	0.80	0.53	1.06	0.47	0.52	0.41	9.55	9.85	0.87	7.43	7.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.25	0.16	0.28	0.16	0.17	0.23	0.89	0.89	0.40	0.86	0.87
d, Delay for Lane Group [s/veh]	12.83	19.86	18.83	14.25	18.72	18.81	21.27	41.01	41.31	22.78	38.13	38.42
Lane Group LOS	B	B	B	B	B	B	C	D	D	C	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.53	2.86	1.47	2.22	1.79	1.70	0.92	12.35	12.00	1.68	11.85	11.51
50th-Percentile Queue Length [ft/ln]	38.34	71.40	36.87	55.60	44.67	42.48	22.94	308.67	300.02	41.94	296.28	287.87
95th-Percentile Queue Length [veh/ln]	2.76	5.14	2.65	4.00	3.22	3.06	1.65	18.11	17.68	3.02	17.50	17.08
95th-Percentile Queue Length [ft/ln]	69.01	128.52	66.36	100.07	80.41	76.47	41.29	452.74	442.05	75.50	437.43	427.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.83	19.86	18.83	14.25	18.75	18.81	21.27	41.14	41.31	22.78	38.26	38.42
Movement LOS	B	B	B	B	B	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	17.34			16.82			39.92			36.64		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	32.37											
Intersection LOS	C											
Intersection V/C	0.572											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	37.18	37.18	37.18	37.18
I_p,int, Pedestrian LOS Score for Intersectio	2.516	2.484	2.808	2.861
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	610	610	799	799
d_b, Bicycle Delay [s]	22.96	22.96	17.13	17.13
I_b,int, Bicycle LOS Score for Intersection	2.259	1.904	2.443	2.483
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Towne Avenue (NS) at Amador Street/Richbrook Drive (EW)

Control Type:	Signalized	Delay (sec / veh):	3.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

Intersection Setup

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	60.00	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Base Volume Input [veh/h]	17	1354	7	37	1099	38	38	0	17	4	1	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	1354	7	37	1099	38	38	0	17	4	1	40
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	362	2	10	294	10	10	0	5	1	0	11
Total Analysis Volume [veh/h]	18	1448	7	40	1175	41	41	0	18	4	1	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	6	0	0	6	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	67	0	0	67	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	12	0	0	0	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	87	87	87	87	87	87	5	5
g / C, Green / Cycle	0.87	0.87	0.87	0.87	0.87	0.87	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.04	0.39	0.39	0.11	0.33	0.33	0.04	0.03
s, saturation flow rate [veh/h]	459	1870	1867	365	1870	1848	1574	1761
c, Capacity [veh/h]	431	1629	1626	350	1629	1610	138	125
d1, Uniform Delay [s]	2.47	1.36	1.36	3.18	1.23	1.23	46.96	46.58
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.89	0.89	0.66	0.66	0.67	2.09	1.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.04	0.45	0.45	0.11	0.38	0.38	0.43	0.38
d, Delay for Lane Group [s/veh]	2.65	2.25	2.25	3.84	1.89	1.90	49.06	48.51
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.08	1.22	1.22	0.23	0.92	0.92	1.52	1.23
50th-Percentile Queue Length [ft/ln]	2.02	30.51	30.50	5.78	23.07	22.92	38.06	30.75
95th-Percentile Queue Length [veh/ln]	0.15	2.20	2.20	0.42	1.66	1.65	2.74	2.21
95th-Percentile Queue Length [ft/ln]	3.64	54.92	54.90	10.40	41.53	41.26	68.52	55.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.65	2.25	2.25	3.84	1.90	1.90	49.06	49.06	49.06	48.51	48.51	48.51
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	2.25			1.96			49.06			48.51		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	3.88											
Intersection LOS	A											
Intersection V/C	0.464											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			11.0			11.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			39.59			39.59			0.00		
I_p,int, Pedestrian LOS Score for Intersectio	0.000			2.969			1.803			0.000		
Crosswalk LOS	F			C			A			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1260			1260			580			580		
d_b, Bicycle Delay [s]	6.84			6.84			25.19			25.19		
I_b,int, Bicycle LOS Score for Intersection	2.775			2.596			1.657			1.639		
Bicycle LOS	C			B			A			A		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix E

Project Opening Year (2025) With Cumulative Projects
Without Project Conditions
LOS Analysis Worksheets

Intersection Level Of Service Report
Intersection 1: Towne Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	134.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.694

Intersection Setup

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	135.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	70.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	238	24	438	13	31	13	5	394	188	862	481	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	238	24	438	13	31	13	5	394	188	862	481	5
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	7	120	4	8	4	1	108	51	235	131	1
Total Analysis Volume [veh/h]	260	26	478	14	34	14	5	430	205	941	525	5
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	34	0	10	45	0	11	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	34	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	R	L	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	30	30	30	53	19	19	53	48	48
g / C, Green / Cycle	0.24	0.24	0.24	0.42	0.15	0.15	0.42	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.16	0.17	0.03	0.01	0.12	0.13	0.68	0.14	0.14
s, saturation flow rate [veh/h]	1789	2813	1779	926	3560	1589	1388	1870	1864
c, Capacity [veh/h]	430	676	427	384	543	242	583	716	714
d1, Uniform Delay [s]	42.96	43.48	37.39	21.57	51.09	51.57	39.54	27.74	27.74
k, delay calibration	0.50	0.50	0.50	0.11	0.11	0.11	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.92	6.15	0.71	0.01	2.66	8.14	284.27	0.32	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.71	0.15	0.01	0.79	0.85	1.61	0.37	0.37
d, Delay for Lane Group [s/veh]	50.88	49.62	38.11	21.58	53.75	59.70	323.81	28.06	28.06
Lane Group LOS	D	D	D	C	D	E	F	C	C
Critical Lane Group	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	8.95	7.34	1.59	0.09	6.69	6.80	60.87	5.79	5.78
50th-Percentile Queue Length [ft/ln]	223.69	183.62	39.87	2.18	167.36	169.94	1521.83	144.72	144.40
95th-Percentile Queue Length [veh/ln]	13.85	11.79	2.87	0.16	10.94	11.07	95.58	9.73	9.72
95th-Percentile Queue Length [ft/ln]	346.33	294.74	71.76	3.93	273.44	276.83	2389.52	243.37	242.93

Movement, Approach, & Intersection Results

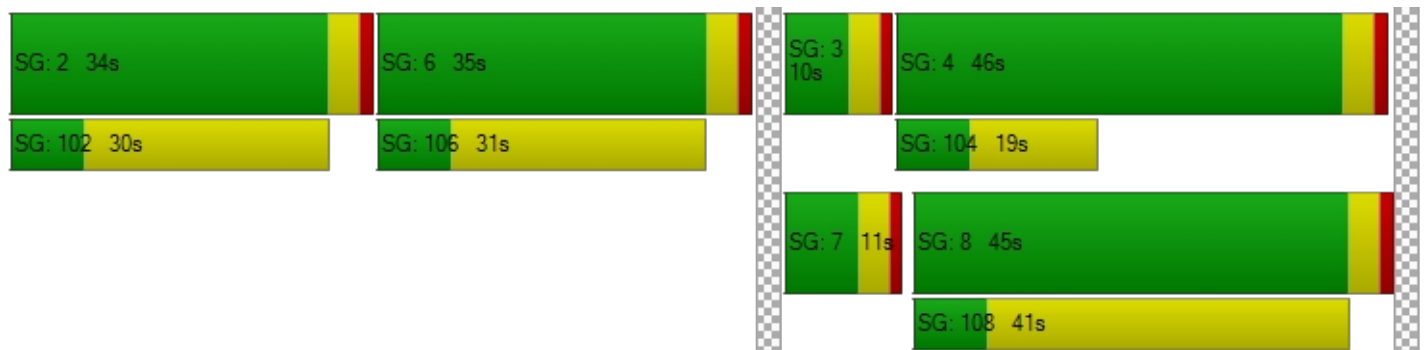
d_M, Delay for Movement [s/veh]	50.88	50.88	49.62	38.11	38.11	38.11	21.58	53.75	59.70	323.81	28.06	28.06
Movement LOS	D	D	D	D	D	D	C	D	E	F	C	C
d_A, Approach Delay [s/veh]	50.09			38.11			55.40			217.25		
Approach LOS	D			D			E			F		
d_I, Intersection Delay [s/veh]	134.72											
Intersection LOS	F											
Intersection V/C	0.694											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.99	51.99	51.99	51.99
I_p,int, Pedestrian LOS Score for Intersectio	3.272	1.781	2.702	2.782
Crosswalk LOS	C	A	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	496	480	656	672
d_b, Bicycle Delay [s]	35.35	36.11	28.23	27.57
I_b,int, Bicycle LOS Score for Intersection	2.820	1.662	2.088	2.773
Bicycle LOS	C	A	B	C

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-







Intersection Level Of Service Report

Intersection 2: Mountain Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	33.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

Intersection Setup

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	115.00	90.00	100.00	100.00	180.00	100.00	100.00	110.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	91	26	124	93	62	119	71	736	99	142	1003	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	26	124	93	62	119	71	736	99	142	1003	49
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	7	35	26	18	34	20	209	28	40	285	14
Total Analysis Volume [veh/h]	103	30	141	106	70	135	81	835	112	161	1138	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	10	39	0	16	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	16	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	40	40	40	40	5	28	28	10	32	32
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.06	0.31	0.31	0.11	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.13	0.09	0.09	0.12	0.05	0.26	0.26	0.09	0.32	0.32
s, saturation flow rate [veh/h]	1022	1589	1214	1675	1781	1870	1794	1781	1870	1839
c, Capacity [veh/h]	529	713	390	751	107	575	552	197	670	659
d1, Uniform Delay [s]	20.03	15.05	27.37	15.62	41.68	29.11	29.11	39.16	27.34	27.37
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.19	0.19	0.11	0.24	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.14	0.62	1.72	0.90	10.21	5.65	5.88	7.97	9.35	9.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.20	0.27	0.27	0.75	0.84	0.84	0.82	0.90	0.90
d, Delay for Lane Group [s/veh]	21.17	15.67	29.09	16.52	51.89	34.76	35.00	47.12	36.69	37.08
Lane Group LOS	C	B	C	B	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.12	1.81	2.01	2.73	2.06	10.31	9.93	3.87	13.41	13.29
50th-Percentile Queue Length [ft/ln]	53.08	45.22	50.30	68.29	51.41	257.87	248.25	96.65	335.15	332.33
95th-Percentile Queue Length [veh/ln]	3.82	3.26	3.62	4.92	3.70	15.58	15.10	6.96	19.41	19.27
95th-Percentile Queue Length [ft/ln]	95.55	81.39	90.53	122.93	92.54	389.55	377.45	173.97	485.27	481.82

Movement, Approach, & Intersection Results

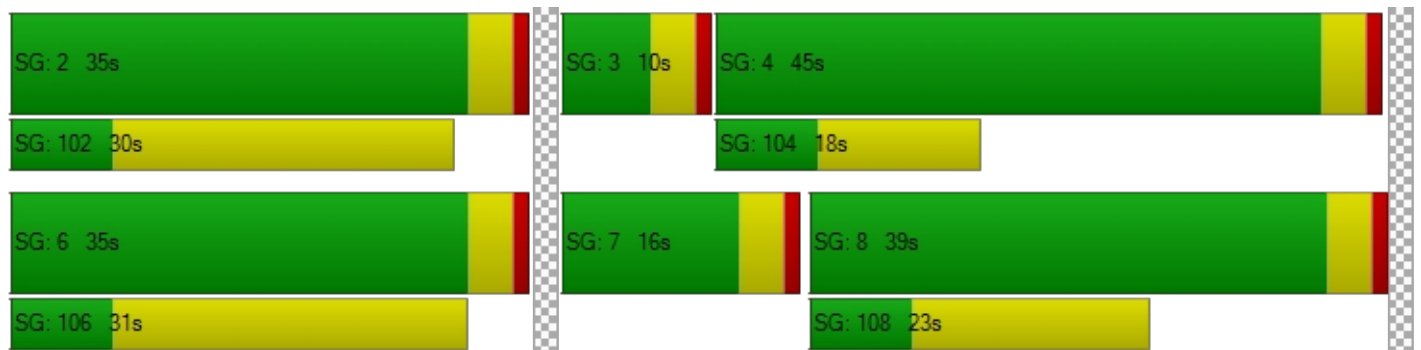
d_M, Delay for Movement [s/veh]	21.17	21.17	15.67	29.09	16.52	16.52	51.89	34.86	35.00	47.12	36.87	37.08
Movement LOS	C	C	B	C	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	18.34			20.80			36.22			38.10		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	33.81											
Intersection LOS	C											
Intersection V/C	0.574											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.70	34.70	34.70	34.70
I_p,int, Pedestrian LOS Score for Intersectio	2.140	2.095	2.915	2.925
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	689	777	911
d_b, Bicycle Delay [s]	19.36	19.36	16.83	13.36
I_b,int, Bicycle LOS Score for Intersection	2.012	2.073	2.408	2.677
Bicycle LOS	B	B	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Towne Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	50.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.936

Intersection Setup

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	80.00	140.00	100.00	100.00	200.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	249	784	340	290	884	175	145	430	163	260	587	149
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	249	784	340	290	884	175	145	430	163	260	587	149
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	228	99	84	257	51	42	125	47	76	171	43
Total Analysis Volume [veh/h]	290	912	395	337	1028	203	169	500	190	302	683	173
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	40	0	16	41	0	16	34	0	25	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	12	0	0	23	0	0	23	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57	41	41	57	42	42	12	25	25	21	34	34
g / C, Green / Cycle	0.50	0.36	0.36	0.50	0.37	0.37	0.10	0.22	0.22	0.18	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.38	0.26	0.25	0.45	0.34	0.34	0.09	0.19	0.19	0.17	0.24	0.24
s, saturation flow rate [veh/h]	758	3560	1589	757	1870	1765	1781	1870	1697	1781	1870	1741
c, Capacity [veh/h]	318	1270	567	374	683	645	188	404	366	326	549	511
d1, Uniform Delay [s]	32.84	32.02	31.70	24.90	34.87	35.25	50.91	43.89	43.90	46.29	37.67	37.70
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.26	0.26	0.19	0.24	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	32.48	3.51	6.93	27.29	19.23	22.90	14.19	15.13	16.51	17.70	6.17	6.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.91	0.72	0.70	0.90	0.92	0.94	0.90	0.90	0.90	0.93	0.81	0.81
d, Delay for Lane Group [s/veh]	65.32	35.53	38.63	52.19	54.11	58.15	65.10	59.02	60.42	63.99	43.83	44.40
Lane Group LOS	E	D	D	D	D	E	E	E	E	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.43	11.44	10.37	8.31	20.03	20.06	5.54	11.64	10.72	10.05	12.37	11.63
50th-Percentile Queue Length [ft/ln]	185.84	285.97	259.22	207.86	500.66	501.62	138.61	291.05	267.96	251.35	309.16	290.66
95th-Percentile Queue Length [veh/ln]	11.91	16.99	15.65	13.04	27.37	27.41	9.41	17.24	16.09	15.25	18.13	17.22
95th-Percentile Queue Length [ft/ln]	297.63	424.63	391.24	326.09	684.14	685.28	235.15	430.95	402.19	381.35	453.34	430.46

Movement, Approach, & Intersection Results

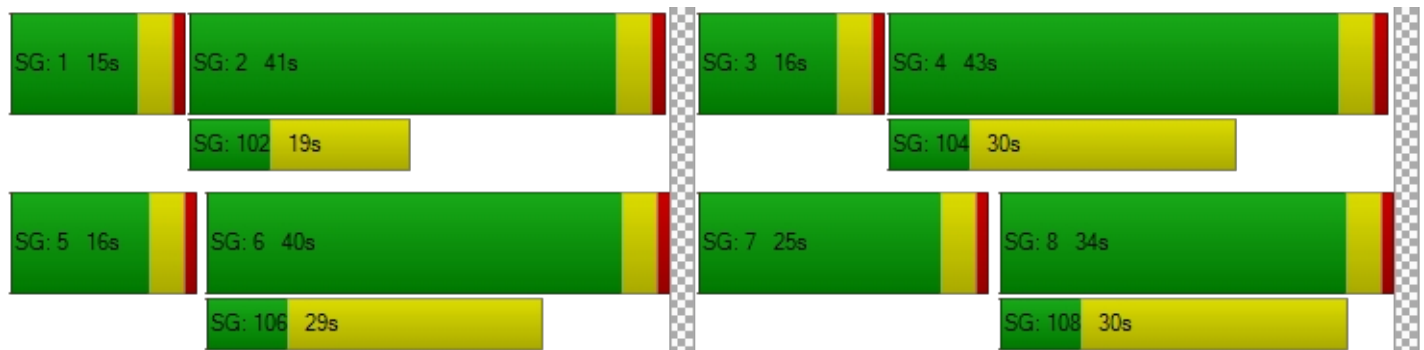
d_M, Delay for Movement [s/veh]	65.32	35.53	38.63	52.19	55.68	58.15	65.10	59.41	60.42	63.99	44.03	44.40
Movement LOS	E	D	D	D	E	E	E	E	E	E	D	D
d_A, Approach Delay [s/veh]	41.71			55.25			60.75			49.29		
Approach LOS	D			E			E			D		
d_I, Intersection Delay [s/veh]	50.66											
Intersection LOS	D											
Intersection V/C	0.936											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.07	47.07	47.07	47.07
I_p,int, Pedestrian LOS Score for Intersectio	3.040	2.862	2.867	3.033
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	626	643	521	678
d_b, Bicycle Delay [s]	27.17	26.49	31.45	25.15
I_b,int, Bicycle LOS Score for Intersection	2.877	2.853	2.268	2.515
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Regis Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.132

Intersection Setup

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↶			↶ ↑ ↶			↶ ↑ ↶		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	90.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	48	83	1440	0	0	1098	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	48	83	1440	0	0	1098	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	14	24	413	0	0	315	6
Total Analysis Volume [veh/h]	0	0	0	0	0	55	95	1653	0	0	1261	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.13	0.18	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	14.96	13.17	0.00	0.00	14.32	0.00	0.00
Movement LOS						B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.45	0.64	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	11.31	16.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			14.96			0.72			0.00		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	0.67											
Intersection LOS	B											

Intersection Level Of Service Report

Intersection 5: Mountain Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	40.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.865

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	55.00	100.00	115.00	40.00	100.00	100.00	190.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	110	293	175	193	494	92	92	734	125	268	788	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	293	175	193	494	92	92	734	125	268	788	82
Peak Hour Factor	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	98	59	65	166	31	31	247	42	90	265	28
Total Analysis Volume [veh/h]	148	394	235	259	664	124	124	987	168	360	1059	110
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	33	0	11	33	0	11	55	0	21	65	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	22	0	0	19	0	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	49	38	38	49	38	38	63	42	42	63	52	52
g / C, Green / Cycle	0.41	0.32	0.32	0.41	0.32	0.32	0.52	0.35	0.35	0.52	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.17	0.21	0.15	0.26	0.22	0.22	0.19	0.32	0.32	0.41	0.32	0.32
s, saturation flow rate [veh/h]	888	1870	1589	978	1870	1769	653	1870	1777	880	1870	1809
c, Capacity [veh/h]	325	598	508	347	598	565	300	647	615	400	814	788
d1, Uniform Delay [s]	25.39	35.22	32.62	32.32	35.48	35.48	20.78	37.51	37.60	33.73	27.99	28.13
k, delay calibration	0.21	0.50	0.50	0.50	0.50	0.50	0.27	0.28	0.28	0.32	0.18	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.89	5.63	3.01	13.71	6.08	6.42	2.31	12.30	13.39	18.61	2.12	2.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.66	0.46	0.75	0.68	0.68	0.41	0.91	0.92	0.90	0.73	0.73
d, Delay for Lane Group [s/veh]	27.28	40.84	35.63	46.03	41.56	41.90	23.08	49.81	50.99	52.34	30.11	30.47
Lane Group LOS	C	D	D	D	D	D	C	D	D	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.87	10.81	5.88	6.39	11.23	10.68	1.93	18.55	17.92	7.97	14.25	14.04
50th-Percentile Queue Length [ft/ln]	71.74	270.28	147.05	159.68	280.85	267.11	48.37	463.78	448.09	199.16	356.21	351.07
95th-Percentile Queue Length [veh/ln]	5.17	16.20	9.86	10.53	16.73	16.04	3.48	25.61	24.87	12.60	20.44	20.19
95th-Percentile Queue Length [ft/ln]	129.13	405.09	246.49	263.29	418.28	401.12	87.06	640.37	621.67	314.88	510.97	504.71

Movement, Approach, & Intersection Results

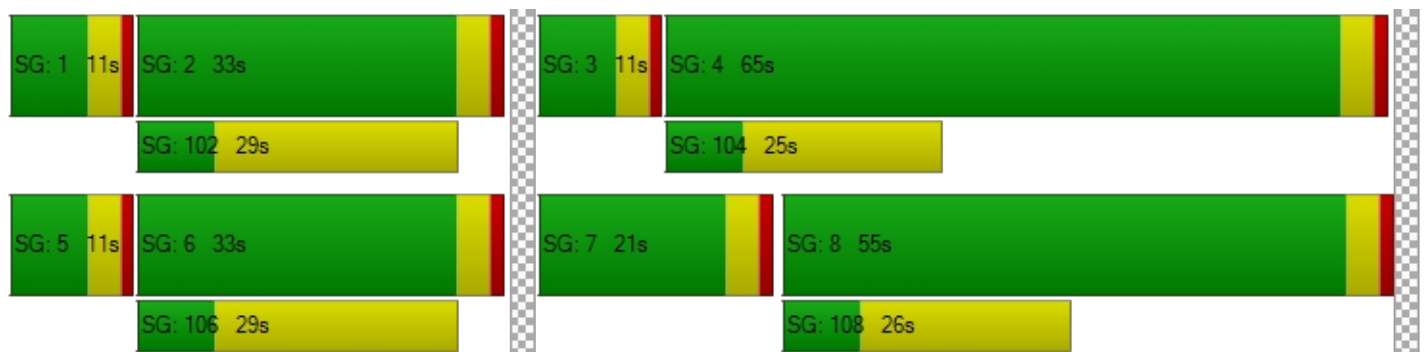
d_M, Delay for Movement [s/veh]	27.28	40.84	35.63	46.03	41.69	41.90	23.08	50.28	50.99	52.34	30.27	30.47
Movement LOS	C	D	D	D	D	D	C	D	D	D	C	C
d_A, Approach Delay [s/veh]	36.68			42.79			47.74			35.48		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	40.72											
Intersection LOS	D											
Intersection V/C	0.865											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.52	49.52	49.52	49.52
I_p,int, Pedestrian LOS Score for Intersectio	2.883	2.720	2.893	3.035
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	483	483	850	1016
d_b, Bicycle Delay [s]	34.52	34.52	19.85	14.52
I_b,int, Bicycle LOS Score for Intersection	2.842	2.423	2.615	2.821
Bicycle LOS	C	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Towne Avenue (NS) at Amador Street/Richbrook Drive (EW)

Control Type:	Signalized	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.756

Intersection Setup

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	60.00	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Base Volume Input [veh/h]	11	1607	15	33	2030	22	86	5	46	7	2	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	1607	15	33	2030	22	86	5	46	7	2	51
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	437	4	9	552	6	23	1	13	2	1	14
Total Analysis Volume [veh/h]	12	1749	16	36	2209	24	94	5	50	8	2	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	6	0	0	6	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	87	0	0	87	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	12	0	0	0	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	97	97	97	97	97	97	15	15
g / C, Green / Cycle	0.81	0.81	0.81	0.81	0.81	0.81	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.07	0.47	0.47	0.13	0.60	0.60	0.11	0.04
s, saturation flow rate [veh/h]	171	1870	1864	271	1870	1863	1407	1703
c, Capacity [veh/h]	149	1519	1514	230	1519	1514	219	240
d1, Uniform Delay [s]	14.90	4.00	4.00	9.51	5.23	5.26	51.87	48.26
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.06	1.63	1.64	1.44	3.20	3.25	3.69	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.58	0.58	0.16	0.73	0.74	0.68	0.27
d, Delay for Lane Group [s/veh]	15.96	5.63	5.65	10.95	8.43	8.52	55.57	48.87
Lane Group LOS	B	A	A	B	A	A	E	D
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.21	6.36	6.37	0.49	10.74	10.82	4.62	1.83
50th-Percentile Queue Length [ft/ln]	5.34	158.97	159.19	12.16	268.60	270.39	115.60	45.66
95th-Percentile Queue Length [veh/ln]	0.38	10.49	10.51	0.88	16.12	16.21	8.15	3.29
95th-Percentile Queue Length [ft/ln]	9.61	262.36	262.66	21.89	402.98	405.22	203.77	82.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.96	5.64	5.65	10.95	8.47	8.52	55.57	55.57	55.57	48.87	48.87	48.87
Movement LOS	B	A	A	B	A	A	E	E	E	D	D	D
d_A, Approach Delay [s/veh]	5.71			8.51			55.57			48.87		
Approach LOS	A			A			E			D		
d_I, Intersection Delay [s/veh]	9.60											
Intersection LOS	A											
Intersection V/C	0.756											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			11.0			11.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			49.48			49.48			0.00		
I_p,int, Pedestrian LOS Score for Intersectio	0.000			3.277			1.837			0.000		
Crosswalk LOS	F			C			A			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1384			1384			484			484		
d_b, Bicycle Delay [s]	5.69			5.69			34.48			34.48		
I_b,int, Bicycle LOS Score for Intersection	3.026			3.432			1.805			1.667		
Bicycle LOS	C			C			A			A		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Towne Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	45.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.645

Intersection Setup

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	135.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	70.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	153	13	478	3	8	3	1	654	148	425	383	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	153	13	478	3	8	3	1	654	148	425	383	3
Peak Hour Factor	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	3	123	1	2	1	0	168	38	109	99	1
Total Analysis Volume [veh/h]	158	13	492	3	8	3	1	674	152	438	394	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	34	0	10	45	0	11	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	34	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	R	L	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	28	28	28	56	26	26	56	52	52
g / C, Green / Cycle	0.23	0.23	0.23	0.45	0.21	0.21	0.45	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.10	0.17	0.01	0.00	0.19	0.10	0.36	0.11	0.11
s, saturation flow rate [veh/h]	1787	2813	1783	1020	3560	1589	1220	1870	1865
c, Capacity [veh/h]	405	638	404	472	748	334	514	778	776
d1, Uniform Delay [s]	41.34	45.31	37.68	19.23	48.12	43.14	30.83	23.86	23.86
k, delay calibration	0.50	0.50	0.50	0.11	0.11	0.11	0.43	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.20	8.77	0.16	0.00	4.32	0.97	14.17	0.17	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.77	0.03	0.00	0.90	0.46	0.85	0.26	0.26
d, Delay for Lane Group [s/veh]	44.54	54.08	37.84	19.23	52.44	44.11	45.00	24.03	24.03
Lane Group LOS	D	D	D	B	D	D	D	C	C
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.89	7.93	0.36	0.02	10.65	4.22	11.42	3.90	3.89
50th-Percentile Queue Length [ft/ln]	122.35	198.13	8.91	0.41	266.37	105.41	285.61	97.50	97.25
95th-Percentile Queue Length [veh/ln]	8.52	12.54	0.64	0.03	16.01	7.58	16.97	7.02	7.00
95th-Percentile Queue Length [ft/ln]	213.06	313.55	16.03	0.74	400.19	189.60	424.19	175.50	175.05

Movement, Approach, & Intersection Results

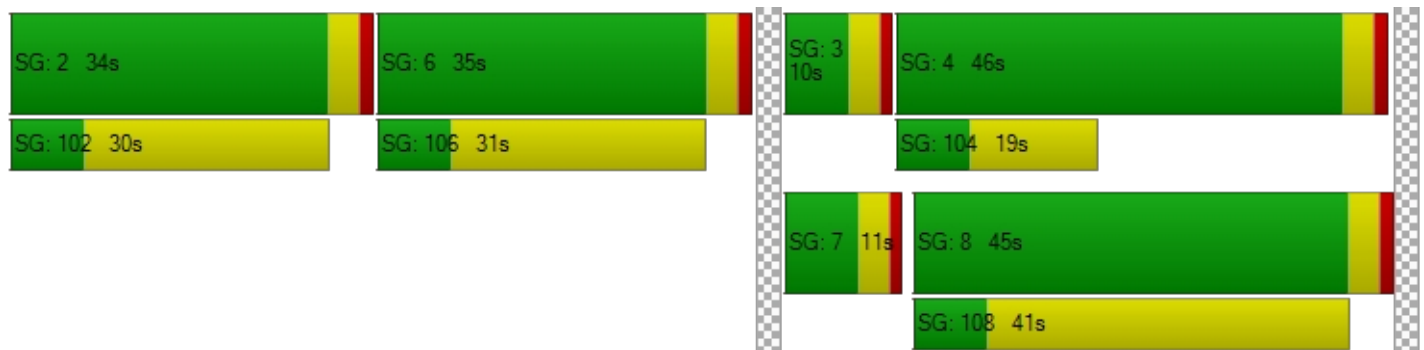
d_M, Delay for Movement [s/veh]	44.54	44.54	54.08	37.84	37.84	37.84	19.23	52.44	44.11	45.00	24.03	24.03
Movement LOS	D	D	D	D	D	D	B	D	D	D	C	C
d_A, Approach Delay [s/veh]	51.62			37.84			50.87			35.03		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	45.35											
Intersection LOS	D											
Intersection V/C	0.645											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.99	51.99	51.99	51.99
I_p,int, Pedestrian LOS Score for Intersectio	2.595	1.746	2.693	2.706
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	496	480	656	672
d_b, Bicycle Delay [s]	35.35	36.11	28.23	27.57
I_b,int, Bicycle LOS Score for Intersection	2.654	1.583	2.242	2.248
Bicycle LOS	B	A	B	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: Mountain Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.541

Intersection Setup

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	115.00	90.00	100.00	100.00	180.00	100.00	100.00	110.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	72	52	166	44	31	37	54	929	70	98	683	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	52	166	44	31	37	54	929	70	98	683	63
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	14	45	12	8	10	15	253	19	27	186	17
Total Analysis Volume [veh/h]	78	57	181	48	34	40	59	1012	76	107	744	69
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	28	45	0	10	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	16	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	42	42	42	42	5	30	30	6	31	31
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.05	0.33	0.33	0.07	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.09	0.11	0.04	0.04	0.03	0.29	0.29	0.06	0.22	0.22
s, saturation flow rate [veh/h]	1424	1589	1142	1707	1781	1870	1824	1781	1870	1815
c, Capacity [veh/h]	730	745	493	800	94	618	603	121	646	627
d1, Uniform Delay [s]	14.83	14.35	19.15	13.29	41.80	28.60	28.61	41.64	24.74	24.74
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.20	0.20	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	0.77	0.39	0.23	6.80	8.20	8.44	18.65	1.06	1.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.18	0.24	0.10	0.09	0.63	0.89	0.89	0.89	0.64	0.64
d, Delay for Lane Group [s/veh]	15.39	15.12	19.54	13.52	48.60	36.80	37.04	60.29	25.79	25.83
Lane Group LOS	B	B	B	B	D	D	D	E	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.75	2.28	0.71	0.85	1.45	12.22	11.97	2.95	7.32	7.11
50th-Percentile Queue Length [ft/ln]	43.85	57.08	17.72	21.37	36.19	305.47	299.32	73.79	183.12	177.87
95th-Percentile Queue Length [veh/ln]	3.16	4.11	1.28	1.54	2.61	17.95	17.65	5.31	11.76	11.49
95th-Percentile Queue Length [ft/ln]	78.93	102.74	31.89	38.47	65.14	448.79	441.19	132.82	294.08	287.23

Movement, Approach, & Intersection Results

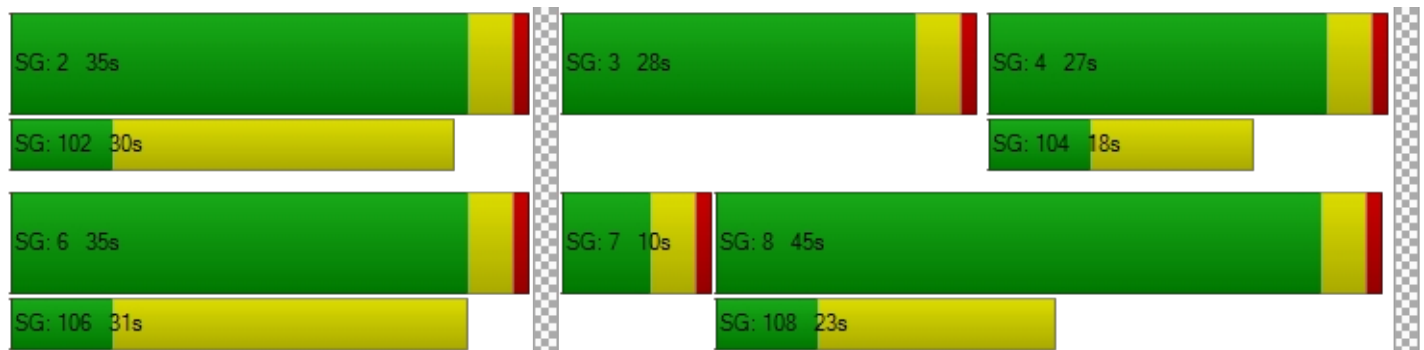
d_M, Delay for Movement [s/veh]	15.39	15.39	15.12	19.54	13.52	13.52	48.60	36.91	37.04	60.29	25.81	25.83
Movement LOS	B	B	B	B	B	B	D	D	D	E	C	C
d_A, Approach Delay [s/veh]	15.24			15.89			37.52			29.82		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	30.83											
Intersection LOS	C											
Intersection V/C	0.541											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.68	34.68	34.68	34.68
I_p,int, Pedestrian LOS Score for Intersectio	2.113	2.039	2.802	2.789
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	689	911	511
d_b, Bicycle Delay [s]	19.35	19.35	13.35	24.95
I_b,int, Bicycle LOS Score for Intersection	2.081	1.761	2.506	2.319
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Towne Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	47.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.892

Intersection Setup

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	80.00	140.00	100.00	100.00	200.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	234	830	261	211	422	123	274	823	196	261	737	188
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	234	830	261	211	422	123	274	823	196	261	737	188
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	216	68	55	110	32	71	215	51	68	192	49
Total Analysis Volume [veh/h]	244	865	272	220	440	128	286	858	204	272	769	196
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	33	0	11	27	0	25	52	0	24	51	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	12	0	0	23	0	0	23	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	49	38	38	49	32	32	21	39	39	20	38	38
g / C, Green / Cycle	0.41	0.32	0.32	0.41	0.27	0.27	0.17	0.32	0.32	0.17	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.22	0.24	0.17	0.30	0.16	0.16	0.16	0.29	0.30	0.15	0.27	0.27
s, saturation flow rate [veh/h]	1130	3560	1589	734	1870	1727	1781	1870	1748	1781	1870	1741
c, Capacity [veh/h]	438	1134	506	281	503	465	312	601	562	298	586	545
d1, Uniform Delay [s]	25.73	36.85	33.65	30.61	38.11	38.13	48.68	39.08	39.23	49.17	38.62	38.69
k, delay calibration	0.35	0.50	0.50	0.50	0.50	0.50	0.19	0.27	0.27	0.17	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.58	4.88	4.05	19.22	4.94	5.37	16.58	12.33	14.17	15.23	7.27	8.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.76	0.54	0.78	0.59	0.59	0.92	0.91	0.92	0.91	0.85	0.86
d, Delay for Lane Group [s/veh]	29.31	41.73	37.70	49.84	43.05	43.50	65.26	51.41	53.40	64.40	45.88	46.75
Lane Group LOS	C	D	D	D	D	D	E	D	D	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.17	12.09	7.07	5.70	8.21	7.66	9.83	17.30	16.66	9.25	14.79	13.98
50th-Percentile Queue Length [ft/ln]	129.14	302.18	176.77	142.53	205.18	191.47	245.75	432.56	416.44	231.33	369.74	349.44
95th-Percentile Queue Length [veh/ln]	8.89	17.79	11.43	9.62	12.91	12.20	14.97	24.12	23.35	14.24	21.10	20.11
95th-Percentile Queue Length [ft/ln]	222.33	444.72	285.80	240.43	322.64	304.94	374.29	603.10	583.77	356.05	527.42	502.72

Movement, Approach, & Intersection Results

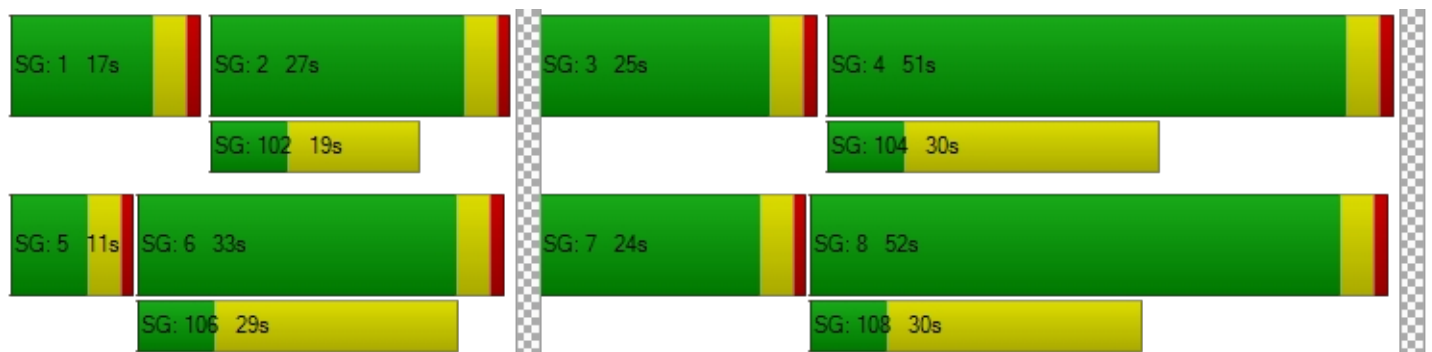
d_M, Delay for Movement [s/veh]	29.31	41.73	37.70	49.84	43.20	43.50	65.26	52.13	53.40	64.40	46.19	46.75
Movement LOS	C	D	D	D	D	D	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	38.74			45.10			55.11			50.28		
Approach LOS	D			D			E			D		
d_I, Intersection Delay [s/veh]	47.44											
Intersection LOS	D											
Intersection V/C	0.892											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.54	49.54	49.54	49.54
I_p,int, Pedestrian LOS Score for Intersectio	2.928	2.730	2.898	2.992
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	483	383	800	783
d_b, Bicycle Delay [s]	34.53	39.23	21.63	22.23
I_b,int, Bicycle LOS Score for Intersection	2.699	2.210	2.672	2.580
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Regis Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.108

Intersection Setup

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↶			↶ ↑ ↶			↶ ↑ ↶		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	90.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	43	72	1274	0	4	1233	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	43	72	1274	0	4	1233	39
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	11	19	328	0	1	317	10
Total Analysis Volume [veh/h]	0	0	0	0	0	44	74	1311	0	4	1269	40
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.11	0.14	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	14.86	12.99	0.00	0.00	11.93	0.00	0.00
Movement LOS						B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.36	0.49	0.00	0.00	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	8.97	12.21	0.00	0.00	0.58	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			14.86			0.69			0.04		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	0.61											
Intersection LOS	B											

Intersection Level Of Service Report

Intersection 5: Mountain Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.615

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	55.00	100.00	115.00	40.00	100.00	100.00	190.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	140	193	103	185	187	62	72	974	95	121	979	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	193	103	185	187	62	72	974	95	121	979	99
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	50	27	48	48	16	19	252	25	31	253	26
Total Analysis Volume [veh/h]	145	200	107	192	194	64	75	1008	98	125	1013	102
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	33	0	10	33	0	10	47	0	10	47	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	22	0	0	19	0	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	49	39	39	49	39	39	43	33	33	43	34	34
g / C, Green / Cycle	0.49	0.39	0.39	0.49	0.39	0.39	0.43	0.33	0.33	0.43	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.07	0.16	0.07	0.07	0.10	0.30	0.30	0.17	0.30	0.30
s, saturation flow rate [veh/h]	1231	1870	1589	1190	1870	1715	721	1870	1812	746	1870	1811
c, Capacity [veh/h]	652	719	611	607	719	660	274	624	605	284	638	618
d1, Uniform Delay [s]	14.56	21.23	20.33	15.19	20.41	20.45	21.71	31.74	31.76	22.66	31.16	31.19
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.24	0.24	0.11	0.24	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	0.96	0.62	1.37	0.57	0.64	0.54	10.14	10.54	1.07	8.95	9.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.28	0.18	0.32	0.18	0.19	0.27	0.90	0.90	0.44	0.89	0.89
d, Delay for Lane Group [s/veh]	14.73	22.19	20.95	16.56	20.98	21.09	22.24	41.88	42.30	23.73	40.11	40.59
Lane Group LOS	B	C	C	B	C	C	C	D	D	C	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.83	3.37	1.73	2.69	2.15	2.03	1.05	14.30	13.95	1.81	14.10	13.77
50th-Percentile Queue Length [ft/ln]	45.79	84.29	43.37	67.14	53.66	50.77	26.16	357.41	348.71	45.28	352.60	344.36
95th-Percentile Queue Length [veh/ln]	3.30	6.07	3.12	4.83	3.86	3.66	1.88	20.50	20.07	3.26	20.26	19.86
95th-Percentile Queue Length [ft/ln]	82.42	151.73	78.06	120.84	96.59	91.38	47.09	512.44	501.84	81.51	506.58	496.53

Movement, Approach, & Intersection Results

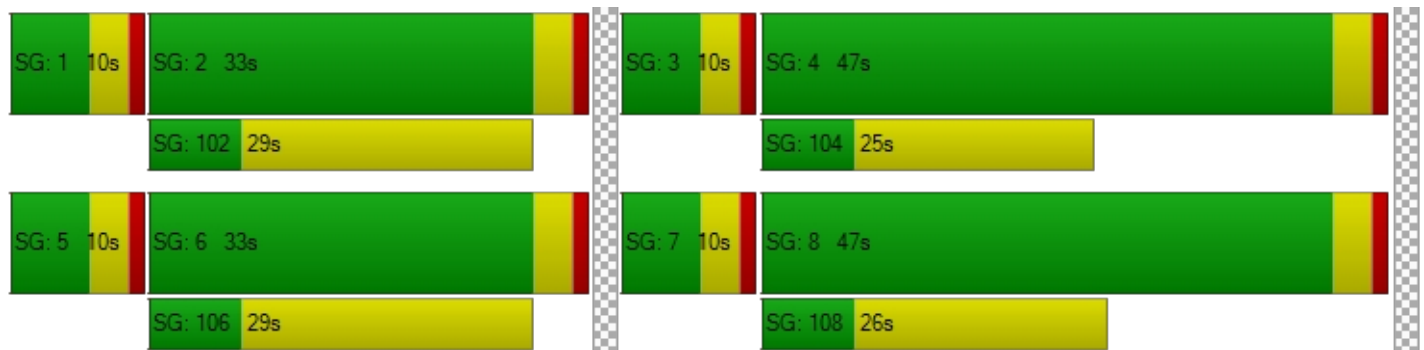
d_M, Delay for Movement [s/veh]	14.73	22.19	20.95	16.56	21.01	21.09	22.24	42.07	42.30	23.73	40.32	40.59
Movement LOS	B	C	C	B	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	19.51			19.12			40.83			38.67		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	34.18											
Intersection LOS	C											
Intersection V/C	0.615											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	39.64			39.64			39.64			39.64		
I_p,int, Pedestrian LOS Score for Intersectio	2.537			2.505			2.857			2.912		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	580			580			859			859		
d_b, Bicycle Delay [s]	25.24			25.24			16.27			16.27		
I_b,int, Bicycle LOS Score for Intersection	2.305			1.931			2.534			2.583		
Bicycle LOS	B			A			B			B		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Towne Avenue (NS) at Amador Street/Richbrook Drive (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.502

Intersection Setup

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	60.00	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Base Volume Input [veh/h]	18	1471	7	39	1211	40	40	0	18	4	1	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1471	7	39	1211	40	40	0	18	4	1	42
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	393	2	10	324	11	11	0	5	1	0	11
Total Analysis Volume [veh/h]	19	1573	7	42	1295	43	43	0	19	4	1	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	6	0	0	6	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	77	0	0	77	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	12	0	0	0	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	96	96	96	96	96	96	6	6
g / C, Green / Cycle	0.88	0.88	0.88	0.88	0.88	0.88	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.05	0.42	0.42	0.13	0.36	0.36	0.04	0.03
s, saturation flow rate [veh/h]	409	1870	1867	324	1870	1849	1446	1753
c, Capacity [veh/h]	387	1639	1637	314	1639	1621	129	124
d1, Uniform Delay [s]	2.60	1.45	1.45	3.43	1.31	1.31	51.77	51.12
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	1.02	1.02	0.88	0.76	0.77	2.78	2.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.48	0.48	0.13	0.41	0.41	0.48	0.40
d, Delay for Lane Group [s/veh]	2.84	2.47	2.47	4.32	2.07	2.08	54.55	53.22
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.10	1.71	1.71	0.28	1.30	1.29	1.79	1.42
50th-Percentile Queue Length [ft/ln]	2.45	42.71	42.71	7.07	32.52	32.35	44.74	35.44
95th-Percentile Queue Length [veh/ln]	0.18	3.07	3.08	0.51	2.34	2.33	3.22	2.55
95th-Percentile Queue Length [ft/ln]	4.41	76.87	76.88	12.72	58.53	58.23	80.53	63.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.84	2.47	2.47	4.32	2.07	2.08	54.55	54.55	54.55	53.22	53.22	53.22
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	2.47			2.14			54.55			53.22		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	4.19											
Intersection LOS	A											
Intersection V/C	0.502											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			11.0			11.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			44.54			44.54			0.00		
I_p,int, Pedestrian LOS Score for Intersectio	0.000			3.018			1.812			0.000		
Crosswalk LOS	F			C			A			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1328			1328			527			527		
d_b, Bicycle Delay [s]	6.22			6.22			29.81			29.81		
I_b,int, Bicycle LOS Score for Intersection	2.879			2.698			1.662			1.642		
Bicycle LOS	C			B			A			A		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix F

Project Opening Year (2025) With Cumulative Projects
With Project Conditions
LOS Analysis Worksheets

Intersection Level Of Service Report
Intersection 1: Towne Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	134.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.694

Intersection Setup

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	135.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	70.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	239	24	438	13	31	13	5	394	188	862	481	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	239	24	438	13	31	13	5	394	188	862	481	5
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	7	120	4	8	4	1	108	51	235	131	1
Total Analysis Volume [veh/h]	261	26	478	14	34	14	5	430	205	941	525	5
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	34	0	10	45	0	11	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	34	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	R	L	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	30	30	30	53	19	19	53	48	48
g / C, Green / Cycle	0.24	0.24	0.24	0.42	0.15	0.15	0.42	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.16	0.17	0.03	0.01	0.12	0.13	0.68	0.14	0.14
s, saturation flow rate [veh/h]	1789	2813	1779	926	3560	1589	1388	1870	1864
c, Capacity [veh/h]	430	676	427	384	543	242	583	716	714
d1, Uniform Delay [s]	42.99	43.48	37.39	21.57	51.09	51.57	39.54	27.74	27.74
k, delay calibration	0.50	0.50	0.50	0.11	0.11	0.11	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.00	6.15	0.71	0.01	2.66	8.14	284.27	0.32	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.71	0.15	0.01	0.79	0.85	1.61	0.37	0.37
d, Delay for Lane Group [s/veh]	50.98	49.62	38.11	21.58	53.75	59.70	323.81	28.06	28.06
Lane Group LOS	D	D	D	C	D	E	F	C	C
Critical Lane Group	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	8.99	7.34	1.59	0.09	6.69	6.80	60.87	5.79	5.78
50th-Percentile Queue Length [ft/ln]	224.75	183.62	39.87	2.18	167.36	169.94	1521.83	144.72	144.40
95th-Percentile Queue Length [veh/ln]	13.91	11.79	2.87	0.16	10.94	11.07	95.58	9.73	9.72
95th-Percentile Queue Length [ft/ln]	347.69	294.74	71.76	3.93	273.44	276.83	2389.52	243.37	242.93

Movement, Approach, & Intersection Results

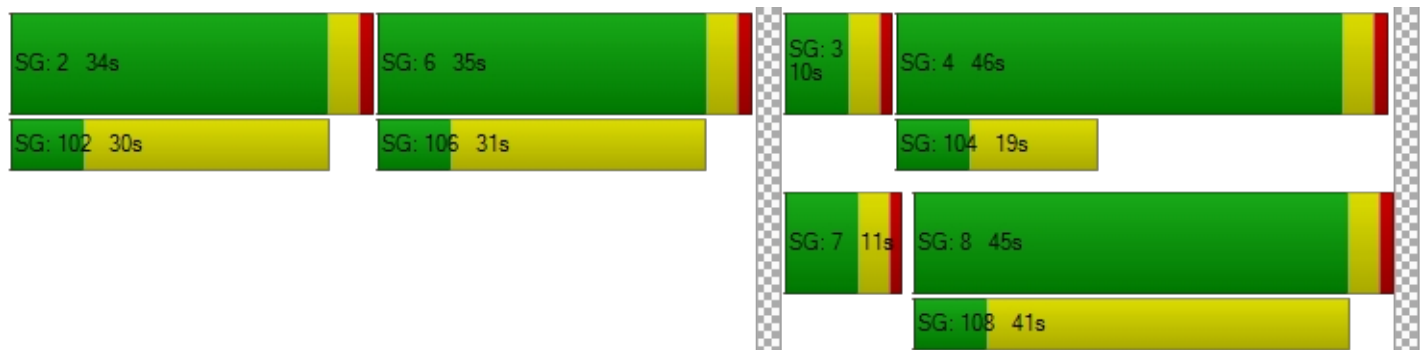
d_M, Delay for Movement [s/veh]	50.98	50.98	49.62	38.11	38.11	38.11	21.58	53.75	59.70	323.81	28.06	28.06
Movement LOS	D	D	D	D	D	D	C	D	E	F	C	C
d_A, Approach Delay [s/veh]	50.13			38.11			55.40			217.25		
Approach LOS	D			D			E			F		
d_I, Intersection Delay [s/veh]	134.70											
Intersection LOS	F											
Intersection V/C	0.694											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.99	51.99	51.99	51.99
I_p,int, Pedestrian LOS Score for Intersectio	3.273	1.781	2.703	2.782
Crosswalk LOS	C	A	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	496	480	656	672
d_b, Bicycle Delay [s]	35.35	36.11	28.23	27.57
I_b,int, Bicycle LOS Score for Intersection	2.822	1.662	2.088	2.773
Bicycle LOS	C	A	B	C

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-







Intersection Level Of Service Report

Intersection 2: Mountain Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	33.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

Intersection Setup

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	115.00	90.00	100.00	100.00	180.00	100.00	100.00	110.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	91	26	125	93	62	119	71	736	99	142	1003	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	26	125	93	62	119	71	736	99	142	1003	49
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	7	35	26	18	34	20	209	28	40	285	14
Total Analysis Volume [veh/h]	103	30	142	106	70	135	81	835	112	161	1138	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	10	39	0	16	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	16	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	40	40	40	40	5	28	28	10	32	32
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.06	0.31	0.31	0.11	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.13	0.09	0.09	0.12	0.05	0.26	0.26	0.09	0.32	0.32
s, saturation flow rate [veh/h]	1022	1589	1213	1675	1781	1870	1794	1781	1870	1839
c, Capacity [veh/h]	529	713	390	751	107	575	552	197	670	659
d1, Uniform Delay [s]	20.03	15.06	27.37	15.62	41.68	29.11	29.11	39.16	27.34	27.37
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.19	0.19	0.11	0.24	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.14	0.63	1.72	0.90	10.21	5.65	5.88	7.97	9.35	9.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.20	0.27	0.27	0.75	0.84	0.84	0.82	0.90	0.90
d, Delay for Lane Group [s/veh]	21.17	15.69	29.09	16.52	51.89	34.76	35.00	47.12	36.69	37.08
Lane Group LOS	C	B	C	B	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.12	1.82	2.01	2.73	2.06	10.31	9.93	3.87	13.41	13.29
50th-Percentile Queue Length [ft/ln]	53.08	45.57	50.30	68.29	51.41	257.87	248.25	96.65	335.15	332.33
95th-Percentile Queue Length [veh/ln]	3.82	3.28	3.62	4.92	3.70	15.58	15.10	6.96	19.41	19.27
95th-Percentile Queue Length [ft/ln]	95.55	82.03	90.55	122.93	92.54	389.55	377.45	173.97	485.27	481.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.17	21.17	15.69	29.09	16.52	16.52	51.89	34.86	35.00	47.12	36.87	37.08
Movement LOS	C	C	B	C	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	18.34			20.81			36.22			38.10		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	33.81											
Intersection LOS	C											
Intersection V/C	0.574											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.70	34.70	34.70	34.70
I_p,int, Pedestrian LOS Score for Intersectio	2.141	2.095	2.915	2.926
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	689	777	911
d_b, Bicycle Delay [s]	19.36	19.36	16.83	13.36
I_b,int, Bicycle LOS Score for Intersection	2.013	2.073	2.408	2.677
Bicycle LOS	B	B	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Towne Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	51.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.943

Intersection Setup

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	80.00	140.00	100.00	100.00	200.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	254	786	343	291	885	175	145	431	164	265	590	151
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	786	343	291	885	175	145	431	164	265	590	151
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	74	228	100	85	257	51	42	125	48	77	172	44
Total Analysis Volume [veh/h]	295	914	399	338	1029	203	169	501	191	308	686	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	40	0	16	41	0	16	34	0	25	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	12	0	0	23	0	0	23	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57	41	41	57	42	42	12	25	25	21	34	34
g / C, Green / Cycle	0.50	0.36	0.36	0.50	0.37	0.37	0.10	0.22	0.22	0.18	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.39	0.26	0.25	0.45	0.34	0.34	0.09	0.19	0.19	0.17	0.24	0.24
s, saturation flow rate [veh/h]	758	3560	1589	755	1870	1765	1781	1870	1696	1781	1870	1740
c, Capacity [veh/h]	317	1269	566	373	682	644	188	405	367	326	550	511
d1, Uniform Delay [s]	34.20	32.10	31.86	25.20	34.95	35.33	50.91	43.86	43.88	46.48	37.69	37.73
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.26	0.26	0.20	0.24	0.25
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	35.52	3.56	7.19	28.07	19.52	23.26	14.19	15.23	16.61	21.00	6.40	6.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	0.72	0.70	0.91	0.92	0.94	0.90	0.90	0.90	0.95	0.81	0.81
d, Delay for Lane Group [s/veh]	69.72	35.66	39.05	53.27	54.46	58.59	65.10	59.09	60.49	67.48	44.10	44.71
Lane Group LOS	E	D	D	D	D	E	E	E	E	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.80	11.49	10.54	8.41	20.11	20.16	5.54	11.69	10.76	10.56	12.50	11.76
50th-Percentile Queue Length [ft/ln]	194.91	287.22	263.57	210.37	502.73	504.04	138.61	292.17	268.92	263.90	312.55	293.89
95th-Percentile Queue Length [veh/ln]	12.38	17.05	15.87	13.17	27.46	27.53	9.41	17.29	16.14	15.88	18.30	17.38
95th-Percentile Queue Length [ft/ln]	309.40	426.20	396.70	329.31	686.59	688.14	235.15	432.33	403.39	397.10	457.51	434.46

Movement, Approach, & Intersection Results

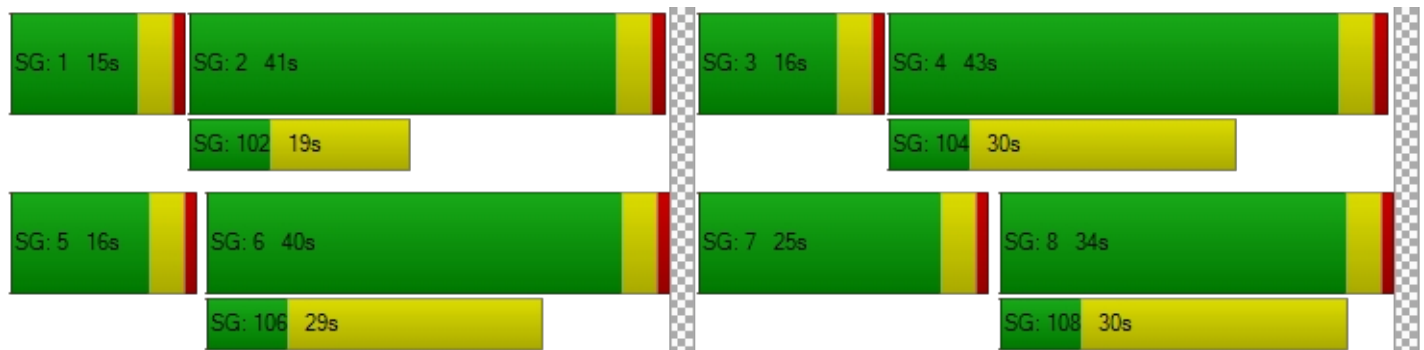
d_M, Delay for Movement [s/veh]	69.72	35.66	39.05	53.27	56.07	58.59	65.10	59.48	60.49	67.48	44.31	44.71
Movement LOS	E	D	D	D	E	E	E	E	E	E	D	D
d_A, Approach Delay [s/veh]	42.75			55.79			60.81			50.47		
Approach LOS	D			E			E			D		
d_I, Intersection Delay [s/veh]	51.40											
Intersection LOS	D											
Intersection V/C	0.943											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.07	47.07	47.07	47.07
I_p,int, Pedestrian LOS Score for Intersectio	3.042	2.863	2.871	3.036
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	626	643	521	678
d_b, Bicycle Delay [s]	27.17	26.49	31.45	25.15
I_b,int, Bicycle LOS Score for Intersection	2.886	2.855	2.270	2.525
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Regis Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.132

Intersection Setup

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↶			↶ ↑ ↶			↶ ↑ ↶		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	90.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	48	90	1445	0	0	1100	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	48	90	1445	0	0	1100	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	14	26	415	0	0	316	6
Total Analysis Volume [veh/h]	0	0	0	0	0	55	103	1659	0	0	1263	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.13	0.19	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	14.98	13.34	0.00	0.00	14.37	0.00	0.00
Movement LOS						B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.45	0.71	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	11.33	17.68	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			14.98			0.78			0.00		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	0.71											
Intersection LOS	B											

Intersection Level Of Service Report

Intersection 5: Mountain Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	40.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.866

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	55.00	100.00	115.00	40.00	100.00	100.00	190.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	110	293	175	193	494	92	93	737	126	268	788	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	293	175	193	494	92	93	737	126	268	788	82
Peak Hour Factor	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	98	59	65	166	31	31	248	42	90	265	28
Total Analysis Volume [veh/h]	148	394	235	259	664	124	125	991	169	360	1059	110
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	33	0	11	33	0	11	55	0	21	65	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	22	0	0	19	0	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	49	38	38	49	38	38	63	42	42	63	52	52
g / C, Green / Cycle	0.41	0.32	0.32	0.41	0.32	0.32	0.52	0.35	0.35	0.52	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.17	0.21	0.15	0.26	0.22	0.22	0.19	0.32	0.32	0.41	0.32	0.32
s, saturation flow rate [veh/h]	889	1870	1589	978	1870	1769	654	1870	1776	877	1870	1809
c, Capacity [veh/h]	324	595	506	345	595	563	301	650	618	399	816	790
d1, Uniform Delay [s]	25.50	35.36	32.75	32.50	35.62	35.63	20.70	37.43	37.52	33.80	27.88	28.01
k, delay calibration	0.21	0.50	0.50	0.50	0.50	0.50	0.28	0.28	0.28	0.32	0.18	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.90	5.72	3.05	13.93	6.18	6.52	2.35	12.37	13.49	18.75	2.10	2.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.66	0.46	0.75	0.68	0.68	0.42	0.91	0.92	0.90	0.72	0.73
d, Delay for Lane Group [s/veh]	27.41	41.08	35.80	46.43	41.80	42.15	23.05	49.80	51.01	52.56	29.98	30.33
Lane Group LOS	C	D	D	D	D	D	C	D	D	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.88	10.85	5.90	6.42	11.27	10.72	1.95	18.63	18.01	7.96	14.21	14.01
50th-Percentile Queue Length [ft/ln]	71.94	271.13	147.45	160.43	281.76	267.98	48.70	465.87	450.33	199.01	355.28	350.15
95th-Percentile Queue Length [veh/ln]	5.18	16.25	9.88	10.57	16.78	16.09	3.51	25.71	24.97	12.59	20.39	20.14
95th-Percentile Queue Length [ft/ln]	129.50	406.16	247.03	264.29	419.41	402.22	87.66	642.86	624.34	314.68	509.84	503.59

Movement, Approach, & Intersection Results

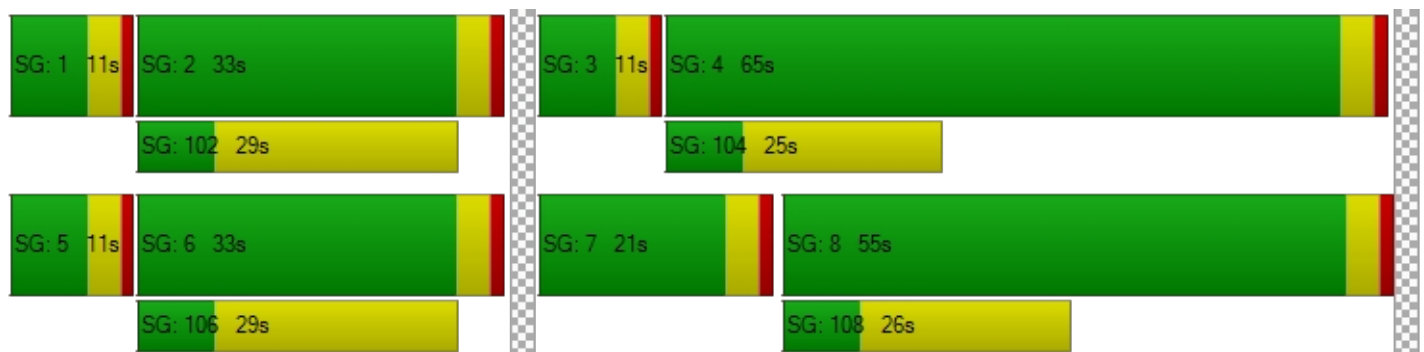
d_M, Delay for Movement [s/veh]	27.41	41.08	35.80	46.43	41.94	42.15	23.05	50.28	51.01	52.56	30.13	30.33
Movement LOS	C	D	D	D	D	D	C	D	D	D	C	C
d_A, Approach Delay [s/veh]	36.88			43.07			47.73			35.43		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	40.81											
Intersection LOS	D											
Intersection V/C	0.866											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.52	49.52	49.52	49.52
I_p,int, Pedestrian LOS Score for Intersectio	2.884	2.721	2.894	3.036
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	483	483	850	1016
d_b, Bicycle Delay [s]	34.52	34.52	19.85	14.52
I_b,int, Bicycle LOS Score for Intersection	2.842	2.423	2.620	2.821
Bicycle LOS	C	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Towne Avenue (NS) at Amador Street/Richbrook Drive (EW)

Control Type:	Signalized	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.757

Intersection Setup

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	60.00	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Base Volume Input [veh/h]	11	1609	15	36	2036	22	86	5	46	7	2	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	1609	15	36	2036	22	86	5	46	7	2	51
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	438	4	10	554	6	23	1	13	2	1	14
Total Analysis Volume [veh/h]	12	1751	16	39	2215	24	94	5	50	8	2	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	6	0	0	6	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	87	0	0	87	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	12	0	0	0	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	97	97	97	97	97	97	15	15
g / C, Green / Cycle	0.81	0.81	0.81	0.81	0.81	0.81	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.07	0.47	0.47	0.14	0.60	0.60	0.11	0.04
s, saturation flow rate [veh/h]	170	1870	1864	270	1870	1863	1407	1703
c, Capacity [veh/h]	148	1519	1514	230	1519	1514	219	240
d1, Uniform Delay [s]	15.03	4.00	4.01	9.65	5.25	5.28	51.87	48.26
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.07	1.63	1.65	1.59	3.23	3.29	3.69	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.58	0.58	0.17	0.74	0.74	0.68	0.27
d, Delay for Lane Group [s/veh]	16.10	5.63	5.66	11.24	8.48	8.57	55.57	48.87
Lane Group LOS	B	A	A	B	A	A	E	D
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.21	6.37	6.38	0.53	10.82	10.89	4.62	1.83
50th-Percentile Queue Length [ft/ln]	5.37	159.32	159.55	13.37	270.50	272.31	115.60	45.66
95th-Percentile Queue Length [veh/ln]	0.39	10.51	10.52	0.96	16.21	16.30	8.15	3.29
95th-Percentile Queue Length [ft/ln]	9.66	262.82	263.12	24.07	405.36	407.62	203.77	82.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.10	5.64	5.66	11.24	8.53	8.57	55.57	55.57	55.57	48.87	48.87	48.87
Movement LOS	B	A	A	B	A	A	E	E	E	D	D	D
d_A, Approach Delay [s/veh]	5.71			8.57			55.57			48.87		
Approach LOS	A			A			E			D		
d_I, Intersection Delay [s/veh]	9.64											
Intersection LOS	A											
Intersection V/C	0.757											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			11.0			11.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			49.48			49.48			0.00		
I_p,int, Pedestrian LOS Score for Intersectio	0.000			3.279			1.837			0.000		
Crosswalk LOS	F			C			A			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1384			1384			484			484		
d_b, Bicycle Delay [s]	5.69			5.69			34.48			34.48		
I_b,int, Bicycle LOS Score for Intersection	3.027			3.439			1.805			1.667		
Bicycle LOS	C			C			A			A		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 7: Project Access No.1 (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.023

Intersection Setup

Name	Project Access No.1		Foothill Boulevard		Foothill Boulevard	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↕	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Access No.1		Foothill Boulevard		Foothill Boulevard	
Base Volume Input [veh/h]	0	10	1052	4	0	1000
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	10	1052	4	0	1000
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	277	1	0	263
Total Analysis Volume [veh/h]	0	11	1107	4	0	1053
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	12.76	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.07	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.78	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.76		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 8: Towne Avenue (NS) at Project Access No.2 (EW)

Control Type:	Two-way stop	Delay (sec / veh):	18.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

Intersection Setup

Name	Towne Avenue		Towne Avenue		Project Access No.2	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	⇈		⇈		⇈	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Towne Avenue		Towne Avenue		Project Access No.2	
Base Volume Input [veh/h]	1744	4	0	1316	0	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1744	4	0	1316	0	9
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	459	1	0	346	0	2
Total Analysis Volume [veh/h]	1836	4	0	1385	0	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	18.63
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.10
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	2.55
d_A, Approach Delay [s/veh]	0.00		0.00		18.63	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Towne Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	45.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.645

Intersection Setup

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	135.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	70.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	153	13	478	3	8	3	1	654	148	425	383	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	153	13	478	3	8	3	1	654	148	425	383	3
Peak Hour Factor	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	3	123	1	2	1	0	168	38	109	99	1
Total Analysis Volume [veh/h]	158	13	492	3	8	3	1	674	152	438	394	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	34	0	10	45	0	11	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	34	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	R	L	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	28	28	28	56	26	26	56	52	52
g / C, Green / Cycle	0.23	0.23	0.23	0.45	0.21	0.21	0.45	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.10	0.17	0.01	0.00	0.19	0.10	0.36	0.11	0.11
s, saturation flow rate [veh/h]	1787	2813	1783	1020	3560	1589	1220	1870	1865
c, Capacity [veh/h]	405	638	404	472	748	334	514	778	776
d1, Uniform Delay [s]	41.34	45.31	37.68	19.23	48.12	43.14	30.83	23.86	23.86
k, delay calibration	0.50	0.50	0.50	0.11	0.11	0.11	0.43	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.20	8.77	0.16	0.00	4.32	0.97	14.17	0.17	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.77	0.03	0.00	0.90	0.46	0.85	0.26	0.26
d, Delay for Lane Group [s/veh]	44.54	54.08	37.84	19.23	52.44	44.11	45.00	24.03	24.03
Lane Group LOS	D	D	D	B	D	D	D	C	C
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.89	7.93	0.36	0.02	10.65	4.22	11.42	3.90	3.89
50th-Percentile Queue Length [ft/ln]	122.35	198.13	8.91	0.41	266.37	105.41	285.61	97.50	97.25
95th-Percentile Queue Length [veh/ln]	8.52	12.54	0.64	0.03	16.01	7.58	16.97	7.02	7.00
95th-Percentile Queue Length [ft/ln]	213.06	313.55	16.03	0.74	400.19	189.60	424.19	175.50	175.05

Movement, Approach, & Intersection Results

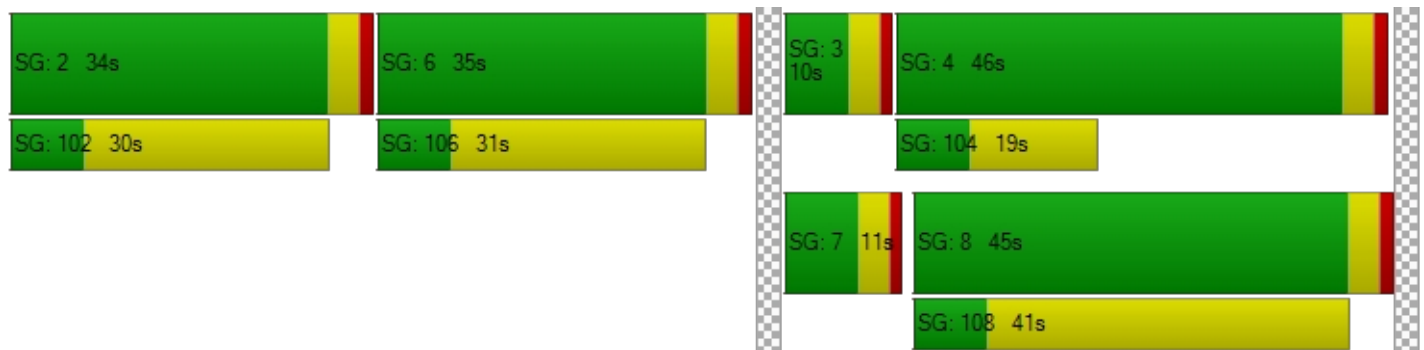
d_M, Delay for Movement [s/veh]	44.54	44.54	54.08	37.84	37.84	37.84	19.23	52.44	44.11	45.00	24.03	24.03
Movement LOS	D	D	D	D	D	D	B	D	D	D	C	C
d_A, Approach Delay [s/veh]	51.62			37.84			50.87			35.03		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	45.35											
Intersection LOS	D											
Intersection V/C	0.645											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.99	51.99	51.99	51.99
I_p,int, Pedestrian LOS Score for Intersectio	2.595	1.746	2.693	2.706
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	496	480	656	672
d_b, Bicycle Delay [s]	35.35	36.11	28.23	27.57
I_b,int, Bicycle LOS Score for Intersection	2.654	1.583	2.242	2.248
Bicycle LOS	B	A	B	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: Mountain Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.541

Intersection Setup

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	115.00	90.00	100.00	100.00	180.00	100.00	100.00	110.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	72	52	166	44	31	37	54	929	70	98	683	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	52	166	44	31	37	54	929	70	98	683	63
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	14	45	12	8	10	15	253	19	27	186	17
Total Analysis Volume [veh/h]	78	57	181	48	34	40	59	1012	76	107	744	69
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	28	45	0	10	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	16	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	42	42	42	42	5	30	30	6	31	31
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.05	0.33	0.33	0.07	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.09	0.11	0.04	0.04	0.03	0.29	0.29	0.06	0.22	0.22
s, saturation flow rate [veh/h]	1424	1589	1142	1707	1781	1870	1824	1781	1870	1815
c, Capacity [veh/h]	730	745	493	800	94	618	603	121	646	627
d1, Uniform Delay [s]	14.83	14.35	19.15	13.29	41.80	28.60	28.61	41.64	24.74	24.74
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.20	0.20	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	0.77	0.39	0.23	6.80	8.20	8.44	18.65	1.06	1.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.18	0.24	0.10	0.09	0.63	0.89	0.89	0.89	0.64	0.64
d, Delay for Lane Group [s/veh]	15.39	15.12	19.54	13.52	48.60	36.80	37.04	60.29	25.79	25.83
Lane Group LOS	B	B	B	B	D	D	D	E	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.75	2.28	0.71	0.85	1.45	12.22	11.97	2.95	7.32	7.11
50th-Percentile Queue Length [ft/ln]	43.85	57.08	17.72	21.37	36.19	305.47	299.32	73.79	183.12	177.87
95th-Percentile Queue Length [veh/ln]	3.16	4.11	1.28	1.54	2.61	17.95	17.65	5.31	11.76	11.49
95th-Percentile Queue Length [ft/ln]	78.93	102.74	31.89	38.47	65.14	448.79	441.19	132.82	294.08	287.23

Movement, Approach, & Intersection Results

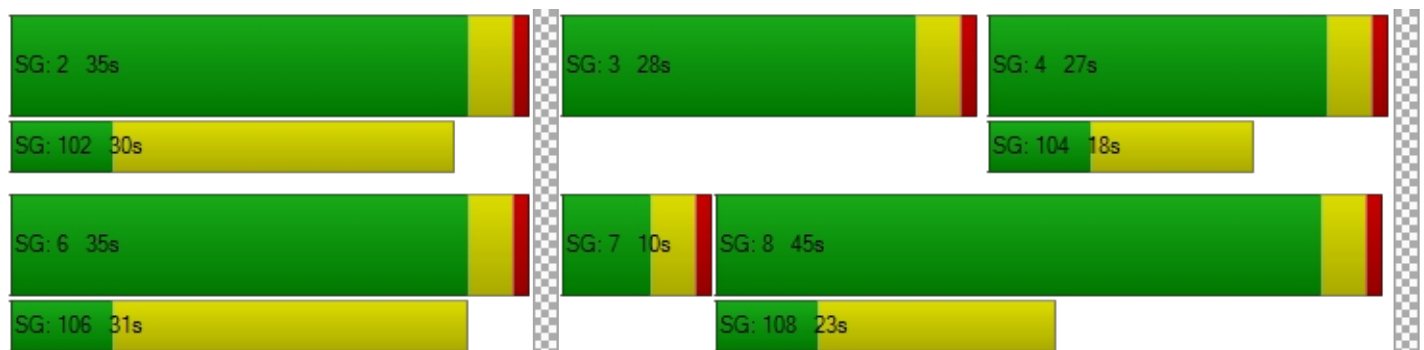
d_M, Delay for Movement [s/veh]	15.39	15.39	15.12	19.54	13.52	13.52	48.60	36.91	37.04	60.29	25.81	25.83
Movement LOS	B	B	B	B	B	B	D	D	D	E	C	C
d_A, Approach Delay [s/veh]	15.24			15.89			37.52			29.82		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	30.83											
Intersection LOS	C											
Intersection V/C	0.541											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.68	34.68	34.68	34.68
I_p,int, Pedestrian LOS Score for Intersectio	2.113	2.039	2.802	2.789
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	689	911	511
d_b, Bicycle Delay [s]	19.35	19.35	13.35	24.95
I_b,int, Bicycle LOS Score for Intersection	2.081	1.761	2.506	2.319
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Towne Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	47.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.898

Intersection Setup

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	80.00	140.00	100.00	100.00	200.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	238	832	264	213	424	123	274	825	198	266	738	189
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	238	832	264	213	424	123	274	825	198	266	738	189
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	62	217	69	56	111	32	71	215	52	69	192	49
Total Analysis Volume [veh/h]	248	868	275	222	442	128	286	860	206	277	770	197
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	33	0	11	27	0	25	52	0	24	51	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	12	0	0	23	0	0	23	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	49	38	38	49	32	32	21	39	39	20	38	38
g / C, Green / Cycle	0.41	0.32	0.32	0.41	0.27	0.27	0.17	0.32	0.32	0.17	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.22	0.24	0.17	0.30	0.16	0.16	0.16	0.29	0.30	0.16	0.27	0.27
s, saturation flow rate [veh/h]	1130	3560	1589	732	1870	1728	1781	1870	1747	1781	1870	1741
c, Capacity [veh/h]	436	1130	504	280	501	463	312	603	564	298	588	547
d1, Uniform Delay [s]	25.92	37.02	33.85	31.05	38.26	38.28	48.68	39.00	39.17	49.34	38.51	38.59
k, delay calibration	0.36	0.50	0.50	0.50	0.50	0.50	0.19	0.27	0.28	0.17	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.87	5.04	4.19	20.31	5.05	5.49	16.58	12.39	14.27	17.90	7.20	8.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.77	0.55	0.79	0.59	0.59	0.92	0.91	0.92	0.93	0.85	0.85
d, Delay for Lane Group [s/veh]	29.79	42.05	38.04	51.36	43.31	43.77	65.26	51.39	53.43	67.24	45.72	46.60
Lane Group LOS	C	D	D	D	D	D	E	D	D	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.30	12.18	7.19	5.83	8.26	7.71	9.83	17.37	16.73	9.65	14.79	13.99
50th-Percentile Queue Length [ft/ln]	132.52	304.59	179.71	145.78	206.62	192.85	245.75	434.29	418.25	241.20	369.87	349.67
95th-Percentile Queue Length [veh/ln]	9.08	17.91	11.59	9.79	12.98	12.27	14.97	24.21	23.44	14.74	21.10	20.12
95th-Percentile Queue Length [ft/ln]	226.91	447.70	289.64	244.79	324.49	306.72	374.29	605.18	585.95	368.56	527.57	503.01

Movement, Approach, & Intersection Results

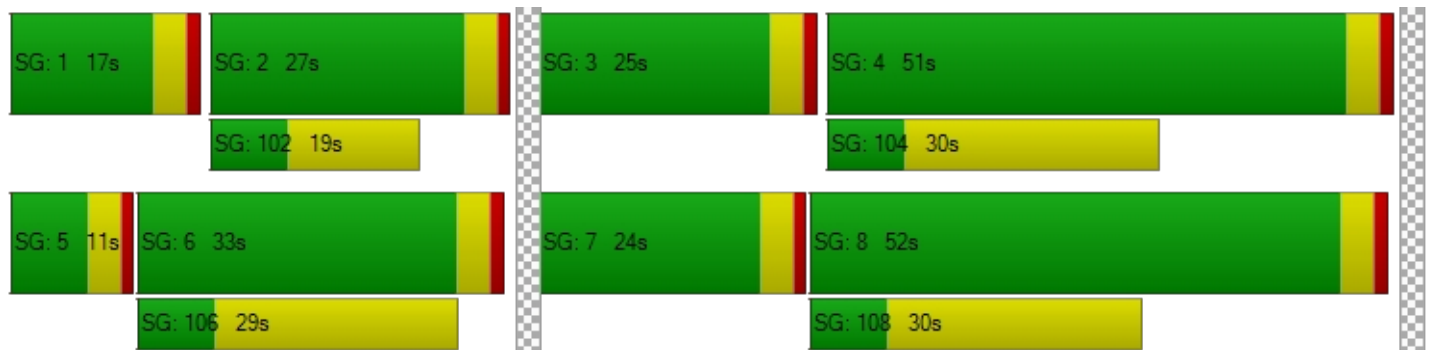
d_M, Delay for Movement [s/veh]	29.79	42.05	38.04	51.36	43.46	43.77	65.26	52.13	53.43	67.24	46.03	46.60
Movement LOS	C	D	D	D	D	D	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	39.07			45.72			55.11			50.84		
Approach LOS	D			D			E			D		
d_I, Intersection Delay [s/veh]	47.77											
Intersection LOS	D											
Intersection V/C	0.898											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.54	49.54	49.54	49.54
I_p,int, Pedestrian LOS Score for Intersectio	2.930	2.732	2.901	2.995
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	483	383	800	783
d_b, Bicycle Delay [s]	34.53	39.23	21.63	22.23
I_b,int, Bicycle LOS Score for Intersection	2.707	2.213	2.675	2.586
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Regis Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.108

Intersection Setup

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↶			↶ ↑ ↶			↶ ↑ ↶		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	90.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	43	76	1277	0	4	1237	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	43	76	1277	0	4	1237	39
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	11	20	328	0	1	318	10
Total Analysis Volume [veh/h]	0	0	0	0	0	44	78	1314	0	4	1273	40
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.11	0.15	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	14.89	13.09	0.00	0.00	11.95	0.00	0.00
Movement LOS						B	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.36	0.52	0.00	0.00	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	9.00	13.03	0.00	0.00	0.58	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			14.89			0.73			0.04		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	0.63											
Intersection LOS	B											

Intersection Level Of Service Report

Intersection 5: Mountain Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.616

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	55.00	100.00	115.00	40.00	100.00	100.00	190.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	140	193	103	185	187	62	72	976	95	121	981	99
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	193	103	185	187	62	72	976	95	121	981	99
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	50	27	48	48	16	19	253	25	31	254	26
Total Analysis Volume [veh/h]	145	200	107	192	194	64	75	1010	98	125	1016	102
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	33	0	10	33	0	10	47	0	10	47	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	22	0	0	19	0	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	49	39	39	49	39	39	44	33	33	44	34	34
g / C, Green / Cycle	0.49	0.38	0.38	0.49	0.38	0.38	0.43	0.33	0.33	0.43	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.07	0.16	0.07	0.07	0.10	0.30	0.30	0.17	0.30	0.30
s, saturation flow rate [veh/h]	1231	1870	1589	1190	1870	1715	720	1870	1813	745	1870	1811
c, Capacity [veh/h]	651	718	611	606	718	659	273	625	606	284	639	619
d1, Uniform Delay [s]	14.59	21.27	20.36	15.22	20.45	20.48	21.71	31.72	31.74	22.65	31.15	31.18
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.24	0.24	0.11	0.24	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	0.96	0.63	1.37	0.57	0.64	0.54	10.17	10.58	1.08	9.05	9.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.28	0.18	0.32	0.19	0.19	0.27	0.90	0.90	0.44	0.89	0.89
d, Delay for Lane Group [s/veh]	14.76	22.23	20.99	16.59	21.02	21.12	22.25	41.89	42.32	23.72	40.20	40.68
Lane Group LOS	B	C	C	B	C	C	C	D	D	C	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.83	3.38	1.74	2.69	2.15	2.03	1.05	14.33	13.98	1.81	14.16	13.83
50th-Percentile Queue Length [ft/ln]	45.85	84.38	43.41	67.22	53.72	50.82	26.13	358.14	349.46	45.24	353.99	345.80
95th-Percentile Queue Length [veh/ln]	3.30	6.08	3.13	4.84	3.87	3.66	1.88	20.53	20.11	3.26	20.33	19.93
95th-Percentile Queue Length [ft/ln]	82.53	151.89	78.15	121.00	96.69	91.48	47.04	513.32	502.75	81.43	508.27	498.28

Movement, Approach, & Intersection Results

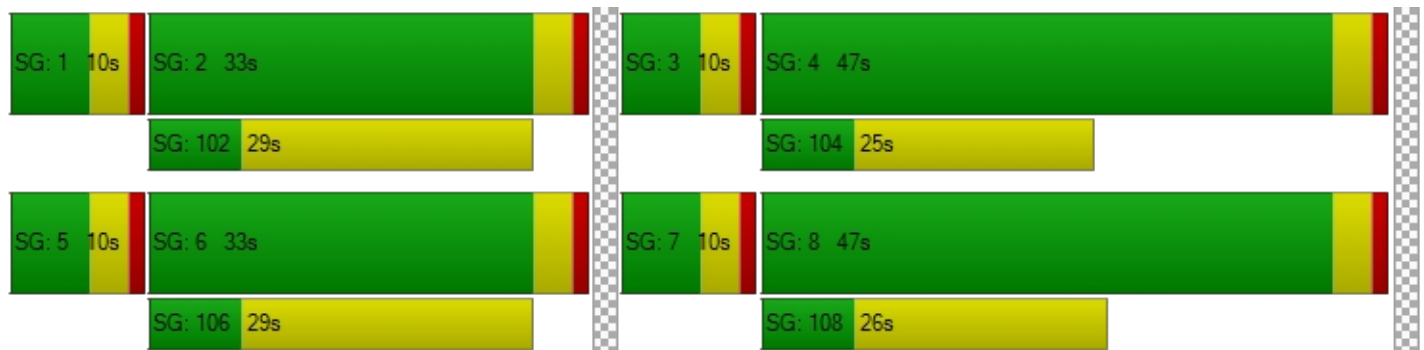
d_M, Delay for Movement [s/veh]	14.76	22.23	20.99	16.59	21.05	21.12	22.25	42.08	42.32	23.72	40.41	40.68
Movement LOS	B	C	C	B	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	19.54			19.16			40.84			38.76		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	34.24											
Intersection LOS	C											
Intersection V/C	0.616											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	39.64			39.64			39.64			39.64		
I_p,int, Pedestrian LOS Score for Intersectio	2.537			2.505			2.858			2.913		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	580			580			859			859		
d_b, Bicycle Delay [s]	25.24			25.24			16.27			16.27		
I_b,int, Bicycle LOS Score for Intersection	2.305			1.931			2.536			2.585		
Bicycle LOS	B			A			B			B		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Towne Avenue (NS) at Amador Street/Richbrook Drive (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

Intersection Setup

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	60.00	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Base Volume Input [veh/h]	18	1476	7	45	1215	40	40	0	18	4	1	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	1476	7	45	1215	40	40	0	18	4	1	42
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	395	2	12	325	11	11	0	5	1	0	11
Total Analysis Volume [veh/h]	19	1579	7	48	1299	43	43	0	19	4	1	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	6	0	0	6	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	77	0	0	77	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	12	0	0	0	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	96	96	96	96	96	96	6	6
g / C, Green / Cycle	0.88	0.88	0.88	0.88	0.88	0.88	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.05	0.42	0.42	0.15	0.36	0.36	0.04	0.03
s, saturation flow rate [veh/h]	407	1870	1867	322	1870	1849	1446	1753
c, Capacity [veh/h]	386	1639	1637	312	1639	1621	129	124
d1, Uniform Delay [s]	2.60	1.45	1.45	3.53	1.31	1.31	51.77	51.12
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	1.03	1.03	1.04	0.76	0.78	2.78	2.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.05	0.48	0.48	0.15	0.41	0.41	0.48	0.40
d, Delay for Lane Group [s/veh]	2.85	2.48	2.48	4.57	2.07	2.09	54.55	53.22
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.10	1.72	1.72	0.33	1.31	1.30	1.79	1.42
50th-Percentile Queue Length [ft/ln]	2.46	43.00	43.00	8.30	32.67	32.51	44.74	35.44
95th-Percentile Queue Length [veh/ln]	0.18	3.10	3.10	0.60	2.35	2.34	3.22	2.55
95th-Percentile Queue Length [ft/ln]	4.42	77.40	77.40	14.94	58.80	58.51	80.53	63.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.85	2.48	2.48	4.57	2.08	2.09	54.55	54.55	54.55	53.22	53.22	53.22
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	2.48			2.17			54.55			53.22		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	4.20											
Intersection LOS	A											
Intersection V/C	0.504											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			11.0			11.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			44.54			44.54			0.00		
I_p,int, Pedestrian LOS Score for Intersectio	0.000			3.020			1.812			0.000		
Crosswalk LOS	F			C			A			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1328			1328			527			527		
d_b, Bicycle Delay [s]	6.22			6.22			29.81			29.81		
I_b,int, Bicycle LOS Score for Intersection	2.884			2.706			1.662			1.642		
Bicycle LOS	C			B			A			A		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 7: Project Access No.1 (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name	Project Access No.1		Foothill Boulevard		Foothill Boulevard	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↕	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Access No.1		Foothill Boulevard		Foothill Boulevard	
Base Volume Input [veh/h]	0	5	1290	8	0	1181
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	1290	8	0	1181
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	339	2	0	311
Total Analysis Volume [veh/h]	0	5	1358	8	0	1243
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	14.31	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.04	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.97	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.31		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.03					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 8: Towne Avenue (NS) at Project Access No.2 (EW)

Control Type:	Two-way stop	Delay (sec / veh):	16.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

Name	Towne Avenue		Towne Avenue		Project Access No.2	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	⇈		⇈		↱	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Towne Avenue		Towne Avenue		Project Access No.2	
Base Volume Input [veh/h]	1556	9	0	889	0	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1556	9	0	889	0	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	409	2	0	234	0	2
Total Analysis Volume [veh/h]	1638	9	0	936	0	7
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	16.64
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	1.69
d_A, Approach Delay [s/veh]	0.00		0.00		16.64	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Appendix G

Horizon Year (2040)
Without Project Conditions
LOS Analysis Worksheets

Intersection Level Of Service Report
Intersection 1: Towne Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	138.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	135.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	70.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	238	25	449	14	33	14	5	414	197	880	505	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	238	25	449	14	33	14	5	414	197	880	505	5
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	7	123	4	9	4	1	113	54	240	138	1
Total Analysis Volume [veh/h]	260	27	490	15	36	15	5	452	215	961	551	5
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	34	0	10	45	0	11	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	34	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	R	L	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	30	30	30	54	20	20	54	49	49
g / C, Green / Cycle	0.24	0.24	0.24	0.43	0.16	0.16	0.43	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.16	0.17	0.04	0.01	0.13	0.14	0.70	0.15	0.15
s, saturation flow rate [veh/h]	1789	2813	1778	906	3560	1589	1370	1870	1864
c, Capacity [veh/h]	424	667	421	379	566	253	582	728	726
d1, Uniform Delay [s]	43.35	44.08	37.80	21.17	50.66	51.15	38.87	27.38	27.38
k, delay calibration	0.50	0.50	0.50	0.11	0.11	0.13	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.41	7.07	0.79	0.01	2.66	9.34	300.52	0.33	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.73	0.16	0.01	0.80	0.85	1.65	0.38	0.38
d, Delay for Lane Group [s/veh]	51.76	51.14	38.59	21.18	53.32	60.49	339.39	27.71	27.71
Lane Group LOS	D	D	D	C	D	E	F	C	C
Critical Lane Group	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.06	7.66	1.71	0.09	7.02	7.20	63.21	6.05	6.04
50th-Percentile Queue Length [ft/ln]	226.61	191.53	42.79	2.15	175.62	180.05	1580.22	151.19	150.89
95th-Percentile Queue Length [veh/ln]	14.00	12.20	3.08	0.16	11.37	11.60	99.78	10.08	10.06
95th-Percentile Queue Length [ft/ln]	350.05	305.02	77.02	3.88	284.28	290.08	2494.59	252.01	251.62

Movement, Approach, & Intersection Results

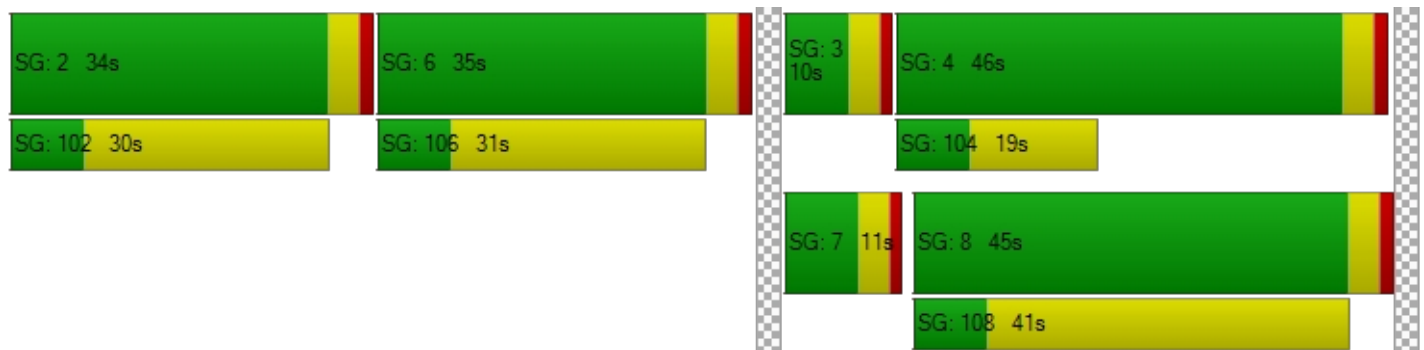
d_M, Delay for Movement [s/veh]	51.76	51.76	51.14	38.59	38.59	38.59	21.18	53.32	60.49	339.39	27.71	27.71
Movement LOS	D	D	D	D	D	D	C	D	E	F	C	C
d_A, Approach Delay [s/veh]	51.37			38.59			55.38			225.16		
Approach LOS	D			D			E			F		
d_I, Intersection Delay [s/veh]	138.93											
Intersection LOS	F											
Intersection V/C	0.708											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.99	51.99	51.99	51.99
I_p,int, Pedestrian LOS Score for Intersectio	3.312	1.784	2.712	2.798
Crosswalk LOS	C	A	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	496	480	656	672
d_b, Bicycle Delay [s]	35.35	36.11	28.23	27.57
I_b,int, Bicycle LOS Score for Intersection	2.842	1.669	2.114	2.811
Bicycle LOS	C	A	B	C

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: Mountain Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.587

Intersection Setup

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	115.00	90.00	100.00	100.00	180.00	100.00	100.00	110.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	96	26	130	96	62	122	73	740	104	149	1008	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	26	130	96	62	122	73	740	104	149	1008	50
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	7	37	27	18	35	21	210	30	42	286	14
Total Analysis Volume [veh/h]	109	30	148	109	70	138	83	840	118	169	1144	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	10	39	0	16	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	16	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	40	40	40	40	5	28	28	10	32	32
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.06	0.31	0.31	0.11	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.14	0.09	0.09	0.12	0.05	0.26	0.26	0.09	0.32	0.32
s, saturation flow rate [veh/h]	1007	1589	1206	1674	1781	1870	1790	1781	1870	1839
c, Capacity [veh/h]	520	707	375	745	110	573	548	205	673	662
d1, Uniform Delay [s]	20.57	15.29	28.25	15.84	41.61	29.36	29.36	38.95	27.26	27.29
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.20	0.20	0.11	0.24	0.25
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.26	0.67	1.95	0.93	10.11	6.58	6.86	7.98	9.50	9.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.27	0.21	0.29	0.28	0.76	0.85	0.85	0.82	0.90	0.90
d, Delay for Lane Group [s/veh]	21.83	15.97	30.20	16.77	51.72	35.93	36.21	46.93	36.76	37.17
Lane Group LOS	C	B	C	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.26	1.92	2.12	2.80	2.10	10.64	10.23	4.05	13.50	13.40
50th-Percentile Queue Length [ft/ln]	56.50	48.07	52.99	69.99	52.56	265.99	255.80	101.29	337.56	334.88
95th-Percentile Queue Length [veh/ln]	4.07	3.46	3.81	5.04	3.78	15.99	15.48	7.29	19.53	19.40
95th-Percentile Queue Length [ft/ln]	101.70	86.53	95.37	125.98	94.61	399.72	386.95	182.32	488.22	484.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.83	21.83	15.97	30.20	16.77	16.77	51.72	36.05	36.21	46.93	36.96	37.17
Movement LOS	C	C	B	C	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	18.81			21.39			37.32			38.19		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	34.28											
Intersection LOS	C											
Intersection V/C	0.587											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.70			34.70			34.70			34.70		
I_p,int, Pedestrian LOS Score for Intersectio	2.149			2.098			2.929			2.935		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	689			689			777			911		
d_b, Bicycle Delay [s]	19.36			19.36			16.83			13.36		
I_b,int, Bicycle LOS Score for Intersection	2.033			2.083			2.418			2.690		
Bicycle LOS	B			B			B			B		

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Towne Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	53.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.953

Intersection Setup

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	80.00	140.00	100.00	100.00	200.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	261	788	357	305	888	184	152	452	171	260	616	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	261	788	357	305	888	184	152	452	171	260	616	156
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	76	229	104	89	258	53	44	131	50	76	179	45
Total Analysis Volume [veh/h]	303	916	415	355	1033	214	177	526	199	302	716	181
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	30	0	22	39	0	16	41	0	22	47	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	12	0	0	23	0	0	23	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	59	37	37	59	46	46	12	26	26	18	32	32
g / C, Green / Cycle	0.51	0.32	0.32	0.51	0.40	0.40	0.10	0.23	0.23	0.16	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.44	0.26	0.26	0.41	0.34	0.35	0.10	0.20	0.20	0.17	0.25	0.25
s, saturation flow rate [veh/h]	696	3560	1589	866	1870	1761	1781	1870	1697	1781	1870	1742
c, Capacity [veh/h]	305	1153	515	439	744	700	186	427	387	279	524	488
d1, Uniform Delay [s]	37.78	35.40	35.59	26.29	31.58	31.99	51.21	42.99	43.00	48.50	39.61	39.66
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.19	0.19	0.19	0.21	0.22
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	49.84	5.69	12.71	14.86	11.92	14.29	20.89	10.52	11.46	58.24	9.48	10.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.99	0.79	0.81	0.81	0.85	0.87	0.95	0.89	0.89	1.08	0.88	0.89
d, Delay for Lane Group [s/veh]	87.62	41.09	48.30	41.15	43.50	46.27	72.10	53.51	54.46	106.74	49.09	50.06
Lane Group LOS	F	D	D	D	D	D	E	D	D	F	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	8.88	12.44	12.32	7.46	18.17	18.14	6.14	11.63	10.66	12.47	13.78	13.01
50th-Percentile Queue Length [ft/ln]	221.88	310.96	307.90	186.46	454.17	453.41	153.40	290.75	266.58	311.70	344.40	325.31
95th-Percentile Queue Length [veh/ln]	13.76	18.22	18.07	11.94	25.16	25.12	10.20	17.22	16.02	18.96	19.86	18.93
95th-Percentile Queue Length [ft/ln]	344.03	455.55	451.79	298.43	628.92	628.01	254.95	430.57	400.47	473.91	496.58	473.21

Movement, Approach, & Intersection Results

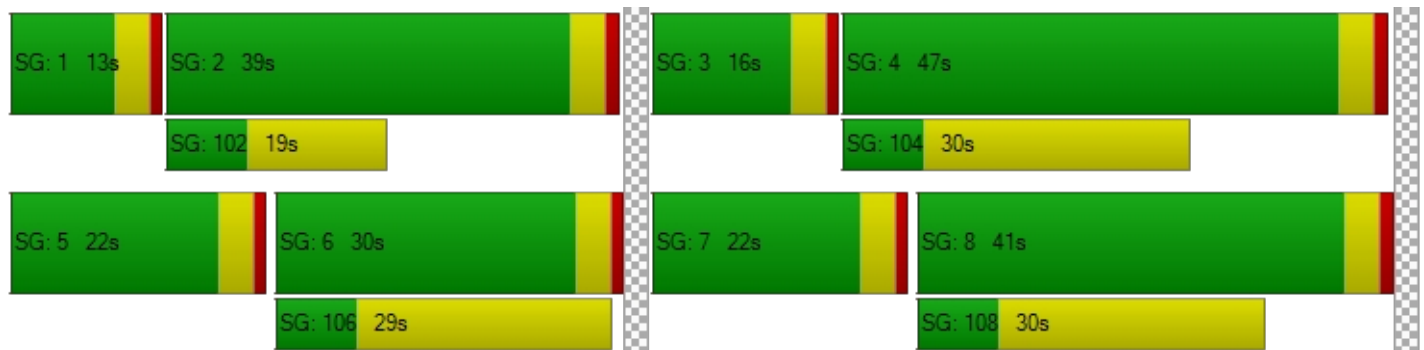
d_M, Delay for Movement [s/veh]	87.62	41.09	48.30	41.15	44.57	46.27	72.10	53.77	54.46	106.74	49.43	50.06
Movement LOS	F	D	D	D	D	D	E	D	D	F	D	D
d_A, Approach Delay [s/veh]	51.55			44.04			57.52			63.96		
Approach LOS	D			D			E			E		
d_I, Intersection Delay [s/veh]	53.09											
Intersection LOS	D											
Intersection V/C	0.953											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.03	47.03	47.03	47.03
I_p,int, Pedestrian LOS Score for Intersectio	3.047	2.872	2.907	3.043
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	452	609	643	748
d_b, Bicycle Delay [s]	34.44	27.83	26.46	22.54
I_b,int, Bicycle LOS Score for Intersection	2.908	2.881	2.304	2.549
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Regis Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.144

Intersection Setup

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↶			↶ ↑ ↶			↶ ↑ ↶		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	90.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	50	87	1512	0	0	1153	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	50	87	1512	0	0	1153	23
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	14	25	434	0	0	331	7
Total Analysis Volume [veh/h]	0	0	0	0	0	57	100	1736	0	0	1324	26
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.14	0.20	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	15.60	13.86	0.00	0.00	15.03	0.00	0.00
Movement LOS						C	B	A	A	C	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.50	0.73	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	12.45	18.22	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			15.60			0.76			0.00		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	0.70											
Intersection LOS	C											

Intersection Level Of Service Report

Intersection 5: Mountain Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	41.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.897

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	55.00	100.00	115.00	40.00	100.00	100.00	190.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	113	298	181	194	498	97	97	771	128	274	827	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	113	298	181	194	498	97	97	771	128	274	827	82
Peak Hour Factor	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	100	61	65	167	33	33	259	43	92	278	28
Total Analysis Volume [veh/h]	152	401	243	261	669	130	130	1036	172	368	1112	110
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	33	0	11	33	0	12	51	0	20	59	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	22	0	0	19	0	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	46	35	35	46	35	35	61	41	41	61	51	51
g / C, Green / Cycle	0.40	0.30	0.30	0.40	0.30	0.30	0.53	0.36	0.36	0.53	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.17	0.21	0.15	0.27	0.22	0.22	0.20	0.33	0.33	0.43	0.33	0.33
s, saturation flow rate [veh/h]	899	1870	1589	984	1870	1766	636	1870	1779	850	1870	1812
c, Capacity [veh/h]	317	562	478	335	562	531	300	672	639	398	830	804
d1, Uniform Delay [s]	25.73	35.84	33.24	32.53	36.08	36.09	20.28	35.25	35.37	33.59	26.56	26.73
k, delay calibration	0.19	0.50	0.50	0.50	0.50	0.50	0.29	0.32	0.33	0.38	0.22	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.99	7.54	3.84	16.32	8.16	8.63	2.64	14.12	15.58	24.76	2.75	3.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.71	0.51	0.78	0.73	0.73	0.43	0.92	0.92	0.93	0.74	0.75
d, Delay for Lane Group [s/veh]	27.72	43.38	37.07	48.85	44.25	44.72	22.93	49.37	50.94	58.35	29.31	29.79
Lane Group LOS	C	D	D	D	D	D	C	D	D	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.90	11.11	6.09	6.53	11.52	10.95	1.91	18.83	18.33	8.31	14.32	14.20
50th-Percentile Queue Length [ft/ln]	72.48	277.72	152.25	163.24	287.99	273.77	47.66	470.76	458.20	207.78	358.01	354.90
95th-Percentile Queue Length [veh/ln]	5.22	16.57	10.14	10.72	17.09	16.38	3.43	25.95	25.35	13.04	20.53	20.38
95th-Percentile Queue Length [ft/ln]	130.46	414.37	253.43	268.00	427.14	409.44	85.79	648.68	633.73	325.98	513.16	509.38

Movement, Approach, & Intersection Results

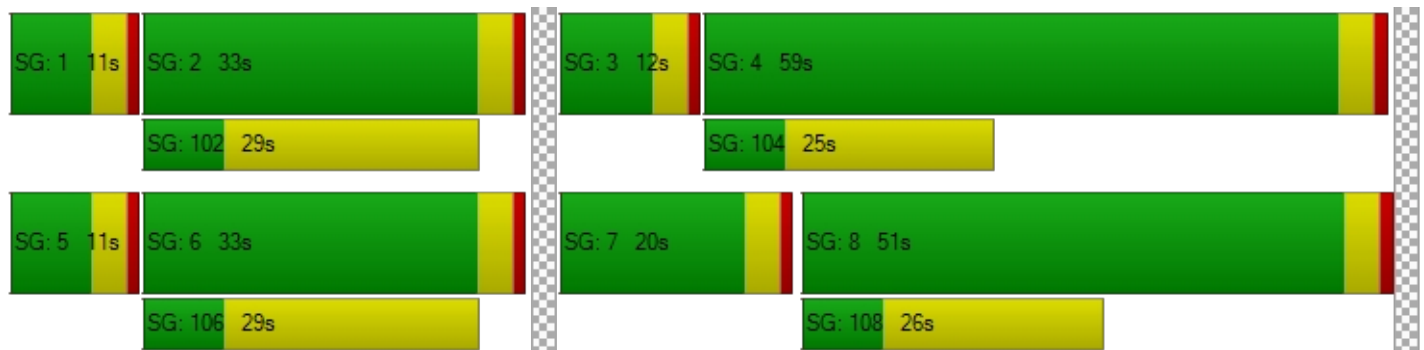
d_M, Delay for Movement [s/veh]	27.72	43.38	37.07	48.85	44.43	44.72	22.93	50.01	50.94	58.35	29.53	29.79
Movement LOS	C	D	D	D	D	D	C	D	D	E	C	C
d_A, Approach Delay [s/veh]	38.47			45.55			47.50			36.21		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	41.81											
Intersection LOS	D											
Intersection V/C	0.897											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.05	47.05	47.05	47.05
I_p,int, Pedestrian LOS Score for Intersectio	2.900	2.729	2.913	3.049
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	504	504	817	956
d_b, Bicycle Delay [s]	32.18	32.18	20.12	15.67
I_b,int, Bicycle LOS Score for Intersection	2.873	2.434	2.663	2.871
Bicycle LOS	C	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Towne Avenue (NS) at Amador Street/Richbrook Drive (EW)

Control Type:	Signalized	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.794

Intersection Setup

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	60.00	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Base Volume Input [veh/h]	11	1687	17	37	2132	22	87	6	47	9	2	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	1687	17	37	2132	22	87	6	47	9	2	59
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	459	5	10	580	6	24	2	13	2	1	16
Total Analysis Volume [veh/h]	12	1836	18	40	2320	24	95	7	51	10	2	64
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	6	0	0	6	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	87	0	0	87	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	12	0	0	0	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	97	97	97	97	97	97	15	15
g / C, Green / Cycle	0.81	0.81	0.81	0.81	0.81	0.81	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.08	0.50	0.50	0.16	0.63	0.63	0.11	0.04
s, saturation flow rate [veh/h]	153	1870	1864	248	1870	1863	1369	1700
c, Capacity [veh/h]	132	1507	1502	209	1507	1502	223	251
d1, Uniform Delay [s]	18.52	4.48	4.49	11.41	6.05	6.09	51.53	47.88
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.37	1.89	1.91	2.02	4.02	4.09	3.71	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.62	0.62	0.19	0.78	0.78	0.69	0.30
d, Delay for Lane Group [s/veh]	19.89	6.37	6.40	13.43	10.07	10.18	55.23	48.56
Lane Group LOS	B	A	A	B	B	B	E	D
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.24	7.42	7.44	0.62	13.00	13.09	4.74	2.13
50th-Percentile Queue Length [ft/ln]	6.10	185.49	186.02	15.39	324.95	327.32	118.61	53.33
95th-Percentile Queue Length [veh/ln]	0.44	11.89	11.91	1.11	18.91	19.03	8.32	3.84
95th-Percentile Queue Length [ft/ln]	10.99	297.17	297.86	27.70	472.77	475.67	207.91	95.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.89	6.39	6.40	13.43	10.13	10.18	55.23	55.23	55.23	48.56	48.56	48.56
Movement LOS	B	A	A	B	B	B	E	E	E	D	D	D
d_A, Approach Delay [s/veh]	6.48			10.18			55.23			48.56		
Approach LOS	A			B			E			D		
d_I, Intersection Delay [s/veh]	10.83											
Intersection LOS	B											
Intersection V/C	0.794											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			11.0			11.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			49.48			49.48			0.00		
I_p,int, Pedestrian LOS Score for Intersectio	0.000			3.313			1.839			0.000		
Crosswalk LOS	F			C			A			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1384			1384			484			484		
d_b, Bicycle Delay [s]	5.69			5.69			34.48			34.48		
I_b,int, Bicycle LOS Score for Intersection	3.099			3.526			1.812			1.685		
Bicycle LOS	C			D			A			A		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Towne Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	46.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.671

Intersection Setup

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	135.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	70.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	204	14	502	3	8	4	1	673	167	446	452	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	204	14	502	3	8	4	1	673	167	446	452	3
Peak Hour Factor	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	4	129	1	2	1	0	173	43	115	116	1
Total Analysis Volume [veh/h]	210	14	517	3	8	4	1	693	172	459	465	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	34	0	10	45	0	11	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	34	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	R	L	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	27	27	27	58	27	27	58	54	54
g / C, Green / Cycle	0.22	0.22	0.22	0.47	0.21	0.21	0.47	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.13	0.18	0.01	0.00	0.19	0.11	0.38	0.13	0.13
s, saturation flow rate [veh/h]	1786	2813	1769	959	3560	1589	1216	1870	1866
c, Capacity [veh/h]	390	615	387	453	765	342	533	809	807
d1, Uniform Delay [s]	43.65	46.78	38.51	18.25	47.84	43.20	31.39	23.03	23.03
k, delay calibration	0.50	0.50	0.50	0.11	0.11	0.11	0.46	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.02	13.08	0.19	0.00	4.41	1.15	15.49	0.20	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.84	0.04	0.00	0.91	0.50	0.86	0.29	0.29
d, Delay for Lane Group [s/veh]	49.67	59.85	38.69	18.25	52.25	44.35	46.88	23.23	23.23
Lane Group LOS	D	E	D	B	D	D	D	C	C
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.87	8.80	0.39	0.02	10.96	4.81	11.95	4.54	4.53
50th-Percentile Queue Length [ft/ln]	171.64	219.99	9.68	0.40	273.96	120.28	298.83	113.61	113.35
95th-Percentile Queue Length [veh/ln]	11.16	13.66	0.70	0.03	16.39	8.41	17.62	8.04	8.03
95th-Percentile Queue Length [ft/ln]	279.08	341.61	17.42	0.71	409.68	210.22	440.58	201.01	200.66

Movement, Approach, & Intersection Results

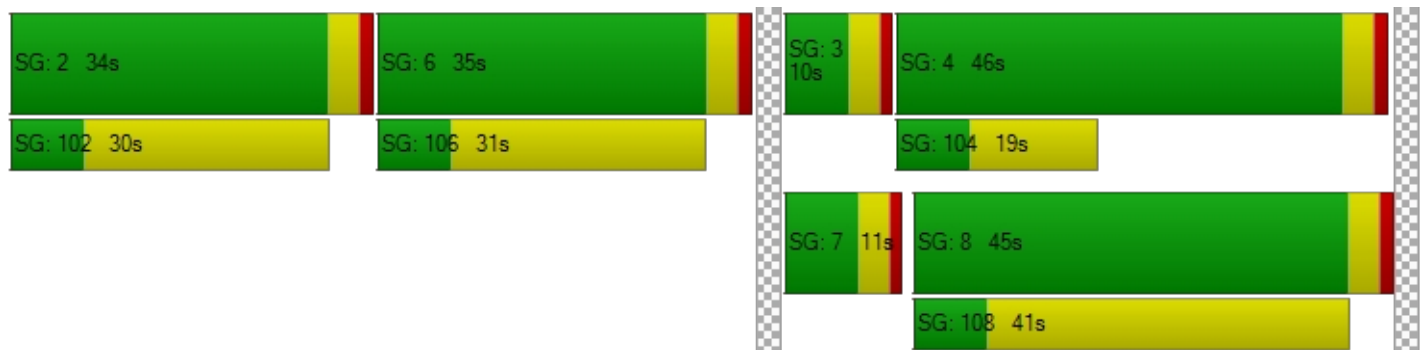
d_M, Delay for Movement [s/veh]	49.67	49.67	59.85	38.69	38.69	38.69	18.25	52.25	44.35	46.88	23.23	23.23
Movement LOS	D	D	E	D	D	D	B	D	D	D	C	C
d_A, Approach Delay [s/veh]	56.77			38.69			50.64			34.94		
Approach LOS	E			D			D			C		
d_I, Intersection Delay [s/veh]	46.64											
Intersection LOS	D											
Intersection V/C	0.671											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.99	51.99	51.99	51.99
I_p,int, Pedestrian LOS Score for Intersectio	2.634	1.747	2.720	2.733
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	496	480	656	672
d_b, Bicycle Delay [s]	35.35	36.11	28.23	27.57
I_b,int, Bicycle LOS Score for Intersection	2.782	1.584	2.274	2.324
Bicycle LOS	C	A	B	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-







Intersection Level Of Service Report

Intersection 2: Mountain Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.572

Intersection Setup

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	115.00	90.00	100.00	100.00	180.00	100.00	100.00	110.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	97	56	174	46	33	47	68	961	85	103	756	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	97	56	174	46	33	47	68	961	85	103	756	66
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	15	47	13	9	13	19	262	23	28	206	18
Total Analysis Volume [veh/h]	106	61	190	50	36	51	74	1047	93	112	824	72
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	23	44	0	11	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	16	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	40	40	40	40	5	31	31	7	33	33
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.06	0.34	0.34	0.08	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.04	0.05	0.04	0.31	0.31	0.06	0.24	0.24
s, saturation flow rate [veh/h]	1354	1589	1128	1695	1781	1870	1817	1781	1870	1818
c, Capacity [veh/h]	666	705	432	752	102	644	626	140	684	665
d1, Uniform Delay [s]	17.31	15.84	22.33	14.70	41.75	27.99	28.01	40.78	23.91	23.91
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.24	0.24	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.90	0.94	0.55	0.31	9.34	9.55	9.94	9.93	1.12	1.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.27	0.12	0.12	0.73	0.90	0.90	0.80	0.66	0.66
d, Delay for Lane Group [s/veh]	18.21	16.78	22.87	15.01	51.09	37.54	37.95	50.71	25.02	25.06
Lane Group LOS	B	B	C	B	D	D	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.41	2.56	0.81	1.08	1.86	13.00	12.72	2.80	7.99	7.78
50th-Percentile Queue Length [ft/ln]	60.25	64.07	20.37	26.91	46.58	324.95	318.12	69.92	199.86	194.43
95th-Percentile Queue Length [veh/ln]	4.34	4.61	1.47	1.94	3.35	18.91	18.58	5.03	12.63	12.35
95th-Percentile Queue Length [ft/ln]	108.44	115.33	36.66	48.44	83.85	472.77	464.38	125.86	315.79	308.77

Movement, Approach, & Intersection Results

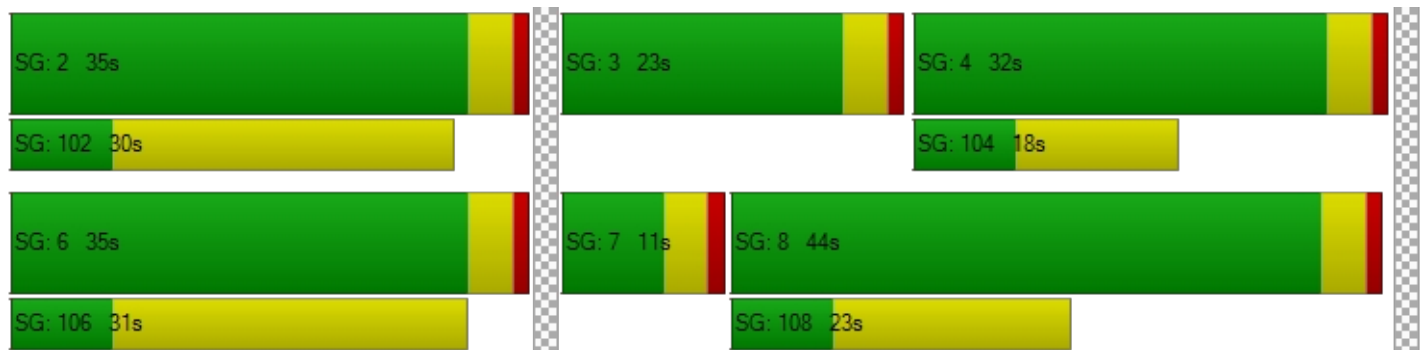
d_M, Delay for Movement [s/veh]	18.21	18.21	16.78	22.87	15.01	15.01	51.09	37.72	37.95	50.71	25.04	25.06
Movement LOS	B	B	B	C	B	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	17.45			17.88			38.55			27.89		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	30.78											
Intersection LOS	C											
Intersection V/C	0.572											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.68			34.68			34.68			34.68		
I_p,int, Pedestrian LOS Score for Intersectio	2.134			2.052			2.878			2.818		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	689			689			889			622		
d_b, Bicycle Delay [s]	19.35			19.35			13.90			21.37		
I_b,int, Bicycle LOS Score for Intersection	2.149			1.786			2.561			2.391		
Bicycle LOS	B			A			B			B		

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Towne Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	48.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.943

Intersection Setup

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	80.00	140.00	100.00	100.00	200.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	246	838	274	222	422	129	288	864	206	274	774	197
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	246	838	274	222	422	129	288	864	206	274	774	197
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	218	71	58	110	34	75	225	54	71	202	51
Total Analysis Volume [veh/h]	257	874	286	231	440	135	300	901	215	286	807	205
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	20	33	0	10	23	0	24	44	0	23	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	12	0	0	23	0	0	23	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	42	32	32	42	25	25	20	37	37	19	36	36
g / C, Green / Cycle	0.38	0.29	0.29	0.38	0.22	0.22	0.18	0.33	0.33	0.17	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.22	0.25	0.18	0.31	0.16	0.16	0.17	0.31	0.31	0.16	0.28	0.28
s, saturation flow rate [veh/h]	1186	3560	1589	735	1870	1721	1781	1870	1748	1781	1870	1741
c, Capacity [veh/h]	433	1040	464	269	420	386	324	623	583	308	606	565
d1, Uniform Delay [s]	26.05	36.59	33.66	32.42	39.46	39.48	44.32	35.32	35.53	44.87	34.90	35.01
k, delay calibration	0.30	0.50	0.50	0.50	0.50	0.50	0.17	0.35	0.36	0.15	0.31	0.31
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.59	8.16	6.00	28.26	9.89	10.76	15.84	15.98	18.79	15.20	9.75	10.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.84	0.62	0.86	0.71	0.71	0.92	0.92	0.93	0.93	0.86	0.87
d, Delay for Lane Group [s/veh]	29.64	44.75	39.66	60.68	49.35	50.23	60.16	51.29	54.32	60.08	44.66	45.99
Lane Group LOS	C	D	D	E	D	D	E	D	D	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.22	12.04	7.31	6.34	8.57	8.00	9.41	17.22	16.82	8.94	14.52	13.84
50th-Percentile Queue Length [ft/ln]	130.49	300.89	182.79	158.53	214.25	200.04	235.32	430.58	420.57	223.44	362.91	345.99
95th-Percentile Queue Length [veh/ln]	8.97	17.73	11.75	10.47	13.37	12.64	14.44	24.03	23.55	13.84	20.76	19.94
95th-Percentile Queue Length [ft/ln]	224.16	443.13	293.65	261.77	334.28	316.01	361.11	600.73	588.73	346.02	519.12	498.52

Movement, Approach, & Intersection Results

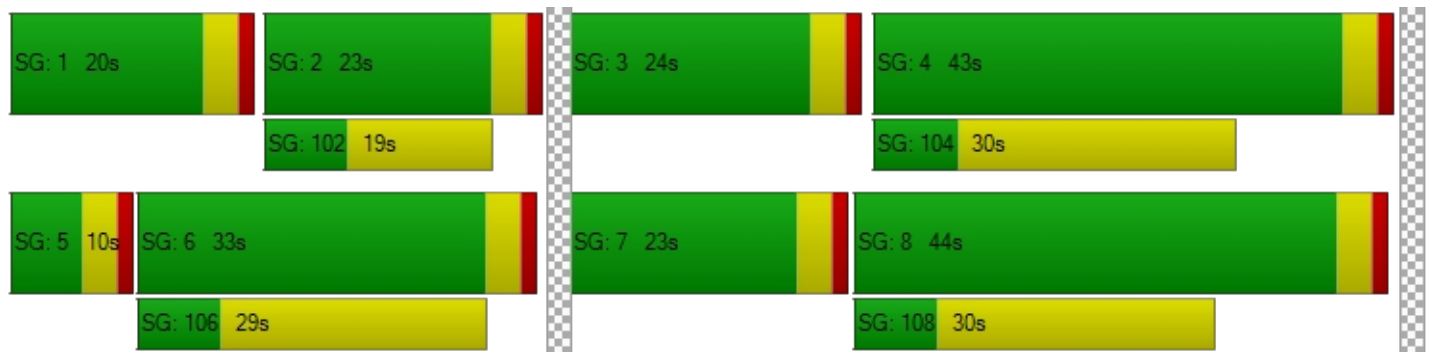
d_M, Delay for Movement [s/veh]	29.64	44.75	39.66	60.68	49.63	50.23	60.16	52.40	54.32	60.08	45.13	45.99
Movement LOS	C	D	D	E	D	D	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	40.98			52.90			54.33			48.56		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	48.75											
Intersection LOS	D											
Intersection V/C	0.943											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	44.60	44.60	44.60	44.60
I_p,int, Pedestrian LOS Score for Intersectio	2.932	2.736	2.908	3.006
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	527	345	727	708
d_b, Bicycle Delay [s]	29.87	37.69	22.32	22.96
I_b,int, Bicycle LOS Score for Intersection	2.729	2.225	2.728	2.630
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Regis Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.118

Intersection Setup

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↻			↻ ↑ ↑			↻ ↑ ↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	90.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	45	77	1338	0	4	1295	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	45	77	1338	0	4	1295	43
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	12	20	344	0	1	333	11
Total Analysis Volume [veh/h]	0	0	0	0	0	46	79	1377	0	4	1332	44
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.12	0.16	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	15.50	13.66	0.00	0.00	12.35	0.00	0.00
Movement LOS						C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.40	0.56	0.00	0.00	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	9.97	14.11	0.00	0.00	0.61	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			15.50			0.74			0.04		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	0.64											
Intersection LOS	C											

Intersection Level Of Service Report

Intersection 5: Mountain Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	35.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.632

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	55.00	100.00	115.00	40.00	100.00	100.00	190.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	143	193	104	194	188	65	76	1023	99	124	1028	104
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	143	193	104	194	188	65	76	1023	99	124	1028	104
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	50	27	50	49	17	20	265	26	32	266	27
Total Analysis Volume [veh/h]	148	200	108	201	195	67	79	1059	102	128	1064	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	33	0	10	33	0	10	52	0	10	52	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	22	0	0	19	0	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	50	40	40	50	40	40	47	37	37	47	37	37
g / C, Green / Cycle	0.48	0.38	0.38	0.48	0.38	0.38	0.44	0.35	0.35	0.44	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.07	0.17	0.07	0.07	0.11	0.31	0.32	0.18	0.32	0.32
s, saturation flow rate [veh/h]	1224	1870	1589	1185	1870	1710	688	1870	1813	708	1870	1810
c, Capacity [veh/h]	634	716	609	591	716	655	261	652	632	270	663	641
d1, Uniform Delay [s]	15.70	22.40	21.46	16.43	21.56	21.60	22.88	32.54	32.57	23.76	32.13	32.18
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.24	0.24	0.11	0.24	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.97	0.64	1.56	0.58	0.66	0.64	9.92	10.39	1.29	9.32	9.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.28	0.18	0.34	0.19	0.19	0.30	0.90	0.91	0.47	0.90	0.90
d, Delay for Lane Group [s/veh]	15.89	23.37	22.10	17.99	22.14	22.26	23.52	42.46	42.97	25.05	41.44	42.07
Lane Group LOS	B	C	C	B	C	C	C	D	D	C	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.02	3.57	1.86	3.04	2.32	2.19	1.15	15.66	15.31	1.94	15.62	15.30
50th-Percentile Queue Length [ft/ln]	50.47	89.33	46.41	76.10	57.94	54.63	28.73	391.38	382.66	48.39	390.61	382.49
95th-Percentile Queue Length [veh/ln]	3.63	6.43	3.34	5.48	4.17	3.93	2.07	22.14	21.72	3.48	22.11	21.71
95th-Percentile Queue Length [ft/ln]	90.84	160.80	83.54	136.98	104.28	98.33	51.71	553.60	543.07	87.10	552.67	542.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.89	23.37	22.10	17.99	22.18	22.26	23.52	42.68	42.97	25.05	41.72	42.07
Movement LOS	B	C	C	B	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	20.64			20.37			41.49			40.11		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.39											
Intersection LOS	D											
Intersection V/C	0.632											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	42.11	42.11	42.11	42.11
I_p,int, Pedestrian LOS Score for Intersectio	2.546	2.515	2.883	2.943
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	552	552	914	914
d_b, Bicycle Delay [s]	27.53	27.53	15.50	15.50
I_b,int, Bicycle LOS Score for Intersection	2.312	1.942	2.583	2.632
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Towne Avenue (NS) at Amador Street/Richbrook Drive (EW)

Control Type:	Signalized	Delay (sec / veh):	4.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.533

Intersection Setup

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	60.00	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Base Volume Input [veh/h]	22	1545	7	39	1272	47	47	0	22	5	1	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	1545	7	39	1272	47	47	0	22	5	1	44
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	413	2	10	340	13	13	0	6	1	0	12
Total Analysis Volume [veh/h]	24	1652	7	42	1360	50	50	0	24	5	1	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	6	0	0	6	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	72	0	0	72	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	12	0	0	0	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	91	91	91	91	91	91	6	6
g / C, Green / Cycle	0.87	0.87	0.87	0.87	0.87	0.87	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.06	0.44	0.44	0.14	0.38	0.38	0.05	0.03
s, saturation flow rate [veh/h]	381	1870	1867	300	1870	1847	1548	1741
c, Capacity [veh/h]	353	1620	1618	284	1620	1600	146	137
d1, Uniform Delay [s]	3.61	1.68	1.68	4.82	1.50	1.50	48.84	48.12
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	1.16	1.16	1.09	0.86	0.88	2.71	1.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.51	0.51	0.15	0.44	0.44	0.51	0.39
d, Delay for Lane Group [s/veh]	3.98	2.83	2.84	5.91	2.36	2.38	51.55	49.91
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.15	2.05	2.05	0.35	1.55	1.55	2.02	1.41
50th-Percentile Queue Length [ft/ln]	3.82	51.23	51.25	8.66	38.86	38.69	50.40	35.32
95th-Percentile Queue Length [veh/ln]	0.27	3.69	3.69	0.62	2.80	2.79	3.63	2.54
95th-Percentile Queue Length [ft/ln]	6.87	92.21	92.24	15.60	69.94	69.64	90.73	63.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.98	2.84	2.84	5.91	2.37	2.38	51.55	51.55	51.55	49.91	49.91	49.91
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	2.85			2.47			51.55			49.91		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	4.55											
Intersection LOS	A											
Intersection V/C	0.533											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			11.0			11.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			42.00			42.00			0.00		
I_p,int, Pedestrian LOS Score for Intersectio	0.000			3.051			1.829			0.000		
Crosswalk LOS	F			C			A			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1297			1297			553			553		
d_b, Bicycle Delay [s]	6.48			6.48			27.44			27.44		
I_b,int, Bicycle LOS Score for Intersection	2.948			2.758			1.682			1.647		
Bicycle LOS	C			C			A			A		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Appendix H

Horizon Year (2040)
With Project Conditions
LOS Analysis Worksheets

Intersection Level Of Service Report
Intersection 1: Towne Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	138.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	135.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	70.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	239	25	449	14	33	14	5	414	197	880	505	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	239	25	449	14	33	14	5	414	197	880	505	5
Peak Hour Factor	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160	0.9160
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	7	123	4	9	4	1	113	54	240	138	1
Total Analysis Volume [veh/h]	261	27	490	15	36	15	5	452	215	961	551	5
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	34	0	10	45	0	11	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	34	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	R	L	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	30	30	30	54	20	20	54	49	49
g / C, Green / Cycle	0.24	0.24	0.24	0.43	0.16	0.16	0.43	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.16	0.17	0.04	0.01	0.13	0.14	0.70	0.15	0.15
s, saturation flow rate [veh/h]	1789	2813	1778	906	3560	1589	1370	1870	1864
c, Capacity [veh/h]	424	667	421	379	566	253	582	728	726
d1, Uniform Delay [s]	43.38	44.08	37.80	21.17	50.66	51.15	38.87	27.38	27.38
k, delay calibration	0.50	0.50	0.50	0.11	0.11	0.13	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.49	7.07	0.79	0.01	2.66	9.34	300.52	0.33	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.73	0.16	0.01	0.80	0.85	1.65	0.38	0.38
d, Delay for Lane Group [s/veh]	51.88	51.14	38.59	21.18	53.32	60.49	339.39	27.71	27.71
Lane Group LOS	D	D	D	C	D	E	F	C	C
Critical Lane Group	No	Yes	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.11	7.66	1.71	0.09	7.02	7.20	63.21	6.05	6.04
50th-Percentile Queue Length [ft/ln]	227.69	191.53	42.79	2.15	175.62	180.05	1580.22	151.19	150.89
95th-Percentile Queue Length [veh/ln]	14.06	12.20	3.08	0.16	11.37	11.60	99.78	10.08	10.06
95th-Percentile Queue Length [ft/ln]	351.43	305.02	77.02	3.88	284.28	290.08	2494.59	252.01	251.62

Movement, Approach, & Intersection Results

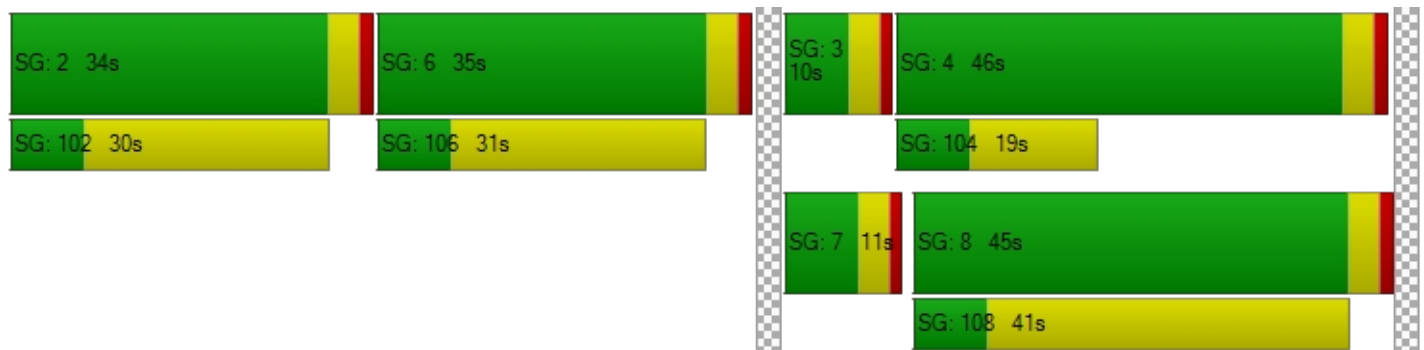
d_M, Delay for Movement [s/veh]	51.88	51.88	51.14	38.59	38.59	38.59	21.18	53.32	60.49	339.39	27.71	27.71
Movement LOS	D	D	D	D	D	D	C	D	E	F	C	C
d_A, Approach Delay [s/veh]	51.41			38.59			55.38			225.16		
Approach LOS	D			D			E			F		
d_I, Intersection Delay [s/veh]	138.91											
Intersection LOS	F											
Intersection V/C	0.708											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.99	51.99	51.99	51.99
I_p,int, Pedestrian LOS Score for Intersectio	3.312	1.784	2.712	2.798
Crosswalk LOS	C	A	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	496	480	656	672
d_b, Bicycle Delay [s]	35.35	36.11	28.23	27.57
I_b,int, Bicycle LOS Score for Intersection	2.843	1.669	2.114	2.811
Bicycle LOS	C	A	B	C

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: Mountain Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.587

Intersection Setup

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	115.00	90.00	100.00	100.00	180.00	100.00	100.00	110.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	96	26	131	96	62	122	73	740	104	149	1008	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	96	26	131	96	62	122	73	740	104	149	1008	50
Peak Hour Factor	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810	0.8810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	7	37	27	18	35	21	210	30	42	286	14
Total Analysis Volume [veh/h]	109	30	149	109	70	138	83	840	118	169	1144	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	10	39	0	16	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	16	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	40	40	40	40	5	28	28	10	32	32
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.06	0.31	0.31	0.11	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.14	0.09	0.09	0.12	0.05	0.26	0.26	0.09	0.32	0.32
s, saturation flow rate [veh/h]	1007	1589	1205	1674	1781	1870	1790	1781	1870	1839
c, Capacity [veh/h]	520	707	375	745	110	573	548	205	673	662
d1, Uniform Delay [s]	20.57	15.31	28.25	15.84	41.61	29.36	29.36	38.95	27.26	27.29
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.20	0.20	0.11	0.24	0.25
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.26	0.68	1.96	0.93	10.11	6.58	6.86	7.98	9.50	9.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.27	0.21	0.29	0.28	0.76	0.85	0.85	0.82	0.90	0.90
d, Delay for Lane Group [s/veh]	21.83	15.98	30.21	16.77	51.72	35.93	36.21	46.93	36.76	37.17
Lane Group LOS	C	B	C	B	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.26	1.94	2.12	2.80	2.10	10.64	10.23	4.05	13.50	13.40
50th-Percentile Queue Length [ft/ln]	56.50	48.43	52.99	69.99	52.56	265.99	255.80	101.29	337.56	334.88
95th-Percentile Queue Length [veh/ln]	4.07	3.49	3.82	5.04	3.78	15.99	15.48	7.29	19.53	19.40
95th-Percentile Queue Length [ft/ln]	101.70	87.18	95.39	125.98	94.61	399.72	386.95	182.32	488.22	484.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.83	21.83	15.98	30.21	16.77	16.77	51.72	36.05	36.21	46.93	36.96	37.17
Movement LOS	C	C	B	C	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	18.81			21.39			37.32			38.19		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	34.27											
Intersection LOS	C											
Intersection V/C	0.587											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.70			34.70			34.70			34.70		
I_p,int, Pedestrian LOS Score for Intersectio	2.149			2.098			2.929			2.936		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	689			689			777			911		
d_b, Bicycle Delay [s]	19.36			19.36			16.83			13.36		
I_b,int, Bicycle LOS Score for Intersection	2.035			2.083			2.418			2.690		
Bicycle LOS	B			B			B			B		

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Towne Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	54.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.960

Intersection Setup

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	80.00	140.00	100.00	100.00	200.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	266	790	360	306	889	184	152	453	172	265	619	158
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	266	790	360	306	889	184	152	453	172	265	619	158
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	77	230	105	89	258	53	44	132	50	77	180	46
Total Analysis Volume [veh/h]	309	919	419	356	1034	214	177	527	200	308	720	184
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	30	0	22	39	0	16	41	0	22	47	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	12	0	0	23	0	0	23	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	59	37	37	59	46	46	12	26	26	18	32	32
g / C, Green / Cycle	0.51	0.32	0.32	0.51	0.40	0.40	0.10	0.23	0.23	0.16	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.44	0.26	0.26	0.41	0.34	0.35	0.10	0.20	0.20	0.17	0.25	0.25
s, saturation flow rate [veh/h]	696	3560	1589	868	1870	1761	1781	1870	1697	1781	1870	1741
c, Capacity [veh/h]	304	1147	512	439	743	699	186	428	388	279	525	489
d1, Uniform Delay [s]	38.71	35.63	35.89	26.58	31.65	32.06	51.21	42.96	42.97	48.50	39.65	39.70
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.19	0.19	0.20	0.22	0.22
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	55.43	5.94	13.60	14.94	12.07	14.48	20.89	10.58	11.53	66.57	9.98	11.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.01	0.80	0.82	0.81	0.86	0.88	0.95	0.89	0.89	1.10	0.89	0.89
d, Delay for Lane Group [s/veh]	94.14	41.57	49.49	41.52	43.72	46.55	72.10	53.54	54.50	115.08	49.63	50.70
Lane Group LOS	F	D	D	D	D	D	E	D	D	F	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.37	12.56	12.60	7.50	18.23	18.21	6.14	11.67	10.70	13.11	13.97	13.21
50th-Percentile Queue Length [ft/ln]	234.32	314.02	315.08	187.47	455.72	455.23	153.40	291.74	267.43	327.84	349.26	330.17
95th-Percentile Queue Length [veh/ln]	14.54	18.37	18.43	11.99	25.23	25.21	10.20	17.27	16.06	19.96	20.10	19.17
95th-Percentile Queue Length [ft/ln]	363.58	459.33	460.64	299.74	630.77	630.19	254.95	431.80	401.53	498.95	502.51	479.17

Movement, Approach, & Intersection Results

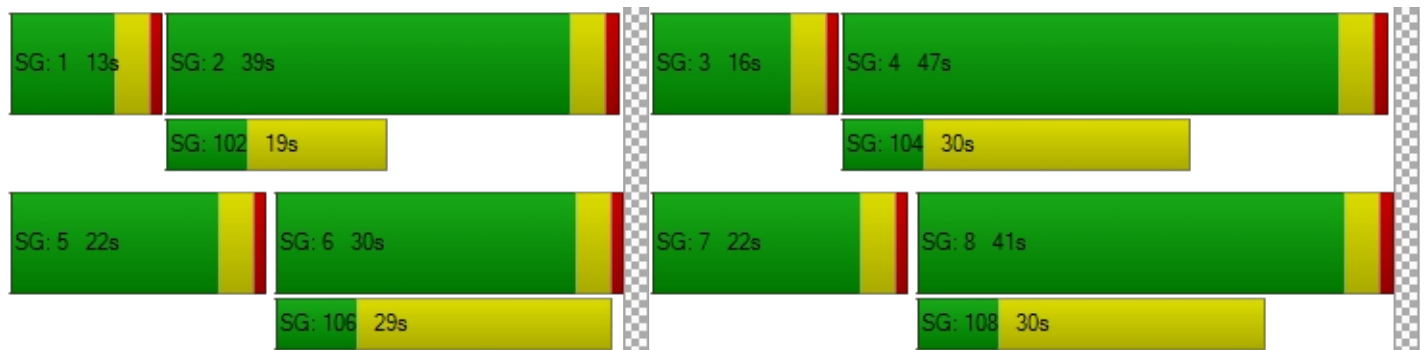
d_M, Delay for Movement [s/veh]	94.14	41.57	49.49	41.52	44.81	46.55	72.10	53.81	54.50	115.08	50.00	50.70
Movement LOS	F	D	D	D	D	D	E	D	D	F	D	D
d_A, Approach Delay [s/veh]	53.45			44.31			57.54			66.65		
Approach LOS	D			D			E			E		
d_I, Intersection Delay [s/veh]	54.39											
Intersection LOS	D											
Intersection V/C	0.960											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.03	47.03	47.03	47.03
I_p,int, Pedestrian LOS Score for Intersectio	3.050	2.874	2.913	3.045
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	452	609	643	748
d_b, Bicycle Delay [s]	34.44	27.83	26.46	22.54
I_b,int, Bicycle LOS Score for Intersection	2.918	2.883	2.305	2.560
Bicycle LOS	C	C	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Regis Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.144

Intersection Setup

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↻			↻ ↑			↻ ↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	90.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	50	94	1517	0	0	1155	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	50	94	1517	0	0	1155	23
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710	0.8710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	14	27	435	0	0	332	7
Total Analysis Volume [veh/h]	0	0	0	0	0	57	108	1742	0	0	1326	26
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.14	0.21	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	15.62	14.06	0.00	0.00	15.09	0.00	0.00
Movement LOS						C	B	A	A	C	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.50	0.80	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	12.47	20.08	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			15.62			0.82			0.00		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	0.74											
Intersection LOS	C											

Intersection Level Of Service Report

Intersection 5: Mountain Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	41.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.898

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	55.00	100.00	115.00	40.00	100.00	100.00	190.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	113	298	181	194	498	97	98	774	129	274	827	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	113	298	181	194	498	97	98	774	129	274	827	82
Peak Hour Factor	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440	0.7440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	100	61	65	167	33	33	260	43	92	278	28
Total Analysis Volume [veh/h]	152	401	243	261	669	130	132	1040	173	368	1112	110
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing m		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing mi		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	33	0	11	33	0	12	51	0	20	59	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	22	0	0	19	0	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	46	34	34	46	34	34	62	42	42	62	51	51
g / C, Green / Cycle	0.40	0.30	0.30	0.40	0.30	0.30	0.53	0.36	0.36	0.53	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.17	0.21	0.15	0.27	0.22	0.22	0.21	0.33	0.33	0.43	0.33	0.33
s, saturation flow rate [veh/h]	900	1870	1589	985	1870	1766	637	1870	1778	848	1870	1812
c, Capacity [veh/h]	316	560	476	334	560	528	302	674	641	397	831	805
d1, Uniform Delay [s]	25.83	35.97	33.36	32.67	36.22	36.22	20.27	35.18	35.30	33.72	26.49	26.66
k, delay calibration	0.19	0.50	0.50	0.50	0.50	0.50	0.30	0.33	0.33	0.39	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.01	7.68	3.89	16.54	8.31	8.79	2.75	14.22	15.72	24.99	2.74	3.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.72	0.51	0.78	0.73	0.73	0.44	0.92	0.93	0.93	0.74	0.75
d, Delay for Lane Group [s/veh]	27.83	43.65	37.24	49.21	44.53	45.01	23.03	49.39	51.02	58.71	29.23	29.71
Lane Group LOS	C	D	D	D	D	D	C	D	D	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.91	11.15	6.11	6.56	11.56	10.99	1.94	18.92	18.43	8.32	14.30	14.17
50th-Percentile Queue Length [ft/ln]	72.67	278.65	152.66	163.96	288.98	274.73	48.47	472.91	460.63	207.89	357.42	354.31
95th-Percentile Queue Length [veh/ln]	5.23	16.62	10.16	10.76	17.14	16.43	3.49	26.05	25.46	13.04	20.50	20.35
95th-Percentile Queue Length [ft/ln]	130.80	415.53	253.97	268.96	428.38	410.65	87.24	651.24	636.62	326.12	512.44	508.66

Movement, Approach, & Intersection Results

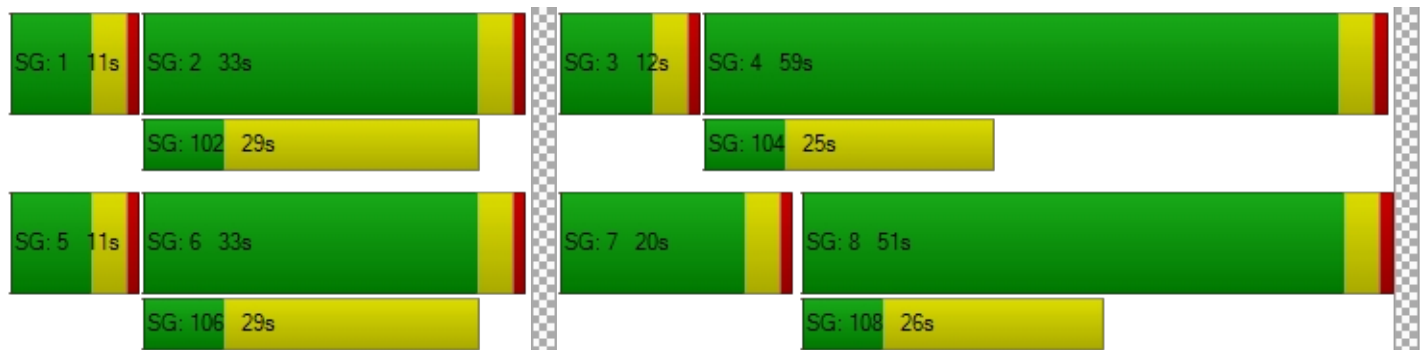
d_M, Delay for Movement [s/veh]	27.83	43.65	37.24	49.21	44.71	45.01	23.03	50.05	51.02	58.71	29.45	29.71
Movement LOS	C	D	D	D	D	D	C	D	D	E	C	C
d_A, Approach Delay [s/veh]	38.67			45.86			47.52			36.24		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	41.94											
Intersection LOS	D											
Intersection V/C	0.898											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.05	47.05	47.05	47.05
I_p,int, Pedestrian LOS Score for Intersectio	2.901	2.731	2.914	3.050
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	504	504	817	956
d_b, Bicycle Delay [s]	32.18	32.18	20.12	15.67
I_b,int, Bicycle LOS Score for Intersection	2.873	2.434	2.669	2.871
Bicycle LOS	C	B	B	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Towne Avenue (NS) at Amador Street/Richbrook Drive (EW)

Control Type:	Signalized	Delay (sec / veh):	10.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.795

Intersection Setup

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	60.00	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Base Volume Input [veh/h]	11	1689	17	40	2138	22	87	6	47	9	2	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	1689	17	40	2138	22	87	6	47	9	2	59
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	459	5	11	582	6	24	2	13	2	1	16
Total Analysis Volume [veh/h]	12	1838	18	44	2326	24	95	7	51	10	2	64
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	6	0	0	6	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	87	0	0	87	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	12	0	0	0	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	97	97	97	97	97	97	15	15
g / C, Green / Cycle	0.81	0.81	0.81	0.81	0.81	0.81	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.08	0.50	0.50	0.18	0.63	0.63	0.11	0.04
s, saturation flow rate [veh/h]	152	1870	1864	248	1870	1863	1369	1700
c, Capacity [veh/h]	131	1507	1502	209	1507	1502	223	251
d1, Uniform Delay [s]	18.69	4.49	4.50	11.66	6.08	6.12	51.53	47.88
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.39	1.90	1.92	2.29	4.06	4.14	3.71	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.62	0.62	0.21	0.78	0.78	0.69	0.30
d, Delay for Lane Group [s/veh]	20.07	6.38	6.42	13.95	10.14	10.26	55.23	48.56
Lane Group LOS	C	A	A	B	B	B	E	D
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.25	7.44	7.46	0.69	13.09	13.19	4.74	2.13
50th-Percentile Queue Length [ft/ln]	6.14	185.90	186.44	17.30	327.36	329.75	118.61	53.33
95th-Percentile Queue Length [veh/ln]	0.44	11.91	11.94	1.25	19.03	19.15	8.32	3.84
95th-Percentile Queue Length [ft/ln]	11.05	297.70	298.40	31.15	475.72	478.66	207.91	95.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.07	6.40	6.42	13.95	10.20	10.26	55.23	55.23	55.23	48.56	48.56	48.56
Movement LOS	C	A	A	B	B	B	E	E	E	D	D	D
d_A, Approach Delay [s/veh]	6.49			10.27			55.23			48.56		
Approach LOS	A			B			E			D		
d_I, Intersection Delay [s/veh]	10.87											
Intersection LOS	B											
Intersection V/C	0.795											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			11.0			11.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			49.48			49.48			0.00		
I_p,int, Pedestrian LOS Score for Intersectio	0.000			3.315			1.839			0.000		
Crosswalk LOS	F			C			A			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1384			1384			484			484		
d_b, Bicycle Delay [s]	5.69			5.69			34.48			34.48		
I_b,int, Bicycle LOS Score for Intersection	3.101			3.535			1.812			1.685		
Bicycle LOS	C			D			A			A		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 7: Project Access No.1 (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name	Project Access No.1		Foothill Boulevard		Foothill Boulevard	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↕	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Access No.1		Foothill Boulevard		Foothill Boulevard	
Base Volume Input [veh/h]	0	10	1116	4	0	1041
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	10	1116	4	0	1041
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	294	1	0	274
Total Analysis Volume [veh/h]	0	11	1175	4	0	1096
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	13.18	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.07	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.87	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.18		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 8: Towne Avenue (NS) at Project Access No.2 (EW)

Control Type:	Two-way stop	Delay (sec / veh):	19.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.035

Intersection Setup

Name	Towne Avenue		Towne Avenue		Project Access No.2	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	⇈		⇈		⇈	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Towne Avenue		Towne Avenue		Project Access No.2	
Base Volume Input [veh/h]	1834	4	0	1328	0	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1834	4	0	1328	0	9
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	483	1	0	349	0	2
Total Analysis Volume [veh/h]	1931	4	0	1398	0	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	19.70
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.11
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	2.75
d_A, Approach Delay [s/veh]	0.00		0.00		19.70	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Towne Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	46.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.671

Intersection Setup

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	135.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	70.00	155.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	204	14	502	3	8	4	1	673	167	446	452	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	204	14	502	3	8	4	1	673	167	446	452	3
Peak Hour Factor	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	4	129	1	2	1	0	173	43	115	116	1
Total Analysis Volume [veh/h]	210	14	517	3	8	4	1	693	172	459	465	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	34	0	10	45	0	11	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	34	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	L	C	R	L	C	C
C, Cycle Length [s]	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	27	27	27	58	27	27	58	54	54
g / C, Green / Cycle	0.22	0.22	0.22	0.47	0.21	0.21	0.47	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.13	0.18	0.01	0.00	0.19	0.11	0.38	0.13	0.13
s, saturation flow rate [veh/h]	1786	2813	1769	959	3560	1589	1216	1870	1866
c, Capacity [veh/h]	390	615	387	453	765	342	533	809	807
d1, Uniform Delay [s]	43.65	46.78	38.51	18.25	47.84	43.20	31.39	23.03	23.03
k, delay calibration	0.50	0.50	0.50	0.11	0.11	0.11	0.46	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.02	13.08	0.19	0.00	4.41	1.15	15.49	0.20	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.84	0.04	0.00	0.91	0.50	0.86	0.29	0.29
d, Delay for Lane Group [s/veh]	49.67	59.85	38.69	18.25	52.25	44.35	46.88	23.23	23.23
Lane Group LOS	D	E	D	B	D	D	D	C	C
Critical Lane Group	No	Yes	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.87	8.80	0.39	0.02	10.96	4.81	11.95	4.54	4.53
50th-Percentile Queue Length [ft/ln]	171.64	219.99	9.68	0.40	273.96	120.28	298.83	113.61	113.35
95th-Percentile Queue Length [veh/ln]	11.16	13.66	0.70	0.03	16.39	8.41	17.62	8.04	8.03
95th-Percentile Queue Length [ft/ln]	279.08	341.61	17.42	0.71	409.68	210.22	440.58	201.01	200.66

Movement, Approach, & Intersection Results

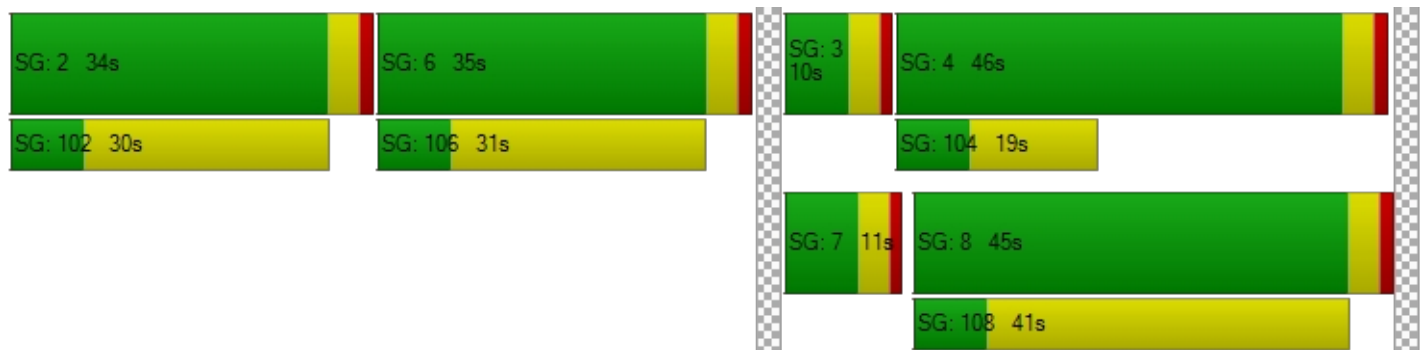
d_M, Delay for Movement [s/veh]	49.67	49.67	59.85	38.69	38.69	38.69	18.25	52.25	44.35	46.88	23.23	23.23
Movement LOS	D	D	E	D	D	D	B	D	D	D	C	C
d_A, Approach Delay [s/veh]	56.77			38.69			50.64			34.94		
Approach LOS	E			D			D			C		
d_I, Intersection Delay [s/veh]	46.64											
Intersection LOS	D											
Intersection V/C	0.671											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.99	51.99	51.99	51.99
I_p,int, Pedestrian LOS Score for Intersectio	2.634	1.747	2.720	2.733
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	496	480	656	672
d_b, Bicycle Delay [s]	35.35	36.11	28.23	27.57
I_b,int, Bicycle LOS Score for Intersection	2.782	1.584	2.274	2.324
Bicycle LOS	C	A	B	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-







Intersection Level Of Service Report

Intersection 2: Mountain Avenue (NS) at Base Line Road (EW)

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.572

Intersection Setup

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	115.00	90.00	100.00	100.00	180.00	100.00	100.00	110.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Mountain Avenue			Mountain Avenue			Base Line Road			Base Line Road		
Base Volume Input [veh/h]	97	56	174	46	33	47	68	961	85	103	756	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	97	56	174	46	33	47	68	961	85	103	756	66
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	15	47	13	9	13	19	262	23	28	206	18
Total Analysis Volume [veh/h]	106	61	190	50	36	51	74	1047	93	112	824	72
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	6	6	0	6	6	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	23	44	0	11	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	24	0	0	23	0	0	16	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	40	40	40	40	5	31	31	7	33	33
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.06	0.34	0.34	0.08	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.04	0.05	0.04	0.31	0.31	0.06	0.24	0.24
s, saturation flow rate [veh/h]	1354	1589	1128	1695	1781	1870	1817	1781	1870	1818
c, Capacity [veh/h]	666	705	432	752	102	644	626	140	684	665
d1, Uniform Delay [s]	17.31	15.84	22.33	14.70	41.75	27.99	28.01	40.78	23.91	23.91
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.24	0.24	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.90	0.94	0.55	0.31	9.34	9.55	9.94	9.93	1.12	1.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.27	0.12	0.12	0.73	0.90	0.90	0.80	0.66	0.66
d, Delay for Lane Group [s/veh]	18.21	16.78	22.87	15.01	51.09	37.54	37.95	50.71	25.02	25.06
Lane Group LOS	B	B	C	B	D	D	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.41	2.56	0.81	1.08	1.86	13.00	12.72	2.80	7.99	7.78
50th-Percentile Queue Length [ft/ln]	60.25	64.07	20.37	26.91	46.58	324.95	318.12	69.92	199.86	194.43
95th-Percentile Queue Length [veh/ln]	4.34	4.61	1.47	1.94	3.35	18.91	18.58	5.03	12.63	12.35
95th-Percentile Queue Length [ft/ln]	108.44	115.33	36.66	48.44	83.85	472.77	464.38	125.86	315.79	308.77

Movement, Approach, & Intersection Results

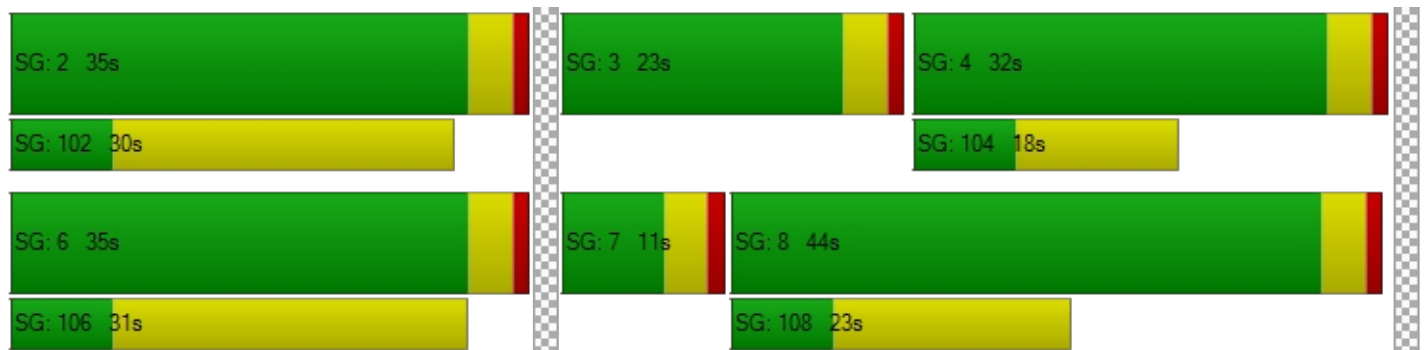
d_M, Delay for Movement [s/veh]	18.21	18.21	16.78	22.87	15.01	15.01	51.09	37.72	37.95	50.71	25.04	25.06
Movement LOS	B	B	B	C	B	B	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	17.45			17.88			38.55			27.89		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	30.78											
Intersection LOS	C											
Intersection V/C	0.572											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.68	34.68	34.68	34.68
I_p,int, Pedestrian LOS Score for Intersectio	2.134	2.052	2.878	2.818
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	689	889	622
d_b, Bicycle Delay [s]	19.35	19.35	13.90	21.37
I_b,int, Bicycle LOS Score for Intersection	2.149	1.786	2.561	2.391
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Towne Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	49.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.950

Intersection Setup

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	225.00	100.00	80.00	140.00	100.00	100.00	200.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	1	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Towne Avenue			Towne Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	250	840	277	224	424	129	288	866	208	279	775	198
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	250	840	277	224	424	129	288	866	208	279	775	198
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	219	72	58	111	34	75	226	54	73	202	52
Total Analysis Volume [veh/h]	261	876	289	234	442	135	300	903	217	291	808	206
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	20	33	0	10	23	0	24	44	0	23	43	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	12	0	0	23	0	0	23	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	42	32	32	42	24	24	20	37	37	19	36	36
g / C, Green / Cycle	0.38	0.29	0.29	0.38	0.22	0.22	0.18	0.33	0.33	0.17	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.22	0.25	0.18	0.32	0.16	0.16	0.17	0.31	0.31	0.16	0.28	0.28
s, saturation flow rate [veh/h]	1191	3560	1589	733	1870	1722	1781	1870	1747	1781	1870	1741
c, Capacity [veh/h]	433	1037	463	268	414	381	324	625	584	308	608	566
d1, Uniform Delay [s]	26.22	36.71	33.83	32.81	39.78	39.79	44.32	35.27	35.49	45.03	34.83	34.94
k, delay calibration	0.31	0.50	0.50	0.50	0.50	0.50	0.17	0.35	0.36	0.16	0.31	0.31
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.81	8.43	6.23	30.31	10.53	11.45	15.84	16.09	18.98	17.95	9.70	10.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.84	0.62	0.87	0.72	0.73	0.92	0.92	0.93	0.94	0.86	0.87
d, Delay for Lane Group [s/veh]	30.03	45.15	40.06	63.11	50.31	51.24	60.16	51.36	54.47	62.98	44.53	45.88
Lane Group LOS	C	D	D	E	D	D	E	D	D	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.34	12.12	7.43	6.56	8.69	8.12	9.41	17.30	16.91	9.33	14.52	13.85
50th-Percentile Queue Length [ft/ln]	133.55	303.04	185.83	163.94	217.30	202.96	235.32	432.54	422.76	233.32	363.09	346.35
95th-Percentile Queue Length [veh/ln]	9.13	17.83	11.90	10.76	13.53	12.79	14.44	24.12	23.65	14.34	20.77	19.96
95th-Percentile Queue Length [ft/ln]	228.31	445.78	297.61	268.93	338.18	319.78	361.11	603.08	591.37	358.58	519.33	498.95

Movement, Approach, & Intersection Results

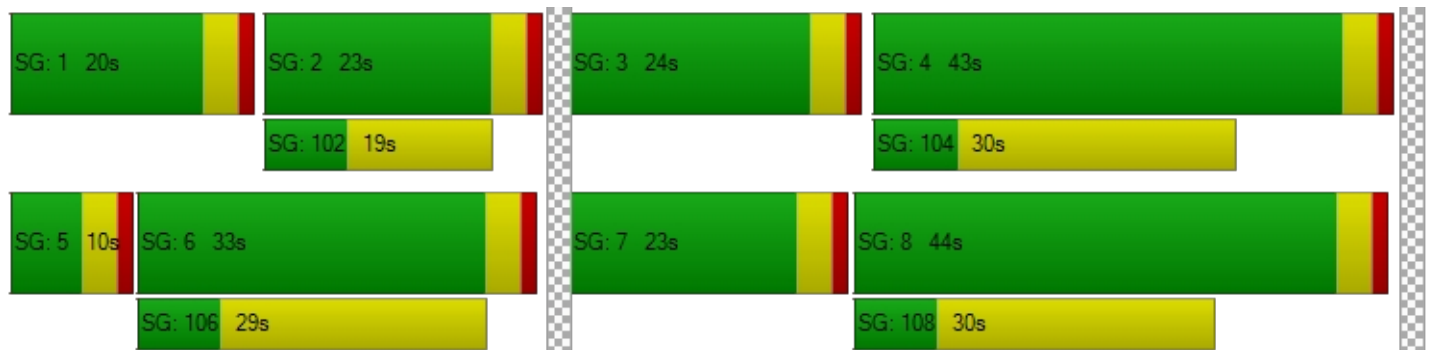
d_M, Delay for Movement [s/veh]	30.03	45.15	40.06	63.11	50.61	51.24	60.16	52.49	54.47	62.98	45.00	45.88
Movement LOS	C	D	D	E	D	D	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	41.35			54.32			54.41			49.15		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	49.26											
Intersection LOS	D											
Intersection V/C	0.950											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	44.60	44.60	44.60	44.60
I_p,int, Pedestrian LOS Score for Intersectio	2.934	2.737	2.910	3.009
Crosswalk LOS	C	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	527	345	727	708
d_b, Bicycle Delay [s]	29.87	37.69	22.32	22.96
I_b,int, Bicycle LOS Score for Intersection	2.736	2.229	2.731	2.636
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 4: Regis Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.119

Intersection Setup

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration				↶			↶ ↑ ↶			↶ ↑ ↶		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	150.00	100.00	100.00	90.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	Regis Avenue			Regis Avenue			Foothill Boulevard			Foothill Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	45	81	1341	0	4	1299	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	45	81	1341	0	4	1299	43
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	12	21	345	0	1	334	11
Total Analysis Volume [veh/h]	0	0	0	0	0	46	83	1380	0	4	1336	44
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane				
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.12	0.17	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	15.54	13.78	0.00	0.00	12.37	0.00	0.00
Movement LOS						C	B	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.40	0.60	0.00	0.00	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	10.01	15.02	0.00	0.00	0.61	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			15.54			0.78			0.04		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	0.66											
Intersection LOS	C											

Intersection Level Of Service Report

Intersection 5: Mountain Avenue (NS) at Foothill Boulevard (EW)

Control Type:	Signalized	Delay (sec / veh):	35.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.632

Intersection Setup

Name	Northbound			Southbound			Eastbound			Westbound		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	55.00	100.00	115.00	40.00	100.00	100.00	190.00	100.00	100.00	240.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	143	193	104	194	188	65	76	1025	99	124	1030	104
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	143	193	104	194	188	65	76	1025	99	124	1030	104
Peak Hour Factor	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660	0.9660
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	50	27	50	49	17	20	265	26	32	267	27
Total Analysis Volume [veh/h]	148	200	108	201	195	67	79	1061	102	128	1066	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	6	6	0	6	6	0	6	6	0	6	6	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	33	0	10	33	0	10	52	0	10	52	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	22	0	0	19	0	0	18	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	50	40	40	50	40	40	47	37	37	47	37	37
g / C, Green / Cycle	0.48	0.38	0.38	0.48	0.38	0.38	0.44	0.35	0.35	0.44	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.07	0.17	0.07	0.07	0.12	0.32	0.32	0.18	0.32	0.32
s, saturation flow rate [veh/h]	1224	1870	1589	1185	1870	1710	687	1870	1813	707	1870	1810
c, Capacity [veh/h]	633	715	608	590	715	654	261	653	633	270	664	642
d1, Uniform Delay [s]	15.73	22.44	21.50	16.46	21.60	21.64	22.87	32.51	32.55	23.75	32.10	32.15
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.24	0.24	0.11	0.24	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.97	0.64	1.57	0.59	0.66	0.64	9.95	10.43	1.29	9.34	9.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, 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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.28	0.18	0.34	0.19	0.19	0.30	0.90	0.91	0.47	0.90	0.90
d, Delay for Lane Group [s/veh]	15.92	23.41	22.13	18.03	22.18	22.30	23.51	42.46	42.97	25.04	41.44	42.08
Lane Group LOS	B	C	C	B	C	C	C	D	D	C	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.02	3.58	1.86	3.05	2.32	2.19	1.15	15.68	15.34	1.93	15.65	15.33
50th-Percentile Queue Length [ft/ln]	50.53	89.43	46.46	76.20	58.00	54.69	28.69	392.09	383.42	48.34	391.31	383.24
95th-Percentile Queue Length [veh/ln]	3.64	6.44	3.35	5.49	4.18	3.94	2.07	22.18	21.76	3.48	22.14	21.75
95th-Percentile Queue Length [ft/ln]	90.96	160.97	83.63	137.15	104.40	98.44	51.65	554.47	543.98	87.01	553.52	543.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	15.92	23.41	22.13	18.03	22.22	22.30	23.51	42.69	42.97	25.04	41.72	42.08
Movement LOS	B	C	C	B	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	20.68			20.41			41.49			40.11		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.41											
Intersection LOS	D											
Intersection V/C	0.632											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	42.11	42.11	42.11	42.11
I_p,int, Pedestrian LOS Score for Intersectio	2.546	2.515	2.884	2.943
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	552	552	914	914
d_b, Bicycle Delay [s]	27.53	27.53	15.50	15.50
I_b,int, Bicycle LOS Score for Intersection	2.312	1.942	2.584	2.634
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 6: Towne Avenue (NS) at Amador Street/Richbrook Drive (EW)

Control Type:	Signalized	Delay (sec / veh):	4.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.534

Intersection Setup

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	60.00	100.00	100.00	55.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Towne Avenue			Towne Avenue			Richbrook Drive			Amador Street		
Base Volume Input [veh/h]	22	1550	7	45	1276	47	47	0	22	5	1	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	1550	7	45	1276	47	47	0	22	5	1	44
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	414	2	12	341	13	13	0	6	1	0	12
Total Analysis Volume [veh/h]	24	1658	7	48	1365	50	50	0	24	5	1	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	6	0	0	6	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	72	0	0	72	0	0	33	0	0	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	12	0	0	0	0	0	22	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	91	91	91	91	91	91	6	6
g / C, Green / Cycle	0.87	0.87	0.87	0.87	0.87	0.87	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.06	0.45	0.45	0.16	0.38	0.38	0.05	0.03
s, saturation flow rate [veh/h]	380	1870	1867	298	1870	1847	1548	1741
c, Capacity [veh/h]	352	1620	1618	283	1620	1600	146	137
d1, Uniform Delay [s]	3.63	1.68	1.68	4.97	1.50	1.51	48.84	48.12
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	1.17	1.17	1.30	0.86	0.88	2.71	1.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.07	0.51	0.51	0.17	0.44	0.44	0.51	0.39
d, Delay for Lane Group [s/veh]	4.00	2.85	2.85	6.26	2.37	2.39	51.55	49.91
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.15	2.06	2.06	0.41	1.56	1.56	2.02	1.41
50th-Percentile Queue Length [ft/ln]	3.83	51.57	51.59	10.20	39.08	38.92	50.40	35.32
95th-Percentile Queue Length [veh/ln]	0.28	3.71	3.71	0.73	2.81	2.80	3.63	2.54
95th-Percentile Queue Length [ft/ln]	6.90	92.83	92.87	18.35	70.34	70.05	90.73	63.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.00	2.85	2.85	6.26	2.38	2.39	51.55	51.55	51.55	49.91	49.91	49.91
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	2.87			2.51			51.55			49.91		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	4.56											
Intersection LOS	A											
Intersection V/C	0.534											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			11.0			11.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			42.00			42.00			0.00		
I_p,int, Pedestrian LOS Score for Intersectio	0.000			3.054			1.829			0.000		
Crosswalk LOS	F			C			A			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1297			1297			553			553		
d_b, Bicycle Delay [s]	6.48			6.48			27.44			27.44		
I_b,int, Bicycle LOS Score for Intersection	2.953			2.767			1.682			1.647		
Bicycle LOS	C			C			A			A		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 7: Project Access No.1 (NS) at Foothill Boulevard (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	Project Access No.1		Foothill Boulevard		Foothill Boulevard	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↕	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Access No.1		Foothill Boulevard		Foothill Boulevard	
Base Volume Input [veh/h]	0	5	1361	8	0	1252
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	1361	8	0	1252
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	358	2	0	329
Total Analysis Volume [veh/h]	0	5	1433	8	0	1318
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	14.86	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.04	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.03	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.86		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.03					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 8: Towne Avenue (NS) at Project Access No.2 (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.024

Intersection Setup

Name	Towne Avenue		Towne Avenue		Project Access No.2	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	⇈		⇈		⇈	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Towne Avenue		Towne Avenue		Project Access No.2	
Base Volume Input [veh/h]	1638	9	0	912	0	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1638	9	0	912	0	7
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	431	2	0	240	0	2
Total Analysis Volume [veh/h]	1724	9	0	960	0	7
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	17.44
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	1.81
d_A, Approach Delay [s/veh]	0.00		0.00		17.44	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.05					
Intersection LOS	C					

Appendix I

San Gabriel Valley Council of Governments
VMT Assessment Tool Report Output

Project Details

Timestamp of Analysis: September 06, 2022, 04:00:27 PM

Project Name: Foothill and Towne Residential

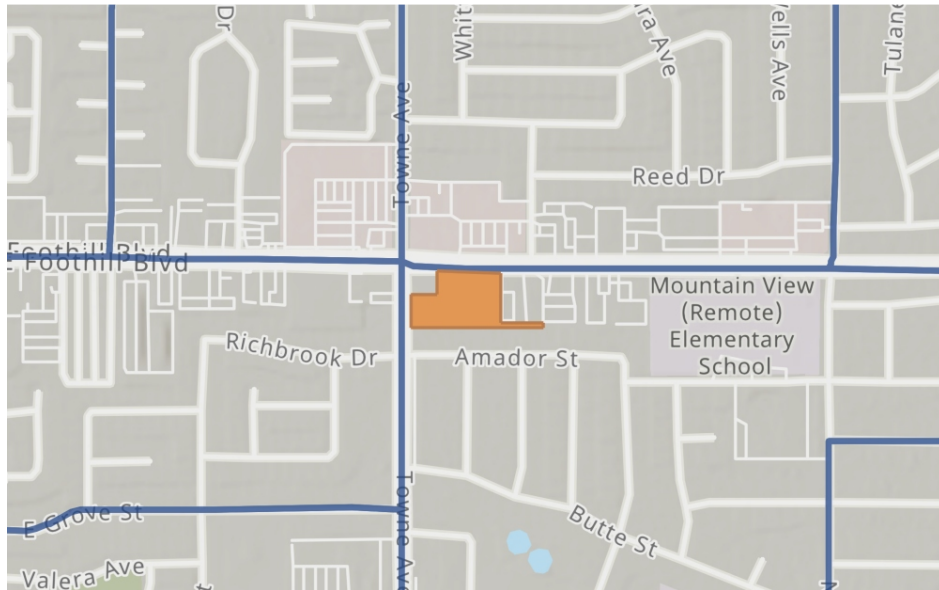
Project Description: 56 DU Single Family Residential

Project Location

jurisdiction:	apn	TAZ
Claremont	8311-001-016	22445400

Inside a TPA?

Yes (Pass)



Analysis Details

Data Version: SCAG Regional Travel Demand Model
2016 RTP Base Year 2012

Analysis Methodology: TAZ

Baseline Year: 2025

Project Land Use

Residential:

Single Family DU: 56

Multifamily DU:

Total DUs: 56

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 0 %

Low Income: 7.0000000000000001 %

Parking:

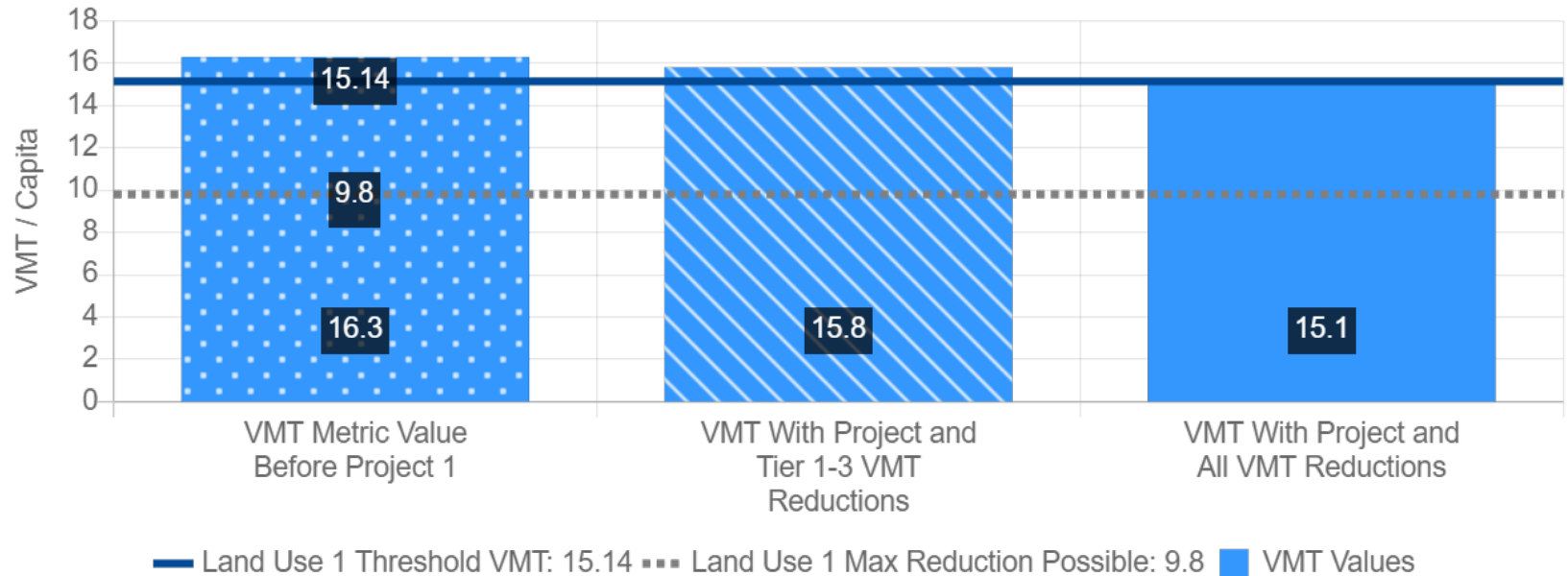
Motor Vehicle Parking: 130

Bicycle Parking: 112

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project 1:	Home-based VMT per Capita
VMT Baseline Description 1:	Subarea Average
VMT Baseline Value 1:	17.81
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	16.3	15.8	15.1
Low VMT Screening Analysis	No (Fail)	No (Fail)	Yes (Pass)



Tier 1 Project Characteristics

PC01 Increase Residential Density

Existing Residential Density:	5.49
With Project Residential Density:	5.99

PC03 Affordable Housing

Low Income:	7.000000000000001 %
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Tier 4 TDM Programs

TP01 School Pool Programs

School Pool Program Percent of Expected Participant Households:	25 %
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TP18 Voluntary Travel Behavior Change Program

Percent of Behavior Program Participants :	100 %
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