840 South Indian Hill Traffic Impact Analysis

City of Claremont, California

May 22, 2025

Prepared by:

TJW ENGINEERING, INC.
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CONSULTANTS

May 22, 2025

Mr. Patrick Chien
CITY VENTURES
3121 Michelson Drive, Suite 150
Irvine, CA 92612

Subject: Traffic Impact Analysis – 840 South Indian Hill, City of Claremont, CA

Dear Mr. Chien:

TJW ENGINEERING, INC. (TJW) is pleased to present you with this traffic impact analysis for the proposed project of 70 multi-family dwelling units located at 840 South Indian Hill Road in the City of Claremont, California.

This traffic study has been prepared to meet the traffic study requirements for the City of Claremont and assesses the forecast traffic operations associated with the proposed project and its impact on the local street network. This report is being submitted to you for review and forwarding to the City of Claremont.

Please contact us at (949) 878-3509 if you have any questions regarding this analysis.

Sincerely,

Thomas Wheat, PE, TE
President
Registered Civil Engineer *#69467*
Registered Traffic Engineer *#2565*





David Chew, PTP
Transportation Planner

Travis Yokota
Assistant Transportation Planner

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1.0 EXECUTIVE SUMMARY

This traffic impact analysis (TIA) analyzes the projected traffic operations associated with the proposed project located at 840 South Indian Hill Boulevard in the City of Claremont. The purpose of this TIA is to evaluate potential circulation system deficiencies that may result from the development of the proposed project, and to recommend improvements to achieve acceptable operations, if applicable. This analysis has been prepared in coordination with the City of Claremont via a scoping agreement (See **Appendix B**) and follows the *City of Claremont General Plan (City General Plan)* (October 2009) and the *City of Claremont Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment (City Guidelines)* (August 2020).

The proposed project is for the construction of 70 multi-family dwelling units. Site access is planned via a full access driveway located on West American Way. The site is currently designated for Residential land use per the *City General Plan* Land Use Plan. The site is currently zoned RM-2,000, or Residential with a minimum lot 2,000 square feet. Currently the majority of the project site is occupied by tennis courts with the remaining area vacant.

The proposed project is anticipated to be built and generating trips in 2025. A growth rate of 2% was used to account for 2025 volumes. The proposed project is projected to generate 472 daily trips which includes 28 AM peak hour trips and 36 PM peak hour trips.

The following thirteen (13) intersections in the vicinity of the project site have been included in the intersection level of service (LOS) analysis:

1. South-Indian Hill Boulevard/West American Avenue;
2. Indian Hill Boulevard/San Bernardino Avenue;
3. College Avenue/San Bernardino Avenue;
4. South College Avenue/West-East American Avenue;
5. South Indian Hill Boulevard/I-10 Eastbound Ramps;
6. South Indian Hill Boulevard/I-10 Westbound Ramps;
7. South Indian Hill Boulevard/West San Jose Avenue;
8. South College Avenue/West-East San Jose Avenue;
9. North Mills Avenue/East San Jose Avenue;
10. North Mills Avenue/East American Avenue;
11. South Indian Hill Boulevard/West Arrow Highway;
12. South Indian Hill Boulevard/Auto Center Drive;
13. Project Driveway/West American Avenue.

The study intersections are analyzed for the following study scenarios:

- Existing Traffic Conditions (Existing);
- Opening Year Traffic Conditions (OY);
- Opening Year With Project Traffic Conditions (OYP);
- Horizon Year Traffic Conditions (HY);
- Horizon Year With Project Traffic Conditions (HYP).

1.1 SUMMARY OF LEVEL OF SERVICE ANALYSIS RESULTS

Table ES-1 summarizes the results of the intersection level of service analysis based on the *City General Plan* thresholds of significance for analyzing transportation deficiencies.

Table ES-1

Summary of Transportation Deficiencies at Study Intersections

Intersection			Existing	OY	OYP	HP	HYP
1	South-Indian Hill Boulevard	West American Avenue	-	-	-	-	-
2	Indian Hill Boulevard	San Bernardino Avenue	-	-	-	-	-
3	College Avenue	San Bernardino Avenue	-	-	-	-	-
4	South College Avenue	West-East American Avenue	-	-	-	-	-
5	South Indian Hill Boulevard	I-10 Eastbound Ramps	-	-	-	-	-
6	South Indian Hill Boulevard	I-10 Westbound Ramps	-	-	-	-	-
7	South Indian Hill Boulevard	West San Jose Avenue	-	-	-	-	-
8	South College Avenue	West-East San Jose Avenue	-	-	-	-	-
9	North Mills Avenue	East San Jose Avenue	-	Deficient	Deficient	Deficient	Deficient
10	North Mills Avenue	East American Avenue	-	-	-	-	-
11	South Indian Hill Boulevard	West Arrow Highway	-	-	-	-	-
12	South Indian Hill Boulevard	Auto Center Drive	-	-	-	-	-
13	Project Driveway	West American Avenue	-	-	-	-	-

Existing Traffic Conditions

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Existing* traffic conditions.

Opening Year Traffic Conditions (OY)

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Opening Year* traffic conditions with the following exception:

- Intersection 9: North Mills Avenue/East San Jose Avenue during the AM Peak Hour.

Opening Year With Project Traffic Conditions (OYP)

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Opening Year With Project* traffic conditions with the following exception:

- Intersection 9: North Mills Avenue/East San Jose Avenue during the AM Peak Hour.

Horizon Year Traffic Conditions (HY)

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Horizon Year* traffic conditions with the following exception:

- Intersection 9: North Mills Avenue/East San Jose Avenue during the AM and PM Peak Hour.

Horizon Year With Project Traffic Conditions (HYP)

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Horizon Year With Project* traffic conditions with the following exception:

- Intersection 9: North Mills Avenue/East San Jose Avenue during the AM and PM Peak Hour.

For Intersection 1: Indian Hill Boulevard/West American Avenue, the existing AM peak hour westbound right turn volumes start at 168 and increase to 198 right turn movements for the Horizon Year. This is projected to add 30 additional AM peak hour right turns at the Horizon Year from the Existing conditions, to an already congested right turn movement. The City is conditioning a dedicated right turn pocket improvements as part of the development conditions of approval, and will be working towards obtaining the necessary right of way, and providing plans and specifications for the developer to construct necessary signal modifications in order to provide roadway improvements to address the need for a right turn only lane for westbound West American Avenue at Indian Hill Boulevard. This improvement is necessary to address the right turn congestion on West American Avenue at Indian Hill Boulevard.

2.0 INTRODUCTION

This traffic impact analysis (TIA) analyzes the projected traffic operations associated with the proposed project located at 840 South Indian Hill Boulevard in the City of Claremont. The purpose of this TIA is to evaluate potential circulation system deficiencies that may result from the development of the proposed project, and to recommend improvements to achieve acceptable operations, if applicable. This analysis has been prepared in coordination with the City of Claremont via a scoping agreement (See **Appendix B**) and follows the *City of Claremont General Plan (City General Plan)* (October 2009) and the *City of Claremont Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment (City Guidelines)* (August 2020).

2.1 PROJECT DESCRIPTION

The proposed project is for the construction of 70 multi-family dwelling units. Site access is planned via a full access driveway located on West American Way. The site is currently designated for Residential land use per the *City General Plan* Land Use Plan. The site is currently zoned RM-2,000, or Residential with a minimum lot 2,000 square feet. Currently the majority of the project site is occupied by tennis courts with the remaining area vacant.

The proposed project is anticipated to be built and generating trips in 2025. A growth rate of 2% was used to account for 2025 volumes.

Exhibit 1 shows the project site location. **Exhibit 2** shows the proposed project site plan.

2.2 STUDY AREA

The following thirteen (13) intersections in the vicinity of the project site have been included in the intersection level of service (LOS) analysis:

1. South-Indian Hill Boulevard/West American Avenue;
2. Indian Hill Boulevard/San Bernardino Avenue;
3. College Avenue/San Bernardino Avenue;
4. South College Avenue/West-East American Avenue;
5. South Indian Hill Boulevard/I-10 Eastbound Ramps;
6. South Indian Hill Boulevard/I-10 Westbound Ramps;
7. South Indian Hill Boulevard/West San Jose Avenue;
8. South College Avenue/West-East San Jose Avenue;
9. North Mills Avenue/East San Jose Avenue;
10. North Mills Avenue/East American Avenue;
11. South Indian Hill Boulevard/West Arrow Highway;

12. South Indian Hill Boulevard/Auto Center Drive;
13. Project Driveway/West American Avenue.

Exhibit 3 shows the location of each study intersection.

The study intersections are analyzed for the following study scenarios:

- Existing Traffic Conditions (Existing);
- Opening Year Traffic Conditions (OY);
- Opening Year With Project Traffic Conditions (OYP);
- Horizon Year Traffic Conditions (HY);
- Horizon Year With Project Traffic Conditions (HYP).

Traffic operations are evaluated for the following time periods:

- Weekday AM Peak Hour occurring between 7:00 AM to 9:00 AM; and
- Weekday PM Peak Hour occurring between 4:00 PM to 6:00 PM.

2.3 INTERSECTION ANALYSIS METHODOLOGY

Level of Service (LOS) is commonly used to describe the quality of flow on roadways and at intersections using a range of LOS from LOS A (free flow with little congestion) to LOS F (severely congested conditions). The definitions for LOS for interruption of traffic flow differ depending on the type of traffic control (traffic signal, unsignalized intersection with side street stops, unsignalized intersection with all-way stops). The *Highway Capacity Manual (HCM) 7th Edition* (Transportation Research Board, 2022) methodology expresses the LOS of an intersection in terms of delay time for the intersection approaches. The HCM methodology utilizes different procedures for different types of intersection control.

City Guidelines require signalized intersection operations to be analyzed utilizing the HCM 7th Edition methodology. Intersection LOS for signalized intersections is based on the intersections average control delay for all movements at the intersection during the peak hour. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The procedure for stop-control analysis determines the average total delay, expressed in seconds of delay per vehicle, for left turns from the major street and from the stop-controlled minor street traffic stream. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable "gaps" in this stream through which conflicting traffic movements can be made.

Table 1 describes the general characteristics of traffic flow and accompanying delay ranges at signalized intersections.

Table 1:
HCM – LOS & Delay Ranges – Signalized Intersections

Level of Service	Description	Delay (in seconds)
A	Very favorable progression; most vehicles arrive during green signal and do not stop. Short cycle lengths.	0 – 10.00
B	Good progression, short cycle lengths. More vehicles stop than for LOS A.	10.01 – 20.00
C	Fair progression; longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant, though many vehicles still pass through without stopping.	20.01 – 35.00
D	Progression less favorable, longer cycle length and high flow/capacity ratio. The proportion of vehicles that pass through without stopping diminishes. Individual cycle failures are obvious.	35.01 – 55.00
E	Severe congestion with some long-standing queues on critical approaches. Poor progression, long cycle lengths and high flow/capacity ratio. Individual cycle failures are frequent.	55.01 – 80.00
F	Very poor progression, long cycle lengths and many individual cycle failures. Arrival flow rates exceed capacity of intersection.	> 80.01

Source: Transportation Research Board, *Highway Capacity Manual 7th Edition* (Washington D.C., 2022).

Collected peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. It is a common practice in LOS analysis to conservatively use a peak 15-minute flow rate applied to the entire hour to derive flow rates in vehicles per hour that are used in the LOS analysis. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume. PHF = [Hourly Volume]/ [4 * Peak 15-Minute Volume]. The use of a 15-minute PHF produces a more detailed and conservative analysis compared to analyzing vehicles per hour. Existing PHFs, obtained from the existing traffic counts have been used for all analysis scenarios in this study.

The *City Guidelines* also require unsignalized intersection operations to be analyzed utilizing the HCM 7th Edition methodology. Intersection operation for unsignalized intersections is based on the weighted average control delay expressed in seconds per vehicle.

At a two-way or side-street stop-controlled intersection, LOS is calculated for each stop-controlled minor street movement, for the left-turn movement(s) from the major street, and for the intersection as a whole. For approaches consisting of a single lane, the delay is calculated as the average of all movements in that lane. For all-way stop-controlled intersection, LOS is computed for the intersection as a whole.

Table 2 describes the general characteristics of traffic flow and accompanying delay ranges at unsignalized intersections.

Table 2:
HCM – LOS & Delay Ranges – Unsignalized Intersections

Level of Service	Description	Delay (in seconds)
A	Very favorable progression; most vehicles arrive during green signal and do not stop. Short cycle lengths.	0 – 10.00
B	Good progression, short cycle lengths. More vehicles stop than for LOS A.	10.01 – 20.00
C	Fair progression; longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant, though many vehicles still pass through without stopping.	20.01 – 35.00
D	Progression less favorable, longer cycle length and high flow/capacity ratio. The proportion of vehicles that pass through without stopping diminishes. Individual cycle failures are obvious.	35.01 – 55.00
E	Severe congestion with some long-standing queues on critical approaches. Poor progression, long cycle lengths and high flow/capacity ratio. Individual cycle failures are frequent.	55.01 – 80.00
F	Very poor progression, long cycle lengths and many individual cycle failures. Arrival flow rates exceed capacity of intersection.	> 80.01

Source: Transportation Research Board, *Highway Capacity Manual*, HCM7 Edition (Washington D.C., 2022).

This analysis utilizes *PTV Vistro*, Version 2022 analysis software for all signalized and unsignalized intersections. Vistro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis specified in Chapter 16 of the HCM. The level of service and capacity analysis performed within Vistro takes the optimization and coordination of signalized intersections within a network into consideration.

2.4 PERFORMANCE CRITERIA

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies. As shown in the *City General Plan Mobility Element (2009) and the City of Claremont Transportation Study Guidelines (August 2020),* the City of Claremont performance standards are based roadway type. **Table 3** summarizes the minimum acceptable LOS for intersections per roadway type.

Table 3:
Intersection Performance Criteria

	Roadway Classification	Minimum LOS
1	Major Arterial	E
2	Secondary Arterial	D
3	Rural Secondary Arterial	D
4	Collector	C
5	Local Street	B

Source: City of Claremont General Plan (October 2009) Table 4-2.

Additionally, the City outlines the following requirements for intersection improvement for signalized and unsignalized intersections.

2.4.1 Signalized Intersections

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

- Any study intersection that is operating at a minimum level of service 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.
- 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.

2.4.2 Unsignalized Intersections

Unsignalized intersections will require 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.

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



Exhibit 1: Proposed Location

Traffic Impact Analysis

CVR-24-003

Not to Scale

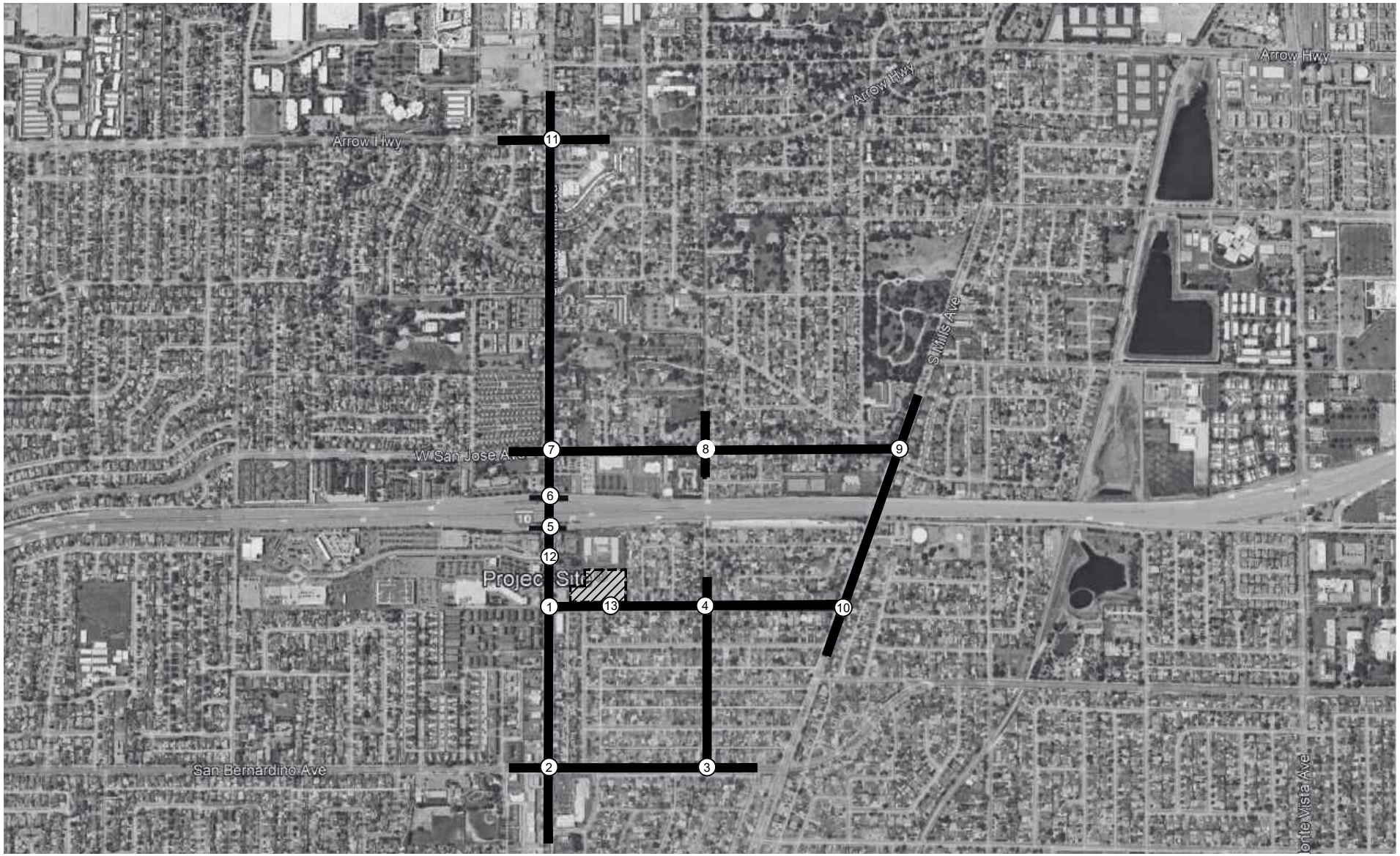


Exhibit 2: Proposed Project Site Plan

Traffic Impact Analysis

CVR-24-003

Not to Scale



Legend:

Project Site

(#) Study Intersection Location

Exhibit 3: Project Study Intersection

Traffic Impact Analysis

CVR-24-003

Not to Scale

3.0 EXISTING CONDITIONS

3.1 EXISTING CIRCULATION NETWORK/STUDY AREA CONDITIONS

The *City General Plan* provides a classification system for the roadways within the City of Claremont. This includes illustrations of roadway cross-sections for each classification type. The classification system is shown in **Appendix B**. The characteristics of the roadways in the vicinity of the proposed project site, including their roadway classifications, are described in **Table 4. Exhibit 4** show current lane geometry and intersection controls.

Table 4:
Roadway Characteristics within Study Area

Roadway	Classification[1]	Jurisdiction	Direction	Travel Lanes	Median Type[3]	Speed Limit (mph)	On-Street Parking
Indian Hill Boulevard	Major Arterial	Claremont	North-South	4-5	RM	30-40	No
South Indian Hill Boulevard	Major Arterial	Claremont	North-South	4	RM	30-40	Yes
West-East American Avenue	Collector	Claremont	East-West	2	NM	25	Yes
College Avenue	Collector	Claremont - Pomona	North-South	2	NM	25	Yes
San Bernardino Avenue	Minor Arterial[2]	Pomona	East-West	2	TWLTL	35-40	Yes
West-East San Jose Avenue	Secondary Arterial	Claremont	East-West	2	TWLTL	25-35	Yes
North Mills Avenue	Secondary Arterial	Claremont	North-South	2	RM	40	Yes
West Arrow Highway	Major Arterial	Claremont	East-West	4	RM	40-45	No

1: Source: City of Claremont General Plan (October 2009) unless otherwise noted.
2: Source: City of Pomona 2014 General Plan Update (March 2014).
3: TWLTL = Two-Way Left-Turn Lane, RM= Raised Median, NM = No Median.

3.2 EXISTING PUBLIC TRANSIT SERVICES

The City of Claremont is served by Foothill Transit which provides bus service throughout the Claremont region. The nearest transit service is Foothill Transit Route 480 with multiple stops along Indian Hill Avenue within a one-half mile radius from the project site. This includes both northbound and southbound stops at the intersection Indian Hill Avenue and West American Avenue approximately 500 feet from the proposed project driveway. See **Appendix B** for the Foothill Transit map and schedule of this route.

3.3 EXISTING TRAFFIC VOLUMES

To determine the existing operation of the study intersections, AM and PM peak period traffic volumes were collected at all study intersections on Wednesday, May 8, 2024. Detailed traffic count data is provided in **Appendix C**.

Exhibit 5 shows existing AM peak hour volumes at the study intersections. **Exhibit 6** shows existing PM peak hour volumes at the study intersections.

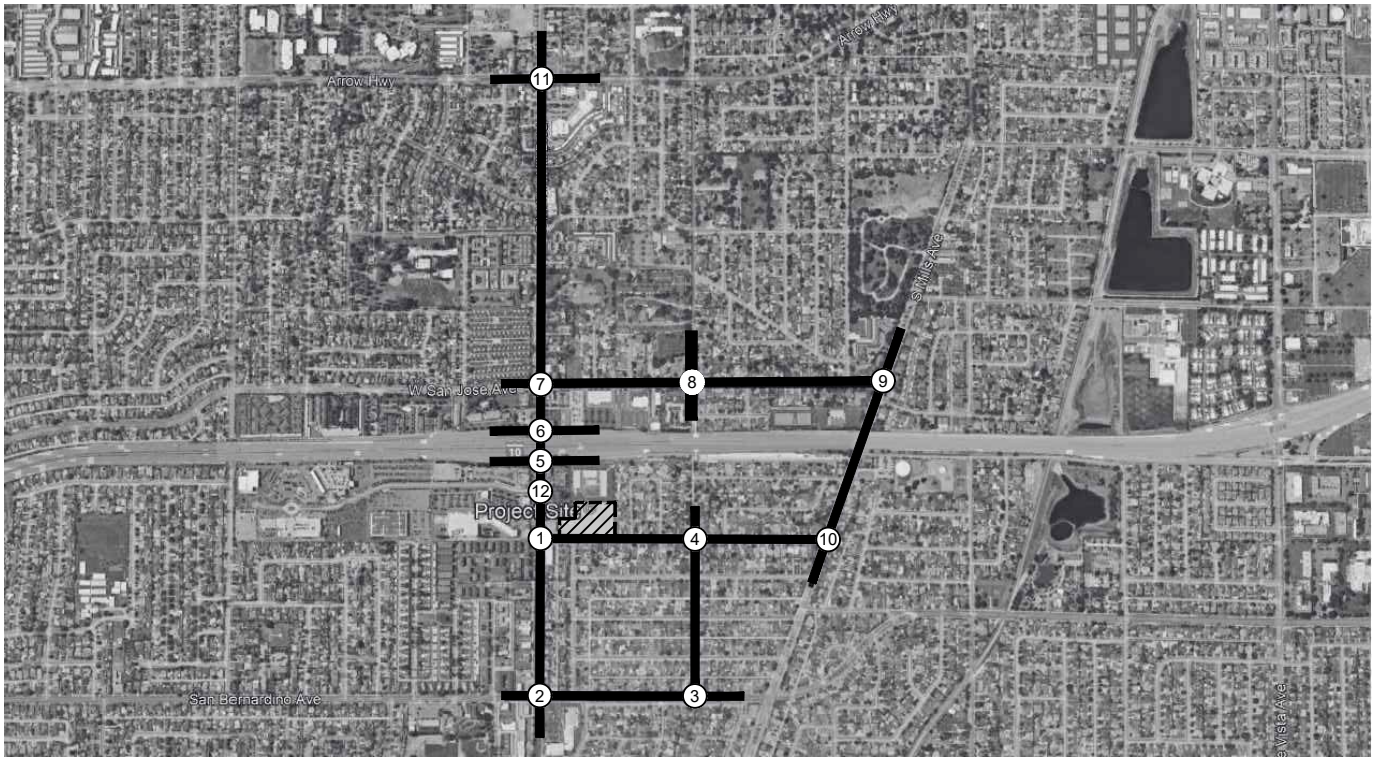
3.4 EXISTING TRAFFIC CONDITIONS INTERSECTION LEVEL OF SERVICE ANALYSIS

Existing traffic conditions AM and PM peak hour intersection analysis is shown in **Table 5.** Calculations are based on the existing geometrics at the study area intersections as shown in **Exhibit 4.** HCM analysis sheets are provided in **Appendix E**. As shown in **Table 5**, the study intersections are currently operating at an acceptable LOS during the AM and PM peak hours for *Existing* traffic conditions.

Table 5:
Intersection Analysis – Existing Conditions

Intersection			Control Type[1]	LOS Threshold	Peak Hour	Existing Conditions	
						Delay[2]	LOS
1	Indian Hill Boulevard	West American Avenue	Signal	E	AM	10.73	B
					PM	9.46	A
2	South Indian Hill Boulevard	San Bernardino Avenue	Signal	E	AM	18.86	B
					PM	20.90	C
3	College Avenue	San Bernardino Avenue	OWSC	D	AM	11.78	B
					PM	11.16	B
4	South College Avenue	West-East American Avenue	AWSC	D	AM	7.56	A
					PM	7.57	A
5	South Indian Hill Boulevard	I-10 Eastbound Ramps	Signal	E	AM	19.45	B
					PM	15.09	B
6	South Indian Hill Boulevard	I-10 Westbound Ramps	Signal	E	AM	23.20	C
					PM	20.42	C
7	South Indian Hill Boulevard	West San Jose Avenue	Signal	E	AM	18.63	B
					PM	20.15	C
8	South College Avenue	West-East San Jose Avenue	AWSC	D	AM	12.30	B
					PM	10.55	B
9	North Mills Avenue	East San Jose Avenue	OWSC	D	AM	33.24	D
					PM	27.26	D
10	North Mills Avenue	East American Avenue	OWSC	D	AM	20.33	C
					PM	18.01	C
11	South Indian Hill Boulevard	West Arrow Highway	Signal	E	AM	34.67	C
					PM	37.09	D
12	South Indian Hill Boulevard	Auto Center Drive	Signal	E	AM	25.16	C
					PM	25.87	C

1: AWSC = All-Way Stop-Control, OWSC = One-Way Stop-Control.
2: Delay shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.



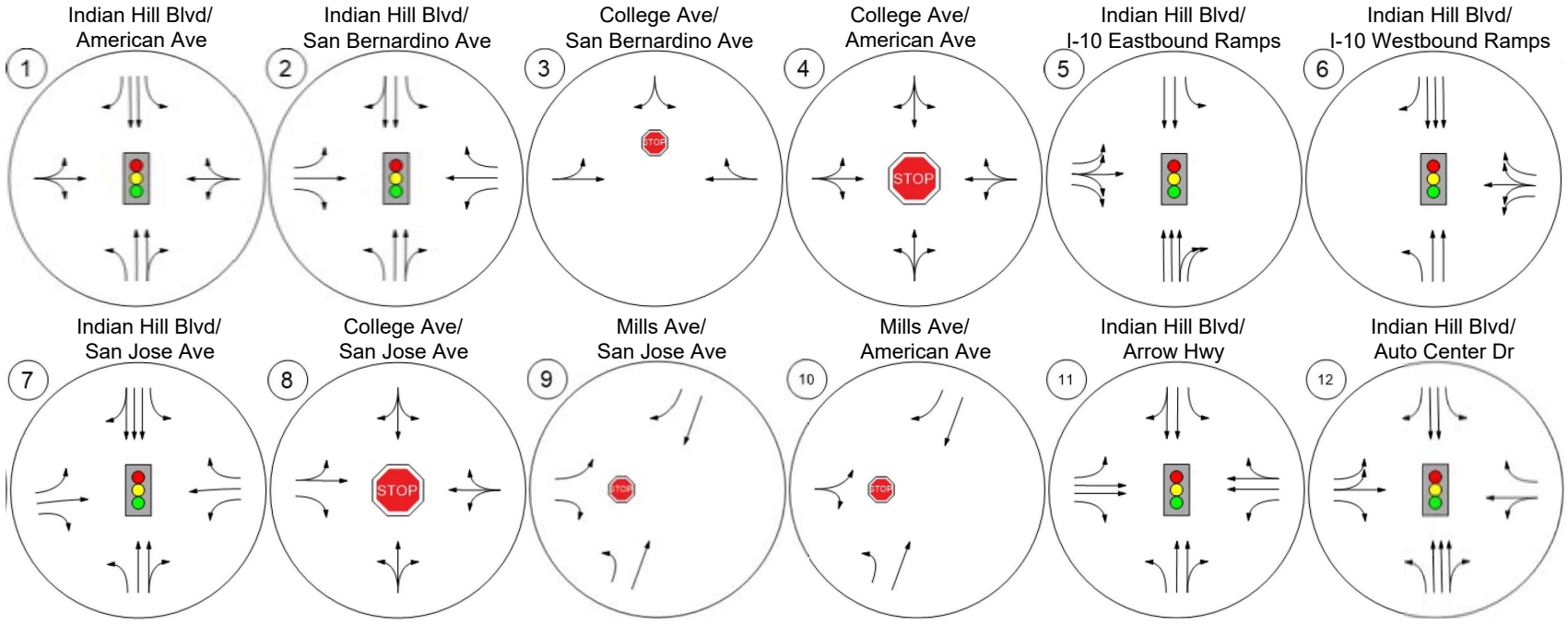
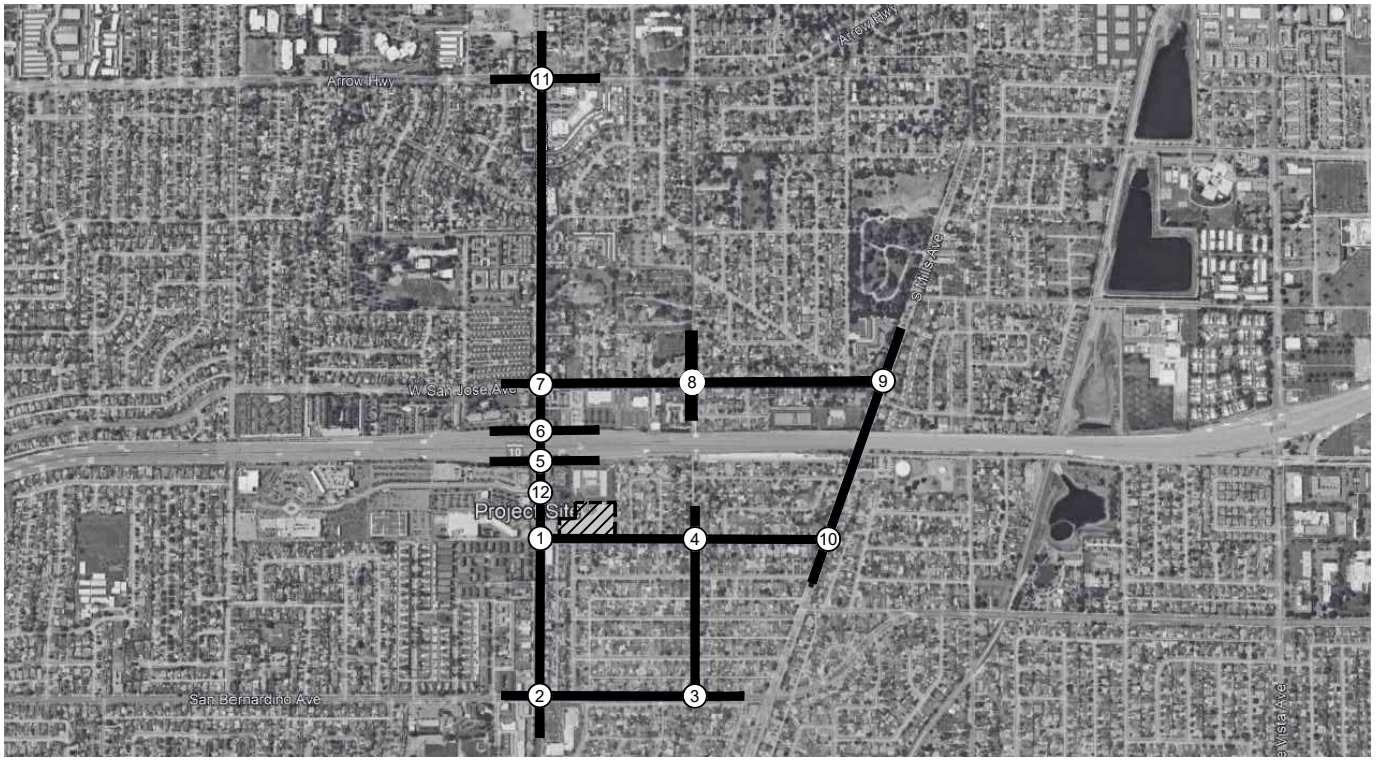


Exhibit 4: Lane Geometry and Intersection Controls



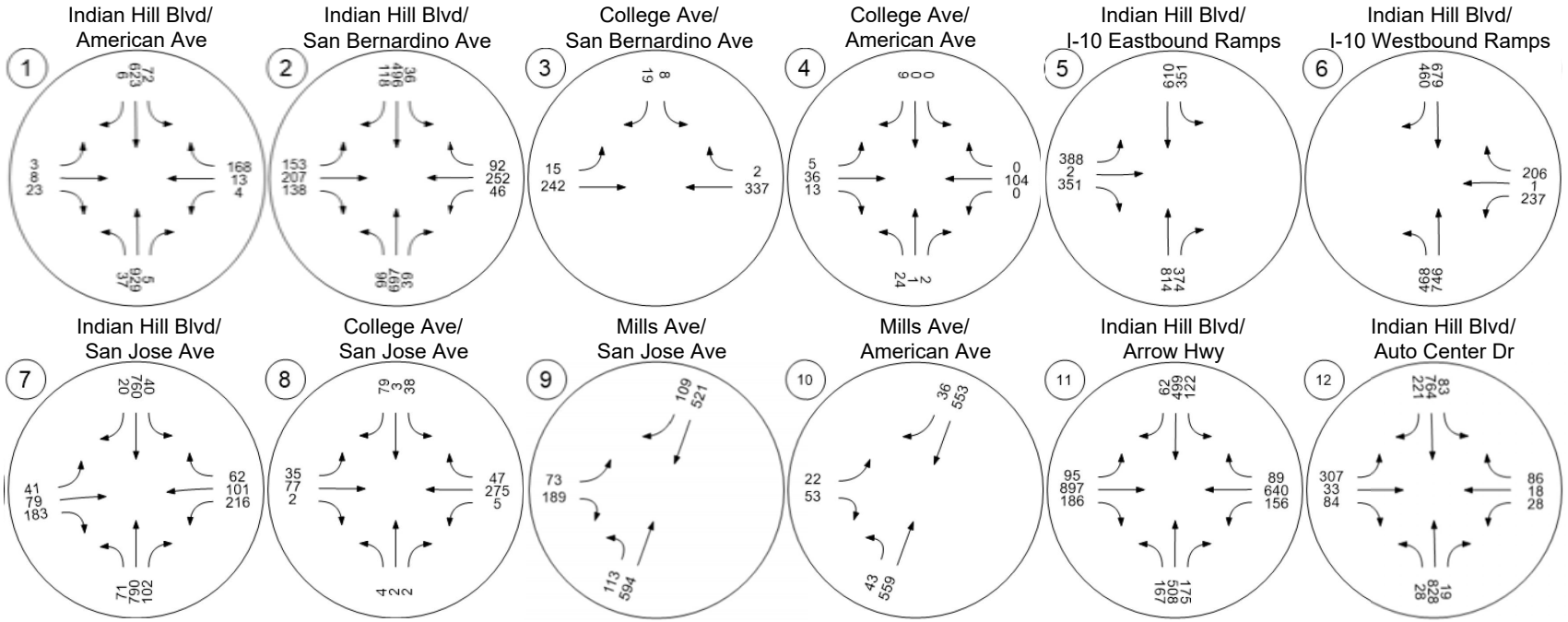
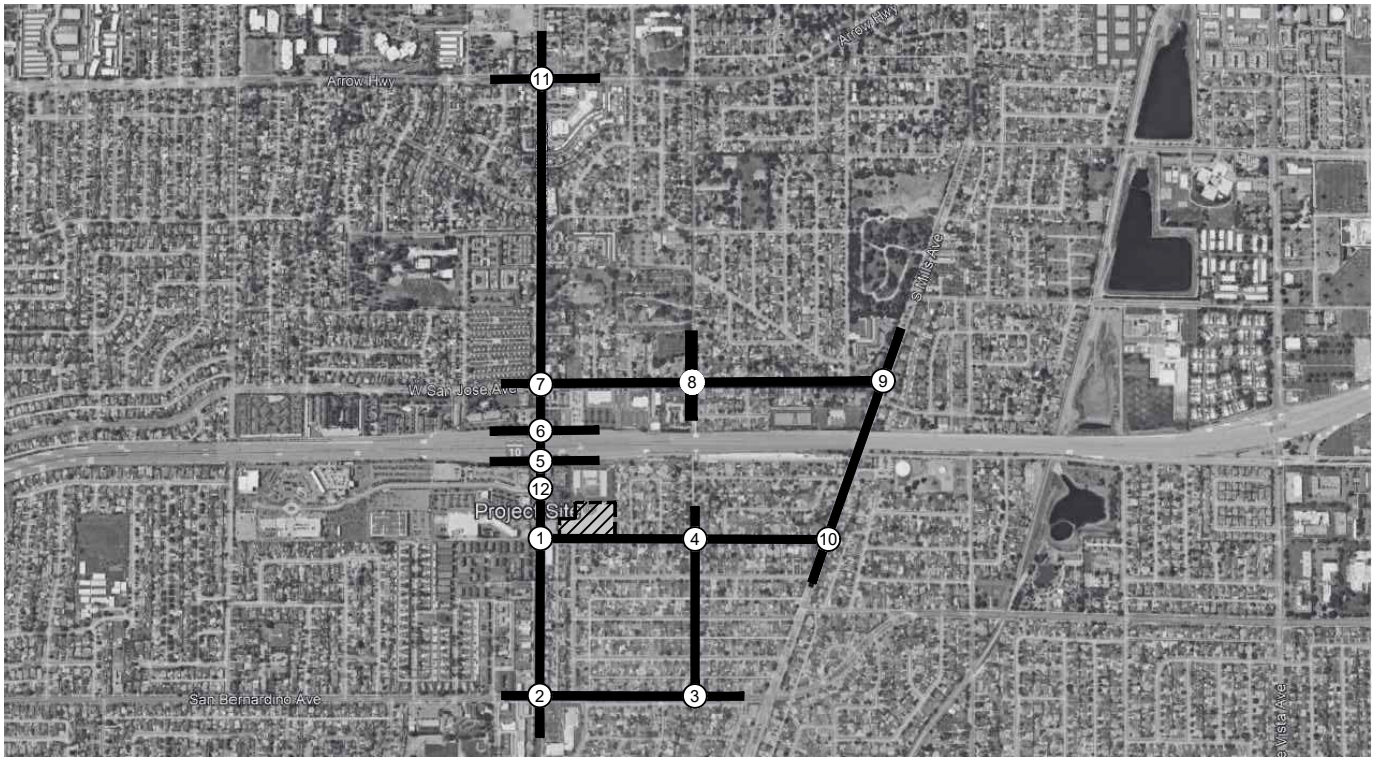


Exhibit 5: Existing AM Peak Hour Volumes



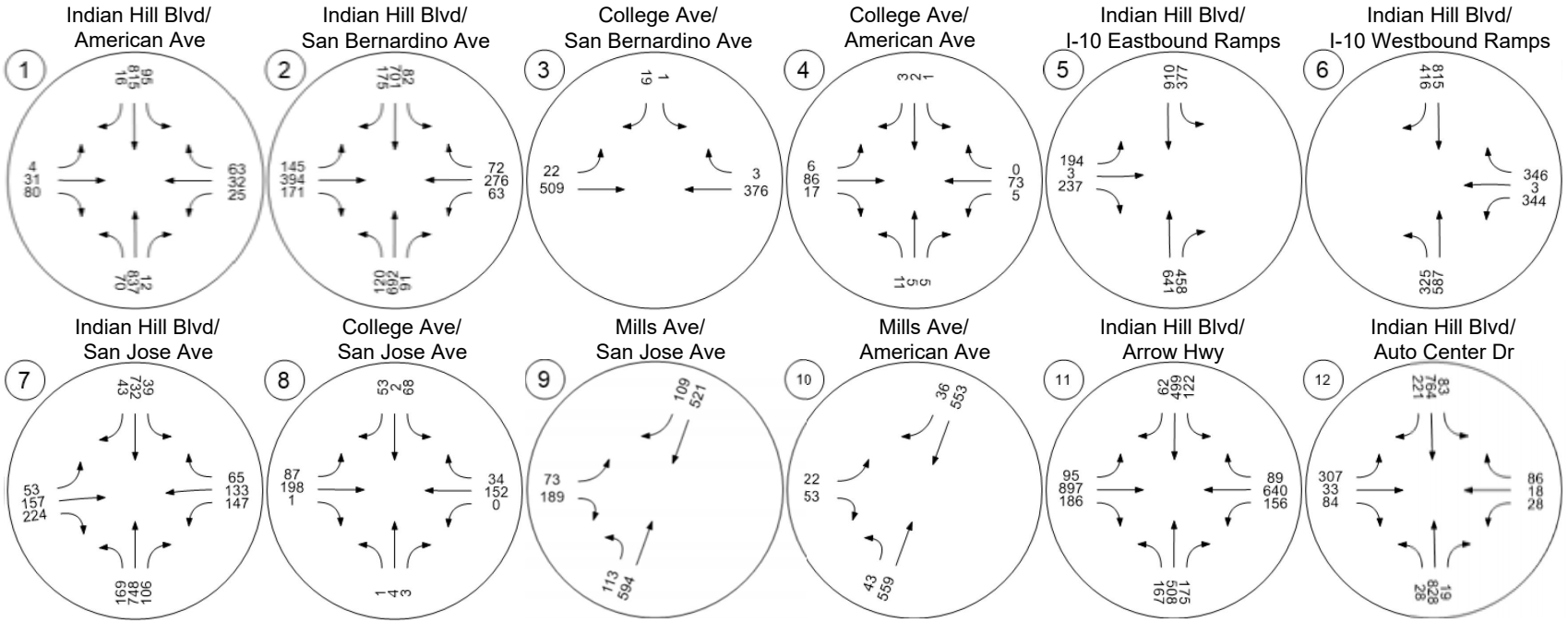


Exhibit 6: Existing PM Peak Hour Volumes

4.0 PROPOSED PROJECT

4.1 PROJECT DESCRIPTION

The proposed project is for the construction of 70 multi-family dwelling units. Site access is planned via a full access driveway located on West American Way. The site is currently designated for Residential land use per the *City General Plan* Land Use Plan. The site is currently zoned RM-2,000, or Residential with a minimum lot 2,000 square feet. Currently the majority of the project site is occupied by tennis courts with the remaining area vacant.

The proposed project is anticipated to be built and generating trips in 2025. A growth rate of 2% was used to account for 2025 volumes. **Exhibit 2** shows the proposed project site plan.

4.2 PROPOSED PROJECT PARKING

The proposed parking was calculated per the state density bonus which would require the proposed project to provide 123 parking spaces. The projects is proposing 2 tandem parking spaces per town home and 11 guest parking spaces for a total of 151 parking spaces. Since the project is proposing more parking spaces than required, the project is determined to have sufficient parking. The parking summary for the proposed project is shown below on **Table 6**.

Table 6:
Parking Summary

Required Parking[1]					Parking Spaces
0 to 1 Beds	1.25	Parking Spaces/Unit	0	Units	0
2 Beds	1.5	Parking Spaces/Unit	16	Units	24
3 Beds	1.5	Parking Spaces/Unit	36	Units	54
4 Beds	2.5	Parking Spaces/Unit	18	Units	45
Total Required Parking Spaces					**123**
Proposed Parking Spaces					Parking Spaces
Townhomes	2	Parking Spaces/Unit	70	units	140
Guest Parking					11
Total Proposed Parking Spaces					**151**

1: Per State Density Bonus

4.3 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic, both inbound and outbound, produced by a development. Determining trip generation for a proposed project is based on projecting the amount of traffic that the specific land uses being proposed will produce. Industry standard *Institute of Transportation Engineers (ITE)*

Trip Generation Manual (11th Edition, 2021) trip generation rates were used to determine trip generation of for most of the proposed project land uses.

Table 7 summarizes the projected AM peak hour, PM peak hour and daily trip generation of the proposed project. The proposed project is projected to generate 472 daily trips including 28 AM peak hour trips, and 36 PM peak hour trips.

Table 7:
Proposed Project Trip Generation

Proposed Land Use	Qty	Unit	Daily		AM Peak Hour					PM Peak Hour				
			Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
							In	Out	Total			In	Out	Total
Multifamily Housing (Low-Rise)	70	DU	6.74	472	0.40	24:76	7	21	28	0.51	63:37	23	13	36

1: Trip generation and pass-by rates from ITE Trip Generation (11th Edition, 2021) (ITE Land Use 220).
2: DU = Dwelling Unit

4.4 PROJECT TRIP DISTRIBUTION

Projecting trip distribution involves the process of identifying probable destinations and traffic routes that will be utilized by the proposed project's traffic. The potential interaction between the proposed land use and surrounding regional access routes are considered to identify the probable routes onto which project traffic would distribute. The projected trip distribution for the proposed project is based on anticipated travel patterns to and from the project site.

Exhibit 7 shows the proposed project trip distribution. Project trip assignment for AM and PM peak are shown in **Exhibit 8** and **Exhibit 9.**

4.5 CUMULATIVE PROJECTS TRAFFIC

Guidelines require that other reasonably foreseeable development projects which are either approved or are currently being processed in the study area also be included as part of a cumulative analysis scenario. A list of cumulative projects was developed for this analysis through consultation with City of Claremont staff, and obtainment of current development status reports**.** In addition, given the close proximity of the proposed project to the City of Pomona and City of Montclair, one list of cumulative projects per each city were developed through consultation with City of Pomona and City of Montclair staff. **Exhibit 10** shows a map of the locations of the approved cumulative projects within a 1-mile radius from the proposed project site. Of note, none of the projects provided by the City of Pomona and the City of Montclair were within the 1-mile radius of the proposed project. A summary of the cumulative projects land uses and trips generated is shown in **Table 8**. The cumulative project lists from the Cities of Pomona and Montclair are attached in **Appendix D**.

Table 8:
Cumulative Project Trip Generation

Project	Land Use[1]	ITE Code	Qty	Unit[2]	Daily		AM Peak Hour					PM Peak Hour				
					Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
									In	Out	Total			In	Out	Total
TTM 62814	Multifamily Housing (Low-Rise)	220	13	DU	6.74	88	0.4	24:76	1	4	5	0.51	63:37	4	3	7
Marriott Residence Inn (Knight's Inn)	Hotel	310	120	RM	7.99	959	0.46	56:44	31	24	55	0.59	51:49	36	35	71
South Village Development (VSSP)	Multifamily Housing (Low-Rise)	220	610	DU	6.74	4,111	0.4	24:76	59	185	244	0.51	63:37	196	115	311
	Multifamily Housing (Low-Rise)	220	124	DU	6.74	836	0.4	24:76	12	38	50	0.51	63:37	40	23	63
	Fast Casual Restaurant	930	34.0	TSF	97.14	3,303	1.43	50:50	25	24	49	12.55	55:45	235	192	427
	Shopping Plaza (40-150k), w/o Supermarket *Pass-By Trips (0.4 Daily, 0.4 PM)*	821	52.0	TSF	67.52	3,511 *-1,404*	1.73	62:38	56 *0*	34 *0*	90 *0*	5.19	49:51	132 *-53*	138 *-55*	270 *-108*
	General Office Building	710	26.0	TSF	10.84	282	1.52	88:12	35	5	40	1.44	17:83	6	31	37
DPR-00039-2025	Affordable Housing	223	28.0	DU	4.81	135	0.5	29:71	4	10	14	0.46	59:41	8	5	13

Results	Daily Volume	AM Peak Hour	In	Out	Total	PM Peak Hour	In	Out	Total
Net Total	**11,821**		**223**	**324**	**547**		**604**	**487**	**1,091**

1: Trip generation and pass-by rates are from the ITE Trip Generation Manual (11th Edition, 2021)

2: DU = Dwelling Units; RM = Rooms; TSF = Thousand Square Feet.

4.6 CORNER SIGHT-DISTANCE ANALYSIS

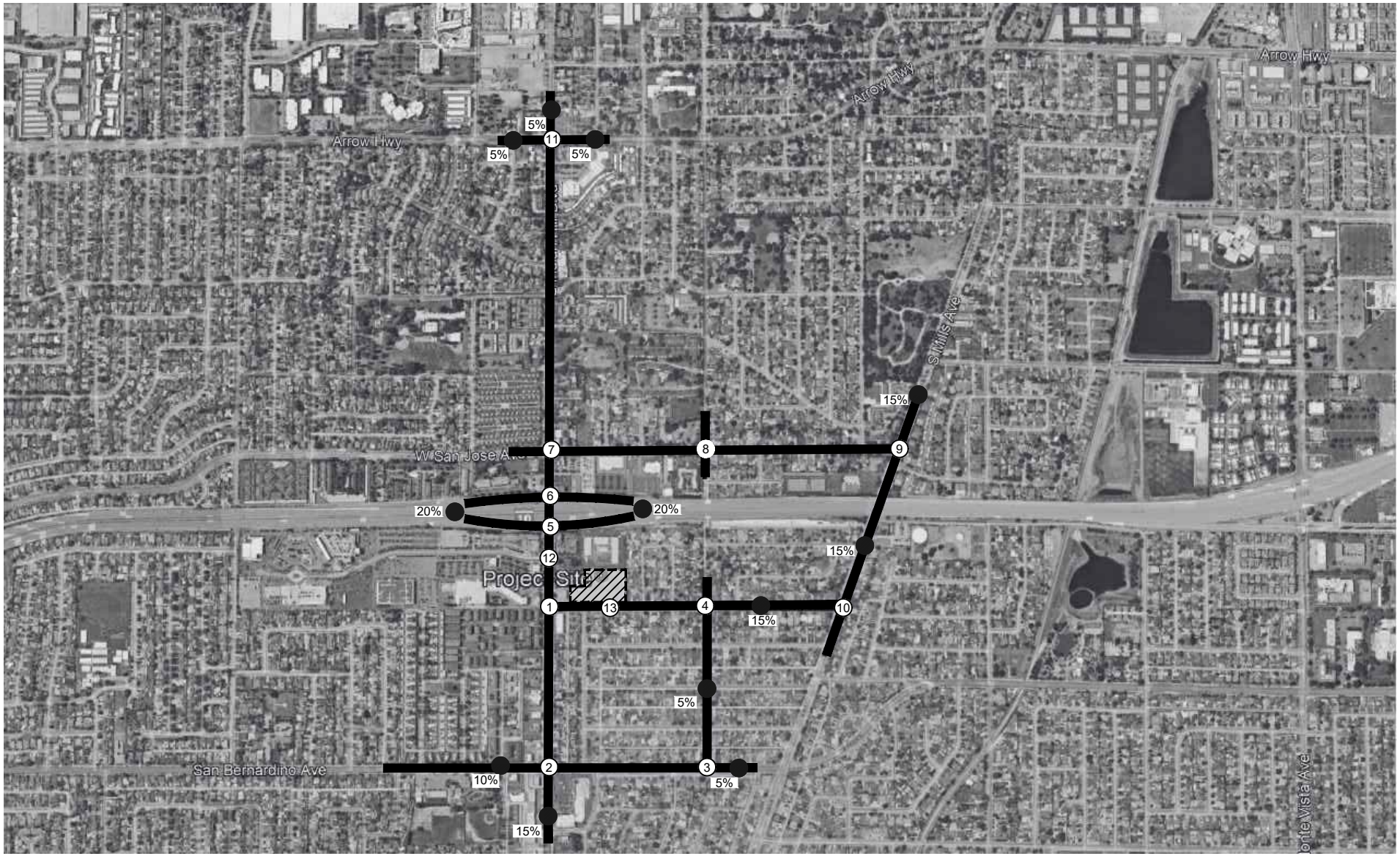
A corner sight distance analysis has been prepared based on applicable HDM and California Manual on Uniform Traffic Control Devices (CA MUTCD) 11th Edition (January 2024) standards for corner sight distance analysis of the proposed project driveway. Topic 405.1 of the HDM discusses corner sight distance. Corner sight distance refers to the area of the roadway that will allow the stopped vehicle to turn into the appropriate lane on the road. In accordance with the HDM, the minimum corner sight distance equation, $1.47V_mT_g$ with V_m representing the design speed in miles per hour (mph) of the major road and T_g representing the time gap in seconds for the minor road vehicles, is used. HDM **Table 405.1A** below shows the minimum corner sight distance time gap for unsignalized intersection.

Table 405.1A
Corner Sight Distance Time Gap (Tg) for Unsignalized Intersection

Design Vehicle	Left-turn from Stop (seconds)	Right-turn from Stop and Crossing Maneuver (seconds)
Passenger Car Private Road Intersection Rural Driveway	**7.5**	**6.5**
Single-Unit Truck Public Road Intersection	**9.5**	**8.5**
Combination Truck Major and Minor Roads on Routes: National Network Terminal or Service Access California Legal KpRA Advisory	**11.5**	**10.5**

Source: Highway Design Manual on Intersection Design Standards (July 1, 2020).

As shown in **Table 405.1A**, the design vehicle passenger car utilizes 7.5 seconds for a left turn from stop and 6.5 seconds for a right turn from stop. These time gaps and the 25 miles per hour speed limit on West American Avenue were used with the minimum corner sight distance equation to determine a 275-foot corner sight distance for left turns and 240-foot corner sight distance for right turns.



Legend:

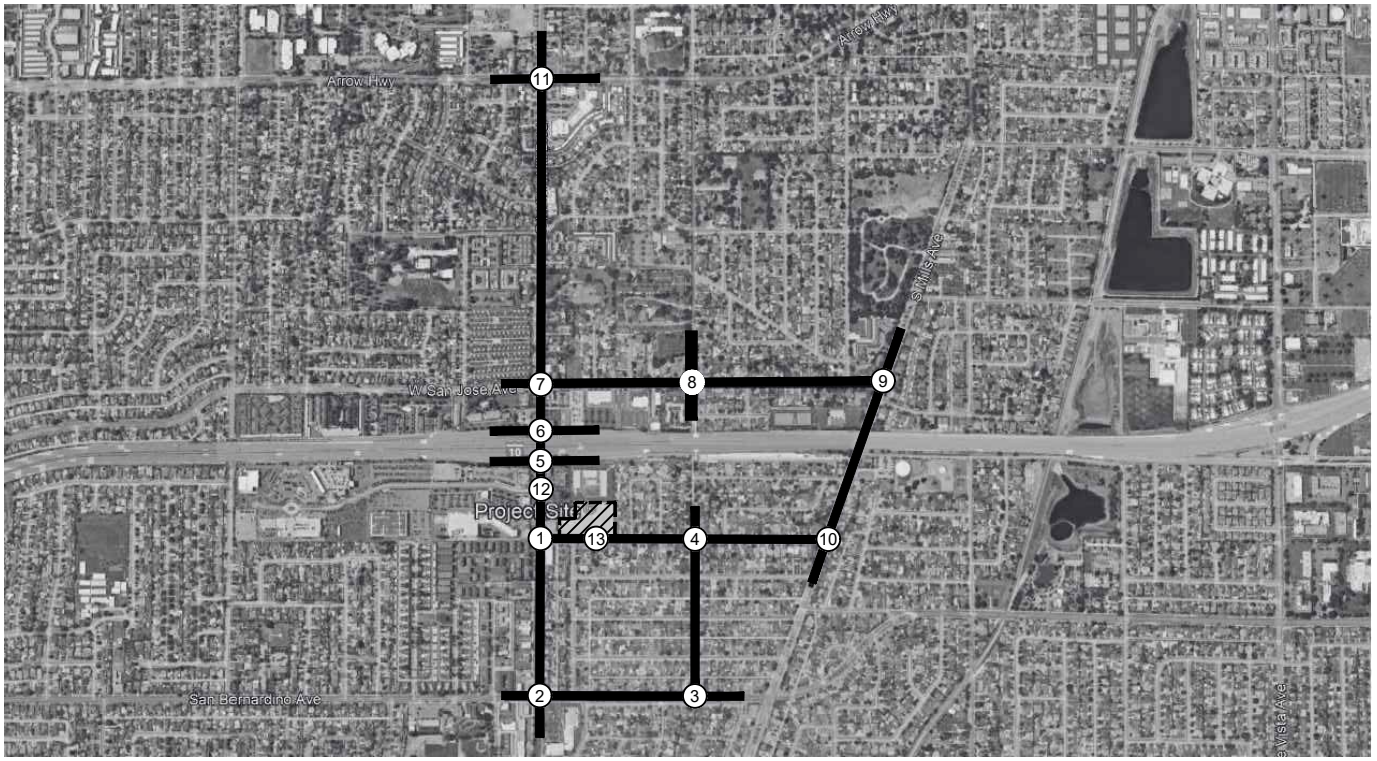
- Project Site
- (#) Study Intersection Location
- (XX%) Percent Trip Distribution

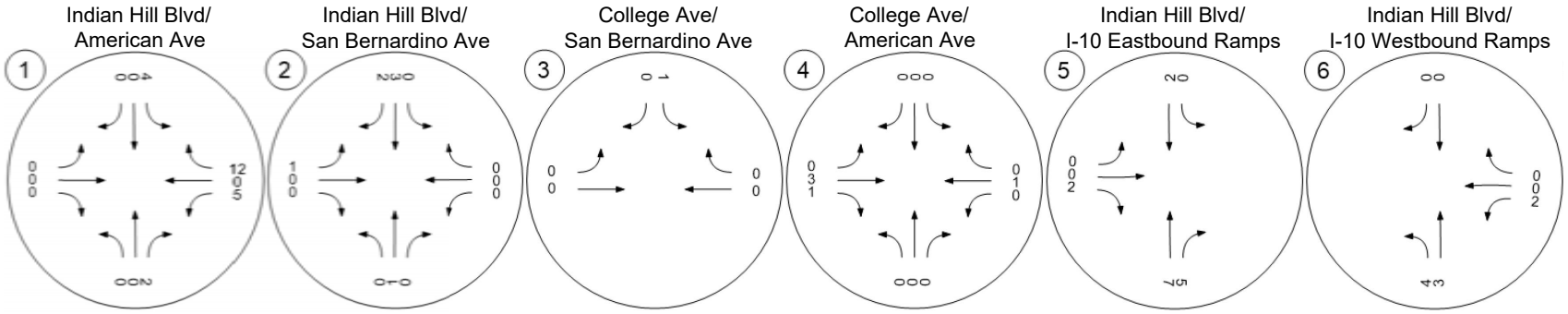
Exhibit 7: Proposed Trip Distribution

Traffic Impact Analysis

CVR-24-003

Not to Scale





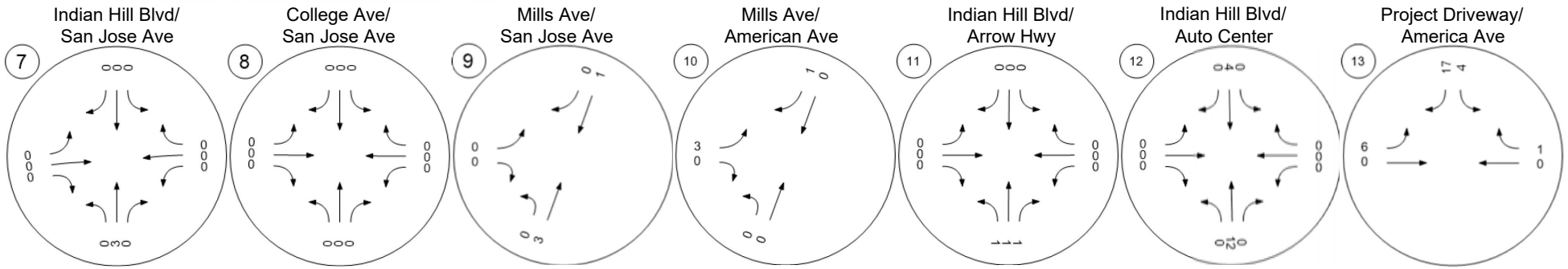
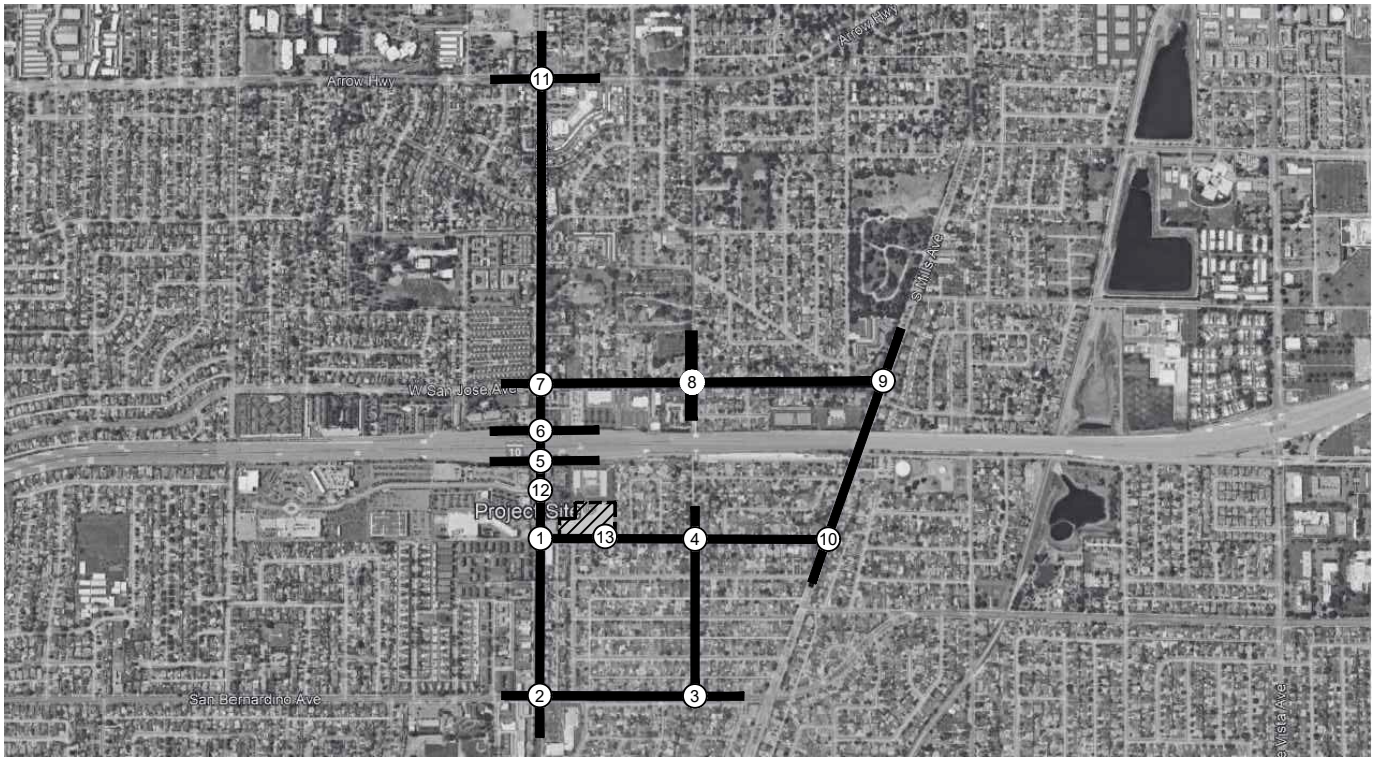


Exhibit 8: Project AM Peak Hour Trip Assignment



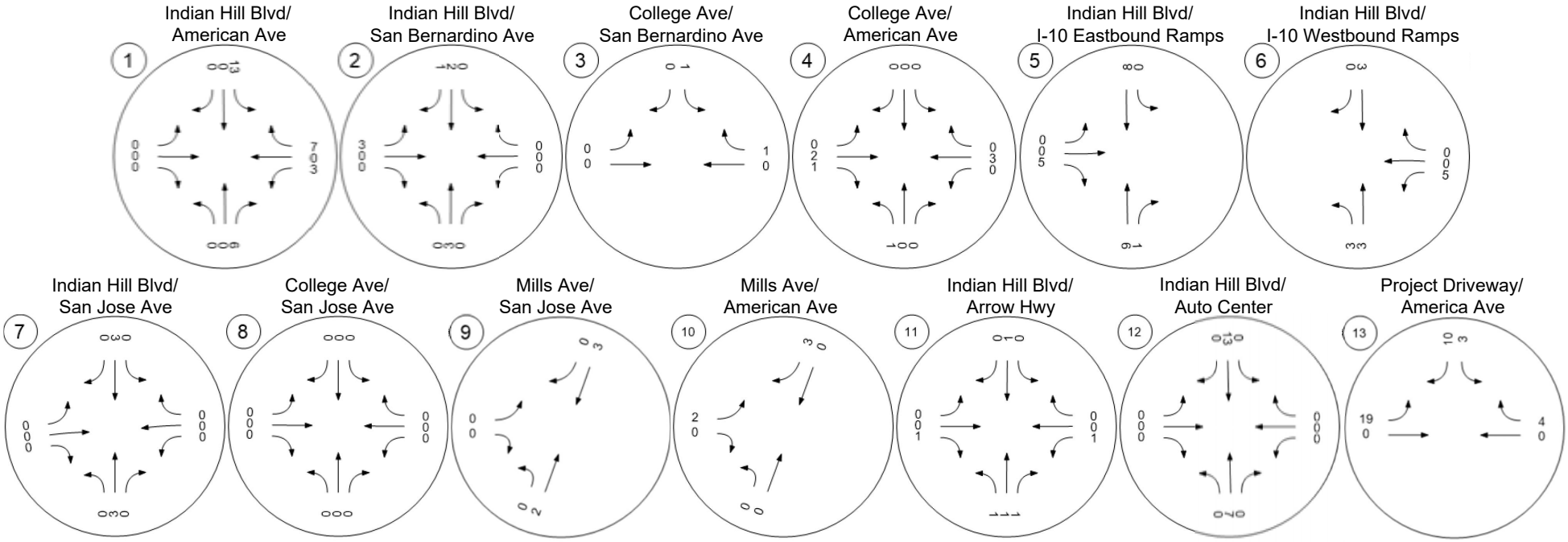
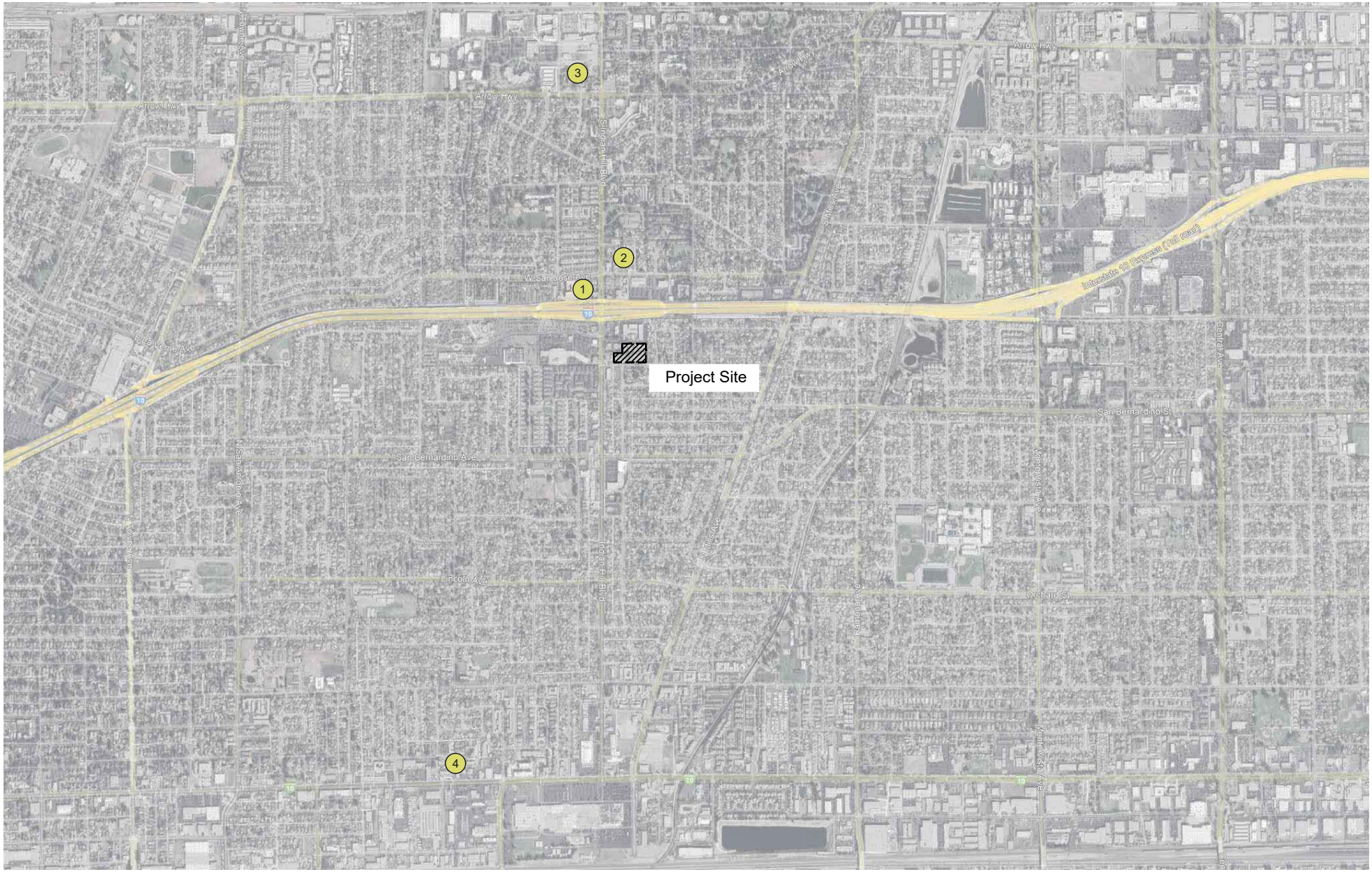


Exhibit 9: Project PM Peak Hour Trip Assignment

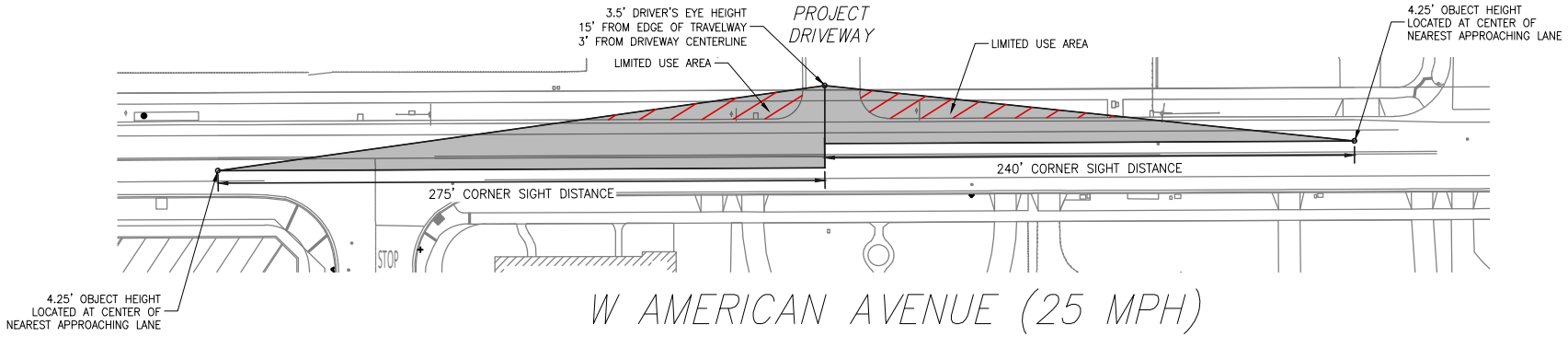

3
2
1
4
Project Site
Arrow Hwy
W San Jose Ave
Sierra Way
Interstate 10 Express (Toll Lane)
Cable Creek Ave
San Bernardino Ave
San Bernardino St
Lincoln Ave
Orchard St
Mount Vernon Ave
Citrus Ave
Pepper Ave
Central Ave
Tippecanoe Ave
Waterman Ave
Meadow Park Ave
Fairfield Ave
Palm Ave
Fern Ave
Fern Ave
Fern

CORNER SIGHT DISTANCE NOTES:

FOR PRIVATE ROAD/RURAL DRIVEWAYS, THE HIGHWAY DESIGN MANUAL (HDM) RECOMMENDS CORNER SIGHT DISTANCE EQUAL (1.47)(Vm)(Tg).

RIGHT–TURN: Vm=25MPH, Tg=6.5
CORNER SIGHT DISTANCE: 240'

LEFT–TURN: Vm=25MPH, Tg=7.5
CORNER SIGHT DISTANCE: 275'



SCALE: 1" = 80'

20 0 20 40 60

Exhibit 11: Corner Sight Distance

Arcadia Site Traffic Impact Analysis

CVR-24-003

Not to Scale

5.0 OPENING YEAR TRAFFIC CONDITIONS (OY)

Opening Year (OY) traffic conditions analysis is intended to identify baseline conditions in the near-term plus cumulative projects.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the OY conditions scenario are consistent with those previously shown in **Exhibit 4**.

5.2 OY TRAFFIC VOLUMES

OY volumes do not include background traffic. Since the proposed project is expected to be built and generating trips in 2025, OY volumes include a growth rate of 2% per year for one year, applied to existing volumes. The City of Claremont provided a list of cumulative projects that was added to the analysis. Volumes from the proposed project itself are not added in this study scenario. **Exhibit 12** and **Exhibit 13** show OY AM and PM peak hour volumes at the study intersections.

OY Volumes = (Existing (2024) Counts * 1.02) + Cumulative Projects

5.3 OY INTERSECTION LOS ANALYSIS

OY AM and PM peak hour intersection analysis is shown in **Table 9**. Calculations are based on the proposed geometrics at the study area intersections.

Table 9:

Intersection Analysis – OY Conditions

Intersection			Control Type[1]	LOS Threshold	Peak Hour	OY Conditions	
						Delay[2]	LOS
1	Indian Hill Boulevard	West American Avenue	Signal	E	AM	10.95	B
					PM	9.63	A
2	South Indian Hill Boulevard	San Bernardino Avenue	Signal	E	AM	19.42	B
					PM	21.68	C
3	College Avenue	San Bernardino Avenue	OWSC	D	AM	11.95	B
					PM	11.29	B
4	South College Avenue	West-East American Avenue	AWSC	D	AM	7.57	A
					PM	7.59	A
5	South Indian Hill Boulevard	I-10 Eastbound Ramps	Signal	E	AM	24.10	C
					PM	20.14	C
6	South Indian Hill Boulevard	I-10 Westbound Ramps	Signal	E	AM	28.87	C
					PM	29.88	C
7	South Indian Hill Boulevard	West San Jose Avenue	Signal	E	AM	21.31	C
					PM	21.87	C
8	South College Avenue	West-East San Jose Avenue	AWSC	D	AM	12.75	B
					PM	10.79	B
9	North Mills Avenue	East San Jose Avenue	OWSC	D	AM	**41.56**	**E**
					PM	30.50	D
10	North Mills Avenue	East American Avenue	OWSC	D	AM	20.85	C
					PM	18.43	C
11	South Indian Hill Boulevard	West Arrow Highway	Signal	E	AM	39.80	D
					PM	44.47	D
12	South Indian Hill Boulevard	Auto Center Drive	Signal	E	AM	20.35	C
					PM	26.92	C

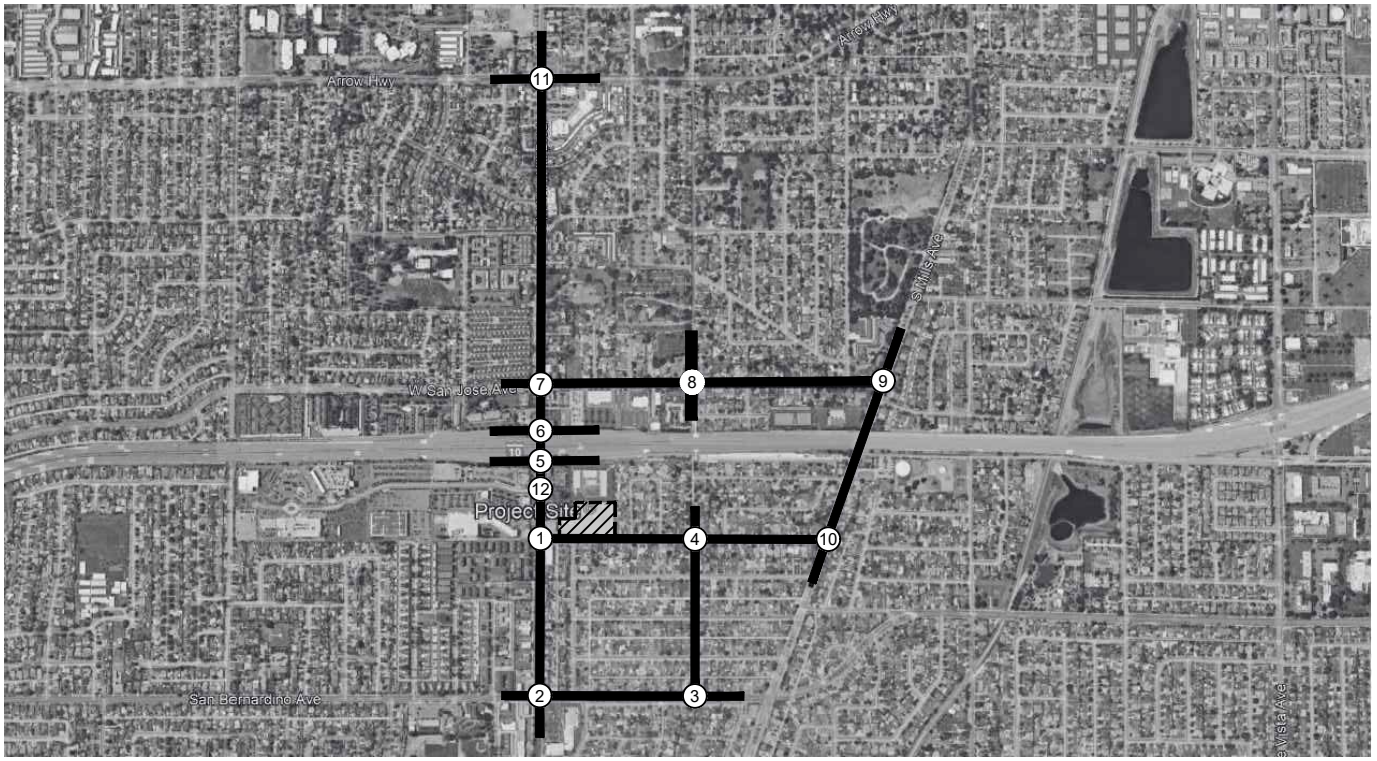
1: AWSC = All-Way Stop-Control, OWSC = One-Way Stop-Control.

2: Delay shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 9**, the study intersections are projected to continue to operate at an acceptable LOS during the AM and PM peak hours for OY conditions with the exception of:

- Intersection 9: North Mills Avenue/East San Jose Avenue during the AM Peak Hour.[1]

[1] Intersection 9 meets the AM peak hour signal warrant. See **Appendix F** for the analysis sheet.



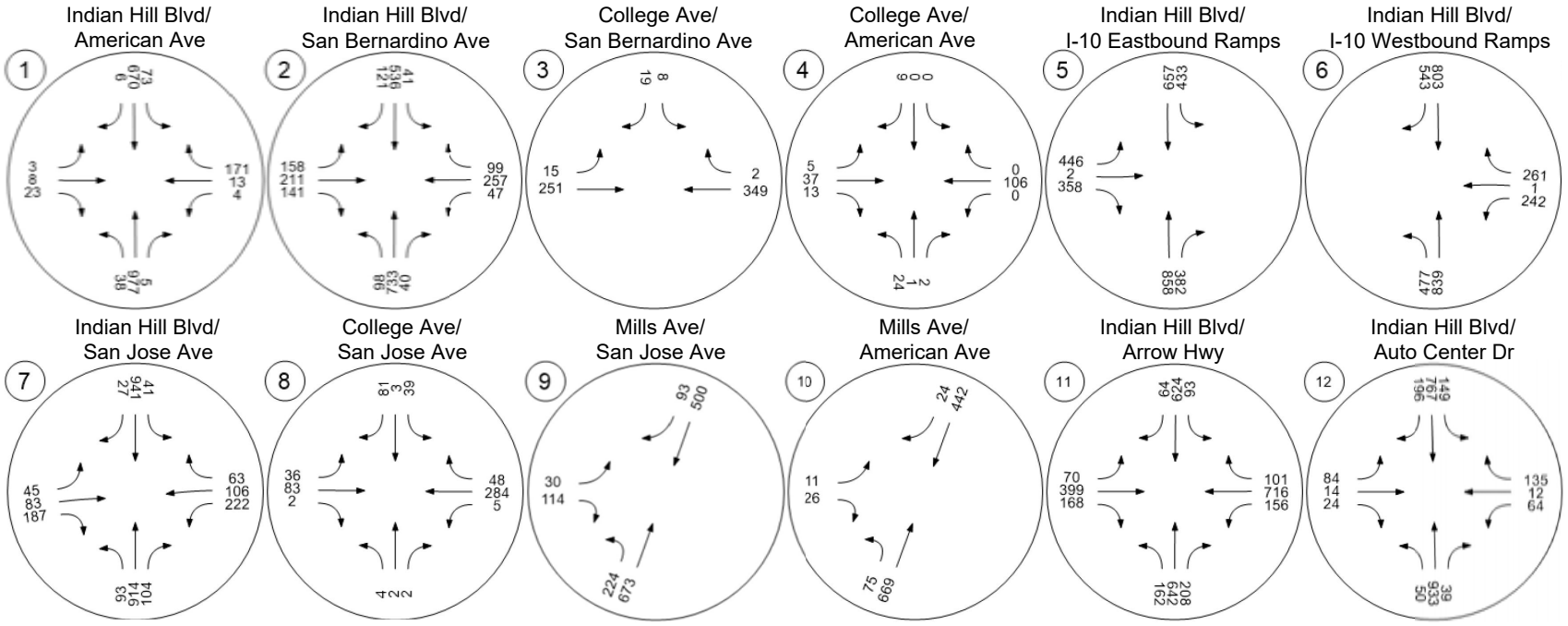
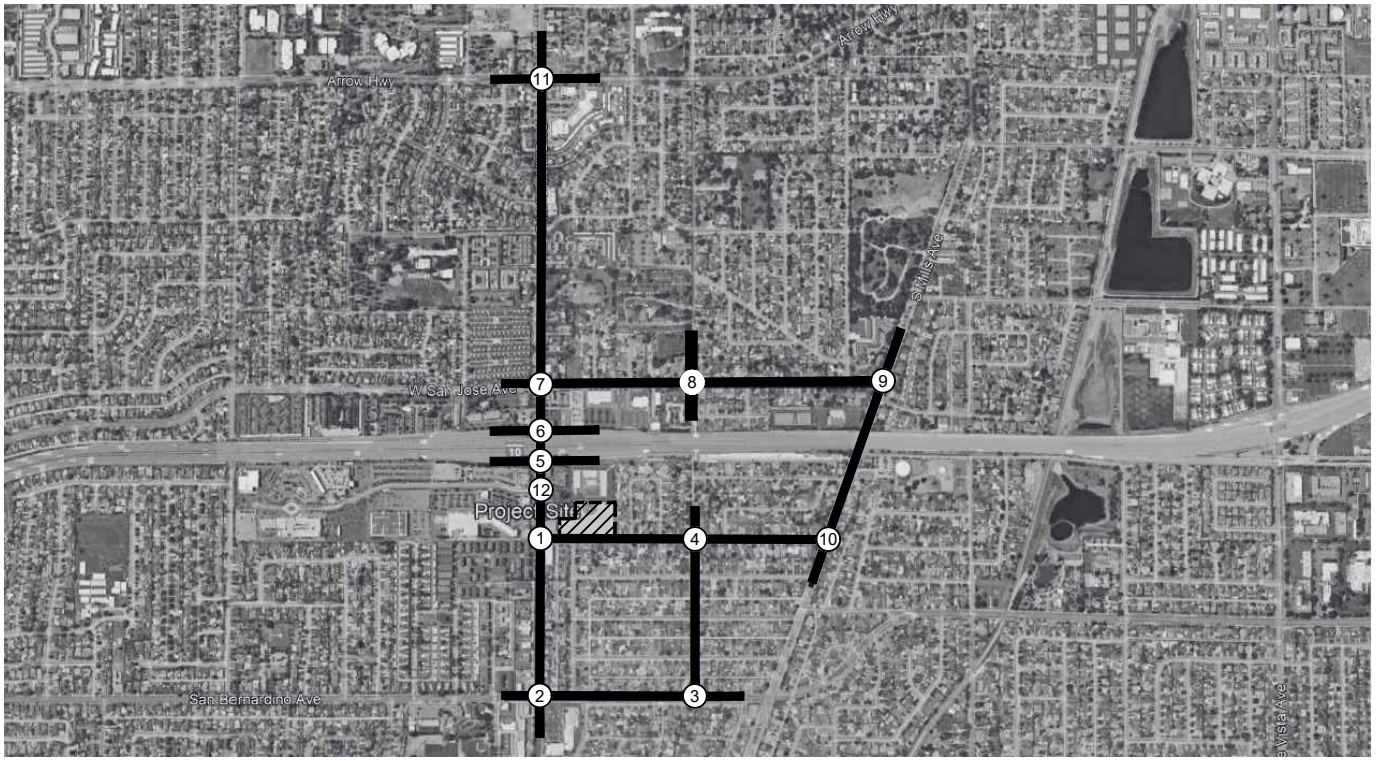


Exhibit 12: OY AM Peak Hour Volumes

Traffic Impact Analysis

CVR-24-003

Not to Scale



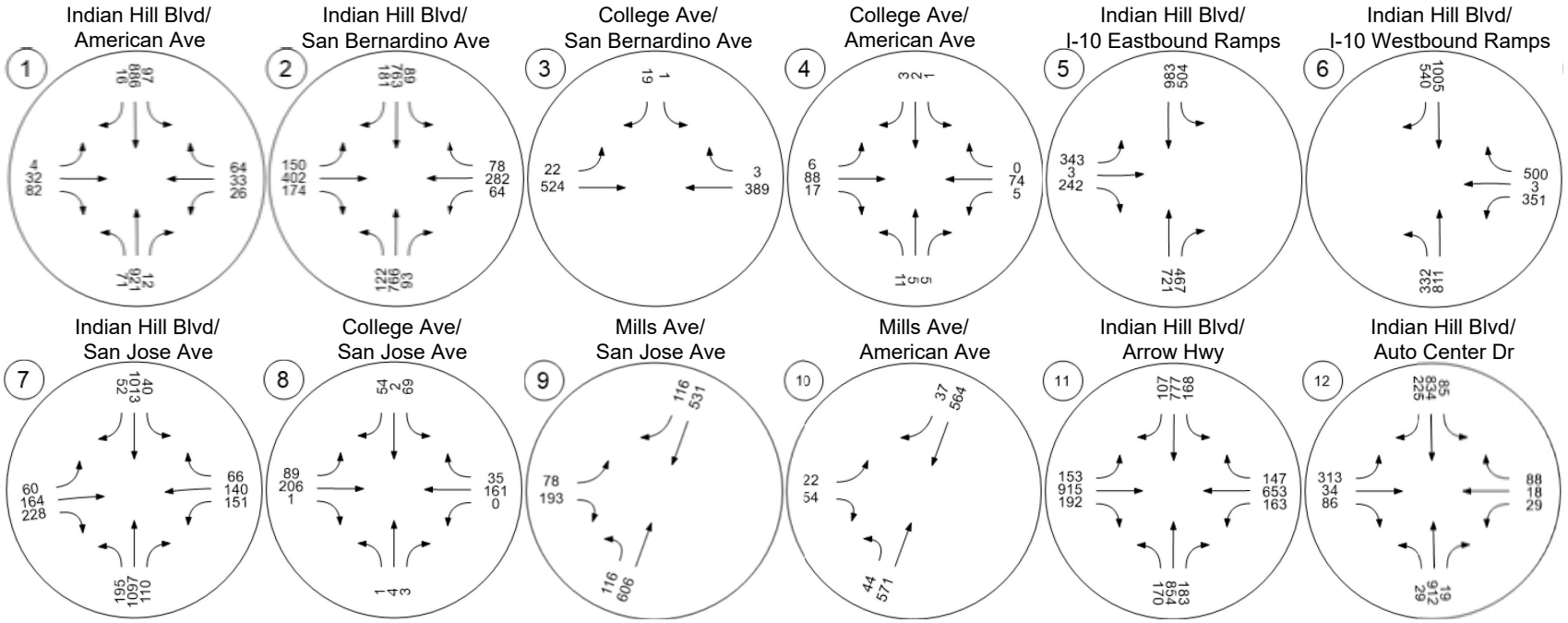


Exhibit 13: OY PM Peak Hour Volumes

Traffic Impact Analysis

CVR-24-003

Not to Scale

TJW Engineering, Inc.

6.0 OPENING YEAR WITH PROJECT (OYP) TRAFFIC CONDITIONS

Opening Year With Project (OYP) traffic conditions analysis is intended identify existing conditions in the near-term with both the cumulative projects and the proposed project.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the OYP conditions scenario are consistent with those previously shown in **Exhibit 4**.

6.2 OYP TRAFFIC VOLUMES

OYP volumes include background traffic plus the addition of traffic projected to be generated by nearby cumulative projects. Since the proposed project is expected to be built and generating trips in 2025, OYP volumes include a growth rate of 2% per year for one year, applied to existing volumes. The City of Claremont provided a list of cumulative projects that was added to the analysis. **Exhibit 14** and **Exhibit 15** show OYP AM and PM peak hour volumes at the study intersections.

OYP Volumes = (Existing (2024) Counts * 1.02) + Project Volumes + Cumulative Projects.

6.3 OYP INTERSECTION LEVEL OF SERVICE ANALYSIS

OYP conditions AM and PM peak hour intersection analysis is shown in **Table 10**. HCM analysis sheets are provided in **Appendix E.** Of note, the analysis also determined that the 95th percentile queue lengths for left-turns from West American Avenue into the proposed Project Driveway are less than a single passenger vehicle length.

Table 10:
Intersection Analysis – OYP Conditions

Intersection			Control Type[1]	Target LOS	Peak Hour	OY Conditions		OYP Conditions	
						Delay[2]	LOS	Delay[2]	LOS
1	Indian Hill Boulevard	West American Avenue	Signal	E	AM	10.95	B	11.65	B
					PM	9.63	A	9.84	A
2	South Indian Hill Boulevard	San Bernardino Avenue	Signal	E	AM	19.42	B	19.46	B
					PM	21.68	C	21.77	C
3	College Avenue	San Bernardino Avenue	OWSC	D	AM	11.95	B	12.06	B
					PM	11.29	B	11.70	B
4	South College Avenue	West-East American Avenue	AWSC	D	AM	7.57	A	7.59	A
					PM	7.59	A	7.61	A
5	South Indian Hill Boulevard	I-10 Eastbound Ramps	Signal	E	AM	24.10	C	24.30	C
					PM	20.14	C	20.21	C
6	South Indian Hill Boulevard	I-10 Westbound Ramps	Signal	E	AM	28.87	C	29.51	C
					PM	29.88	C	30.22	C
7	South Indian Hill Boulevard	West San Jose Avenue	Signal	E	AM	21.31	C	21.36	C
					PM	21.87	C	21.88	C
8	South College Avenue	West-East San Jose Avenue	AWSC	D	AM	12.75	B	12.75	B
					PM	10.79	B	10.79	B
9	North Mills Avenue	East San Jose Avenue	OWSC	D	AM	**41.56**	**E**	**41.97**	**E**
					PM	30.50	D	30.82	D
10	North Mills Avenue	East American Avenue	OWSC	D	AM	20.85	C	23.15	C
					PM	18.43	C	18.91	C
11	South Indian Hill Boulevard	West Arrow Highway	Signal	E	AM	39.80	D	40.14	D
					PM	44.47	D	44.60	D
12	South Indian Hill Boulevard	Auto Center Drive	Signal	E	AM	20.35	C	20.37	C
					PM	26.92	C	27.05	C
13	Project Driveway	West American Avenue	OWSC	C	AM	-	-	9.49	A
					PM	-	-	9.25	A

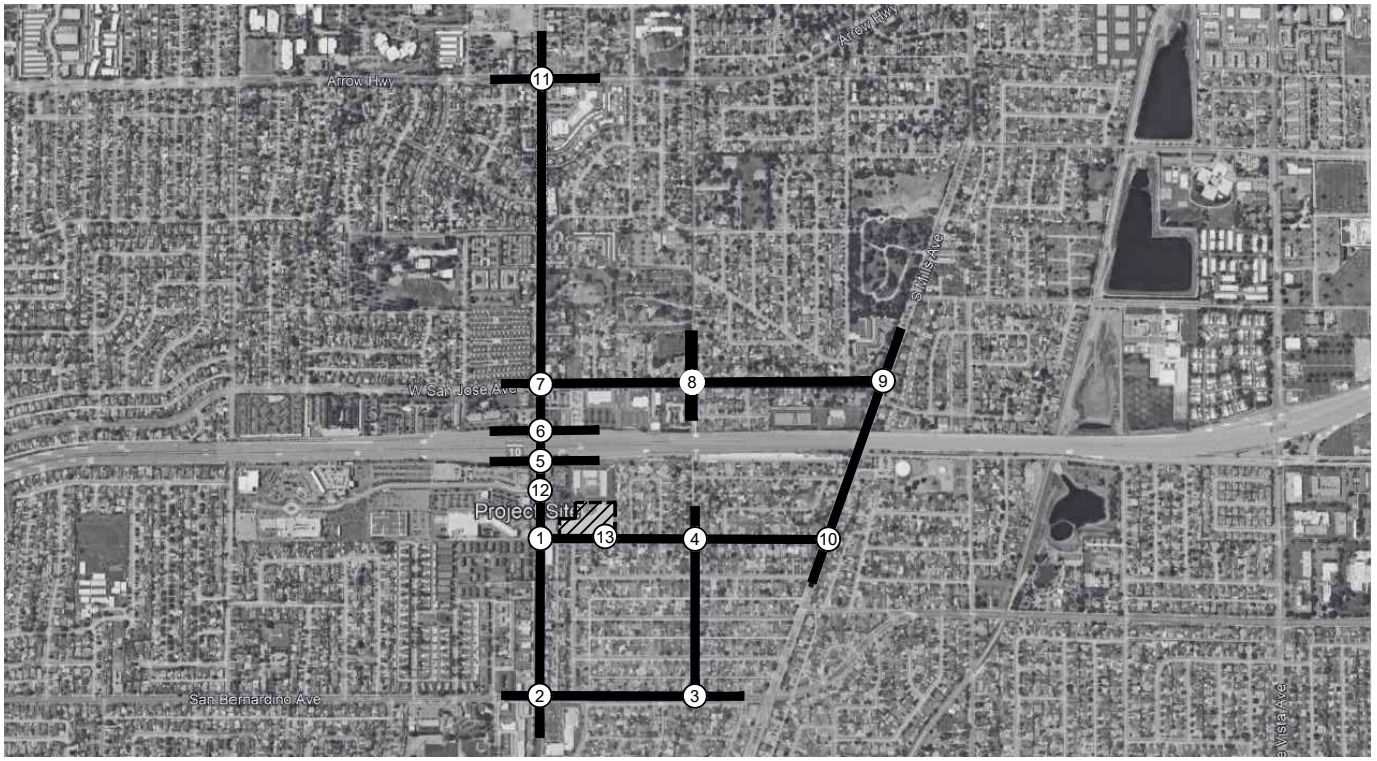
1: AWSC = All-Way Stop-Control, OWSC = One-Way Stop-Control.
2: Delay shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 10**, the study intersections are projected to continue to operate at an acceptable LOS during the AM and PM peak hours OYP conditions with the exception of:

- Intersection 9: North Mills Avenue/East San Jose Avenue during the AM Peak Hour.

Based on City criteria and threshold (Section 2.4.2), mitigation measures are not required as the proposed project does not add 10 or more AM project trips and the addition of project traffic does not cause the

intersection to warrant a signal in the AM peak hour; as the AM peak hour signal warrant is already met without the addition of the project.



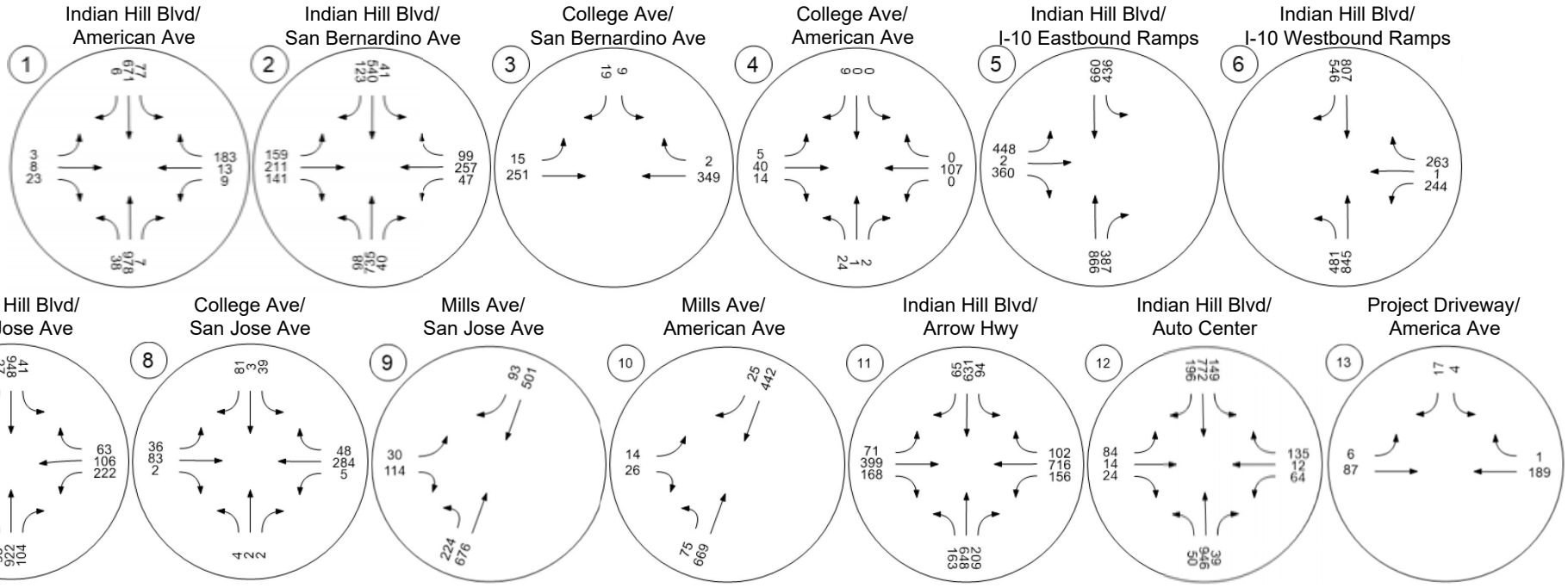
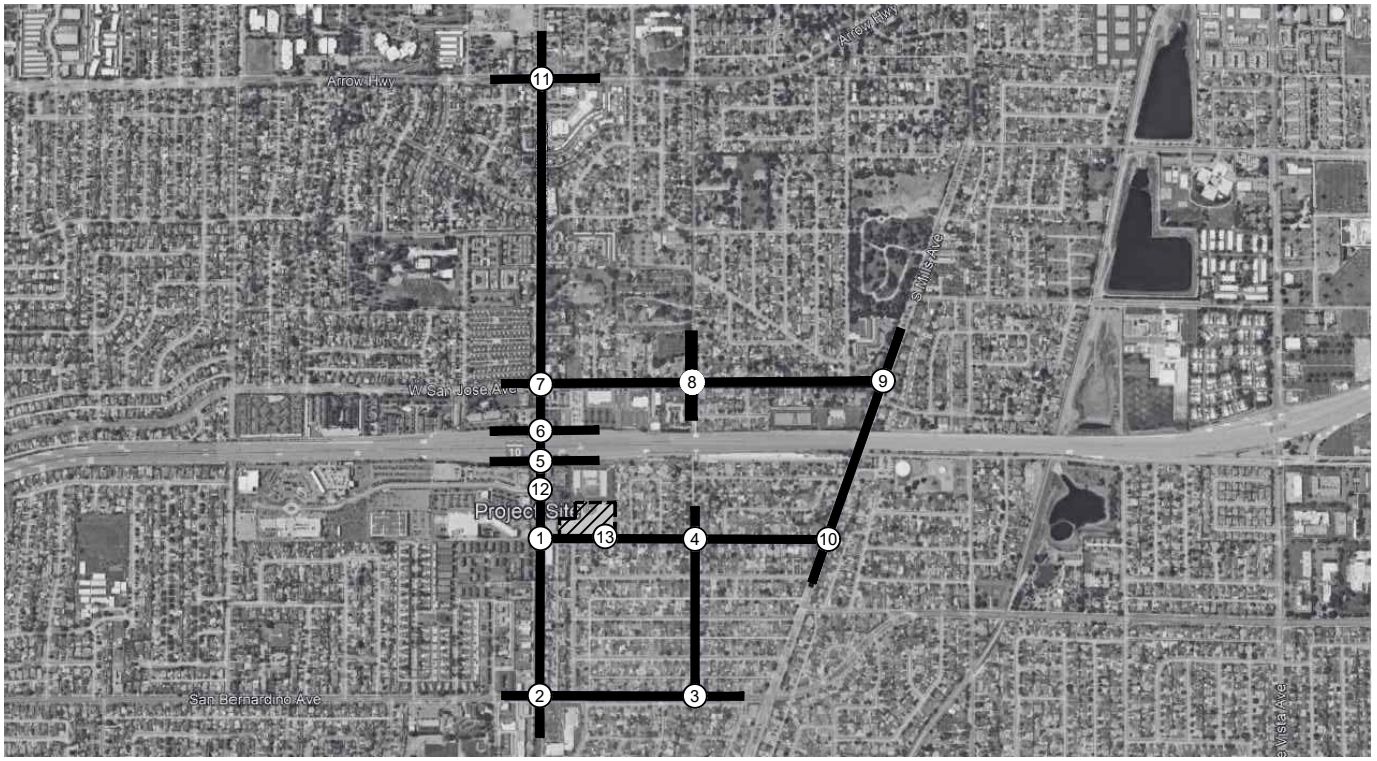


Exhibit 14: OYP AM Peak Hour Volumes

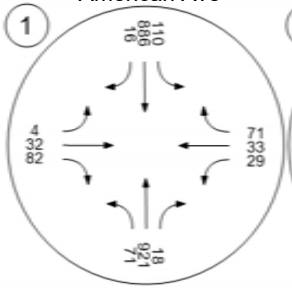
Traffic Impact Analysis

CVR-24-003

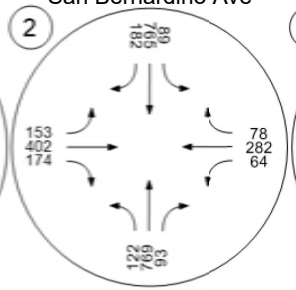
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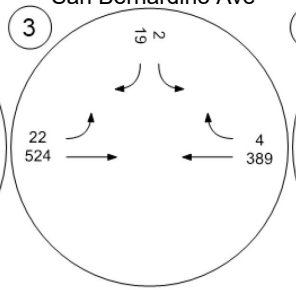
Indian Hill Blvd/ American Ave



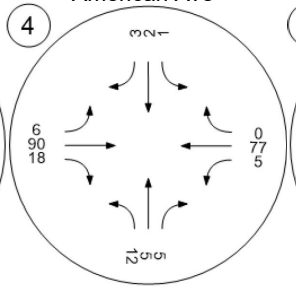
Indian Hill Blvd/ San Bernardino Ave



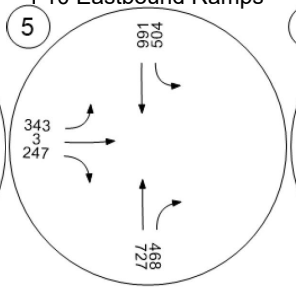
College Ave/ San Bernardino Ave



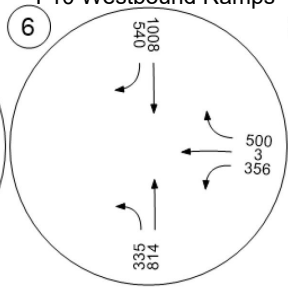
College Ave/ American Ave



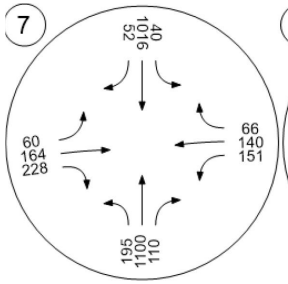
Indian Hill Blvd/ I-10 Eastbound Ramps



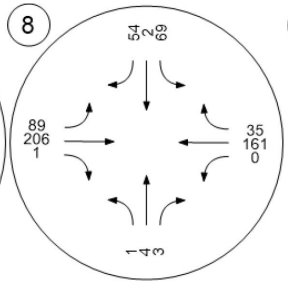
Indian Hill Blvd/ I-10 Westbound Ramps



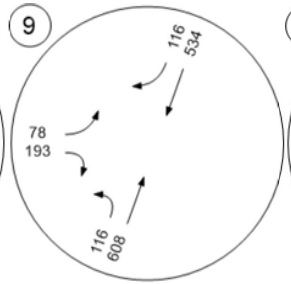
Indian Hill Blvd/ San Jose Ave



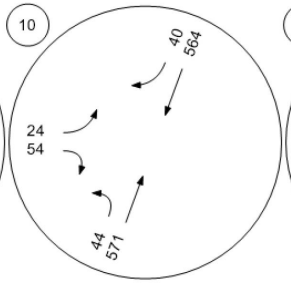
College Ave/ San Jose Ave



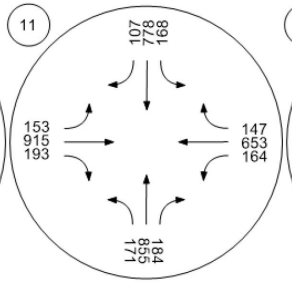
Mills Ave/ San Jose Ave



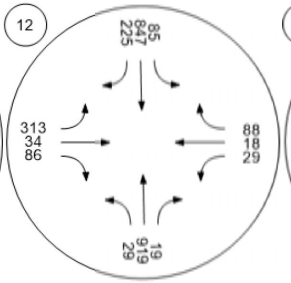
Mills Ave/ American Ave



Indian Hill Blvd/ Arrow Hwy



Indian Hill Blvd/ Auto Center



Project Driveway/ America Ave

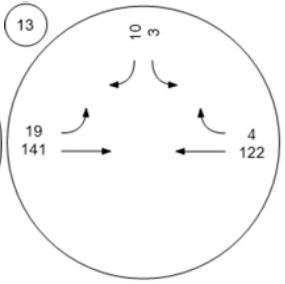


Exhibit 15: OYP PM Peak Hour Volumes

Traffic Impact Analysis

CVR-24-003

Not to Scale

7.0 HORIZON YEAR (HY) TRAFFIC CONDITIONS

Horizon Year (HY) traffic conditions analysis is intended identify existing conditions in the General Plan Horizon Year.

7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the HY conditions scenario are consistent with those previously shown in **Exhibit 4**.

7.2 HY TRAFFIC VOLUMES

Per *City Guidelines*, HY volumes are based on the Southern California Association of Governments (SCAG) regional travel demand model build out projections. Base year 2016 model volumes were compared to Horizon year building year 2045 volumes to determine the compound annual growth rate within the study area. That rate was determined to be less than 0.10%. To provide a conservative analysis, a rate of 0.50% was utilized. Model output volumes are included for reference. **Exhibit 16** and **Exhibit 17** shows HY AM and PM peak hour volumes at the study intersections.

HY Volumes = (Existing (2024) Counts * 1.11) + Cumulative Projects

7.3 HY INTERSECTION LEVEL OF SERVICE ANALYSIS

HY conditions AM and PM peak hour intersection analysis is shown in **Table 11**. HCM analysis sheets are provided in **Appendix E.**

Table 11:
Intersection Analysis – HY Conditions

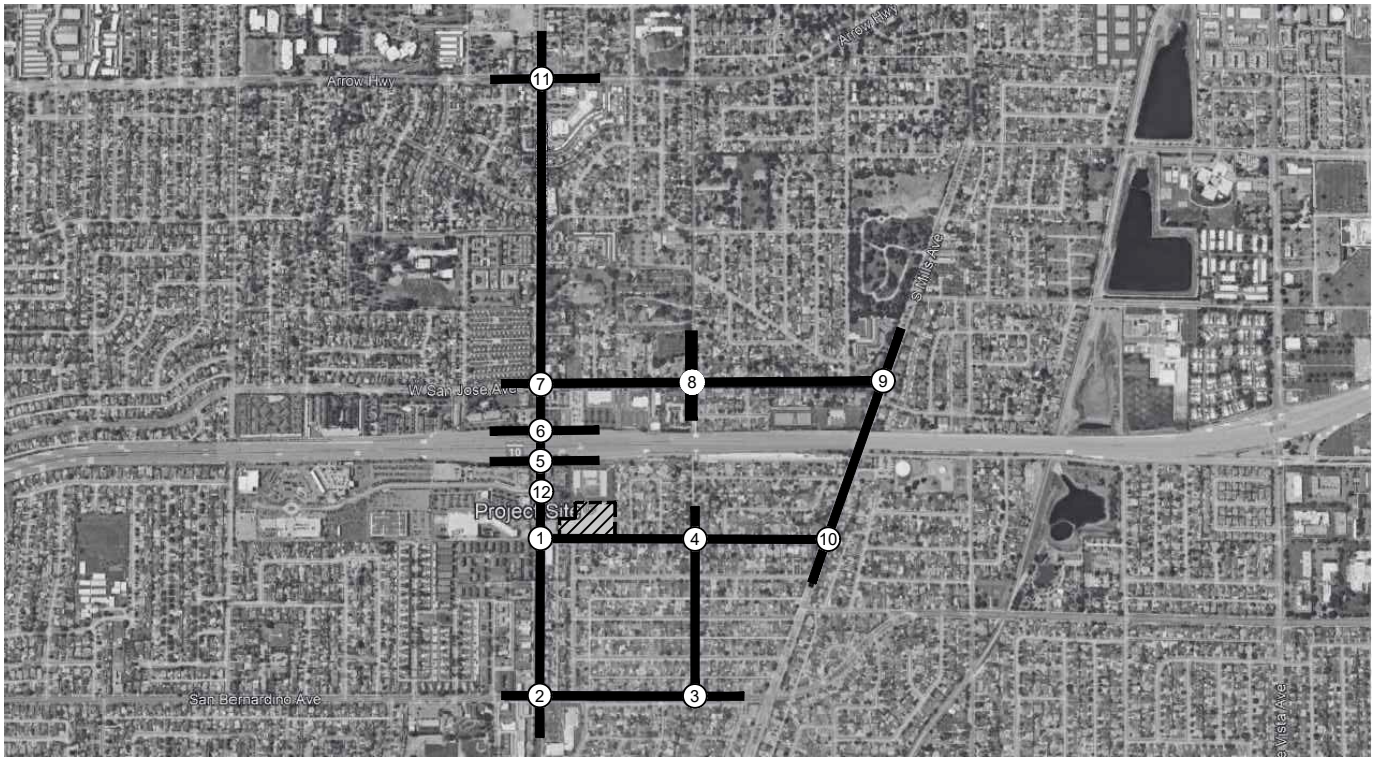
Intersection			Control Type[1]	LOS	Peak Hour	HY Conditions	
						Delay[2]	LOS
1	Indian Hill Boulevard	West American Avenue	Signal	E	AM	11.84	B
					PM	10.11	B
2	South Indian Hill Boulevard	San Bernardino Avenue	Signal	E	AM	20.76	C
					PM	23.64	C
3	College Avenue	San Bernardino Avenue	OWSC	D	AM	12.49	B
					PM	11.65	B
4	South College Avenue	West-East American Avenue	AWSC	D	AM	7.66	A
					PM	7.67	A
5	South Indian Hill Boulevard	I-10 Eastbound Ramps	Signal	E	AM	27.27	C
					PM	21.02	C
6	South Indian Hill Boulevard	I-10 Westbound Ramps	Signal	E	AM	37.15	D
					PM	38.45	D
7	South Indian Hill Boulevard	West San Jose Avenue	Signal	E	AM	23.80	C
					PM	24.04	C
8	South College Avenue	West-East San Jose Avenue	AWSC	D	AM	14.32	B
					PM	11.47	B
9	North Mills Avenue	East San Jose Avenue	OWSC	D	AM	**65.11**	**F**
					PM	**44.49**	**E**
10	North Mills Avenue	East American Avenue	OWSC	D	AM	24.59	C
					PM	21.12	C
11	South Indian Hill Boulevard	West Arrow Highway	Signal	E	AM	42.95	D
					PM	52.77	D
12	South Indian Hill Boulevard	Auto Center Drive	Signal	E	AM	27.18	C
					PM	46.30	D

1: AWSC = All-Way Stop-Control, OWSC = One-Way Stop-Control.
2: Delay shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 11**, the study intersections are projected to continue to operate at an acceptable LOS during the AM and PM peak hours for HY conditions with the exception of:

- Intersection 9: North Mills Avenue/East San Jose Avenue during the AM and PM Peak Hour.[2]

[2] Intersection 9 meets the AM and PM peak hour signal warrant. See **Appendix F** for the analysis sheet.



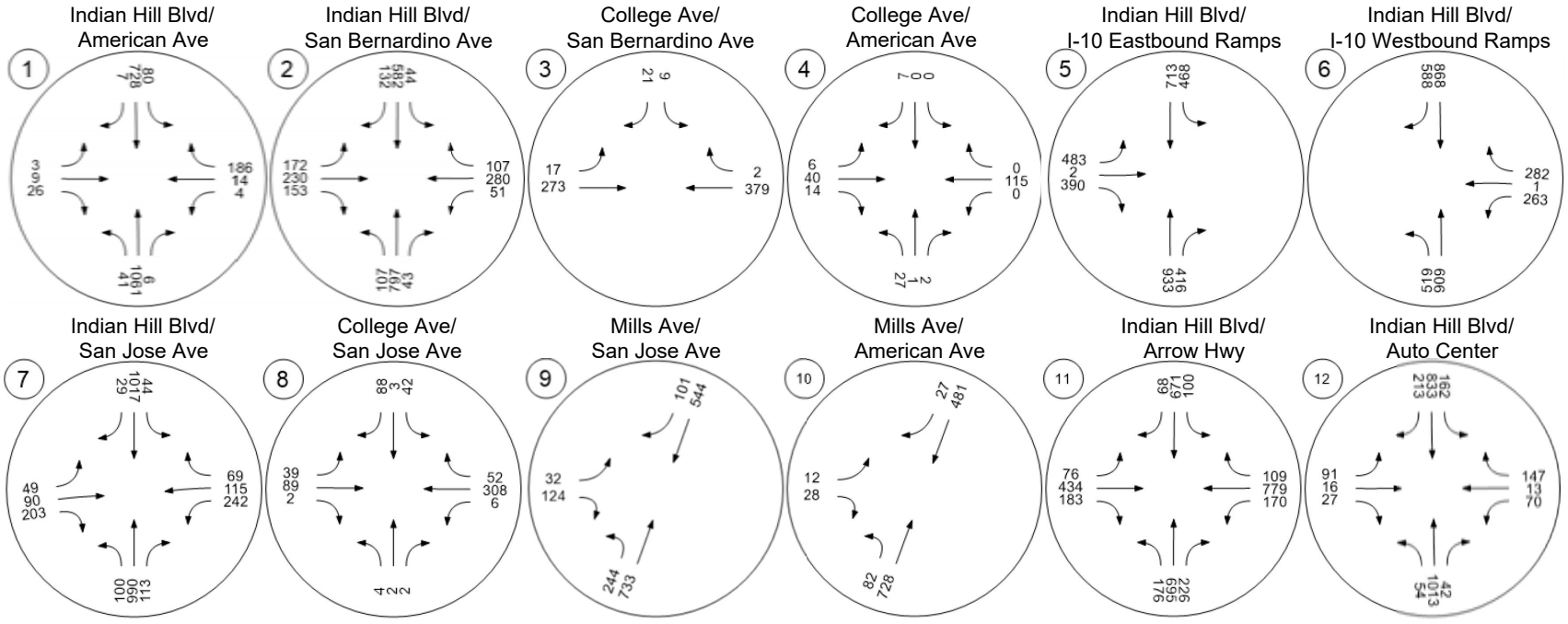
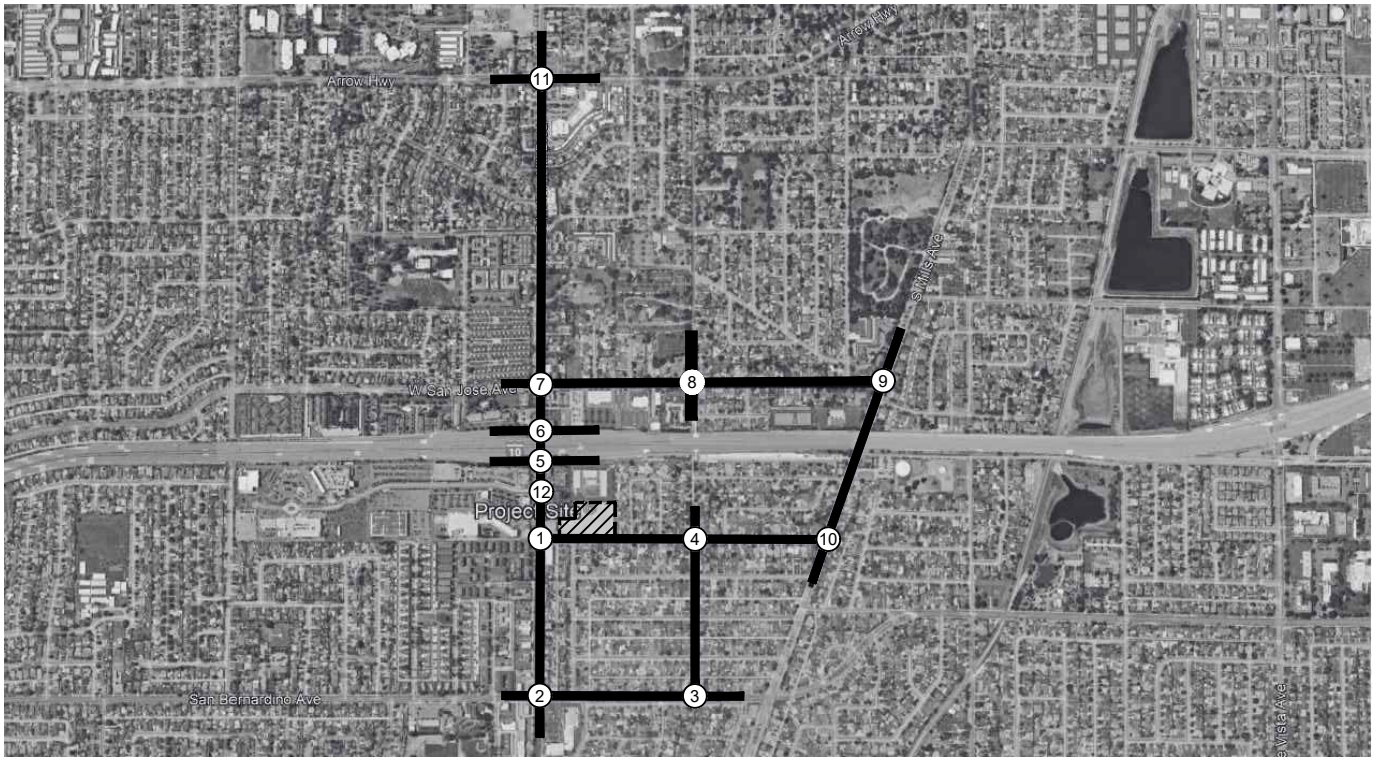


Exhibit 16: Horizon Year AM Peak Hour Volumes

Traffic Impact Analysis

CVR-24-003

Not to Scale



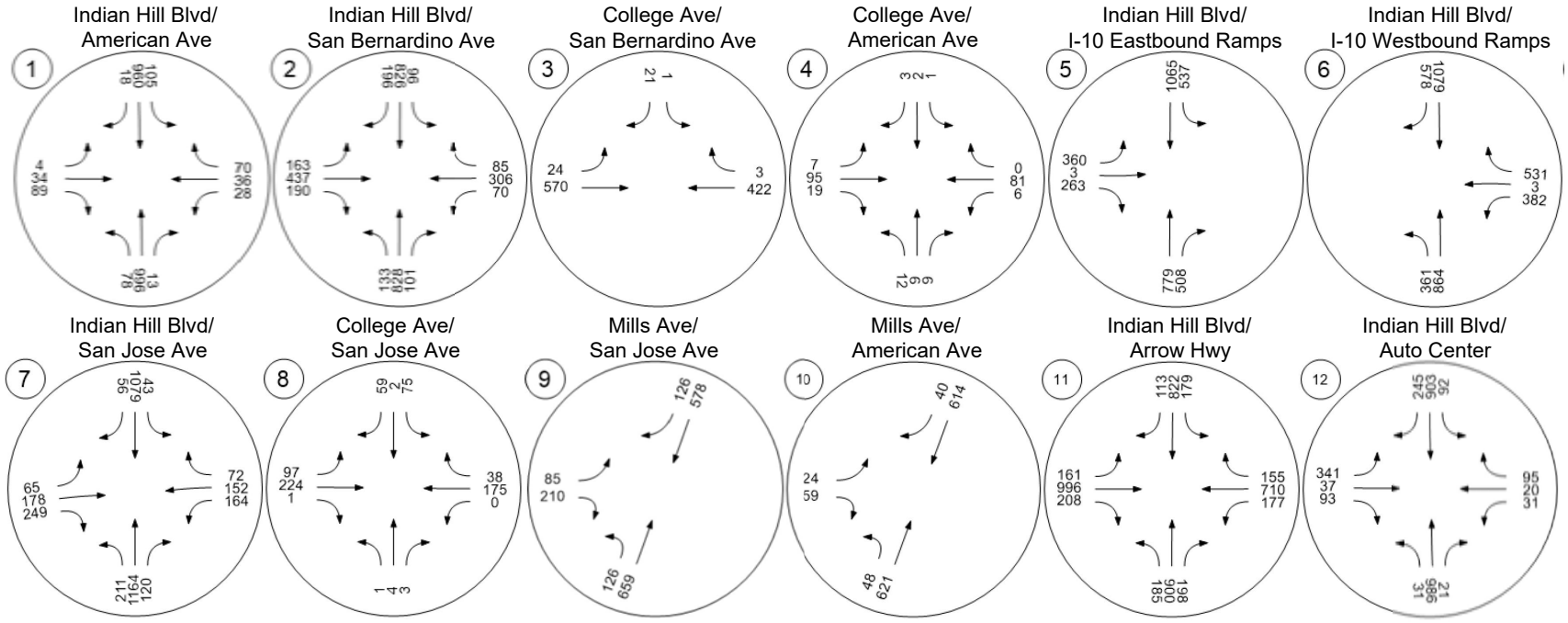


Exhibit 17: Horizon Year PM Peak Hour Volumes

Traffic Impact Analysis

CVR-24-003

Not to Scale

8.0 HORIZON YEAR WITH PROJECT (HYP) TRAFFIC CONDITIONS

Horizon Year With Project (HYP) traffic conditions analysis is intended identify existing conditions in the near-term with cumulative projects and with the cumulative projects project.

8.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the HY conditions scenario are consistent with those previously shown in **Exhibit 4**.

8.2 HYP TRAFFIC VOLUMES

HYP Volumes include HY volumes plus the addition of the proposed project. Per *City Guidelines*, HY volumes are based on the Southern California Association of Governments (SCAG) regional travel demand model build out projections. Base year 2016 model volumes were compared to Horizon year building year 2045 volumes to determine the compound annual growth rate within the study area. That rate was determined to be less than 0.10%. To provide a conservative analysis, a rate of 0.50% was utilized. Model output volumes are included for reference. Model output volumes are included for reference. **Exhibit 18** and **Exhibit 19** show HYP AM and PM peak hour volumes at the study intersections.

HYP Volumes = (Existing (2024) Counts * 1.11) + Proposed Project + Cumulative Projects

8.3 HYP INTERSECTION LEVEL OF SERVICE ANALYSIS

HYP conditions AM and PM peak hour intersection analysis is shown in **Table 12**. HCM analysis sheets are provided in **Appendix E.** Of note, the analysis also determined that the 95th percentile queue lengths for left-turns from West American Avenue into the proposed Project Driveway are less than a single passenger vehicle length.

Table 12:
Intersection Analysis – HYP Conditions

Intersection			Control Type[1]	LOS	Peak Hour	HY Conditions		HYP Conditions	
						Delay[2]	LOS	Delay[2]	LOS
1	Indian Hill Boulevard	West American Avenue	Signal	E	AM	11.84	B	12.57	B
					PM	10.11	B	10.29	B
2	South Indian Hill Boulevard	San Bernardino Avenue	Signal	E	AM	20.76	C	20.82	C
					PM	23.64	C	23.70	C
3	College Avenue	San Bernardino Avenue	OWSC	D	AM	12.49	B	12.60	B
					PM	11.65	B	12.11	B
4	South College Avenue	West-East American Avenue	AWSC	D	AM	7.66	A	7.67	A
					PM	7.67	A	7.70	A
5	South Indian Hill Boulevard	I-10 Eastbound Ramps	Signal	E	AM	27.27	C	27.43	C
					PM	21.02	C	21.83	C
6	South Indian Hill Boulevard	I-10 Westbound Ramps	Signal	E	AM	37.15	D	37.60	D
					PM	38.45	D	40.03	D
7	South Indian Hill Boulevard	West San Jose Avenue	Signal	E	AM	23.80	C	23.84	C
					PM	24.04	C	24.08	C
8	South College Avenue	West-East San Jose Avenue	AWSC	D	AM	14.32	B	14.32	B
					PM	11.47	B	11.47	B
9	North Mills Avenue	East San Jose Avenue	OWSC	D	AM	**65.11**	**F**	**65.84**	**F**
					PM	**44.49**	**E**	**45.08**	**E**
10	North Mills Avenue	East American Avenue	OWSC	D	AM	24.59	C	27.73	D
					PM	21.12	C	21.76	C
11	South Indian Hill Boulevard	West Arrow Highway	Signal	E	AM	42.95	D	43.02	D
					PM	52.77	D	53.04	D
12	South Indian Hill Boulevard	Auto Center Drive	Signal	E	AM	27.18	C	27.28	C
					PM	46.30	D	48.49	D
13	Project Driveway	West American Avenue	OWSC	C	AM	-	-	9.59	A
					PM	-	-	9.33	A

1: AWSC = All-Way Stop-Control, OWSC = One-Way Stop-Control.
2: Delay shown in seconds per vehicle. Per the Highway Capacity Manual 7th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

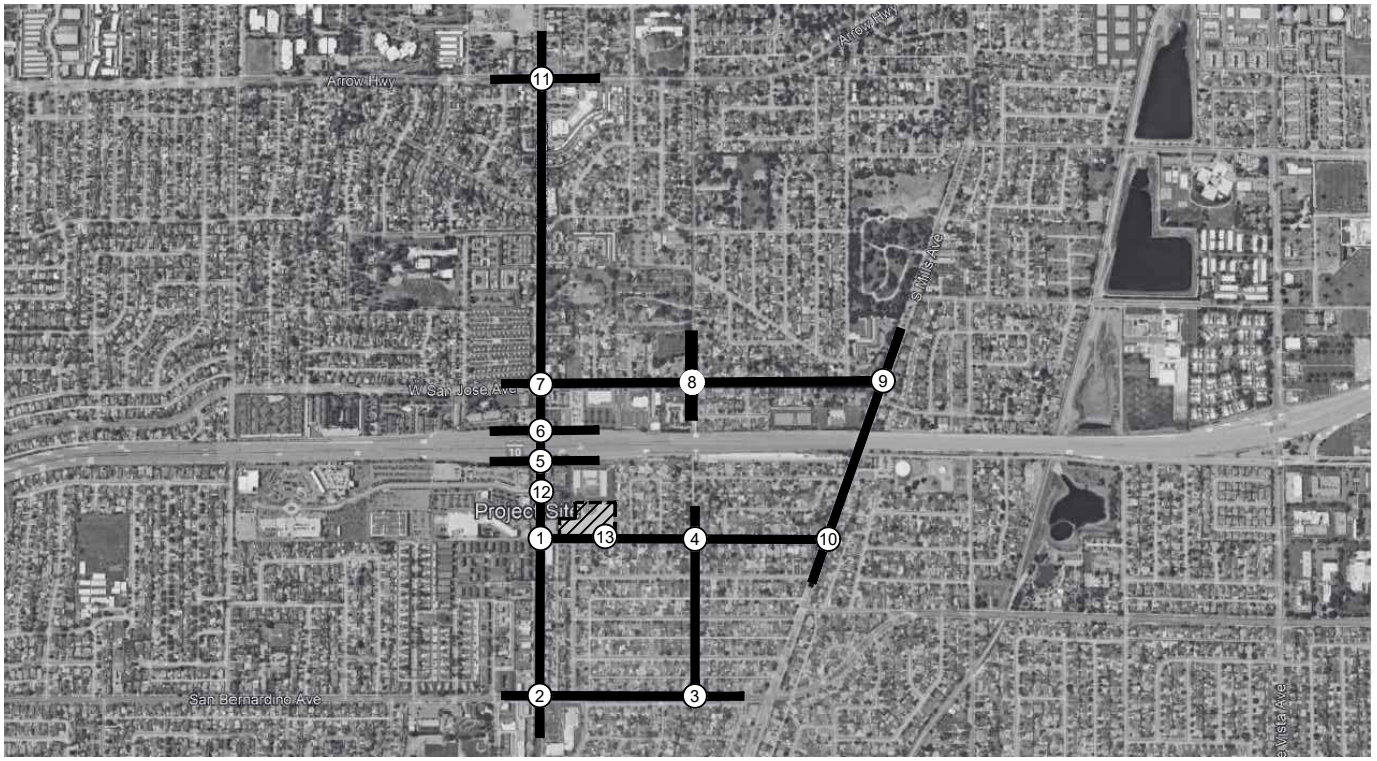
As shown in **Table 12**, the study intersections are projected to continue to operate at an acceptable LOS during the AM and PM peak hours for HYP conditions with the exception of:

- Intersection 9: North Mills Avenue/East San Jose Avenue during the AM and PM Peak Hour.

According to the City criteria and threshold outlined in Section 2.4.2, mitigation measures are necessary if a proposed project increases traffic at an intersection that is already expected to perform at an unacceptable level of service (LOS) with existing background traffic and if the project adds 10 or more peak hour trips to any approach. It is advisable to coordinate with the City of Claremont to address and mitigate any potential impacts effectively.

Based on coordination with the City of Claremont, Intersection 9 is on the border with the City of Montclair which does not have the same mitigation measures. The City of Claremont is requiring the following mitigation measures for Intersection 1: Indian Hill Boulevard/West American Avenue only.

For Intersection 1: Indian Hill Boulevard/West American Avenue, the existing AM peak hour westbound right turn volumes start at 168 and increase to 198 right turn movements for the Horizon Year. This is projected to add 30 additional AM peak hour right turns at the Horizon Year from the Existing conditions, to an already congested right turn movement. The City is conditioning a dedicated right turn pocket improvements as part of the development conditions of approval, and will be working towards obtaining the necessary right of way, and providing plans and specifications for the developer to construct necessary signal modifications in order to provide roadway improvements to address the need for a right turn only lane for westbound West American Avenue at Indian Hill Boulevard. This improvement is necessary to address the right turn congestion on West American Avenue at Indian Hill Boulevard.



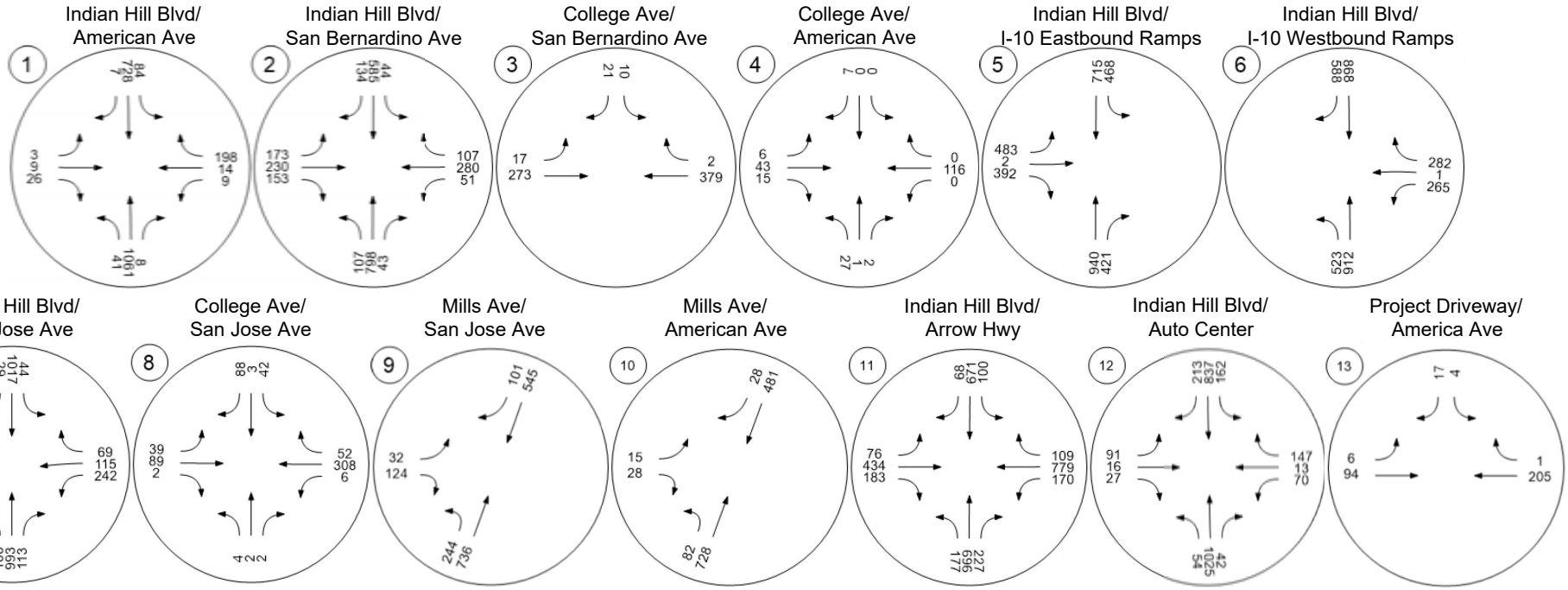
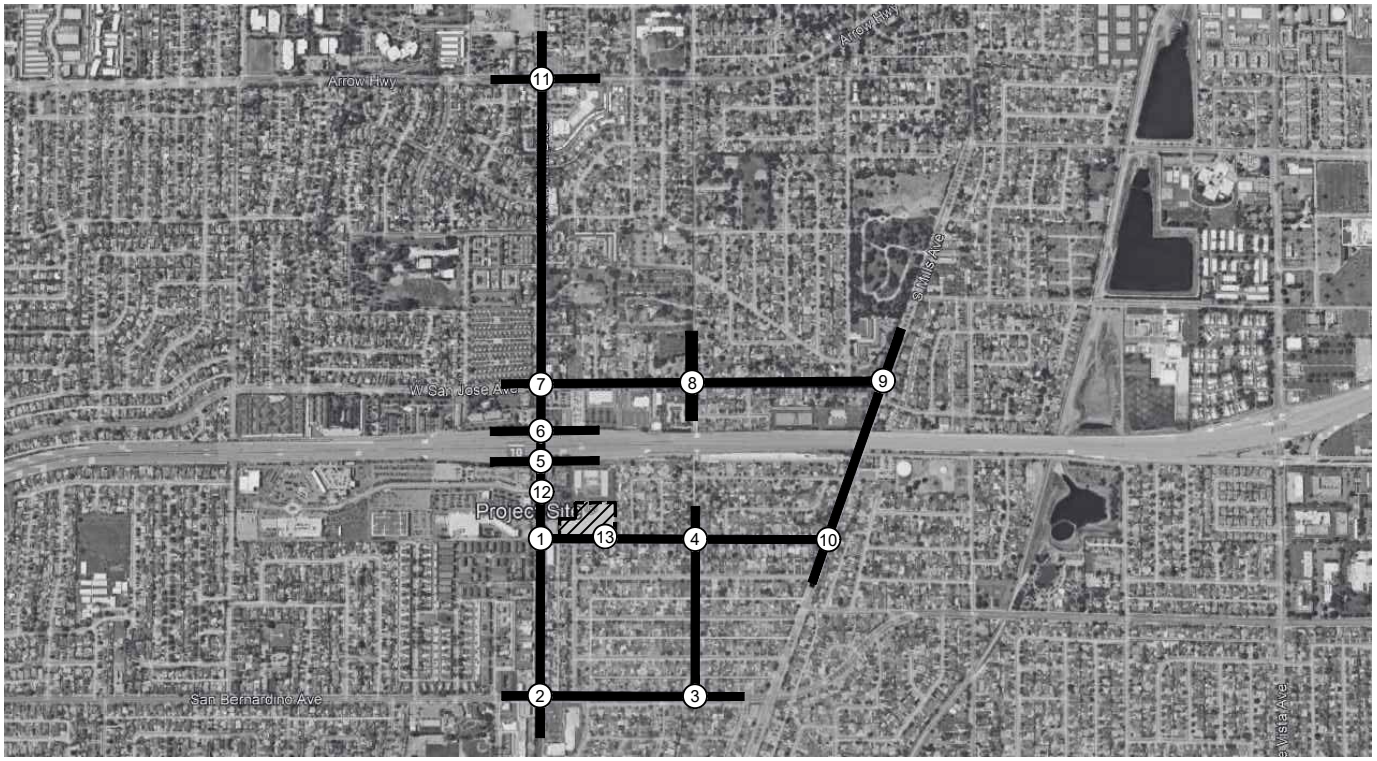


Exhibit 18: HYP AM Peak Hour Volumes

Traffic Impact Analysis

CVR-24-003

Not to Scale



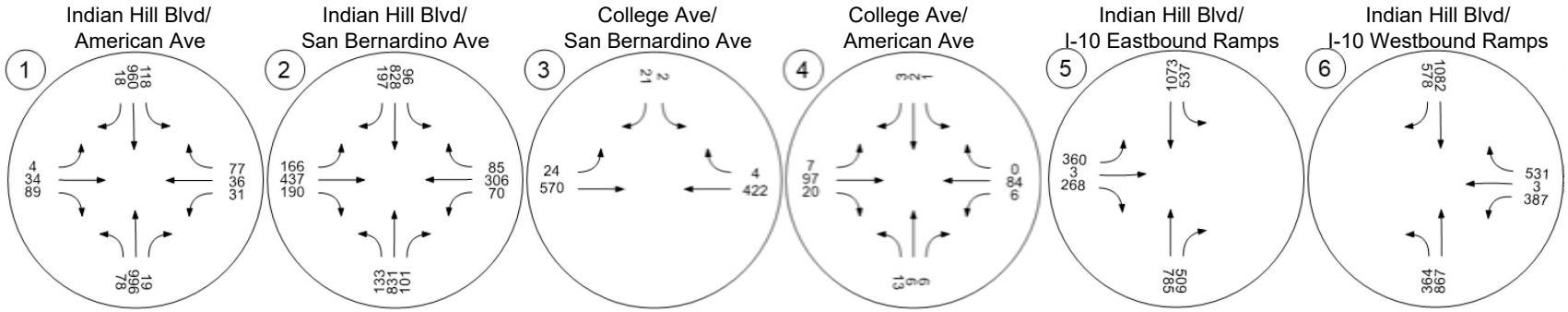


Exhibit 19: HYP PM Peak Hour Volumes

Traffic Impact Analysis

CVR-24-003

Not to Scale

9.0 VEHICLE MILES TRAVELED (VMT) SCREENING

A VMT screening was conducted to determine if the proposed project requires VMT analysis. The project was found to screen from VMT analysis. The results of this screening were documented in a separate memorandum, “Technical Review of 840 South Indian Hill VMT Screening Memo” (Fehr & Peers, May 1, 2025).

APPENDIX

Appendix A: Glossary of Terminology
Appendix B: Scoping Agreement
Appendix C: Existing Traffic Counts
Appendix D: Cumulative Project Lists
Appendix E: HCM Analysis Sheets
Appendix F: Signal Warrant Sheets

APPENDIX A

GLOSSARY OF TERMINOLOGY

Glossary of Terminology

ACRONYMS:

ADT	Average Daily Traffic
DU	Dwelling Unit
LOS	Level of Service
TSF	Thousand Square Feet
V/C	Volume/Capacity

TERMS

AVERAGE DAILY TRAFFIC – *The average 24-hour volume for a stated period divided by the number of days in that period. For example, Annual Average Daily Traffic is the total volume during a year divided by 365 days.*

CAPACITY – T*he maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.*

CYCLE LENGTH – *The time period in seconds required for a traffic signal to complete one full cycle of indications.*

DAILY CAPACITY – *A theoretical value representing the daily traffic volume that will typically result in a peak hour volume equal to the capacity of the roadway.*

DELAY – *The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.*

FREE FLOW – *Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.*

LEVEL OF SERVICE – *A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.*

PEAK HOUR – *The 60 consecutive minutes with the highest number of vehicles.*

SIGNAL CYCLE – *The time period in seconds required for one complete sequence of signal indications.*

STARTING DELAY – *The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through an intersection.*

TRAFFIC-ACTUATED SIGNAL – *A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.*

TRIP – *The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.*

TRIP GENERATION RATE – *The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.*

APPENDIX B

SCOPING AGREEMENT

Scoping Agreement for Traffic Impact Analysis

This form acknowledges the requirements for the traffic impact analysis of the following project. The analysis will follow the local jurisdiction's traffic impact analysis guidelines.

Project Name:	840 South Indian Hill
Project Address:	840 South Indian Hill Boulevard, City of Claremont
Project Description:	65 multi-family dwelling units

	Consultant	Developer
Name:	TJW Engineering	City Ventures
Address:	9841 Irvine Center Drive, Suite 200	3121 Michelson Drive, Suite 150
	Irvine, CA	Irvine, CA 92612
Telephone:	949-878-3509	
Email:		

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

Current GP Land Use:	Freeway Commercial	Proposed GP Land Use:	
Current Zoning:	CP – Commercial Freeway	Proposed Zoning:	RM-2000

Is the project screened from LOS analysis? [ ] Yes [X] No

Justification:	The City of Claremont has requested a LOS analysis due to the close proximity of the proposed project location to the I-10 Ramps at Indian Hill Boulevard.

Is the project screened from VMT analysis? [ ] Yes [X] No

Justification:	Per the *City of Claremont Transportation Study Guidelines for VMT and LOS Assessment*, the online SGVCOG VMT Assessment Tool may be used to screen projects. Per Tool analysis, the proposed project does not fall within a Transportation Priority Area (TPA) or Low VMT Area Screening. Also, the proposed project is not any of the project types identified as having the presumption of a less than significant impact. Because the project does not meet any of these screening steps, a VMT analysis is required.

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips				6	20	26
PM Trips				21	12	33
Daily						438

Internal Trip Capture: [ ] Yes [X] No _____ % Trip Discount

Pass-By Allowance: [ ] Yes [X] No _____ % Trip Discount

Trip Distribution: See Exhibit

Project Build-out Year: 2025 Annual Ambient Growth Rate: 2%

Study Intersections:

1. College Ave./W.-E. American Ave.
2. College Ave./San Bernardino Ave.
3. Indian Hill Blvd./San Bernardino Ave.
4. S. Indian Hill Blvd./W. American Ave.
5. S. Indian Hill Blvd./I-10 Eastbound Ramps
6. S. Indian Hill Blvd./I-10 Westbound Ramp
7. S. Indian Hill Blvd./W. San Jose Ave.
8. S. College Ave./W.-E. San Jose Ave.
9. W. American Ave./Project Driveway
10. N.-S. Mills Ave./E. American Ave.
11. S. Mills Ave./E. San Jose Ave.
12. S. Indian Hill Blvd./Arrow Hwy.

Study Roadway Segments:

1. _____
2. _____
3. _____
4. _____

Analysis Scenarios:

1. Existing Traffic Conditions (Existing);
2. Opening Year Traffic Conditions (OY);
3. Opening Year With Project Traffic Condition (OYP);
4. Horizon Year Traffic Conditions (HY);
5. Horizon Year With Project Traffic Conditions (HYP).

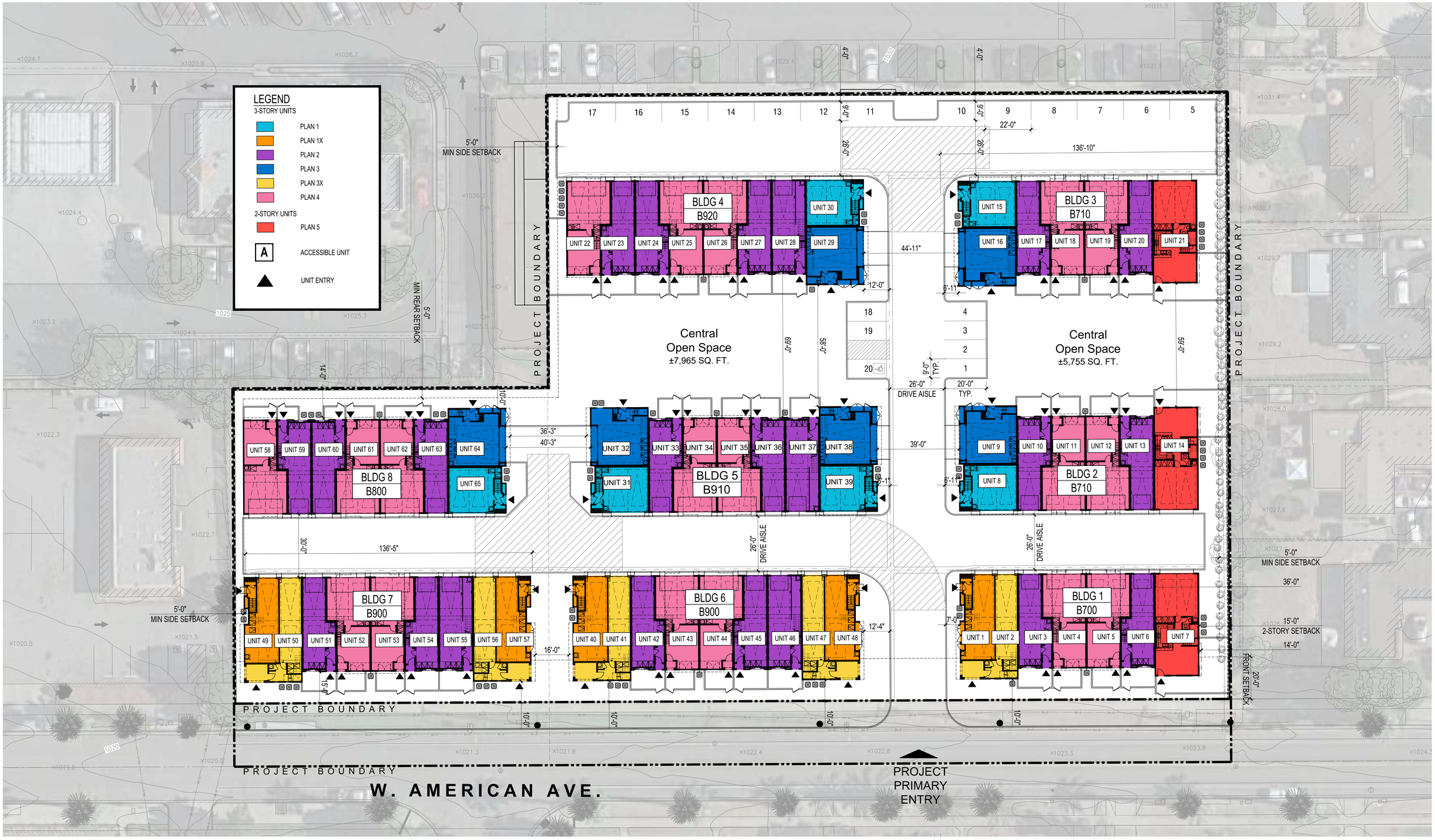
Other Jurisdiction Analyzed? [X] Yes [ ] No Name of Jurisdiction: City of Pomona

Date of Traffic Counts: New counts will be collected

Additional Items to be Addressed:	Cumulative projects to be provided by City Staff.

Additional Notes:	

Names: David Chew, PTP	Vincent Ramos
Consultant's Representative Signature:	City (Approved By)
Consultant's Representative	City (Approved By)
04/24/2024	4/29/2024
Date	Date



Architecture + Planning
17911 Von Karman Ave,
Suite 200
Irvine, CA 92614
949.851.2133
ktgy.com

City Ventures
3121 Michelson Drive, Suite 150
Irvine, CA 92612

AMERICAN AVENUE
CLAREMONT, CA # 2023-0433

Plot Date: 11.8.2023
1st Submittal Date: 8.30.2023
2nd Submittal Date: 10.25.2023

0 10 20 40

SITE PLAN

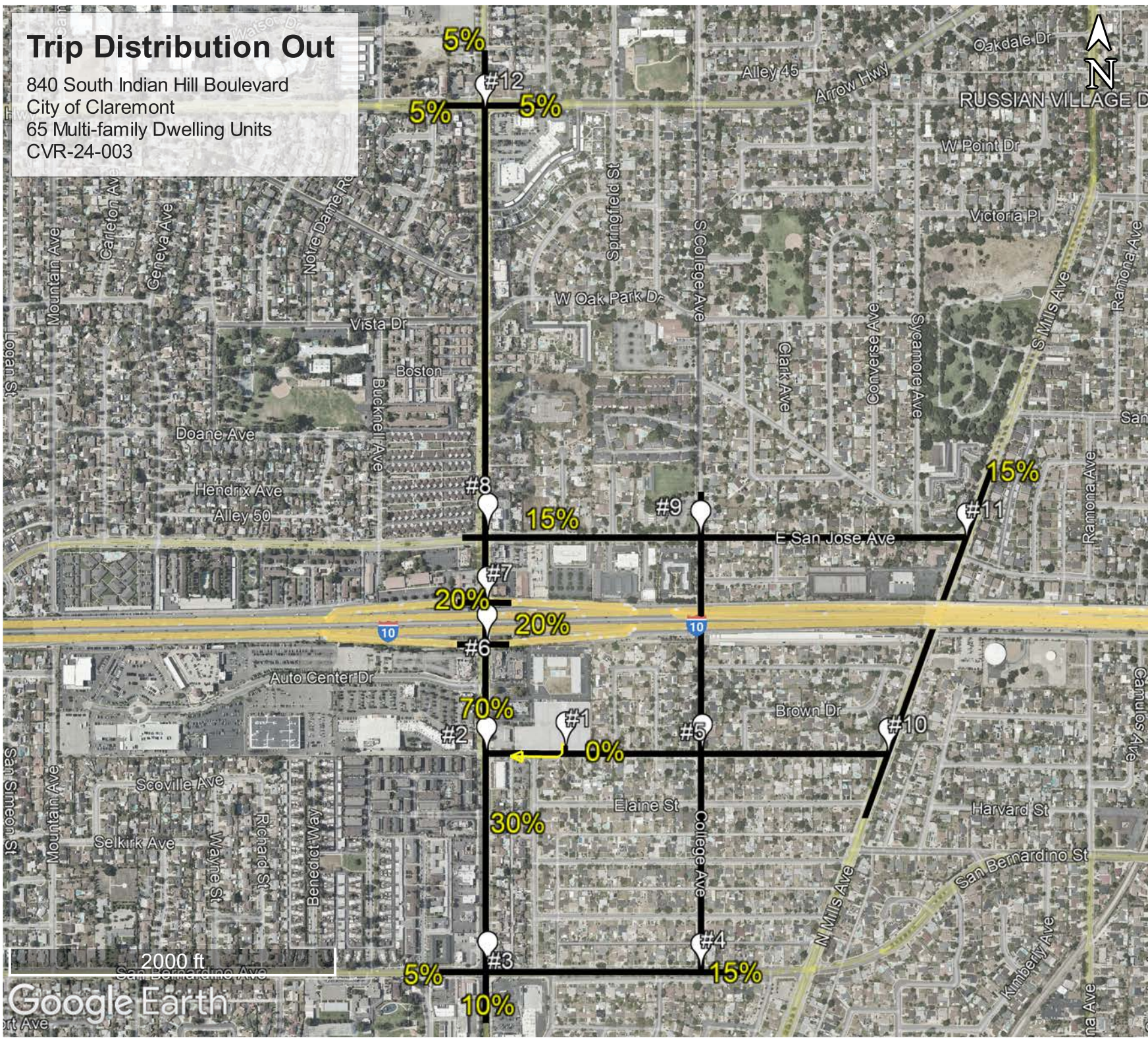
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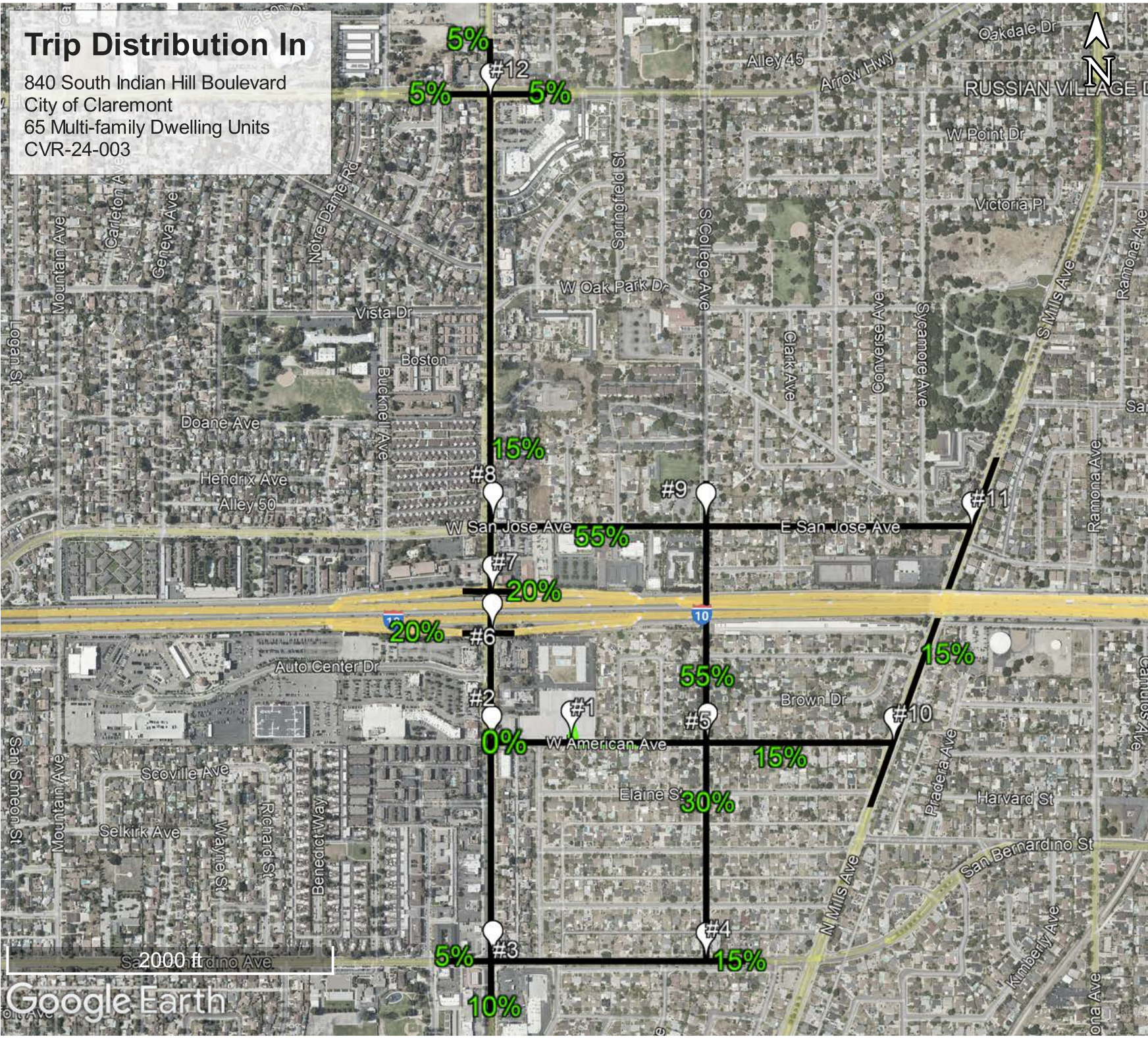
Table
Project Trip Generation

Proposed Land Use[1]	ITE Code	Qty	Unit[2]	Daily		AM Peak Hour					PM Peak Hour				
				Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
								In	Out	Total			In	Out	Total
Multifamily Housing (Low-Rise), Not Close to Rail Transit	220(1)	65	DU	6.74	438	0.4	24:76	6	20	26	0.51	63:37	21	12	33

1: Trip generation and pass-by rates from ITE Trip Generation (11th Edition, 2021).

2: DU = Dwelling Units.


Trip Distribution Out
840 South Indian Hill Boulevard
City of Claremont
65 Multi-family Dwelling Units
CVR-24-003
5%
#12
5%
5%
#8
15%
#9
#11
15%
E San Jose Ave
#7
20%
20%
#6
#2
70%
#1
#5
#10
0%
30%
#3
5%
10%
#4
15%
Alley 45
Arrow Hwy
Oakdale Dr
RUSSIAN VILLAGE D
W Point Dr
Victoria Pl
Springfield St
S College Ave
W Oak Park Dr
Converse Ave
Sycamore Ave
S Mills Ave
Ramona Ave
Clark Ave
Vista Dr
Boston
Bucknell Ave
Doane Ave
Hendrix Ave
Alley 50
Auto Center Dr
Brown Dr
Elaine St
College Ave
Harvard St
San Bernardino St
N Mills Ave
Kimberly Ave
Scoville Ave
Selkirk Ave
Wayne St
Richard St
Benedict Way
Mountain Ave
Carleton Ave
Geneva Ave
Notre Dame Rd
Logan St
San Simeon St
Camulos Ave
10
2000 ft
Google Earth
N


Trip Distribution In
840 South Indian Hill Boulevard
City of Claremont
65 Multi-family Dwelling Units
CVR-24-003
5%
#12
5%
5%
15%
#8
#9
#11
W San Jose Ave
55%
E San Jose Ave
#7
20%
20%
#6
10
55%
#2
#1
#5
#10
0%
W American Ave
15%
15%
30%
#4
5%
#3
10%
2000 ft
Google Earth
Alley 45
Arrow Hwy
Oakdale Dr
RUSSIAN VILLAGE
W Point Dr
Victoria Pl
Springfield St
S College Ave
W Oak Park Dr
Clark Ave
Converse Ave
Sycamore Ave
S Mills Ave
Ramona Ave
Vista Dr
Boston
Bucknell Ave
Doane Ave
Hendrix Ave
Alley 50
Auto Center Dr
Brown Dr
Scoville Ave
Selkirk Ave
Benedict Way
Wayne St
Richard St
Elaine St
Harvard St
Pradera Ave
San Bernardino St
N Mills Ave
Kimberly Ave
Mountain Ave
Carleton Ave
Geneva Ave
Notre Dame Rd
Logan St
San Simeon St

SGVCOG VMT Evaluation Tool Report

Project Details

Timestamp of Analysis: February 21, 2024, 02:46:10 PM

Project Name: 840 South Indian Hill

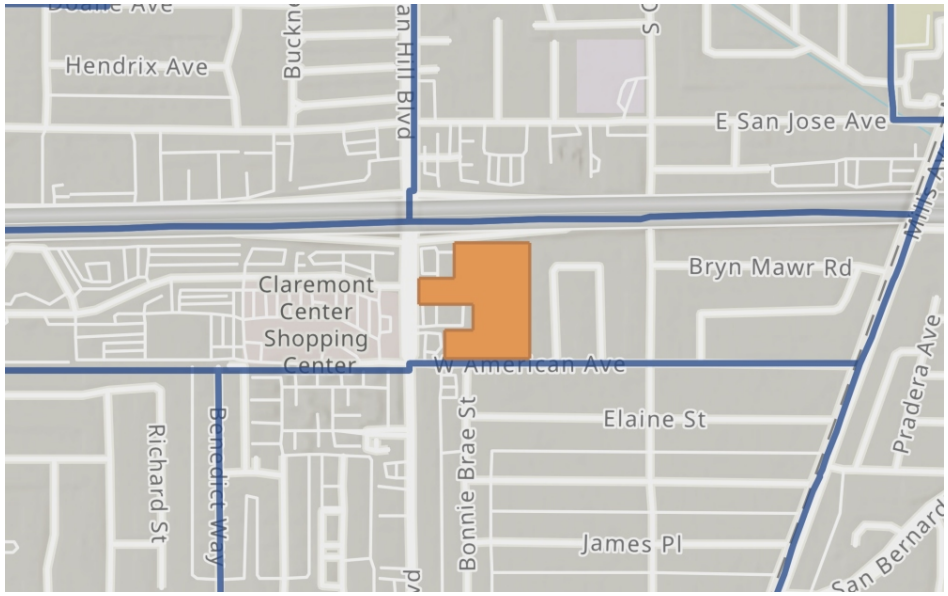
Project Description: 65 multi-family dwelling units

Project Location

jurisdiction:
Claremont

apn	TAZ
8322-006-006	22448100

Inside a TPA?
No (Fail)



Analysis Details

Data Version: SCAG Regional Travel Demand Model
2016 RTP Base Year 2012

Analysis Methodology: TAZ

Baseline Year: 2024

Project Land Use

Residential:

Single Family DU:	
Multifamily DU:	65
Total DUs:	65

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:	16 %

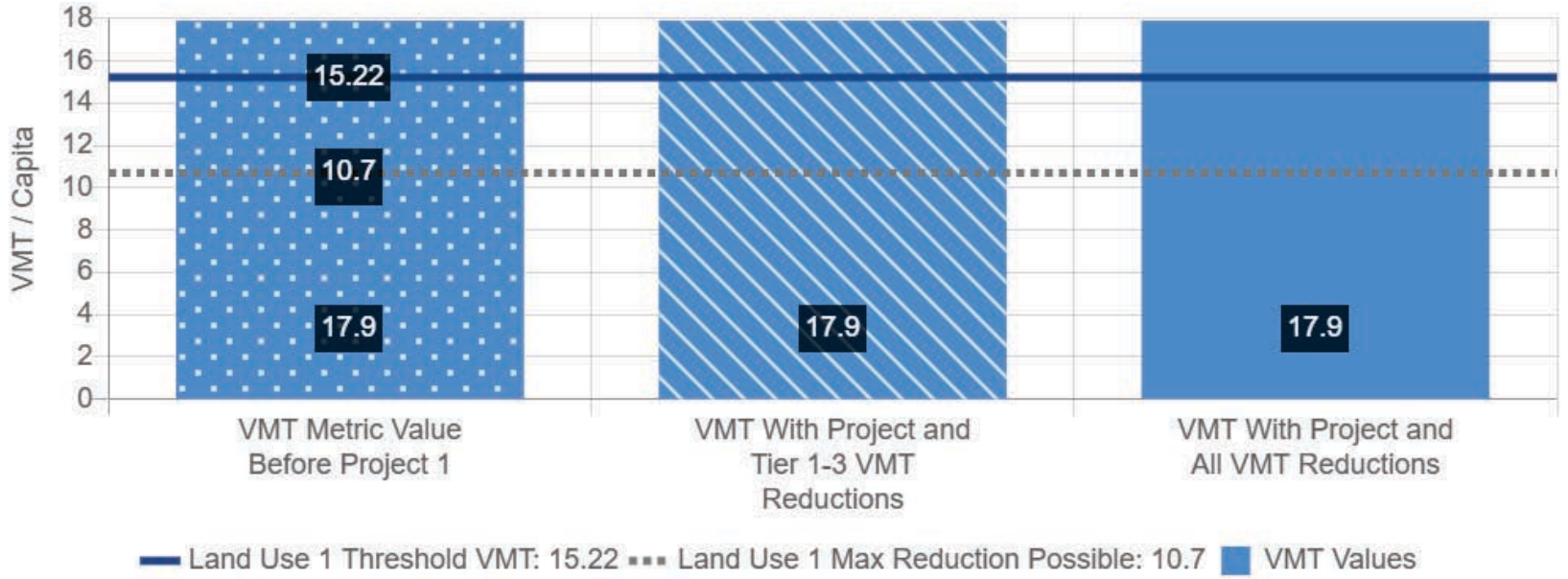
Parking:

Motor Vehicle Parking:	150
Bicycle Parking:	

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:	17.91
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	17.9	17.9	17.9
Low VMT Screening Analysis	No (Fail)	No (Fail)	No (Fail)

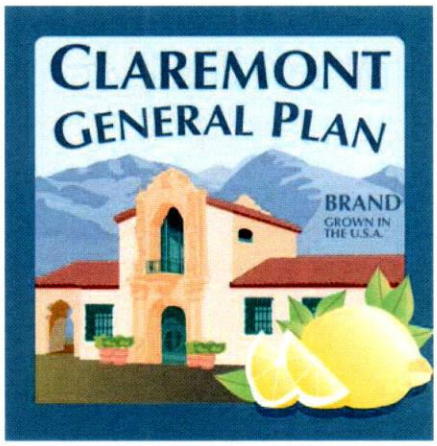


Tier 3 Parking

PK01 Limit Parking Supply

Minimum Parking Required by City Code:	98

CHAPTER 4
COMMUNITY MOBILITY ELEMENT



THE CITY OF CLAREMONT
GENERAL PLAN

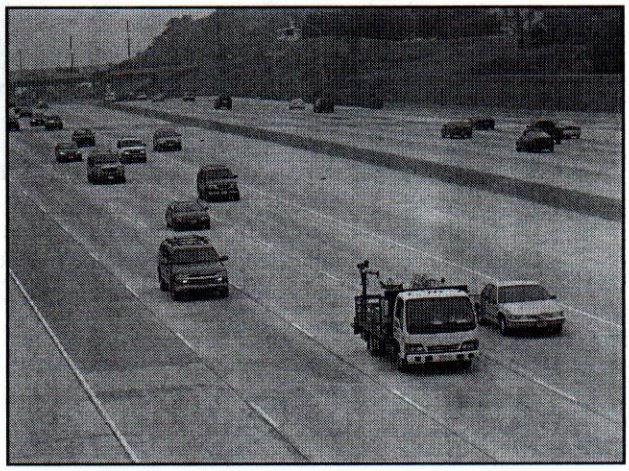
people and goods, connecting neighborhoods, and as statements of civic pride and beauty.

Streets and highways are grouped into classes or systems according to the character of the service they are intended to provide. This grouping is called functional classification. An integral part of functionally classifying streets is recognizing that individual roads and streets do not serve travel independent from the rest of the highway system. Rather, most travel involves movement through a network of roads, so it is necessary to determine how this travel can be channeled within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the role that a particular road or street should play in serving the flow of trips within a highway network.

Functional classification can be applied in planning highway system development, determining the jurisdictional responsibility for particular systems, and in fiscal planning. Functional classification is also important in determining eligibility for federal funding.

Claremont's Street System

Claremont's street system is differentiated by roadway size, function, and capacity. The four basic types of roadways in Claremont are described below. Figure 4-1 presents schematic cross-sections for each type of roadway that represent desirable standards. Deviations from these standards may occur in cases where physical constraints and/or right-of-way limitations are present, and where preservation of neighborhood or community character dictates special treatment. Provision of bikeways and sidewalks may also affect the specific design of roadways. In addition, the median width of major and secondary arterials will vary according to the area being served, right-of-way constraints, and turn lane requirements.



Foothill Freeway

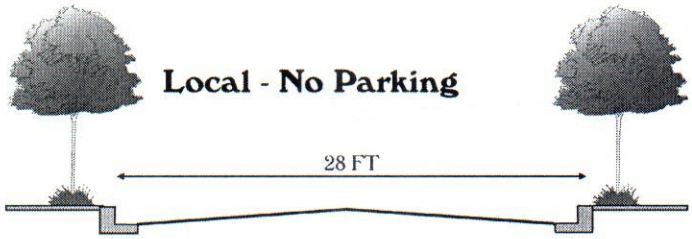
The Foothill Freeway opened in November 2002 with the intention of relieving congestion on surface streets in Claremont and on the 10 Freeway.

Freeways

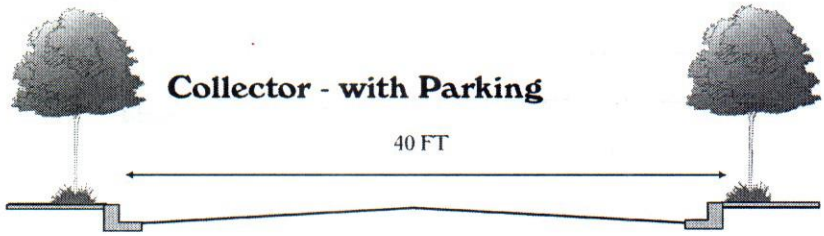
Freeways are limited-access, high-speed travelways included in the state and federal highway systems. Their purpose is to carry regional through traffic (traffic passing through Claremont without stopping). Access to the regional highway system for Claremont residents and visitors is provided at interchanges. The 10 Freeway and 210 Freeway connect Claremont to regional destinations. The design, construction, and operation of freeways are under the jurisdiction of the California Department of Transportation (Caltrans).

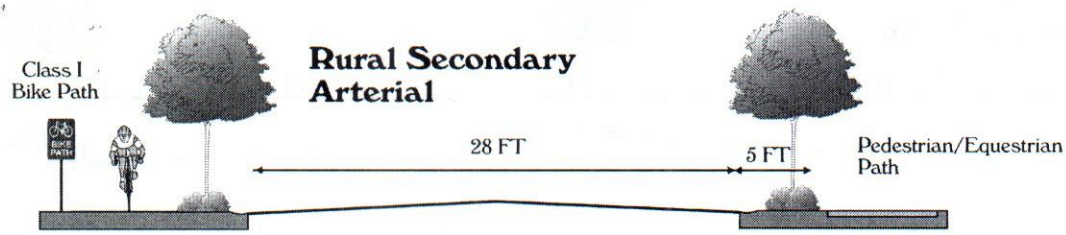
NOTES

1. Total right-of-way width will vary depending upon parkway requirements.
2. Streets designated for on-street bike paths will require an additional eight feet of pavement.
3. Maximum street grade shall be eight percent.
4. All streets shall have a minimum two percent crossfall.
5. Curb and gutter, pavement thickness, and striping shall be as specified by the City Engineer.
6. American Disability Act (ADA) requirements must be met for all pedestrian access.
7. Parking on arterials will depend on land width and available right-of-way.



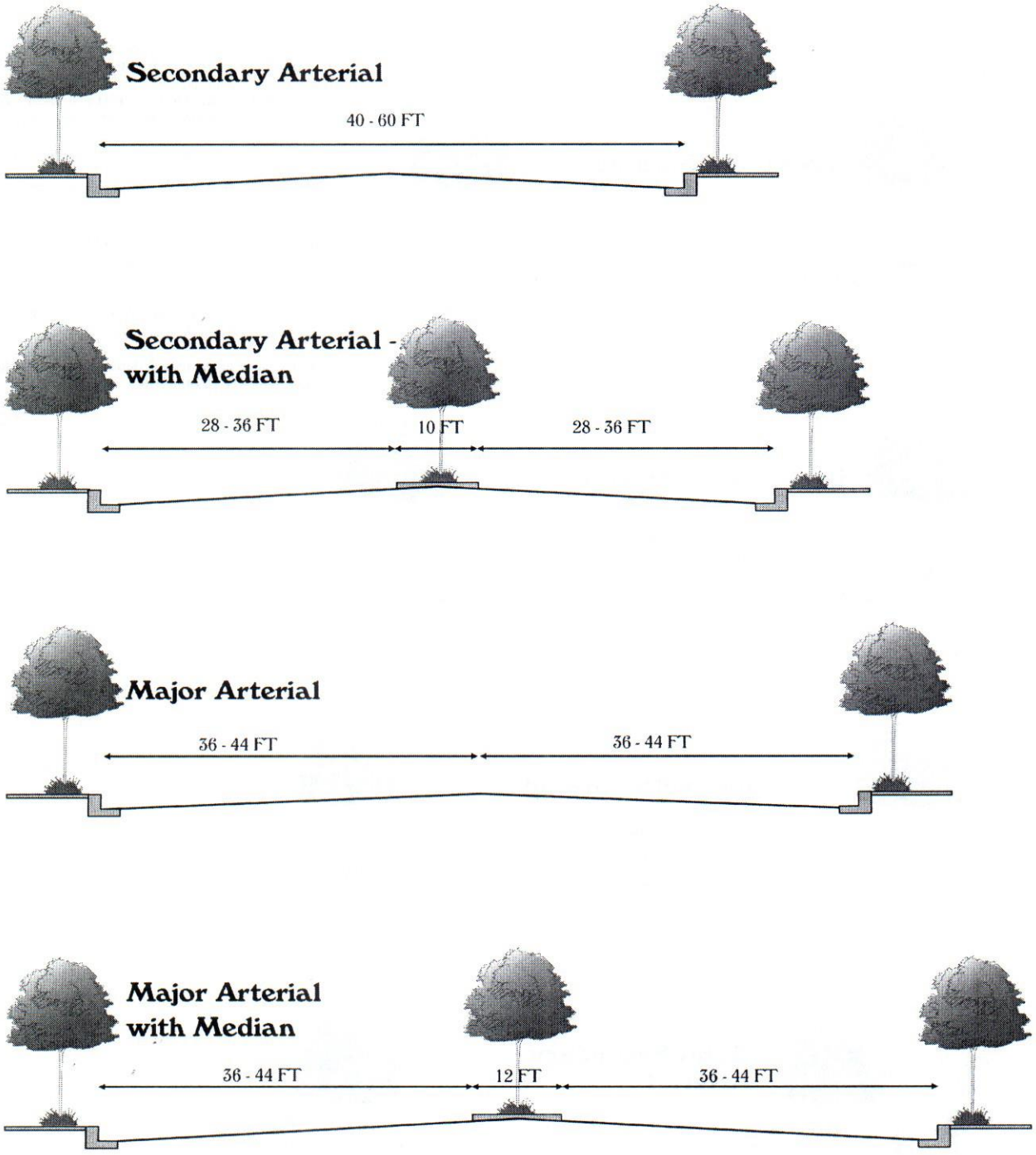






Note: Roadway dimensions are not to scale

Figure 4-1
Roadway Cross Sections A



Note: Roadway dimensions are not to scale

Figure 4-1
Roadway Cross Sections B

Arterial Streets

Arterial streets, together with freeways, form a network carrying long-distance, high-speed traffic. Arterial streets transport large volumes of traffic from one part of the City to another and connect to the state highway system. The Arterial Street also moves traffic between cities in locations where a freeway does not link the two. Arterials are designed to have the highest traffic carrying capacity in the City's roadway system, with the highest speeds and limited interference with traffic flow by driveways. Claremont's arterials include Towne Avenue, Mountain Avenue, Indian Hill Boulevard, Mills Avenue, Claremont Boulevard, Monte Vista Avenue, Padua Avenue, Mt. Baldy Road, Base Line Road, Foothill Boulevard, Bonita Avenue, First Street, Arrow Highway, and San Jose Avenue. Two arterial streets in Claremont are Caltrans facilities: SR-30 (Base Line Road) and SR-66 (Foothill Boulevard). The City has initiated a process to accept Caltrans relinquishment of Base Line Road.



Foothill Boulevard

A view of Foothill Boulevard looking east at Indian Hill Boulevard.

Claremont has three types of Arterial streets: *Major Arterials, Secondary Arterials,* and *Rural Secondary Arterials.* These designations differ in capacity to carry traffic based on the size of right-of-way and pavement width. Major Arterials range from 72 to 88 feet in width without a median, and from 84 to 100 feet with a median. Secondary Arterials range from 40 to 60 feet in width without a median, and from 66 to 82 feet in width with a median. As a matter of policy, medians are desired on all Major and Secondary Arterials where sufficient right-of-way exists. Rural Secondary Arterials are 28 feet in width, do not have a median, and may feature separated pedestrian/equestrian trails and Class I bike lanes within the right-of-way.

Residential driveway access and on-street parking are generally not appropriate on Arterials. However, due to historical development patterns, some of Claremont's Arterial streets also provide access to homes, and have residential driveways and curb parking. These streets, including Indian Hill Boulevard, Mills Avenue, Arrow Highway, Mountain Avenue, and Padua Avenue, pass through established residential neighborhoods. The City seeks a balance between the arterial function of the streets, and neighborhood protection. Methods the City may employ include managing the arterial function of these streets, and providing appropriate driveway access and bicycle and pedestrian crossings.

Collector Streets

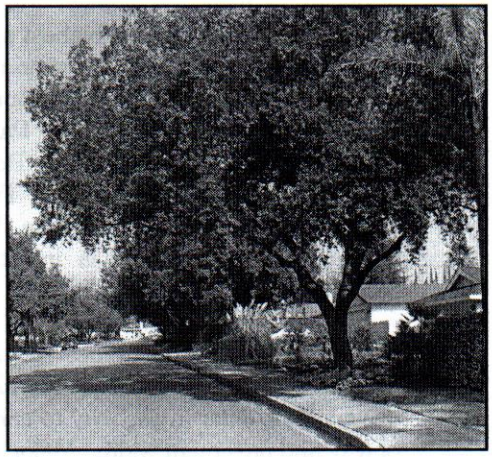
Collector streets are intended to serve as intermediate routes handling traffic between arterial streets and local streets. Collectors are designed primarily to move traffic, but also provide access to abutting properties. Collectors differ from arterials in that Collectors may pass through residential neighborhoods to distribute trips from the arterials to ultimate destinations. Conversely, Collectors also collect traffic from

local streets in residential neighborhoods and channel it onto the arterials. Ideally, Collector streets should form a network, with no one Collector extending so far that it functions as an arterial street. Some Collector streets include Radcliffe Drive, Scripps Drive, Sixth Street, Sumner Avenue, and Williams Avenue. Collectors are typically 40 feet wide within a broader right-of-way.

Local Streets

Local streets provide direct access to individual parcels. The Local street is not designed for through traffic. Rather, Local streets should move traffic toward the nearest collector street. Therefore, speeds on Local streets are relatively low, and on-street parking is usually permitted. Local streets in Claremont are two-lane roadways without medians.

Some Local streets serve industrial areas. Because of the nature of the traffic on these streets, special consideration must be given to their design beyond that given to other Local streets, including load-bearing capacity, paving widths and materials, and turning radii.



Local Street

An example of a local street in Claremont – Morgan Avenue.

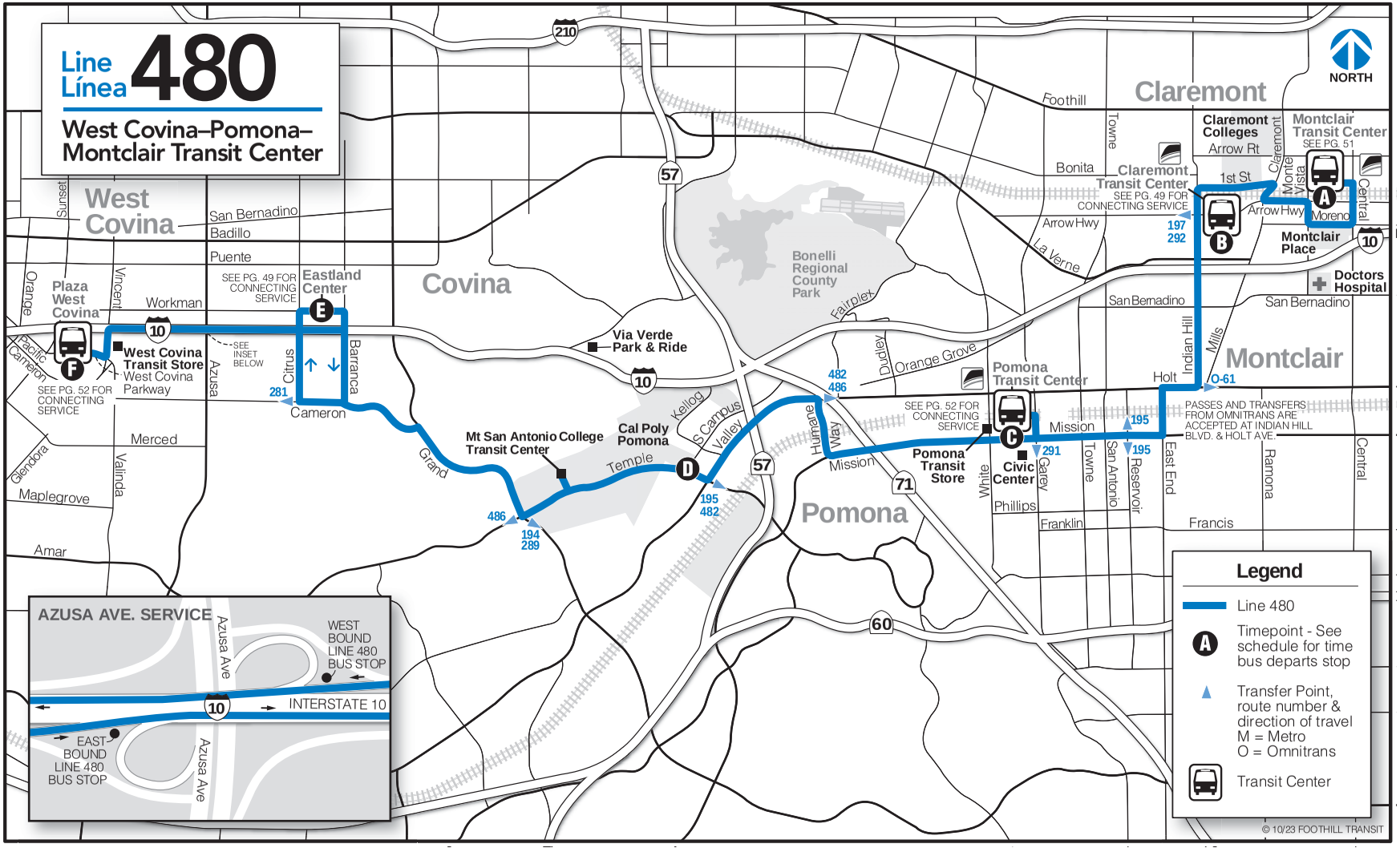
Vehicle Travel Lanes

Claremont residents have identified that adding additional travel lanes to roadways to carry increased traffic volumes is not a sustainable option. This means other modes of transportation rather than the automobile must be encouraged, and that many alternative options need to be available to meet travel needs. For these reasons, the number of vehicle travel lanes on all City arterials and collectors will be limited to no more than four lanes, unless special circumstances demonstrate that additional lanes within limited stretches are needed for merging, congestion, or safety reasons.

Although a need for six lanes along certain segments of arterial streets may be demonstrated in the future based on travel demand and traffic volumes, such expansion of Claremont's arterials is problematic due to a lack of available right-of-way. This is also inconsistent with other City policies supporting the use of bicycles, rail, bus transit, and walking as viable circulation options, as well as policies that sustain our streets as livable places. Expansion of roadways beyond four lanes for purposes of providing bikeways, pedestrian improvements, and/or transit amenities will continue to be encouraged where right-of-way is available.

Level of Service Standards

Evaluating the ability of the circulation system to serve Claremont's residents and businesses requires establishing suitable performance criteria. Performance criteria have a policy component that establishes a desired level of service, as well as a technical component that


Line 480
Línea
West Covina–Pomona–Montclair Transit Center
NORTH
West Covina
Covina
Claremont
Montclair
Pomona
Plaza West Covina
West Covina Transit Store
West Covina Parkway
SEE PG. 52 FOR CONNECTING SERVICE
SEE INSET BELOW
SEE PG. 49 FOR CONNECTING SERVICE
Eastland Center
Via Verde Park & Ride
Bonelli Regional County Park
Mt San Antonio College Transit Center
Cal Poly Pomona
Claremont Transit Center
Claremont Colleges
Montclair Transit Center
SEE PG. 51
Montclair Place
Doctors Hospital
Pomona Transit Center
Pomona Transit Store
Civic Center
PASSES AND TRANSFERS FROM OMNITRANS ARE ACCEPTED AT INDIAN HILL BLVD. & HOLT AVE.
AZUSA AVE. SERVICE
WEST BOUND LINE 480 BUS STOP
EAST BOUND LINE 480 BUS STOP
INTERSTATE 10
Legend
Line 480
Timepoint - See schedule for time bus departs stop
Transfer Point, route number & direction of travel
M = Metro
O = Omnitrans
Transit Center
© 10/23 FOOTHILL TRANSIT

Line-Línea

480

WEEKDAY
ENTRE SEMANA

WESTBOUND/EN DIRECCíON OESTE

MONTCLAIR TO WEST COVINA
MONTCLAIR HACIA WEST COVINA

Montclair Transit Center Ⓐ	Claremont Transit Center Ⓑ	Pomona Transit Center Ⓒ	Temple Ave. & S. Campus Dr. Ⓓ	Eastland Center Ⓔ	W. Covina Pkwy. & California Ave. Ⓕ
5:00	5:09	5:30	5:48	6:06	6:15
5:30	5:39	6:00	6:18	6:36	6:40
6:00	6:10	6:32	6:55	7:15	7:28
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7:00	7:10	7:34	7:59	8:22	8:35
7:20	7:30	7:54	8:19	8:42	8:55
7:40	7:50	8:14	8:39	9:02	9:15
8:00	8:10	8:34	8:59	9:22	9:35
8:20	8:30	8:54	9:19	9:42	9:55
8:40	8:50	9:14	9:39	10:02	10:15
9:00	9:12	9:38	10:03	10:23	10:36
9:20	9:32	9:58	10:23	10:43	10:56
9:40	9:52	10:18	10:43	11:03	11:16
10:00	10:12	10:39	11:01	11:21	11:34
10:20	10:32	10:59	11:21	11:41	11:54
10:40	10:52	11:19	11:41	**12:01**	**12:14**
11:00	11:12	11:41	**12:04**	**12:24**	**12:36**
11:20	11:32	**12:01**	**12:24**	**12:44**	**12:56**
11:40	11:52	**12:21**	**12:44**	**1:04**	**1:16**
12:00	**12:12**	**12:41**	**1:04**	**1:24**	**1:36**
12:20	**12:32**	**1:01**	**1:24**	**1:44**	**1:56**
12:40	**12:52**	**1:21**	**1:44**	**2:04**	**2:16**
1:00	**1:12**	**1:40**	**2:03**	**2:23**	**2:36**
1:30	**1:42**	**2:10**	**2:33**	**2:53**	**3:06**
2:00	**2:12**	**2:40**	**3:03**	**3:23**	**3:36**
2:30	**2:42**	**3:10**	**3:33**	**3:53**	**4:06**
3:00	**3:12**	**3:40**	**4:03**	**4:23**	**4:36**
3:30	**3:42**	**4:10**	**4:33**	**4:53**	**5:06**
4:00	**4:12**	**4:40**	**5:03**	**5:23**	**5:36**
4:30	**4:42**	**5:10**	**5:33**	**5:53**	**6:06**
5:00	**5:12**	**5:40**	**6:03**	**6:23**	**6:36**
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7:00	**7:11**	**7:34**	**7:53**	**8:12**	**8:24**
7:30	**7:41**	**8:04**	**8:23**	**8:42**	**8:54**
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8:30	**8:41**	**9:04**	**9:23**	**9:42**	**9:52**
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10:30	**10:39**	**11:01**	**11:18**	**11:34**	**11:43**
11:00	**11:09**	**11:31**	**11:48**	12:04	12:13

LIGHT TYPE = AM
BOLD TYPE = PM

Line-Línea

480

WEEKDAY
ENTRE SEMANA

EASTBOUND/EN DIRECCíON ESTE

WEST COVINA TO MONTCLAIR
WEST COVINA HACIA MONTCLAIR

W. Covina Pkwy. & California Ave. (F)	Eastland Center (E)	Temple Ave. & S. Campus Dr. (D)	Pomona Transit Center (C)	Claremont Transit Center (B)	Montclair Transit Center (A)
5:00	5:09	5:23	5:41	6:02	6:13
5:40	5:49	6:03	6:21	6:42	6:53
6:20	6:29	6:45	7:04	7:29	7:40
6:50	6:59	7:15	7:34	7:59	8:10
7:15	7:27	7:47	8:07	8:34	8:45
7:40	7:52	8:12	8:32	8:59	9:10
8:00	8:12	8:32	8:53	9:20	9:31
8:20	8:32	8:52	9:13	9:40	9:51
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9:00	9:12	9:32	9:53	10:20	10:32
9:20	9:32	9:52	10:13	10:40	10:52
9:40	9:52	10:12	10:33	11:00	11:12
10:00	10:12	10:32	10:54	11:22	11:30
10:20	10:32	10:52	11:14	11:42	11:54
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12:20	**12:32**	**12:52**	**1:16**	**1:45**	**1:57**
12:40	**12:52**	**1:12**	**1:36**	**2:05**	**2:17**
1:00	**1:12**	**1:32**	**1:56**	**2:25**	**2:37**
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1:40	**1:52**	**2:12**	**2:36**	**3:05**	**3:17**
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3:35	**3:50**	**4:11**	**4:35**	**5:04**	**5:16**
4:03	**4:18**	**4:39**	**5:03**	**5:32**	**5:44**
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6:17	**6:31**	**6:51**	**7:12**	**7:38**	**7:50**
6:47	**7:01**	**7:21**	**7:42**	**8:08**	**8:20**
7:16	**7:28**	**7:48**	**8:08**	**8:33**	**8:44**
7:46	**7:58**	**8:18**	**8:38**	**9:03**	**9:14**
8:15	**8:25**	**8:44**	**9:02**	**9:26**	**9:37**
8:45	**8:55**	**9:14**	**9:32**	**9:56**	**10:07**
9:18	**9:28**	**9:44**	**10:01**	**10:23**	**10:34**
9:48	**9:58**	**10:14**	**10:31**	**10:53**	**11:04**
10:27	**10:36**	**10:52**	**11:09**	**11:28**	**11:39**
11:07	**11:16**	**11:32**	**11:49**	12:08	12:19

LIGHT TYPE = AM
BOLD TYPE = PM

Line-Línea

480

WEEKEND/HOLIDAY
FIN DE SEMANA Y DÍA FESTIVO

WESTBOUND/EN DIRECCíON OESTE

MONTCLAIR TO WEST COVINA
MONTCLAIR HACIA WEST COVINA

Montclair Transit Center Ⓐ	Claremont Transit Center Ⓑ	Pomona Transit Center Ⓒ	Temple Ave. & S. Campus Dr. Ⓓ	Eastland Center Ⓔ	W. Covina Pkwy. & California Ave. Ⓕ
5:00	5:10	5:31	5:48	5:58	6:05
6:00	6:10	6:31	6:48	6:58	7:08
6:30	6:40	7:01	7:18	7:28	7:38
7:00	7:10	7:31	7:48	7:58	8:07
7:30	7:40	8:01	8:18	8:28	8:37
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8:30	8:40	9:01	9:21	9:31	9:42
9:00	9:10	9:31	9:51	10:01	10:12
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11:00	11:11	11:35	11:55	**12:05**	**12:15**
12:00	**12:11**	**12:38**	**1:00**	**1:10**	**1:20**
1:00	**1:11**	**1:38**	**2:00**	**2:10**	**2:21**
2:00	**2:11**	**2:38**	**3:00**	**3:10**	**3:21**
2:30	**2:41**	**3:08**	**3:30**	**3:40**	**3:51**
3:00	**3:11**	**3:36**	**3:57**	**4:07**	**4:18**
3:30	**3:41**	**4:06**	**4:27**	**4:37**	**4:48**
4:00	**4:11**	**4:36**	**4:57**	**5:07**	**5:18**
4:30	**4:41**	**5:06**	**5:27**	**5:37**	**5:48**
5:00	**5:11**	**5:35**	**5:55**	**6:05**	**6:16**
5:30	**5:41**	**6:05**	**6:25**	**6:35**	**6:46**
6:00	**6:11**	**6:34**	**6:54**	**7:04**	**7:14**
6:30	**6:41**	**7:04**	**7:24**	**7:34**	**7:44**
7:00	**7:11**	**7:34**	**7:54**	**8:04**	**8:14**
7:30	**7:41**	**8:04**	**8:24**	**8:34**	**8:44**
8:00	**8:11**	**8:33**	**8:51**	**9:01**	**9:10**
8:30	**8:41**	**9:03**	**9:21**	**9:31**	**9:40**
9:00	**9:11**	**9:33**	**9:51**	**10:01**	**10:10**
10:00	**10:10**	**10:30**	**10:48**	**10:58**	**11:07**

LIGHT TYPE = AM
BOLD TYPE = PM

Line-Línea

480

WEEKEND/HOLIDAY
FIN DE SEMANA Y DÍA FESTIVO

EASTBOUND/EN DIRECCíON ESTE

WEST COVINA TO MONTCLAIR
WEST COVINA HACIA MONTCLAIR

W. Covina Pkwy. & California Ave. (F)	Eastland Center (E)	Temple Ave. & S. Campus Dr. (D)	Pomona Transit Center (C)	Claremont Transit Center (B)	Montclair Transit Center (A)
5:00	5:08	5:18	5:35	5:58	6:09
6:00	6:08	6:18	6:35	6:58	7:09
6:30	6:38	6:48	7:05	7:28	7:39
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9:30	9:40	9:53	10:11	10:35	10:46
10:30	10:40	10:53	11:13	11:38	11:49
11:15	11:28	11:41	**12:01**	**12:27**	**12:39**
12:15	**12:28**	**12:41**	**1:01**	**1:27**	**1:39**
1:15	**1:28**	**1:41**	**2:02**	**2:31**	**2:43**
1:45	**1:58**	**2:11**	**2:32**	**3:01**	**3:13**
2:15	**2:28**	**2:41**	**3:02**	**3:31**	**3:43**
2:45	**2:58**	**3:11**	**3:32**	**4:01**	**4:13**
3:15	**3:27**	**3:40**	**4:00**	**4:30**	**4:42**
3:45	**3:57**	**4:10**	**4:30**	**5:00**	**5:12**
4:15	**4:27**	**4:40**	**4:58**	**5:26**	**5:38**
4:45	**4:57**	**5:10**	**5:28**	**5:56**	**6:08**
5:15	**5:27**	**5:39**	**5:57**	**6:23**	**6:34**
5:45	**5:57**	**6:09**	**6:27**	**6:53**	**7:04**
6:15	**6:27**	**6:39**	**6:57**	**7:23**	**7:34**
6:45	**6:57**	**7:09**	**7:27**	**7:53**	**8:04**
7:20	**7:32**	**7:42**	**8:00**	**8:26**	**8:37**
8:10	**8:22**	**8:32**	**8:50**	**9:16**	**9:27**
9:15	**9:25**	**9:35**	**9:52**	**10:15**	**10:26**
10:10	**10:20**	**10:30**	**10:47**	**11:10**	**11:21**

LIGHT TYPE = AM
BOLD TYPE = PM

APPENDIX C

EXISTING TRAFFIC COUNTS

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Claremont
N/S: Indian Hill Boulevard
E/W: W American Avenue
Weather: Clear

File Name : 01_CMT_IH_Amer AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

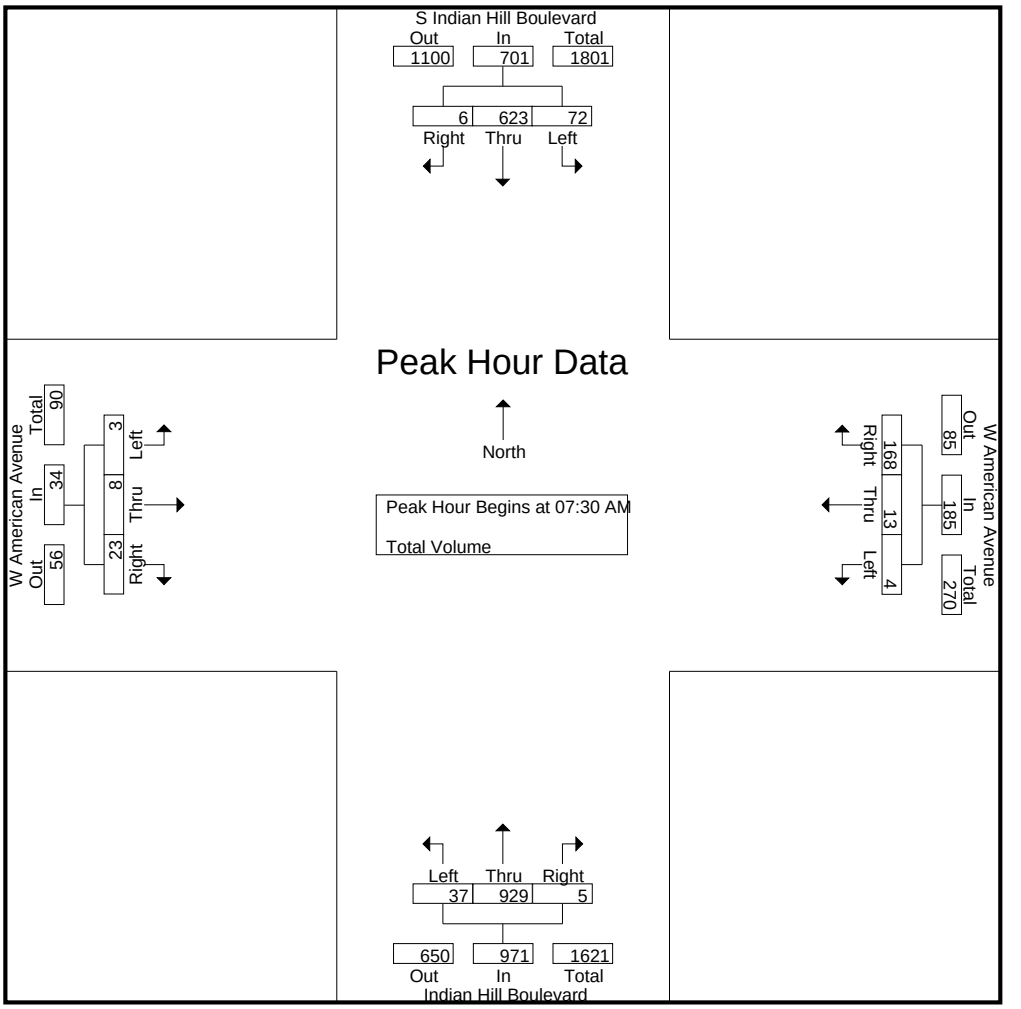
	S Indian Hill Boulevard Southbound				W American Avenue Westbound				Indian Hill Boulevard Northbound				W American Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	7	102	1	110	0	4	32	36	7	194	0	201	0	1	4	5	352
07:15 AM	7	131	1	139	2	2	39	43	8	223	1	232	2	1	8	11	425
07:30 AM	10	124	1	135	1	1	48	50	4	261	2	267	1	0	4	5	457
07:45 AM	18	162	1	181	1	5	52	58	15	242	3	260	1	4	4	9	508
Total	42	519	4	565	4	12	171	187	34	920	6	960	4	6	20	30	1742
08:00 AM	25	163	2	190	2	5	35	42	11	221	0	232	0	2	8	10	474
08:15 AM	19	174	2	195	0	2	33	35	7	205	0	212	1	2	7	10	452
08:30 AM	11	138	2	151	2	0	29	31	11	211	0	222	1	4	10	15	419
08:45 AM	15	152	0	167	0	4	18	22	13	165	5	183	1	2	13	16	388
Total	70	627	6	703	4	11	115	130	42	802	5	849	3	10	38	51	1733
Grand Total	112	1146	10	1268	8	23	286	317	76	1722	11	1809	7	16	58	81	3475
Apprch %	8.8	90.4	0.8		2.5	7.3	90.2		4.2	95.2	0.6		8.6	19.8	71.6		
Total %	3.2	33	0.3	36.5	0.2	0.7	8.2	9.1	2.2	49.6	0.3	52.1	0.2	0.5	1.7	2.3	

	S Indian Hill Boulevard Southbound				W American Avenue Westbound				Indian Hill Boulevard Northbound				W American Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	10	124	1	135	1	1	48	50	4	**261**	2	**267**	**1**	0	4	5	457
07:45 AM	18	162	1	181	1	**5**	**52**	**58**	**15**	242	**3**	260	1	**4**	4	9	**508**
08:00 AM	**25**	163	**2**	190	**2**	5	35	42	11	221	0	232	0	2	**8**	**10**	474
08:15 AM	19	**174**	2	**195**	0	2	33	35	7	205	0	212	1	2	7	10	452
Total Volume	72	623	6	701	4	13	168	185	37	929	5	971	3	8	23	34	1891
% App. Total	10.3	88.9	0.9		2.2	7	90.8		3.8	95.7	0.5		8.8	23.5	67.6		
PHF	.720	.895	.750	.899	.500	.650	.808	.797	.617	.890	.417	.909	.750	.500	.719	.850	.931

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City of Claremont
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File Name : 01_CMT_IH_Amer AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				07:15 AM				08:00 AM			
+0 mins.	18	162	1	181	**2**	2	39	43	8	223	1	232	0	2	8	10
+15 mins.	**25**	163	**2**	190	1	1	48	50	4	**261**	2	**267**	**1**	2	7	10
+30 mins.	19	**174**	2	**195**	1	**5**	**52**	**58**	**15**	242	**3**	260	1	**4**	10	15
+45 mins.	11	138	2	151	2	5	35	42	11	221	0	232	1	2	**13**	**16**
Total Volume	73	637	7	717	6	13	174	193	38	947	6	991	3	10	38	51
% App. Total	10.2	88.8	1		3.1	6.7	90.2		3.8	95.6	0.6		5.9	19.6	74.5	
PHF	.730	.915	.875	.919	.750	.650	.837	.832	.633	.907	.500	.928	.750	.625	.731	.797

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Site Code : 23624447
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Groups Printed- Total Volume

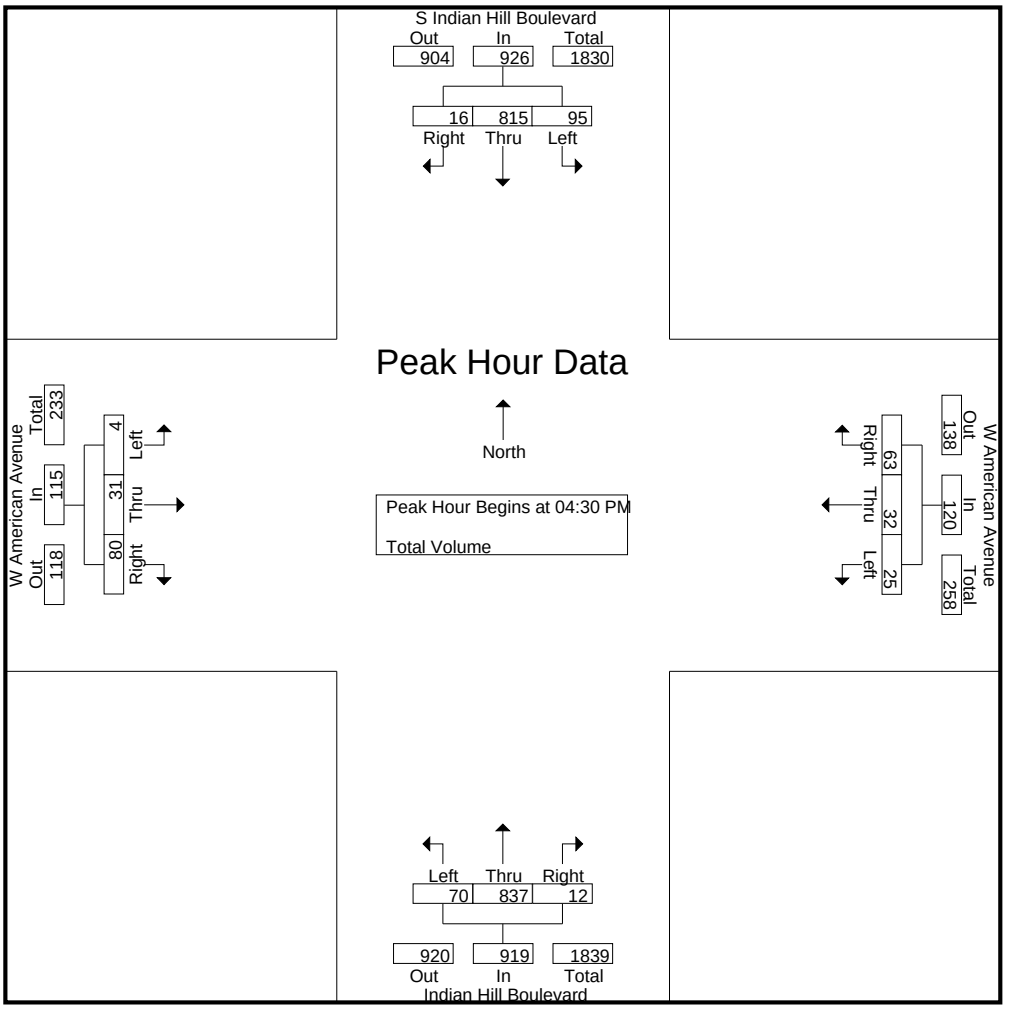
	S Indian Hill Boulevard Southbound				W American Avenue Westbound				Indian Hill Boulevard Northbound				W American Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	25	240	5	270	10	8	15	33	15	198	3	216	1	8	25	34	553
04:15 PM	31	215	6	252	2	5	15	22	19	197	5	221	1	5	17	23	518
04:30 PM	18	218	3	239	6	8	15	29	15	200	3	218	2	5	20	27	513
04:45 PM	28	176	4	208	4	8	16	28	17	201	5	223	0	13	21	34	493
Total	102	849	18	969	22	29	61	112	66	796	16	878	4	31	83	118	2077
05:00 PM	25	202	8	235	8	10	13	31	18	207	0	225	1	7	21	29	520
05:15 PM	24	219	1	244	7	6	19	32	20	229	4	253	1	6	18	25	554
05:30 PM	27	167	6	200	3	5	18	26	18	218	7	243	1	2	17	20	489
05:45 PM	27	165	9	201	5	2	17	24	17	187	9	213	2	6	17	25	463
Total	103	753	24	880	23	23	67	113	73	841	20	934	5	21	73	99	2026
Grand Total	205	1602	42	1849	45	52	128	225	139	1637	36	1812	9	52	156	217	4103
Apprch %	11.1	86.6	2.3		20	23.1	56.9		7.7	90.3	2		4.1	24	71.9		
Total %	5	39	1	45.1	1.1	1.3	3.1	5.5	3.4	39.9	0.9	44.2	0.2	1.3	3.8	5.3	

	S Indian Hill Boulevard Southbound				W American Avenue Westbound				Indian Hill Boulevard Northbound				W American Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	18	218	3	239	6	8	15	29	15	200	3	218	**2**	5	20	27	513
04:45 PM	**28**	176	4	208	4	8	16	28	17	201	**5**	223	0	**13**	**21**	**34**	493
05:00 PM	25	202	**8**	235	**8**	**10**	13	31	18	207	0	225	1	7	21	29	520
05:15 PM	24	**219**	1	**244**	7	6	**19**	**32**	**20**	**229**	4	**253**	1	6	18	25	**554**
Total Volume	95	815	16	926	25	32	63	120	70	837	12	919	4	31	80	115	2080
% App. Total	10.3	88	1.7		20.8	26.7	52.5		7.6	91.1	1.3		3.5	27	69.6		
PHF	.848	.930	.500	.949	.781	.800	.829	.938	.875	.914	.600	.908	.500	.596	.952	.846	.939

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File Name : 01_CMT_IH_Amer PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:45 PM				04:00 PM			
+0 mins.	25	**240**	5	**270**	6	8	15	29	17	201	5	223	1	8	**25**	**34**
+15 mins.	**31**	215	**6**	252	4	8	16	28	18	207	0	225	1	5	17	23
+30 mins.	18	218	3	239	**8**	**10**	13	31	**20**	**229**	4	**253**	**2**	5	20	27
+45 mins.	28	176	4	208	7	6	**19**	**32**	18	218	**7**	243	0	**13**	21	34
Total Volume	102	849	18	969	25	32	63	120	73	855	16	944	4	31	83	118
% App. Total	10.5	87.6	1.9		20.8	26.7	52.5		7.7	90.6	1.7		3.4	26.3	70.3	
PHF	.823	.884	.750	.897	.781	.800	.829	.938	.913	.933	.571	.933	.500	.596	.830	.868

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City of Claremont
N/S: Indian Hill Boulevard
E/W: San Bernardino Avenue
Weather: Clear

File Name : 02_CMT_IH_San B AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

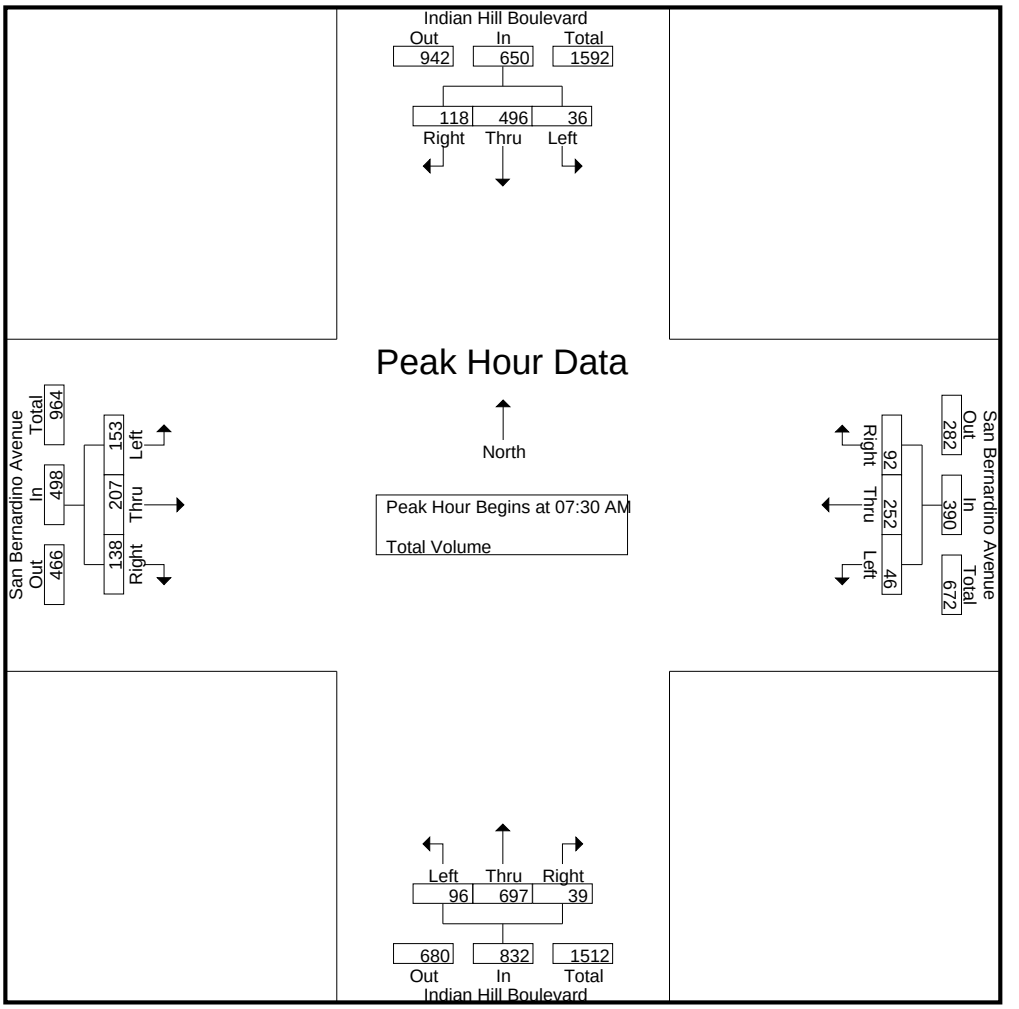
	Indian Hill Boulevard Southbound				San Bernardino Avenue Westbound				Indian Hill Boulevard Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	85	15	103	14	40	20	74	14	136	6	156	33	19	16	68	401
07:15 AM	7	101	17	125	8	46	24	78	17	155	6	178	38	22	22	82	463
07:30 AM	9	93	22	124	15	67	28	110	30	173	11	214	48	40	21	109	557
07:45 AM	10	134	39	183	12	87	25	124	29	185	9	223	35	57	36	128	658
Total	29	413	93	535	49	240	97	386	90	649	32	771	154	138	95	387	2079
08:00 AM	9	128	30	167	10	54	23	87	20	175	11	206	38	64	40	142	602
08:15 AM	8	141	27	176	9	44	16	69	17	164	8	189	32	46	41	119	553
08:30 AM	9	122	19	150	7	43	19	69	15	157	8	180	31	34	33	98	497
08:45 AM	8	143	20	171	13	29	16	58	30	153	5	188	19	21	29	69	486
Total	34	534	96	664	39	170	74	283	82	649	32	763	120	165	143	428	2138
Grand Total	63	947	189	1199	88	410	171	669	172	1298	64	1534	274	303	238	815	4217
Apprch %	5.3	79	15.8		13.2	61.3	25.6		11.2	84.6	4.2		33.6	37.2	29.2		
Total %	1.5	22.5	4.5	28.4	2.1	9.7	4.1	15.9	4.1	30.8	1.5	36.4	6.5	7.2	5.6	19.3	

	Indian Hill Boulevard Southbound				San Bernardino Avenue Westbound				Indian Hill Boulevard Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	93	22	124	**15**	67	**28**	110	**30**	173	**11**	214	**48**	40	21	109	557
07:45 AM	**10**	134	**39**	**183**	12	**87**	25	**124**	29	**185**	9	**223**	35	57	36	128	**658**
08:00 AM	9	128	30	167	10	54	23	87	20	175	11	206	38	**64**	40	**142**	602
08:15 AM	8	**141**	27	176	9	44	16	69	17	164	8	189	32	46	**41**	119	553
Total Volume	36	496	118	650	46	252	92	390	96	697	39	832	153	207	138	498	2370
% App. Total	5.5	76.3	18.2		11.8	64.6	23.6		11.5	83.8	4.7		30.7	41.6	27.7		
PHF	.900	.879	.756	.888	.767	.724	.821	.786	.800	.942	.886	.933	.797	.809	.841	.877	.900

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City of Claremont
N/S: Indian Hill Boulevard
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Weather: Clear

File Name : 02_CMT_IH_San B AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				07:30 AM				07:30 AM			
+0 mins.	**10**	134	**39**	**183**	8	46	24	78	**30**	173	**11**	214	**48**	40	21	109
+15 mins.	9	128	30	167	**15**	67	**28**	110	29	**185**	9	**223**	35	57	36	128
+30 mins.	8	**141**	27	176	12	**87**	25	**124**	20	175	11	206	38	**64**	40	**142**
+45 mins.	9	122	19	150	10	54	23	87	17	164	8	189	32	46	**41**	119
Total Volume	36	525	115	676	45	254	100	399	96	697	39	832	153	207	138	498
% App. Total	5.3	77.7	17		11.3	63.7	25.1		11.5	83.8	4.7		30.7	41.6	27.7	
PHF	.900	.931	.737	.923	.750	.730	.893	.804	.800	.942	.886	.933	.797	.809	.841	.877

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File Name : 02_CMT_IH_San B PM
Site Code : 23624447
Start Date : 5/8/2024
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Groups Printed- Total Volume

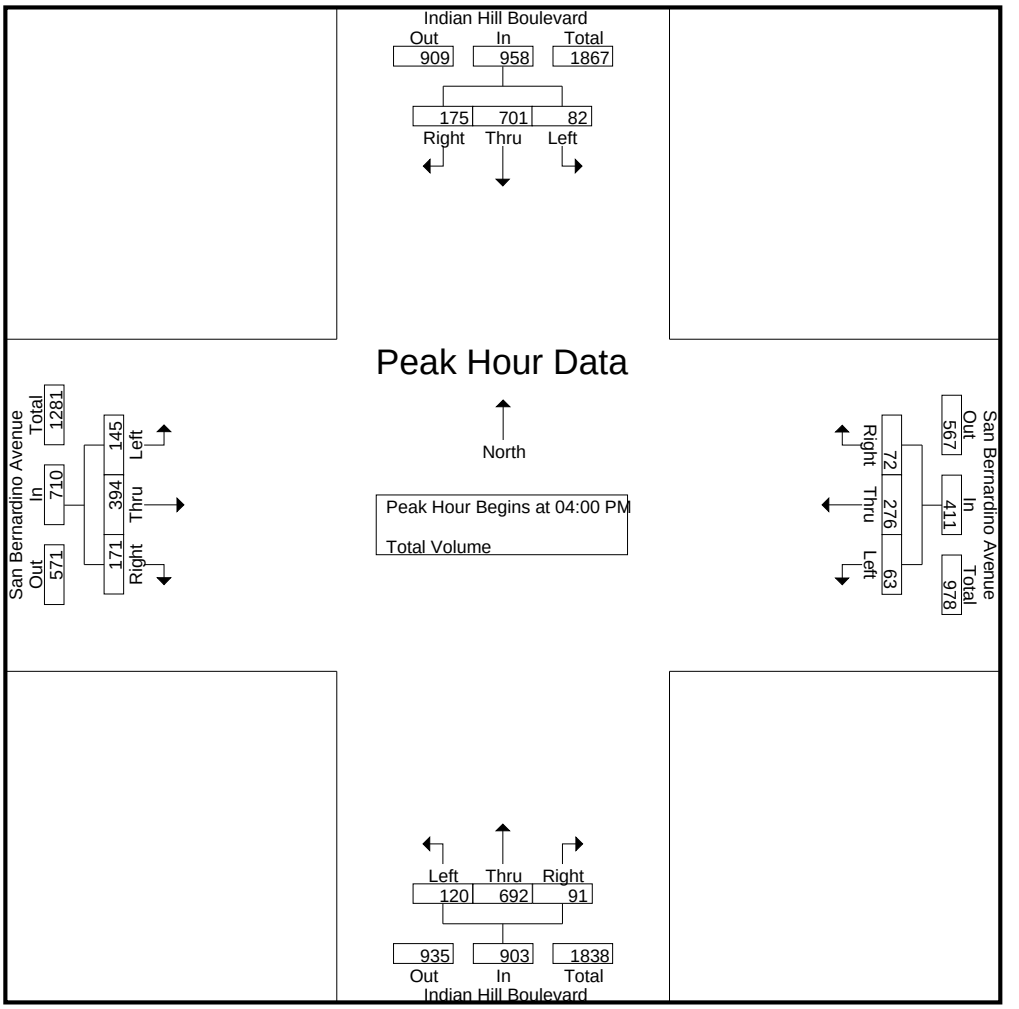
	Indian Hill Boulevard Southbound				San Bernardino Avenue Westbound				Indian Hill Boulevard Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	20	178	59	257	14	83	24	121	24	172	18	214	35	105	42	182	774
04:15 PM	18	198	37	253	14	59	19	92	27	163	22	212	36	100	40	176	733
04:30 PM	21	169	42	232	13	69	15	97	36	197	26	259	30	101	51	182	770
04:45 PM	23	156	37	216	22	65	14	101	33	160	25	218	44	88	38	170	705
Total	82	701	175	958	63	276	72	411	120	692	91	903	145	394	171	710	2982
05:00 PM	13	147	38	198	12	48	18	78	22	169	27	218	46	102	27	175	669
05:15 PM	15	174	46	235	13	59	13	85	27	197	24	248	42	104	35	181	749
05:30 PM	15	140	36	191	22	41	20	83	17	200	24	241	31	99	36	166	681
05:45 PM	25	129	33	187	14	47	16	77	18	170	24	212	35	84	35	154	630
Total	68	590	153	811	61	195	67	323	84	736	99	919	154	389	133	676	2729
Grand Total	150	1291	328	1769	124	471	139	734	204	1428	190	1822	299	783	304	1386	5711
Apprch %	8.5	73	18.5		16.9	64.2	18.9		11.2	78.4	10.4		21.6	56.5	21.9		
Total %	2.6	22.6	5.7	31	2.2	8.2	2.4	12.9	3.6	25	3.3	31.9	5.2	13.7	5.3	24.3	

	Indian Hill Boulevard Southbound				San Bernardino Avenue Westbound				Indian Hill Boulevard Northbound				San Bernardino Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	20	178	**59**	**257**	14	**83**	**24**	**121**	24	172	18	214	35	**105**	42	**182**	**774**
04:15 PM	18	**198**	37	253	14	59	19	92	27	163	22	212	36	100	40	176	733
04:30 PM	21	169	42	232	13	69	15	97	**36**	**197**	**26**	**259**	30	101	**51**	182	770
04:45 PM	**23**	156	37	216	**22**	65	14	101	33	160	25	218	**44**	88	38	170	705
Total Volume	82	701	175	958	63	276	72	411	120	692	91	903	145	394	171	710	2982
% App. Total	8.6	73.2	18.3		15.3	67.2	17.5		13.3	76.6	10.1		20.4	55.5	24.1		
PHF	.891	.885	.742	.932	.716	.831	.750	.849	.833	.878	.875	.872	.824	.938	.838	.975	.963

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File Name : 02_CMT_IH_San B PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:30 PM				04:00 PM			
+0 mins.	20	178	**59**	**257**	14	**83**	**24**	**121**	**36**	**197**	26	**259**	35	**105**	42	**182**
+15 mins.	18	**198**	37	253	14	59	19	92	33	160	25	218	36	100	40	176
+30 mins.	21	169	42	232	13	69	15	97	22	169	**27**	218	30	101	**51**	182
+45 mins.	**23**	156	37	216	**22**	65	14	101	27	197	24	248	**44**	88	38	170
Total Volume	82	701	175	958	63	276	72	411	118	723	102	943	145	394	171	710
% App. Total	8.6	73.2	18.3		15.3	67.2	17.5		12.5	76.7	10.8		20.4	55.5	24.1	
PHF	.891	.885	.742	.932	.716	.831	.750	.849	.819	.918	.944	.910	.824	.938	.838	.975

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City of Claremont
N/S: S College Avenue
E/W: San Bernardino Avenue
Weather: Clear

File Name : 03_CMT_S Col_San B AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

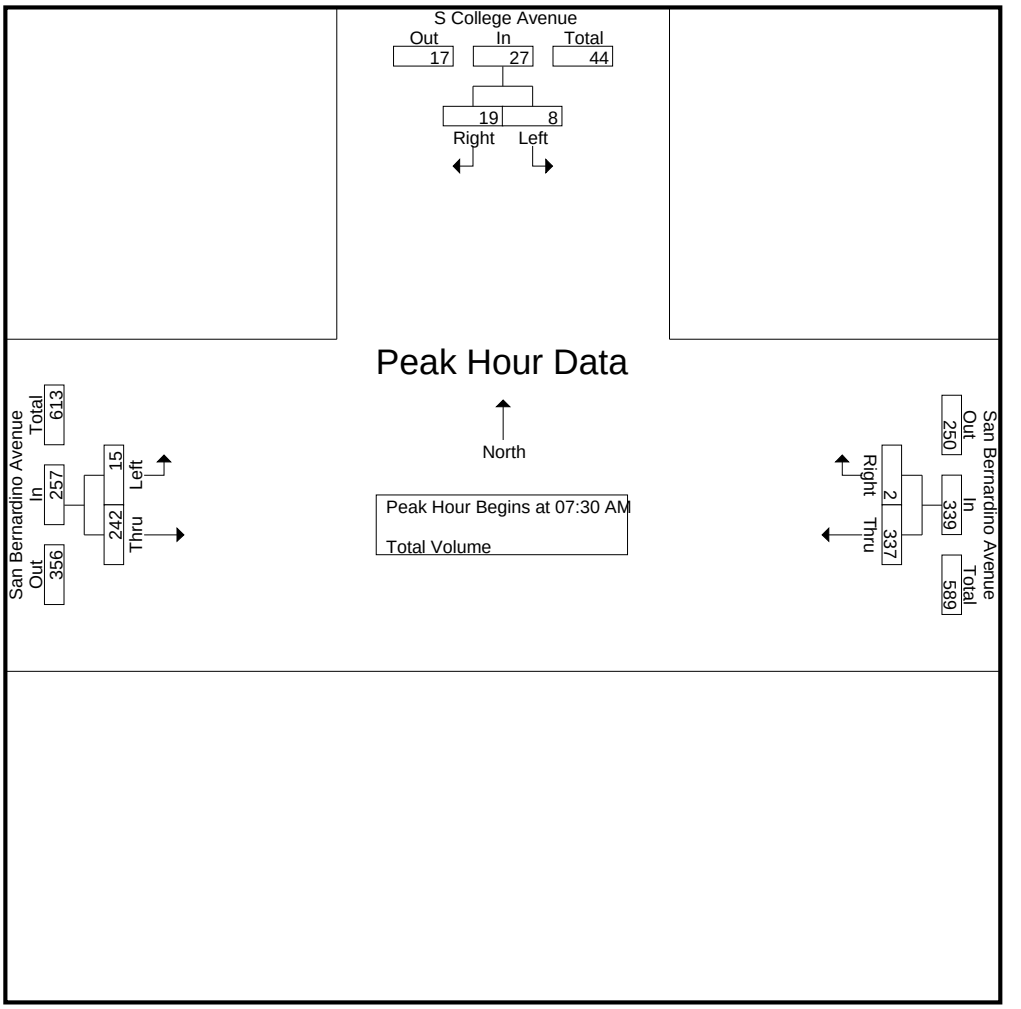
	S College Avenue Southbound			San Bernardino Avenue Westbound			San Bernardino Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	2	3	5	66	1	67	0	28	28	100
07:15 AM	1	4	5	63	0	63	0	36	36	104
07:30 AM	3	2	5	94	0	94	2	53	55	154
07:45 AM	2	9	11	98	1	99	1	66	67	177
Total	8	18	26	321	2	323	3	183	186	535
08:00 AM	1	4	5	75	0	75	10	68	78	158
08:15 AM	2	4	6	70	1	71	2	55	57	134
08:30 AM	0	1	1	58	1	59	0	45	45	105
08:45 AM	0	2	2	47	0	47	0	35	35	84
Total	3	11	14	250	2	252	12	203	215	481
Grand Total	11	29	40	571	4	575	15	386	401	1016
Apprch %	27.5	72.5		99.3	0.7		3.7	96.3		
Total %	1.1	2.9	3.9	56.2	0.4	56.6	1.5	38	39.5	

	S College Avenue Southbound			San Bernardino Avenue Westbound			San Bernardino Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	**3**	2	5	94	0	94	2	53	55	154
07:45 AM	2	**9**	**11**	**98**	**1**	**99**	1	66	67	**177**
08:00 AM	1	4	5	75	0	75	**10**	**68**	**78**	158
08:15 AM	2	4	6	70	1	71	2	55	57	134
Total Volume	8	19	27	337	2	339	15	242	257	623
% App. Total	29.6	70.4		99.4	0.6		5.8	94.2		
PHF	.667	.528	.614	.860	.500	.856	.375	.890	.824	.880

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City of Claremont
N/S: S College Avenue
E/W: San Bernardino Avenue
Weather: Clear

File Name : 03_CMT_S Col_San B AM
Site Code : 23624447
Start Date : 5/8/2024
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	**3**	2	5	94	0	94	2	53	55
+15 mins.	2	**9**	**11**	**98**	**1**	**99**	1	66	67
+30 mins.	1	4	5	75	0	75	**10**	**68**	**78**
+45 mins.	2	4	6	70	1	71	2	55	57
Total Volume	8	19	27	337	2	339	15	242	257
% App. Total	29.6	70.4		99.4	0.6		5.8	94.2	
PHF	.667	.528	.614	.860	.500	.856	.375	.890	.824

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City of Claremont
N/S: S College Avenue
E/W: San Bernardino Avenue
Weather: Clear

File Name : 03_CMT_S Col_San B PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

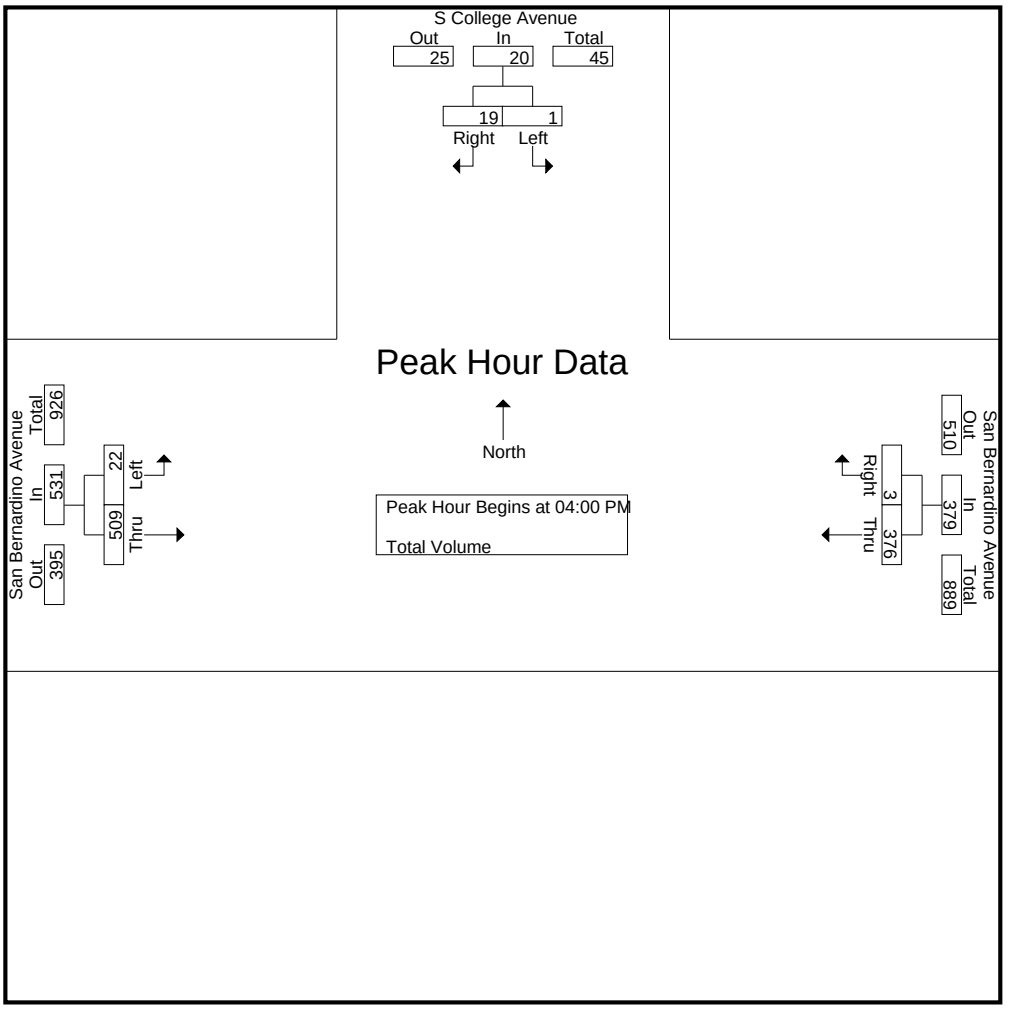
	S College Avenue Southbound			San Bernardino Avenue Westbound			San Bernardino Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	1	4	5	107	1	108	3	136	139	252
04:15 PM	0	3	3	91	0	91	6	131	137	231
04:30 PM	0	4	4	93	0	93	6	127	133	230
04:45 PM	0	8	8	85	2	87	7	115	122	217
Total	1	19	20	376	3	379	22	509	531	930
05:00 PM	3	2	5	63	0	63	6	128	134	202
05:15 PM	1	4	5	81	0	81	4	133	137	223
05:30 PM	4	8	12	72	1	73	9	119	128	213
05:45 PM	2	4	6	71	0	71	8	118	126	203
Total	10	18	28	287	1	288	27	498	525	841
Grand Total	11	37	48	663	4	667	49	1007	1056	1771
Apprch %	22.9	77.1		99.4	0.6		4.6	95.4		
Total %	0.6	2.1	2.7	37.4	0.2	37.7	2.8	56.9	59.6	

	S College Avenue Southbound			San Bernardino Avenue Westbound			San Bernardino Avenue Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**1**	4	5	**107**	1	**108**	3	**136**	**139**	**252**
04:15 PM	0	3	3	91	0	91	6	131	137	231
04:30 PM	0	4	4	93	0	93	6	127	133	230
04:45 PM	0	**8**	**8**	85	**2**	87	**7**	115	122	217
Total Volume	1	19	20	376	3	379	22	509	531	930
% App. Total	5	95		99.2	0.8		4.1	95.9		
PHF	.250	.594	.625	.879	.375	.877	.786	.936	.955	.923

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City of Claremont
N/S: S College Avenue
E/W: San Bernardino Avenue
Weather: Clear

File Name : 03_CMT_S Col_San B PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:00 PM			04:00 PM		
+0 mins.	0	**8**	8	**107**	1	**108**	3	**136**	**139**
+15 mins.	3	2	5	91	0	91	6	131	137
+30 mins.	1	4	5	93	0	93	6	127	133
+45 mins.	**4**	8	**12**	85	**2**	87	**7**	115	122
Total Volume	8	22	30	376	3	379	22	509	531
% App. Total	26.7	73.3		99.2	0.8		4.1	95.9	
PHF	.500	.688	.625	.879	.375	.877	.786	.936	.955

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City of Claremont
N/S: S College Avenue
E/W: American Avenue
Weather: Clear

File Name : 04_CMT_S Col_Amer AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

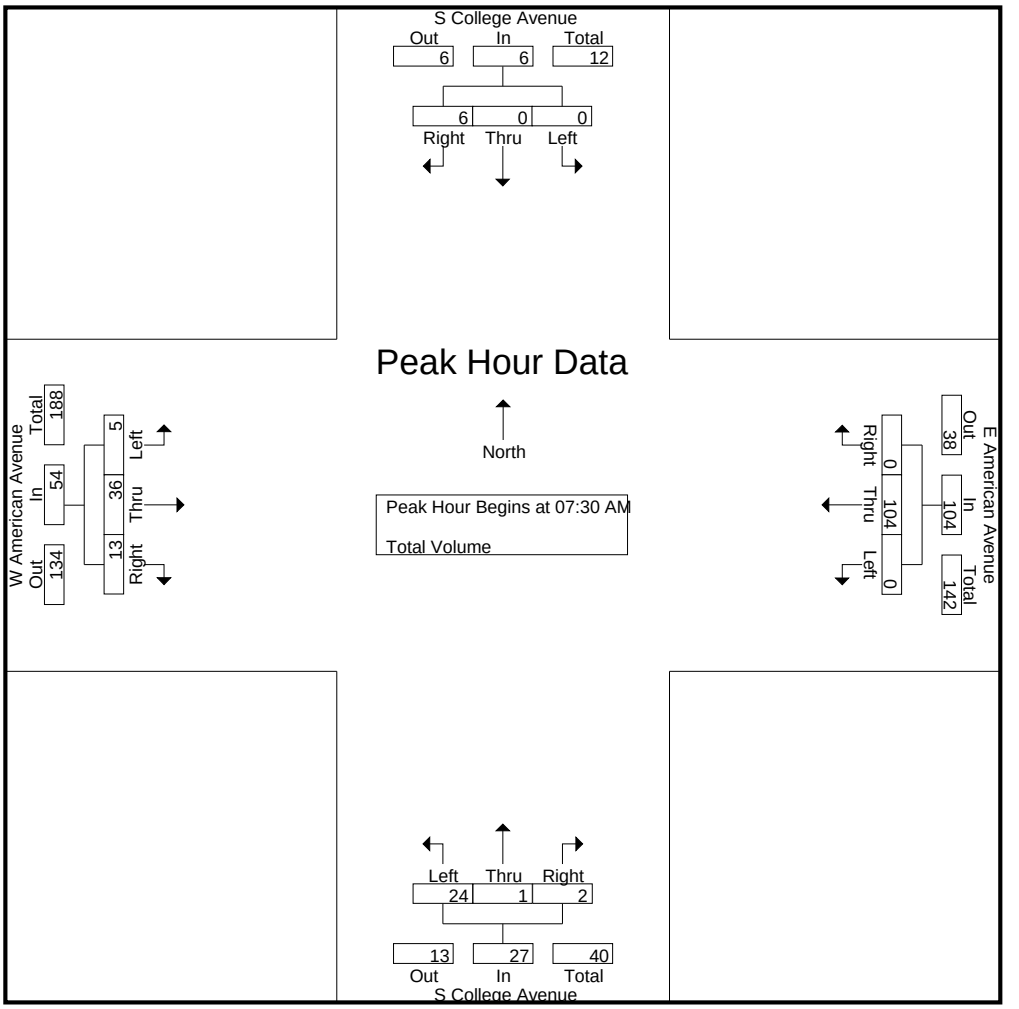
	S College Avenue Southbound				E American Avenue Westbound				S College Avenue Northbound				W American Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	3	5	0	20	0	20	5	0	1	6	1	4	5	10	41
07:15 AM	0	0	1	1	1	21	0	22	6	0	0	6	0	4	2	6	35
07:30 AM	0	0	2	2	0	25	0	25	6	1	0	7	2	6	3	11	45
07:45 AM	0	0	4	4	0	26	0	26	10	0	0	10	0	10	2	12	52
Total	0	2	10	12	1	92	0	93	27	1	1	29	3	24	12	39	173
08:00 AM	0	0	0	0	0	31	0	31	5	0	2	7	1	14	5	20	58
08:15 AM	0	0	0	0	0	22	0	22	3	0	0	3	2	6	3	11	36
08:30 AM	0	0	1	1	0	18	0	18	1	0	0	1	0	9	1	10	30
08:45 AM	0	1	3	4	0	13	0	13	1	0	0	1	1	13	3	17	35
Total	0	1	4	5	0	84	0	84	10	0	2	12	4	42	12	58	159
Grand Total	0	3	14	17	1	176	0	177	37	1	3	41	7	66	24	97	332
Apprch %	0	17.6	82.4		0.6	99.4	0		90.2	2.4	7.3		7.2	68	24.7		
Total %	0	0.9	4.2	5.1	0.3	53	0	53.3	11.1	0.3	0.9	12.3	2.1	19.9	7.2	29.2	

	S College Avenue Southbound				E American Avenue Westbound				S College Avenue Northbound				W American Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	2	2	0	25	0	25	6	**1**	0	7	**2**	6	3	11	45
07:45 AM	0	0	**4**	**4**	0	26	0	26	**10**	0	0	**10**	0	10	2	12	52
08:00 AM	0	0	0	0	0	**31**	0	**31**	5	0	**2**	7	1	**14**	**5**	**20**	**58**
08:15 AM	0	0	0	0	0	22	0	22	3	0	0	3	2	6	3	11	36
Total Volume	0	0	6	6	0	104	0	104	24	1	2	27	5	36	13	54	191
% App. Total	0	0	100		0	100	0		88.9	3.7	7.4		9.3	66.7	24.1		
PHF	.000	.000	.375	.375	.000	.839	.000	.839	.600	.250	.250	.675	.625	.643	.650	.675	.823

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City of Claremont
N/S: S College Avenue
E/W: American Avenue
Weather: Clear

File Name : 04_CMT_S Col_Amer AM
Site Code : 23624447
Start Date : 5/8/2024
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:15 AM				08:00 AM			
+0 mins.	0	**2**	3	**5**	**1**	21	0	22	6	0	0	6	1	**14**	**5**	**20**
+15 mins.	0	0	1	1	0	25	0	25	6	**1**	0	7	**2**	6	3	11
+30 mins.	0	0	2	2	0	26	0	26	**10**	0	0	**10**	0	9	1	10
+45 mins.	0	0	**4**	4	0	**31**	0	**31**	5	0	**2**	7	1	13	3	17
Total Volume	0	2	10	12	1	103	0	104	27	1	2	30	4	42	12	58
% App. Total	0	16.7	83.3		1	99	0		90	3.3	6.7		6.9	72.4	20.7	
PHF	.000	.250	.625	.600	.250	.831	.000	.839	.675	.250	.250	.750	.500	.750	.600	.725

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City of Claremont
N/S: S College Avenue
E/W: American Avenue
Weather: Clear

File Name : 04_CMT_S Col_Amer PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

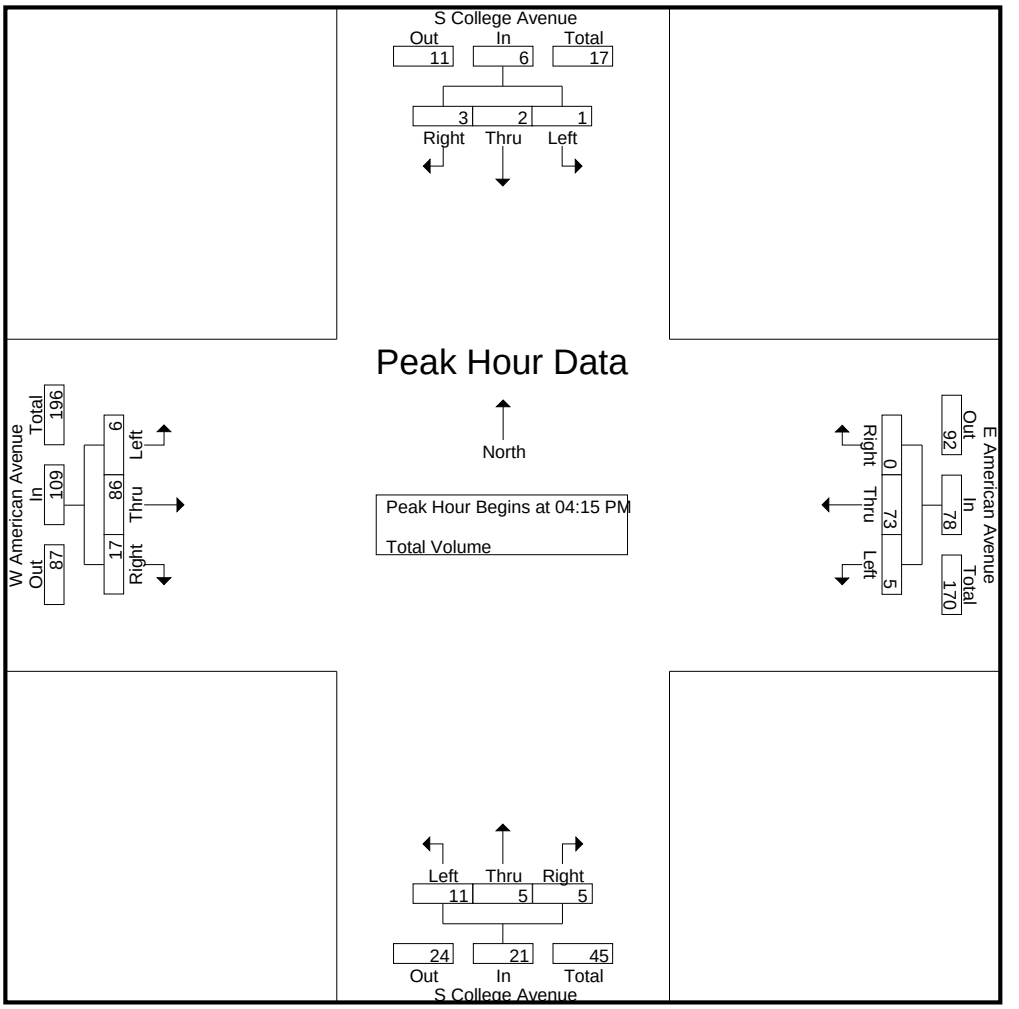
	S College Avenue Southbound				E American Avenue Westbound				S College Avenue Northbound				W American Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	3	4	1	22	0	23	3	0	0	3	2	13	3	18	48
04:15 PM	1	0	0	1	1	17	0	18	2	1	0	3	1	27	2	30	52
04:30 PM	0	0	1	1	2	19	0	21	2	1	2	5	1	15	4	20	47
04:45 PM	0	2	1	3	2	16	0	18	2	0	1	3	4	28	6	38	62
Total	1	3	5	9	6	74	0	80	9	2	3	14	8	83	15	106	209
05:00 PM	0	0	1	1	0	21	0	21	5	3	2	10	0	16	5	21	53
05:15 PM	0	1	1	2	1	16	0	17	1	2	1	4	0	22	3	25	48
05:30 PM	0	0	0	0	1	21	0	22	3	0	1	4	3	16	4	23	49
05:45 PM	0	0	3	3	1	9	0	10	4	0	1	5	1	17	6	24	42
Total	0	1	5	6	3	67	0	70	13	5	5	23	4	71	18	93	192
Grand Total	1	4	10	15	9	141	0	150	22	7	8	37	12	154	33	199	401
Apprch %	6.7	26.7	66.7		6	94	0		59.5	18.9	21.6		6	77.4	16.6		
Total %	0.2	1	2.5	3.7	2.2	35.2	0	37.4	5.5	1.7	2	9.2	3	38.4	8.2	49.6	

	S College Avenue Southbound				E American Avenue Westbound				S College Avenue Northbound				W American Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	**1**	0	0	1	1	17	0	18	2	1	0	3	1	27	2	30	52
04:30 PM	0	0	**1**	1	**2**	19	0	**21**	2	1	**2**	5	1	15	4	20	47
04:45 PM	0	**2**	1	**3**	2	16	0	18	2	0	1	3	**4**	**28**	**6**	**38**	**62**
05:00 PM	0	0	1	1	0	**21**	0	21	**5**	**3**	2	**10**	0	16	5	21	53
Total Volume	1	2	3	6	5	73	0	78	11	5	5	21	6	86	17	109	214
% App. Total	16.7	33.3	50		6.4	93.6	0		52.4	23.8	23.8		5.5	78.9	15.6		
PHF	.250	.250	.750	.500	.625	.869	.000	.929	.550	.417	.625	.525	.375	.768	.708	.717	.863

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City of Claremont
N/S: S College Avenue
E/W: American Avenue
Weather: Clear

File Name : 04_CMT_S Col_Amer PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				05:00 PM				04:15 PM			
+0 mins.	0	1	**3**	**4**	1	**22**	0	**23**	**5**	**3**	**2**	**10**	1	27	2	30
+15 mins.	**1**	0	0	1	1	17	0	18	1	2	1	4	1	15	4	20
+30 mins.	0	0	1	1	**2**	19	0	21	3	0	1	4	**4**	**28**	**6**	**38**
+45 mins.	0	**2**	1	3	2	16	0	18	4	0	1	5	0	16	5	21
Total Volume	1	3	5	9	6	74	0	80	13	5	5	23	6	86	17	109
% App. Total	11.1	33.3	55.6		7.5	92.5	0		56.5	21.7	21.7		5.5	78.9	15.6	
PHF	.250	.375	.417	.563	.750	.841	.000	.870	.650	.417	.625	.575	.375	.768	.708	.717

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City of Claremont
N/S: S Indian Hill Boulevard
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 05_CMT_IH_10E AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

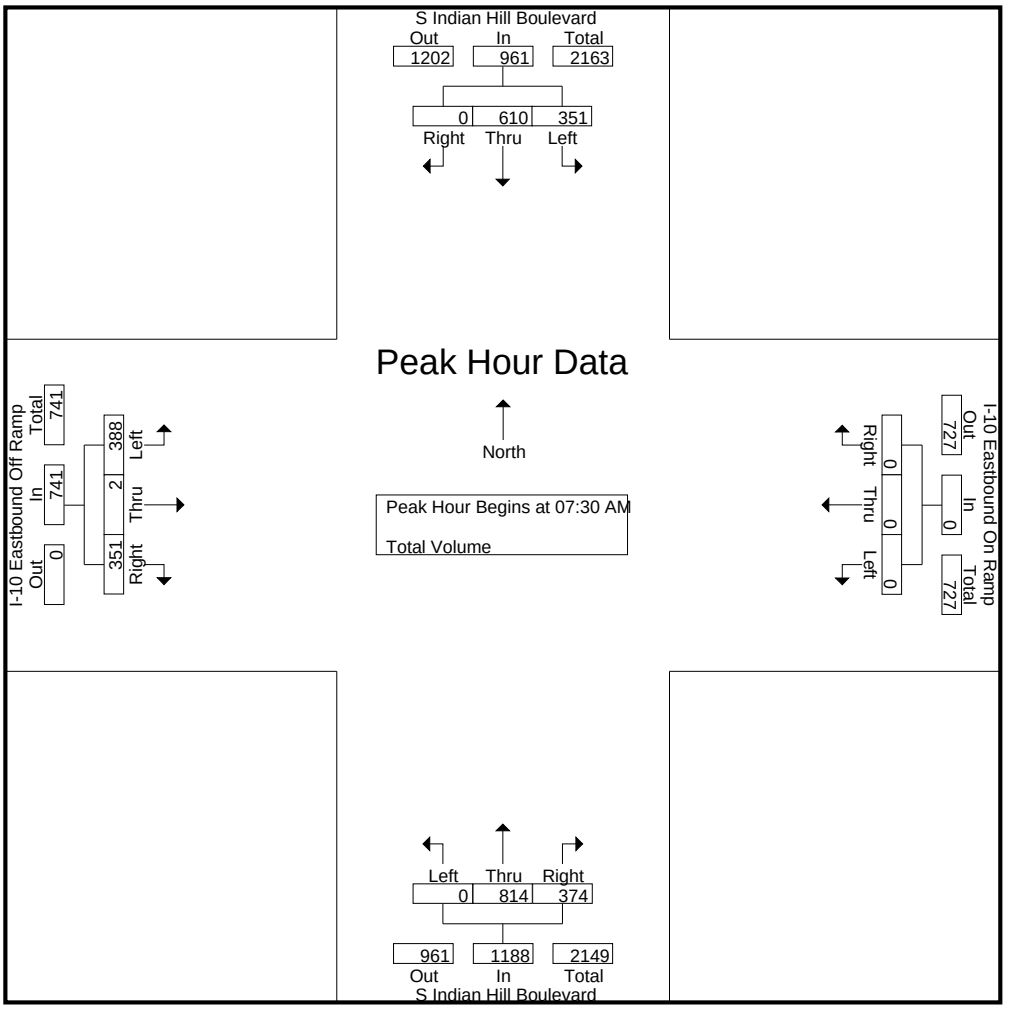
	S Indian Hill Boulevard Southbound				I-10 Eastbound On Ramp Westbound				S Indian Hill Boulevard Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	78	113	0	191	0	0	0	0	0	140	100	240	71	0	60	131	562
07:15 AM	98	115	0	213	0	0	0	0	0	181	101	282	64	0	69	133	628
07:30 AM	103	121	0	224	0	0	0	0	0	194	132	326	83	0	70	153	703
07:45 AM	92	159	0	251	0	0	0	0	0	236	88	324	112	2	95	209	784
Total	371	508	0	879	0	0	0	0	0	751	421	1172	330	2	294	626	2677
08:00 AM	86	168	0	254	0	0	0	0	0	177	79	256	101	0	95	196	706
08:15 AM	70	162	0	232	0	0	0	0	0	207	75	282	92	0	91	183	697
08:30 AM	55	150	0	205	0	0	0	0	0	171	95	266	96	1	73	170	641
08:45 AM	58	162	0	220	0	0	0	0	0	143	68	211	90	0	84	174	605
Total	269	642	0	911	0	0	0	0	0	698	317	1015	379	1	343	723	2649
Grand Total	640	1150	0	1790	0	0	0	0	0	1449	738	2187	709	3	637	1349	5326
Apprch %	35.8	64.2	0		0	0	0		0	66.3	33.7		52.6	0.2	47.2		
Total %	12	21.6	0	33.6	0	0	0	0	0	27.2	13.9	41.1	13.3	0.1	12	25.3	

	S Indian Hill Boulevard Southbound				I-10 Eastbound On Ramp Westbound				S Indian Hill Boulevard Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**103**	121	0	224	0	0	0	0	0	194	**132**	**326**	83	0	70	153	703
07:45 AM	92	159	0	251	0	0	0	0	0	**236**	88	324	**112**	**2**	**95**	**209**	**784**
08:00 AM	86	**168**	0	**254**	0	0	0	0	0	177	79	256	101	0	95	196	706
08:15 AM	70	162	0	232	0	0	0	0	0	207	75	282	92	0	91	183	697
Total Volume	351	610	0	961	0	0	0	0	0	814	374	1188	388	2	351	741	2890
% App. Total	36.5	63.5	0		0	0	0		0	68.5	31.5		52.4	0.3	47.4		
PHF	.852	.908	.000	.946	.000	.000	.000	.000	.000	.862	.708	.911	.866	.250	.924	.886	.922

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City of Claremont
N/S: S Indian Hill Boulevard
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 05_CMT_IH_10E AM
Site Code : 23624447
Start Date : 5/8/2024
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:15 AM				07:45 AM			
+0 mins.	**103**	121	0	224	0	0	0	0	0	181	101	282	**112**	**2**	**95**	**209**
+15 mins.	92	159	0	251	0	0	0	0	0	194	**132**	**326**	101	0	95	196
+30 mins.	86	**168**	0	**254**	0	0	0	0	0	**236**	88	324	92	0	91	183
+45 mins.	70	162	0	232	0	0	0	0	0	177	79	256	96	1	73	170
Total Volume	351	610	0	961	0	0	0	0	0	788	400	1188	401	3	354	758
% App. Total	36.5	63.5	0		0	0	0		0	66.3	33.7		52.9	0.4	46.7	
PHF	.852	.908	.000	.946	.000	.000	.000	.000	.000	.835	.758	.911	.895	.375	.932	.907

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City of Claremont
N/S: S Indian Hill Boulevard
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 05_CMT_IH_10E PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

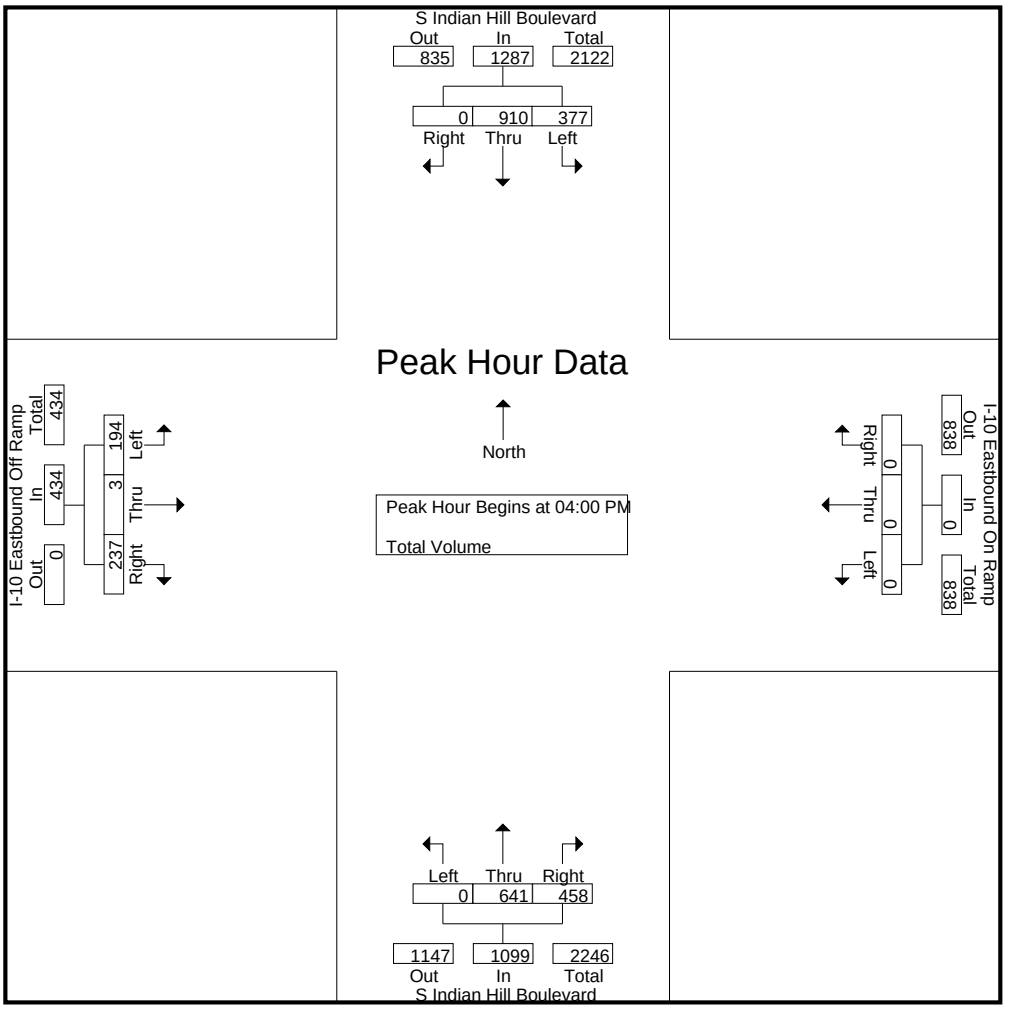
	S Indian Hill Boulevard Southbound				I-10 Eastbound On Ramp Westbound				S Indian Hill Boulevard Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	94	261	0	355	0	0	0	0	0	164	106	270	46	2	45	93	718
04:15 PM	107	239	0	346	0	0	0	0	0	165	117	282	48	1	63	112	740
04:30 PM	85	222	0	307	0	0	0	0	0	156	118	274	47	0	73	120	701
04:45 PM	91	188	0	279	0	0	0	0	0	156	117	273	53	0	56	109	661
Total	377	910	0	1287	0	0	0	0	0	641	458	1099	194	3	237	434	2820
05:00 PM	103	211	0	314	0	0	0	0	0	168	118	286	43	1	48	92	692
05:15 PM	115	198	0	313	0	0	0	0	0	181	128	309	43	1	74	118	740
05:30 PM	112	185	0	297	0	0	0	0	0	189	123	312	44	3	42	89	698
05:45 PM	109	177	0	286	0	0	0	0	0	173	104	277	50	0	65	115	678
Total	439	771	0	1210	0	0	0	0	0	711	473	1184	180	5	229	414	2808
Grand Total	816	1681	0	2497	0	0	0	0	0	1352	931	2283	374	8	466	848	5628
Apprch %	32.7	67.3	0		0	0	0		0	59.2	40.8		44.1	0.9	55		
Total %	14.5	29.9	0	44.4	0	0	0	0	0	24	16.5	40.6	6.6	0.1	8.3	15.1	

	S Indian Hill Boulevard Southbound				I-10 Eastbound On Ramp Westbound				S Indian Hill Boulevard Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	94	**261**	0	**355**	0	0	0	0	0	164	106	270	46	**2**	45	93	718
04:15 PM	**107**	239	0	346	0	0	0	0	0	**165**	117	**282**	48	1	63	112	**740**
04:30 PM	85	222	0	307	0	0	0	0	0	156	**118**	274	47	0	**73**	**120**	701
04:45 PM	91	188	0	279	0	0	0	0	0	156	117	273	**53**	0	56	109	661
Total Volume	377	910	0	1287	0	0	0	0	0	641	458	1099	194	3	237	434	2820
% App. Total	29.3	70.7	0		0	0	0		0	58.3	41.7		44.7	0.7	54.6		
PHF	.881	.872	.000	.906	.000	.000	.000	.000	.000	.971	.970	.974	.915	.375	.812	.904	.953

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City of Claremont
N/S: S Indian Hill Boulevard
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File Name : 05_CMT_IH_10E PM
Site Code : 23624447
Start Date : 5/8/2024
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				05:00 PM				04:30 PM			
+0 mins.	94	**261**	0	**355**	0	0	0	0	0	168	118	286	47	0	73	**120**
+15 mins.	**107**	239	0	346	0	0	0	0	0	181	**128**	309	**53**	0	56	109
+30 mins.	85	222	0	307	0	0	0	0	0	**189**	123	**312**	43	**1**	48	92
+45 mins.	91	188	0	279	0	0	0	0	0	173	104	277	43	1	**74**	118
Total Volume	377	910	0	1287	0	0	0	0	0	711	473	1184	186	2	251	439
% App. Total	29.3	70.7	0		0	0	0		0	60.1	39.9		42.4	0.5	57.2	
PHF	.881	.872	.000	.906	.000	.000	.000	.000	.000	.940	.924	.949	.877	.500	.848	.915

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City of Claremont
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Weather: Clear

File Name : 06_CMT_IH_10W AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

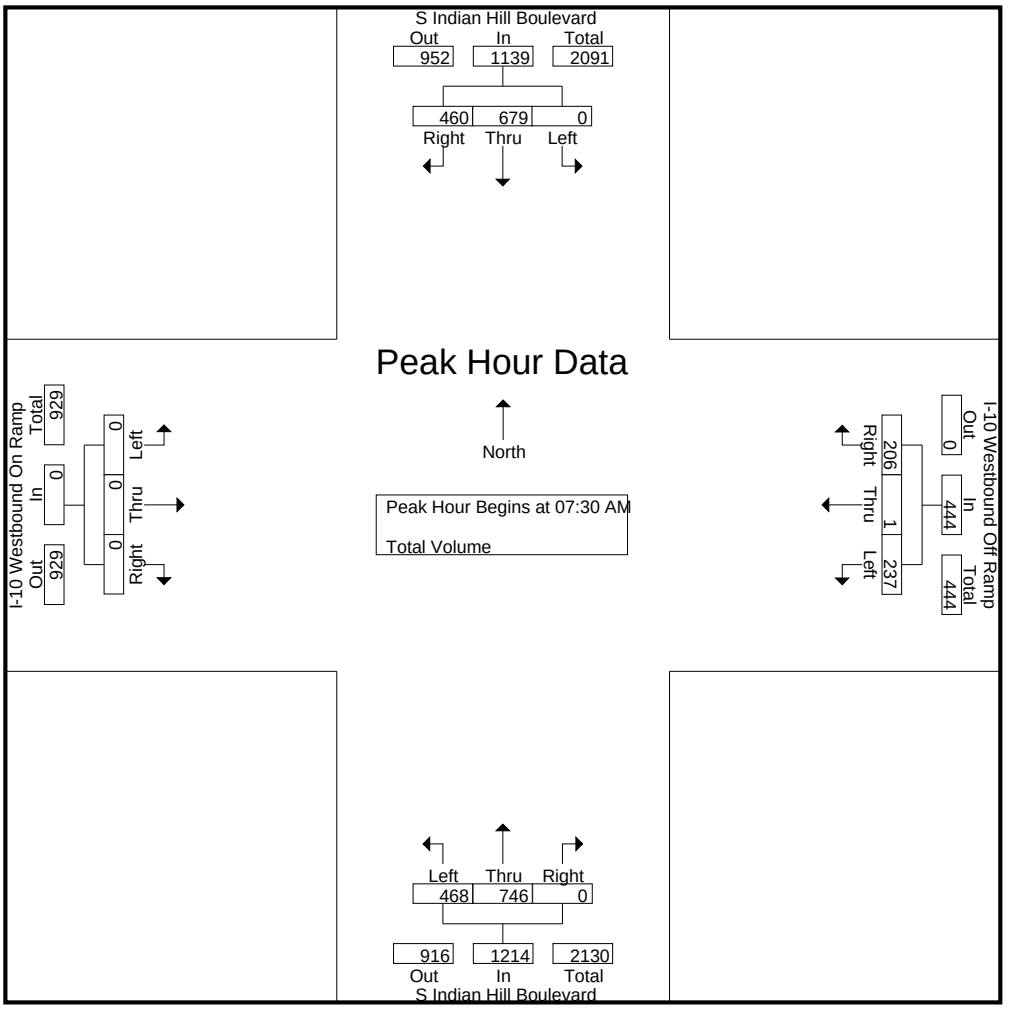
	S Indian Hill Boulevard Southbound				I-10 Westbound Off Ramp Westbound				S Indian Hill Boulevard Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	144	100	244	48	1	33	82	94	120	0	214	0	0	0	0	540
07:15 AM	0	168	119	287	37	0	33	70	128	123	0	251	0	0	0	0	608
07:30 AM	0	158	135	293	48	1	39	88	115	162	0	277	0	0	0	0	658
07:45 AM	0	185	130	315	63	0	55	118	110	248	0	358	0	0	0	0	791
Total	0	655	484	1139	196	2	160	358	447	653	0	1100	0	0	0	0	2597
08:00 AM	0	185	109	294	66	0	68	134	119	161	0	280	0	0	0	0	708
08:15 AM	0	151	86	237	60	0	44	104	124	175	0	299	0	0	0	0	640
08:30 AM	0	125	83	208	70	0	50	120	103	174	0	277	0	0	0	0	605
08:45 AM	0	148	82	230	70	0	58	128	73	161	0	234	0	0	0	0	592
Total	0	609	360	969	266	0	220	486	419	671	0	1090	0	0	0	0	2545
Grand Total	0	1264	844	2108	462	2	380	844	866	1324	0	2190	0	0	0	0	5142
Apprch %	0	60	40		54.7	0.2	45		39.5	60.5	0		0	0	0		
Total %	0	24.6	16.4	41	9	0	7.4	16.4	16.8	25.7	0	42.6	0	0	0	0	

	S Indian Hill Boulevard Southbound				I-10 Westbound Off Ramp Westbound				S Indian Hill Boulevard Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	158	**135**	293	48	**1**	39	88	115	162	0	277	0	0	0	0	658
07:45 AM	0	**185**	130	**315**	63	0	55	118	110	**248**	0	**358**	0	0	0	0	**791**
08:00 AM	0	185	109	294	**66**	0	**68**	**134**	119	161	0	280	0	0	0	0	708
08:15 AM	0	151	86	237	60	0	44	104	**124**	175	0	299	0	0	0	0	640
Total Volume	0	679	460	1139	237	1	206	444	468	746	0	1214	0	0	0	0	2797
% App. Total	0	59.6	40.4		53.4	0.2	46.4		38.6	61.4	0		0	0	0		
PHF	.000	.918	.852	.904	.898	.250	.757	.828	.944	.752	.000	.848	.000	.000	.000	.000	.884

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City of Claremont
N/S: S Indian Hill Boulevard
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 06_CMT_IH_10W AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				08:00 AM				07:30 AM				07:00 AM			
+0 mins.	0	168	119	287	66	0	**68**	**134**	115	162	0	277	0	0	0	0
+15 mins.	0	158	**135**	293	60	0	44	104	110	**248**	0	**358**	0	0	0	0
+30 mins.	0	**185**	130	**315**	**70**	0	50	120	119	161	0	280	0	0	0	0
+45 mins.	0	185	109	294	70	0	58	128	**124**	175	0	299	0	0	0	0
Total Volume	0	696	493	1189	266	0	220	486	468	746	0	1214	0	0	0	0
% App. Total	0	58.5	41.5		54.7	0	45.3		38.6	61.4	0		0	0	0	
PHF	.000	.941	.913	.944	.950	.000	.809	.907	.944	.752	.000	.848	.000	.000	.000	.000

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City of Claremont
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File Name : 06_CMT_IH_10W PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

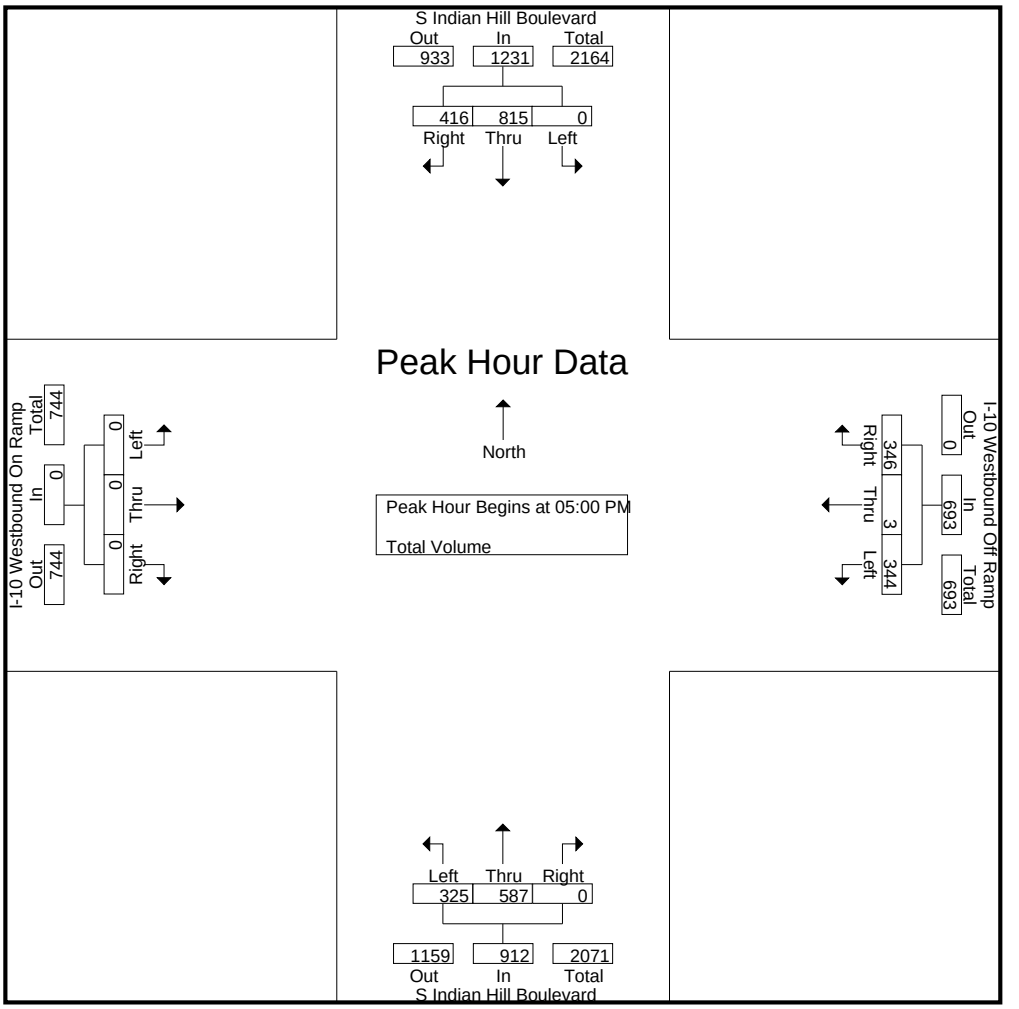
	S Indian Hill Boulevard Southbound				I-10 Westbound Off Ramp Westbound				S Indian Hill Boulevard Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	212	45	257	135	4	140	279	53	155	0	208	0	0	0	0	744
04:15 PM	0	218	49	267	122	3	95	220	57	161	0	218	0	0	0	0	705
04:30 PM	0	200	73	273	97	2	81	180	71	151	0	222	0	0	0	0	675
04:45 PM	0	181	93	274	87	2	81	170	61	151	0	212	0	0	0	0	656
Total	0	811	260	1071	441	11	397	849	242	618	0	860	0	0	0	0	2780
05:00 PM	0	212	118	330	90	0	90	180	83	134	0	217	0	0	0	0	727
05:15 PM	0	215	112	327	86	2	74	162	87	143	0	230	0	0	0	0	719
05:30 PM	0	201	90	291	83	0	91	174	75	169	0	244	0	0	0	0	709
05:45 PM	0	187	96	283	85	1	91	177	80	141	0	221	0	0	0	0	681
Total	0	815	416	1231	344	3	346	693	325	587	0	912	0	0	0	0	2836
Grand Total	0	1626	676	2302	785	14	743	1542	567	1205	0	1772	0	0	0	0	5616
Apprch %	0	70.6	29.4		50.9	0.9	48.2		32	68	0		0	0	0		
Total %	0	29	12	41	14	0.2	13.2	27.5	10.1	21.5	0	31.6	0	0	0	0	

	S Indian Hill Boulevard Southbound				I-10 Westbound Off Ramp Westbound				S Indian Hill Boulevard Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	212	**118**	**330**	**90**	0	90	**180**	83	134	0	217	0	0	0	0	**727**
05:15 PM	0	**215**	112	327	86	**2**	74	162	**87**	143	0	230	0	0	0	0	719
05:30 PM	0	201	90	291	83	0	**91**	174	75	**169**	0	**244**	0	0	0	0	709
05:45 PM	0	187	96	283	85	1	91	177	80	141	0	221	0	0	0	0	681
Total Volume	0	815	416	1231	344	3	346	693	325	587	0	912	0	0	0	0	2836
% App. Total	0	66.2	33.8		49.6	0.4	49.9		35.6	64.4	0		0	0	0		
PHF	.000	.948	.881	.933	.956	.375	.951	.963	.934	.868	.000	.934	.000	.000	.000	.000	.975

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City of Claremont
N/S: S Indian Hill Boulevard
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File Name : 06_CMT_IH_10W PM
Site Code : 23624447
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				05:00 PM				04:00 PM			
+0 mins.	0	212	**118**	**330**	**135**	**4**	**140**	**279**	83	134	0	217	0	0	0	0
+15 mins.	0	**215**	112	327	122	3	95	220	**87**	143	0	230	0	0	0	0
+30 mins.	0	201	90	291	97	2	81	180	75	**169**	0	**244**	0	0	0	0
+45 mins.	0	187	96	283	87	2	81	170	80	141	0	221	0	0	0	0
Total Volume	0	815	416	1231	441	11	397	849	325	587	0	912	0	0	0	0
% App. Total	0	66.2	33.8		51.9	1.3	46.8		35.6	64.4	0		0	0	0	
PHF	.000	.948	.881	.933	.817	.688	.709	.761	.934	.868	.000	.934	.000	.000	.000	.000

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City of Claremont
N/S: S Indian Hill Boulevard
E/W: W San Jose Avenue
Weather: Clear

File Name : 07_CMT_IH_San J AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

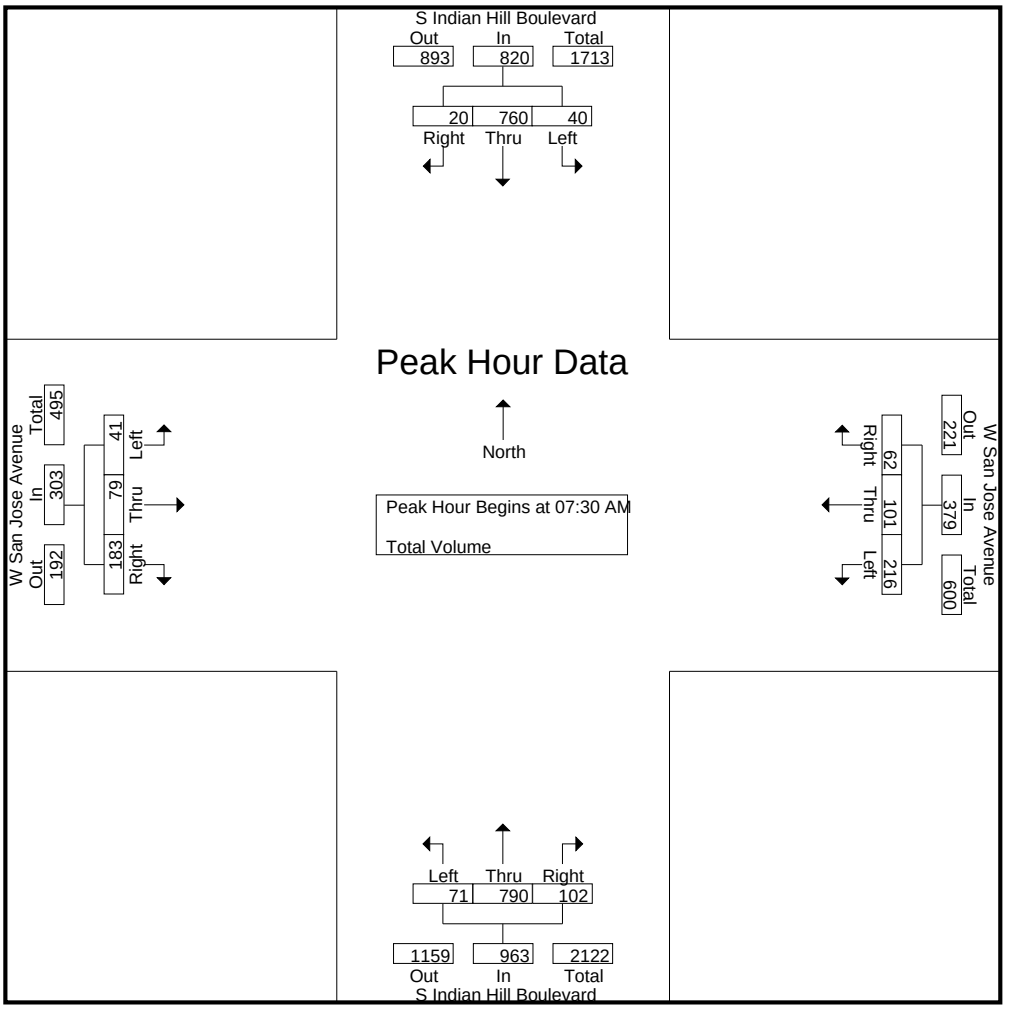
	S Indian Hill Boulevard Southbound				W San Jose Avenue Westbound				S Indian Hill Boulevard Northbound				W San Jose Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	175	3	178	44	8	5	57	11	122	19	152	4	2	28	34	421
07:15 AM	5	200	2	207	56	16	14	86	14	126	16	156	3	3	40	46	495
07:30 AM	9	196	3	208	57	26	14	97	21	166	19	206	8	11	47	66	577
07:45 AM	10	215	5	230	54	37	22	113	22	257	24	303	16	18	49	83	729
Total	24	786	13	823	211	87	55	353	68	671	78	817	31	34	164	229	2222
08:00 AM	8	196	7	211	59	19	11	89	16	191	27	234	11	33	50	94	628
08:15 AM	13	153	5	171	46	19	15	80	12	176	32	220	6	17	37	60	531
08:30 AM	16	139	4	159	38	10	14	62	11	187	23	221	5	18	37	60	502
08:45 AM	17	176	4	197	29	16	10	55	16	181	19	216	3	18	27	48	516
Total	54	664	20	738	172	64	50	286	55	735	101	891	25	86	151	262	2177
Grand Total	78	1450	33	1561	383	151	105	639	123	1406	179	1708	56	120	315	491	4399
Apprch %	5	92.9	2.1		59.9	23.6	16.4		7.2	82.3	10.5		11.4	24.4	64.2		
Total %	1.8	33	0.8	35.5	8.7	3.4	2.4	14.5	2.8	32	4.1	38.8	1.3	2.7	7.2	11.2	

	S Indian Hill Boulevard Southbound				W San Jose Avenue Westbound				S Indian Hill Boulevard Northbound				W San Jose Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	196	3	208	57	26	14	97	21	166	19	206	8	11	47	66	577
07:45 AM	10	**215**	5	**230**	54	**37**	**22**	**113**	**22**	**257**	24	**303**	**16**	18	49	83	**729**
08:00 AM	8	196	**7**	211	**59**	19	11	89	16	191	27	234	11	**33**	**50**	**94**	628
08:15 AM	**13**	153	5	171	46	19	15	80	12	176	**32**	220	6	17	37	60	531
Total Volume	40	760	20	820	216	101	62	379	71	790	102	963	41	79	183	303	2465
% App. Total	4.9	92.7	2.4		57	26.6	16.4		7.4	82	10.6		13.5	26.1	60.4		
PHF	.769	.884	.714	.891	.915	.682	.705	.838	.807	.768	.797	.795	.641	.598	.915	.806	.845

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File Name : 07_CMT_IH_San J AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:45 AM				07:30 AM			
+0 mins.	5	200	2	207	56	16	14	86	**22**	**257**	24	**303**	8	11	47	66
+15 mins.	9	196	3	208	57	26	14	97	16	191	27	234	**16**	18	49	83
+30 mins.	**10**	**215**	5	**230**	54	**37**	**22**	**113**	12	176	**32**	220	11	**33**	**50**	**94**
+45 mins.	8	196	**7**	211	**59**	19	11	89	11	187	23	221	6	17	37	60
Total Volume	32	807	17	856	226	98	61	385	61	811	106	978	41	79	183	303
% App. Total	3.7	94.3	2		58.7	25.5	15.8		6.2	82.9	10.8		13.5	26.1	60.4	
PHF	.800	.938	.607	.930	.958	.662	.693	.852	.693	.789	.828	.807	.641	.598	.915	.806

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File Name : 07_CMT_IH_San J PM
Site Code : 23624447
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Groups Printed- Total Volume

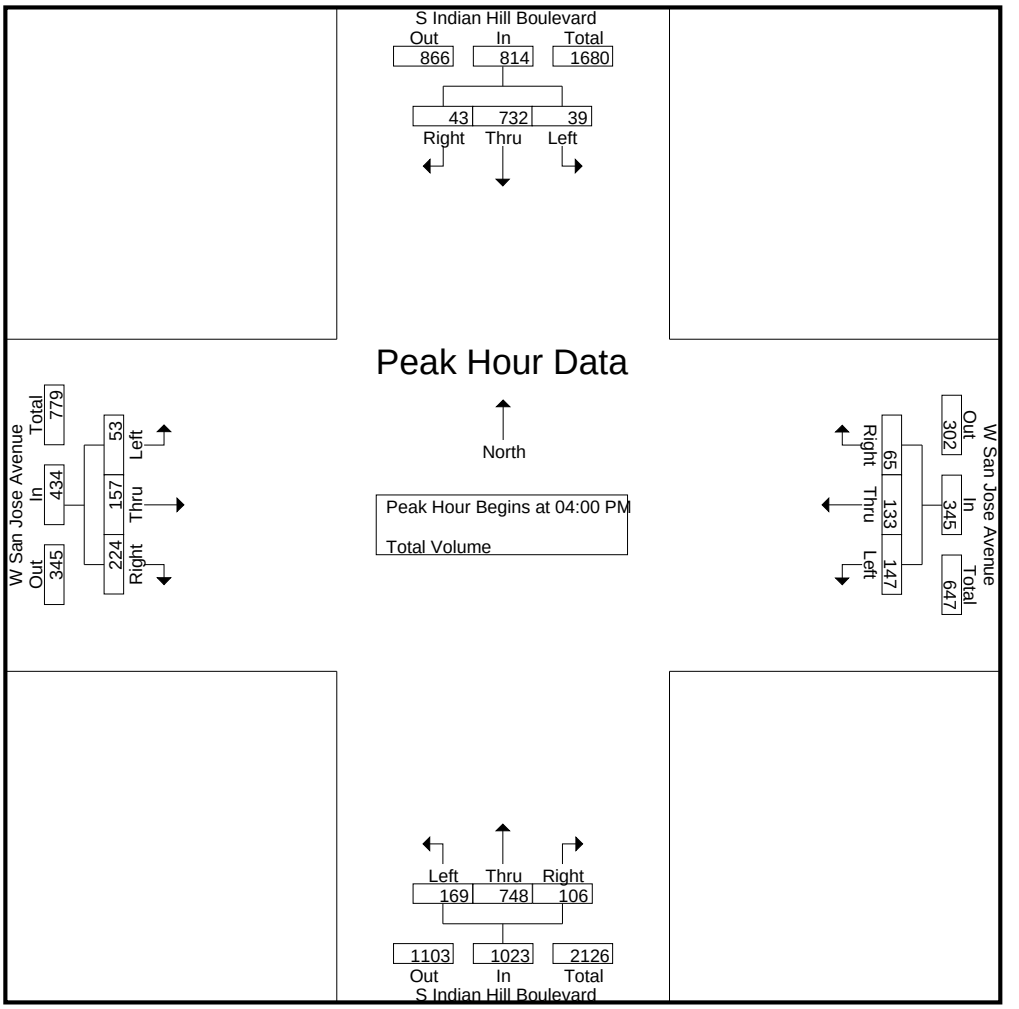
	S Indian Hill Boulevard Southbound				W San Jose Avenue Westbound				S Indian Hill Boulevard Northbound				W San Jose Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	10	188	12	210	32	40	12	84	56	216	31	303	10	45	63	118	715
04:15 PM	14	172	17	203	35	39	16	90	46	181	31	258	16	29	52	97	648
04:30 PM	8	187	9	204	44	33	12	89	45	165	25	235	14	49	58	121	649
04:45 PM	7	185	5	197	36	21	25	82	22	186	19	227	13	34	51	98	604
Total	39	732	43	814	147	133	65	345	169	748	106	1023	53	157	224	434	2616
05:00 PM	8	266	7	281	35	22	10	67	33	173	20	226	19	37	38	94	668
05:15 PM	7	241	10	258	34	12	10	56	31	161	35	227	10	35	46	91	632
05:30 PM	12	222	10	244	36	22	9	67	33	198	26	257	10	36	50	96	664
05:45 PM	7	227	11	245	21	16	9	46	36	185	24	245	15	38	44	97	633
Total	34	956	38	1028	126	72	38	236	133	717	105	955	54	146	178	378	2597
Grand Total	73	1688	81	1842	273	205	103	581	302	1465	211	1978	107	303	402	812	5213
Apprch %	4	91.6	4.4		47	35.3	17.7		15.3	74.1	10.7		13.2	37.3	49.5		
Total %	1.4	32.4	1.6	35.3	5.2	3.9	2	11.1	5.8	28.1	4	37.9	2.1	5.8	7.7	15.6	

	S Indian Hill Boulevard Southbound				W San Jose Avenue Westbound				S Indian Hill Boulevard Northbound				W San Jose Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	10	**188**	12	**210**	32	**40**	12	84	**56**	**216**	**31**	**303**	10	45	**63**	118	**715**
04:15 PM	**14**	172	**17**	203	35	39	16	**90**	46	181	31	258	**16**	29	52	97	648
04:30 PM	8	187	9	204	**44**	33	12	89	45	165	25	235	14	**49**	58	**121**	649
04:45 PM	7	185	5	197	36	21	**25**	82	22	186	19	227	13	34	51	98	604
Total Volume	39	732	43	814	147	133	65	345	169	748	106	1023	53	157	224	434	2616
% App. Total	4.8	89.9	5.3		42.6	38.6	18.8		16.5	73.1	10.4		12.2	36.2	51.6		
PHF	.696	.973	.632	.969	.835	.831	.650	.958	.754	.866	.855	.844	.828	.801	.889	.897	.915

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City of Claremont
N/S: S Indian Hill Boulevard
E/W: W San Jose Avenue
Weather: Clear

File Name : 07_CMT_IH_San J PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	8	**266**	7	**281**	32	**40**	12	84	**56**	**216**	**31**	**303**	10	45	**63**	118
+15 mins.	7	241	10	258	35	39	16	**90**	46	181	31	258	**16**	29	52	97
+30 mins.	**12**	222	10	244	**44**	33	12	89	45	165	25	235	14	**49**	58	**121**
+45 mins.	7	227	**11**	245	36	21	**25**	82	22	186	19	227	13	34	51	98
Total Volume	34	956	38	1028	147	133	65	345	169	748	106	1023	53	157	224	434
% App. Total	3.3	93	3.7		42.6	38.6	18.8		16.5	73.1	10.4		12.2	36.2	51.6	
PHF	.708	.898	.864	.915	.835	.831	.650	.958	.754	.866	.855	.844	.828	.801	.889	.897

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City of Claremont
N/S: S College Avenue
E/W: San Jose Avenue
Weather: Clear

File Name : 08_CMT_S Col_San J AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

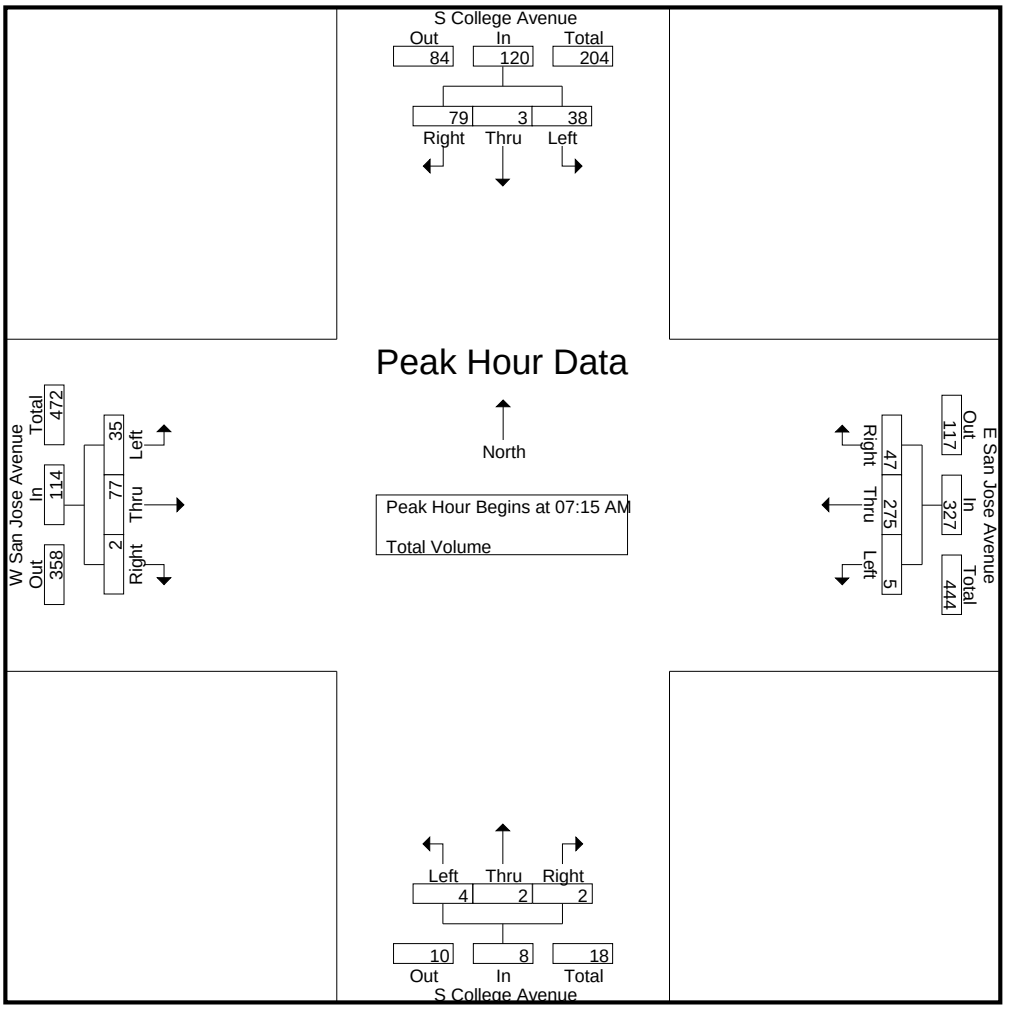
	S College Avenue Southbound				E San Jose Avenue Westbound				S College Avenue Northbound				W San Jose Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	1	13	19	0	48	6	54	1	0	0	1	8	8	0	16	90
07:15 AM	5	1	19	25	1	67	7	75	1	0	0	1	4	12	1	17	118
07:30 AM	3	0	11	14	2	78	11	91	0	0	1	1	9	17	1	27	133
07:45 AM	12	1	17	30	1	79	23	103	2	1	0	3	9	21	0	30	166
Total	25	3	60	88	4	272	47	323	4	1	1	6	30	58	2	90	507
08:00 AM	18	1	32	51	1	51	6	58	1	1	1	3	13	27	0	40	152
08:15 AM	9	4	20	33	0	47	6	53	4	0	0	4	5	20	0	25	115
08:30 AM	8	0	18	26	0	45	10	55	0	0	0	0	6	15	1	22	103
08:45 AM	3	0	20	23	0	39	9	48	1	0	0	1	7	15	0	22	94
Total	38	5	90	133	1	182	31	214	6	1	1	8	31	77	1	109	464
Grand Total	63	8	150	221	5	454	78	537	10	2	2	14	61	135	3	199	971
Apprch %	28.5	3.6	67.9		0.9	84.5	14.5		71.4	14.3	14.3		30.7	67.8	1.5		
Total %	6.5	0.8	15.4	22.8	0.5	46.8	8	55.3	1	0.2	0.2	1.4	6.3	13.9	0.3	20.5	

	S College Avenue Southbound				E San Jose Avenue Westbound				S College Avenue Northbound				W San Jose Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	**1**	19	25	1	67	7	75	1	0	0	1	4	12	**1**	17	118
07:30 AM	3	0	11	14	**2**	78	11	91	0	0	**1**	1	9	17	1	27	133
07:45 AM	12	1	17	30	1	**79**	**23**	**103**	**2**	**1**	0	**3**	9	21	0	30	**166**
08:00 AM	**18**	1	**32**	**51**	1	51	6	58	1	1	1	3	**13**	**27**	0	**40**	152
Total Volume	38	3	79	120	5	275	47	327	4	2	2	8	35	77	2	114	569
% App. Total	31.7	2.5	65.8		1.5	84.1	14.4		50	25	25		30.7	67.5	1.8		
PHF	.528	.750	.617	.588	.625	.870	.511	.794	.500	.500	.500	.667	.673	.713	.500	.713	.857

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City of Claremont
N/S: S College Avenue
E/W: San Jose Avenue
Weather: Clear

File Name : 08_CMT_S Col_San J AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				07:30 AM				07:30 AM			
+0 mins.	12	1	17	30	1	67	7	75	0	0	**1**	1	9	17	**1**	27
+15 mins.	**18**	1	**32**	**51**	**2**	78	11	91	2	**1**	0	3	9	21	0	30
+30 mins.	9	**4**	20	33	1	**79**	**23**	**103**	1	1	1	3	**13**	**27**	0	**40**
+45 mins.	8	0	18	26	1	51	6	58	**4**	0	0	**4**	5	20	0	25
Total Volume	47	6	87	140	5	275	47	327	7	2	2	11	36	85	1	122
% App. Total	33.6	4.3	62.1		1.5	84.1	14.4		63.6	18.2	18.2		29.5	69.7	0.8	
PHF	.653	.375	.680	.686	.625	.870	.511	.794	.438	.500	.500	.688	.692	.787	.250	.763

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City of Claremont
N/S: S College Avenue
E/W: San Jose Avenue
Weather: Clear

File Name : 08_CMT_S Col_San J PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

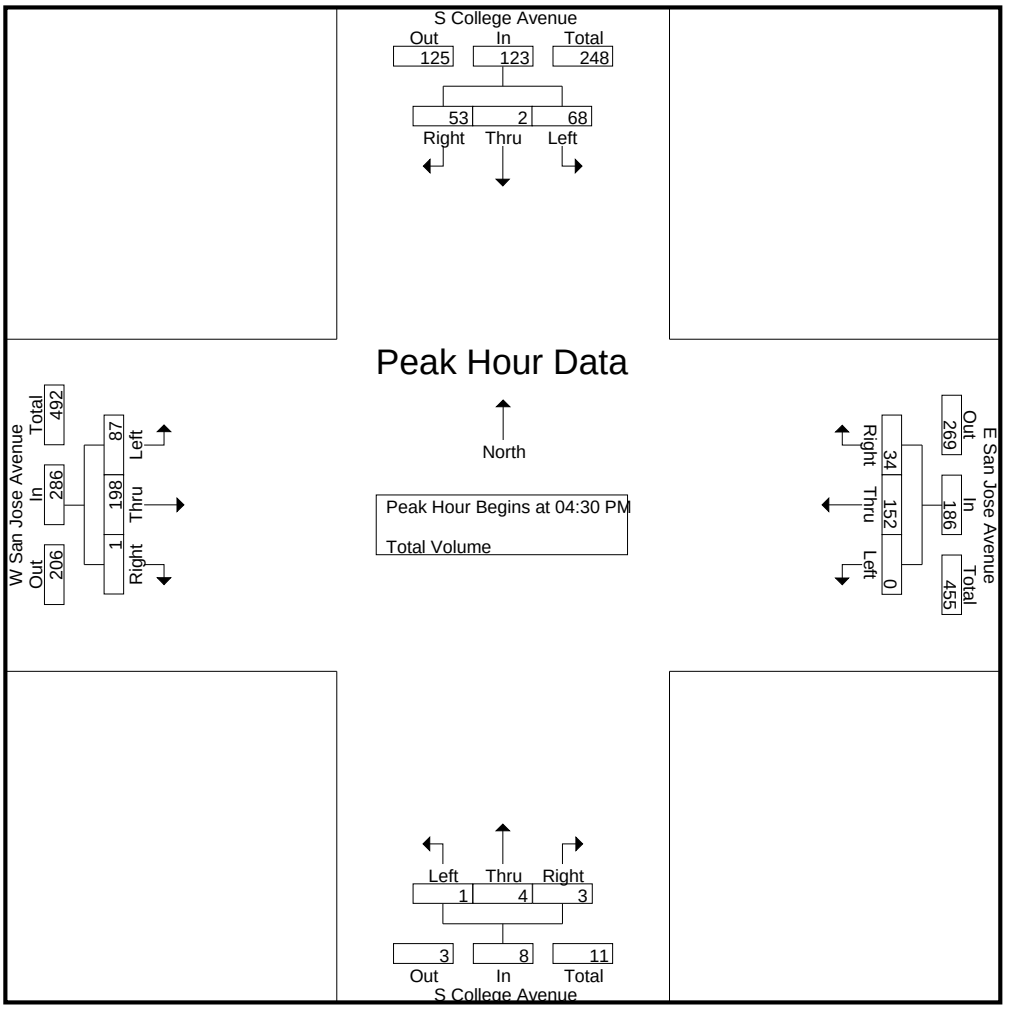
	S College Avenue Southbound				E San Jose Avenue Westbound				S College Avenue Northbound				W San Jose Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	4	0	13	17	1	48	6	55	1	1	0	2	17	64	0	81	155
04:15 PM	8	1	12	21	0	37	11	48	1	1	0	2	17	43	0	60	131
04:30 PM	15	0	12	27	0	50	6	56	0	2	1	3	19	57	1	77	163
04:45 PM	15	0	14	29	0	33	12	45	1	0	0	1	28	43	0	71	146
Total	42	1	51	94	1	168	35	204	3	4	1	8	81	207	1	289	595
05:00 PM	25	1	17	43	0	35	10	45	0	1	2	3	19	45	0	64	155
05:15 PM	13	1	10	24	0	34	6	40	0	1	0	1	21	53	0	74	139
05:30 PM	12	1	10	23	0	36	11	47	0	0	0	0	20	53	1	74	144
05:45 PM	14	2	14	30	0	25	10	35	0	2	0	2	12	47	0	59	126
Total	64	5	51	120	0	130	37	167	0	4	2	6	72	198	1	271	564
Grand Total	106	6	102	214	1	298	72	371	3	8	3	14	153	405	2	560	1159
Apprch %	49.5	2.8	47.7		0.3	80.3	19.4		21.4	57.1	21.4		27.3	72.3	0.4		
Total %	9.1	0.5	8.8	18.5	0.1	25.7	6.2	32	0.3	0.7	0.3	1.2	13.2	34.9	0.2	48.3	

	S College Avenue Southbound				E San Jose Avenue Westbound				S College Avenue Northbound				W San Jose Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	15	0	12	27	0	**50**	6	**56**	0	**2**	1	**3**	19	**57**	**1**	**77**	**163**
04:45 PM	15	0	14	29	0	33	**12**	45	**1**	0	0	1	**28**	43	0	71	146
05:00 PM	**25**	**1**	**17**	**43**	0	35	10	45	0	1	**2**	3	19	45	0	64	155
05:15 PM	13	1	10	24	0	34	6	40	0	1	0	1	21	53	0	74	139
Total Volume	68	2	53	123	0	152	34	186	1	4	3	8	87	198	1	286	603
% App. Total	55.3	1.6	43.1		0	81.7	18.3		12.5	50	37.5		30.4	69.2	0.3		
PHF	.680	.500	.779	.715	.000	.760	.708	.830	.250	.500	.375	.667	.777	.868	.250	.929	.925

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City of Claremont
N/S: S College Avenue
E/W: San Jose Avenue
Weather: Clear

File Name : 08_CMT_S Col_San J PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:15 PM				04:00 PM			
+0 mins.	15	0	12	27	**1**	48	6	55	**1**	1	0	2	17	**64**	0	**81**
+15 mins.	15	0	14	29	0	37	11	48	0	**2**	1	**3**	17	43	0	60
+30 mins.	**25**	**1**	**17**	**43**	0	**50**	6	**56**	1	0	0	1	19	57	**1**	77
+45 mins.	13	1	10	24	0	33	**12**	45	0	1	**2**	3	**28**	43	0	71
Total Volume	68	2	53	123	1	168	35	204	2	4	3	9	81	207	1	289
% App. Total	55.3	1.6	43.1		0.5	82.4	17.2		22.2	44.4	33.3		28	71.6	0.3	
PHF	.680	.500	.779	.715	.250	.840	.729	.911	.500	.500	.375	.750	.723	.809	.250	.892

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City of Claremont
N/S: S Mills Avenue
E/W: E San Jose Avenue
Weather: Clear

File Name : 09_CMT_S Mills_San J AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

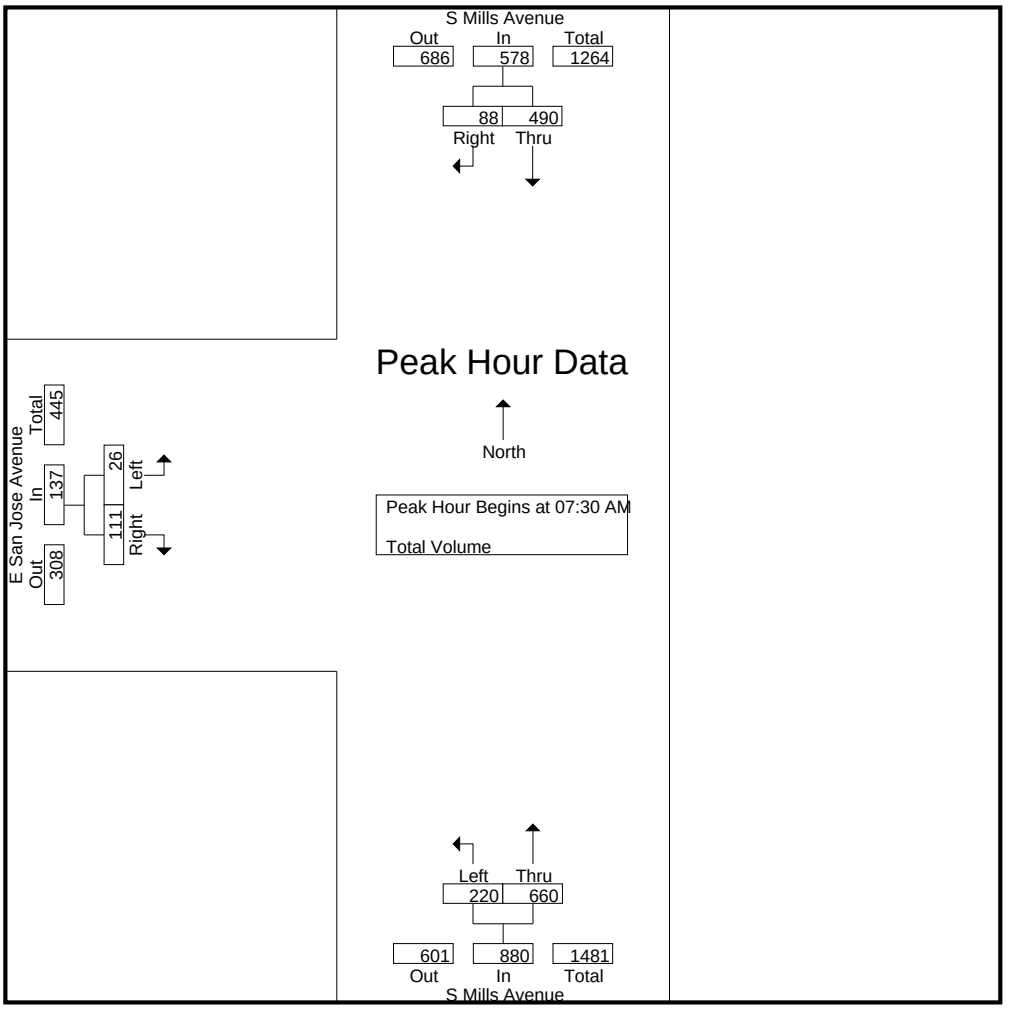
	S Mills Avenue Southbound			S Mills Avenue Northbound			E San Jose Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	85	10	95	40	111	151	6	10	16	262
07:15 AM	76	29	105	40	88	128	7	9	16	249
07:30 AM	97	26	123	64	143	207	3	13	16	346
07:45 AM	110	24	134	78	200	278	9	29	38	450
Total	368	89	457	222	542	764	25	61	86	1307
08:00 AM	151	18	169	41	206	247	8	41	49	465
08:15 AM	132	20	152	37	111	148	6	28	34	334
08:30 AM	67	11	78	47	88	135	5	21	26	239
08:45 AM	61	18	79	37	88	125	7	15	22	226
Total	411	67	478	162	493	655	26	105	131	1264
Grand Total	779	156	935	384	1035	1419	51	166	217	2571
Apprch %	83.3	16.7		27.1	72.9		23.5	76.5		
Total %	30.3	6.1	36.4	14.9	40.3	55.2	2	6.5	8.4	

	S Mills Avenue Southbound			S Mills Avenue Northbound			E San Jose Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	97	**26**	123	64	143	207	3	13	16	346
07:45 AM	110	24	134	**78**	200	**278**	**9**	29	38	450
08:00 AM	**151**	18	**169**	41	**206**	247	8	**41**	**49**	**465**
08:15 AM	132	20	152	37	111	148	6	28	34	334
Total Volume	490	88	578	220	660	880	26	111	137	1595
% App. Total	84.8	15.2		25	75		19	81		
PHF	.811	.846	.855	.705	.801	.791	.722	.677	.699	.858

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City of Claremont
N/S: S Mills Avenue
E/W: E San Jose Avenue
Weather: Clear

File Name : 09_CMT_S Mills_San J AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:45 AM		
+0 mins.	97	**26**	123	64	143	207	**9**	29	38
+15 mins.	110	24	134	**78**	200	**278**	8	**41**	**49**
+30 mins.	**151**	18	**169**	41	**206**	247	6	28	34
+45 mins.	132	20	152	37	111	148	5	21	26
Total Volume	490	88	578	220	660	880	28	119	147
% App. Total	84.8	15.2		25	75		19	81	
PHF	.811	.846	.855	.705	.801	.791	.778	.726	.750

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City of Claremont
N/S: S Mills Avenue
E/W: E San Jose Avenue
Weather: Clear

File Name : 09_CMT_S Mills_San J PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

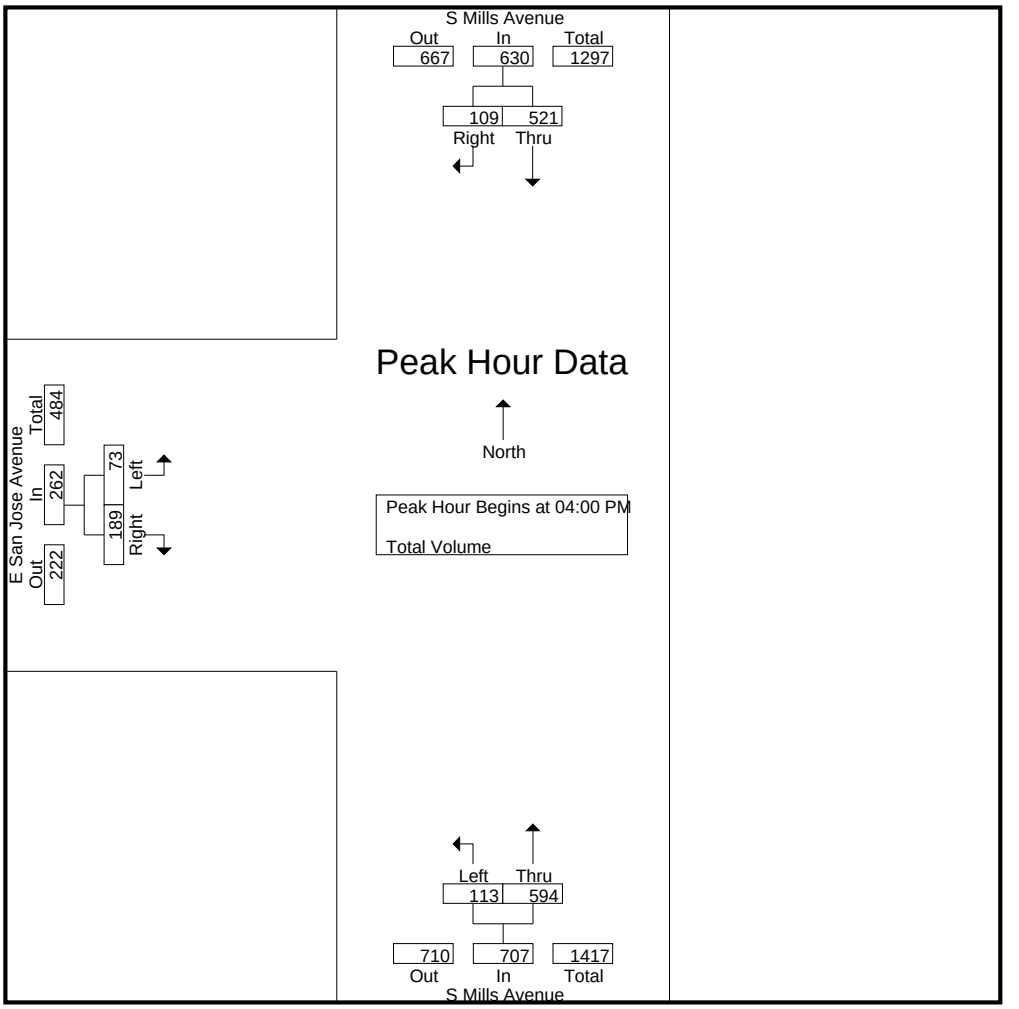
	S Mills Avenue Southbound			S Mills Avenue Northbound			E San Jose Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	148	34	182	24	134	158	24	50	74	414
04:15 PM	115	28	143	27	157	184	15	41	56	383
04:30 PM	126	33	159	35	148	183	17	52	69	411
04:45 PM	132	14	146	27	155	182	17	46	63	391
Total	521	109	630	113	594	707	73	189	262	1599
05:00 PM	135	23	158	32	138	170	11	46	57	385
05:15 PM	134	11	145	30	127	157	12	57	69	371
05:30 PM	104	16	120	31	124	155	17	43	60	335
05:45 PM	105	16	121	29	111	140	17	43	60	321
Total	478	66	544	122	500	622	57	189	246	1412
Grand Total	999	175	1174	235	1094	1329	130	378	508	3011
Apprch %	85.1	14.9		17.7	82.3		25.6	74.4		
Total %	33.2	5.8	39	7.8	36.3	44.1	4.3	12.6	16.9	

	S Mills Avenue Southbound			S Mills Avenue Northbound			E San Jose Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**148**	**34**	**182**	24	134	158	**24**	50	**74**	**414**
04:15 PM	115	28	143	27	**157**	**184**	15	41	56	383
04:30 PM	126	33	159	**35**	148	183	17	**52**	69	411
04:45 PM	132	14	146	27	155	182	17	46	63	391
Total Volume	521	109	630	113	594	707	73	189	262	1599
% App. Total	82.7	17.3		16	84		27.9	72.1		
PHF	.880	.801	.865	.807	.946	.961	.760	.909	.885	.966

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City of Claremont
N/S: S Mills Avenue
E/W: E San Jose Avenue
Weather: Clear

File Name : 09_CMT_S Mills_San J PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			04:00 PM		
+0 mins.	**148**	**34**	**182**	27	**157**	**184**	**24**	50	**74**
+15 mins.	115	28	143	**35**	148	183	15	41	56
+30 mins.	126	33	159	27	155	182	17	**52**	69
+45 mins.	132	14	146	32	138	170	17	46	63
Total Volume	521	109	630	121	598	719	73	189	262
% App. Total	82.7	17.3		16.8	83.2		27.9	72.1	
PHF	.880	.801	.865	.864	.952	.977	.760	.909	.885

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City of Claremont
N/S: S Mills Avenue
E/W: E American Avenue
Weather: Clear

File Name : 10_CMT_S Mills_Amer AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

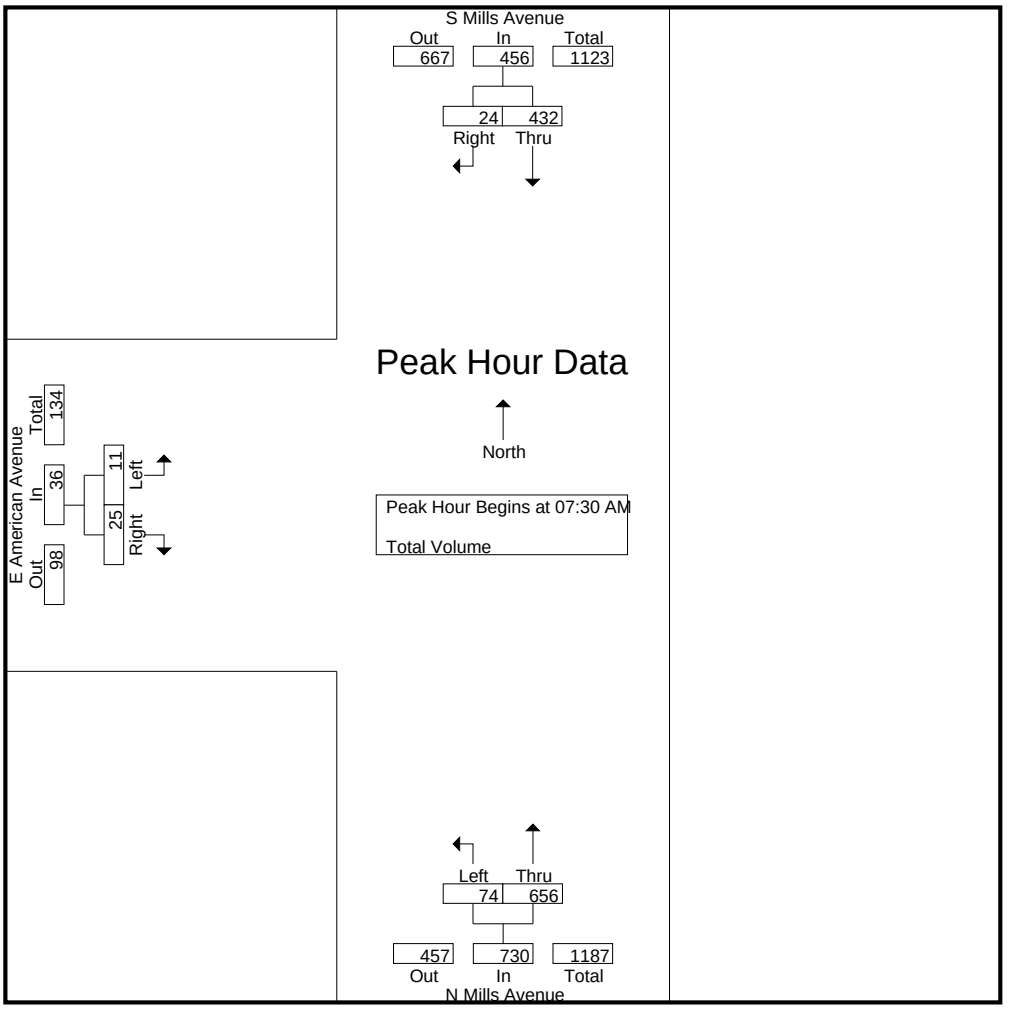
	S Mills Avenue Southbound			N Mills Avenue Northbound			E American Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	68	4	72	14	90	104	4	3	7	183
07:15 AM	72	3	75	16	83	99	2	4	6	180
07:30 AM	92	6	98	15	152	167	3	3	6	271
07:45 AM	102	6	108	22	223	245	4	8	12	365
Total	334	19	353	67	548	615	13	18	31	999
08:00 AM	133	11	144	18	174	192	3	8	11	347
08:15 AM	105	1	106	19	107	126	1	6	7	239
08:30 AM	65	5	70	12	82	94	4	6	10	174
08:45 AM	59	3	62	11	83	94	6	6	12	168
Total	362	20	382	60	446	506	14	26	40	928
Grand Total	696	39	735	127	994	1121	27	44	71	1927
Apprch %	94.7	5.3		11.3	88.7		38	62		
Total %	36.1	2	38.1	6.6	51.6	58.2	1.4	2.3	3.7	

	S Mills Avenue Southbound			N Mills Avenue Northbound			E American Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	92	6	98	15	152	167	3	3	6	271
07:45 AM	102	6	108	**22**	**223**	**245**	**4**	**8**	**12**	**365**
08:00 AM	**133**	**11**	**144**	18	174	192	3	8	11	347
08:15 AM	105	1	106	19	107	126	1	6	7	239
Total Volume	432	24	456	74	656	730	11	25	36	1222
% App. Total	94.7	5.3		10.1	89.9		30.6	69.4		
PHF	.812	.545	.792	.841	.735	.745	.688	.781	.750	.837

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City of Claremont
N/S: S Mills Avenue
E/W: E American Avenue
Weather: Clear

File Name : 10_CMT_S Mills_Amer AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:45 AM		
+0 mins.	92	6	98	15	152	167	**4**	**8**	**12**
+15 mins.	102	6	108	**22**	**223**	**245**	3	8	11
+30 mins.	**133**	**11**	**144**	18	174	192	1	6	7
+45 mins.	105	1	106	19	107	126	4	6	10
Total Volume	432	24	456	74	656	730	12	28	40
% App. Total	94.7	5.3		10.1	89.9		30	70	
PHF	.812	.545	.792	.841	.735	.745	.750	.875	.833

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City of Claremont
N/S: S Mills Avenue
E/W: E American Avenue
Weather: Clear

File Name : 10_CMT_S Mills_Amer PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

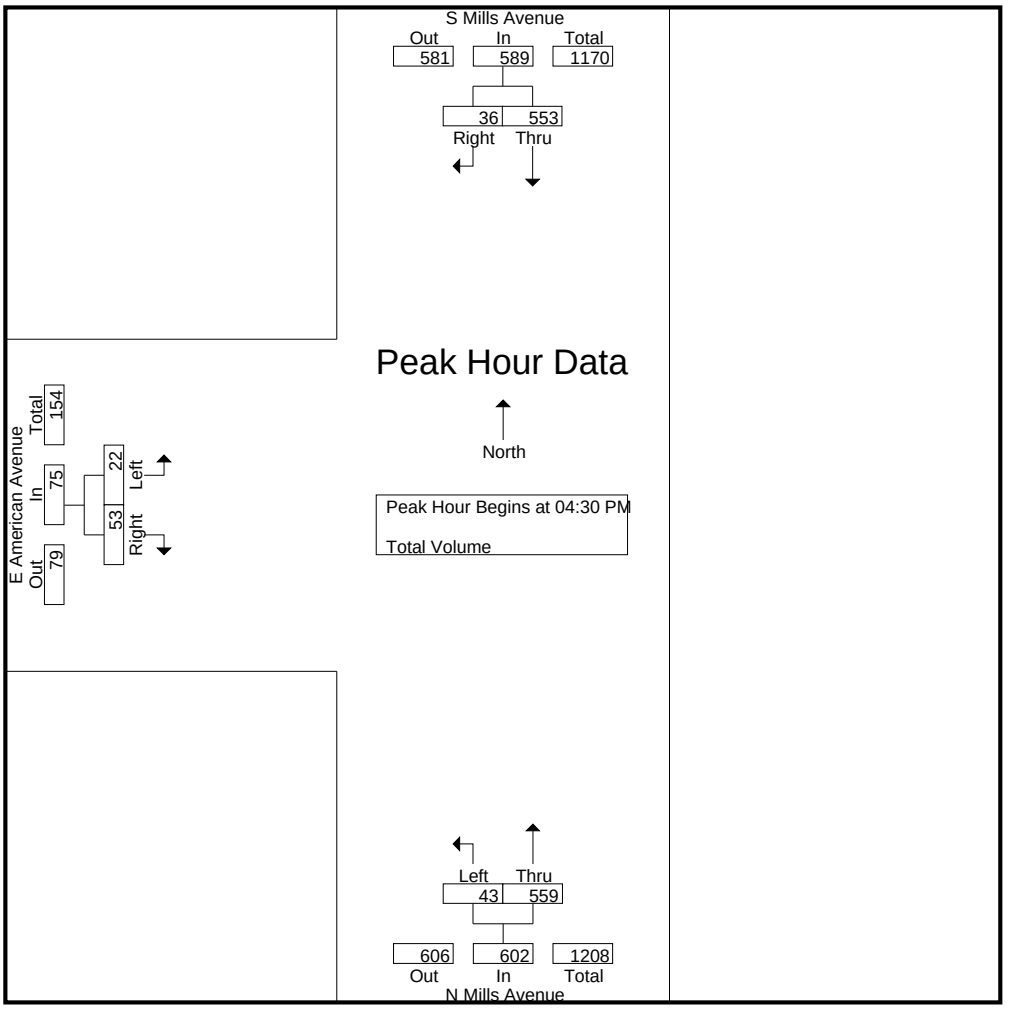
	S Mills Avenue Southbound			N Mills Avenue Northbound			E American Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	147	12	159	10	133	143	1	10	11	313
04:15 PM	113	8	121	7	149	156	7	18	25	302
04:30 PM	133	10	143	10	153	163	4	10	14	320
04:45 PM	136	5	141	13	142	155	6	19	25	321
Total	529	35	564	40	577	617	18	57	75	1256
05:00 PM	140	8	148	12	135	147	6	10	16	311
05:15 PM	144	13	157	8	129	137	6	14	20	314
05:30 PM	111	3	114	14	117	131	4	9	13	258
05:45 PM	115	5	120	4	110	114	3	15	18	252
Total	510	29	539	38	491	529	19	48	67	1135
Grand Total	1039	64	1103	78	1068	1146	37	105	142	2391
Apprch %	94.2	5.8		6.8	93.2		26.1	73.9		
Total %	43.5	2.7	46.1	3.3	44.7	47.9	1.5	4.4	5.9	

	S Mills Avenue Southbound			N Mills Avenue Northbound			E American Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	133	10	143	10	**153**	**163**	4	10	14	320
04:45 PM	136	5	141	**13**	142	155	**6**	**19**	**25**	**321**
05:00 PM	140	8	148	12	135	147	6	10	16	311
05:15 PM	**144**	**13**	**157**	8	129	137	6	14	20	314
Total Volume	553	36	589	43	559	602	22	53	75	1266
% App. Total	93.9	6.1		7.1	92.9		29.3	70.7		
PHF	.960	.692	.938	.827	.913	.923	.917	.697	.750	.986

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City of Claremont
N/S: S Mills Avenue
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Weather: Clear

File Name : 10_CMT_S Mills_Amer PM
Site Code : 23624447
Start Date : 5/8/2024
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:15 PM			04:15 PM		
+0 mins.	133	10	143	7	149	156	**7**	18	**25**
+15 mins.	136	5	141	10	**153**	**163**	4	10	14
+30 mins.	140	8	148	**13**	142	155	6	**19**	25
+45 mins.	**144**	**13**	**157**	12	135	147	6	10	16
Total Volume	553	36	589	42	579	621	23	57	80
% App. Total	93.9	6.1		6.8	93.2		28.8	71.2	
PHF	.960	.692	.938	.808	.946	.952	.821	.750	.800

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City of Claremont
N/S: S Indian Hill Boulevard
E/W: Arrow Highway
Weather: Clear

File Name : 11_CMT_IH_Arrow AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

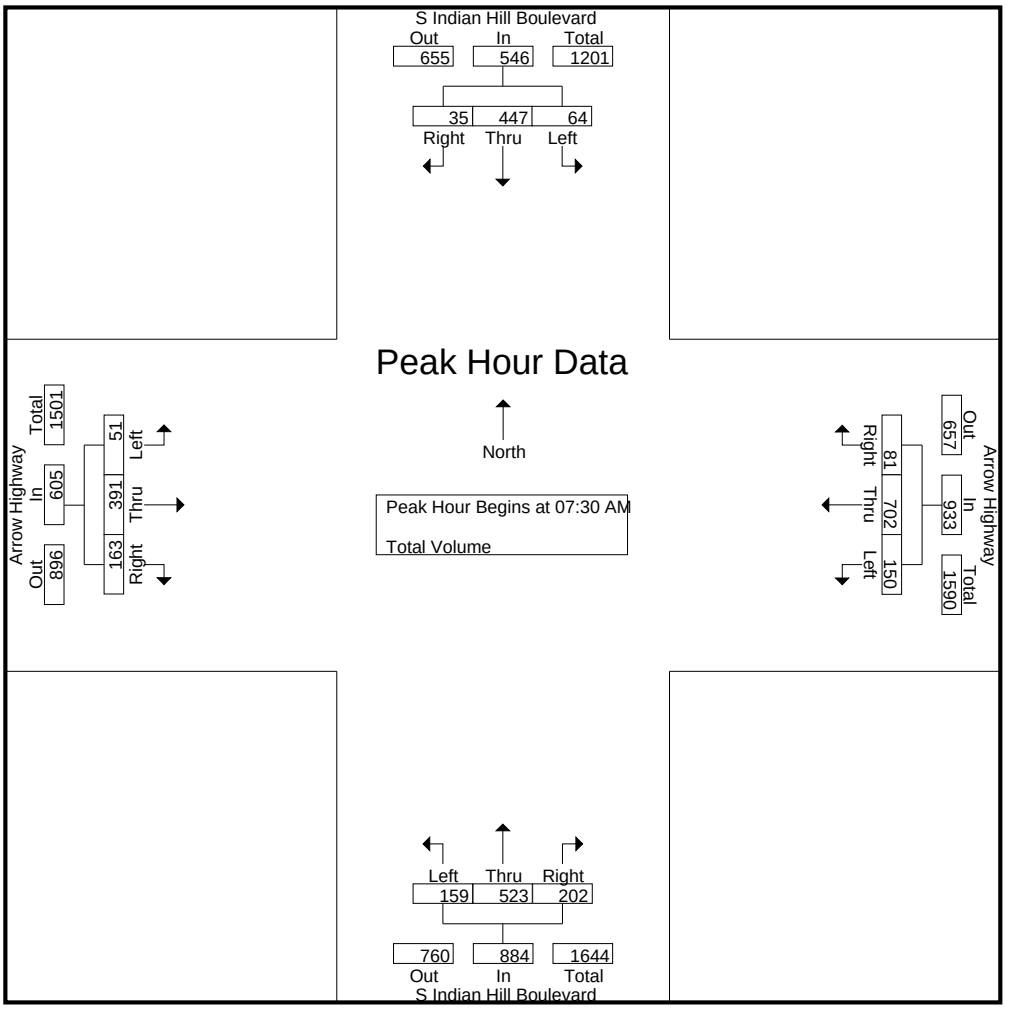
	S Indian Hill Boulevard Southbound				Arrow Highway Westbound				S Indian Hill Boulevard Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	6	87	5	98	32	127	11	170	28	60	41	129	7	53	25	85	482
07:15 AM	6	95	5	106	48	174	11	233	25	68	29	122	8	62	32	102	563
07:30 AM	12	124	8	144	34	190	24	248	33	115	35	183	13	64	34	111	686
07:45 AM	16	115	11	142	41	218	25	284	44	172	59	275	19	118	47	184	885
Total	40	421	29	490	155	709	71	935	130	415	164	709	47	297	138	482	2616
08:00 AM	15	113	10	138	38	156	20	214	41	136	63	240	12	130	44	186	778
08:15 AM	21	95	6	122	37	138	12	187	41	100	45	186	7	79	38	124	619
08:30 AM	7	107	5	119	26	102	12	140	26	122	48	196	23	75	38	136	591
08:45 AM	13	95	7	115	30	107	21	158	25	143	29	197	18	84	45	147	617
Total	56	410	28	494	131	503	65	699	133	501	185	819	60	368	165	593	2605
Grand Total	96	831	57	984	286	1212	136	1634	263	916	349	1528	107	665	303	1075	5221
Apprch %	9.8	84.5	5.8		17.5	74.2	8.3		17.2	59.9	22.8		10	61.9	28.2		
Total %	1.8	15.9	1.1	18.8	5.5	23.2	2.6	31.3	5	17.5	6.7	29.3	2	12.7	5.8	20.6	

	S Indian Hill Boulevard Southbound				Arrow Highway Westbound				S Indian Hill Boulevard Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	12	**124**	8	**144**	34	190	24	248	33	115	35	183	13	64	34	111	686
07:45 AM	16	115	**11**	142	**41**	**218**	**25**	**284**	**44**	**172**	59	**275**	**19**	118	**47**	184	**885**
08:00 AM	15	113	10	138	38	156	20	214	41	136	**63**	240	12	**130**	44	**186**	778
08:15 AM	**21**	95	6	122	37	138	12	187	41	100	45	186	7	79	38	124	619
Total Volume	64	447	35	546	150	702	81	933	159	523	202	884	51	391	163	605	2968
% App. Total	11.7	81.9	6.4		16.1	75.2	8.7		18	59.2	22.9		8.4	64.6	26.9		
PHF	.762	.901	.795	.948	.915	.805	.810	.821	.903	.760	.802	.804	.671	.752	.867	.813	.838

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City of Claremont
N/S: S Indian Hill Boulevard
E/W: Arrow Highway
Weather: Clear

File Name : 11_CMT_IH_Arrow AM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:45 AM				07:45 AM			
+0 mins.	12	**124**	8	**144**	**48**	174	11	233	**44**	**172**	59	**275**	19	118	**47**	184
+15 mins.	16	115	**11**	142	34	190	24	248	41	136	**63**	240	12	**130**	44	**186**
+30 mins.	15	113	10	138	41	**218**	**25**	**284**	41	100	45	186	7	79	38	124
+45 mins.	**21**	95	6	122	38	156	20	214	26	122	48	196	**23**	75	38	136
Total Volume	64	447	35	546	161	738	80	979	152	530	215	897	61	402	167	630
% App. Total	11.7	81.9	6.4		16.4	75.4	8.2		16.9	59.1	24		9.7	63.8	26.5	
PHF	.762	.901	.795	.948	.839	.846	.800	.862	.864	.770	.853	.815	.663	.773	.888	.847

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City of Claremont
N/S: S Indian Hill Boulevard
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Weather: Clear

File Name : 11_CMT_IH_Arrow PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 1

Groups Printed- Total Volume

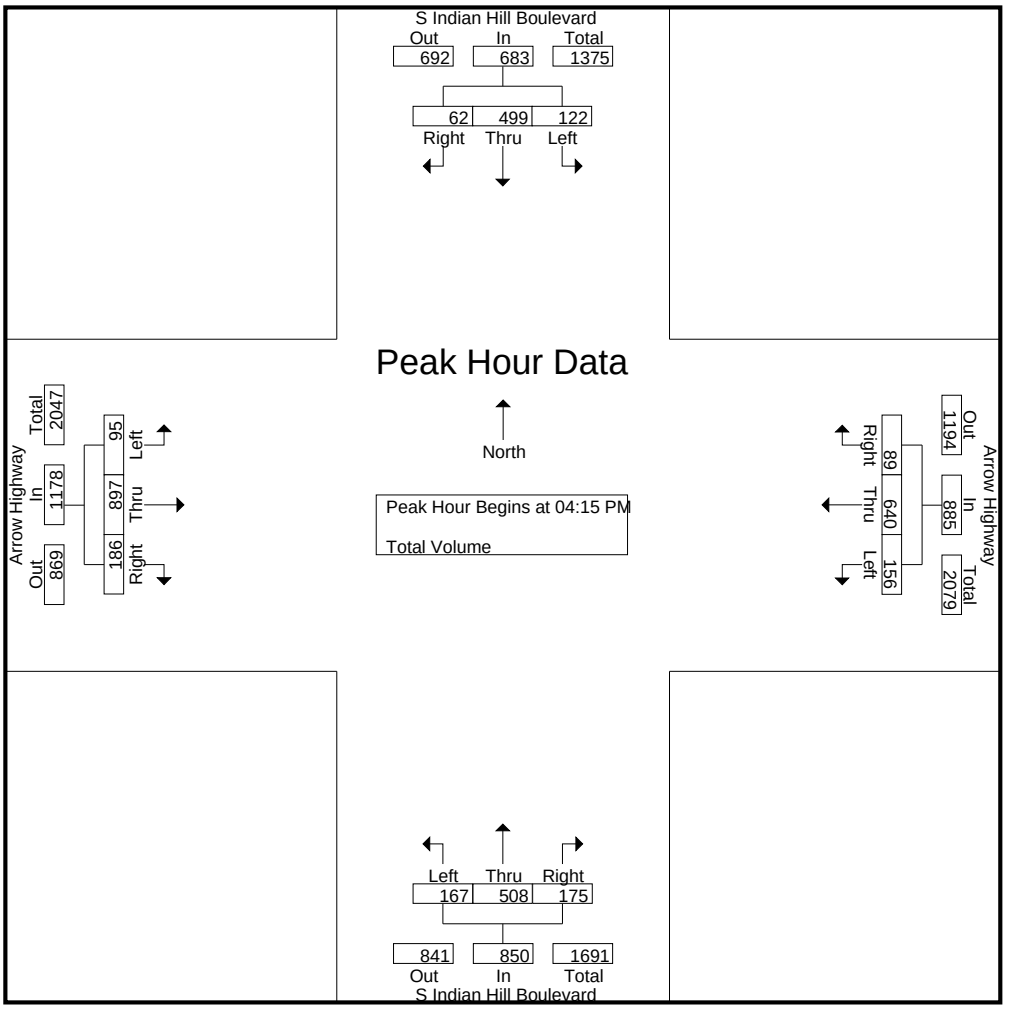
	S Indian Hill Boulevard Southbound				Arrow Highway Westbound				S Indian Hill Boulevard Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	30	116	23	169	31	152	18	201	44	136	51	231	25	215	57	297	898
04:15 PM	22	105	23	150	31	177	32	240	49	144	43	236	18	234	46	298	924
04:30 PM	29	130	13	172	33	172	20	225	43	102	39	184	24	243	38	305	886
04:45 PM	34	104	16	154	42	150	21	213	37	142	50	229	21	216	40	277	873
Total	115	455	75	645	137	651	91	879	173	524	183	880	88	908	181	1177	3581
05:00 PM	37	160	10	207	50	141	16	207	38	120	43	201	32	204	62	298	913
05:15 PM	29	141	14	184	47	134	22	203	36	121	35	192	24	204	60	288	867
05:30 PM	23	123	15	161	39	120	22	181	44	118	47	209	24	198	62	284	835
05:45 PM	25	118	10	153	42	112	16	170	44	140	35	219	16	177	67	260	802
Total	114	542	49	705	178	507	76	761	162	499	160	821	96	783	251	1130	3417
Grand Total	229	997	124	1350	315	1158	167	1640	335	1023	343	1701	184	1691	432	2307	6998
Apprch %	17	73.9	9.2		19.2	70.6	10.2		19.7	60.1	20.2		8	73.3	18.7		
Total %	3.3	14.2	1.8	19.3	4.5	16.5	2.4	23.4	4.8	14.6	4.9	24.3	2.6	24.2	6.2	33	

	S Indian Hill Boulevard Southbound				Arrow Highway Westbound				S Indian Hill Boulevard Northbound				Arrow Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	22	105	**23**	150	31	**177**	**32**	**240**	**49**	**144**	43	**236**	18	234	46	298	**924**
04:30 PM	29	130	13	172	33	172	20	225	43	102	39	184	24	**243**	38	**305**	886
04:45 PM	34	104	16	154	42	150	21	213	37	142	**50**	229	21	216	40	277	873
05:00 PM	**37**	**160**	10	**207**	**50**	141	16	207	38	120	43	201	**32**	204	**62**	298	913
Total Volume	122	499	62	683	156	640	89	885	167	508	175	850	95	897	186	1178	3596
% App. Total	17.9	73.1	9.1		17.6	72.3	10.1		19.6	59.8	20.6		8.1	76.1	15.8		
PHF	.824	.780	.674	.825	.780	.904	.695	.922	.852	.882	.875	.900	.742	.923	.750	.966	.973

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City of Claremont
N/S: S Indian Hill Boulevard
E/W: Arrow Highway
Weather: Clear

File Name : 11_CMT_IH_Arrow PM
Site Code : 23624447
Start Date : 5/8/2024
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:15 PM				04:00 PM				04:15 PM			
+0 mins.	29	130	13	172	31	**177**	**32**	**240**	44	136	**51**	231	18	234	46	298
+15 mins.	34	104	**16**	154	33	172	20	225	**49**	**144**	43	**236**	24	**243**	38	**305**
+30 mins.	**37**	**160**	10	**207**	42	150	21	213	43	102	39	184	21	216	40	277
+45 mins.	29	141	14	184	**50**	141	16	207	37	142	50	229	**32**	204	**62**	298
Total Volume	129	535	53	717	156	640	89	885	173	524	183	880	95	897	186	1178
% App. Total	18	74.6	7.4		17.6	72.3	10.1		19.7	59.5	20.8		8.1	76.1	15.8	
PHF	.872	.836	.828	.866	.780	.904	.695	.922	.883	.910	.897	.932	.742	.923	.750	.966

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City of Claremont
N/S: Indian Hill Boulevard
E/W: Auto Center Drive
Weather: Clear

File Name : CMT_IH_AC AM
Site Code : 23625529
Start Date : 5/13/2025
Page No : 1

Groups Printed- Total Volume

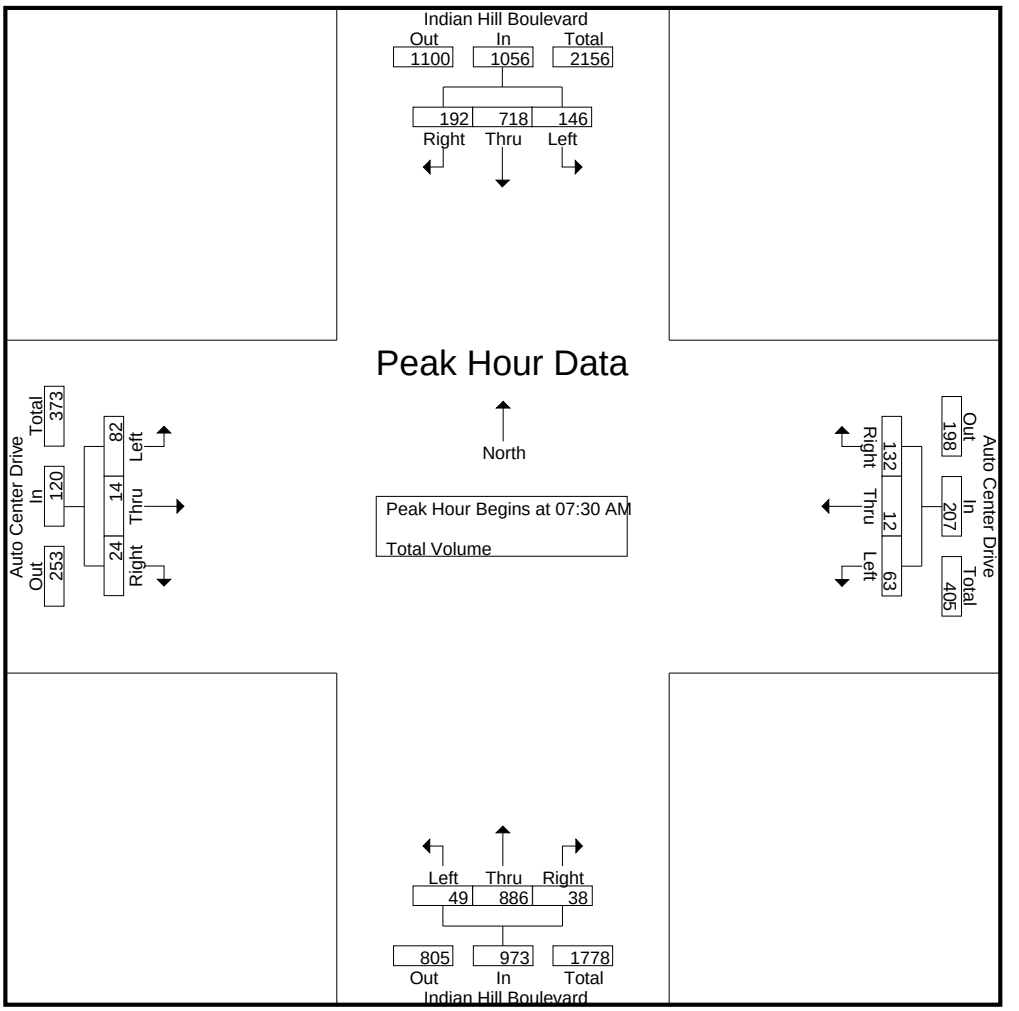
	Indian Hill Boulevard Southbound				Auto Center Drive Westbound				Indian Hill Boulevard Northbound				Auto Center Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	23	145	41	209	13	5	31	49	4	173	11	188	8	0	1	9	455
07:15 AM	33	146	39	218	11	3	41	55	5	222	16	243	17	2	1	20	536
07:30 AM	42	146	43	231	17	6	36	59	4	269	10	283	17	2	5	24	597
07:45 AM	27	186	42	255	12	3	30	45	16	252	6	274	16	3	3	22	596
Total	125	623	165	913	53	17	138	208	29	916	43	988	58	7	10	75	2184
08:00 AM	42	195	49	286	16	2	32	50	15	181	10	206	19	4	4	27	569
08:15 AM	35	191	58	284	18	1	34	53	14	184	12	210	30	5	12	47	594
08:30 AM	31	140	64	235	13	5	33	51	10	179	5	194	36	5	11	52	532
08:45 AM	23	204	53	280	10	2	24	36	10	177	5	192	37	0	10	47	555
Total	131	730	224	1085	57	10	123	190	49	721	32	802	122	14	37	173	2250
Grand Total	256	1353	389	1998	110	27	261	398	78	1637	75	1790	180	21	47	248	4434
Apprch %	12.8	67.7	19.5		27.6	6.8	65.6		4.4	91.5	4.2		72.6	8.5	19		
Total %	5.8	30.5	8.8	45.1	2.5	0.6	5.9	9	1.8	36.9	1.7	40.4	4.1	0.5	1.1	5.6	

	Indian Hill Boulevard Southbound				Auto Center Drive Westbound				Indian Hill Boulevard Northbound				Auto Center Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**42**	146	43	231	17	**6**	**36**	**59**	4	**269**	10	**283**	17	2	5	24	**597**
07:45 AM	27	186	42	255	12	3	30	45	**16**	252	6	274	16	3	3	22	596
08:00 AM	42	**195**	49	**286**	16	2	32	50	15	181	10	206	19	4	4	27	569
08:15 AM	35	191	**58**	284	**18**	1	34	53	14	184	**12**	210	**30**	**5**	**12**	**47**	594
Total Volume	146	718	192	1056	63	12	132	207	49	886	38	973	82	14	24	120	2356
% App. Total	13.8	68	18.2		30.4	5.8	63.8		5	91.1	3.9		68.3	11.7	20		
PHF	.869	.921	.828	.923	.875	.500	.917	.877	.766	.823	.792	.860	.683	.700	.500	.638	.987

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City of Claremont
N/S: Indian Hill Boulevard
E/W: Auto Center Drive
Weather: Clear

File Name : CMT_IH_AC AM
Site Code : 23625529
Start Date : 5/13/2025
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:15 AM				07:15 AM				08:00 AM			
+0 mins.	**42**	195	49	**286**	11	3	**41**	55	5	222	**16**	243	19	4	4	27
+15 mins.	35	191	58	284	**17**	**6**	36	**59**	4	**269**	10	**283**	30	**5**	**12**	47
+30 mins.	31	140	**64**	235	12	3	30	45	**16**	252	6	274	36	5	11	**52**
+45 mins.	23	**204**	53	280	16	2	32	50	15	181	10	206	**37**	0	10	47
Total Volume	131	730	224	1085	56	14	139	209	40	924	42	1006	122	14	37	173
% App. Total	12.1	67.3	20.6		26.8	6.7	66.5		4	91.8	4.2		70.5	8.1	21.4	
PHF	.780	.895	.875	.948	.824	.583	.848	.886	.625	.859	.656	.889	.824	.700	.771	.832

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City of Claremont
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File Name : CMT_IH_AC PM
Site Code : 23625529
Start Date : 5/13/2025
Page No : 1

Groups Printed- Total Volume

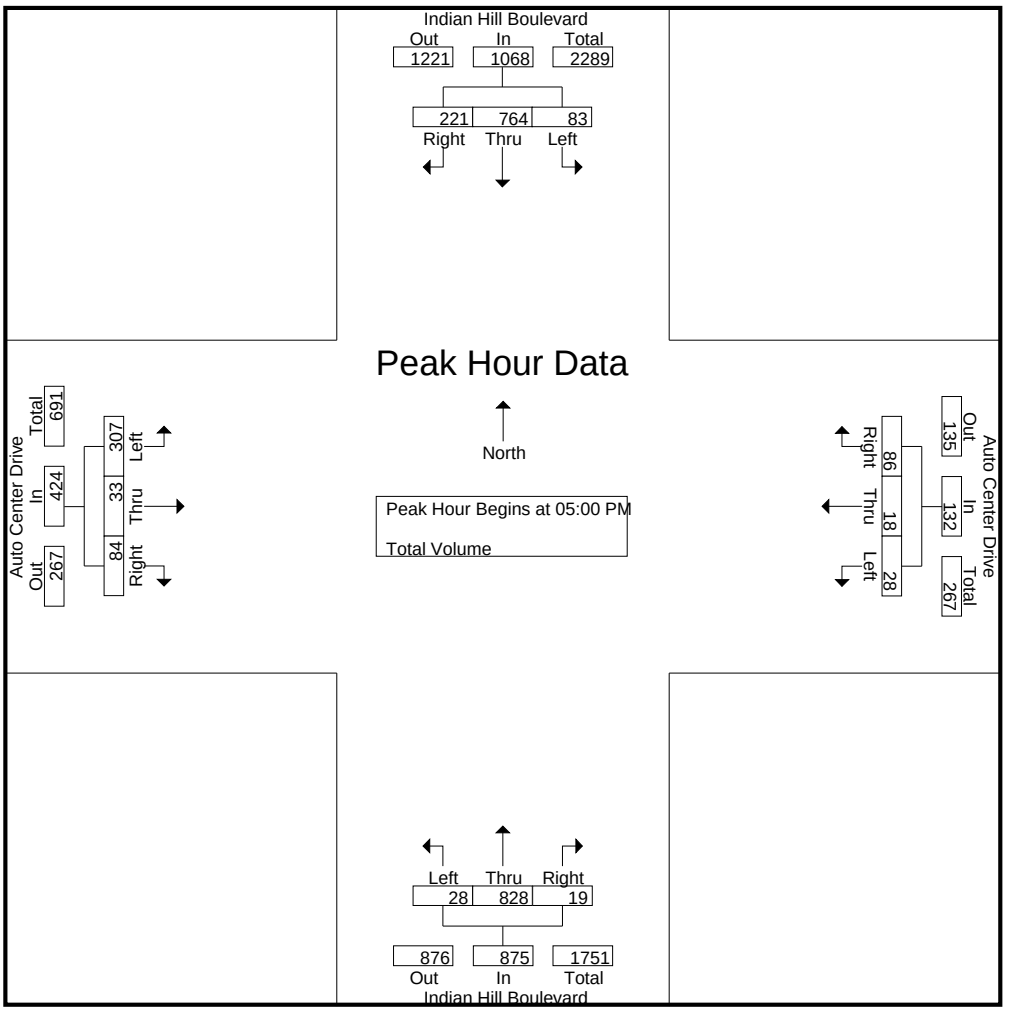
	Indian Hill Boulevard Southbound				Auto Center Drive Westbound				Indian Hill Boulevard Northbound				Auto Center Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	22	194	68	284	15	5	25	45	7	196	2	205	83	3	20	106	640
04:15 PM	15	205	57	277	13	1	20	34	7	191	6	204	58	6	12	76	591
04:30 PM	17	202	62	281	13	4	21	38	4	211	3	218	75	7	12	94	631
04:45 PM	18	177	59	254	12	4	18	34	13	197	3	213	71	3	21	95	596
Total	72	778	246	1096	53	14	84	151	31	795	14	840	287	19	65	371	2458
05:00 PM	16	201	53	270	7	2	21	30	5	199	5	209	77	14	18	109	618
05:15 PM	20	206	47	273	5	6	25	36	7	192	8	207	82	10	21	113	629
05:30 PM	22	176	59	257	13	5	21	39	6	238	2	246	67	7	20	94	636
05:45 PM	25	181	62	268	3	5	19	27	10	199	4	213	81	2	25	108	616
Total	83	764	221	1068	28	18	86	132	28	828	19	875	307	33	84	424	2499
Grand Total	155	1542	467	2164	81	32	170	283	59	1623	33	1715	594	52	149	795	4957
Apprch %	7.2	71.3	21.6		28.6	11.3	60.1		3.4	94.6	1.9		74.7	6.5	18.7		
Total %	3.1	31.1	9.4	43.7	1.6	0.6	3.4	5.7	1.2	32.7	0.7	34.6	12	1	3	16	

	Indian Hill Boulevard Southbound				Auto Center Drive Westbound				Indian Hill Boulevard Northbound				Auto Center Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	16	201	53	270	7	2	21	30	5	199	5	209	77	**14**	18	109	618
05:15 PM	20	**206**	47	**273**	5	**6**	**25**	36	7	192	**8**	207	**82**	10	21	**113**	629
05:30 PM	22	176	59	257	**13**	5	21	**39**	6	**238**	2	**246**	67	7	20	94	**636**
05:45 PM	**25**	181	**62**	268	3	5	19	27	**10**	199	4	213	81	2	**25**	108	616
Total Volume	83	764	221	1068	28	18	86	132	28	828	19	875	307	33	84	424	2499
% App. Total	7.8	71.5	20.7		21.2	13.6	65.2		3.2	94.6	2.2		72.4	7.8	19.8		
PHF	.830	.927	.891	.978	.538	.750	.860	.846	.700	.870	.594	.889	.936	.589	.840	.938	.982

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Claremont
N/S: Indian Hill Boulevard
E/W: Auto Center Drive
Weather: Clear

File Name : CMT_IH_AC PM
Site Code : 23625529
Start Date : 5/13/2025
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:45 PM				05:00 PM			
+0 mins.	**22**	194	**68**	**284**	**15**	**5**	**25**	**45**	**13**	197	3	213	77	**14**	18	109
+15 mins.	15	**205**	57	277	13	1	20	34	5	199	5	209	**82**	10	21	**113**
+30 mins.	17	202	62	281	13	4	21	38	7	192	**8**	207	67	7	20	94
+45 mins.	18	177	59	254	12	4	18	34	6	**238**	2	**246**	81	2	**25**	108
Total Volume	72	778	246	1096	53	14	84	151	31	826	18	875	307	33	84	424
% App. Total	6.6	71	22.4		35.1	9.3	55.6		3.5	94.4	2.1		72.4	7.8	19.8	
PHF	.818	.949	.904	.965	.883	.700	.840	.839	.596	.868	.563	.889	.936	.589	.840	.938

APPENDIX D

CUMULATIVE PROJECT LISTS
CITY OF POMONA
CITY OF MONTCLAIR

City of Pomona
Cumulative Projects
4/30/2025

Plan Number	Address	Plan Type	Plan Description
DPR-000236-2024	1463 W MISSION BLVD	PLN - Development Plan Review	New 18 unit apartment building along W MIssion Blvd; 4 stories tall.
DPR-021813-2023	2145 N GAREY AVE	PLN - Development Plan Review	(N) 3-story unit Multi-Family Residential development with 6 different
DPR-022373-2023	1438 W ELEVENTH ST	PLN - Development Plan Review	multi-residential 9 (n) units. Associated with: CUP-015380-2021
DPR-021948-2023	400 E FOURTH ST	PLN - Development Plan Review	5-story structure including 10 for-sale work force condos.
DPR-022736-2023	1304 W SECOND ST	PLN - Development Plan Review	Land use conversion from industrial to residential. Proposed: One nev
DPR-000238-2024	416 N GAREY AVE	PLN - Development Plan Review	Proposal: 56 residential units + 3 retails units.
DPR-000563-2024	882 E PHILLIPS BLVD	PLN - Development Plan Review	Resubmittal of DPR and revised plans. Previous DPR-020024-2022 pr
DPR-022671-2023	1423 S GIBBS ST	PLN - Development Plan Review	New 8-unit multi-family development per RN1 standards within the SE
DPR-023019-2023	1061 E PHILLIPS BLVD	PLN - Development Plan Review	(n) 16 total units - 8 single story units and 8 townhomes
DPR-000941-2024	1377 N GAREY AVE	PLN - Development Plan Review	proposed 4-story dwellings of 35 apartment units and proposed 35 AD
DPR-000072-2024	3101 N GAREY AVE	PLN - Development Plan Review	DPR for 289 residential rental units and 411 parking spaces. Two build
DPR-021912-2023	100 E HOLT AVE	PLN - Development Plan Review	Facade remodel of existing drive through restaurant of Jack in the Box,
CUP-000379-2024	910 E SECOND ST	PLN - Conditional Use Permit	construction of (2) concrete tilt-up warehouse buildings (9,552 sqft ea
DPR-000038-2024	1601 W MISSION BLVD	PLN - Development Plan Review	Proposed demolition of (e) 749.184 sf industrial building. Related on-s
DPR-021512-2023	1427 S WHITE AVE	PLN - Development Plan Review	1427 S White Avenue Project (CUP-2017) 20 Residential Units
DPR-000246-2024	3220 W TEMPLE AVE	PLN - Development Plan Review	92-unit apartment development
DPR-021837-2023	1170 MURCHISON AVE U	PLN - Development Plan Review	Development Plan Review: Demolish (D) Eleven (11) existing rental un
DPR-000288-2024	221 W HOLT AVE	PLN - Development Plan Review	160 (n) affordable housing development on vacant land, 6 stories with
DPR-001770-2024	882 E PHILLIPS BLVD	PLN - Development Plan Review	43 single-family home units with 40 parking spaces (ENV-001771-202
DPR-001733-2024	314 E MONTEREY AVE	PLN - Development Plan Review	Podium style apartment building with 14 units and ground level parkin
DPR-022988-2023	2128 N GAREY AVE	PLN - Development Plan Review	1 (n) 4,400 square foot commercial structure on (e) vacant land - PCS
DPR-022550-2023	1518 ARROYO AVE	PLN - Development Plan Review	A DPR application to develop 15 apartment units , 1400 SF per unit 2.5
DPR-001519-2024	3255 POMONA BLVD	PLN - Development Plan Review	New industrial building. Previously reviewed under CUP-018317-2022
DPR-000039-2025	1190 E PASADENA ST	PLN - Development Plan Review	3-story building w/ 28 units. 100% affordable shared housing
DPR-000462-2024	675 E MISSION BLVD	PLN - Development Plan Review	36 residential units
DPR-001727-2024	3619 N GAREY AVE	PLN - Development Plan Review	Development review associated with the construction of a new schoo
DPR-000151-2025	1421 S GAREY AVE	PLN - Development Plan Review	Change of use from hotel to long-term residential units.
DPR-001227-2024	252 W FRANKLIN AVE	PLN - Development Plan Review	15 three-story townhome units, totaling 25,483 square feet
DPR-022353-2023	1105 E SEVENTH ST	PLN - Development Plan Review	Proposal: 40 2-bed dwelling units in two (2) 3-story buildings on a 1.05
DPR-001387-2024	398 S SAN ANTONIO	PLN - Development Plan Review	100 three-story attached townhouses ranging from 1255 SQFT to 1765
DPR-000271-2024	221 W HOLT AVE	PLN - Development Plan Review	DPR in conjuntion with SB-330 Application submitted under MISC-000
DPR-000439-2024	857 W MONTEREY AVE	PLN - Development Plan Review	Construct 15 units.
DPR-001359-2024	700 E FOOTHILL BLVD	PLN - Development Plan Review	DPR for the development of 59 condominium units; associated with M
CUP-000011-2024	1760 E MISSION BLVD	PLN - Conditional Use Permit	New development of industrial property over an acre
DPR-001370-2024	888 W MISSION BLVD	PLN - Development Plan Review	Development Plan Review for 462 residential apartment units, 80% lo
DPR-001358-2024	700 E FOOTHILL BLVD	PLN - Development Plan Review	DPR associated with MISC 001357-2024 for the development of 59 co
DPR-000020-2024	1525 VIA ESTRELLA	PLN - Development Plan Review	Development of three detached single family homes on three separate
DPR-001409-2024	1500 E MISSION BLVD	PLN - Development Plan Review	Development Review for a new speculative warehouse for distribution
CUP-000925-2024	1201 E LEXINGTON AVE	PLN - Conditional Use Permit	Request for the construction of new industrial building.
DPR-000217-2024	2601 S TOWNE AVE	PLN - Development Plan Review	DPR for the development of 96 townhomes
DPR-021499-2023	1707 N TOWNE AVE	PLN - Development Plan Review	45 unit, 3-story (37-ft)
DPR-000991-2024	2250 N GAREY AVE	PLN - Development Plan Review	Facade improvements and 821 SQFT addition to existing structure
DPR-001577-2024	898 N GAREY AVE	PLN - Development Plan Review	Exterior remodel and 3,270 sf addition to commercial building at 898 I
DPR-000301-2025	1422 S GAREY AVE	PLN - Development Plan Review	83 units of market-rate apartments
DPR-000337-2025	505 S GAREY AVE	PLN - Development Plan Review	TESTING NEW WORKFLOW
DPR-001466-2024	401 W MONTEREY AVE	PLN - Development Plan Review	Construction of 8-unit 3-story apartment buildings (ENV-001468-2024
DPR-000348-2025	348 N PALOMARES ST	PLN - Development Plan Review	3-unit residential development on an existing vacant lot zoned R-MF ir
DPR-000179-2025	874 E ARROW HWY	PLN - Development Plan Review	Development Plan Review for the development of 21 three-story cond
DPR-001018-2024	1490 W MISSION BLVD	PLN - Development Plan Review	Residential, 46 units, rental product
DPR-021570-2023	100 N MOUNTAIN VIEW	PLN - Development Plan Review	PROJECT RESUBMITTED

City of Montclair
Residential Development Summary
(Updated: April 30, 2025)

Following is a listing of all residential developments in various stages of plan review, construction or are recently completed in the City of Montclair and the sphere of influence area. Every effort has been made to provide the most relevant information for public use. However, we make no representation that all project data and contact information are current. For further information concerning details and status of these and/or other unlisted projects, you may wish to contact the respective developers listed herein or the Montclair Planning Division at (909) 625-9477 during our public counter hours of 7:00-9:00 a.m. and 4:00-6:00 p.m., Monday through Thursday. You may also e-mail your inquiry to Senior Planner Silvia Gutierrez at *sgutierrez@cityofmontclair.org*.

Case No.	Project Description	Acres	Units	General Location (Assessor's Parcel No.)	Developer / Phone No.	Commission & Council Actions	Project Status
2021-36	Multi-family residential development with community building & amenities within North Montclair Downtown SP	2.85	137	SWC Arrow Highway and Monte Vista Avenue	Alexan Trammel Crow Reece Pettersen *Development Associate* 5790 Fleet Street, Suite 140 | Carlsbad, CA 92008 rpettersen@crowholdings.com P: 760.444.5236 | C: 760.803.0871 www.crowholdings.com/tcr	CC Approved 7/18/2022	Under construction Occupancy expected Summer 2025
2017-20	Village at Montclair (Mixed-Use) TM No. 20273 Village Partners (Developer)	6.68-gross acres	350 330 Apts 10 Flex 10 Commercial	Currently 5050 Arrow Hwy	Village Partner Ventures Kaitlin Morris Village Partners | Development Ma phone: (949) 433-4557 site: www.VillagePartners.com email: kaitlin@villagepartners.com address: 4340 Von Karman Avenu Newport Beach, CA 92660 Kaitlin Morris Development Manager phone: (949) 433-4557 site: www.VillagePartners.com email: kaitlin@villagepartners.com address: 4340 Von Karman Avenu Newport Beach, CA 92660	CC- Approved 12/7/2020	Under construction Occupancy expected Summer 2025

APPENDIX E

HCM ANALYSIS WORKSHEETS

EXISTING CONDITIONS

Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.522

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
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	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	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]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	37	929	5	72	623	6	3	8	23	4	13	168
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	37	929	5	72	623	6	3	8	23	4	13	168
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
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]	10	249	1	19	167	2	1	2	6	1	3	45
Total Analysis Volume [veh/h]	40	998	5	77	669	6	3	9	25	4	14	180
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	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	22	0	5	22	0	0	41	0	0	41	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	40.0	0.0	9.0	40.0	0.0	0.0	31.0	0.0	0.0	31.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
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]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	59.3	51.2	51.2	59.3	52.3	52.3	12.7	12.7
g / C, Green / Cycle	0.74	0.64	0.64	0.74	0.65	0.65	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.05	0.29	0.29	0.12	0.21	0.00	0.02	0.13
s, saturation flow rate [veh/h]	776	1710	1707	629	3256	1454	1564	1474
c, Capacity [veh/h]	635	1093	1091	513	2128	950	298	281
d1, Uniform Delay [s]	3.19	7.37	7.37	4.07	6.04	4.82	28.97	32.66
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	1.39	1.39	0.62	0.39	0.01	0.19	3.24
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	0.46	0.46	0.15	0.31	0.01	0.12	0.71
d, Delay for Lane Group [s/veh]	3.24	8.76	8.76	4.69	6.43	4.83	29.16	35.89
Lane Group LOS	A	A	A	A	A	A	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.11	3.74	3.73	0.30	2.04	0.03	0.64	3.92
50th-Percentile Queue Length [ft/ln]	2.66	93.43	93.29	7.54	51.02	0.77	16.01	97.95
95th-Percentile Queue Length [veh/ln]	0.19	6.73	6.72	0.54	3.67	0.06	1.15	7.05
95th-Percentile Queue Length [ft/ln]	4.78	168.18	167.92	13.58	91.84	1.38	28.82	176.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.24	8.76	8.76	4.69	6.43	4.83	29.16	29.16	29.16	35.89	35.89	35.89
Movement LOS	A	A	A	A	A	A	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	8.55			6.24			29.16			35.89		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	10.73											
Intersection LOS	B											
Intersection V/C	0.522											

Emissions

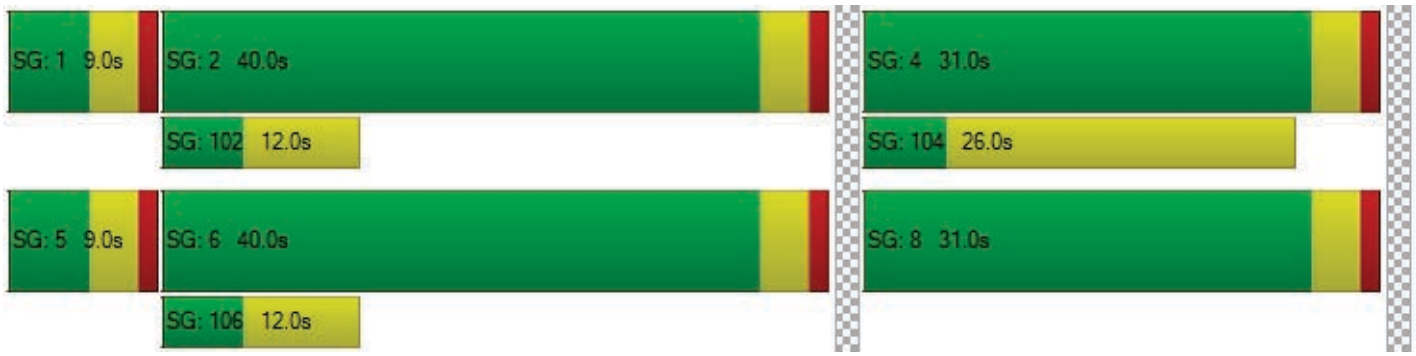
Vehicle Miles Traveled [mph]	10.14	127.19	126.97	5.99	52.02	0.47	0.88	19.61
Stops [stops/h]	4.78	168.18	167.92	13.58	183.68	1.38	28.82	176.30
Fuel consumption [US gal/h]	0.44	7.10	7.09	0.40	4.24	0.03	0.31	3.00
CO [g/h]	30.51	496.47	495.65	28.23	296.37	2.38	21.49	210.00
NOx [g/h]	5.94	96.60	96.43	5.49	57.66	0.46	4.18	40.86
VOC [g/h]	7.07	115.06	114.87	6.54	68.69	0.55	4.98	48.67

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.819	1.773	1.901
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	900	675	675
d_b, Bicycle Delay [s]	12.10	12.10	17.56	17.56
l_b,int, Bicycle LOS Score for Intersection	2.420	2.180	1.621	1.886
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	18.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
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	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	96	697	39	36	496	118	153	207	138	46	252	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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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	697	39	36	496	118	153	207	138	46	252	92
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
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	194	11	10	138	33	43	58	38	13	70	26
Total Analysis Volume [veh/h]	107	774	43	40	551	131	170	230	153	51	280	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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	15	19	0	15	19	0	0	24	0	0	24	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	16.0	26.0	0.0	14.0	24.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	5.4	31.4	31.4	2.7	28.7	28.7	23.9	23.9	23.9	23.9	23.9	23.9
g / C, Green / Cycle	0.08	0.45	0.45	0.04	0.41	0.41	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.06	0.22	0.22	0.02	0.19	0.19	0.17	0.12	0.09	0.05	0.15	0.06
s, saturation flow rate [veh/h]	1810	1900	1865	1810	1900	1776	1017	1900	1615	1016	1900	1615
c, Capacity [veh/h]	141	853	837	71	780	729	301	646	549	324	646	549
d1, Uniform Delay [s]	31.65	13.57	13.57	33.02	14.92	14.93	27.25	17.33	16.83	22.53	17.87	16.26
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	8.21	1.96	1.99	6.73	1.88	2.03	1.67	0.33	0.27	0.22	0.46	0.16
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	0.76	0.48	0.48	0.56	0.45	0.45	0.57	0.36	0.28	0.16	0.43	0.19
d, Delay for Lane Group [s/veh]	39.86	15.53	15.57	39.75	16.80	16.96	28.92	17.67	17.10	22.76	18.33	16.42
Lane Group LOS	D	B	B	D	B	B	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	1.98	4.36	4.29	0.76	3.92	3.71	2.70	2.60	1.68	0.67	3.27	1.08
50th-Percentile Queue Length [ft/ln]	49.53	108.93	107.14	19.03	98.03	92.80	67.39	64.91	42.00	16.71	81.65	27.00
95th-Percentile Queue Length [veh/ln]	3.57	7.78	7.68	1.37	7.06	6.68	4.85	4.67	3.02	1.20	5.88	1.94
95th-Percentile Queue Length [ft/ln]	89.15	194.51	192.02	34.25	176.46	167.04	121.30	116.83	75.60	30.07	146.97	48.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.86	15.55	15.57	39.75	16.85	16.96	28.92	17.67	17.10	22.76	18.33	16.42
Movement LOS	D	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.37			18.14			20.97			18.40		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	18.86											
Intersection LOS	B											
Intersection V/C	0.498											

Emissions

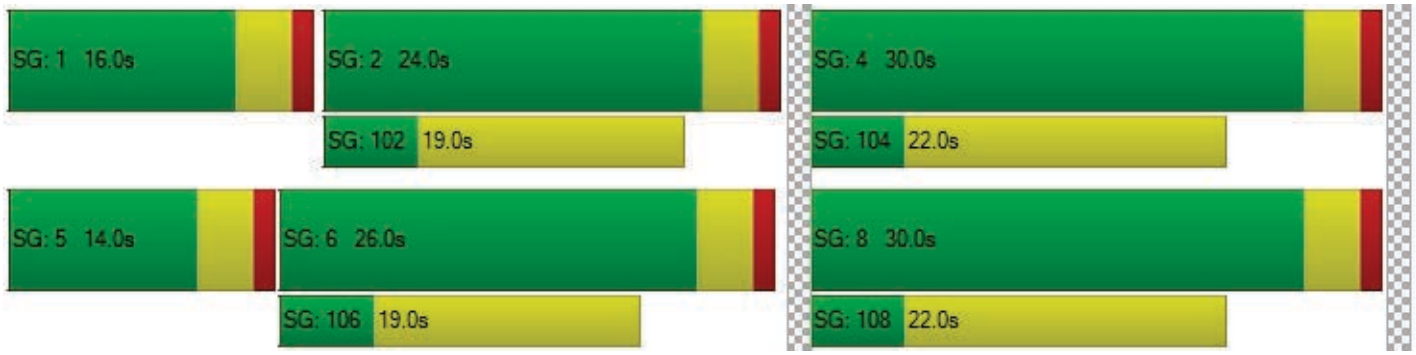
Vehicle Miles Traveled [mph]	8.26	31.82	31.24	10.14	89.14	83.68	10.86	14.69	9.77	12.71	69.76	25.41
Stops [stops/h]	101.89	224.08	220.40	39.14	201.67	190.91	138.63	133.53	86.40	34.37	167.96	55.55
Fuel consumption [US gal/h]	2.16	4.64	4.57	1.07	6.38	6.01	2.46	2.39	1.55	0.98	4.97	1.73
CO [g/h]	151.31	324.65	319.20	74.88	445.74	420.26	171.75	167.14	108.69	68.43	347.16	120.74
NOx [g/h]	29.44	63.16	62.10	14.57	86.72	81.77	33.42	32.52	21.15	13.31	67.54	23.49
VOC [g/h]	35.07	75.24	73.98	17.35	103.30	97.40	39.80	38.74	25.19	15.86	80.46	27.98

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.798	2.990	2.424	2.332
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	629	571	743	743
d_b, Bicycle Delay [s]	16.46	17.86	13.83	13.83
l_b,int, Bicycle LOS Score for Intersection	2.322	2.155	2.472	2.274
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	8	19	15	242	337	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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]	8	19	15	242	337	2
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	5	4	69	96	1
Total Analysis Volume [veh/h]	9	22	17	275	383	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.03	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	14.25	10.76	8.06	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.17	0.17	0.03	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.36	4.36	0.71	0.71	0.00	0.00
d_A, Approach Delay [s/veh]	11.78		0.47		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.71					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.142

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
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	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	24	1	2	0	0	6	5	36	13	0	104	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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]	24	1	2	0	0	6	5	36	13	0	104	0
Peak Hour Factor	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230
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]	7	0	1	0	0	2	2	11	4	0	32	0
Total Analysis Volume [veh/h]	29	1	2	0	0	7	6	44	16	0	126	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	807	963	905	889
Degree of Utilization, x	0.04	0.01	0.07	0.14

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.12	0.02	0.24	0.49
95th-Percentile Queue Length [ft]	3.09	0.55	5.89	12.32
Approach Delay [s/veh]	7.64	6.77	7.29	7.72
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.56			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
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	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	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]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	814	374	351	610	0	388	2	351	0	0	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	0	814	374	351	610	0	388	2	351	0	0	0
Peak Hour Factor	1.0000	0.9220	0.9220	0.9220	0.9220	1.0000	0.9220	0.9220	0.9220	1.0000	1.0000	1.0000
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	221	101	95	165	0	105	1	95	0	0	0
Total Analysis Volume [veh/h]	0	883	406	381	662	0	421	2	381	0	0	0
Presence of On-Street Parking	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]	60
Active Pattern	Pattern 1
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 (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	22	40	0	0	12	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
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				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	0.0	21.0	0.0	21.0	42.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	
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]	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	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	21.5	21.5	21.5	14.6	40.0	12.0	12.0	12.0	
g / C, Green / Cycle	0.36	0.36	0.36	0.24	0.67	0.20	0.20	0.20	
(v / s)_i Volume / Saturation Flow Rate	0.18	0.20	0.20	0.21	0.18	0.15	0.16	0.16	
s, saturation flow rate [veh/h]	3618	1628	1615	1810	3618	1810	1716	1615	
c, Capacity [veh/h]	1291	581	576	440	2412	362	343	323	
d1, Uniform Delay [s]	15.10	15.47	15.50	21.76	4.08	22.67	22.76	22.86	
k, delay calibration	0.50	0.50	0.50	0.19	0.50	0.17	0.18	0.19	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.38	3.79	3.89	8.74	0.28	5.14	6.23	7.72	
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	0.50	0.55	0.56	0.87	0.27	0.77	0.78	0.80	
d, Delay for Lane Group [s/veh]	16.48	19.26	19.39	30.51	4.36	27.81	28.99	30.59	
Lane Group LOS	B	B	B	C	A	C	C	C	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.22	3.66	3.68	5.77	1.17	3.79	3.78	3.78	
50th-Percentile Queue Length [ft/ln]	80.62	91.53	91.96	144.17	29.30	94.71	94.42	94.38	
95th-Percentile Queue Length [veh/ln]	5.80	6.59	6.62	9.71	2.11	6.82	6.80	6.80	
95th-Percentile Queue Length [ft/ln]	145.11	164.75	165.53	242.63	52.75	170.48	169.96	169.89	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	16.56	19.36	30.51	4.36	0.00	28.23	28.99	30.10	0.00	0.00	0.00
Movement LOS		B	B	C	A		C	C	C			
d_A, Approach Delay [s/veh]	17.90			13.91			29.10			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	19.45											
Intersection LOS	B											
Intersection V/C	0.658											

Emissions

Vehicle Miles Traveled [mph]	33.16	16.58	16.58	17.19	29.86	23.81	23.07	22.24
Stops [stops/h]	386.96	219.67	220.71	346.01	140.66	227.31	226.61	226.52
Fuel consumption [US gal/h]	6.34	3.55	3.56	4.98	2.59	4.65	4.64	4.63
CO [g/h]	442.89	247.93	249.09	348.41	181.33	325.24	324.03	323.77
NOx [g/h]	86.17	48.24	48.46	67.79	35.28	63.28	63.04	62.99
VOC [g/h]	102.64	57.46	57.73	80.75	42.02	75.38	75.10	75.04

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.269	2.080
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	567	1267	467	0
d_b, Bicycle Delay [s]	15.41	4.03	17.63	30.00
l_b,int, Bicycle LOS Score for Intersection	2.269	2.420	2.886	4.132
Bicycle LOS	B	B	C	D

Sequence

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



Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
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	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
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			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	468	746	0	0	679	460	0	0	0	237	1	206
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	468	746	0	0	679	460	0	0	0	237	1	206
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
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]	132	211	0	0	192	130	0	0	0	67	0	58
Total Analysis Volume [veh/h]	529	844	0	0	768	520	0	0	0	268	1	233
Presence of On-Street Parking	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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	27	52	0	0	21	0	0	0	0	0	10	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	27.0	56.0	0.0	0.0	29.0	0.0	0.0	0.0	0.0	0.0	14.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	70	70	70	70		70	70	70
L, Total Lost Time per Cycle [s]	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	22.1	52.0	25.9	25.9		10.0	10.0	10.0
g / C, Green / Cycle	0.32	0.74	0.37	0.37		0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.29	0.23	0.15	0.32		0.10	0.10	0.10
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1717	1615
c, Capacity [veh/h]	572	2687	1912	597		258	245	231
d1, Uniform Delay [s]	23.12	3.02	16.34	20.53		28.50	28.50	28.50
k, delay calibration	0.36	0.50	0.50	0.50		0.16	0.16	0.16
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	17.96	0.31	0.63	16.04		4.73	4.98	5.28
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.31	0.40	0.87		0.68	0.68	0.68
d, Delay for Lane Group [s/veh]	41.08	3.32	16.97	36.57		33.23	33.47	33.78
Lane Group LOS	D	A	B	D		C	C	C
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	10.65	1.28	2.92	9.83		2.95	2.82	2.67
50th-Percentile Queue Length [ft/ln]	266.30	31.97	73.12	245.87		73.73	70.39	66.69
95th-Percentile Queue Length [veh/ln]	16.00	2.30	5.26	14.98		5.31	5.07	4.80
95th-Percentile Queue Length [ft/ln]	400.12	57.55	131.62	374.45		132.71	126.70	120.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.08	3.32	0.00	0.00	16.97	36.57	0.00	0.00	0.00	33.32	33.47	33.69
Movement LOS	D	A			B	D				C	C	C
d_A, Approach Delay [s/veh]	17.87			24.88			0.00			33.48		
Approach LOS	B			C			A			C		
d_I, Intersection Delay [s/veh]	23.20											
Intersection LOS	C											
Intersection V/C	0.804											

Emissions

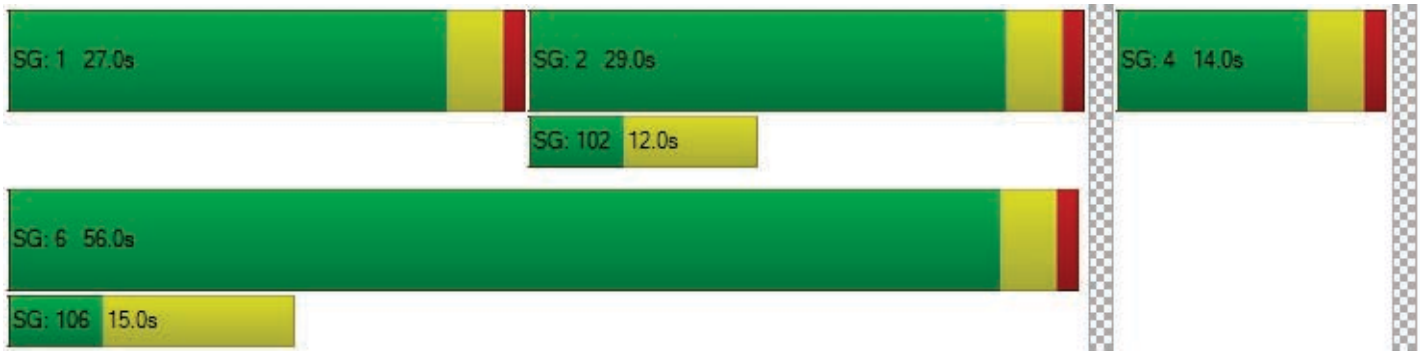
Vehicle Miles Traveled [mph]	23.86	38.07	28.48	19.28		14.75	14.00	13.16
Stops [stops/h]	547.83	131.54	451.26	505.80		151.67	144.80	137.20
Fuel consumption [US gal/h]	8.43	2.87	6.32	7.46		3.21	3.07	2.90
CO [g/h]	589.35	200.27	441.67	521.29		224.57	214.30	202.94
NOx [g/h]	114.67	38.97	85.93	101.42		43.69	41.69	39.48
VOC [g/h]	136.59	46.42	102.36	120.81		52.05	49.67	47.03

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.216	2.147
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1486	714	0	286
d_b, Bicycle Delay [s]	2.31	14.46	35.00	25.71
l_b,int, Bicycle LOS Score for Intersection	2.692	2.268	4.132	2.388
Bicycle LOS	B	B	D	B

Sequence

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



Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
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	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	71	790	102	40	760	20	41	79	183	216	101	62
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	71	790	102	40	760	20	41	79	183	216	101	62
Peak Hour Factor	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450
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]	21	234	30	12	225	6	12	23	54	64	30	18
Total Analysis Volume [veh/h]	84	935	121	47	899	24	49	93	217	256	120	73
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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	13	27	0	5	19	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	16.0	29.0	0.0	11.0	24.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	4.3	32.0	32.0	3.0	30.7	30.7	23.0	23.0	23.0	23.0	23.0	23.0
g / C, Green / Cycle	0.06	0.46	0.46	0.04	0.44	0.44	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.05	0.28	0.28	0.03	0.17	0.17	0.04	0.05	0.13	0.24	0.06	0.05
s, saturation flow rate [veh/h]	1810	1900	1825	1810	3618	1875	1209	1900	1615	1086	1900	1615
c, Capacity [veh/h]	111	869	834	78	1588	823	408	624	530	388	624	530
d1, Uniform Delay [s]	32.35	14.39	14.40	32.91	13.24	13.24	20.40	16.60	18.24	24.88	16.85	16.53
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.18	0.11	0.11
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
d2, Incremental Delay [s]	10.14	3.31	3.46	7.32	0.70	1.35	0.13	0.11	0.51	3.12	0.15	0.12
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	0.76	0.62	0.62	0.60	0.38	0.38	0.12	0.15	0.41	0.66	0.19	0.14
d, Delay for Lane Group [s/veh]	42.49	17.71	17.86	40.23	13.94	14.59	20.53	16.71	18.74	28.00	17.00	16.65
Lane Group LOS	D	B	B	D	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.67	6.56	6.35	0.90	2.92	3.18	0.60	0.99	2.57	4.17	1.33	0.79
50th-Percentile Queue Length [ft/ln]	41.65	164.09	158.65	22.38	72.97	79.49	14.96	24.78	64.19	104.24	33.21	19.87
95th-Percentile Queue Length [veh/ln]	3.00	10.77	10.48	1.61	5.25	5.72	1.08	1.78	4.62	7.51	2.39	1.43
95th-Percentile Queue Length [ft/ln]	74.97	269.13	261.94	40.28	131.35	143.08	26.93	44.61	115.54	187.64	59.78	35.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.49	17.77	17.86	40.23	14.15	14.59	20.53	16.71	18.74	28.00	17.00	16.65
Movement LOS	D	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	19.60			15.43			18.46			23.21		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.63											
Intersection LOS	B											
Intersection V/C	0.658											

Emissions

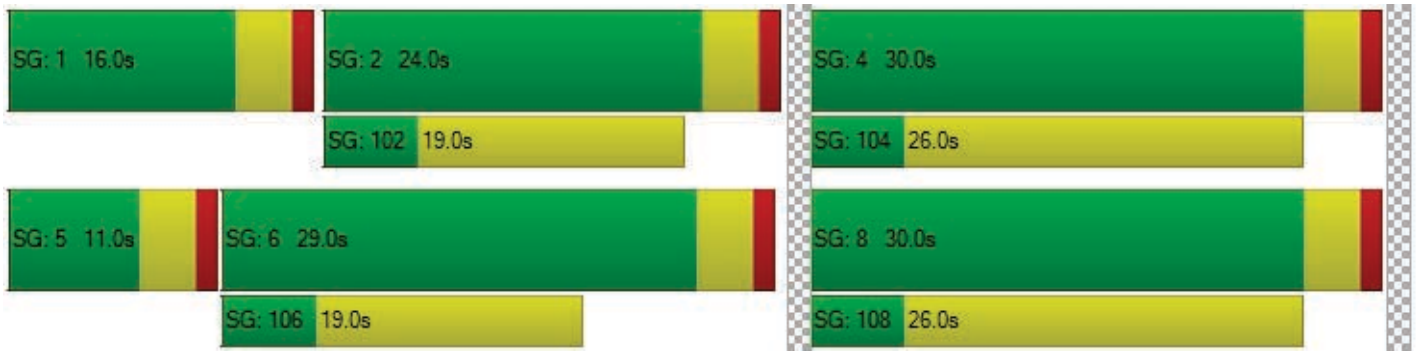
Vehicle Miles Traveled [mph]	3.59	22.98	22.10	23.35	301.89	156.69	2.93	5.55	12.96	14.65	6.87	4.18
Stops [stops/h]	85.68	337.56	326.38	46.04	300.23	163.52	30.77	50.98	132.04	214.45	68.32	40.88
Fuel consumption [US gal/h]	1.35	4.75	4.59	1.67	15.49	8.16	0.55	0.91	2.31	3.25	1.08	0.65
CO [g/h]	94.18	332.10	321.13	116.97	1082.53	570.08	38.29	63.70	161.80	226.95	75.17	45.10
NOx [g/h]	18.32	64.61	62.48	22.76	210.62	110.92	7.45	12.39	31.48	44.16	14.62	8.78
VOC [g/h]	21.83	76.97	74.42	27.11	250.89	132.12	8.87	14.76	37.50	52.60	17.42	10.45

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	3.214	2.951	2.287	2.293
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	714	571	743	743
d_b, Bicycle Delay [s]	14.46	17.86	13.83	13.83
l_b,int, Bicycle LOS Score for Intersection	2.500	2.093	2.152	2.300
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	12.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.592

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
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	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	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]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	4	2	2	38	3	79	35	77	2	5	275	47
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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]	4	2	2	38	3	79	35	77	2	5	275	47
Peak Hour Factor	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130
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]	1	1	1	13	1	28	12	27	1	2	96	16
Total Analysis Volume [veh/h]	6	3	3	53	4	111	49	108	3	7	386	66
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	635	706	645	763	775
Degree of Utilization, x	0.02	0.24	0.24	0.00	0.59

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.06	0.92	0.95	0.01	3.96
95th-Percentile Queue Length [ft]	1.44	23.10	23.75	0.30	98.95
Approach Delay [s/veh]	8.78	9.68	10.02		14.15
Approach LOS	A	A	B		B
Intersection Delay [s/veh]	12.30				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	115.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	220	660	490	88	26	111
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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]	220	660	490	88	26	111
Peak Hour Factor	0.8580	0.8580	0.8580	0.8580	0.8580	0.8580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	192	143	26	8	32
Total Analysis Volume [veh/h]	256	769	571	103	30	129
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	0.28	0.01	0.01	0.00	0.50	0.25
d_M, Delay for Movement [s/veh]	10.36	0.00	0.00	0.00	115.54	14.10
Movement LOS	B	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	1.13	0.00	0.00	0.00	1.98	0.96
95th-Percentile Queue Length [ft/ln]	28.25	0.00	0.00	0.00	49.54	24.02
d_A, Approach Delay [s/veh]	2.59		0.00		33.24	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	4.27					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	35.5
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.102

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	74	656	432	24	11	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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]	74	656	432	24	11	25
Peak Hour Factor	0.8370	0.8370	0.8370	0.8370	0.8370	0.8370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	196	129	7	3	7
Total Analysis Volume [veh/h]	88	784	516	29	13	30
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
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	0.09	0.01	0.01	0.00	0.10	0.05
d_M, Delay for Movement [s/veh]	8.80	0.00	0.00	0.00	35.49	13.76
Movement LOS	A	A	A	A	E	B
95th-Percentile Queue Length [veh/ln]	0.28	0.00	0.00	0.00	0.54	0.54
95th-Percentile Queue Length [ft/ln]	6.96	0.00	0.00	0.00	13.49	13.49
d_A, Approach Delay [s/veh]	0.89		0.00		20.33	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.13					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	34.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
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	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	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]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	159	523	202	64	447	35	51	391	163	150	702	81
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	159	523	202	64	447	35	51	391	163	150	702	81
Peak Hour Factor	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380
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]	47	156	60	19	133	10	15	117	49	45	209	24
Total Analysis Volume [veh/h]	190	624	241	76	533	42	61	467	195	179	838	97
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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	23	44	0	5	26	0	7	22	0	13	28	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	22.0	35.0	0.0	17.0	30.0	0.0	14.0	26.0	0.0	22.0	34.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
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	

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	L	C	R	L	C	C
C, Calculated 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]	2.00	2.00	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]	12.4	26.9	26.9	5.5	20.0	20.0	4.5	39.7	39.7	11.9	47.2	47.2
g / C, Green / Cycle	0.12	0.27	0.27	0.05	0.20	0.20	0.04	0.40	0.40	0.12	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.11	0.24	0.24	0.04	0.15	0.15	0.03	0.13	0.12	0.10	0.25	0.25
s, saturation flow rate [veh/h]	1810	1900	1722	1810	1900	1852	1810	3618	1615	1810	1900	1832
c, Capacity [veh/h]	225	511	463	100	380	370	81	1432	639	217	894	862
d1, Uniform Delay [s]	42.82	35.10	35.11	46.57	37.79	37.81	47.20	20.95	20.75	43.00	18.69	18.69
k, delay calibration	0.13	0.18	0.18	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	9.67	8.56	9.38	11.00	3.24	3.36	12.96	0.61	1.23	7.79	2.26	2.35
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	0.84	0.89	0.89	0.76	0.77	0.77	0.75	0.33	0.30	0.83	0.53	0.53
d, Delay for Lane Group [s/veh]	52.49	43.66	44.49	57.57	41.03	41.17	60.16	21.56	21.98	50.79	20.95	21.04
Lane Group LOS	D	D	D	E	D	D	E	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.06	11.33	10.38	2.14	6.91	6.76	1.74	3.66	3.14	4.66	7.76	7.51
50th-Percentile Queue Length [ft/ln]	126.52	283.15	259.45	53.56	172.67	169.12	43.57	91.46	78.62	116.61	194.08	187.80
95th-Percentile Queue Length [veh/ln]	8.75	16.85	15.66	3.86	11.22	11.03	3.14	6.59	5.66	8.21	12.33	12.01
95th-Percentile Queue Length [ft/ln]	218.75	421.13	391.54	96.41	280.43	275.76	78.42	164.63	141.52	205.16	308.32	300.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.49	43.88	44.49	57.57	41.09	41.17	60.16	21.56	21.98	50.79	20.99	21.04
Movement LOS	D	D	D	E	D	D	E	C	C	D	C	C
d_A, Approach Delay [s/veh]	45.57			43.02			24.93			25.78		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	34.67											
Intersection LOS	C											
Intersection V/C	0.673											

Emissions

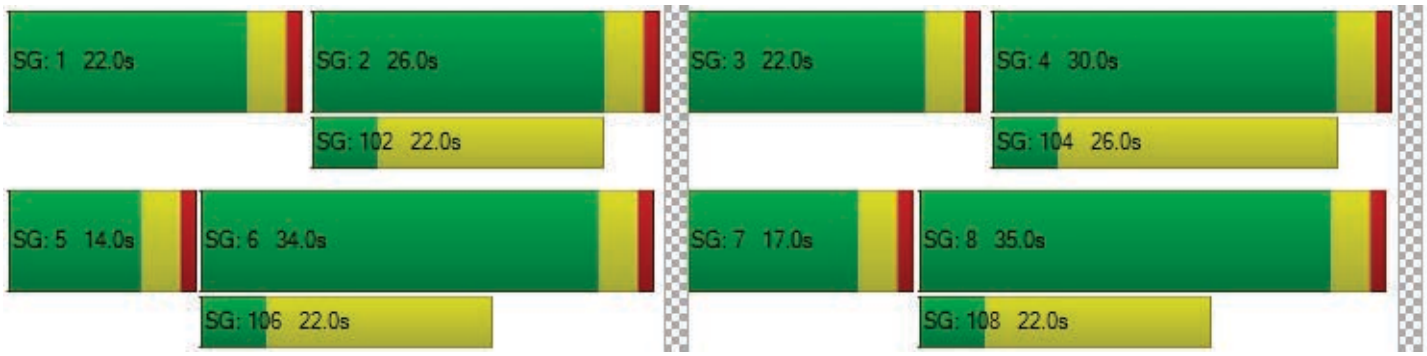
Vehicle Miles Traveled [mph]	94.40	225.37	204.39	5.14	19.68	19.24	7.19	55.05	22.99	17.38	46.20	44.58
Stops [stops/h]	182.18	407.73	373.61	77.13	248.65	243.53	62.74	263.41	113.22	167.92	279.48	270.44
Fuel consumption [US gal/h]	7.20	16.11	14.72	1.67	5.05	4.95	1.77	7.21	3.07	4.12	6.43	6.22
CO [g/h]	503.32	1125.96	1028.62	116.48	352.87	345.70	123.95	504.04	214.45	288.13	449.43	434.76
NOx [g/h]	97.93	219.07	200.13	22.66	68.66	67.26	24.12	98.07	41.72	56.06	87.44	84.59
VOC [g/h]	116.65	260.95	238.39	26.99	81.78	80.12	28.73	116.82	49.70	66.78	104.16	100.76

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.817	2.632	2.897	2.800
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]	620	520	440	600
d_b, Bicycle Delay [s]	23.81	27.38	30.42	24.50
l_b,int, Bicycle LOS Score for Intersection	2.430	2.097	2.156	2.479
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 12: S Indian Hill Blvd/Auto Center Dr

Control Type:	Signalized	Delay (sec / veh):	25.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.611

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
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	2	0	0	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	140.00	100.00	120.00	75.00	100.00	75.00	100.00	100.00	50.00
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]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
Base Volume Input [veh/h]	49	886	38	146	718	192	82	14	24	63	12	132
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	49	886	38	146	718	192	82	14	24	63	12	132
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
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]	12	224	10	37	182	49	21	4	6	16	3	33
Total Analysis Volume [veh/h]	50	898	39	148	727	195	83	14	24	64	12	134
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	14	15	0	18	19	0	18	26	0	5	13	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	10.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	19.0	0.0	13.0	23.0	0.0	25.0	31.0	0.0	17.0	23.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
Minimum Recall	No	No		No	No		Yes	No		Yes	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

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	R	L	C	R	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
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
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	3.4	25.4	25.4	8.3	30.4	30.4	34.3	34.3	17.3	34.3	14.5
g / C, Green / Cycle	0.04	0.32	0.32	0.10	0.38	0.38	0.43	0.43	0.22	0.43	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.17	0.17	0.08	0.20	0.12	0.02	0.62	0.01	0.53	0.08
s, saturation flow rate [veh/h]	1810	3618	1860	1810	3618	1615	1262	122	1615	142	1615
c, Capacity [veh/h]	76	1153	593	187	1376	614	208	205	348	206	293
d1, Uniform Delay [s]	37.76	22.39	22.40	35.02	19.23	17.47	25.01	22.82	24.99	24.47	29.25
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11	0.50	0.11
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
d2, Incremental Delay [s]	9.31	1.79	3.47	7.29	1.46	1.36	0.22	5.03	0.08	5.01	1.12
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
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
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

Lane Group Results

X, volume / capacity	0.66	0.54	0.54	0.79	0.53	0.32	0.10	0.37	0.07	0.37	0.46
d, Delay for Lane Group [s/veh]	47.07	24.18	25.87	42.31	20.68	18.83	25.23	27.85	25.07	29.48	30.37
Lane Group LOS	D	C	C	D	C	B	C	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.13	4.78	5.20	3.09	5.14	2.60	0.32	1.34	0.36	1.41	2.33
50th-Percentile Queue Length [ft/ln]	28.28	119.46	130.05	77.23	128.40	64.99	7.91	33.46	9.05	35.22	58.24
95th-Percentile Queue Length [veh/ln]	2.04	8.36	8.94	5.56	8.85	4.68	0.57	2.41	0.65	2.54	4.19
95th-Percentile Queue Length [ft/ln]	50.90	209.08	223.56	139.01	221.31	116.99	14.23	60.23	16.29	63.40	104.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.07	24.70	25.87	42.31	20.68	18.83	27.09	27.85	25.07	29.48	29.48	30.37
Movement LOS	D	C	C	D	C	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	25.88			23.34			26.83			30.05		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.16											
Intersection LOS	C											
Intersection V/C	1.611											

Emissions

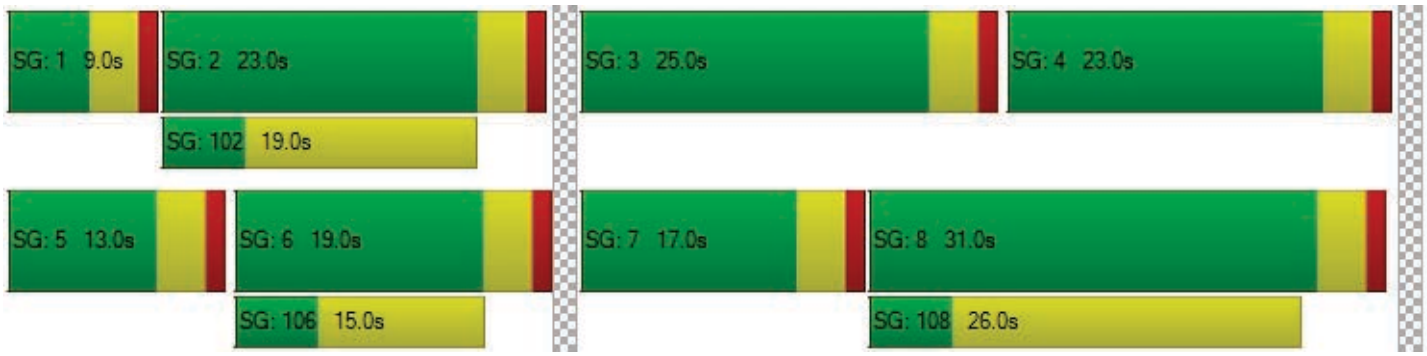
Vehicle Miles Traveled [mph]	3.89	48.08	24.77	7.61	37.40	10.03	0.52	1.79	0.57	1.80	3.18
Stops [stops/h]	50.90	430.04	234.09	139.01	462.23	116.99	14.23	60.23	16.29	63.40	104.83
Fuel consumption [US gal/h]	1.01	8.11	4.38	2.61	7.96	2.01	0.21	0.83	0.24	0.88	1.54
CO [g/h]	70.59	566.86	306.31	182.43	556.56	140.47	14.77	58.22	16.49	61.54	107.51
NOx [g/h]	13.73	110.29	59.60	35.49	108.29	27.33	2.87	11.33	3.21	11.97	20.92
VOC [g/h]	16.36	131.37	70.99	42.28	128.99	32.55	3.42	13.49	3.82	14.26	24.92

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	0.00	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.898	0.000	2.219	2.069
Crosswalk LOS	C	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	375	475	1100	1100
d_b, Bicycle Delay [s]	26.41	23.26	8.10	8.10
l_b,int, Bicycle LOS Score for Intersection	2.102	2.442	1.759	1.906
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.430

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
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	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	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]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	70	837	12	95	815	16	4	31	80	25	32	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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	70	837	12	95	815	16	4	31	80	25	32	63
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
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	223	3	25	217	4	1	8	21	7	9	17
Total Analysis Volume [veh/h]	75	891	13	101	868	17	4	33	85	27	34	67
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	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	29	0	5	29	0	0	34	0	0	34	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	40.0	0.0	9.0	40.0	0.0	0.0	31.0	0.0	0.0	31.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
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]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	62.5	54.0	54.0	62.5	54.5	54.5	9.5	9.5
g / C, Green / Cycle	0.78	0.68	0.68	0.78	0.68	0.68	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.11	0.26	0.26	0.15	0.27	0.01	0.08	0.08
s, saturation flow rate [veh/h]	676	1710	1701	674	3256	1454	1556	1569
c, Capacity [veh/h]	586	1154	1148	585	2213	988	232	242
d1, Uniform Delay [s]	2.76	5.76	5.76	2.85	5.59	4.15	33.72	33.75
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	1.01	1.01	0.64	0.52	0.03	1.84	1.79
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	0.13	0.39	0.39	0.17	0.39	0.02	0.53	0.53
d, Delay for Lane Group [s/veh]	2.86	6.77	6.77	3.49	6.12	4.18	35.55	35.54
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.14	2.71	2.70	0.29	2.52	0.08	2.42	2.48
50th-Percentile Queue Length [ft/ln]	3.38	67.75	67.45	7.31	62.99	1.93	60.58	61.92
95th-Percentile Queue Length [veh/ln]	0.24	4.88	4.86	0.53	4.54	0.14	4.36	4.46
95th-Percentile Queue Length [ft/ln]	6.09	121.96	121.41	13.15	113.38	3.48	109.05	111.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.86	6.77	6.77	3.49	6.12	4.18	35.55	35.55	35.55	35.54	35.54	35.54
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	6.47			5.81			35.55			35.54		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	9.46											
Intersection LOS	A											
Intersection V/C	0.430											

Emissions

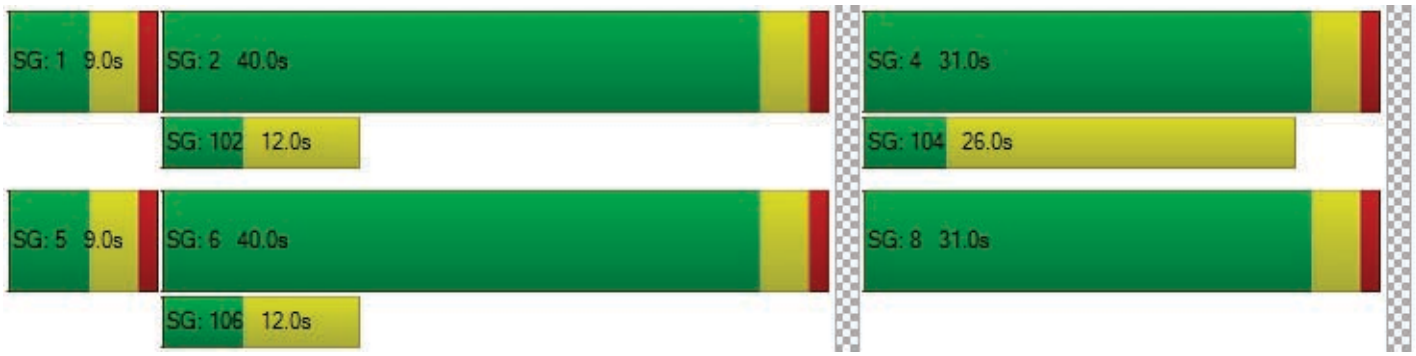
Vehicle Miles Traveled [mph]	19.01	114.83	114.25	7.92	68.08	1.33	2.89	12.68
Stops [stops/h]	6.09	121.96	121.41	13.15	226.75	3.48	109.05	111.45
Fuel consumption [US gal/h]	0.78	5.94	5.91	0.47	5.38	0.09	1.19	1.92
CO [g/h]	54.82	414.88	412.87	33.04	376.12	6.39	83.31	134.44
NOx [g/h]	10.67	80.72	80.33	6.43	73.18	1.24	16.21	26.16
VOC [g/h]	12.71	96.15	95.69	7.66	87.17	1.48	19.31	31.16

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.824	1.846	1.923
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	900	675	675
d_b, Bicycle Delay [s]	12.10	12.10	17.56	17.56
l_b,int, Bicycle LOS Score for Intersection	2.367	2.373	1.761	1.771
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.642

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
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	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	120	692	91	82	701	175	145	394	171	63	276	72
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	120	692	91	82	701	175	145	394	171	63	276	72
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
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]	31	180	24	21	182	45	38	102	44	16	72	19
Total Analysis Volume [veh/h]	125	719	94	85	728	182	151	409	178	65	287	75
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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	10	28	0	7	25	0	0	23	0	0	23	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	15.0	26.0	0.0	16.0	27.0	0.0	0.0	28.0	0.0	0.0	28.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	6.3	30.9	30.9	4.3	29.0	29.0	22.7	22.7	22.7	22.7	22.7	22.7
g / C, Green / Cycle	0.09	0.44	0.44	0.06	0.41	0.41	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.07	0.22	0.22	0.05	0.25	0.25	0.15	0.22	0.11	0.08	0.15	0.05
s, saturation flow rate [veh/h]	1810	1900	1824	1810	1900	1770	1036	1900	1615	842	1900	1615
c, Capacity [veh/h]	162	841	807	114	789	736	283	614	522	194	614	522
d1, Uniform Delay [s]	31.15	13.92	13.92	32.26	15.90	15.90	27.99	20.42	18.01	30.16	18.88	16.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.17	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	7.46	2.07	2.15	9.41	3.31	3.55	1.57	1.96	0.38	1.01	0.55	0.12
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	0.77	0.49	0.49	0.75	0.60	0.60	0.53	0.67	0.34	0.34	0.47	0.14
d, Delay for Lane Group [s/veh]	38.61	15.98	16.07	41.67	19.21	19.45	29.55	22.39	18.40	31.17	19.43	16.93
Lane Group LOS	D	B	B	D	B	B	C	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.27	4.47	4.31	1.63	5.77	5.42	2.41	5.56	2.06	1.05	3.48	0.81
50th-Percentile Queue Length [ft/ln]	56.65	111.75	107.76	40.65	144.15	135.55	60.23	138.95	51.51	26.37	87.06	20.16
95th-Percentile Queue Length [veh/ln]	4.08	7.94	7.72	2.93	9.70	9.24	4.34	9.42	3.71	1.90	6.27	1.45
95th-Percentile Queue Length [ft/ln]	101.96	198.43	192.89	73.16	242.60	231.01	108.42	235.61	92.72	47.47	156.71	36.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.61	16.02	16.07	41.67	19.30	19.45	29.55	22.39	18.40	31.17	19.43	16.93
Movement LOS	D	B	B	D	B	B	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	19.03			21.24			22.89			20.78		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	20.90											
Intersection LOS	C											
Intersection V/C	0.642											

Emissions

Vehicle Miles Traveled [mph]	9.65	32.02	30.74	21.54	119.36	111.23	9.65	26.13	11.37	16.19	71.50	18.69
Stops [stops/h]	116.53	229.88	221.68	83.61	296.54	278.84	123.91	285.85	105.97	54.25	179.09	41.47
Fuel consumption [US gal/h]	2.47	4.75	4.58	2.31	9.03	8.46	2.21	5.01	1.90	1.44	5.21	1.28
CO [g/h]	172.82	332.32	320.21	161.73	631.25	591.44	154.32	350.13	132.59	100.49	363.99	89.65
NOx [g/h]	33.62	64.66	62.30	31.47	122.82	115.07	30.02	68.12	25.80	19.55	70.82	17.44
VOC [g/h]	40.05	77.02	74.21	37.48	146.30	137.07	35.76	81.14	30.73	23.29	84.36	20.78

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.877	3.008	2.499	2.409
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	629	657	686	686
d_b, Bicycle Delay [s]	16.46	15.78	15.11	15.11
l_b,int, Bicycle LOS Score for Intersection	2.333	2.380	2.777	2.264
Bicycle LOS	B	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	19.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	1	19	22	509	376	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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]	1	19	22	509	376	3
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	5	6	138	102	1
Total Analysis Volume [veh/h]	1	21	24	551	407	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.03	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	19.01	10.79	8.13	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.04	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.82	2.82	1.01	1.01	0.00	0.00
d_A, Approach Delay [s/veh]	11.16		0.34		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.44					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.140

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
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	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	11	5	5	1	2	3	6	86	17	5	73	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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]	11	5	5	1	2	3	6	86	17	5	73	0
Peak Hour Factor	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630
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	1	1	0	1	1	2	25	5	1	21	0
Total Analysis Volume [veh/h]	13	6	6	1	2	3	7	100	20	6	85	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	832	874	906	878
Degree of Utilization, x	0.03	0.01	0.14	0.10

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.09	0.02	0.49	0.35
95th-Percentile Queue Length [ft]	2.32	0.52	12.16	8.64
Approach Delay [s/veh]	7.46	7.15	7.62	7.57
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.57			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.562

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
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	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	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]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	641	458	377	910	0	194	3	237	0	0	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	0	641	458	377	910	0	194	3	237	0	0	0
Peak Hour Factor	1.0000	0.9530	0.9530	0.9530	0.9530	1.0000	0.9530	0.9530	0.9530	1.0000	1.0000	1.0000
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	168	120	99	239	0	51	1	62	0	0	0
Total Analysis Volume [veh/h]	0	673	481	396	955	0	204	3	249	0	0	0
Presence of On-Street Parking	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]	60
Active Pattern	Pattern 1
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 (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	24	42	0	0	10	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
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				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	0.0	21.0	0.0	23.0	44.0	0.0	0.0	16.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	
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]	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	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	22.8	22.8	22.8	15.2	41.9	10.1	10.1	10.1	
g / C, Green / Cycle	0.38	0.38	0.38	0.25	0.70	0.17	0.17	0.17	
(v / s)_i Volume / Saturation Flow Rate	0.16	0.18	0.18	0.22	0.26	0.09	0.09	0.09	
s, saturation flow rate [veh/h]	3618	1615	1615	1810	3618	1810	1671	1615	
c, Capacity [veh/h]	1368	611	611	458	2525	305	282	272	
d1, Uniform Delay [s]	13.80	14.12	14.12	21.42	3.72	22.77	22.77	22.77	
k, delay calibration	0.50	0.50	0.50	0.17	0.50	0.11	0.11	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.96	2.61	2.61	7.53	0.43	1.43	1.55	1.60	
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	0.42	0.47	0.47	0.86	0.38	0.53	0.53	0.53	
d, Delay for Lane Group [s/veh]	14.75	16.73	16.73	28.95	4.15	24.20	24.32	24.37	
Lane Group LOS	B	B	B	C	A	C	C	C	
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	2.66	2.98	2.98	5.81	1.53	1.99	1.85	1.79	
50th-Percentile Queue Length [ft/ln]	66.54	74.51	74.51	145.28	38.37	49.87	46.28	44.85	
95th-Percentile Queue Length [veh/ln]	4.79	5.36	5.36	9.76	2.76	3.59	3.33	3.23	
95th-Percentile Queue Length [ft/ln]	119.77	134.11	134.11	244.11	69.07	89.76	83.31	80.73	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	14.75	16.73	28.95	4.15	0.00	24.23	24.32	24.35	0.00	0.00	0.00
Movement LOS		B	B	C	A		C	C	C			
d_A, Approach Delay [s/veh]	15.74			11.42			24.29			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	15.09											
Intersection LOS	B											
Intersection V/C	0.562											

Emissions

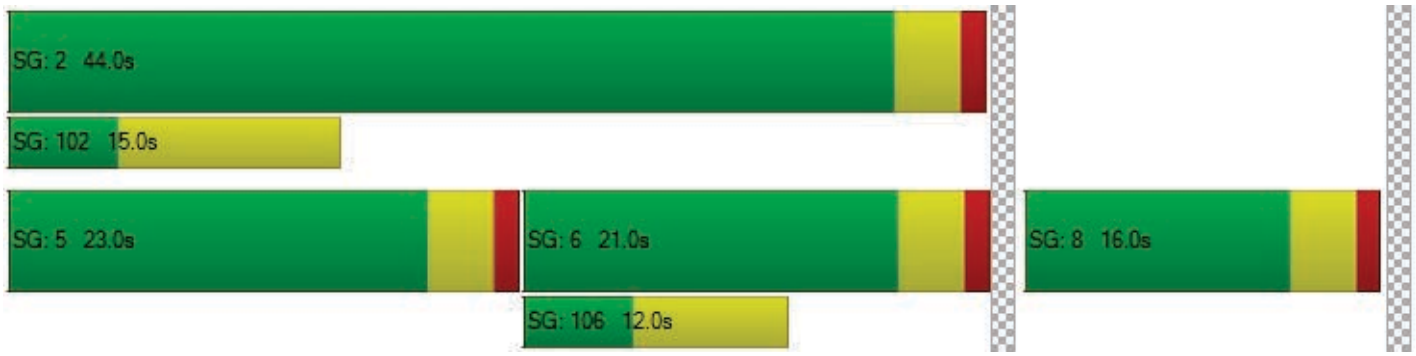
Vehicle Miles Traveled [mph]	29.30	14.65	14.65	17.86	43.08	13.92	12.85	12.43
Stops [stops/h]	319.38	178.82	178.82	348.66	184.19	119.68	111.08	107.64
Fuel consumption [US gal/h]	5.25	2.89	2.89	4.99	3.60	2.47	2.29	2.22
CO [g/h]	367.08	201.70	201.70	349.13	251.48	172.77	160.19	155.15
NOx [g/h]	71.42	39.24	39.24	67.93	48.93	33.61	31.17	30.19
VOC [g/h]	85.07	46.75	46.75	80.91	58.28	40.04	37.12	35.96

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.118	2.125
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	567	1333	400	0
d_b, Bicycle Delay [s]	15.41	3.33	19.20	30.00
l_b,int, Bicycle LOS Score for Intersection	2.194	2.674	2.312	4.132
Bicycle LOS	B	B	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.751

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
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	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
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			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	325	587	0	0	815	416	0	0	0	344	3	346
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	325	587	0	0	815	416	0	0	0	344	3	346
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
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]	92	166	0	0	230	118	0	0	0	97	1	98
Total Analysis Volume [veh/h]	368	664	0	0	922	471	0	0	0	389	3	391
Presence of On-Street Parking	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]	60
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	21	40	0	0	15	0	0	0	0	0	12	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	19.0	43.0	0.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	17.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	14.0	40.4	22.4	22.4		11.6	11.6	11.6
g / C, Green / Cycle	0.23	0.67	0.37	0.37		0.19	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.20	0.18	0.18	0.29		0.15	0.15	0.16
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1701	1615
c, Capacity [veh/h]	423	2434	1927	601		351	330	313
d1, Uniform Delay [s]	22.11	3.93	14.38	16.68		22.93	23.02	23.09
k, delay calibration	0.24	0.50	0.50	0.50		0.19	0.20	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	11.51	0.28	0.85	9.82		6.10	7.44	8.75
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.27	0.48	0.78		0.77	0.79	0.80
d, Delay for Lane Group [s/veh]	33.63	4.21	15.23	26.50		29.03	30.46	31.84
Lane Group LOS	C	A	B	C		C	C	C
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.92	1.13	2.98	6.66		3.82	3.79	3.78
50th-Percentile Queue Length [ft/ln]	148.06	28.28	74.41	166.54		95.48	94.79	94.41
95th-Percentile Queue Length [veh/ln]	9.91	2.04	5.36	10.89		6.87	6.82	6.80
95th-Percentile Queue Length [ft/ln]	247.84	50.90	133.93	272.37		171.86	170.62	169.94

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.63	4.21	0.00	0.00	15.23	26.50	0.00	0.00	0.00	29.49	30.46	31.37
Movement LOS	C	A			B	C				C	C	C
d_A, Approach Delay [s/veh]	14.70			19.04			0.00			30.41		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	20.42											
Intersection LOS	C											
Intersection V/C	0.751											

Emissions

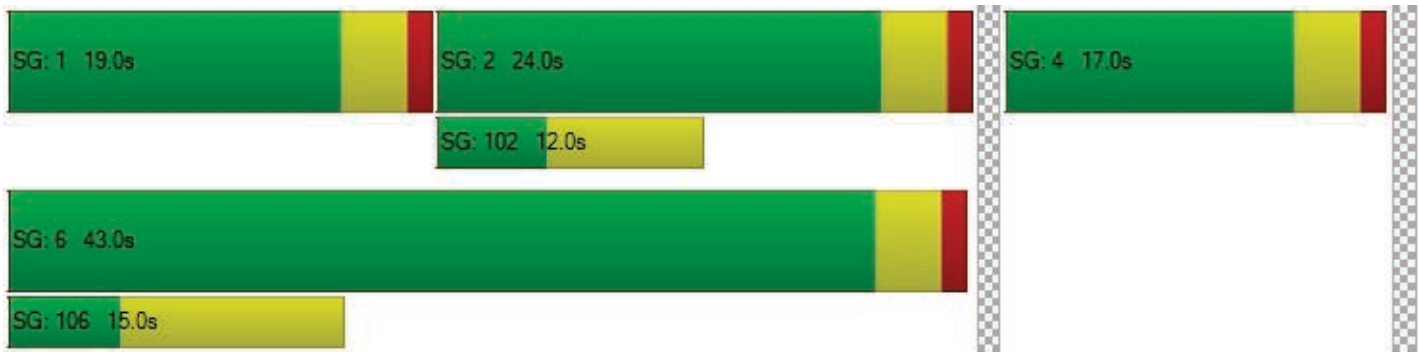
Vehicle Miles Traveled [mph]	16.60	29.95	34.19	17.47		22.62	21.74	21.01
Stops [stops/h]	355.35	135.74	535.72	399.71		229.15	227.49	226.58
Fuel consumption [US gal/h]	5.16	2.55	7.23	5.47		4.66	4.63	4.61
CO [g/h]	361.03	178.40	505.05	382.18		325.90	323.44	322.15
NOx [g/h]	70.24	34.71	98.26	74.36		63.41	62.93	62.68
VOC [g/h]	83.67	41.35	117.05	88.57		75.53	74.96	74.66

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.106	2.260
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1300	667	0	433
d_b, Bicycle Delay [s]	3.68	13.33	30.00	18.41
l_b,int, Bicycle LOS Score for Intersection	2.411	2.326	4.132	2.852
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.516

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
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	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	169	748	106	39	732	43	53	157	224	147	133	65
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	169	748	106	39	732	43	53	157	224	147	133	65
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
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]	46	204	29	11	200	12	14	43	61	40	36	18
Total Analysis Volume [veh/h]	185	817	116	43	800	47	58	172	245	161	145	71
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	23	19	0	23	19	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	22.0	32.0	0.0	16.0	26.0	0.0	0.0	32.0	0.0	0.0	32.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	10.1	41.7	41.7	3.1	34.7	34.7	23.2	23.2	23.2	23.2	23.2	23.2
g / C, Green / Cycle	0.13	0.52	0.52	0.04	0.43	0.43	0.29	0.29	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.10	0.25	0.25	0.02	0.15	0.16	0.05	0.09	0.15	0.16	0.08	0.04
s, saturation flow rate [veh/h]	1810	1900	1818	1810	3618	1847	1184	1900	1615	985	1900	1615
c, Capacity [veh/h]	229	991	949	70	1571	802	329	550	467	277	550	467
d1, Uniform Delay [s]	33.99	12.21	12.22	37.85	15.15	15.17	26.81	22.21	23.81	31.42	21.87	21.13
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	6.64	1.67	1.75	8.28	0.63	1.25	0.25	0.32	0.91	1.94	0.25	0.15
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	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	0.81	0.48	0.48	0.61	0.36	0.36	0.18	0.31	0.52	0.58	0.26	0.15
d, Delay for Lane Group [s/veh]	40.63	13.88	13.96	46.13	15.79	16.41	27.07	22.53	24.73	33.36	22.12	21.28
Lane Group LOS	D	B	B	D	B	B	C	C	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.83	5.39	5.19	0.96	3.20	3.42	0.91	2.44	3.78	3.06	2.06	0.98
50th-Percentile Queue Length [ft/ln]	95.71	134.75	129.63	23.90	80.04	85.53	22.87	61.12	94.43	76.45	51.57	24.42
95th-Percentile Queue Length [veh/ln]	6.89	9.20	8.92	1.72	5.76	6.16	1.65	4.40	6.80	5.50	3.71	1.76
95th-Percentile Queue Length [ft/ln]	172.28	229.94	222.99	43.02	144.07	153.95	41.16	110.02	169.97	137.62	92.83	43.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.63	13.91	13.96	46.13	15.98	16.41	27.07	22.53	24.73	33.36	22.12	21.28
Movement LOS	D	B	B	D	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	18.34			17.46			24.22			26.76		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.15											
Intersection LOS	C											
Intersection V/C	0.516											

Emissions

Vehicle Miles Traveled [mph]	7.90	20.34	19.49	21.36	278.20	142.62	3.46	10.27	14.63	9.22	8.30	4.06
Stops [stops/h]	172.28	242.56	233.34	43.02	288.15	153.95	41.16	110.02	169.97	137.62	92.83	43.96
Fuel consumption [US gal/h]	2.81	3.52	3.39	1.59	14.59	7.58	0.76	2.01	3.07	2.23	1.51	0.72
CO [g/h]	196.18	246.29	236.85	111.24	1020.19	529.83	53.20	140.34	214.52	156.06	105.36	50.16
NOx [g/h]	38.17	47.92	46.08	21.64	198.49	103.09	10.35	27.30	41.74	30.36	20.50	9.76
VOC [g/h]	45.47	57.08	54.89	25.78	236.44	122.79	12.33	32.52	49.72	36.17	24.42	11.63

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.055	2.929	2.369	2.299
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	550	700	700
d_b, Bicycle Delay [s]	16.90	21.03	16.90	16.90
l_b,int, Bicycle LOS Score for Intersection	2.482	2.049	2.343	2.182
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.446

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
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	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	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]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	1	4	3	68	2	53	87	198	1	0	152	34
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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]	1	4	3	68	2	53	87	198	1	0	152	34
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
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	1	1	18	1	14	24	54	0	0	41	9
Total Analysis Volume [veh/h]	1	4	3	74	2	57	94	214	1	0	164	37
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	692	714	691	828	772
Degree of Utilization, x	0.01	0.19	0.45	0.00	0.26

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.04	0.68	2.30	0.00	1.04
95th-Percentile Queue Length [ft]	0.88	17.01	57.51	0.09	26.06
Approach Delay [s/veh]	8.26	9.19	12.01		9.31
Approach LOS	A	A	B		A
Intersection Delay [s/veh]	10.55				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	58.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.546

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	113	594	521	109	73	189
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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]	113	594	521	109	73	189
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	29	154	135	28	19	49
Total Analysis Volume [veh/h]	117	615	539	113	76	196
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	0.12	0.01	0.01	0.00	0.55	0.36
d_M, Delay for Movement [s/veh]	9.35	0.00	0.00	0.00	58.29	15.23
Movement LOS	A	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.42	0.00	0.00	0.00	2.69	1.62
95th-Percentile Queue Length [ft/ln]	10.57	0.00	0.00	0.00	67.28	40.46
d_A, Approach Delay [s/veh]	1.49		0.00		27.26	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	5.14					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	26.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.114

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	43	559	553	36	22	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
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]	43	559	553	36	22	53
Peak Hour Factor	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	142	140	9	6	13
Total Analysis Volume [veh/h]	44	567	561	37	22	54
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
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	0.04	0.01	0.01	0.00	0.11	0.10
d_M, Delay for Movement [s/veh]	8.81	0.00	0.00	0.00	26.47	14.57
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	0.81	0.81
95th-Percentile Queue Length [ft/ln]	3.49	0.00	0.00	0.00	20.17	20.17
d_A, Approach Delay [s/veh]	0.63		0.00		18.01	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.37					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	37.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.709

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
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	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	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]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	167	508	175	122	499	62	95	897	186	156	640	89
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	167	508	175	122	499	62	95	897	186	156	640	89
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
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]	43	131	45	31	128	16	24	230	48	40	164	23
Total Analysis Volume [veh/h]	172	522	180	125	513	64	98	922	191	160	658	91
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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	33	55	0	9	31	0	8	22	0	8	22	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	22.0	32.0	0.0	20.0	30.0	0.0	22.0	36.0	0.0	22.0	36.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
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	

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	L	C	R	L	C	C
C, Calculated 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]	2.00	2.00	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]	12.4	24.0	24.0	9.4	21.1	21.1	7.7	48.8	48.8	11.8	52.9	52.9
g / C, Green / Cycle	0.11	0.22	0.22	0.09	0.19	0.19	0.07	0.44	0.44	0.11	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.10	0.19	0.19	0.07	0.15	0.16	0.05	0.25	0.12	0.09	0.20	0.20
s, saturation flow rate [veh/h]	1810	1900	1736	1810	1900	1827	1810	3618	1615	1810	1900	1820
c, Capacity [veh/h]	204	415	379	155	364	350	127	1603	716	194	912	873
d1, Uniform Delay [s]	47.84	41.62	41.63	49.38	42.51	42.54	50.26	22.90	19.35	48.10	18.63	18.64
k, delay calibration	0.13	0.17	0.17	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	10.39	9.54	10.40	9.34	4.46	4.74	9.37	1.51	0.91	8.57	1.42	1.48
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	0.84	0.88	0.88	0.80	0.81	0.81	0.77	0.58	0.27	0.83	0.42	0.42
d, Delay for Lane Group [s/veh]	58.23	51.16	52.02	58.72	46.97	47.27	59.62	24.40	20.26	56.67	20.05	20.12
Lane Group LOS	E	D	D	E	D	D	E	C	C	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.11	10.43	9.63	3.74	7.95	7.70	2.91	8.65	3.09	4.67	6.36	6.11
50th-Percentile Queue Length [ft/ln]	127.71	260.86	240.77	93.44	198.81	192.51	72.67	216.19	77.29	116.64	159.01	152.74
95th-Percentile Queue Length [veh/ln]	8.82	15.73	14.72	6.73	12.58	12.25	5.23	13.47	5.57	8.21	10.50	10.16
95th-Percentile Queue Length [ft/ln]	220.38	393.30	368.01	168.18	314.43	306.28	130.81	336.76	139.13	205.20	262.41	254.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.23	51.41	52.02	58.72	47.10	47.27	59.62	24.40	20.26	56.67	20.08	20.12
Movement LOS	E	D	D	E	D	D	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	52.88			49.18			26.60			26.53		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	37.09											
Intersection LOS	D											
Intersection V/C	0.709											

Emissions

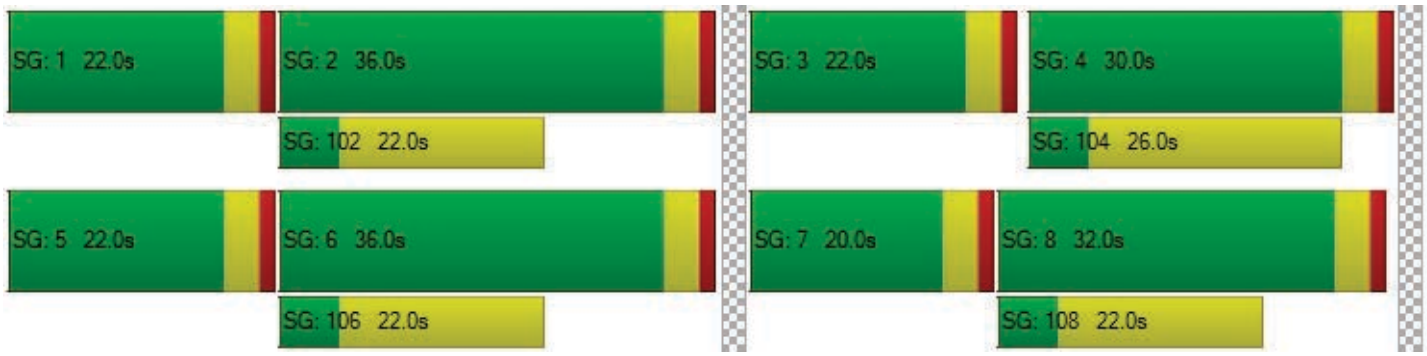
Vehicle Miles Traveled [mph]	85.46	182.20	166.58	8.46	19.88	19.17	11.55	108.69	22.52	15.54	37.14	35.59
Stops [stops/h]	167.19	341.49	315.19	122.32	260.26	252.01	95.13	566.03	101.18	152.69	208.16	199.95
Fuel consumption [US gal/h]	6.74	13.70	12.61	2.74	5.52	5.35	2.77	15.34	2.82	3.90	4.94	4.74
CO [g/h]	471.23	957.53	881.61	191.24	386.00	374.05	193.47	1072.42	196.94	272.72	345.04	331.29
NOx [g/h]	91.68	186.30	171.53	37.21	75.10	72.78	37.64	208.65	38.32	53.06	67.13	64.46
VOC [g/h]	109.21	221.92	204.32	44.32	89.46	86.69	44.84	248.54	45.64	63.20	79.97	76.78

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.763	2.632	2.977	2.866
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]	509	473	582	582
d_b, Bicycle Delay [s]	30.56	32.07	27.65	27.65
l_b,int, Bicycle LOS Score for Intersection	2.281	2.139	2.559	2.310
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 12: S Indian Hill Blvd/Auto Center Dr

Control Type:	Signalized	Delay (sec / veh):	25.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2,105.920

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
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	2	0	0	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	140.00	100.00	120.00	75.00	100.00	75.00	100.00	100.00	50.00
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]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
Base Volume Input [veh/h]	28	828	19	83	764	221	307	33	84	28	18	86
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
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]	28	828	19	83	764	221	307	33	84	28	18	86
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
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]	7	211	5	21	195	56	78	8	21	7	5	22
Total Analysis Volume [veh/h]	29	843	19	85	778	225	313	34	86	29	18	88
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	20	15	0	15	10	0	5	29	0	5	29	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0	0.0	24.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	19.0	0.0	9.0	19.0	0.0	19.0	43.0	0.0	9.0	33.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
Minimum Recall	No	No		No	No		Yes	No		Yes	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

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	R	L	C	R	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
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
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	2.4	24.2	24.2	4.9	26.7	26.7	38.9	38.9	29.9	38.9	20.4
g / C, Green / Cycle	0.03	0.30	0.30	0.06	0.33	0.33	0.49	0.49	0.37	0.49	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.16	0.05	0.22	0.14	0.11	0.55	0.05	0.39	0.05
s, saturation flow rate [veh/h]	1810	3618	1879	1810	3618	1615	1308	375	1615	122	1615
c, Capacity [veh/h]	54	1098	570	111	1212	541	344	347	602	177	411
d1, Uniform Delay [s]	38.27	23.02	23.03	36.98	22.53	20.55	20.50	24.59	16.62	15.10	23.52
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.12	0.50	0.11	0.48	0.11
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
d2, Incremental Delay [s]	8.15	1.74	3.34	10.41	2.62	2.35	0.84	7.25	0.11	3.48	0.26
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
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
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

Lane Group Results

X, volume / capacity	0.54	0.52	0.52	0.77	0.64	0.42	0.41	0.59	0.14	0.26	0.21
d, Delay for Lane Group [s/veh]	46.43	24.76	26.36	47.39	25.15	22.90	21.34	31.84	16.73	18.59	23.77
Lane Group LOS	D	C	C	D	C	C	C	C	B	B	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.67	4.43	4.86	1.90	6.23	3.41	1.78	2.50	1.02	0.58	1.30
50th-Percentile Queue Length [ft/ln]	16.64	110.78	121.60	47.60	155.83	85.21	44.51	62.51	25.50	14.57	32.57
95th-Percentile Queue Length [veh/ln]	1.20	7.88	8.48	3.43	10.33	6.13	3.20	4.50	1.84	1.05	2.35
95th-Percentile Queue Length [ft/ln]	29.95	197.09	212.03	85.68	258.20	153.37	80.12	112.52	45.91	26.23	58.63

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.43	25.28	26.36	47.39	25.15	22.90	27.00	31.84	16.73	18.59	18.59	23.77
Movement LOS	D	C	C	D	C	C	C	C	B	B	B	C
d_A, Approach Delay [s/veh]	26.00			26.42			25.41			21.97		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.87											
Intersection LOS	C											
Intersection V/C	2105.920											

Emissions

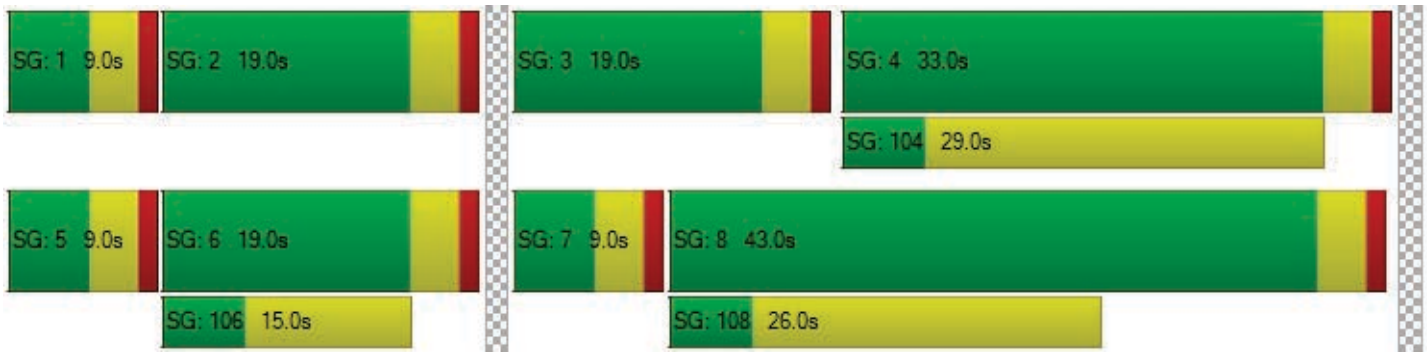
Vehicle Miles Traveled [mph]	2.27	44.47	23.13	4.32	39.50	11.42	3.36	4.88	2.04	1.12	2.09
Stops [stops/h]	29.95	398.82	218.88	85.68	561.00	153.37	80.12	112.52	45.91	26.23	58.63
Fuel consumption [US gal/h]	0.59	7.55	4.11	1.63	9.71	2.64	1.20	2.15	0.63	0.37	0.84
CO [g/h]	40.96	527.85	287.32	113.83	678.53	184.35	83.54	150.57	44.07	25.76	58.41
NOx [g/h]	7.97	102.70	55.90	22.15	132.02	35.87	16.25	29.30	8.57	5.01	11.36
VOC [g/h]	9.49	122.33	66.59	26.38	157.26	42.73	19.36	34.90	10.21	5.97	13.54

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	0.00	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.854	3.462	0.000	2.025
Crosswalk LOS	C	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	375	375	1200	1200
d_b, Bicycle Delay [s]	26.41	26.41	6.40	6.40
l_b,int, Bicycle LOS Score for Intersection	2.050	2.457	2.274	1.782
Bicycle LOS	B	B	B	A

Sequence

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



OPENING YEAR CONDITIONS

Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	10.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.543

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
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	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	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]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	37	929	5	72	623	6	3	8	23	4	13	168
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	29	0	0	35	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]	38	977	5	73	670	6	3	8	23	4	13	171
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
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]	10	262	1	20	180	2	1	2	6	1	3	46
Total Analysis Volume [veh/h]	41	1049	5	78	720	6	3	9	25	4	14	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	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	21	0	5	21	0	0	42	0	0	42	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	40.0	0.0	9.0	40.0	0.0	0.0	31.0	0.0	0.0	31.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
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]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	59.1	50.9	50.9	59.1	52.1	52.1	12.9	12.9
g / C, Green / Cycle	0.74	0.64	0.64	0.74	0.65	0.65	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.05	0.31	0.31	0.13	0.22	0.00	0.02	0.14
s, saturation flow rate [veh/h]	748	1710	1707	608	3256	1454	1563	1474
c, Capacity [veh/h]	608	1088	1086	493	2117	945	302	285
d1, Uniform Delay [s]	3.35	7.65	7.65	4.36	6.29	4.92	28.78	32.54
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	1.55	1.55	0.68	0.44	0.01	0.18	3.25
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	0.48	0.48	0.16	0.34	0.01	0.12	0.71
d, Delay for Lane Group [s/veh]	3.40	9.20	9.20	5.04	6.73	4.93	28.96	35.78
Lane Group LOS	A	A	A	A	A	A	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.11	4.08	4.07	0.32	2.28	0.03	0.64	3.99
50th-Percentile Queue Length [ft/ln]	2.80	101.98	101.83	7.89	56.97	0.78	15.94	99.84
95th-Percentile Queue Length [veh/ln]	0.20	7.34	7.33	0.57	4.10	0.06	1.15	7.19
95th-Percentile Queue Length [ft/ln]	5.04	183.56	183.30	14.20	102.55	1.41	28.69	179.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.40	9.20	9.20	5.04	6.73	4.93	28.96	28.96	28.96	35.78	35.78	35.78
Movement LOS	A	A	A	A	A	A	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	8.99			6.55			28.96			35.78		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	10.95											
Intersection LOS	B											
Intersection V/C	0.543											

Emissions

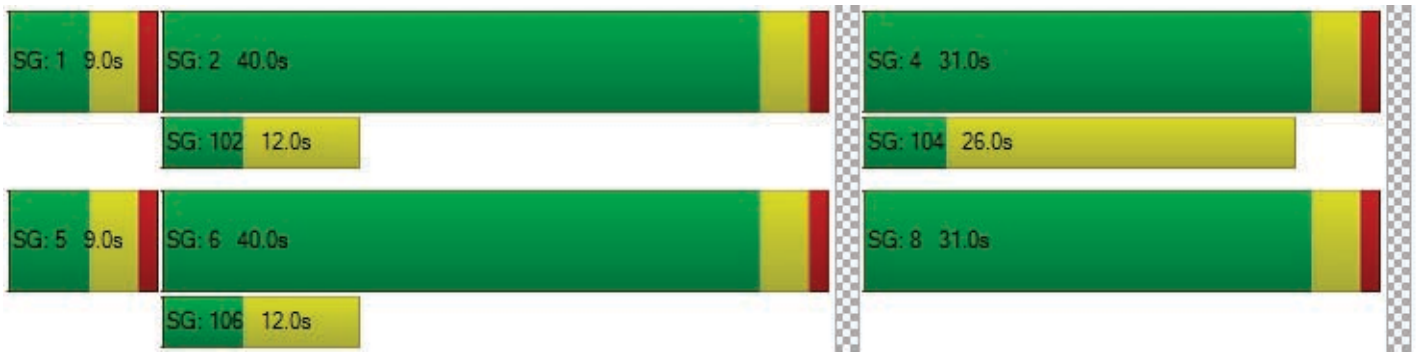
Vehicle Miles Traveled [mph]	10.39	133.65	133.43	6.13	56.59	0.47	0.88	20.01
Stops [stops/h]	5.04	183.56	183.30	14.20	205.10	1.41	28.69	179.71
Fuel consumption [US gal/h]	0.45	7.58	7.57	0.42	4.69	0.03	0.31	3.06
CO [g/h]	31.46	529.73	528.91	29.39	327.48	2.42	21.37	213.89
NOx [g/h]	6.12	103.07	102.91	5.72	63.72	0.47	4.16	41.62
VOC [g/h]	7.29	122.77	122.58	6.81	75.90	0.56	4.95	49.57

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.840	1.774	1.903
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	900	675	675
d_b, Bicycle Delay [s]	12.10	12.10	17.56	17.56
l_b,int, Bicycle LOS Score for Intersection	2.463	2.223	1.621	1.893
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
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	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	96	697	39	36	496	118	153	207	138	46	252	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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	22	0	4	30	1	2	0	0	0	0	5
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]	98	733	40	41	536	121	158	211	141	47	257	99
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
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	204	11	11	149	34	44	59	39	13	71	28
Total Analysis Volume [veh/h]	109	814	44	46	596	134	176	234	157	52	286	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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	27	0	6	24	0	0	25	0	0	25	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	15.0	26.0	0.0	13.0	24.0	0.0	0.0	31.0	0.0	0.0	31.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	5.5	30.4	30.4	3.0	27.9	27.9	24.6	24.6	24.6	24.6	24.6	24.6
g / C, Green / Cycle	0.08	0.43	0.43	0.04	0.40	0.40	0.35	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.06	0.23	0.23	0.03	0.20	0.20	0.18	0.12	0.10	0.05	0.15	0.07
s, saturation flow rate [veh/h]	1810	1900	1866	1810	1900	1781	1004	1900	1615	1009	1900	1615
c, Capacity [veh/h]	143	827	812	78	759	711	307	666	566	332	666	566
d1, Uniform Delay [s]	31.60	14.46	14.46	32.90	15.75	15.76	26.94	16.84	16.36	22.03	17.39	15.85
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	8.18	2.36	2.41	7.02	2.31	2.48	1.69	0.32	0.26	0.22	0.44	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	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	0.76	0.52	0.52	0.59	0.50	0.50	0.57	0.35	0.28	0.16	0.43	0.19
d, Delay for Lane Group [s/veh]	39.78	16.82	16.86	39.91	18.06	18.24	28.63	17.16	16.62	22.25	17.83	16.01
Lane Group LOS	D	B	B	D	B	B	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.02	4.84	4.76	0.87	4.41	4.18	2.78	2.59	1.69	0.67	3.28	1.15
50th-Percentile Queue Length [ft/ln]	50.38	120.98	119.05	21.81	110.32	104.52	69.52	64.80	42.31	16.79	81.94	28.67
95th-Percentile Queue Length [veh/ln]	3.63	8.45	8.34	1.57	7.86	7.53	5.01	4.67	3.05	1.21	5.90	2.06
95th-Percentile Queue Length [ft/ln]	90.68	211.18	208.53	39.26	196.44	188.13	125.13	116.64	76.16	30.23	147.49	51.60

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.78	16.84	16.86	39.91	18.13	18.24	28.63	17.16	16.62	22.25	17.83	16.01
Movement LOS	D	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	19.43			19.44			20.57			17.89		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	19.42											
Intersection LOS	B											
Intersection V/C	0.524											

Emissions

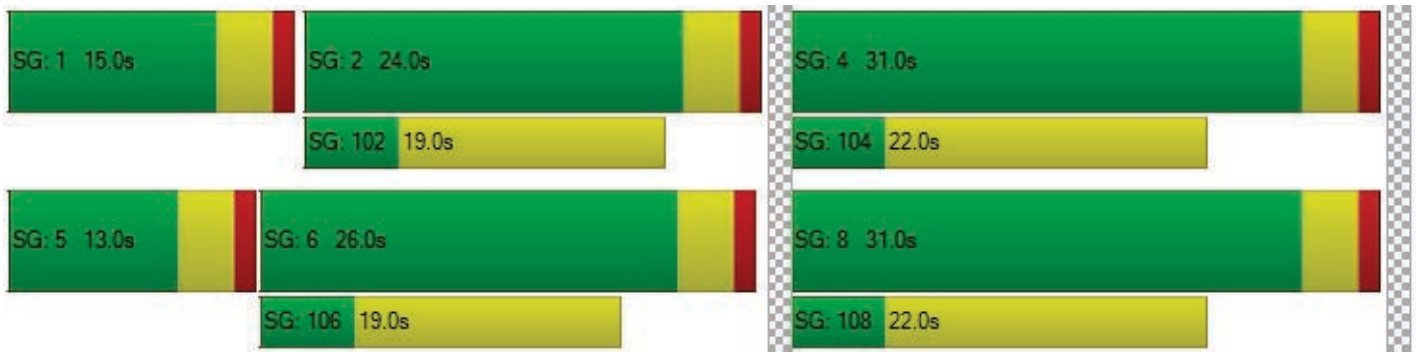
Vehicle Miles Traveled [mph]	8.41	33.41	32.81	11.66	95.36	89.62	11.24	14.95	10.03	12.96	71.25	27.40
Stops [stops/h]	103.64	248.88	244.91	44.87	226.94	215.00	143.01	133.30	87.04	34.55	168.56	58.97
Fuel consumption [US gal/h]	2.20	5.12	5.04	1.23	7.03	6.63	2.53	2.39	1.57	0.99	5.02	1.85
CO [g/h]	153.91	358.14	352.32	86.11	491.30	463.77	176.82	167.03	109.60	69.14	350.98	129.08
NOx [g/h]	29.95	69.68	68.55	16.75	95.59	90.23	34.40	32.50	21.33	13.45	68.29	25.11
VOC [g/h]	35.67	83.00	81.65	19.96	113.86	107.48	40.98	38.71	25.40	16.02	81.34	29.91

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.823	3.027	2.432	2.339
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	629	571	771	771
d_b, Bicycle Delay [s]	16.46	17.86	13.21	13.21
l_b,int, Bicycle LOS Score for Intersection	2.357	2.200	2.495	2.299
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	14.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.023

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	8	19	15	242	337	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	4	5	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]	8	19	15	251	349	2
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	5	4	71	99	1
Total Analysis Volume [veh/h]	9	22	17	285	397	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.03	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	14.57	10.88	8.09	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.18	0.18	0.03	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.48	4.48	0.71	0.71	0.00	0.00
d_A, Approach Delay [s/veh]	11.95		0.46		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.69					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.145

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
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	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	24	1	2	0	0	6	5	36	13	0	104	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	24	1	2	0	0	6	5	37	13	0	106	0
Peak Hour Factor	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230
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]	7	0	1	0	0	2	2	11	4	0	32	0
Total Analysis Volume [veh/h]	29	1	2	0	0	7	6	45	16	0	129	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	807	961	904	889
Degree of Utilization, x	0.04	0.01	0.07	0.15

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.12	0.02	0.24	0.51
95th-Percentile Queue Length [ft]	3.10	0.55	5.99	12.67
Approach Delay [s/veh]	7.65	6.78	7.30	7.74
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.57			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.727

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
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	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	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]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	814	374	351	610	0	388	2	351	0	0	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	28	1	75	35	0	50	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]	0	858	382	433	657	0	446	2	358	0	0	0
Peak Hour Factor	1.0000	0.9220	0.9220	0.9220	0.9220	1.0000	0.9220	0.9220	0.9220	1.0000	1.0000	1.0000
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	233	104	117	178	0	121	1	97	0	0	0
Total Analysis Volume [veh/h]	0	931	414	470	713	0	484	2	388	0	0	0
Presence of On-Street Parking	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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	12	0	32	48	0	0	14	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
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				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	0.0	23.0	0.0	26.0	49.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	
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]	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	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	23.1	23.1	23.1	20.1	47.2	14.8	14.8	14.8	
g / C, Green / Cycle	0.33	0.33	0.33	0.29	0.67	0.21	0.21	0.21	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.21	0.21	0.26	0.20	0.16	0.17	0.18	
s, saturation flow rate [veh/h]	3618	1634	1615	1810	3618	1810	1736	1615	
c, Capacity [veh/h]	1194	539	533	520	2440	382	367	341	
d1, Uniform Delay [s]	19.30	19.79	19.85	24.01	4.62	26.05	26.18	26.42	
k, delay calibration	0.50	0.50	0.50	0.26	0.50	0.19	0.20	0.22	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.93	5.37	5.59	13.11	0.30	5.90	7.25	10.37	
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	0.56	0.62	0.63	0.90	0.29	0.78	0.80	0.83	
d, Delay for Lane Group [s/veh]	21.23	25.16	25.44	37.12	4.93	31.95	33.43	36.79	
Lane Group LOS	C	C	C	D	A	C	C	D	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.41	5.00	5.03	8.86	1.63	4.90	4.96	5.13	
50th-Percentile Queue Length [ft/ln]	110.28	124.95	125.86	221.52	40.72	122.43	124.09	128.16	
95th-Percentile Queue Length [veh/ln]	7.86	8.66	8.71	13.74	2.93	8.53	8.62	8.84	
95th-Percentile Queue Length [ft/ln]	196.39	216.61	217.85	343.56	73.30	213.16	215.43	220.99	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.38	25.39	37.12	4.93	0.00	32.53	33.43	35.94	0.00	0.00	0.00
Movement LOS		C	C	D	A		C	C	D			
d_A, Approach Delay [s/veh]	23.26			17.72			34.02			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	24.10											
Intersection LOS	C											
Intersection V/C	0.727											

Emissions

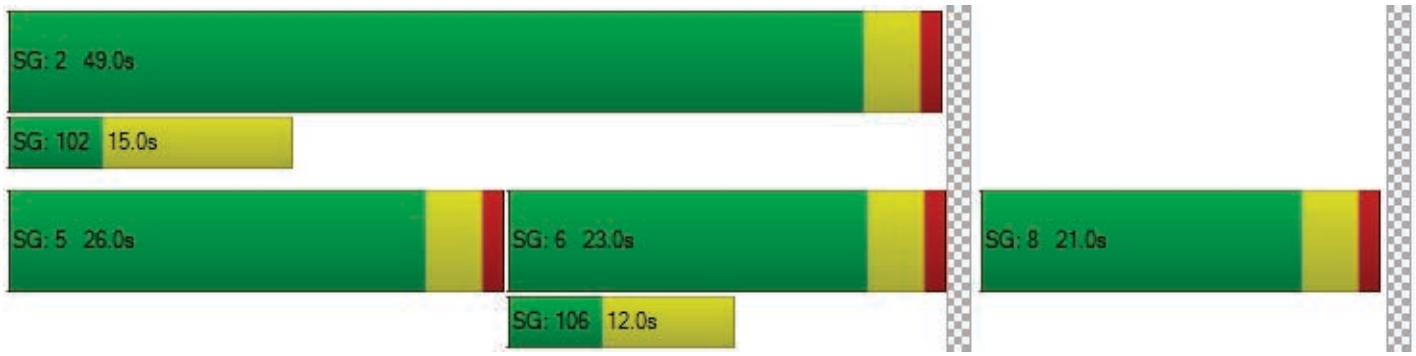
Vehicle Miles Traveled [mph]	34.04	17.02	17.02	21.20	32.16	25.55	25.14	24.44
Stops [stops/h]	453.72	257.04	258.91	455.69	167.54	251.85	255.26	263.65
Fuel consumption [US gal/h]	7.62	4.30	4.34	6.94	2.96	5.32	5.40	5.59
CO [g/h]	532.32	300.79	303.13	485.16	207.23	371.97	377.35	391.01
NOx [g/h]	103.57	58.52	58.98	94.39	40.32	72.37	73.42	76.08
VOC [g/h]	123.37	69.71	70.25	112.44	48.03	86.21	87.45	90.62

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.308	2.136
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	543	1286	486	0
d_b, Bicycle Delay [s]	18.58	4.46	20.06	35.00
l_b,int, Bicycle LOS Score for Intersection	2.299	2.536	3.002	4.132
Bicycle LOS	B	B	C	D

Sequence

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



Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.878

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
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	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
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			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	468	746	0	0	679	460	0	0	0	237	1	206
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	78	0	0	110	74	0	0	0	0	0	51
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]	477	839	0	0	803	543	0	0	0	242	1	261
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
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]	135	237	0	0	227	154	0	0	0	68	0	74
Total Analysis Volume [veh/h]	540	949	0	0	908	614	0	0	0	274	1	295
Presence of On-Street Parking	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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	27	62	0	0	31	0	0	0	0	0	10	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	29.0	64.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	16.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	80	80	80	80		80	80	80
L, Total Lost Time per Cycle [s]	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	25.4	61.0	31.7	31.7		11.0	11.0	11.0
g / C, Green / Cycle	0.32	0.76	0.40	0.40		0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.30	0.26	0.18	0.38		0.11	0.11	0.11
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1686	1615
c, Capacity [veh/h]	573	2757	2047	639		250	233	223
d1, Uniform Delay [s]	26.64	3.07	17.72	23.58		33.44	33.45	33.46
k, delay calibration	0.39	0.50	0.50	0.50		0.21	0.22	0.22
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	21.83	0.34	0.70	27.25		11.43	12.32	12.89
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.34	0.44	0.96		0.81	0.81	0.81
d, Delay for Lane Group [s/veh]	48.47	3.41	18.42	50.83		44.87	45.77	46.35
Lane Group LOS	D	A	B	D		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	12.93	1.67	4.00	15.28		4.38	4.15	4.01
50th-Percentile Queue Length [ft/ln]	323.37	41.72	100.09	382.08		109.57	103.72	100.32
95th-Percentile Queue Length [veh/ln]	18.83	3.00	7.21	21.69		7.82	7.47	7.22
95th-Percentile Queue Length [ft/ln]	470.83	75.10	180.16	542.36		195.40	186.70	180.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.47	3.41	0.00	0.00	18.42	50.83	0.00	0.00	0.00	45.14	45.77	46.14
Movement LOS	D	A			B	D				D	D	D
d_A, Approach Delay [s/veh]	19.75			31.50			0.00			45.64		
Approach LOS	B			C			A			D		
d_I, Intersection Delay [s/veh]	28.87											
Intersection LOS	C											
Intersection V/C	0.878											

Emissions

Vehicle Miles Traveled [mph]	24.36	42.81	33.67	22.77		16.82	15.70	15.06
Stops [stops/h]	582.07	150.20	540.47	687.74		197.22	186.70	180.58
Fuel consumption [US gal/h]	9.54	3.25	7.78	11.09		4.38	4.15	4.01
CO [g/h]	667.19	227.29	543.58	775.07		306.15	290.00	280.61
NOx [g/h]	129.81	44.22	105.76	150.80		59.57	56.42	54.60
VOC [g/h]	154.63	52.68	125.98	179.63		70.95	67.21	65.03

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.274	2.183
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1500	775	0	300
d_b, Bicycle Delay [s]	2.50	15.01	40.00	28.90
l_b,int, Bicycle LOS Score for Intersection	2.788	2.397	4.132	2.500
Bicycle LOS	C	B	D	B

Sequence

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



Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.700

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
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	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	71	790	102	40	760	20	41	79	183	216	101	62
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	108	0	0	166	7	3	2	0	2	3	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]	93	914	104	41	941	27	45	83	187	222	106	63
Peak Hour Factor	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450
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]	28	270	31	12	278	8	13	25	55	66	31	19
Total Analysis Volume [veh/h]	110	1082	123	49	1114	32	53	98	221	263	125	75
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	10	37	0	5	32	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	19.0	35.0	0.0	13.0	29.0	0.0	0.0	32.0	0.0	0.0	32.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	6.3	38.4	38.4	3.3	35.4	35.4	26.3	26.3	26.3	26.3	26.3	26.3
g / C, Green / Cycle	0.08	0.48	0.48	0.04	0.44	0.44	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.06	0.32	0.32	0.03	0.21	0.21	0.04	0.05	0.14	0.24	0.07	0.05
s, saturation flow rate [veh/h]	1810	1900	1833	1810	3618	1873	1201	1900	1615	1077	1900	1615
c, Capacity [veh/h]	144	912	880	76	1601	829	395	623	530	376	623	530
d1, Uniform Delay [s]	36.10	15.96	15.99	37.73	15.71	15.71	23.27	19.04	20.92	28.58	19.33	18.94
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.23	0.11	0.11
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
d2, Incremental Delay [s]	8.22	3.92	4.12	8.79	1.00	1.92	0.15	0.12	0.52	4.89	0.16	0.12
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	0.77	0.67	0.67	0.64	0.47	0.47	0.13	0.16	0.42	0.70	0.20	0.14
d, Delay for Lane Group [s/veh]	44.31	19.88	20.11	46.52	16.70	17.63	23.42	19.16	21.45	33.47	19.49	19.06
Lane Group LOS	D	B	C	D	B	B	C	B	C	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.39	8.83	8.62	1.09	4.54	4.92	0.76	1.24	3.10	5.18	1.64	0.96
50th-Percentile Queue Length [ft/ln]	59.67	220.83	215.43	27.25	113.59	123.00	19.05	31.00	77.49	129.57	40.92	24.10
95th-Percentile Queue Length [veh/ln]	4.30	13.71	13.43	1.96	8.04	8.56	1.37	2.23	5.58	8.92	2.95	1.74
95th-Percentile Queue Length [ft/ln]	107.41	342.68	335.79	49.05	200.98	213.95	34.30	55.80	139.49	222.91	73.66	43.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.31	19.98	20.11	46.52	17.00	17.63	23.42	19.16	21.45	33.47	19.49	19.06
Movement LOS	D	B	C	D	B	B	C	B	C	C	B	B
d_A, Approach Delay [s/veh]	22.03			18.23			21.13			27.36		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	21.31											
Intersection LOS	C											
Intersection V/C	0.700											

Emissions

Vehicle Miles Traveled [mph]	4.70	26.13	25.31	24.34	375.09	194.29	3.17	5.85	13.20	15.05	7.15	4.29
Stops [stops/h]	107.41	397.49	387.77	49.05	408.91	221.41	34.30	55.80	139.49	233.22	73.66	43.39
Fuel consumption [US gal/h]	1.78	5.75	5.61	1.82	20.02	10.54	0.63	1.02	2.52	3.70	1.20	0.71
CO [g/h]	124.33	401.79	392.22	127.06	1399.35	736.58	44.12	71.64	175.93	258.58	83.69	49.45
NOx [g/h]	24.19	78.17	76.31	24.72	272.26	143.31	8.58	13.94	34.23	50.31	16.28	9.62
VOC [g/h]	28.81	93.12	90.90	29.45	324.31	170.71	10.23	16.60	40.77	59.93	19.40	11.46

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.296	3.045	2.308	2.305
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	775	625	700	700
d_b, Bicycle Delay [s]	15.01	18.91	16.90	16.90
l_b,int, Bicycle LOS Score for Intersection	2.644	2.217	2.173	2.324
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	12.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.614

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
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	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	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]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	4	2	2	38	3	79	35	77	2	5	275	47
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	4	0	0	3	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]	4	2	2	39	3	81	36	83	2	5	284	48
Peak Hour Factor	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130
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]	1	1	1	14	1	28	13	29	1	2	100	17
Total Analysis Volume [veh/h]	6	3	3	55	4	114	50	116	3	7	398	67
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	625	697	641	757	769
Degree of Utilization, x	0.02	0.25	0.26	0.00	0.61

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.06	0.98	1.03	0.01	4.27
95th-Percentile Queue Length [ft]	1.47	24.39	25.76	0.30	106.83
Approach Delay [s/veh]	8.87	9.86	10.22		14.82
Approach LOS	A	A	B		B
Intersection Delay [s/veh]	12.75				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	144.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.628

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	220	660	490	88	26	111
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	3	1
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]	224	673	500	93	30	114
Peak Hour Factor	0.8580	0.8580	0.8580	0.8580	0.8580	0.8580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	196	146	27	9	33
Total Analysis Volume [veh/h]	261	784	583	108	35	133
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	0.29	0.01	0.01	0.00	0.63	0.26
d_M, Delay for Movement [s/veh]	10.51	0.00	0.00	0.00	144.84	14.38
Movement LOS	B	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	1.18	0.00	0.00	0.00	2.55	1.02
95th-Percentile Queue Length [ft/ln]	29.58	0.00	0.00	0.00	63.80	25.50
d_A, Approach Delay [s/veh]	2.63		0.00		41.56	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	5.11					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	37.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.106

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	74	656	432	24	11	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	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]	75	669	442	24	11	26
Peak Hour Factor	0.8370	0.8370	0.8370	0.8370	0.8370	0.8370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	200	132	7	3	8
Total Analysis Volume [veh/h]	90	799	528	29	13	31
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
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	0.09	0.01	0.01	0.00	0.11	0.06
d_M, Delay for Movement [s/veh]	8.86	0.00	0.00	0.00	37.04	14.05
Movement LOS	A	A	A	A	E	B
95th-Percentile Queue Length [veh/ln]	0.29	0.00	0.00	0.00	0.57	0.57
95th-Percentile Queue Length [ft/ln]	7.21	0.00	0.00	0.00	14.25	14.25
d_A, Approach Delay [s/veh]	0.90		0.00		20.85	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.15					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	39.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.773

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
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	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	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]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	159	523	202	64	447	35	51	391	163	150	702	81
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	109	2	28	168	28	18	0	2	3	0	18
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]	162	642	208	93	624	64	70	399	168	156	716	101
Peak Hour Factor	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380
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]	48	192	62	28	186	19	21	119	50	47	214	30
Total Analysis Volume [veh/h]	193	766	248	111	745	76	84	476	200	186	854	121
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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	14	45	0	7	38	0	10	22	0	10	22	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	21.0	36.0	0.0	16.0	31.0	0.0	14.0	26.0	0.0	22.0	34.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
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	

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	L	C	R	L	C	C
C, Calculated 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]	2.00	2.00	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]	12.6	30.7	30.7	7.8	25.9	25.9	6.1	33.3	33.3	12.3	39.5	39.5
g / C, Green / Cycle	0.13	0.31	0.31	0.08	0.26	0.26	0.06	0.33	0.33	0.12	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.11	0.28	0.28	0.06	0.22	0.22	0.05	0.13	0.12	0.10	0.26	0.26
s, saturation flow rate [veh/h]	1810	1900	1743	1810	1900	1839	1810	3618	1615	1810	1900	1819
c, Capacity [veh/h]	228	582	534	142	491	475	111	1200	536	224	749	717
d1, Uniform Delay [s]	42.73	33.30	33.36	45.26	35.23	35.23	46.23	25.72	25.49	42.80	24.86	24.87
k, delay calibration	0.16	0.29	0.29	0.11	0.23	0.23	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	11.51	13.12	14.62	9.13	8.58	8.84	10.19	0.98	1.99	7.77	4.62	4.84
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	0.84	0.91	0.91	0.78	0.85	0.85	0.76	0.40	0.37	0.83	0.66	0.67
d, Delay for Lane Group [s/veh]	54.24	46.41	47.98	54.39	43.81	44.07	56.42	26.70	27.48	50.57	29.48	29.71
Lane Group LOS	D	D	D	D	D	D	E	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.26	13.75	12.91	3.02	10.52	10.21	2.30	4.27	3.71	4.84	10.04	9.68
50th-Percentile Queue Length [ft/ln]	131.38	343.81	322.78	75.52	262.93	255.35	57.44	106.70	92.86	121.01	251.07	241.90
95th-Percentile Queue Length [veh/ln]	9.02	19.83	18.80	5.44	15.84	15.46	4.14	7.66	6.69	8.45	15.24	14.78
95th-Percentile Queue Length [ft/ln]	225.38	495.85	470.11	135.93	395.90	386.39	103.39	191.40	167.14	211.22	381.00	369.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.24	46.90	47.98	54.39	43.92	44.07	56.42	26.70	27.48	50.57	29.58	29.71
Movement LOS	D	D	D	D	D	D	E	C	C	D	C	C
d_A, Approach Delay [s/veh]	48.30			45.18			30.19			32.95		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	39.80											
Intersection LOS	D											
Intersection V/C	0.773											

Emissions

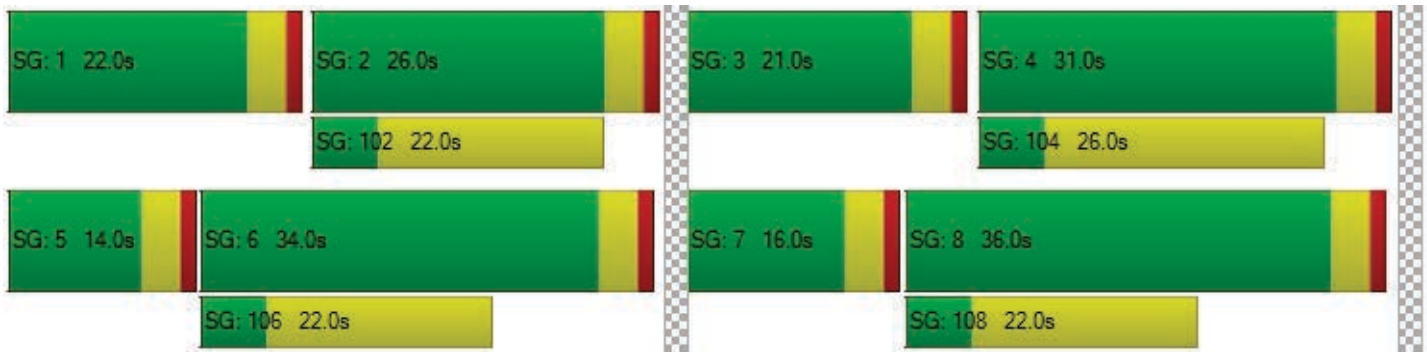
Vehicle Miles Traveled [mph]	95.89	262.14	241.65	7.51	28.24	27.33	9.90	56.11	23.58	18.06	48.33	46.34
Stops [stops/h]	189.19	495.08	464.81	108.74	378.62	367.71	82.71	307.29	133.71	174.26	361.54	348.33
Fuel consumption [US gal/h]	7.42	19.24	17.97	2.33	7.64	7.43	2.33	8.33	3.59	4.27	8.27	7.97
CO [g/h]	518.90	1344.63	1256.16	163.05	534.23	519.23	163.01	582.29	250.87	298.66	577.98	556.90
NOx [g/h]	100.96	261.62	244.40	31.72	103.94	101.02	31.72	113.29	48.81	58.11	112.45	108.35
VOC [g/h]	120.26	311.63	291.13	37.79	123.81	120.34	37.78	134.95	58.14	69.22	133.95	129.07

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.914	2.739	2.918	2.825
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]	640	540	440	600
d_b, Bicycle Delay [s]	23.12	26.65	30.42	24.50
l_b,int, Bicycle LOS Score for Intersection	2.555	2.329	2.187	2.517
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 12: S Indian Hill Blvd/Auto Center Dr

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.112

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
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	2	0	0	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	140.00	100.00	120.00	75.00	100.00	75.00	100.00	100.00	75.00
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]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
Base Volume Input [veh/h]	49	886	38	146	718	192	82	14	24	63	12	132
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	29	0	0	35	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]	50	933	39	149	767	196	84	14	24	64	12	135
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
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]	13	236	10	38	194	50	21	4	6	16	3	34
Total Analysis Volume [veh/h]	51	945	40	151	777	199	85	14	24	65	12	137
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	13	15	0	15	17	0	5	27	0	7	29	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0	0.0	24.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	19.0	0.0	10.0	20.0	0.0	18.0	39.0	0.0	12.0	33.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
Minimum Recall	No	No		No	No		Yes	No		Yes	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

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	R	L	C	R	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
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
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	3.4	33.0	33.0	8.5	38.0	38.0	26.6	26.6	14.6	26.6	11.8
g / C, Green / Cycle	0.04	0.41	0.41	0.11	0.48	0.48	0.33	0.33	0.18	0.33	0.15
(v / s)_i Volume / Saturation Flow Rate	0.03	0.18	0.18	0.08	0.21	0.12	0.02	0.25	0.01	0.26	0.08
s, saturation flow rate [veh/h]	1810	3618	1861	1810	3618	1615	1258	266	1615	298	1615
c, Capacity [veh/h]	77	1492	767	192	1721	768	239	238	294	244	237
d1, Uniform Delay [s]	37.74	16.84	16.85	34.88	14.00	12.53	26.21	24.39	27.18	26.54	31.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11	0.19	0.11
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
d2, Incremental Delay [s]	9.44	0.93	1.81	7.01	0.86	0.82	0.24	2.99	0.12	1.28	2.21
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
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
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

Lane Group Results

X, volume / capacity	0.66	0.44	0.44	0.79	0.45	0.26	0.13	0.28	0.08	0.32	0.58
d, Delay for Lane Group [s/veh]	47.19	17.77	18.65	41.89	14.85	13.35	26.46	27.37	27.30	27.82	34.02
Lane Group LOS	D	B	B	D	B	B	C	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.15	4.14	4.45	3.13	4.43	2.11	0.48	1.20	0.38	1.28	2.55
50th-Percentile Queue Length [ft/ln]	28.87	103.46	111.31	78.35	110.83	52.85	11.99	30.09	9.55	32.04	63.79
95th-Percentile Queue Length [veh/ln]	2.08	7.45	7.91	5.64	7.89	3.81	0.86	2.17	0.69	2.31	4.59
95th-Percentile Queue Length [ft/ln]	51.97	186.22	197.83	141.02	197.15	95.13	21.58	54.16	17.19	57.67	114.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.19	18.05	18.65	41.89	14.85	13.35	27.02	27.37	27.30	27.82	27.82	34.02
Movement LOS	D	B	B	D	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	19.50			18.21			27.13			31.79		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.35											
Intersection LOS	C											
Intersection V/C	1.112											

Emissions

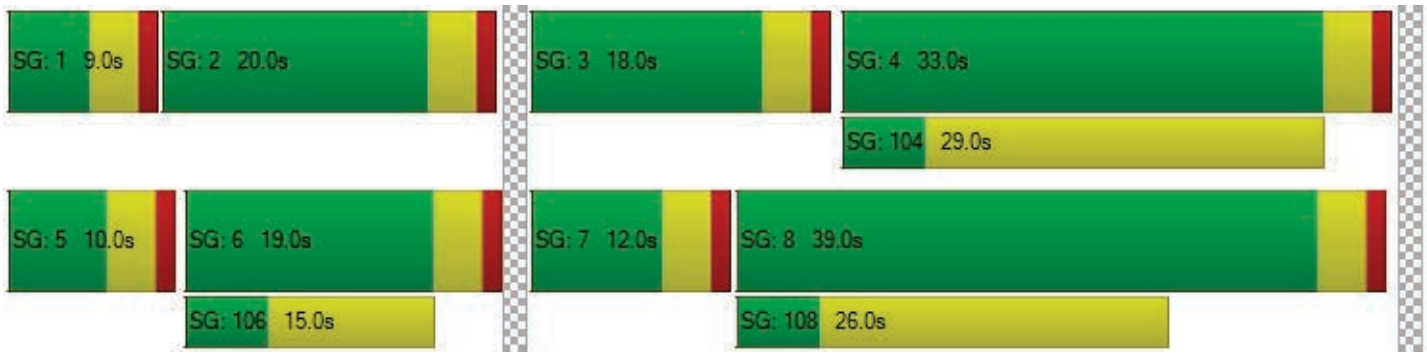
Vehicle Miles Traveled [mph]	4.01	51.09	26.32	7.64	39.32	10.07	0.74	1.61	0.57	1.83	3.25
Stops [stops/h]	51.97	372.45	200.37	141.02	398.98	95.13	21.58	54.16	17.19	57.67	114.82
Fuel consumption [US gal/h]	1.03	7.10	3.78	2.64	6.85	1.64	0.32	0.74	0.25	0.83	1.72
CO [g/h]	72.23	496.24	264.35	184.48	478.70	114.64	22.21	51.94	17.60	58.00	120.00
NOx [g/h]	14.05	96.55	51.43	35.89	93.14	22.30	4.32	10.11	3.42	11.29	23.35
VOC [g/h]	16.74	115.01	61.27	42.75	110.94	26.57	5.15	12.04	4.08	13.44	27.81

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	0.00	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.919	3.103	0.000	2.072
Crosswalk LOS	C	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	375	400	1175	1175
d_b, Bicycle Delay [s]	26.41	25.60	6.81	6.81
l_b,int, Bicycle LOS Score for Intersection	2.129	2.489	1.763	1.913
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	9.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
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	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	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]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	70	837	12	95	815	16	4	31	80	25	32	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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	67	0	0	55	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]	71	921	12	97	886	16	4	32	82	26	33	64
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
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	245	3	26	236	4	1	9	22	7	9	17
Total Analysis Volume [veh/h]	76	981	13	103	944	17	4	34	87	28	35	68
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	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	29	0	5	29	0	0	34	0	0	34	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	41.0	0.0	9.0	41.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
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]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	62.5	54.0	54.0	62.5	54.4	54.4	9.5	9.5
g / C, Green / Cycle	0.78	0.67	0.67	0.78	0.68	0.68	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.12	0.29	0.29	0.16	0.29	0.01	0.08	0.08
s, saturation flow rate [veh/h]	641	1710	1702	634	3256	1454	1559	1562
c, Capacity [veh/h]	555	1152	1147	550	2211	987	233	242
d1, Uniform Delay [s]	2.97	6.00	6.00	3.11	5.80	4.17	33.76	33.79
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	1.18	1.19	0.75	0.61	0.03	1.91	1.89
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	0.14	0.43	0.43	0.19	0.43	0.02	0.54	0.54
d, Delay for Lane Group [s/veh]	3.08	7.18	7.19	3.86	6.40	4.20	35.67	35.68
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.14	3.11	3.10	0.31	2.85	0.08	2.49	2.54
50th-Percentile Queue Length [ft/ln]	3.48	77.81	77.50	7.70	71.13	1.94	62.23	63.57
95th-Percentile Queue Length [veh/ln]	0.25	5.60	5.58	0.55	5.12	0.14	4.48	4.58
95th-Percentile Queue Length [ft/ln]	6.26	140.05	139.50	13.86	128.03	3.49	112.01	114.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.08	7.19	7.19	3.86	6.40	4.20	35.67	35.67	35.67	35.68	35.68	35.68
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	6.89			6.12			35.67			35.68		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	9.63											
Intersection LOS	A											
Intersection V/C	0.464											

Emissions

Vehicle Miles Traveled [mph]	19.26	126.23	125.65	8.10	74.27	1.34	2.97	12.97
Stops [stops/h]	6.26	140.05	139.50	13.86	256.06	3.49	112.01	114.42
Fuel consumption [US gal/h]	0.80	6.63	6.60	0.49	5.99	0.09	1.22	1.97
CO [g/h]	55.84	463.13	461.11	34.53	418.50	6.41	85.59	137.95
NOx [g/h]	10.86	90.11	89.72	6.72	81.43	1.25	16.65	26.84
VOC [g/h]	12.94	107.33	106.87	8.00	96.99	1.49	19.84	31.97

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.856	1.848	1.927
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	925	925	650	650
d_b, Bicycle Delay [s]	11.56	11.56	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.442	2.437	1.766	1.776
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.671

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
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	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	120	692	91	82	701	175	145	394	171	63	276	72
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	60	0	5	48	2	2	0	0	0	0	5
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]	122	766	93	89	763	181	150	402	174	64	282	78
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
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]	32	199	24	23	198	47	39	104	45	17	73	20
Total Analysis Volume [veh/h]	127	795	97	92	792	188	156	417	181	66	293	81
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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	8	29	0	6	27	0	0	23	0	0	23	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	15.0	27.0	0.0	15.0	27.0	0.0	0.0	28.0	0.0	0.0	28.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	6.4	30.2	30.2	4.7	28.5	28.5	23.1	23.1	23.1	23.1	23.1	23.1
g / C, Green / Cycle	0.09	0.43	0.43	0.07	0.41	0.41	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.07	0.24	0.24	0.05	0.27	0.27	0.15	0.22	0.11	0.08	0.15	0.05
s, saturation flow rate [veh/h]	1810	1900	1828	1810	1900	1776	1024	1900	1615	833	1900	1615
c, Capacity [veh/h]	166	819	788	124	774	724	286	625	532	197	625	532
d1, Uniform Delay [s]	31.05	14.91	14.91	31.99	16.75	16.75	27.84	20.18	17.74	29.93	18.62	16.58
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.18	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	7.14	2.71	2.81	8.38	4.27	4.57	1.62	2.04	0.38	1.00	0.55	0.13
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	0.76	0.56	0.56	0.74	0.65	0.65	0.55	0.67	0.34	0.34	0.47	0.15
d, Delay for Lane Group [s/veh]	38.19	17.62	17.72	40.38	21.02	21.32	29.46	22.21	18.11	30.93	19.17	16.71
Lane Group LOS	D	B	B	D	C	C	C	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.29	5.23	5.06	1.72	6.57	6.21	2.49	5.65	2.08	1.07	3.53	0.86
50th-Percentile Queue Length [ft/ln]	57.19	130.83	126.49	43.08	164.30	155.17	62.27	141.23	51.90	26.67	88.22	21.62
95th-Percentile Queue Length [veh/ln]	4.12	8.99	8.75	3.10	10.78	10.29	4.48	9.55	3.74	1.92	6.35	1.56
95th-Percentile Queue Length [ft/ln]	102.94	224.63	218.72	77.54	269.40	257.31	112.08	238.68	93.43	48.00	158.79	38.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.19	17.66	17.72	40.38	21.13	21.32	29.46	22.21	18.11	30.93	19.17	16.71
Movement LOS	D	B	B	D	C	C	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	20.22			22.82			22.73			20.48		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	21.68											
Intersection LOS	C											
Intersection V/C	0.671											

Emissions

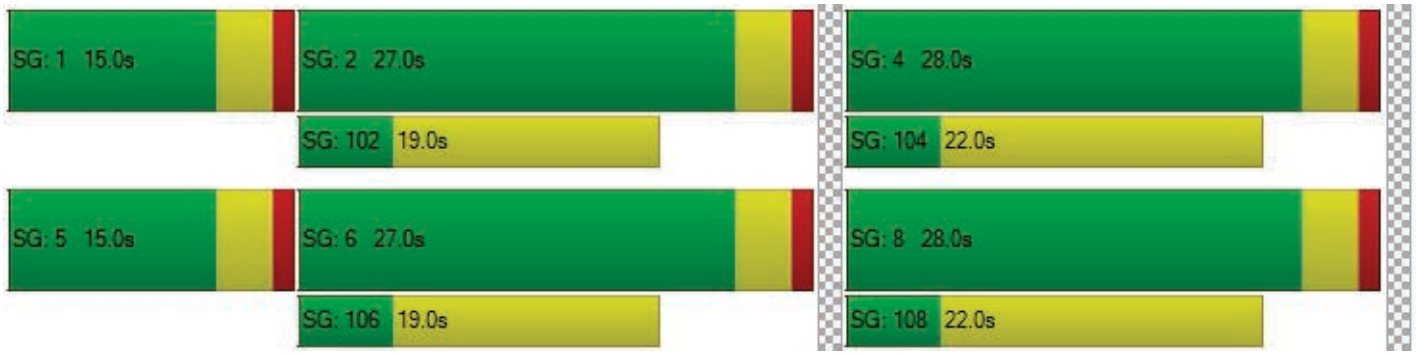
Vehicle Miles Traveled [mph]	9.80	35.08	33.77	23.31	128.33	120.01	9.97	26.64	11.56	16.44	73.00	20.18
Stops [stops/h]	117.65	269.14	260.22	88.62	337.98	319.20	128.09	290.53	106.77	54.86	181.47	44.47
Fuel consumption [US gal/h]	2.49	5.53	5.34	2.46	10.08	9.49	2.28	5.09	1.91	1.45	5.29	1.38
CO [g/h]	174.31	386.56	373.50	172.06	704.82	663.32	159.26	355.48	133.58	101.69	369.78	96.40
NOx [g/h]	33.92	75.21	72.67	33.48	137.13	129.06	30.99	69.16	25.99	19.78	71.95	18.76
VOC [g/h]	40.40	89.59	86.56	39.88	163.35	153.73	36.91	82.39	30.96	23.57	85.70	22.34

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.918	3.058	2.507	2.417
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	657	657	686	686
d_b, Bicycle Delay [s]	15.78	15.78	15.11	15.11
l_b,int, Bicycle LOS Score for Intersection	2.400	2.444	2.804	2.286
Bicycle LOS	B	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	19.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	1	19	22	509	376	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	5	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]	1	19	22	524	389	3
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	5	6	142	105	1
Total Analysis Volume [veh/h]	1	21	24	568	421	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.03	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	19.63	10.90	8.17	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.12	0.12	0.04	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.88	2.88	1.01	1.01	0.00	0.00
d_A, Approach Delay [s/veh]	11.29		0.33		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.43					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.142

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
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	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	11	5	5	1	2	3	6	86	17	5	73	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	11	5	5	1	2	3	6	88	17	5	74	0
Peak Hour Factor	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630
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	1	1	0	1	1	2	25	5	1	21	0
Total Analysis Volume [veh/h]	13	6	6	1	2	3	7	102	20	6	86	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	831	873	906	878
Degree of Utilization, x	0.03	0.01	0.14	0.10

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.09	0.02	0.50	0.35
95th-Percentile Queue Length [ft]	2.32	0.52	12.39	8.75
Approach Delay [s/veh]	7.47	7.15	7.63	7.58
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.59			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.683

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
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	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	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]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	641	458	377	910	0	194	3	237	0	0	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	67	0	119	55	0	145	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]	0	721	467	504	983	0	343	3	242	0	0	0
Peak Hour Factor	1.0000	0.9530	0.9530	0.9530	0.9530	1.0000	0.9530	0.9530	0.9530	1.0000	1.0000	1.0000
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	189	123	132	258	0	90	1	63	0	0	0
Total Analysis Volume [veh/h]	0	757	490	529	1031	0	360	3	254	0	0	0
Presence of On-Street Parking	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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	12	0	36	52	0	0	10	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
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				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	0.0	23.0	0.0	29.0	52.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	
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]	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	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	24.7	24.7	24.7	22.5	51.2	10.8	10.8	10.8	
g / C, Green / Cycle	0.35	0.35	0.35	0.32	0.73	0.15	0.15	0.15	
(v / s)_i Volume / Saturation Flow Rate	0.17	0.19	0.19	0.29	0.28	0.12	0.12	0.12	
s, saturation flow rate [veh/h]	3618	1615	1615	1810	3618	1810	1749	1615	
c, Capacity [veh/h]	1272	568	568	581	2641	282	272	251	
d1, Uniform Delay [s]	17.78	18.23	18.23	22.78	3.57	28.32	28.33	28.35	
k, delay calibration	0.50	0.50	0.50	0.25	0.50	0.12	0.12	0.13	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.35	3.79	3.79	12.11	0.44	4.90	5.14	5.75	
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	0.49	0.55	0.55	0.91	0.39	0.76	0.77	0.77	
d, Delay for Lane Group [s/veh]	19.13	22.02	22.02	34.89	4.00	33.22	33.47	34.10	
Lane Group LOS	B	C	C	C	A	C	C	C	
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.81	4.26	4.26	9.66	1.85	3.58	3.49	3.28	
50th-Percentile Queue Length [ft/ln]	95.22	106.46	106.46	241.61	46.26	89.53	87.22	82.00	
95th-Percentile Queue Length [veh/ln]	6.86	7.64	7.64	14.76	3.33	6.45	6.28	5.90	
95th-Percentile Queue Length [ft/ln]	171.39	191.07	191.07	369.07	83.27	161.16	157.00	147.61	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	19.13	22.02	34.89	4.00	0.00	33.33	33.47	33.98	0.00	0.00	0.00
Movement LOS		B	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	20.57			14.47			33.58			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	20.14											
Intersection LOS	C											
Intersection V/C	0.683											

Emissions

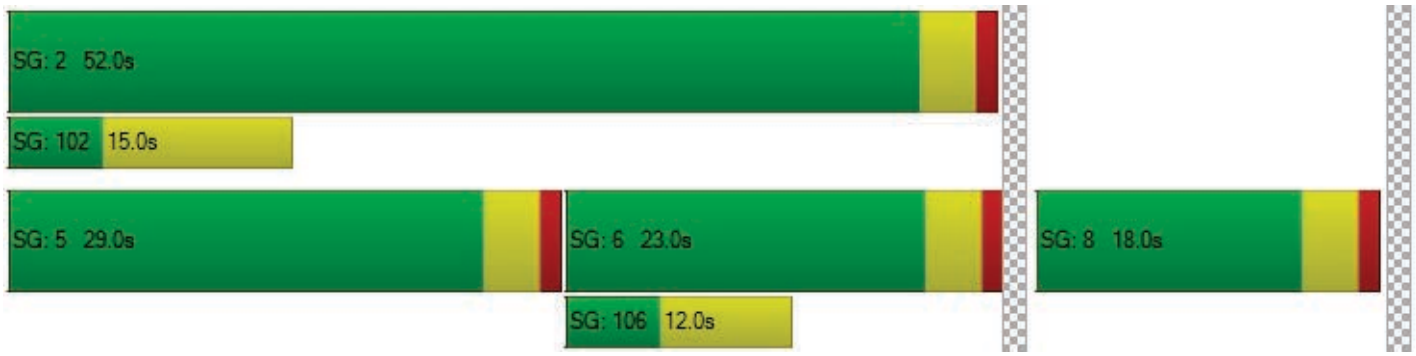
Vehicle Miles Traveled [mph]	31.50	15.75	15.75	23.86	46.51	18.49	17.92	16.63
Stops [stops/h]	391.74	219.01	219.01	497.02	190.32	184.18	179.43	168.69
Fuel consumption [US gal/h]	6.57	3.64	3.64	7.48	3.81	3.93	3.82	3.60
CO [g/h]	459.54	254.75	254.75	523.13	266.02	274.42	267.32	251.30
NOx [g/h]	89.41	49.57	49.57	101.78	51.76	53.39	52.01	48.89
VOC [g/h]	106.50	59.04	59.04	121.24	61.65	63.60	61.96	58.24

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.196	2.202
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	543	1371	400	0
d_b, Bicycle Delay [s]	18.58	3.46	22.40	35.00
l_b,int, Bicycle LOS Score for Intersection	2.245	2.847	2.578	4.132
Bicycle LOS	B	C	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.872

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
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	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
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			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	325	587	0	0	815	416	0	0	0	344	3	346
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	212	0	0	174	116	0	0	0	0	0	147
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]	332	811	0	0	1005	540	0	0	0	351	3	500
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
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]	94	229	0	0	284	153	0	0	0	99	1	141
Total Analysis Volume [veh/h]	376	917	0	0	1137	611	0	0	0	397	3	566
Presence of On-Street Parking	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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	18	55	0	0	33	0	0	0	0	0	17	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	23.0	58.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	22.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	80	80	80	80		80	80	80
L, Total Lost Time per Cycle [s]	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	18.3	54.3	31.9	31.9		17.7	17.7	17.7
g / C, Green / Cycle	0.23	0.68	0.40	0.40		0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.21	0.25	0.22	0.38		0.18	0.19	0.20
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1658	1615
c, Capacity [veh/h]	416	2453	2061	643		401	368	358
d1, Uniform Delay [s]	29.94	5.55	18.57	23.30		29.48	30.05	30.24
k, delay calibration	0.33	0.50	0.50	0.50		0.28	0.32	0.34
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	18.75	0.44	1.07	25.14		9.16	17.02	20.67
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.37	0.55	0.95		0.80	0.87	0.90
d, Delay for Lane Group [s/veh]	48.69	5.99	19.63	48.45		38.64	47.08	50.91
Lane Group LOS	D	A	B	D		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	8.93	2.76	5.29	14.78		6.51	7.32	7.66
50th-Percentile Queue Length [ft/ln]	223.20	69.12	132.17	369.42		162.64	182.88	191.57
95th-Percentile Queue Length [veh/ln]	13.83	4.98	9.06	21.08		10.69	11.75	12.20
95th-Percentile Queue Length [ft/ln]	345.70	124.41	226.44	527.02		267.21	293.76	305.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.69	5.99	0.00	0.00	19.63	48.45	0.00	0.00	0.00	40.23	47.08	49.26
Movement LOS	D	A			B	D				D	D	D
d_A, Approach Delay [s/veh]	18.41			29.71			0.00			45.54		
Approach LOS	B			C			A			D		
d_I, Intersection Delay [s/veh]	29.88											
Intersection LOS	C											
Intersection V/C	0.872											

Emissions

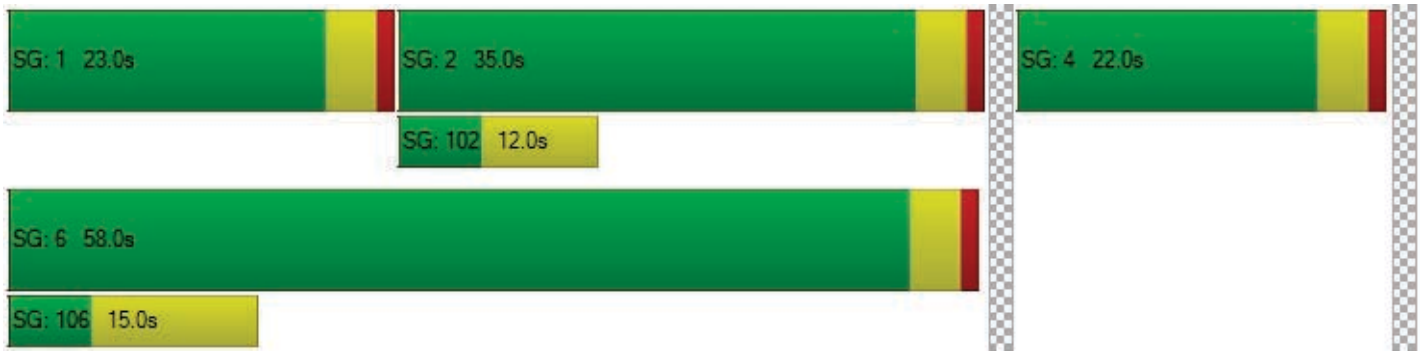
Vehicle Miles Traveled [mph]	16.96	41.36	42.16	22.66		26.94	26.86	26.84
Stops [stops/h]	401.75	248.82	713.71	664.95		292.75	329.18	344.82
Fuel consumption [US gal/h]	6.64	4.19	10.22	10.63		6.38	7.28	7.68
CO [g/h]	464.36	293.23	714.52	743.04		445.83	508.78	536.82
NOx [g/h]	90.35	57.05	139.02	144.57		86.74	98.99	104.44
VOC [g/h]	107.62	67.96	165.60	172.21		103.32	117.91	124.41

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.193	2.354
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1350	775	0	450
d_b, Bicycle Delay [s]	4.23	15.01	40.00	24.03
l_b,int, Bicycle LOS Score for Intersection	2.626	2.521	4.132	3.154
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	21.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.645

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
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	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	169	748	106	39	732	43	53	157	224	147	133	65
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	334	2	0	266	8	6	4	0	1	4	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]	195	1097	110	40	1013	52	60	164	228	151	140	66
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
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	300	30	11	277	14	16	45	62	41	38	18
Total Analysis Volume [veh/h]	213	1199	120	44	1107	57	66	179	249	165	153	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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	23	37	0	5	19	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	22.0	37.0	0.0	13.0	28.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	11.4	41.3	41.3	3.1	33.1	33.1	23.5	23.5	23.5	23.5	23.5	23.5
g / C, Green / Cycle	0.14	0.52	0.52	0.04	0.41	0.41	0.29	0.29	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.12	0.35	0.35	0.02	0.21	0.21	0.06	0.09	0.15	0.17	0.08	0.04
s, saturation flow rate [veh/h]	1810	1900	1840	1810	3618	1853	1174	1900	1615	975	1900	1615
c, Capacity [veh/h]	258	982	951	71	1497	767	331	558	475	279	558	475
d1, Uniform Delay [s]	33.35	14.38	14.47	37.84	17.46	17.46	26.78	22.02	23.58	31.33	21.69	20.88
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	6.65	3.77	4.02	8.47	1.26	2.46	0.29	0.33	0.90	2.01	0.26	0.15
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	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	0.83	0.68	0.69	0.62	0.51	0.51	0.20	0.32	0.52	0.59	0.27	0.15
d, Delay for Lane Group [s/veh]	40.00	18.16	18.48	46.31	18.72	19.92	27.08	22.35	24.48	33.34	21.95	21.02
Lane Group LOS	D	B	B	D	B	B	C	C	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.38	9.10	9.00	0.98	5.00	5.38	1.04	2.54	3.82	3.14	2.17	0.98
50th-Percentile Queue Length [ft/ln]	109.54	227.41	225.04	24.49	125.02	134.53	26.11	63.40	95.51	78.53	54.27	24.60
95th-Percentile Queue Length [veh/ln]	7.81	14.04	13.92	1.76	8.67	9.19	1.88	4.56	6.88	5.65	3.91	1.77
95th-Percentile Queue Length [ft/ln]	195.36	351.06	348.05	44.09	216.70	229.64	46.99	114.12	171.93	141.36	97.69	44.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.00	18.30	18.48	46.31	19.09	19.92	27.08	22.35	24.48	33.34	21.95	21.02
Movement LOS	D	B	B	D	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	21.33			20.12			24.06			26.60		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	21.87											
Intersection LOS	C											
Intersection V/C	0.645											

Emissions

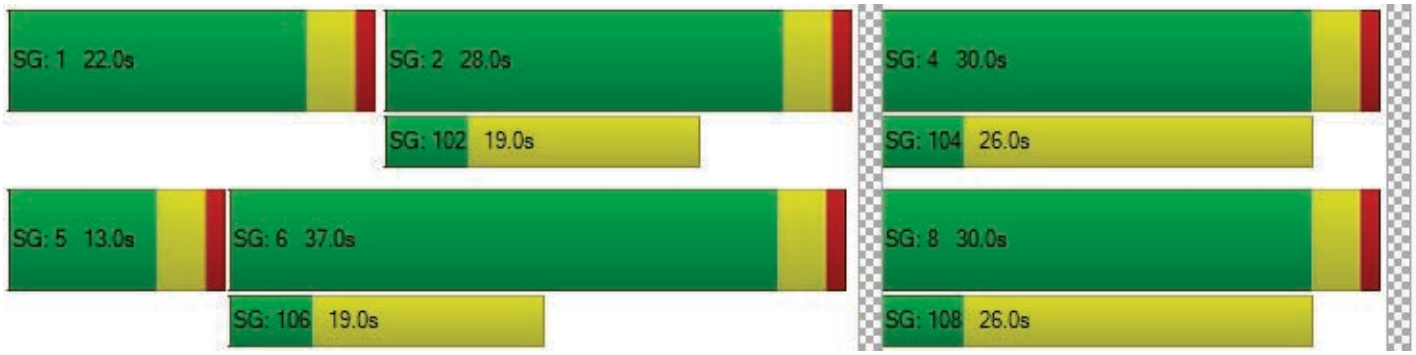
Vehicle Miles Traveled [mph]	9.09	28.46	27.85	21.86	382.35	195.97	3.94	10.69	14.87	9.44	8.76	4.12
Stops [stops/h]	197.16	409.33	405.07	44.09	450.06	242.15	46.99	114.12	171.93	141.36	97.69	44.28
Fuel consumption [US gal/h]	3.20	5.90	5.84	1.63	21.05	11.00	0.87	2.08	3.10	2.29	1.58	0.72
CO [g/h]	223.50	412.15	408.12	113.99	1471.36	768.73	60.63	145.38	216.72	160.01	110.71	50.49
NOx [g/h]	43.49	80.19	79.40	22.18	286.27	149.57	11.80	28.29	42.17	31.13	21.54	9.82
VOC [g/h]	51.80	95.52	94.58	26.42	341.00	178.16	14.05	33.69	50.23	37.08	25.66	11.70

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.179	3.094	2.388	2.305
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	825	600	650	650
d_b, Bicycle Delay [s]	13.81	19.60	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.824	2.224	2.375	2.203
Bicycle LOS	C	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.463

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
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	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	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]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	1	4	3	68	2	53	87	198	1	0	152	34
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	4	0	0	6	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]	1	4	3	69	2	54	89	206	1	0	161	35
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
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	1	1	19	1	15	24	56	0	0	44	9
Total Analysis Volume [veh/h]	1	4	3	75	2	58	96	223	1	0	174	38
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	683	707	689	824	767
Degree of Utilization, x	0.01	0.19	0.46	0.00	0.28

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.04	0.70	2.46	0.00	1.13
95th-Percentile Queue Length [ft]	0.89	17.55	61.44	0.09	28.22
Approach Delay [s/veh]	8.33	9.30	12.34		9.48
Approach LOS	A	A	B		A
Intersection Delay [s/veh]	10.79				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	67.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.610

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	113	594	521	109	73	189
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	5	4	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]	116	606	531	116	78	193
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	30	157	137	30	20	50
Total Analysis Volume [veh/h]	120	627	550	120	81	200
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	0.13	0.01	0.01	0.00	0.61	0.37
d_M, Delay for Movement [s/veh]	9.44	0.00	0.00	0.00	67.34	15.58
Movement LOS	A	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.44	0.00	0.00	0.00	3.15	1.70
95th-Percentile Queue Length [ft/ln]	11.07	0.00	0.00	0.00	78.81	42.58
d_A, Approach Delay [s/veh]	1.52		0.00		30.50	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	5.71					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	27.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.118

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	43	559	553	36	22	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	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]	44	571	564	37	22	54
Peak Hour Factor	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	145	143	9	6	14
Total Analysis Volume [veh/h]	45	579	572	38	22	55
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
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	0.05	0.01	0.01	0.00	0.12	0.11
d_M, Delay for Movement [s/veh]	8.86	0.00	0.00	0.00	27.34	14.86
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	0.84	0.84
95th-Percentile Queue Length [ft/ln]	3.61	0.00	0.00	0.00	21.05	21.05
d_A, Approach Delay [s/veh]	0.64		0.00		18.43	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.39					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	44.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.879

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
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	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	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]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	167	508	175	122	499	62	95	897	186	156	640	89
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	336	4	44	268	44	56	0	2	4	0	56
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]	170	854	183	168	777	107	153	915	192	163	653	147
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
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]	44	219	47	43	200	27	39	235	49	42	168	38
Total Analysis Volume [veh/h]	175	878	188	173	799	110	157	940	197	168	671	151
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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	31	46	0	11	26	0	5	22	0	5	22	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	19.0	35.0	0.0	17.0	33.0	0.0	18.0	31.0	0.0	17.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
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	

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	L	C	R	L	C	C
C, Calculated 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]	2.00	2.00	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]	11.6	31.0	31.0	11.4	30.8	30.8	10.6	30.5	30.5	11.1	31.0	31.0
g / C, Green / Cycle	0.12	0.31	0.31	0.11	0.31	0.31	0.11	0.30	0.30	0.11	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.10	0.29	0.29	0.10	0.24	0.24	0.09	0.26	0.12	0.09	0.22	0.22
s, saturation flow rate [veh/h]	1810	1900	1786	1810	1900	1821	1810	3618	1615	1810	1900	1781
c, Capacity [veh/h]	211	589	553	206	584	560	193	1101	491	202	588	551
d1, Uniform Delay [s]	43.21	33.47	33.53	43.39	31.72	31.73	43.71	32.70	27.57	43.49	30.69	30.69
k, delay calibration	0.16	0.37	0.37	0.22	0.28	0.28	0.11	0.50	0.50	0.16	0.50	0.50
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
d2, Incremental Delay [s]	11.76	19.02	20.63	15.99	6.15	6.43	8.11	8.48	2.43	11.74	7.48	7.96
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	0.83	0.93	0.94	0.84	0.79	0.79	0.82	0.85	0.40	0.83	0.72	0.72
d, Delay for Lane Group [s/veh]	54.98	52.49	54.16	59.38	37.88	38.15	51.82	41.18	30.00	55.22	38.17	38.65
Lane Group LOS	D	D	D	E	D	D	D	D	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.80	15.31	14.71	5.03	10.89	10.48	4.09	11.30	3.87	4.61	9.86	9.32
50th-Percentile Queue Length [ft/ln]	120.02	382.64	367.63	125.78	272.18	262.02	102.29	282.43	96.64	115.32	246.62	232.95
95th-Percentile Queue Length [veh/ln]	8.39	21.72	20.99	8.71	16.30	15.79	7.37	16.81	6.96	8.13	15.02	14.32
95th-Percentile Queue Length [ft/ln]	209.86	543.04	524.85	217.74	407.46	394.76	184.13	420.24	173.95	203.37	375.39	358.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.98	53.12	54.16	59.38	37.99	38.15	51.82	41.18	30.00	55.22	38.35	38.65
Movement LOS	D	D	D	E	D	D	D	D	C	E	D	D
d_A, Approach Delay [s/veh]	53.54			41.43			40.77			41.26		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	44.47											
Intersection LOS	D											
Intersection V/C	0.879											

Emissions

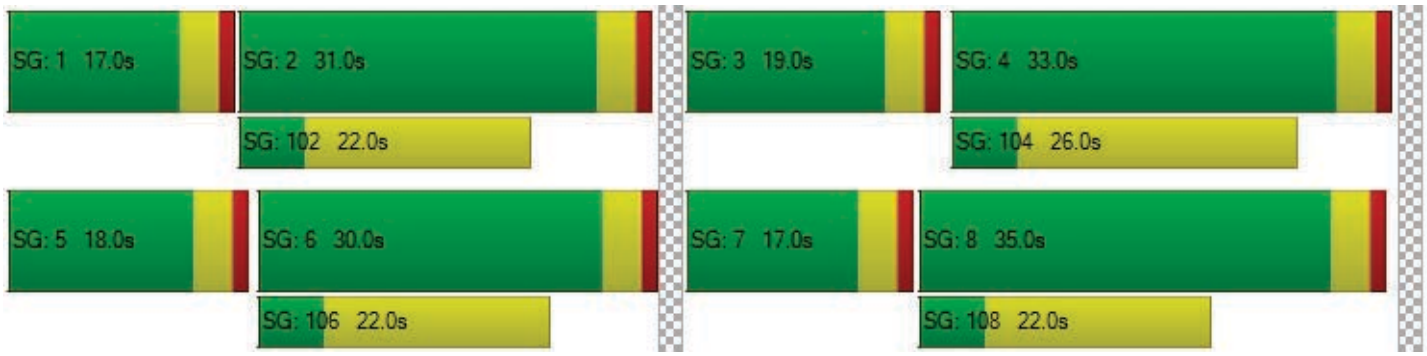
Vehicle Miles Traveled [mph]	86.95	272.43	257.20	11.71	31.41	30.11	18.51	110.82	23.22	16.31	41.20	38.61
Stops [stops/h]	172.83	551.01	529.38	181.12	391.93	377.32	147.30	813.40	139.16	166.05	355.13	335.45
Fuel consumption [US gal/h]	6.77	21.03	20.12	3.90	7.72	7.44	4.12	21.79	3.73	4.10	8.26	7.81
CO [g/h]	473.22	1469.85	1406.27	272.53	539.75	520.04	288.09	1523.04	260.64	286.82	577.40	545.63
NOx [g/h]	92.07	285.98	273.61	53.02	105.02	101.18	56.05	296.33	50.71	55.80	112.34	106.16
VOC [g/h]	109.67	340.65	325.92	63.16	125.09	120.52	66.77	352.98	60.41	66.47	133.82	126.45

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.932	2.822	3.008	2.902
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]	620	580	540	520
d_b, Bicycle Delay [s]	23.81	25.21	26.65	27.38
l_b,int, Bicycle LOS Score for Intersection	2.583	2.452	2.627	2.376
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 12: S Indian Hill Blvd/Auto Center Dr

Control Type:	Signalized	Delay (sec / veh):	26.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2,271.959

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
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	2	0	0	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	140.00	100.00	120.00	75.00	100.00	75.00	100.00	100.00	50.00
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]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
Base Volume Input [veh/h]	28	828	19	83	764	221	307	33	84	28	18	86
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	67	0	0	55	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]	29	912	19	85	834	225	313	34	86	29	18	88
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
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]	7	232	5	22	212	57	80	9	22	7	5	22
Total Analysis Volume [veh/h]	30	929	19	87	849	229	319	35	88	30	18	90
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	10	15	0	5	10	0	175	131	0	73	29	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0	0.0	24.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	19.0	0.0	9.0	19.0	0.0	19.0	43.0	0.0	9.0	33.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
Minimum Recall	No	No		No	No		Yes	No		Yes	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

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	R	L	C	R	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
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
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	2.4	23.8	23.8	5.0	26.4	26.4	39.1	39.1	30.1	39.1	20.6
g / C, Green / Cycle	0.03	0.30	0.30	0.06	0.33	0.33	0.49	0.49	0.38	0.49	0.26
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.17	0.05	0.23	0.14	0.11	0.55	0.05	0.41	0.06
s, saturation flow rate [veh/h]	1810	3618	1881	1810	3618	1615	1306	378	1615	117	1615
c, Capacity [veh/h]	55	1081	562	114	1198	535	346	350	607	177	415
d1, Uniform Delay [s]	38.24	23.76	23.76	36.91	23.38	20.85	20.60	24.62	16.48	15.06	23.38
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.12	0.50	0.11	0.50	0.11
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
d2, Incremental Delay [s]	8.13	2.24	4.28	10.22	3.56	2.49	0.93	7.38	0.11	3.74	0.26
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
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
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

Lane Group Results

X, volume / capacity	0.54	0.58	0.58	0.77	0.71	0.43	0.42	0.60	0.14	0.27	0.22
d, Delay for Lane Group [s/veh]	46.37	26.00	28.04	47.13	26.93	23.34	21.53	32.00	16.59	18.80	23.64
Lane Group LOS	D	C	C	D	C	C	C	C	B	B	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.69	5.04	5.57	1.94	7.12	3.51	1.82	2.59	1.04	0.60	1.33
50th-Percentile Queue Length [ft/ln]	17.17	126.04	139.16	48.54	178.05	87.80	45.51	64.66	25.97	15.02	33.21
95th-Percentile Queue Length [veh/ln]	1.24	8.72	9.44	3.50	11.50	6.32	3.28	4.66	1.87	1.08	2.39
95th-Percentile Queue Length [ft/ln]	30.91	218.10	235.89	87.38	287.46	158.04	81.91	116.39	46.74	27.04	59.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.37	26.67	28.04	47.13	26.93	23.34	27.15	32.00	16.59	18.80	18.80	23.64
Movement LOS	D	C	C	D	C	C	C	C	B	B	B	C
d_A, Approach Delay [s/veh]	27.30			27.74			25.50			21.96		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.92											
Intersection LOS	C											
Intersection V/C	2271.959											

Emissions

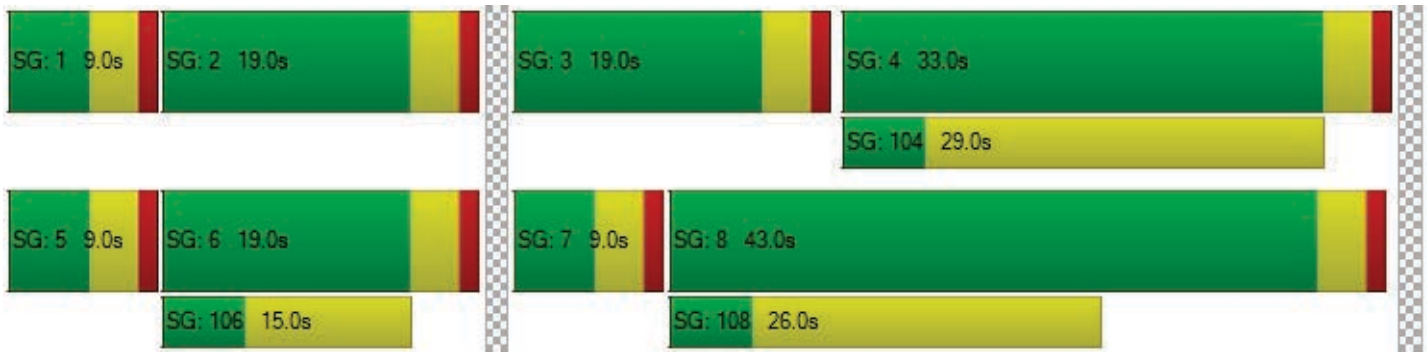
Vehicle Miles Traveled [mph]	2.36	49.05	25.53	4.40	42.90	11.57	3.43	4.96	2.09	1.14	2.14
Stops [stops/h]	30.91	453.76	250.48	87.38	640.96	158.04	81.91	116.39	46.74	27.04	59.78
Fuel consumption [US gal/h]	0.61	8.58	4.71	1.66	11.11	2.72	1.23	2.21	0.64	0.38	0.85
CO [g/h]	42.32	599.83	329.12	115.97	776.52	189.95	85.84	154.47	44.83	26.56	59.49
NOx [g/h]	8.23	116.71	64.04	22.56	151.08	36.96	16.70	30.05	8.72	5.17	11.58
VOC [g/h]	9.81	139.02	76.28	26.88	179.97	44.02	19.89	35.80	10.39	6.15	13.79

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	0.00	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.886	3.500	0.000	2.027
Crosswalk LOS	C	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	375	375	1200	1200
d_b, Bicycle Delay [s]	26.41	26.41	6.40	6.40
l_b,int, Bicycle LOS Score for Intersection	2.098	2.521	2.289	1.787
Bicycle LOS	B	B	B	A

Sequence

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



OPENING YEAR PLUS PROJECT CONDITIONS

Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.562

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
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	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	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]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	37	929	5	72	623	6	3	8	23	4	13	168
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	30	2	4	36	0	0	0	0	5	0	12
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]	38	978	7	77	671	6	3	8	23	9	13	183
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
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]	10	263	2	21	180	2	1	2	6	2	3	49
Total Analysis Volume [veh/h]	41	1050	8	83	721	6	3	9	25	10	14	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	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	5	17	0	0	46	0	0	46	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	40.0	0.0	9.0	40.0	0.0	0.0	31.0	0.0	0.0	31.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
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]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	58.0	49.8	49.8	58.0	51.0	51.0	14.0	14.0
g / C, Green / Cycle	0.72	0.62	0.62	0.72	0.64	0.64	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.05	0.31	0.31	0.14	0.22	0.00	0.02	0.15
s, saturation flow rate [veh/h]	749	1710	1705	610	3256	1454	1561	1470
c, Capacity [veh/h]	597	1063	1060	484	2072	925	323	305
d1, Uniform Delay [s]	3.68	8.30	8.30	4.80	6.79	5.31	27.85	31.96
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	1.67	1.68	0.77	0.46	0.01	0.16	3.25
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	0.50	0.50	0.17	0.35	0.01	0.11	0.72
d, Delay for Lane Group [s/veh]	3.72	9.97	9.98	5.57	7.25	5.32	28.01	35.21
Lane Group LOS	A	A	A	A	A	A	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.12	4.38	4.37	0.37	2.43	0.03	0.63	4.35
50th-Percentile Queue Length [ft/ln]	3.12	109.46	109.21	9.16	60.67	0.83	15.63	108.70
95th-Percentile Queue Length [veh/ln]	0.22	7.81	7.80	0.66	4.37	0.06	1.13	7.77
95th-Percentile Queue Length [ft/ln]	5.62	195.25	194.90	16.48	109.21	1.49	28.13	194.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.72	9.97	9.98	5.57	7.25	5.32	28.01	28.01	28.01	35.21	35.21	35.21
Movement LOS	A	A	A	A	A	A	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	9.74			7.06			28.01			35.21		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	11.65											
Intersection LOS	B											
Intersection V/C	0.562											

Emissions

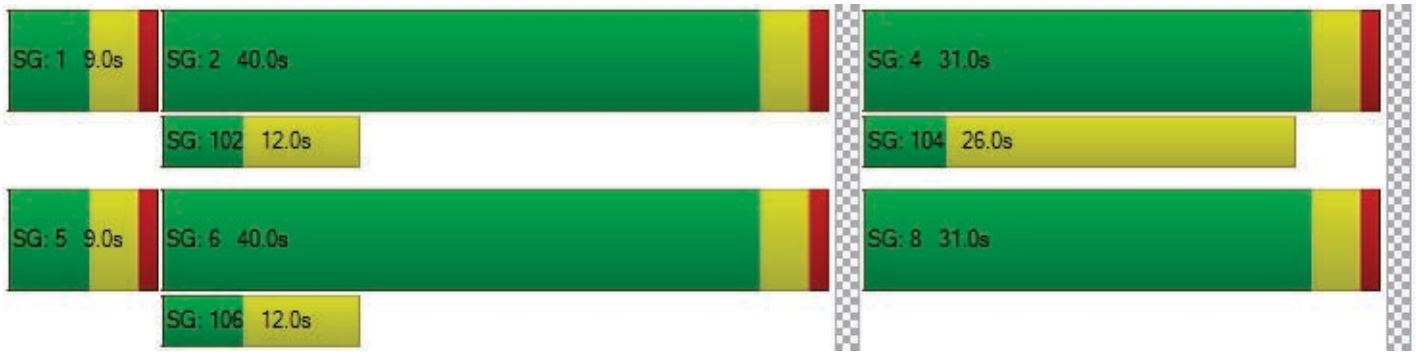
Vehicle Miles Traveled [mph]	10.39	134.22	133.87	6.48	56.31	0.47	0.88	21.89
Stops [stops/h]	5.62	197.03	196.58	16.48	218.42	1.49	28.13	195.66
Fuel consumption [US gal/h]	0.46	7.82	7.80	0.47	4.85	0.04	0.30	3.32
CO [g/h]	32.05	546.52	545.17	32.51	339.23	2.49	20.82	231.95
NOx [g/h]	6.23	106.33	106.07	6.32	66.00	0.48	4.05	45.13
VOC [g/h]	7.43	126.66	126.35	7.53	78.62	0.58	4.82	53.76

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.843	1.773	1.917
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	900	900	675	675
d_b, Bicycle Delay [s]	12.10	12.10	17.56	17.56
l_b,int, Bicycle LOS Score for Intersection	2.466	2.228	1.621	1.924
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
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	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	96	697	39	36	496	118	153	207	138	46	252	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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	0	4	34	3	3	0	0	0	0	5
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]	98	735	40	41	540	123	159	211	141	47	257	99
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
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	204	11	11	150	34	44	59	39	13	71	28
Total Analysis Volume [veh/h]	109	817	44	46	600	137	177	234	157	52	286	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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	27	0	6	24	0	0	25	0	0	25	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	15.0	26.0	0.0	13.0	24.0	0.0	0.0	31.0	0.0	0.0	31.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	5.5	30.3	30.3	3.0	27.8	27.8	24.7	24.7	24.7	24.7	24.7	24.7
g / C, Green / Cycle	0.08	0.43	0.43	0.04	0.40	0.40	0.35	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.06	0.23	0.23	0.03	0.20	0.20	0.18	0.12	0.10	0.05	0.15	0.07
s, saturation flow rate [veh/h]	1810	1900	1866	1810	1900	1779	1004	1900	1615	1009	1900	1615
c, Capacity [veh/h]	143	826	811	78	757	709	308	667	567	333	667	567
d1, Uniform Delay [s]	31.60	14.51	14.51	32.90	15.83	15.84	26.91	16.81	16.32	21.98	17.35	15.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	8.18	2.39	2.44	7.02	2.37	2.54	1.69	0.31	0.26	0.22	0.44	0.16
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	0.76	0.53	0.53	0.59	0.50	0.50	0.57	0.35	0.28	0.16	0.43	0.19
d, Delay for Lane Group [s/veh]	39.79	16.90	16.95	39.91	18.20	18.38	28.61	17.12	16.58	22.20	17.78	15.98
Lane Group LOS	D	B	B	D	B	B	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.02	4.87	4.79	0.87	4.48	4.24	2.80	2.59	1.69	0.67	3.27	1.15
50th-Percentile Queue Length [ft/ln]	50.38	121.80	119.87	21.81	112.00	106.02	69.90	64.71	42.25	16.77	81.82	28.63
95th-Percentile Queue Length [veh/ln]	3.63	8.49	8.39	1.57	7.95	7.62	5.03	4.66	3.04	1.21	5.89	2.06
95th-Percentile Queue Length [ft/ln]	90.69	212.30	209.64	39.26	198.78	190.45	125.82	116.47	76.05	30.19	147.27	51.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.79	16.92	16.95	39.91	18.26	18.38	28.61	17.12	16.58	22.20	17.78	15.98
Movement LOS	D	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	19.49			19.56			20.55			17.85		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	19.46											
Intersection LOS	B											
Intersection V/C	0.528											

Emissions

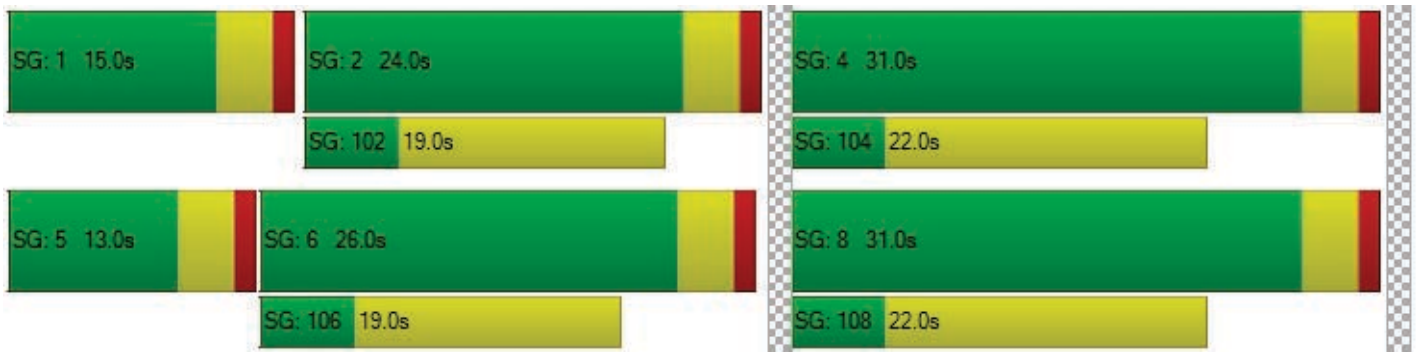
Vehicle Miles Traveled [mph]	8.41	33.53	32.93	11.66	96.32	90.43	11.31	14.95	10.03	12.96	71.25	27.40
Stops [stops/h]	103.64	250.56	246.58	44.87	230.39	218.09	143.80	133.11	86.91	34.50	168.31	58.89
Fuel consumption [US gal/h]	2.20	5.16	5.07	1.23	7.12	6.72	2.54	2.39	1.57	0.99	5.02	1.85
CO [g/h]	153.92	360.45	354.61	86.11	497.79	469.48	177.74	166.79	109.45	69.07	350.68	128.98
NOx [g/h]	29.95	70.13	68.99	16.75	96.85	91.34	34.58	32.45	21.30	13.44	68.23	25.09
VOC [g/h]	35.67	83.54	82.18	19.96	115.37	108.81	41.19	38.66	25.37	16.01	81.27	29.89

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.825	3.031	2.433	2.339
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	629	571	771	771
d_b, Bicycle Delay [s]	16.46	17.86	13.21	13.21
l_b,int, Bicycle LOS Score for Intersection	2.360	2.206	2.497	2.299
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	14.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.025

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	8	19	15	242	337	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	4	5	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]	9	19	15	251	349	2
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	5	4	71	99	1
Total Analysis Volume [veh/h]	10	22	17	285	397	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.03	0.03	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	14.59	10.90	8.09	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.19	0.19	0.03	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	4.69	4.69	0.71	0.71	0.00	0.00
d_A, Approach Delay [s/veh]	12.06		0.46		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.71					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.146

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
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	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	24	1	2	0	0	6	5	36	13	0	104	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	3	1	0	1	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]	24	1	2	0	0	6	5	40	14	0	107	0
Peak Hour Factor	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230
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]	7	0	1	0	0	2	2	12	4	0	33	0
Total Analysis Volume [veh/h]	29	1	2	0	0	7	6	49	17	0	130	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	805	958	903	888
Degree of Utilization, x	0.04	0.01	0.08	0.15

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.12	0.02	0.26	0.51
95th-Percentile Queue Length [ft]	3.10	0.55	6.48	12.80
Approach Delay [s/veh]	7.66	6.79	7.33	7.75
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.59			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	24.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.732

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
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	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	420.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	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]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	814	374	351	610	0	388	2	351	0	0	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	36	6	78	38	0	52	0	2	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]	0	866	387	436	660	0	448	2	360	0	0	0
Peak Hour Factor	1.0000	0.9220	0.9220	0.9220	0.9220	1.0000	0.9220	0.9220	0.9220	1.0000	1.0000	1.0000
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	235	105	118	179	0	121	1	98	0	0	0
Total Analysis Volume [veh/h]	0	939	420	473	716	0	486	2	390	0	0	0
Presence of On-Street Parking	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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	12	0	23	39	0	0	13	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
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				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	0.0	23.0	0.0	26.0	49.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	
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]	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	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	23.0	23.0	23.0	20.2	47.2	14.8	14.8	14.8	
g / C, Green / Cycle	0.33	0.33	0.33	0.29	0.67	0.21	0.21	0.21	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.21	0.21	0.26	0.20	0.16	0.17	0.18	
s, saturation flow rate [veh/h]	3618	1633	1615	1810	3618	1810	1736	1615	
c, Capacity [veh/h]	1185	535	529	523	2437	384	368	343	
d1, Uniform Delay [s]	19.48	19.98	20.04	23.97	4.65	26.02	26.15	26.40	
k, delay calibration	0.50	0.50	0.50	0.27	0.50	0.19	0.20	0.23	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.02	5.66	5.89	13.35	0.31	5.94	7.32	10.54	
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	0.57	0.63	0.64	0.91	0.29	0.78	0.80	0.83	
d, Delay for Lane Group [s/veh]	21.50	25.64	25.92	37.32	4.96	31.96	33.48	36.94	
Lane Group LOS	C	C	C	D	A	C	C	D	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.49	5.11	5.15	8.95	1.64	4.92	4.99	5.17	
50th-Percentile Queue Length [ft/ln]	112.37	127.74	128.66	223.69	41.11	122.95	124.77	129.20	
95th-Percentile Queue Length [veh/ln]	7.97	8.82	8.87	13.85	2.96	8.55	8.65	8.90	
95th-Percentile Queue Length [ft/ln]	199.29	220.42	221.67	346.33	74.00	213.87	216.36	222.41	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.64	25.87	37.32	4.96	0.00	32.56	33.48	36.06	0.00	0.00	0.00
Movement LOS		C	C	D	A		C	C	D			
d_A, Approach Delay [s/veh]	23.64			17.83			34.09			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	24.30											
Intersection LOS	C											
Intersection V/C	0.732											

Emissions

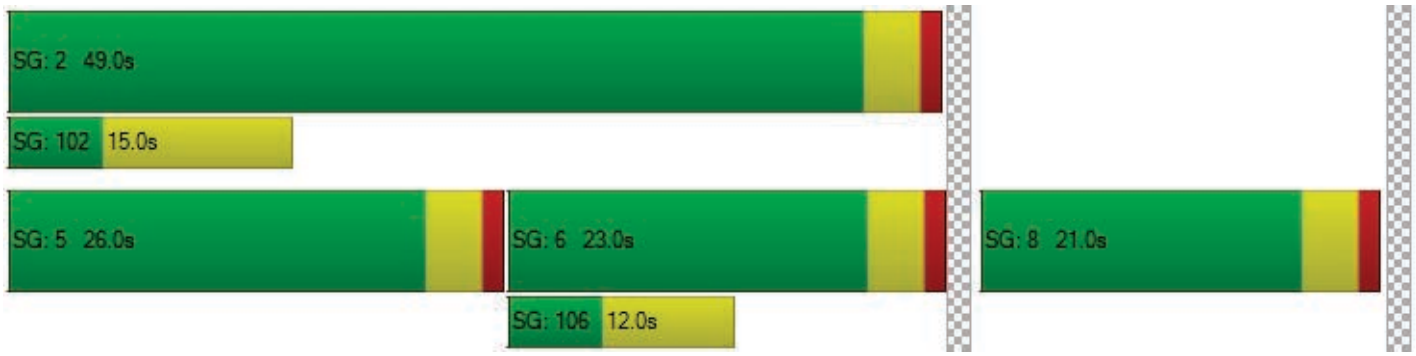
Vehicle Miles Traveled [mph]	34.72	17.36	17.36	21.34	32.30	25.65	25.26	24.57
Stops [stops/h]	462.32	262.79	264.67	460.15	169.15	252.93	256.66	265.79
Fuel consumption [US gal/h]	7.77	4.41	4.44	7.01	2.99	5.34	5.43	5.64
CO [g/h]	543.36	308.30	310.67	490.18	208.75	373.52	379.39	394.22
NOx [g/h]	105.72	59.98	60.44	95.37	40.61	72.67	73.82	76.70
VOC [g/h]	125.93	71.45	72.00	113.60	48.38	86.57	87.93	91.36

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.310	2.140
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	543	1286	486	0
d_b, Bicycle Delay [s]	18.58	4.46	20.06	35.00
l_b,int, Bicycle LOS Score for Intersection	2.307	2.541	3.008	4.132
Bicycle LOS	B	B	C	D

Sequence

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



Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	29.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.884

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
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	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
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			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	468	746	0	0	679	460	0	0	0	237	1	206
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	84	0	0	114	77	0	0	0	2	0	53
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]	481	845	0	0	807	546	0	0	0	244	1	263
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
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]	136	239	0	0	228	154	0	0	0	69	0	74
Total Analysis Volume [veh/h]	544	956	0	0	913	618	0	0	0	276	1	298
Presence of On-Street Parking	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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	21	52	0	0	27	0	0	0	0	0	10	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	29.0	64.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	16.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	80	80	80	80		80	80	80
L, Total Lost Time per Cycle [s]	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	25.5	60.9	31.5	31.5		11.1	11.1	11.1
g / C, Green / Cycle	0.32	0.76	0.39	0.39		0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.30	0.26	0.18	0.38		0.11	0.11	0.11
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1686	1615
c, Capacity [veh/h]	575	2754	2036	635		251	234	224
d1, Uniform Delay [s]	26.62	3.10	17.87	23.84		33.42	33.43	33.44
k, delay calibration	0.39	0.50	0.50	0.50		0.22	0.22	0.22
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	22.46	0.35	0.72	29.62		11.73	12.66	13.25
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.95	0.35	0.45	0.97		0.81	0.81	0.81
d, Delay for Lane Group [s/veh]	49.07	3.45	18.59	53.46		45.15	46.09	46.68
Lane Group LOS	D	A	B	D		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	13.12	1.70	4.05	15.84		4.44	4.20	4.07
50th-Percentile Queue Length [ft/ln]	328.07	42.44	101.30	395.96		110.97	105.10	101.72
95th-Percentile Queue Length [veh/ln]	19.06	3.06	7.29	22.37		7.89	7.57	7.32
95th-Percentile Queue Length [ft/ln]	476.59	76.40	182.34	559.13		197.35	189.16	183.09

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.07	3.45	0.00	0.00	18.59	53.46	0.00	0.00	0.00	45.42	46.09	46.46
Movement LOS	D	A			B	D				D	D	D
d_A, Approach Delay [s/veh]	19.99			32.67			0.00			45.94		
Approach LOS	B			C			A			D		
d_I, Intersection Delay [s/veh]	29.51											
Intersection LOS	C											
Intersection V/C	0.884											

Emissions

Vehicle Miles Traveled [mph]	24.54	43.12	33.86	22.92		16.97	15.84	15.19
Stops [stops/h]	590.52	152.80	547.02	712.73		199.74	189.18	183.09
Fuel consumption [US gal/h]	9.71	3.29	7.87	11.60		4.44	4.21	4.07
CO [g/h]	678.39	229.99	550.11	811.14		310.15	293.96	284.62
NOx [g/h]	131.99	44.75	107.03	157.82		60.34	57.19	55.38
VOC [g/h]	157.22	53.30	127.49	187.99		71.88	68.13	65.96

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.277	2.185
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1500	775	0	300
d_b, Bicycle Delay [s]	2.50	15.01	40.00	28.90
l_b,int, Bicycle LOS Score for Intersection	2.797	2.402	4.132	2.508
Bicycle LOS	C	B	D	B

Sequence

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



Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	21.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.702

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
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	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	71	790	102	40	760	20	41	79	183	216	101	62
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	116	0	0	173	7	3	2	0	2	3	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]	93	922	104	41	948	27	45	83	187	222	106	63
Peak Hour Factor	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450
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]	28	273	31	12	280	8	13	25	55	66	31	19
Total Analysis Volume [veh/h]	110	1091	123	49	1122	32	53	98	221	263	125	75
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	13	27	0	5	19	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	19.0	35.0	0.0	13.0	29.0	0.0	0.0	32.0	0.0	0.0	32.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	6.3	38.4	38.4	3.3	35.4	35.4	26.3	26.3	26.3	26.3	26.3	26.3
g / C, Green / Cycle	0.08	0.48	0.48	0.04	0.44	0.44	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.06	0.32	0.33	0.03	0.21	0.21	0.04	0.05	0.14	0.24	0.07	0.05
s, saturation flow rate [veh/h]	1810	1900	1833	1810	3618	1873	1201	1900	1615	1077	1900	1615
c, Capacity [veh/h]	144	912	880	76	1601	829	395	623	530	376	623	530
d1, Uniform Delay [s]	36.10	16.01	16.05	37.73	15.73	15.74	23.27	19.04	20.92	28.58	19.33	18.94
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.23	0.11	0.11
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
d2, Incremental Delay [s]	8.22	4.01	4.21	8.79	1.01	1.95	0.15	0.12	0.52	4.89	0.16	0.12
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	0.77	0.68	0.68	0.64	0.47	0.48	0.13	0.16	0.42	0.70	0.20	0.14
d, Delay for Lane Group [s/veh]	44.31	20.02	20.26	46.52	16.75	17.68	23.42	19.16	21.45	33.47	19.49	19.06
Lane Group LOS	D	C	C	D	B	B	C	B	C	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.39	8.94	8.73	1.09	4.58	4.97	0.76	1.24	3.10	5.18	1.64	0.96
50th-Percentile Queue Length [ft/ln]	59.67	223.46	218.14	27.25	114.61	124.14	19.05	31.00	77.49	129.57	40.92	24.10
95th-Percentile Queue Length [veh/ln]	4.30	13.84	13.57	1.96	8.10	8.62	1.37	2.23	5.58	8.92	2.95	1.74
95th-Percentile Queue Length [ft/ln]	107.41	346.04	339.25	49.05	202.40	215.50	34.30	55.80	139.49	222.91	73.66	43.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.31	20.12	20.26	46.52	17.05	17.68	23.42	19.16	21.45	33.47	19.49	19.06
Movement LOS	D	C	C	D	B	B	C	B	C	C	B	B
d_A, Approach Delay [s/veh]	22.15			18.27			21.13			27.36		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	21.36											
Intersection LOS	C											
Intersection V/C	0.702											

Emissions

Vehicle Miles Traveled [mph]	4.70	26.31	25.51	24.34	377.70	195.65	3.17	5.85	13.20	15.05	7.15	4.29
Stops [stops/h]	107.41	402.23	392.65	49.05	412.60	223.45	34.30	55.80	139.49	233.22	73.66	43.39
Fuel consumption [US gal/h]	1.78	5.82	5.68	1.82	20.17	10.62	0.63	1.02	2.52	3.70	1.20	0.71
CO [g/h]	124.33	406.63	397.22	127.06	1410.12	742.39	44.12	71.64	175.93	258.58	83.69	49.45
NOx [g/h]	24.19	79.12	77.28	24.72	274.36	144.44	8.58	13.94	34.23	50.31	16.28	9.62
VOC [g/h]	28.81	94.24	92.06	29.45	326.81	172.06	10.23	16.60	40.77	59.93	19.40	11.46

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.299	3.049	2.308	2.305
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	775	625	700	700
d_b, Bicycle Delay [s]	15.01	18.91	16.90	16.90
l_b,int, Bicycle LOS Score for Intersection	2.652	2.221	2.173	2.324
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	12.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.614

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
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	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	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]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	4	2	2	38	3	79	35	77	2	5	275	47
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	4	0	0	3	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]	4	2	2	39	3	81	36	83	2	5	284	48
Peak Hour Factor	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130
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]	1	1	1	14	1	28	13	29	1	2	100	17
Total Analysis Volume [veh/h]	6	3	3	55	4	114	50	116	3	7	398	67
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	625	697	641	757	769
Degree of Utilization, x	0.02	0.25	0.26	0.00	0.61

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.06	0.98	1.03	0.01	4.27
95th-Percentile Queue Length [ft]	1.47	24.39	25.76	0.30	106.83
Approach Delay [s/veh]	8.87	9.86	10.22		14.82
Approach LOS	A	A	B		B
Intersection Delay [s/veh]	12.75				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	146.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.633

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	220	660	490	88	26	111
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	1	3	3	1
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]	224	676	501	93	30	114
Peak Hour Factor	0.8580	0.8580	0.8580	0.8580	0.8580	0.8580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	197	146	27	9	33
Total Analysis Volume [veh/h]	261	788	584	108	35	133
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	0.29	0.01	0.01	0.00	0.63	0.26
d_M, Delay for Movement [s/veh]	10.52	0.00	0.00	0.00	146.72	14.40
Movement LOS	B	A	A	A	F	B
95th-Percentile Queue Length [veh/ln]	1.18	0.00	0.00	0.00	2.57	1.02
95th-Percentile Queue Length [ft/ln]	29.62	0.00	0.00	0.00	64.24	25.55
d_A, Approach Delay [s/veh]	2.62		0.00		41.97	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	5.13					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	38.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.139

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	74	656	432	24	11	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	1	3	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]	75	669	442	25	14	26
Peak Hour Factor	0.8370	0.8370	0.8370	0.8370	0.8370	0.8370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	200	132	7	4	8
Total Analysis Volume [veh/h]	90	799	528	30	17	31
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
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	0.09	0.01	0.01	0.00	0.14	0.06
d_M, Delay for Movement [s/veh]	8.86	0.00	0.00	0.00	38.00	15.01
Movement LOS	A	A	A	A	E	C
95th-Percentile Queue Length [veh/ln]	0.29	0.00	0.00	0.00	0.71	0.71
95th-Percentile Queue Length [ft/ln]	7.22	0.00	0.00	0.00	17.68	17.68
d_A, Approach Delay [s/veh]	0.90		0.00		23.15	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.28					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	40.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.777

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
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	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	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]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	159	523	202	64	447	35	51	391	163	150	702	81
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	115	3	29	175	29	19	0	2	3	0	19
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]	163	648	209	94	631	65	71	399	168	156	716	102
Peak Hour Factor	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380
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]	49	193	62	28	188	19	21	119	50	47	214	30
Total Analysis Volume [veh/h]	195	773	249	112	753	78	85	476	200	186	854	122
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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	13	45	0	7	39	0	10	22	0	10	22	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	21.0	36.0	0.0	16.0	31.0	0.0	14.0	26.0	0.0	22.0	34.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
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	

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	L	C	R	L	C	C
C, Calculated 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]	2.00	2.00	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]	12.7	30.9	30.9	7.8	26.0	26.0	6.1	33.0	33.0	12.3	39.2	39.2
g / C, Green / Cycle	0.13	0.31	0.31	0.08	0.26	0.26	0.06	0.33	0.33	0.12	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.11	0.28	0.28	0.06	0.22	0.22	0.05	0.13	0.12	0.10	0.26	0.26
s, saturation flow rate [veh/h]	1810	1900	1744	1810	1900	1838	1810	3618	1615	1810	1900	1818
c, Capacity [veh/h]	230	586	538	143	494	478	112	1191	532	224	743	711
d1, Uniform Delay [s]	42.68	33.21	33.27	45.23	35.21	35.21	46.19	25.91	25.68	42.80	25.13	25.15
k, delay calibration	0.16	0.29	0.30	0.11	0.24	0.24	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	11.82	13.34	14.91	9.11	9.12	9.40	10.14	1.00	2.03	7.78	4.78	5.01
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	0.85	0.91	0.91	0.79	0.86	0.86	0.76	0.40	0.38	0.83	0.67	0.67
d, Delay for Lane Group [s/veh]	54.50	46.55	48.18	54.34	44.34	44.61	56.33	26.91	27.71	50.58	29.91	30.16
Lane Group LOS	D	D	D	D	D	D	E	C	C	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.33	13.88	13.05	3.05	10.73	10.41	2.32	4.29	3.73	4.84	10.14	9.77
50th-Percentile Queue Length [ft/ln]	133.19	347.09	326.35	76.16	268.14	260.32	58.06	107.24	93.35	121.03	253.58	244.28
95th-Percentile Queue Length [veh/ln]	9.11	19.99	18.98	5.48	16.10	15.71	4.18	7.69	6.72	8.45	15.37	14.90
95th-Percentile Queue Length [ft/ln]	227.82	499.86	474.49	137.09	402.41	392.63	104.51	192.15	168.03	211.24	384.16	372.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.50	47.06	48.18	54.34	44.46	44.61	56.33	26.91	27.71	50.58	30.01	30.16
Movement LOS	D	D	D	D	D	D	E	C	C	D	C	C
d_A, Approach Delay [s/veh]	48.48			45.64			30.41			33.32		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	40.14											
Intersection LOS	D											
Intersection V/C	0.777											

Emissions

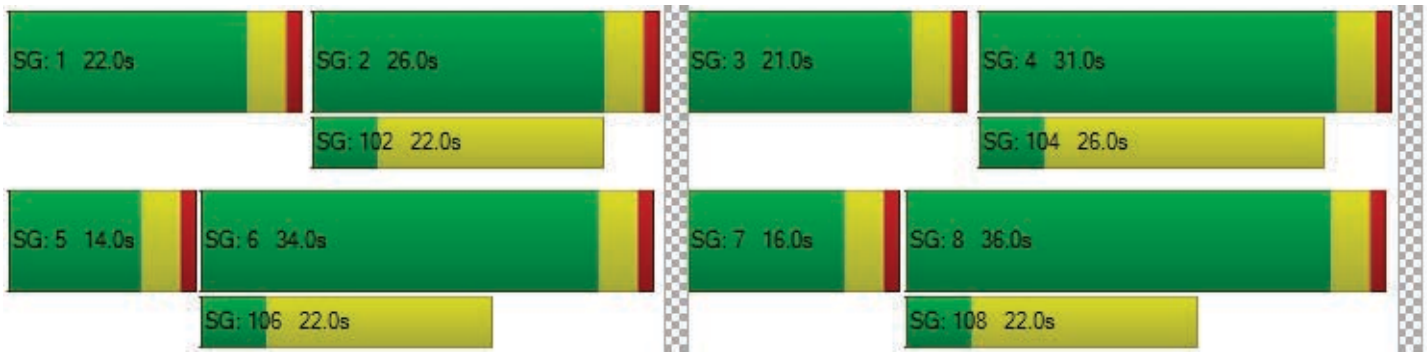
Vehicle Miles Traveled [mph]	96.88	264.11	243.65	7.58	28.59	27.66	10.02	56.11	23.58	18.06	48.39	46.38
Stops [stops/h]	191.79	499.81	469.95	109.67	386.12	374.86	83.61	308.84	134.42	174.29	365.16	351.76
Fuel consumption [US gal/h]	7.52	19.41	18.15	2.35	7.80	7.58	2.36	8.37	3.61	4.27	8.35	8.05
CO [g/h]	525.44	1356.44	1268.87	164.42	545.51	530.04	164.78	585.09	252.15	298.72	583.94	562.56
NOx [g/h]	102.23	263.91	246.88	31.99	106.14	103.13	32.06	113.84	49.06	58.12	113.61	109.45
VOC [g/h]	121.78	314.37	294.07	38.11	126.43	122.84	38.19	135.60	58.44	69.23	135.33	130.38

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.919	2.744	2.920	2.826
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]	640	540	440	600
d_b, Bicycle Delay [s]	23.12	26.65	30.42	24.50
l_b,int, Bicycle LOS Score for Intersection	2.564	2.338	2.187	2.518
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 12: S Indian Hill Blvd/Auto Center Dr

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.115

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
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	2	0	0	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	140.00	100.00	120.00	75.00	100.00	75.00	100.00	100.00	50.00
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]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
Base Volume Input [veh/h]	49	886	38	146	718	192	82	14	24	63	12	132
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	42	0	0	40	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]	50	946	39	149	772	196	84	14	24	64	12	135
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
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]	13	240	10	38	196	50	21	4	6	16	3	34
Total Analysis Volume [veh/h]	51	958	40	151	782	199	85	14	24	65	12	137
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	10	15	0	5	10	0	5	26	0	8	29	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0	0.0	24.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	19.0	0.0	10.0	20.0	0.0	18.0	39.0	0.0	12.0	33.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
Minimum Recall	No	No		No	No		Yes	No		Yes	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

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	R	L	C	R	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
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
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	3.4	33.0	33.0	8.5	38.0	38.0	26.6	26.6	14.6	26.6	11.8
g / C, Green / Cycle	0.04	0.41	0.41	0.11	0.48	0.48	0.33	0.33	0.18	0.33	0.15
(v / s)_i Volume / Saturation Flow Rate	0.03	0.18	0.18	0.08	0.22	0.12	0.02	0.25	0.01	0.26	0.08
s, saturation flow rate [veh/h]	1810	3618	1861	1810	3618	1615	1258	266	1615	298	1615
c, Capacity [veh/h]	77	1492	767	192	1721	768	239	238	294	244	237
d1, Uniform Delay [s]	37.74	16.89	16.90	34.88	14.02	12.53	26.21	24.39	27.18	26.54	31.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11	0.19	0.11
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
d2, Incremental Delay [s]	9.44	0.95	1.85	7.01	0.87	0.82	0.24	2.99	0.12	1.28	2.21
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
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
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

Lane Group Results

X, volume / capacity	0.66	0.44	0.44	0.79	0.45	0.26	0.13	0.28	0.08	0.32	0.58
d, Delay for Lane Group [s/veh]	47.19	17.84	18.74	41.89	14.89	13.35	26.46	27.37	27.30	27.82	34.02
Lane Group LOS	D	B	B	D	B	B	C	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.15	4.21	4.53	3.13	4.47	2.11	0.48	1.20	0.38	1.28	2.55
50th-Percentile Queue Length [ft/ln]	28.87	105.16	113.18	78.35	111.76	52.85	11.99	30.09	9.55	32.04	63.79
95th-Percentile Queue Length [veh/ln]	2.08	7.57	8.02	5.64	7.94	3.81	0.86	2.17	0.69	2.31	4.59
95th-Percentile Queue Length [ft/ln]	51.97	189.24	200.42	141.02	198.44	95.13	21.58	54.16	17.19	57.67	114.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.19	18.12	18.74	41.89	14.89	13.35	27.02	27.37	27.30	27.82	27.82	34.02
Movement LOS	D	B	B	D	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	19.56			18.22			27.13			31.79		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.37											
Intersection LOS	C											
Intersection V/C	1.115											

Emissions

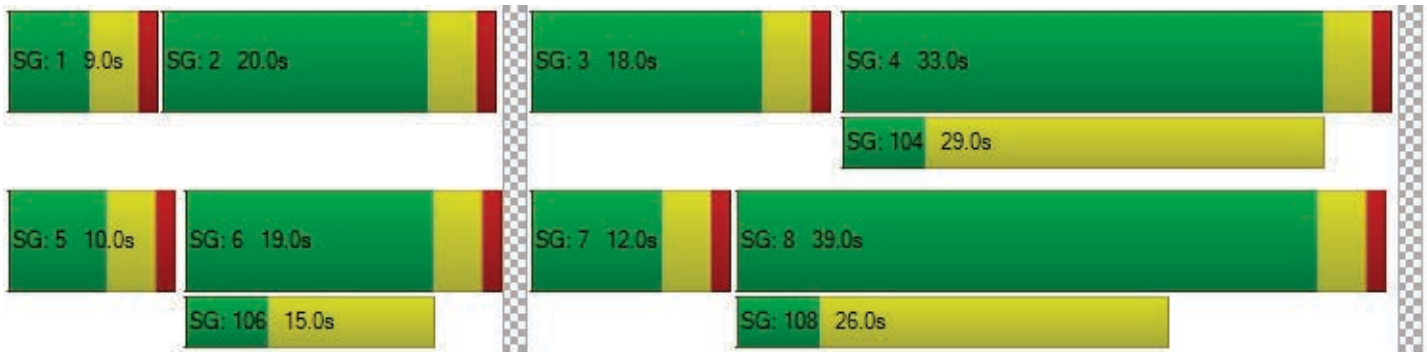
Vehicle Miles Traveled [mph]	3.98	51.44	26.51	7.72	39.96	10.17	0.74	1.61	0.57	1.83	3.25
Stops [stops/h]	51.97	378.56	203.73	141.02	402.32	95.13	21.58	54.16	17.19	57.67	114.82
Fuel consumption [US gal/h]	1.03	7.20	3.84	2.64	6.92	1.64	0.32	0.74	0.25	0.83	1.72
CO [g/h]	72.16	503.21	268.22	184.67	483.60	114.90	22.21	51.94	17.60	58.00	120.00
NOx [g/h]	14.04	97.91	52.19	35.93	94.09	22.35	4.32	10.11	3.42	11.29	23.35
VOC [g/h]	16.72	116.62	62.16	42.80	112.08	26.63	5.15	12.04	4.08	13.44	27.81

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	0.00	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.922	3.106	0.000	2.072
Crosswalk LOS	C	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	375	400	1175	1175
d_b, Bicycle Delay [s]	26.41	25.60	6.81	6.81
l_b,int, Bicycle LOS Score for Intersection	2.137	2.494	1.763	1.913
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 13: Project Driveway/W American Ave

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Project Driveway		West American Avenue		West American Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	15.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway		West American Avenue		West American Avenue	
Base Volume Input [veh/h]	0	0	0	85	185	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	17	6	0	0	1
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]	4	17	6	87	189	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	4	2	22	47	0
Total Analysis Volume [veh/h]	4	17	6	87	189	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.01	0.02	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.23	9.31	7.59	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.96	1.96	0.25	0.25	0.00	0.00
d_A, Approach Delay [s/veh]	9.49		0.49		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.81					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	9.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.479

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
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	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	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]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	70	837	12	95	815	16	4	31	80	25	32	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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	67	6	13	55	0	0	0	0	3	0	7
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]	71	921	18	110	886	16	4	32	82	29	33	71
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
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	245	5	29	236	4	1	9	22	8	9	19
Total Analysis Volume [veh/h]	76	981	19	117	944	17	4	34	87	31	35	76
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	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	29	0	5	29	0	0	34	0	0	34	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	41.0	0.0	9.0	41.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
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]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	62.4	53.7	53.7	62.4	54.3	54.3	9.6	9.6
g / C, Green / Cycle	0.78	0.67	0.67	0.78	0.68	0.68	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.12	0.29	0.29	0.18	0.29	0.01	0.08	0.09
s, saturation flow rate [veh/h]	641	1710	1699	634	3256	1454	1568	1551
c, Capacity [veh/h]	554	1147	1139	548	2206	985	237	243
d1, Uniform Delay [s]	3.00	6.13	6.13	3.23	5.85	4.20	33.65	33.95
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	1.21	1.22	0.89	0.61	0.03	1.83	2.23
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	0.14	0.44	0.44	0.21	0.43	0.02	0.53	0.58
d, Delay for Lane Group [s/veh]	3.11	7.35	7.36	4.12	6.46	4.24	35.47	36.18
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.14	3.20	3.18	0.36	2.87	0.08	2.48	2.79
50th-Percentile Queue Length [ft/ln]	3.54	79.93	79.47	9.02	71.69	1.95	62.02	69.63
95th-Percentile Queue Length [veh/ln]	0.26	5.76	5.72	0.65	5.16	0.14	4.47	5.01
95th-Percentile Queue Length [ft/ln]	6.38	143.88	143.05	16.23	129.04	3.52	111.64	125.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.11	7.35	7.36	4.12	6.46	4.24	35.47	35.47	35.47	36.18	36.18	36.18
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.05			6.17			35.47			36.18		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	9.84											
Intersection LOS	A											
Intersection V/C	0.479											

Emissions

Vehicle Miles Traveled [mph]	19.26	127.12	126.28	9.10	73.39	1.32	2.97	14.06
Stops [stops/h]	6.38	143.88	143.05	16.23	258.07	3.52	111.64	125.33
Fuel consumption [US gal/h]	0.80	6.72	6.67	0.57	5.98	0.09	1.22	2.16
CO [g/h]	55.96	469.53	466.57	39.62	417.97	6.39	85.21	150.89
NOx [g/h]	10.89	91.35	90.78	7.71	81.32	1.24	16.58	29.36
VOC [g/h]	12.97	108.82	108.13	9.18	96.87	1.48	19.75	34.97

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.860	1.848	1.953
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	925	925	650	650
d_b, Bicycle Delay [s]	11.56	11.56	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.447	2.449	1.766	1.794
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	21.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
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	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	120	692	91	82	701	175	145	394	171	63	276	72
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	63	0	5	50	3	5	0	0	0	0	5
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]	122	769	93	89	765	182	153	402	174	64	282	78
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
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]	32	200	24	23	199	47	40	104	45	17	73	20
Total Analysis Volume [veh/h]	127	799	97	92	794	189	159	417	181	66	293	81
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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	8	29	0	6	27	0	0	23	0	0	23	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	15.0	27.0	0.0	15.0	27.0	0.0	0.0	28.0	0.0	0.0	28.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	6.4	30.0	30.0	4.7	28.4	28.4	23.3	23.3	23.3	23.3	23.3	23.3
g / C, Green / Cycle	0.09	0.43	0.43	0.07	0.41	0.41	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.07	0.24	0.24	0.05	0.27	0.27	0.16	0.22	0.11	0.08	0.15	0.05
s, saturation flow rate [veh/h]	1810	1900	1829	1810	1900	1775	1024	1900	1615	833	1900	1615
c, Capacity [veh/h]	166	814	784	124	770	720	289	630	535	199	630	535
d1, Uniform Delay [s]	31.05	15.04	15.04	31.99	16.89	16.90	27.76	20.04	17.62	29.75	18.50	16.47
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.18	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	7.15	2.78	2.89	8.39	4.40	4.71	1.64	1.98	0.37	0.97	0.54	0.13
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	0.77	0.56	0.56	0.74	0.66	0.66	0.55	0.66	0.34	0.33	0.47	0.15
d, Delay for Lane Group [s/veh]	38.20	17.83	17.93	40.38	21.29	21.61	29.40	22.03	17.99	30.71	19.03	16.60
Lane Group LOS	D	B	B	D	C	C	C	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.29	5.30	5.12	1.72	6.65	6.28	2.54	5.62	2.07	1.06	3.51	0.86
50th-Percentile Queue Length [ft/ln]	57.20	132.43	128.06	43.09	166.13	156.91	63.46	140.52	51.69	26.55	87.84	21.53
95th-Percentile Queue Length [veh/ln]	4.12	9.07	8.83	3.10	10.87	10.39	4.57	9.51	3.72	1.91	6.32	1.55
95th-Percentile Queue Length [ft/ln]	102.96	226.79	220.86	77.55	271.82	259.63	114.23	237.73	93.03	47.80	158.11	38.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.20	17.87	17.93	40.38	21.40	21.61	29.40	22.03	17.99	30.71	19.03	16.60
Movement LOS	D	B	B	D	C	C	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	20.40			23.06			22.61			20.34		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	21.77											
Intersection LOS	C											
Intersection V/C	0.673											

Emissions

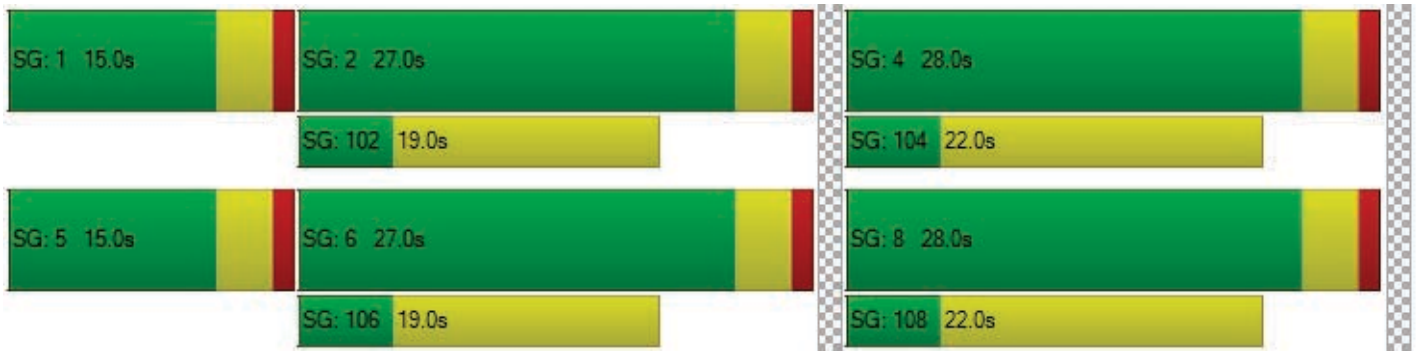
Vehicle Miles Traveled [mph]	9.80	35.24	33.92	23.31	128.73	120.37	10.16	26.64	11.56	16.44	73.00	20.18
Stops [stops/h]	117.67	272.42	263.44	88.63	341.76	322.79	130.55	289.07	106.32	54.63	180.70	44.28
Fuel consumption [US gal/h]	2.49	5.59	5.41	2.46	10.17	9.57	2.32	5.06	1.90	1.45	5.28	1.38
CO [g/h]	174.35	391.06	377.94	172.08	710.84	669.02	162.19	353.59	133.02	101.36	368.81	96.17
NOx [g/h]	33.92	76.09	73.53	33.48	138.30	130.17	31.56	68.80	25.88	19.72	71.76	18.71
VOC [g/h]	40.41	90.63	87.59	39.88	164.74	155.05	37.59	81.95	30.83	23.49	85.47	22.29

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.919	3.065	2.508	2.417
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	657	657	686	686
d_b, Bicycle Delay [s]	15.78	15.78	15.11	15.11
l_b,int, Bicycle LOS Score for Intersection	2.404	2.446	2.809	2.286
Bicycle LOS	B	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	19.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	1	19	22	509	376	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	5	5	1
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]	2	19	22	524	389	4
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	5	6	142	105	1
Total Analysis Volume [veh/h]	2	21	24	568	421	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.01	0.03	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	19.69	10.94	8.17	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.04	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.21	3.21	1.01	1.01	0.00	0.00
d_A, Approach Delay [s/veh]	11.70		0.33		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.45					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.146

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
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	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	11	5	5	1	2	3	6	86	17	5	73	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	2	1	0	3	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]	12	5	5	1	2	3	6	90	18	5	77	0
Peak Hour Factor	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630
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	1	1	0	1	1	2	26	5	1	22	0
Total Analysis Volume [veh/h]	14	6	6	1	2	3	7	104	21	6	89	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	826	869	905	876
Degree of Utilization, x	0.03	0.01	0.15	0.11

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.10	0.02	0.51	0.36
95th-Percentile Queue Length [ft]	2.43	0.52	12.75	9.09
Approach Delay [s/veh]	7.50	7.17	7.66	7.61
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.61			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.686

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
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	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	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]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	641	458	377	910	0	194	3	237	0	0	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	73	1	119	63	0	145	0	5	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]	0	727	468	504	991	0	343	3	247	0	0	0
Peak Hour Factor	1.0000	0.9530	0.9530	0.9530	0.9530	1.0000	0.9530	0.9530	0.9530	1.0000	1.0000	1.0000
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	191	123	132	260	0	90	1	65	0	0	0
Total Analysis Volume [veh/h]	0	763	491	529	1040	0	360	3	259	0	0	0
Presence of On-Street Parking	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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	14	0	24	42	0	0	10	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
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				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	0.0	23.0	0.0	29.0	52.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	
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]	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	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	24.6	24.6	24.6	22.5	51.1	10.9	10.9	10.9	
g / C, Green / Cycle	0.35	0.35	0.35	0.32	0.73	0.16	0.16	0.16	
(v / s)_i Volume / Saturation Flow Rate	0.17	0.19	0.19	0.29	0.29	0.12	0.12	0.12	
s, saturation flow rate [veh/h]	3618	1615	1615	1810	3618	1810	1747	1615	
c, Capacity [veh/h]	1269	566	566	581	2638	283	273	253	
d1, Uniform Delay [s]	17.85	18.31	18.31	22.78	3.60	28.29	28.30	28.32	
k, delay calibration	0.50	0.50	0.50	0.25	0.50	0.13	0.13	0.13	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.38	3.86	3.86	12.17	0.44	5.04	5.31	5.94	
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	0.49	0.55	0.55	0.91	0.39	0.77	0.77	0.77	
d, Delay for Lane Group [s/veh]	19.22	22.17	22.17	34.95	4.05	33.33	33.61	34.26	
Lane Group LOS	B	C	C	C	A	C	C	C	
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.84	4.30	4.30	9.67	1.89	3.62	3.52	3.32	
50th-Percentile Queue Length [ft/ln]	96.09	107.54	107.54	241.86	47.19	90.51	88.11	83.02	
95th-Percentile Queue Length [veh/ln]	6.92	7.70	7.70	14.78	3.40	6.52	6.34	5.98	
95th-Percentile Queue Length [ft/ln]	172.96	192.58	192.58	369.39	84.94	162.93	158.60	149.44	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	19.22	22.17	34.95	4.05	0.00	33.45	33.61	34.12	0.00	0.00	0.00
Movement LOS		B	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	20.70			14.47			33.72			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	20.21											
Intersection LOS	C											
Intersection V/C	0.686											

Emissions

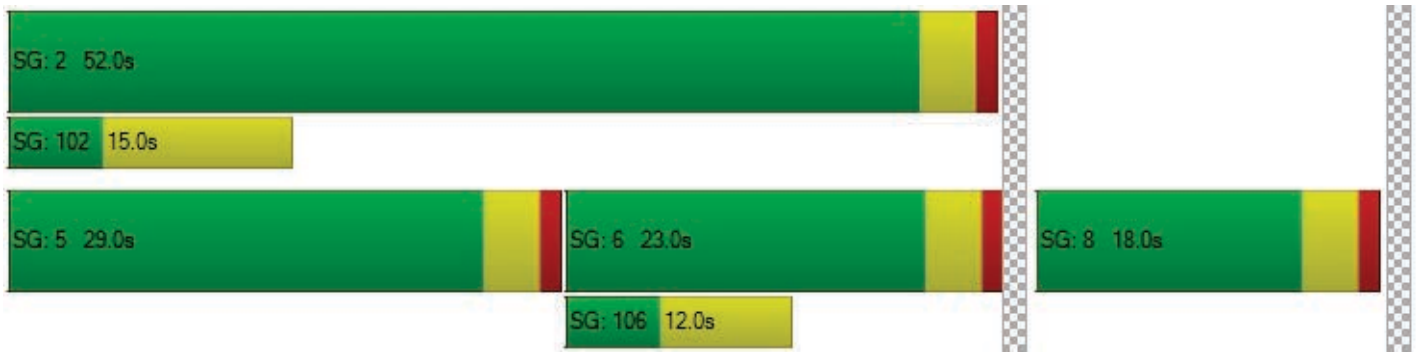
Vehicle Miles Traveled [mph]	32.27	16.13	16.13	23.86	46.91	18.65	18.05	16.78
Stops [stops/h]	395.34	221.23	221.23	497.54	194.16	186.20	181.26	170.79
Fuel consumption [US gal/h]	6.66	3.69	3.69	7.49	3.86	3.97	3.86	3.64
CO [g/h]	465.27	258.17	258.17	523.80	269.85	277.39	270.00	254.39
NOx [g/h]	90.52	50.23	50.23	101.91	52.50	53.97	52.53	49.49
VOC [g/h]	107.83	59.83	59.83	121.40	62.54	64.29	62.58	58.96

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.199	2.202
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	543	1371	400	0
d_b, Bicycle Delay [s]	18.58	3.46	22.40	35.00
l_b,int, Bicycle LOS Score for Intersection	2.249	2.854	2.586	4.132
Bicycle LOS	B	C	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	30.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.876

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
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	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
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			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	325	587	0	0	815	416	0	0	0	344	3	346
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	215	0	0	177	116	0	0	0	5	0	147
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]	335	814	0	0	1008	540	0	0	0	356	3	500
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
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]	95	230	0	0	285	153	0	0	0	101	1	141
Total Analysis Volume [veh/h]	379	921	0	0	1140	611	0	0	0	403	3	566
Presence of On-Street Parking	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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	15	47	0	0	28	0	0	0	0	0	15	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	23.0	58.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	22.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	80	80	80	80		80	80	80
L, Total Lost Time per Cycle [s]	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	18.4	54.2	31.8	31.8		17.8	17.8	17.8
g / C, Green / Cycle	0.23	0.68	0.40	0.40		0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.21	0.25	0.22	0.38		0.18	0.20	0.20
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1661	1615
c, Capacity [veh/h]	418	2450	2050	640		403	370	360
d1, Uniform Delay [s]	29.91	5.59	18.70	23.46		29.45	30.03	30.24
k, delay calibration	0.34	0.50	0.50	0.50		0.28	0.33	0.35
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	19.24	0.44	1.09	26.09		9.24	17.24	21.27
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.91	0.38	0.56	0.95		0.80	0.88	0.90
d, Delay for Lane Group [s/veh]	49.14	6.03	19.80	49.55		38.68	47.27	51.50
Lane Group LOS	D	A	B	D		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.05	2.79	5.33	14.97		6.54	7.38	7.77
50th-Percentile Queue Length [ft/ln]	226.24	69.84	133.29	374.26		163.47	184.58	194.35
95th-Percentile Queue Length [veh/ln]	13.98	5.03	9.12	21.32		10.73	11.84	12.35
95th-Percentile Queue Length [ft/ln]	349.58	125.72	227.96	532.89		268.32	295.99	308.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.14	6.03	0.00	0.00	19.80	49.55	0.00	0.00	0.00	40.37	47.27	49.69
Movement LOS	D	A			B	D				D	D	D
d_A, Approach Delay [s/veh]	18.60			30.18			0.00			45.82		
Approach LOS	B			C			A			D		
d_I, Intersection Delay [s/veh]	30.22											
Intersection LOS	C											
Intersection V/C	0.876											

Emissions

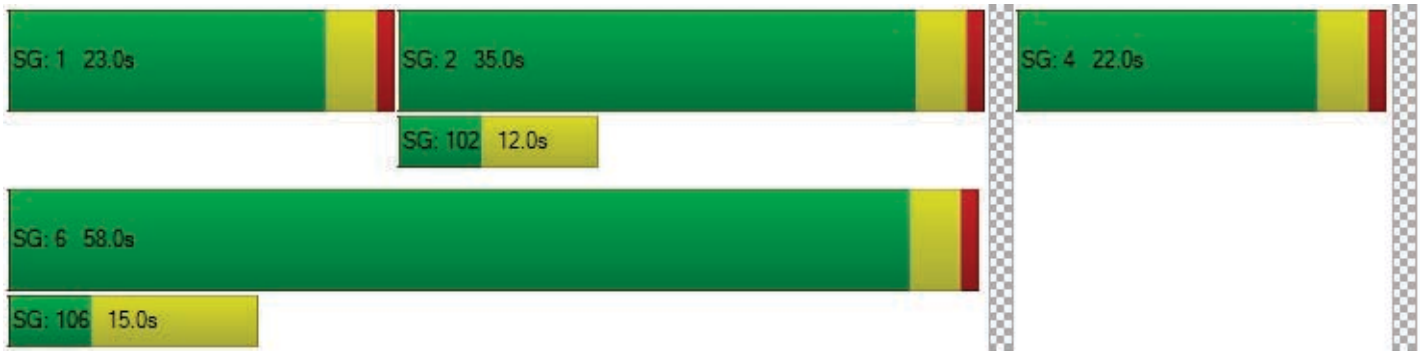
Vehicle Miles Traveled [mph]	17.10	41.54	42.27	22.66		27.06	27.05	27.04
Stops [stops/h]	407.23	251.44	719.78	673.66		294.25	332.25	349.83
Fuel consumption [US gal/h]	6.74	4.23	10.31	10.81		6.41	7.35	7.80
CO [g/h]	471.37	295.63	720.67	755.96		448.13	513.71	545.22
NOx [g/h]	91.71	57.52	140.22	147.08		87.19	99.95	106.08
VOC [g/h]	109.25	68.51	167.02	175.20		103.86	119.06	126.36

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.195	2.357
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1350	775	0	450
d_b, Bicycle Delay [s]	4.23	15.01	40.00	24.03
l_b,int, Bicycle LOS Score for Intersection	2.632	2.523	4.132	3.163
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	21.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.646

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
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	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	169	748	106	39	732	43	53	157	224	147	133	65
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	337	2	0	269	8	6	4	0	1	4	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]	195	1100	110	40	1016	52	60	164	228	151	140	66
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
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	301	30	11	278	14	16	45	62	41	38	18
Total Analysis Volume [veh/h]	213	1202	120	44	1110	57	66	179	249	165	153	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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	23	37	0	5	19	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	22.0	37.0	0.0	13.0	28.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	11.4	41.3	41.3	3.1	33.1	33.1	23.5	23.5	23.5	23.5	23.5	23.5
g / C, Green / Cycle	0.14	0.52	0.52	0.04	0.41	0.41	0.29	0.29	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.12	0.35	0.36	0.02	0.21	0.21	0.06	0.09	0.15	0.17	0.08	0.04
s, saturation flow rate [veh/h]	1810	1900	1840	1810	3618	1853	1174	1900	1615	975	1900	1615
c, Capacity [veh/h]	258	982	951	71	1497	767	331	558	475	279	558	475
d1, Uniform Delay [s]	33.35	14.40	14.48	37.84	17.47	17.47	26.78	22.02	23.58	31.33	21.69	20.88
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	6.65	3.80	4.05	8.47	1.27	2.47	0.29	0.33	0.90	2.01	0.26	0.15
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	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	0.83	0.68	0.69	0.62	0.52	0.52	0.20	0.32	0.52	0.59	0.27	0.15
d, Delay for Lane Group [s/veh]	40.00	18.20	18.53	46.31	18.74	19.95	27.08	22.35	24.48	33.34	21.95	21.02
Lane Group LOS	D	B	B	D	B	B	C	C	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.38	9.13	9.04	0.98	5.02	5.40	1.04	2.54	3.82	3.14	2.17	0.98
50th-Percentile Queue Length [ft/ln]	109.54	228.26	225.94	24.49	125.44	135.00	26.11	63.40	95.51	78.53	54.27	24.60
95th-Percentile Queue Length [veh/ln]	7.81	14.09	13.97	1.76	8.69	9.21	1.88	4.56	6.88	5.65	3.91	1.77
95th-Percentile Queue Length [ft/ln]	195.36	352.15	349.20	44.09	217.27	230.27	46.99	114.12	171.93	141.36	97.69	44.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.00	18.35	18.53	46.31	19.11	19.95	27.08	22.35	24.48	33.34	21.95	21.02
Movement LOS	D	B	B	D	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	21.37			20.14			24.06			26.60		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	21.88											
Intersection LOS	C											
Intersection V/C	0.646											

Emissions

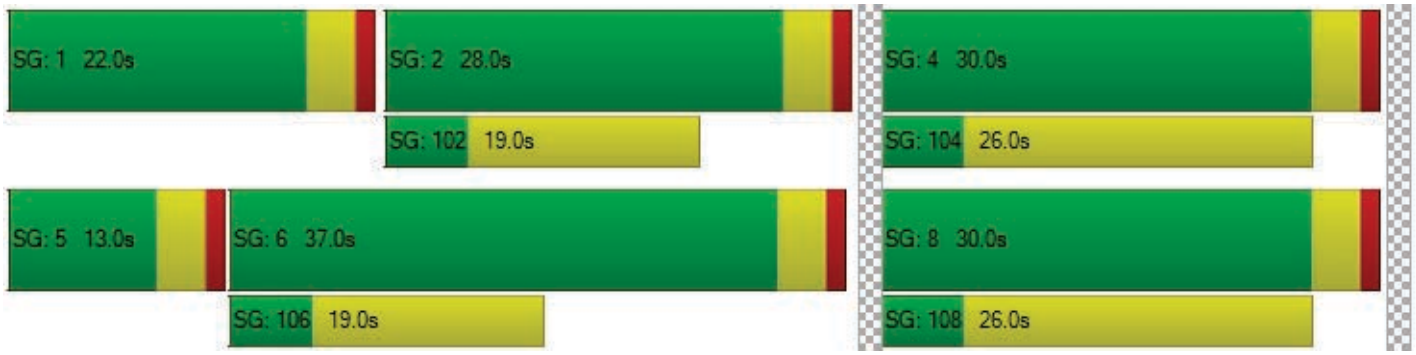
Vehicle Miles Traveled [mph]	9.09	28.52	27.92	21.86	383.33	196.48	3.94	10.69	14.87	9.44	8.76	4.12
Stops [stops/h]	197.16	410.87	406.70	44.09	451.57	243.00	46.99	114.12	171.93	141.36	97.69	44.28
Fuel consumption [US gal/h]	3.20	5.92	5.86	1.63	21.11	11.03	0.87	2.08	3.10	2.29	1.58	0.72
CO [g/h]	223.50	413.69	409.76	113.99	1475.58	771.01	60.63	145.38	216.72	160.01	110.71	50.49
NOx [g/h]	43.49	80.49	79.73	22.18	287.10	150.01	11.80	28.29	42.17	31.13	21.54	9.82
VOC [g/h]	51.80	95.88	94.97	26.42	341.98	178.69	14.05	33.69	50.23	37.08	25.66	11.70

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.180	3.095	2.388	2.305
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	825	600	650	650
d_b, Bicycle Delay [s]	13.81	19.60	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.826	2.226	2.375	2.203
Bicycle LOS	C	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.463

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
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	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	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]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	1	4	3	68	2	53	87	198	1	0	152	34
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	4	0	0	6	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]	1	4	3	69	2	54	89	206	1	0	161	35
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
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	1	1	19	1	15	24	56	0	0	44	9
Total Analysis Volume [veh/h]	1	4	3	75	2	58	96	223	1	0	174	38
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	683	707	689	824	767
Degree of Utilization, x	0.01	0.19	0.46	0.00	0.28

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.04	0.70	2.46	0.00	1.13
95th-Percentile Queue Length [ft]	0.89	17.55	61.44	0.09	28.22
Approach Delay [s/veh]	8.33	9.30	12.34		9.48
Approach LOS	A	A	B		A
Intersection Delay [s/veh]	10.79				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	68.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.614

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	113	594	521	109	73	189
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	2	3	5	4	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]	116	608	534	116	78	193
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	30	157	138	30	20	50
Total Analysis Volume [veh/h]	120	629	553	120	81	200
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	0.13	0.01	0.01	0.00	0.61	0.37
d_M, Delay for Movement [s/veh]	9.46	0.00	0.00	0.00	68.28	15.64
Movement LOS	A	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.44	0.00	0.00	0.00	3.18	1.71
95th-Percentile Queue Length [ft/ln]	11.10	0.00	0.00	0.00	79.57	42.83
d_A, Approach Delay [s/veh]	1.52		0.00		30.82	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	5.75					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	27.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.129

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	43	559	553	36	22	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	3	2	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]	44	571	564	40	24	54
Peak Hour Factor	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	145	143	10	6	14
Total Analysis Volume [veh/h]	45	579	572	41	24	55
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
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	0.05	0.01	0.01	0.00	0.13	0.11
d_M, Delay for Movement [s/veh]	8.87	0.00	0.00	0.00	27.60	15.11
Movement LOS	A	A	A	A	D	C
95th-Percentile Queue Length [veh/ln]	0.14	0.00	0.00	0.00	0.89	0.89
95th-Percentile Queue Length [ft/ln]	3.62	0.00	0.00	0.00	22.32	22.32
d_A, Approach Delay [s/veh]	0.64		0.00		18.91	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.44					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	44.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.880

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
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	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	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]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	167	508	175	122	499	62	95	897	186	156	640	89
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	337	5	44	269	44	56	0	3	5	0	56
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]	171	855	184	168	778	107	153	915	193	164	653	147
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
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]	44	220	47	43	200	27	39	235	50	42	168	38
Total Analysis Volume [veh/h]	176	879	189	173	800	110	157	940	198	169	671	151
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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	41	55	0	12	26	0	5	22	0	5	22	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	19.0	35.0	0.0	17.0	33.0	0.0	18.0	31.0	0.0	17.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
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	

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	L	C	R	L	C	C
C, Calculated 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]	2.00	2.00	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]	11.6	31.1	31.1	11.4	30.8	30.8	10.6	30.4	30.4	11.2	31.0	31.0
g / C, Green / Cycle	0.12	0.31	0.31	0.11	0.31	0.31	0.11	0.30	0.30	0.11	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.10	0.29	0.29	0.10	0.24	0.24	0.09	0.26	0.12	0.09	0.22	0.22
s, saturation flow rate [veh/h]	1810	1900	1785	1810	1900	1821	1810	3618	1615	1810	1900	1781
c, Capacity [veh/h]	212	590	554	206	584	560	193	1097	490	203	587	550
d1, Uniform Delay [s]	43.19	33.45	33.51	43.39	31.74	31.75	43.71	32.79	27.66	43.46	30.73	30.73
k, delay calibration	0.16	0.37	0.38	0.22	0.28	0.28	0.11	0.50	0.50	0.16	0.50	0.50
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
d2, Incremental Delay [s]	11.94	19.12	20.75	15.99	6.22	6.50	8.11	8.65	2.47	12.00	7.53	8.00
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	0.83	0.93	0.94	0.84	0.80	0.80	0.82	0.86	0.40	0.83	0.72	0.72
d, Delay for Lane Group [s/veh]	55.13	52.57	54.27	59.38	37.96	38.24	51.82	41.45	30.13	55.46	38.26	38.73
Lane Group LOS	E	D	D	E	D	D	D	D	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.84	15.35	14.75	5.03	10.91	10.51	4.09	11.34	3.90	4.65	9.88	9.33
50th-Percentile Queue Length [ft/ln]	120.94	383.72	368.73	125.78	272.84	262.69	102.30	283.43	97.42	116.35	246.92	233.24
95th-Percentile Queue Length [veh/ln]	8.44	21.77	21.05	8.71	16.33	15.82	7.37	16.86	7.01	8.19	15.03	14.34
95th-Percentile Queue Length [ft/ln]	211.12	544.34	526.19	217.74	408.28	395.59	184.14	421.48	175.35	204.80	375.78	358.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.13	53.20	54.27	59.38	38.08	38.24	51.82	41.45	30.13	55.46	38.43	38.73
Movement LOS	E	D	D	E	D	D	D	D	C	E	D	D
d_A, Approach Delay [s/veh]	53.64			41.50			40.98			41.38		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	44.60											
Intersection LOS	D											
Intersection V/C	0.880											

Emissions

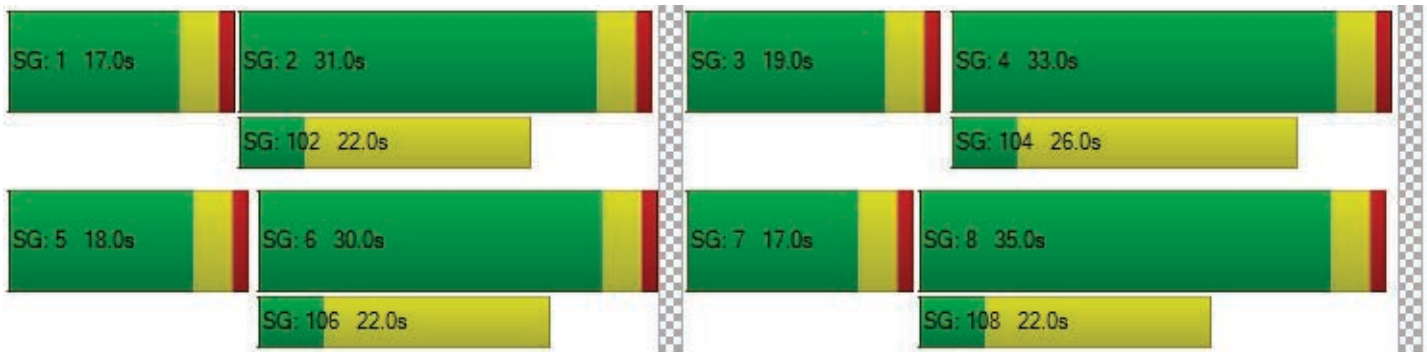
Vehicle Miles Traveled [mph]	87.44	272.95	257.67	11.71	31.44	30.15	18.51	110.82	23.34	16.41	41.20	38.61
Stops [stops/h]	174.16	552.55	530.97	181.12	392.89	378.27	147.31	816.29	140.28	167.54	355.57	335.87
Fuel consumption [US gal/h]	6.82	21.08	20.17	3.90	7.74	7.46	4.12	21.88	3.76	4.14	8.27	7.82
CO [g/h]	476.54	1473.60	1410.05	272.53	541.19	521.48	288.10	1529.11	262.71	289.46	578.20	546.40
NOx [g/h]	92.72	286.71	274.34	53.02	105.30	101.46	56.05	297.51	51.11	56.32	112.50	106.31
VOC [g/h]	110.44	341.52	326.79	63.16	125.43	120.86	66.77	354.39	60.89	67.08	134.00	126.63

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.933	2.823	3.008	2.903
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]	620	580	540	520
d_b, Bicycle Delay [s]	23.81	25.21	26.65	27.38
l_b,int, Bicycle LOS Score for Intersection	2.586	2.453	2.628	2.377
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 12: S Indian Hill Blvd/Auto Center Dr

Control Type:	Signalized	Delay (sec / veh):	27.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2,271.964

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
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	2	0	0	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	140.00	100.00	120.00	75.00	100.00	75.00	100.00	100.00	50.00
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]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
Base Volume Input [veh/h]	28	828	19	83	764	221	307	33	84	28	18	86
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	74	0	0	68	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]	29	919	19	85	847	225	313	34	86	29	18	88
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
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]	7	234	5	22	216	57	80	9	22	7	5	22
Total Analysis Volume [veh/h]	30	936	19	87	863	229	319	35	88	30	18	90
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	20	15	0	15	10	0	5	29	0	5	29	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0	0.0	24.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	19.0	0.0	9.0	19.0	0.0	19.0	43.0	0.0	9.0	33.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
Minimum Recall	No	No		No	No		Yes	No		Yes	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

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	R	L	C	R	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
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
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	2.4	23.8	23.8	5.0	26.4	26.4	39.1	39.1	30.1	39.1	20.6
g / C, Green / Cycle	0.03	0.30	0.30	0.06	0.33	0.33	0.49	0.49	0.38	0.49	0.26
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.17	0.05	0.24	0.14	0.11	0.55	0.05	0.41	0.06
s, saturation flow rate [veh/h]	1810	3618	1881	1810	3618	1615	1306	378	1615	117	1615
c, Capacity [veh/h]	55	1081	562	114	1198	535	346	350	607	177	415
d1, Uniform Delay [s]	38.24	23.79	23.80	36.91	23.50	20.85	20.60	24.62	16.48	15.06	23.38
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.12	0.50	0.11	0.50	0.11
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
d2, Incremental Delay [s]	8.13	2.28	4.35	10.22	3.76	2.49	0.93	7.38	0.11	3.74	0.26
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
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
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

Lane Group Results

X, volume / capacity	0.54	0.58	0.58	0.77	0.72	0.43	0.42	0.60	0.14	0.27	0.22
d, Delay for Lane Group [s/veh]	46.37	26.07	28.15	47.13	27.25	23.34	21.53	32.00	16.59	18.80	23.64
Lane Group LOS	D	C	C	D	C	C	C	C	B	B	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.69	5.09	5.62	1.94	7.30	3.51	1.82	2.59	1.04	0.60	1.33
50th-Percentile Queue Length [ft/ln]	17.17	127.24	140.54	48.54	182.41	87.80	45.51	64.66	25.97	15.02	33.21
95th-Percentile Queue Length [veh/ln]	1.24	8.79	9.51	3.50	11.73	6.32	3.28	4.66	1.87	1.08	2.39
95th-Percentile Queue Length [ft/ln]	30.91	219.73	237.75	87.38	293.16	158.04	81.91	116.39	46.74	27.04	59.78

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	46.37	26.76	28.15	47.13	27.25	23.34	27.15	32.00	16.59	18.80	18.80	23.64
Movement LOS	D	C	C	D	C	C	C	C	B	B	B	C
d_A, Approach Delay [s/veh]	27.38			27.96			25.50			21.96		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27.05											
Intersection LOS	C											
Intersection V/C	2271.964											

Emissions

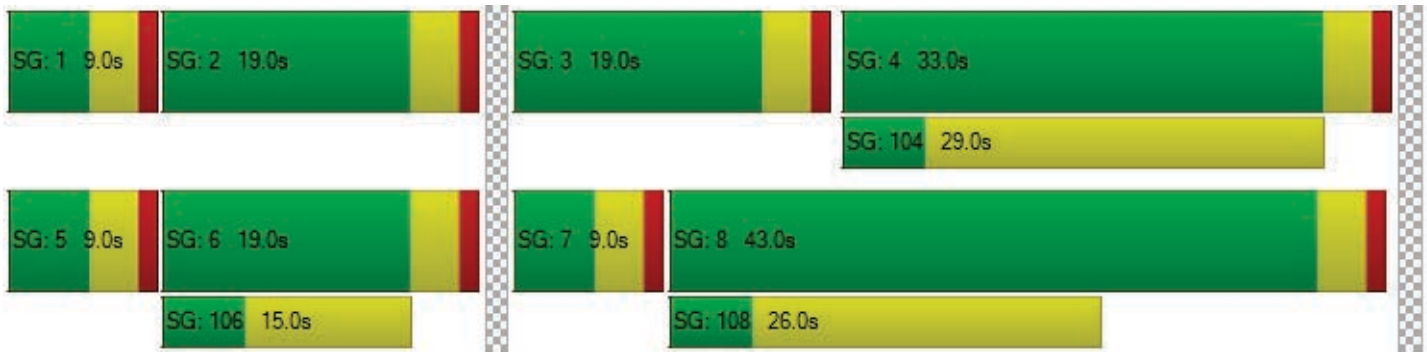
Vehicle Miles Traveled [mph]	2.33	48.83	25.41	4.48	44.41	11.78	3.43	4.96	2.09	1.14	2.14
Stops [stops/h]	30.91	458.06	252.96	87.38	656.68	158.04	81.91	116.39	46.74	27.04	59.78
Fuel consumption [US gal/h]	0.60	8.64	4.74	1.66	11.42	2.73	1.23	2.21	0.64	0.38	0.85
CO [g/h]	42.25	603.86	331.58	116.19	798.08	190.52	85.84	154.47	44.83	26.56	59.49
NOx [g/h]	8.22	117.49	64.51	22.61	155.28	37.07	16.70	30.05	8.72	5.17	11.58
VOC [g/h]	9.79	139.95	76.85	26.93	184.96	44.15	19.89	35.80	10.39	6.15	13.79

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	0.00	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.890	3.503	0.000	2.027
Crosswalk LOS	C	D	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	375	375	1200	1200
d_b, Bicycle Delay [s]	26.41	26.41	6.40	6.40
l_b,int, Bicycle LOS Score for Intersection	2.101	2.532	2.289	1.787
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 13: Project Driveway/W American Ave

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Project Driveway		West American Avenue		West American Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	15.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway		West American Avenue		West American Avenue	
Base Volume Input [veh/h]	0	0	0	138	120	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	10	19	0	0	4
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]	3	10	19	141	122	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	5	35	31	1
Total Analysis Volume [veh/h]	3	10	19	141	122	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.00
d_M, Delay for Movement [s/veh]	10.33	8.93	7.47	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.03	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.15	1.15	0.80	0.80	0.00	0.00
d_A, Approach Delay [s/veh]	9.25		0.89		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.88					
Intersection LOS	B					

HORIZON YEAR CONDITIONS

Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
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	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	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]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	37	929	5	72	623	6	3	8	23	4	13	168
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	30	0	0	36	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]	41	1061	6	80	728	7	3	9	26	4	14	186
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
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]	11	285	2	21	195	2	1	2	7	1	4	50
Total Analysis Volume [veh/h]	44	1140	6	86	782	8	3	10	28	4	15	200
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	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	37	0	5	37	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	41.0	0.0	9.0	41.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
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]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	58.1	49.8	49.8	58.1	51.0	51.0	13.9	13.9
g / C, Green / Cycle	0.73	0.62	0.62	0.73	0.64	0.64	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.06	0.34	0.34	0.15	0.24	0.01	0.03	0.15
s, saturation flow rate [veh/h]	716	1710	1707	576	3256	1454	1562	1473
c, Capacity [veh/h]	572	1065	1063	458	2073	925	320	302
d1, Uniform Delay [s]	3.76	8.57	8.57	5.19	6.95	5.31	28.05	32.06
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.06	1.95	1.96	0.91	0.52	0.02	0.18	3.31
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	0.54	0.54	0.19	0.38	0.01	0.13	0.73
d, Delay for Lane Group [s/veh]	3.82	10.52	10.53	6.10	7.47	5.32	28.23	35.38
Lane Group LOS	A	B	B	A	A	A	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.13	4.93	4.92	0.38	2.70	0.04	0.70	4.32
50th-Percentile Queue Length [ft/ln]	3.33	123.15	122.97	9.62	67.47	1.10	17.41	107.92
95th-Percentile Queue Length [veh/ln]	0.24	8.57	8.56	0.69	4.86	0.08	1.25	7.72
95th-Percentile Queue Length [ft/ln]	5.99	214.15	213.90	17.32	121.45	1.99	31.34	193.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.82	10.53	10.53	6.10	7.47	5.32	28.23	28.23	28.23	35.38	35.38	35.38
Movement LOS	A	B	B	A	A	A	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	10.28			7.32			28.23			35.38		
Approach LOS	B			A			C			D		
d_I, Intersection Delay [s/veh]	11.84											
Intersection LOS	B											
Intersection V/C	0.591											

Emissions

Vehicle Miles Traveled [mph]	11.15	145.33	145.07	6.75	61.41	0.63	0.97	21.69
Stops [stops/h]	5.99	221.67	221.34	17.32	242.91	1.99	31.34	194.25
Fuel consumption [US gal/h]	0.49	8.61	8.60	0.49	5.36	0.05	0.33	3.30
CO [g/h]	34.42	601.95	600.97	34.56	374.44	3.33	23.21	230.46
NOx [g/h]	6.70	117.12	116.93	6.72	72.85	0.65	4.52	44.84
VOC [g/h]	7.98	139.51	139.28	8.01	86.78	0.77	5.38	53.41

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.873	1.778	1.920
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	925	925	650	650
d_b, Bicycle Delay [s]	11.56	11.56	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.541	2.282	1.627	1.921
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	20.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.577

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
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	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	96	697	39	36	496	118	153	207	138	46	252	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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	23	0	4	31	1	2	0	0	0	0	5
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]	107	797	43	44	582	132	172	230	153	51	280	107
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
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]	30	221	12	12	162	37	48	64	43	14	78	30
Total Analysis Volume [veh/h]	119	886	48	49	647	147	191	256	170	57	311	119
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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	11	23	0	8	20	0	0	27	0	0	27	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	15.0	27.0	0.0	12.0	24.0	0.0	0.0	31.0	0.0	0.0	31.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	6.0	28.7	28.7	3.1	25.9	25.9	26.1	26.1	26.1	26.1	26.1	26.1
g / C, Green / Cycle	0.09	0.41	0.41	0.04	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.07	0.25	0.25	0.03	0.22	0.22	0.20	0.13	0.11	0.06	0.16	0.07
s, saturation flow rate [veh/h]	1810	1900	1866	1810	1900	1780	973	1900	1615	977	1900	1615
c, Capacity [veh/h]	157	781	767	83	704	659	317	706	600	342	706	600
d1, Uniform Delay [s]	31.25	16.15	16.15	32.74	17.69	17.69	26.49	15.98	15.45	21.17	16.53	14.92
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	7.32	3.44	3.50	6.42	3.50	3.74	1.84	0.31	0.26	0.23	0.43	0.16
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	0.76	0.60	0.60	0.59	0.58	0.58	0.60	0.36	0.28	0.17	0.44	0.20
d, Delay for Lane Group [s/veh]	38.58	19.59	19.65	39.16	21.19	21.43	28.33	16.29	15.71	21.40	16.96	15.08
Lane Group LOS	D	B	B	D	C	C	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.16	5.84	5.74	0.92	5.34	5.05	3.02	2.75	1.77	0.72	3.46	1.19
50th-Percentile Queue Length [ft/ln]	53.95	145.88	143.61	22.90	133.51	126.33	75.50	68.72	44.21	18.00	86.57	29.84
95th-Percentile Queue Length [veh/ln]	3.88	9.80	9.68	1.65	9.13	8.74	5.44	4.95	3.18	1.30	6.23	2.15
95th-Percentile Queue Length [ft/ln]	97.12	244.92	241.88	41.22	228.26	218.50	135.91	123.69	79.58	32.40	155.82	53.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.58	19.62	19.65	39.16	21.28	21.43	28.33	16.29	15.71	21.40	16.96	15.08
Movement LOS	D	B	B	D	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.76			22.34			19.86			17.02		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.76											
Intersection LOS	C											
Intersection V/C	0.577											

Emissions

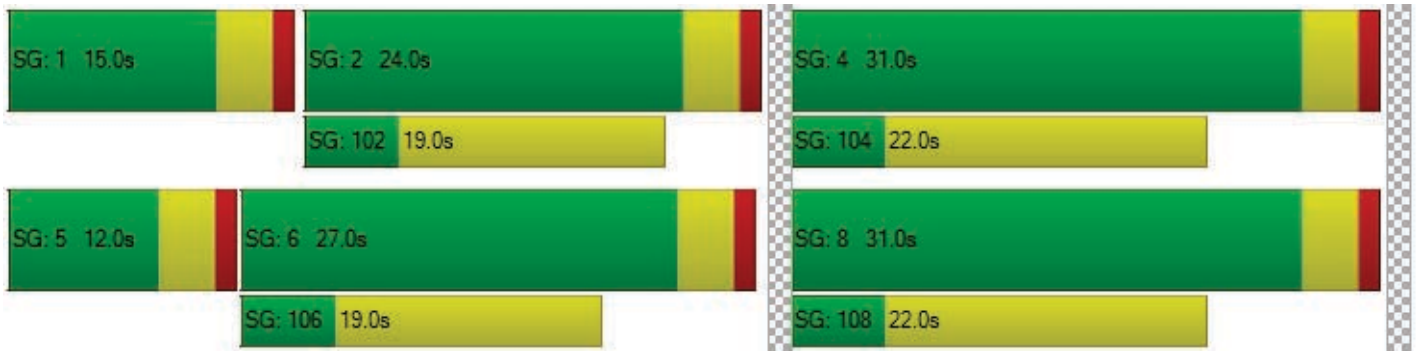
Vehicle Miles Traveled [mph]	9.19	36.37	35.72	12.42	103.83	97.37	12.20	16.35	10.86	14.20	77.48	29.65
Stops [stops/h]	110.99	300.09	295.43	47.11	274.66	259.88	155.32	141.36	90.95	37.03	178.08	61.38
Fuel consumption [US gal/h]	2.35	6.13	6.03	1.30	8.18	7.72	2.73	2.54	1.64	1.07	5.37	1.96
CO [g/h]	164.51	428.44	421.69	90.73	572.05	539.41	191.12	177.21	114.73	74.65	375.10	136.80
NOx [g/h]	32.01	83.36	82.04	17.65	111.30	104.95	37.19	34.48	22.32	14.52	72.98	26.62
VOC [g/h]	38.13	99.30	97.73	21.03	132.58	125.01	44.29	41.07	26.59	17.30	86.93	31.70

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.871	3.091	2.459	2.359
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	657	571	771	771
d_b, Bicycle Delay [s]	15.78	17.86	13.21	13.21
l_b,int, Bicycle LOS Score for Intersection	2.428	2.255	2.578	2.363
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	8	19	15	242	337	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	4	5	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]	9	21	17	273	379	2
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	6	5	78	108	1
Total Analysis Volume [veh/h]	10	24	19	310	431	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.03	0.04	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.51	11.23	8.19	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.21	0.21	0.03	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.29	5.29	0.80	0.80	0.00	0.00
d_A, Approach Delay [s/veh]	12.49		0.47		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.73					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.158

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
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	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	24	1	2	0	0	6	5	36	13	0	104	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
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]	27	1	2	0	0	7	6	40	14	0	115	0
Peak Hour Factor	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230
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]	8	0	1	0	0	2	2	12	4	0	35	0
Total Analysis Volume [veh/h]	33	1	2	0	0	9	7	49	17	0	140	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	797	949	896	883
Degree of Utilization, x	0.05	0.01	0.08	0.16

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.14	0.03	0.27	0.56
95th-Percentile Queue Length [ft]	3.54	0.72	6.64	14.04
Approach Delay [s/veh]	7.73	6.83	7.38	7.84
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.66			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	27.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.792

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
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	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	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]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	814	374	351	610	0	388	2	351	0	0	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	29	1	78	36	0	52	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]	0	933	416	468	713	0	483	2	390	0	0	0
Peak Hour Factor	1.0000	0.9220	0.9220	0.9220	0.9220	1.0000	0.9220	0.9220	0.9220	1.0000	1.0000	1.0000
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	253	113	127	193	0	131	1	106	0	0	0
Total Analysis Volume [veh/h]	0	1012	451	508	773	0	524	2	423	0	0	0
Presence of On-Street Parking	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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	19	0	22	45	0	0	17	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
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				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	0.0	23.0	0.0	26.0	49.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	
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]	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	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	20.9	20.9	20.9	21.3	46.2	15.8	15.8	15.8	
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.66	0.23	0.23	0.23	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.22	0.23	0.28	0.21	0.18	0.18	0.19	
s, saturation flow rate [veh/h]	3618	1633	1615	1810	3618	1810	1738	1615	
c, Capacity [veh/h]	1075	485	480	552	2385	410	394	366	
d1, Uniform Delay [s]	21.67	22.27	22.35	23.51	5.17	25.41	25.61	26.01	
k, delay calibration	0.50	0.50	0.50	0.33	0.50	0.22	0.24	0.28	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.48	10.36	10.90	17.00	0.36	6.41	8.35	13.74	
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	0.68	0.75	0.76	0.92	0.32	0.78	0.80	0.86	
d, Delay for Lane Group [s/veh]	25.15	32.63	33.24	40.51	5.53	31.82	33.96	39.75	
Lane Group LOS	C	C	C	D	A	C	C	D	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.35	6.36	6.44	10.11	1.95	5.25	5.45	5.97	
50th-Percentile Queue Length [ft/ln]	133.80	159.12	160.93	252.83	48.78	131.28	136.29	149.20	
95th-Percentile Queue Length [veh/ln]	9.15	10.50	10.60	15.33	3.51	9.01	9.28	9.97	
95th-Percentile Queue Length [ft/ln]	228.65	262.56	264.95	383.21	87.80	225.24	232.01	249.36	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.42	33.13	40.51	5.53	0.00	32.67	33.96	38.28	0.00	0.00	0.00
Movement LOS		C	C	D	A		C	C	D			
d_A, Approach Delay [s/veh]		29.04			19.40			35.16			0.00	
Approach LOS		C			B			D			A	
d_I, Intersection Delay [s/veh]	27.27											
Intersection LOS	C											
Intersection V/C	0.792											

Emissions

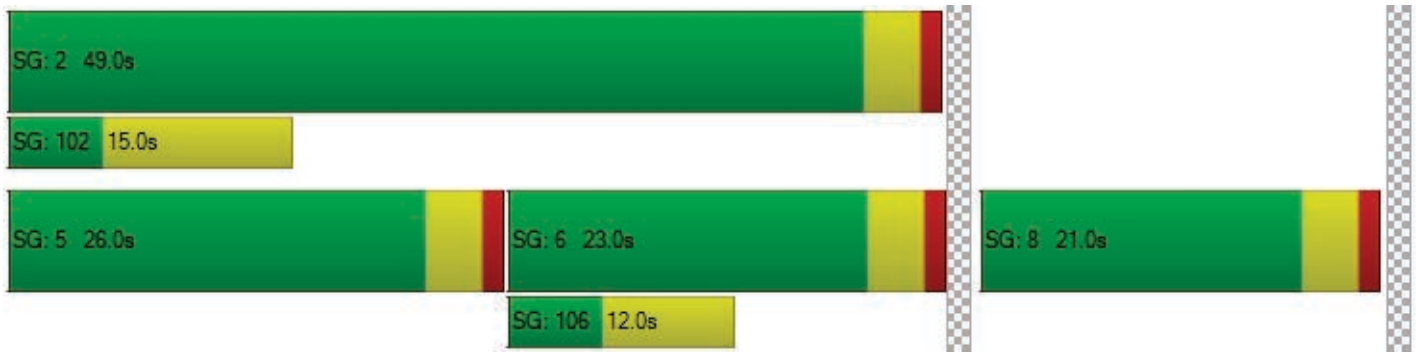
Vehicle Miles Traveled [mph]	37.08	18.54	18.54	22.92	34.87	27.34	27.23	27.01
Stops [stops/h]	550.50	327.33	331.05	520.10	200.69	270.07	280.36	306.93
Fuel consumption [US gal/h]	9.30	5.60	5.67	8.00	3.41	5.69	5.92	6.52
CO [g/h]	649.86	391.26	396.38	559.49	238.64	397.87	413.69	456.06
NOx [g/h]	126.44	76.12	77.12	108.86	46.43	77.41	80.49	88.73
VOC [g/h]	150.61	90.68	91.87	129.67	55.31	92.21	95.88	105.70

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.340	2.172
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	543	1286	486	0
d_b, Bicycle Delay [s]	18.58	4.46	20.06	35.00
l_b,int, Bicycle LOS Score for Intersection	2.364	2.616	3.125	4.132
Bicycle LOS	B	B	C	D

Sequence

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



Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	37.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.941

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
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	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
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			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	468	746	0	0	679	460	0	0	0	237	1	206
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	81	0	0	114	77	0	0	0	0	0	53
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]	519	909	0	0	868	588	0	0	0	263	1	282
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
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]	147	257	0	0	245	166	0	0	0	74	0	80
Total Analysis Volume [veh/h]	587	1028	0	0	982	665	0	0	0	298	1	319
Presence of On-Street Parking	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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	29	69	0	0	36	0	0	0	0	0	13	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	33.0	73.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	17.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	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
l1_p, Permitted Start-Up Lost Time [s]	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
g_i, Effective Green Time [s]	29.1	69.2	36.1	36.1		12.8	12.8	12.8
g / C, Green / Cycle	0.32	0.77	0.40	0.40		0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.32	0.28	0.19	0.41		0.12	0.12	0.12
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1687	1615
c, Capacity [veh/h]	584	2782	2078	648		257	240	230
d1, Uniform Delay [s]	30.47	3.36	19.90	26.93		37.65	37.67	37.68
k, delay calibration	0.45	0.50	0.50	0.50		0.28	0.29	0.29
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	36.42	0.38	0.77	42.03		17.44	19.02	20.05
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.00	0.37	0.47	1.03		0.85	0.85	0.85
d, Delay for Lane Group [s/veh]	66.88	3.74	20.67	68.96		55.09	56.69	57.73
Lane Group LOS	F	A	C	F		E	E	E
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	18.02	2.22	5.03	20.67		5.73	5.47	5.32
50th-Percentile Queue Length [ft/ln]	450.47	55.45	125.82	516.64		143.35	136.87	132.97
95th-Percentile Queue Length [veh/ln]	25.05	3.99	8.71	28.64		9.66	9.31	9.10
95th-Percentile Queue Length [ft/ln]	626.31	99.81	217.80	715.92		241.53	232.81	227.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.88	3.74	0.00	0.00	20.67	68.96	0.00	0.00	0.00	55.56	56.69	57.35
Movement LOS	F	A			C	F				E	E	E
d_A, Approach Delay [s/veh]	26.69			40.17			0.00			56.45		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	37.15											
Intersection LOS	D											
Intersection V/C	0.941											

Emissions

Vehicle Miles Traveled [mph]	26.48	46.37	36.41	24.66		18.19	17.04	16.36
Stops [stops/h]	720.75	177.44	603.95	826.62		229.37	219.00	212.75
Fuel consumption [US gal/h]	13.06	3.67	8.97	14.91		5.35	5.12	4.98
CO [g/h]	912.96	256.60	626.75	1042.43		373.77	357.66	347.95
NOx [g/h]	177.63	49.92	121.94	202.82		72.72	69.59	67.70
VOC [g/h]	211.59	59.47	145.25	241.59		86.62	82.89	80.64

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.327	2.210
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1533	800	0	289
d_b, Bicycle Delay [s]	2.45	16.20	45.00	32.94
l_b,int, Bicycle LOS Score for Intersection	2.892	2.465	4.132	2.579
Bicycle LOS	C	B	D	B

Sequence

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



Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	23.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.767

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
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	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	71	790	102	40	760	20	41	79	183	216	101	62
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	113	0	0	173	7	3	2	0	2	3	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]	100	990	113	44	1017	29	49	90	203	242	115	69
Peak Hour Factor	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450
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]	30	293	33	13	301	9	14	27	60	72	34	20
Total Analysis Volume [veh/h]	118	1172	134	52	1204	34	58	107	240	286	136	82
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	15	32	0	8	25	0	0	28	0	0	28	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	19.0	36.0	0.0	12.0	29.0	0.0	0.0	32.0	0.0	0.0	32.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	6.8	36.5	36.5	3.5	33.2	33.2	28.0	28.0	28.0	28.0	28.0	28.0
g / C, Green / Cycle	0.08	0.46	0.46	0.04	0.42	0.42	0.35	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.07	0.35	0.35	0.03	0.23	0.23	0.05	0.06	0.15	0.27	0.07	0.05
s, saturation flow rate [veh/h]	1810	1900	1833	1810	3618	1873	1182	1900	1615	1050	1900	1615
c, Capacity [veh/h]	156	865	835	81	1497	775	415	665	565	391	665	565
d1, Uniform Delay [s]	35.73	18.21	18.29	37.59	17.75	17.75	22.12	17.91	19.85	28.01	18.20	17.80
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.29	0.11	0.11
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
d2, Incremental Delay [s]	7.26	6.40	6.82	8.29	1.43	2.74	0.15	0.11	0.51	6.81	0.15	0.12
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	0.76	0.77	0.77	0.64	0.54	0.54	0.14	0.16	0.42	0.73	0.20	0.15
d, Delay for Lane Group [s/veh]	42.99	24.61	25.11	45.89	19.18	20.49	22.27	18.02	20.36	34.82	18.35	17.92
Lane Group LOS	D	C	C	D	B	C	C	B	C	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.52	10.89	10.71	1.15	5.38	5.86	0.81	1.31	3.27	5.84	1.72	1.02
50th-Percentile Queue Length [ft/ln]	62.93	272.25	267.71	28.63	134.60	146.51	20.27	32.64	81.86	145.99	43.03	25.42
95th-Percentile Queue Length [veh/ln]	4.53	16.30	16.07	2.06	9.19	9.83	1.46	2.35	5.89	9.80	3.10	1.83
95th-Percentile Queue Length [ft/ln]	113.27	407.54	401.87	51.53	229.73	245.77	36.48	58.76	147.35	245.06	77.45	45.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.99	24.83	25.11	45.89	19.60	20.49	22.27	18.02	20.36	34.82	18.35	17.92
Movement LOS	D	C	C	D	B	C	C	B	C	C	B	B
d_A, Approach Delay [s/veh]	26.36			20.68			20.01			27.63		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.81											
Intersection LOS	C											
Intersection V/C	0.767											

Emissions

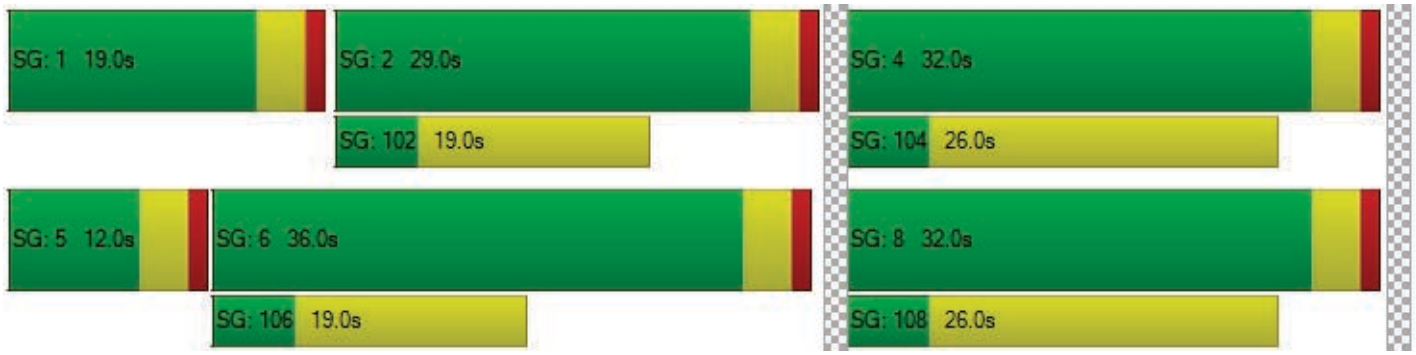
Vehicle Miles Traveled [mph]	5.04	28.27	27.48	25.84	405.20	209.88	3.46	6.39	14.33	16.37	7.78	4.69
Stops [stops/h]	113.27	490.04	481.87	51.53	484.55	263.72	36.48	58.76	147.35	262.78	77.45	45.76
Fuel consumption [US gal/h]	1.87	7.19	7.08	1.92	22.46	11.87	0.67	1.08	2.65	4.15	1.26	0.75
CO [g/h]	130.39	502.47	495.08	134.01	1569.79	829.73	46.78	75.35	185.15	290.23	87.82	52.08
NOx [g/h]	25.37	97.76	96.33	26.07	305.42	161.44	9.10	14.66	36.02	56.47	17.09	10.13
VOC [g/h]	30.22	116.45	114.74	31.06	363.81	192.30	10.84	17.46	42.91	67.26	20.35	12.07

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.368	3.095	2.324	2.321
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	625	700	700
d_b, Bicycle Delay [s]	14.40	18.91	16.90	16.90
l_b,int, Bicycle LOS Score for Intersection	2.734	2.269	2.228	2.391
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.679

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
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	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	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]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	4	2	2	38	3	79	35	77	2	5	275	47
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
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	4	0	0	3	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]	4	2	2	42	3	88	39	89	2	6	308	52
Peak Hour Factor	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130
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]	1	1	1	15	1	31	14	31	1	2	108	18
Total Analysis Volume [veh/h]	6	3	3	59	4	123	55	125	3	8	432	73
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	603	677	628	739	756
Degree of Utilization, x	0.02	0.27	0.29	0.00	0.68

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.06	1.12	1.18	0.01	5.38
95th-Percentile Queue Length [ft]	1.52	27.91	29.50	0.31	134.52
Approach Delay [s/veh]	9.09	10.32	10.66		17.20
Approach LOS	A	B	B		C
Intersection Delay [s/veh]	14.32				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	259.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.899

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	220	660	490	88	26	111
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	3	1
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]	244	733	544	101	32	124
Peak Hour Factor	0.8580	0.8580	0.8580	0.8580	0.8580	0.8580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	71	214	159	29	9	36
Total Analysis Volume [veh/h]	284	854	634	118	37	145
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	0.33	0.01	0.01	0.00	0.90	0.30
d_M, Delay for Movement [s/veh]	11.16	0.00	0.00	0.00	259.00	15.63
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	1.43	0.00	0.00	0.00	3.47	1.25
95th-Percentile Queue Length [ft/ln]	35.84	0.00	0.00	0.00	86.82	31.27
d_A, Approach Delay [s/veh]	2.79		0.00		65.11	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	7.25					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	45.2
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.141

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	74	656	432	24	11	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	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]	82	728	481	27	12	28
Peak Hour Factor	0.8370	0.8370	0.8370	0.8370	0.8370	0.8370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	217	144	8	4	8
Total Analysis Volume [veh/h]	98	870	575	32	14	33
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
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	0.10	0.01	0.01	0.00	0.14	0.06
d_M, Delay for Movement [s/veh]	9.08	0.00	0.00	0.00	45.16	15.87
Movement LOS	A	A	A	A	E	C
95th-Percentile Queue Length [veh/ln]	0.33	0.00	0.00	0.00	0.74	0.74
95th-Percentile Queue Length [ft/ln]	8.30	0.00	0.00	0.00	18.62	18.62
d_A, Approach Delay [s/veh]	0.92		0.00		24.59	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.26					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	42.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.839

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
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	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	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]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	159	523	202	64	447	35	51	391	163	150	702	81
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	114	2	29	175	29	19	0	2	3	0	19
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]	176	695	226	100	671	68	76	434	183	170	779	109
Peak Hour Factor	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380
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	207	67	30	200	20	23	129	55	51	232	33
Total Analysis Volume [veh/h]	210	829	270	119	801	81	91	518	218	203	930	130
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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	17	33	0	11	27	0	9	22	0	18	31	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	21.0	37.0	0.0	15.0	31.0	0.0	13.0	26.0	0.0	22.0	35.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
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	

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	L	C	R	L	C	C
C, Calculated 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]	2.00	2.00	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]	13.5	32.7	32.7	8.2	27.5	27.5	6.5	29.8	29.8	13.2	36.5	36.5
g / C, Green / Cycle	0.14	0.33	0.33	0.08	0.27	0.27	0.06	0.30	0.30	0.13	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.12	0.30	0.30	0.07	0.24	0.24	0.05	0.14	0.13	0.11	0.28	0.29
s, saturation flow rate [veh/h]	1810	1900	1743	1810	1900	1839	1810	3618	1615	1810	1900	1820
c, Capacity [veh/h]	245	622	570	149	522	505	118	1076	481	240	694	664
d1, Uniform Delay [s]	42.29	32.34	32.48	45.04	34.44	34.44	46.01	28.80	28.52	42.37	28.17	28.21
k, delay calibration	0.19	0.34	0.35	0.11	0.29	0.29	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	14.13	15.50	17.95	9.59	10.38	10.68	10.18	1.54	3.07	7.97	8.44	8.92
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	0.86	0.92	0.93	0.80	0.86	0.86	0.77	0.48	0.45	0.85	0.78	0.78
d, Delay for Lane Group [s/veh]	56.42	47.84	50.43	54.63	44.82	45.12	56.20	30.34	31.60	50.34	36.61	37.13
Lane Group LOS	E	D	D	D	D	D	E	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.88	15.19	14.48	3.25	11.50	11.17	2.48	5.05	4.43	5.28	12.42	12.04
50th-Percentile Queue Length [ft/ln]	146.92	379.66	362.05	81.23	287.38	279.28	62.02	126.17	110.64	132.00	310.46	300.89
95th-Percentile Queue Length [veh/ln]	9.85	21.58	20.72	5.85	17.06	16.65	4.47	8.73	7.88	9.05	18.20	17.72
95th-Percentile Queue Length [ft/ln]	246.31	539.43	518.08	146.21	426.39	416.31	111.64	218.28	196.89	226.21	454.94	443.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.42	48.65	50.43	54.63	44.96	45.12	56.20	30.34	31.60	50.34	36.83	37.13
Movement LOS	E	D	D	D	D	D	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	50.26			46.12			33.51			39.03		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	42.95											
Intersection LOS	D											
Intersection V/C	0.839											

Emissions

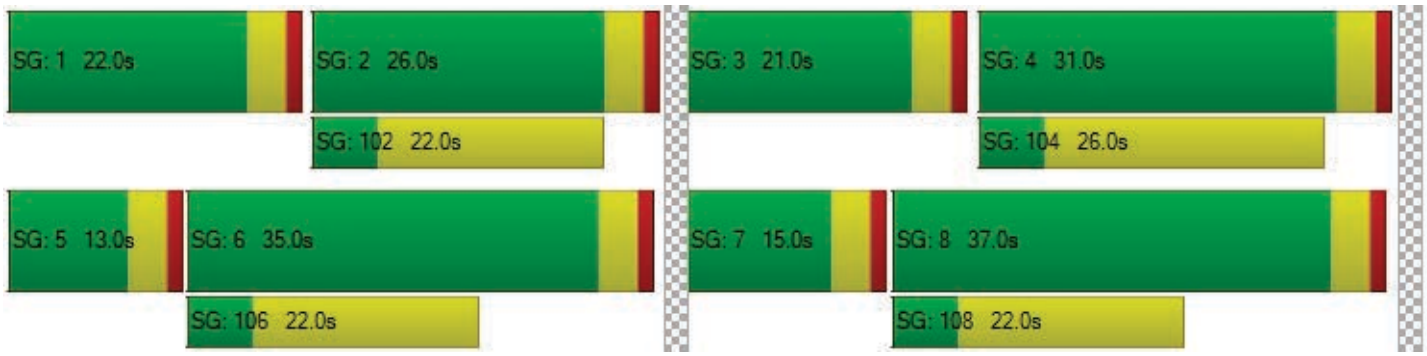
Vehicle Miles Traveled [mph]	104.34	283.44	262.59	8.05	30.33	29.37	10.73	61.07	25.70	19.71	52.47	50.45
Stops [stops/h]	211.56	546.71	521.35	116.96	413.83	402.16	89.31	363.37	159.32	190.08	447.06	433.28
Fuel consumption [US gal/h]	8.23	21.08	19.95	2.51	8.36	8.13	2.52	9.81	4.26	4.65	10.30	9.99
CO [g/h]	575.04	1473.29	1394.55	175.41	584.08	568.12	176.06	685.66	298.02	325.23	719.83	698.23
NOx [g/h]	111.88	286.65	271.33	34.13	113.64	110.54	34.25	133.40	57.98	63.28	140.05	135.85
VOC [g/h]	133.27	341.45	323.20	40.65	135.37	131.67	40.80	158.91	69.07	75.37	166.83	161.82

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.965	2.773	2.959	2.871
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]	660	540	440	620
d_b, Bicycle Delay [s]	22.45	26.65	30.42	23.81
l_b,int, Bicycle LOS Score for Intersection	2.640	2.385	2.242	2.602
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 12: S Indian Hill Blvd/Auto Center Dr

Control Type:	Signalized	Delay (sec / veh):	27.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.597

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
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	2	0	0	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	140.00	100.00	120.00	75.00	100.00	75.00	100.00	100.00	50.00
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]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
Base Volume Input [veh/h]	49	886	38	146	718	192	82	14	24	63	12	132
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	30	0	0	36	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]	54	1013	42	162	833	213	91	16	27	70	13	147
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
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]	14	257	11	41	211	54	23	4	7	18	3	37
Total Analysis Volume [veh/h]	55	1026	43	164	844	216	92	16	27	71	13	149
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	16	0	8	19	0	21	27	0	13	19	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	10.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	20.0	0.0	12.0	23.0	0.0	24.0	31.0	0.0	17.0	24.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
Minimum Recall	No	No		No	No		Yes	No		Yes	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

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	R	L	C	R	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
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
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	3.5	24.1	24.1	9.0	29.6	29.6	34.8	34.8	17.8	34.8	14.8
g / C, Green / Cycle	0.04	0.30	0.30	0.11	0.37	0.37	0.44	0.44	0.22	0.44	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.20	0.09	0.23	0.13	0.02	0.62	0.02	0.52	0.09
s, saturation flow rate [veh/h]	1810	3618	1861	1810	3618	1615	1243	133	1615	161	1615
c, Capacity [veh/h]	80	1092	562	204	1341	599	212	209	360	212	299
d1, Uniform Delay [s]	37.69	24.22	24.22	34.61	20.66	18.29	24.64	22.52	24.57	24.40	29.26
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11	0.50	0.11
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
d2, Incremental Delay [s]	10.06	2.95	5.66	7.17	2.25	1.69	0.25	5.47	0.09	5.47	1.28
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
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
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

Lane Group Results

X, volume / capacity	0.69	0.65	0.65	0.80	0.63	0.36	0.12	0.39	0.08	0.40	0.50
d, Delay for Lane Group [s/veh]	47.75	27.17	29.88	41.78	22.91	19.97	24.90	27.99	24.66	29.88	30.54
Lane Group LOS	D	C	C	D	C	B	C	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.25	5.88	6.49	3.40	6.41	2.99	0.37	1.45	0.40	1.56	2.61
50th-Percentile Queue Length [ft/ln]	31.29	147.12	162.14	85.02	160.13	74.81	9.33	36.33	10.09	38.89	65.21
95th-Percentile Queue Length [veh/ln]	2.25	9.86	10.66	6.12	10.56	5.39	0.67	2.62	0.73	2.80	4.69
95th-Percentile Queue Length [ft/ln]	56.32	246.58	266.55	153.04	263.89	134.66	16.79	65.39	18.17	70.00	117.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.75	28.02	29.88	41.78	22.91	19.97	27.03	27.99	24.66	29.88	29.88	30.54
Movement LOS	D	C	C	D	C	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	29.05			24.92			26.73			30.30		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27.18											
Intersection LOS	C											
Intersection V/C	1.597											

Emissions

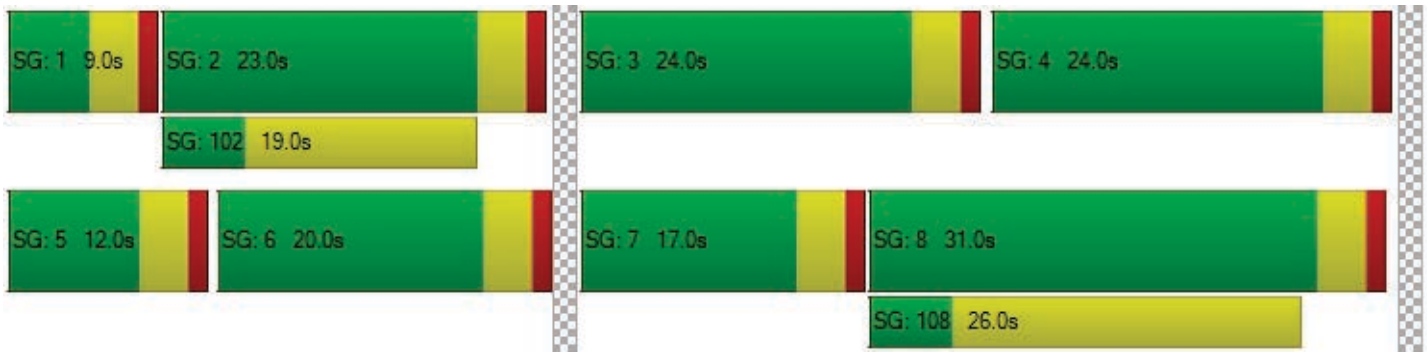
Vehicle Miles Traveled [mph]	4.32	55.41	28.54	8.31	42.78	10.95	0.85	2.70	0.89	2.43	4.30
Stops [stops/h]	56.32	529.63	291.85	153.04	576.47	134.66	16.79	65.39	18.17	70.00	117.37
Fuel consumption [US gal/h]	1.12	10.00	5.49	2.86	9.90	2.31	0.26	0.94	0.27	1.00	1.75
CO [g/h]	78.47	698.73	383.93	200.07	692.07	161.33	18.10	65.71	19.04	69.72	122.45
NOx [g/h]	15.27	135.95	74.70	38.93	134.65	31.39	3.52	12.78	3.70	13.56	23.82
VOC [g/h]	18.19	161.94	88.98	46.37	160.39	37.39	4.19	15.23	4.41	16.16	28.38

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	0.00	31.51	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.960	0.000	2.229	0.000
Crosswalk LOS	C	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	475	1100	1100
d_b, Bicycle Delay [s]	25.60	23.26	8.10	8.10
l_b,int, Bicycle LOS Score for Intersection	2.178	2.569	1.782	1.944
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
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	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	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]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	70	837	12	95	815	16	4	31	80	25	32	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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	67	0	0	55	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]	78	996	13	105	960	18	4	34	89	28	36	70
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
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]	21	265	3	28	256	5	1	9	24	7	10	19
Total Analysis Volume [veh/h]	83	1061	14	112	1022	19	4	36	95	30	38	75
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	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	37	0	5	37	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	41.0	0.0	9.0	41.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
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]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	62.4	53.8	53.8	62.4	54.1	54.1	9.6	9.6
g / C, Green / Cycle	0.78	0.67	0.67	0.78	0.68	0.68	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.14	0.32	0.32	0.19	0.31	0.01	0.09	0.09
s, saturation flow rate [veh/h]	609	1710	1702	601	3256	1454	1568	1543
c, Capacity [veh/h]	526	1148	1143	521	2201	982	237	242
d1, Uniform Delay [s]	3.29	6.31	6.31	3.48	6.12	4.26	33.88	33.99
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	1.38	1.39	0.94	0.71	0.04	2.16	2.30
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	0.16	0.47	0.47	0.21	0.46	0.02	0.57	0.59
d, Delay for Lane Group [s/veh]	3.43	7.69	7.70	4.42	6.83	4.29	36.04	36.29
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.16	3.55	3.53	0.35	3.25	0.09	2.71	2.81
50th-Percentile Queue Length [ft/ln]	3.93	88.64	88.31	8.80	81.23	2.21	67.74	70.30
95th-Percentile Queue Length [veh/ln]	0.28	6.38	6.36	0.63	5.85	0.16	4.88	5.06
95th-Percentile Queue Length [ft/ln]	7.07	159.55	158.95	15.84	146.22	3.97	121.94	126.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.43	7.69	7.70	4.42	6.83	4.29	36.04	36.04	36.04	36.29	36.29	36.29
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.39			6.55			36.04			36.29		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.11											
Intersection LOS	B											
Intersection V/C	0.504											

Emissions

Vehicle Miles Traveled [mph]	21.03	136.50	135.90	8.81	80.38	1.49	3.20	14.16
Stops [stops/h]	7.07	159.55	158.95	15.84	292.44	3.97	121.94	126.54
Fuel consumption [US gal/h]	0.88	7.30	7.27	0.56	6.68	0.10	1.33	2.18
CO [g/h]	61.56	510.28	508.15	38.84	467.21	7.23	93.24	152.25
NOx [g/h]	11.98	99.28	98.87	7.56	90.90	1.41	18.14	29.62
VOC [g/h]	14.27	118.26	117.77	9.00	108.28	1.68	21.61	35.29

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.889	1.860	1.945
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	925	925	650	650
d_b, Bicycle Delay [s]	11.56	11.56	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.515	2.511	1.782	1.796
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	23.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.730

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
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	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	120	692	91	82	701	175	145	394	171	63	276	72
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	60	0	5	48	2	2	0	0	0	0	5
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]	133	828	101	96	826	196	163	437	190	70	306	85
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
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	215	26	25	214	51	42	113	49	18	79	22
Total Analysis Volume [veh/h]	138	860	105	100	858	204	169	454	197	73	318	88
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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	10	23	0	11	24	0	0	24	0	0	24	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	14.0	27.0	0.0	15.0	28.0	0.0	0.0	28.0	0.0	0.0	28.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	6.8	28.9	28.9	5.1	27.2	27.2	24.0	24.0	24.0	24.0	24.0	24.0
g / C, Green / Cycle	0.10	0.41	0.41	0.07	0.39	0.39	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.08	0.26	0.26	0.06	0.29	0.29	0.17	0.24	0.12	0.09	0.17	0.05
s, saturation flow rate [veh/h]	1810	1900	1828	1810	1900	1776	995	1900	1615	793	1900	1615
c, Capacity [veh/h]	177	782	753	134	737	689	284	651	554	189	651	554
d1, Uniform Delay [s]	30.83	16.34	16.34	31.77	18.44	18.46	28.20	19.86	17.21	30.67	18.15	15.99
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.22	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	7.20	3.80	3.95	8.04	6.72	7.22	1.99	2.75	0.39	1.30	0.57	0.13
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	0.78	0.63	0.63	0.75	0.74	0.75	0.59	0.70	0.36	0.39	0.49	0.16
d, Delay for Lane Group [s/veh]	38.04	20.14	20.29	39.82	25.16	25.68	30.19	22.61	17.60	31.97	18.72	16.12
Lane Group LOS	D	C	C	D	C	C	C	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.48	6.18	5.99	1.85	7.97	7.57	2.76	6.26	2.23	1.21	3.79	0.92
50th-Percentile Queue Length [ft/ln]	61.95	154.60	149.69	46.35	199.23	189.15	69.02	156.59	55.71	30.31	94.87	23.00
95th-Percentile Queue Length [veh/ln]	4.46	10.26	10.00	3.34	12.60	12.08	4.97	10.37	4.01	2.18	6.83	1.66
95th-Percentile Queue Length [ft/ln]	111.50	256.56	250.02	83.42	314.97	301.92	124.24	259.20	100.29	54.56	170.77	41.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.04	20.21	20.29	39.82	25.35	25.68	30.19	22.61	17.60	31.97	18.72	16.12
Movement LOS	D	C	C	D	C	C	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	22.44			26.65			22.97			20.26		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.64											
Intersection LOS	C											
Intersection V/C	0.730											

Emissions

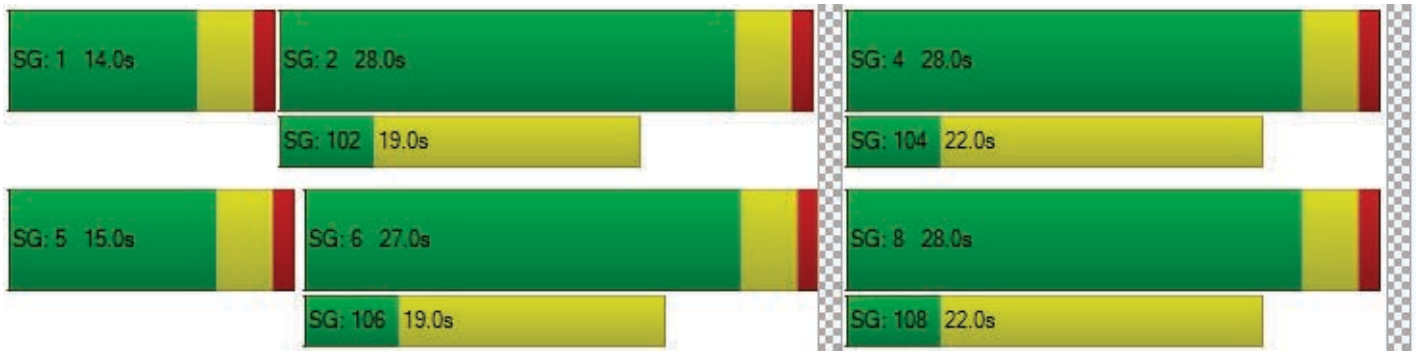
Vehicle Miles Traveled [mph]	10.65	37.94	36.54	25.34	138.94	130.17	10.80	29.00	12.59	18.19	79.23	21.92
Stops [stops/h]	127.43	318.03	307.93	95.34	409.85	389.10	141.99	322.13	114.61	62.35	195.16	47.32
Fuel consumption [US gal/h]	2.70	6.50	6.29	2.65	11.81	11.17	2.52	5.62	2.05	1.64	5.70	1.48
CO [g/h]	188.84	454.23	439.61	185.55	825.54	780.76	175.98	392.61	143.11	114.43	398.37	103.47
NOx [g/h]	36.74	88.38	85.53	36.10	160.62	151.91	34.24	76.39	27.84	22.26	77.51	20.13
VOC [g/h]	43.76	105.27	101.88	43.00	191.33	180.95	40.78	90.99	33.17	26.52	92.33	23.98

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.973	3.122	2.541	2.444
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	657	686	686	686
d_b, Bicycle Delay [s]	15.78	15.11	15.11	15.11
l_b,int, Bicycle LOS Score for Intersection	2.470	2.518	2.913	2.350
Bicycle LOS	B	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	21.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	1	19	22	509	376	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	5	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]	1	21	24	570	422	3
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	6	7	154	114	1
Total Analysis Volume [veh/h]	1	23	26	618	457	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.04	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	21.67	11.22	8.27	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.04	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.32	3.32	1.10	1.10	0.00	0.00
d_A, Approach Delay [s/veh]	11.65		0.33		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.44					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.155

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
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	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	11	5	5	1	2	3	6	86	17	5	73	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
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]	12	6	6	1	2	3	7	95	19	6	81	0
Peak Hour Factor	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630
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	2	2	0	1	1	2	28	6	2	23	0
Total Analysis Volume [veh/h]	14	7	7	1	2	3	8	110	22	7	94	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	824	862	901	873
Degree of Utilization, x	0.03	0.01	0.16	0.12

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.11	0.02	0.55	0.39
95th-Percentile Queue Length [ft]	2.64	0.53	13.71	9.77
Approach Delay [s/veh]	7.52	7.21	7.73	7.66
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.67			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.748

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
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	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	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]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	641	458	377	910	0	194	3	237	0	0	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	67	0	119	55	0	145	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]	0	779	508	537	1065	0	360	3	263	0	0	0
Peak Hour Factor	1.0000	0.9530	0.9530	0.9530	0.9530	1.0000	0.9530	0.9530	0.9530	1.0000	1.0000	1.0000
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	204	133	141	279	0	94	1	69	0	0	0
Total Analysis Volume [veh/h]	0	817	533	563	1118	0	378	3	276	0	0	0
Presence of On-Street Parking	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]	60
Active Pattern	Pattern 1
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 (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	16	0	21	41	0	0	11	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
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				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	0.0	20.0	0.0	25.0	45.0	0.0	0.0	15.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	60	60	60	60	60	60	60	60	
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]	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	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	17.6	17.6	17.6	20.3	41.9	10.1	10.1	10.1	
g / C, Green / Cycle	0.29	0.29	0.29	0.34	0.70	0.17	0.17	0.17	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.21	0.21	0.31	0.31	0.13	0.13	0.13	
s, saturation flow rate [veh/h]	3618	1615	1615	1810	3618	1810	1745	1615	
c, Capacity [veh/h]	1060	473	473	612	2525	305	294	273	
d1, Uniform Delay [s]	18.44	18.96	18.96	19.06	3.96	23.73	23.74	23.77	
k, delay calibration	0.50	0.50	0.50	0.33	0.50	0.17	0.18	0.18	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.93	8.87	8.87	15.60	0.57	5.81	6.17	7.00	
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	0.64	0.71	0.71	0.92	0.44	0.75	0.75	0.76	
d, Delay for Lane Group [s/veh]	21.37	27.83	27.83	34.67	4.53	29.53	29.91	30.77	
Lane Group LOS	C	C	C	C	A	C	C	C	
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.02	4.86	4.86	9.31	1.92	3.25	3.18	3.03	
50th-Percentile Queue Length [ft/ln]	100.59	121.48	121.48	232.69	48.10	81.26	79.43	75.68	
95th-Percentile Queue Length [veh/ln]	7.24	8.47	8.47	14.31	3.46	5.85	5.72	5.45	
95th-Percentile Queue Length [ft/ln]	181.06	211.86	211.86	357.77	86.58	146.27	142.97	136.23	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.37	27.83	34.67	4.53	0.00	29.69	29.91	30.58	0.00	0.00	0.00
Movement LOS		C	C	C	A		C	C	C			
d_A, Approach Delay [s/veh]	24.60			14.62			30.05			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	21.02											
Intersection LOS	C											
Intersection V/C	0.748											

Emissions

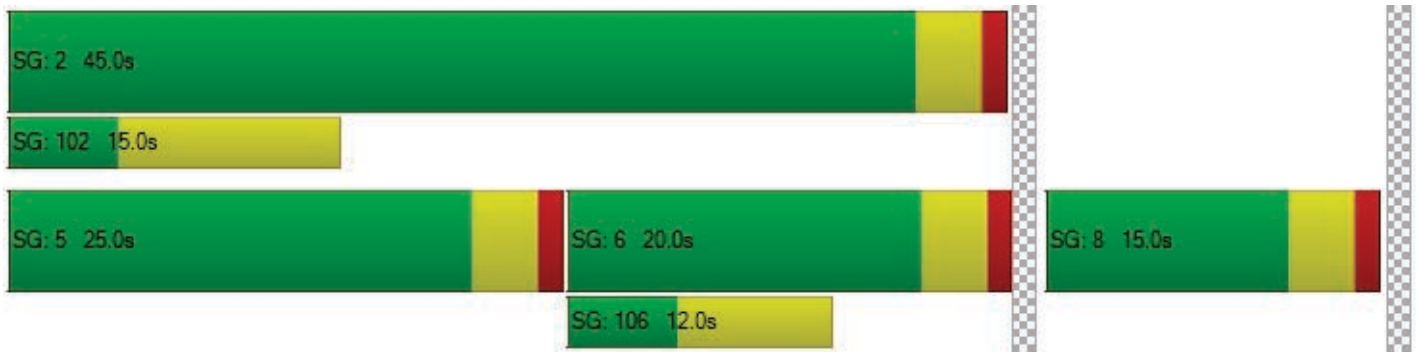
Vehicle Miles Traveled [mph]	34.13	17.07	17.07	25.40	50.43	19.66	19.04	17.77
Stops [stops/h]	482.83	291.56	291.56	558.45	230.88	195.03	190.62	181.64
Fuel consumption [US gal/h]	7.87	4.75	4.75	8.10	4.38	3.99	3.90	3.72
CO [g/h]	549.97	332.36	332.36	566.37	306.29	279.25	272.81	259.72
NOx [g/h]	107.00	64.66	64.66	110.19	59.59	54.33	53.08	50.53
VOC [g/h]	127.46	77.03	77.03	131.26	70.99	64.72	63.23	60.19

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.206	2.231
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	1367	367	0
d_b, Bicycle Delay [s]	16.13	3.01	20.01	30.00
l_b,int, Bicycle LOS Score for Intersection	2.302	2.946	2.644	4.132
Bicycle LOS	B	C	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	38.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.910

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
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	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
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			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	325	587	0	0	815	416	0	0	0	344	3	346
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	212	0	0	174	116	0	0	0	0	0	147
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]	361	864	0	0	1079	578	0	0	0	382	3	531
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
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]	102	244	0	0	305	163	0	0	0	108	1	150
Total Analysis Volume [veh/h]	408	977	0	0	1221	654	0	0	0	432	3	601
Presence of On-Street Parking	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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	27	76	0	0	45	0	0	0	0	0	26	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	31.0	80.0	0.0	0.0	49.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	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
l1_p, Permitted Start-Up Lost Time [s]	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
g_i, Effective Green Time [s]	26.5	76.5	46.1	46.1		25.5	25.5	25.5
g / C, Green / Cycle	0.24	0.70	0.42	0.42		0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.23	0.27	0.24	0.40		0.19	0.21	0.21
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1662	1615
c, Capacity [veh/h]	436	2515	2162	675		420	386	375
d1, Uniform Delay [s]	40.89	7.00	24.40	31.33		40.09	40.95	41.27
k, delay calibration	0.38	0.50	0.50	0.50		0.30	0.36	0.37
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	24.48	0.45	1.07	27.88		10.67	20.02	24.87
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.39	0.56	0.97		0.82	0.90	0.92
d, Delay for Lane Group [s/veh]	65.37	7.45	25.47	59.21		50.76	60.97	66.13
Lane Group LOS	E	A	C	E		D	E	E
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	13.67	4.45	8.14	21.58		9.84	10.93	11.44
50th-Percentile Queue Length [ft/ln]	341.68	111.20	203.52	539.49		246.04	273.14	285.93
95th-Percentile Queue Length [veh/ln]	19.73	7.91	12.82	29.20		14.99	16.35	16.98
95th-Percentile Queue Length [ft/ln]	493.26	197.67	320.50	729.95		374.66	408.66	424.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.37	7.45	0.00	0.00	25.47	59.21	0.00	0.00	0.00	52.81	60.97	63.94
Movement LOS	E	A			C	E				D	E	E
d_A, Approach Delay [s/veh]	24.51			37.24			0.00			59.29		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	38.45											
Intersection LOS	D											
Intersection V/C	0.910											

Emissions

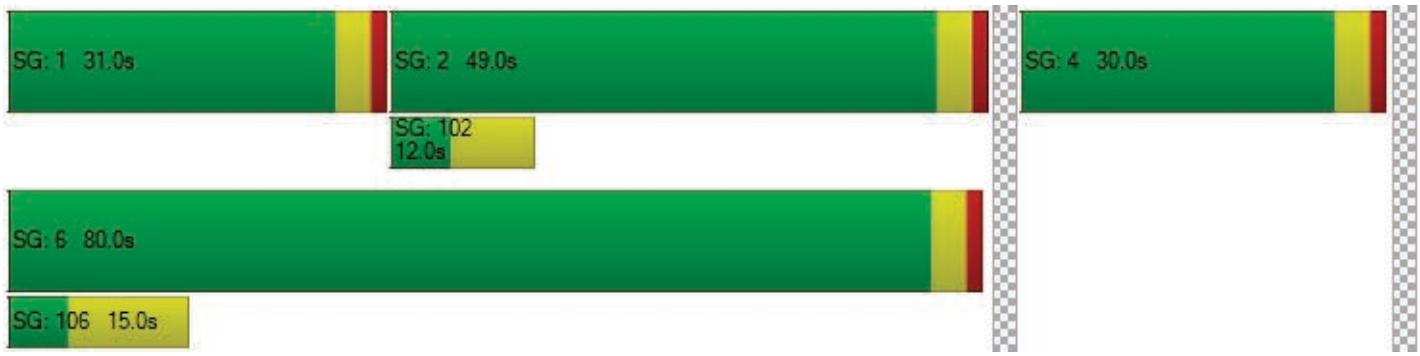
Vehicle Miles Traveled [mph]	18.40	44.07	45.28	24.25		28.83	28.83	28.83
Stops [stops/h]	447.29	291.14	799.27	706.25		322.09	357.56	374.30
Fuel consumption [US gal/h]	8.66	4.90	12.61	12.78		7.76	8.83	9.36
CO [g/h]	605.07	342.79	881.34	893.32		542.68	617.17	654.03
NOx [g/h]	117.72	66.69	171.48	173.81		105.59	120.08	127.25
VOC [g/h]	140.23	79.44	204.26	207.04		125.77	143.04	151.58

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.245	2.400
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1382	818	0	473
d_b, Bicycle Delay [s]	5.25	19.20	55.00	32.07
l_b,int, Bicycle LOS Score for Intersection	2.702	2.591	4.132	3.269
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.699

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
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	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	169	748	106	39	732	43	53	157	224	147	133	65
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	334	2	0	266	8	6	4	0	1	4	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]	211	1164	120	43	1079	56	65	178	249	164	152	72
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
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]	58	318	33	12	295	15	18	49	68	45	42	20
Total Analysis Volume [veh/h]	231	1272	131	47	1179	61	71	195	272	179	166	79
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	18	34	0	8	24	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	22.0	38.0	0.0	12.0	28.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	12.2	39.5	39.5	3.3	30.6	30.6	25.2	25.2	25.2	25.2	25.2	25.2
g / C, Green / Cycle	0.15	0.49	0.49	0.04	0.38	0.38	0.31	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.13	0.37	0.38	0.03	0.23	0.23	0.06	0.10	0.17	0.19	0.09	0.05
s, saturation flow rate [veh/h]	1810	1900	1839	1810	3618	1853	1153	1900	1615	941	1900	1615
c, Capacity [veh/h]	277	939	908	77	1387	710	347	596	507	288	596	507
d1, Uniform Delay [s]	32.90	16.32	16.47	37.66	19.67	19.67	25.72	21.00	22.66	30.80	20.65	19.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.14	0.11	0.11
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
d2, Incremental Delay [s]	6.51	5.60	6.11	7.70	1.86	3.60	0.29	0.32	0.89	2.88	0.25	0.14
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	0.83	0.75	0.77	0.61	0.59	0.59	0.20	0.33	0.54	0.62	0.28	0.16
d, Delay for Lane Group [s/veh]	39.41	21.92	22.58	45.36	21.53	23.27	26.00	21.31	23.54	33.67	20.90	19.95
Lane Group LOS	D	C	C	D	C	C	C	C	C	C	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.72	10.89	10.89	1.03	5.86	6.35	1.10	2.69	4.09	3.47	2.29	1.05
50th-Percentile Queue Length [ft/ln]	118.12	272.28	272.30	25.77	146.45	158.64	27.42	67.15	102.21	86.66	57.18	26.13
95th-Percentile Queue Length [veh/ln]	8.29	16.30	16.30	1.86	9.83	10.48	1.97	4.83	7.36	6.24	4.12	1.88
95th-Percentile Queue Length [ft/ln]	207.24	407.59	407.61	46.38	245.69	261.92	49.35	120.86	183.99	155.98	102.92	47.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.41	22.22	22.58	45.36	22.06	23.27	26.00	21.31	23.54	33.67	20.90	19.95
Movement LOS	D	C	C	D	C	C	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	24.68			22.97			23.06			26.11		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.04											
Intersection LOS	C											
Intersection V/C	0.699											

Emissions

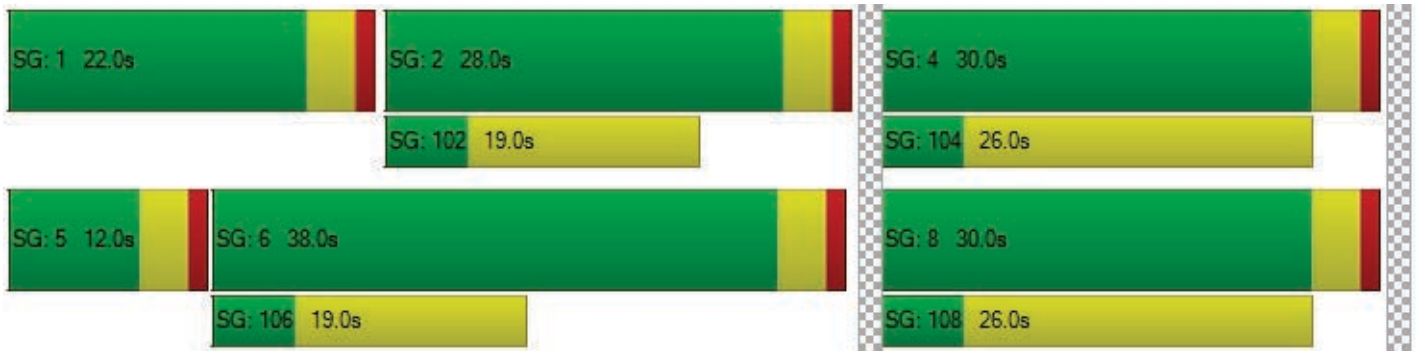
Vehicle Miles Traveled [mph]	9.86	30.21	29.68	23.35	407.39	208.69	4.24	11.65	16.24	10.25	9.50	4.52
Stops [stops/h]	212.61	490.11	490.14	46.38	527.23	285.55	49.35	120.86	183.99	155.98	102.92	47.04
Fuel consumption [US gal/h]	3.43	7.11	7.13	1.73	23.36	12.27	0.91	2.20	3.31	2.51	1.67	0.77
CO [g/h]	239.97	496.90	498.06	120.64	1633.18	857.66	63.50	153.69	231.10	175.45	116.43	53.60
NOx [g/h]	46.69	96.68	96.90	23.47	317.76	166.87	12.36	29.90	44.96	34.14	22.65	10.43
VOC [g/h]	55.61	115.16	115.43	27.96	378.51	198.77	14.72	35.62	53.56	40.66	26.98	12.42

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.234	3.136	2.410	2.321
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	850	600	650	650
d_b, Bicycle Delay [s]	13.23	19.60	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.908	2.267	2.447	2.259
Bicycle LOS	C	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.510

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
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	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	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]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	1	4	3	68	2	53	87	198	1	0	152	34
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
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	4	0	0	6	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]	1	4	3	75	2	59	97	224	1	0	175	38
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
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	1	1	20	1	16	26	61	0	0	47	10
Total Analysis Volume [veh/h]	1	4	3	81	2	64	105	242	1	0	189	41
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	662	690	680	812	752
Degree of Utilization, x	0.01	0.21	0.51	0.00	0.31

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.04	0.80	2.92	0.00	1.30
95th-Percentile Queue Length [ft]	0.92	20.08	73.02	0.09	32.40
Approach Delay [s/veh]	8.50	9.63	13.36		9.88
Approach LOS	A	A	B		A
Intersection Delay [s/veh]	11.47				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	111.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	113	594	521	109	73	189
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	5	4	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]	126	659	578	126	85	210
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	33	171	150	33	22	54
Total Analysis Volume [veh/h]	130	682	598	130	88	217
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	0.15	0.01	0.01	0.00	0.80	0.43
d_M, Delay for Movement [s/veh]	9.77	0.00	0.00	0.00	111.40	17.35
Movement LOS	A	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.51	0.00	0.00	0.00	4.56	2.13
95th-Percentile Queue Length [ft/ln]	12.85	0.00	0.00	0.00	113.92	53.19
d_A, Approach Delay [s/veh]	1.56		0.00		44.49	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	8.04					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	32.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.152

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	43	559	553	36	22	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	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]	48	621	614	40	24	59
Peak Hour Factor	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	157	156	10	6	15
Total Analysis Volume [veh/h]	49	630	623	41	24	60
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
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	0.05	0.01	0.01	0.00	0.15	0.12
d_M, Delay for Movement [s/veh]	9.07	0.00	0.00	0.00	32.11	16.73
Movement LOS	A	A	A	A	D	C
95th-Percentile Queue Length [veh/ln]	0.17	0.00	0.00	0.00	1.09	1.09
95th-Percentile Queue Length [ft/ln]	4.14	0.00	0.00	0.00	27.25	27.25
d_A, Approach Delay [s/veh]	0.65		0.00		21.12	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.55					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	52.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.928

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
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	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	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]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	167	508	175	122	499	62	95	897	186	156	640	89
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	336	4	44	268	44	56	0	2	4	0	56
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]	185	900	198	179	822	113	161	996	208	177	710	155
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
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]	48	231	51	46	211	29	41	256	53	45	182	40
Total Analysis Volume [veh/h]	190	925	203	184	845	116	165	1024	214	182	730	159
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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	17	35	0	14	32	0	15	31	0	14	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	21.0	39.0	0.0	18.0	36.0	0.0	19.0	35.0	0.0	18.0	34.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
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	

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	L	C	R	L	C	C
C, Calculated 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]	2.00	2.00	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]	13.5	35.5	35.5	13.0	35.0	35.0	11.9	32.7	32.7	12.9	33.6	33.6
g / C, Green / Cycle	0.12	0.32	0.32	0.12	0.32	0.32	0.11	0.30	0.30	0.12	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.11	0.31	0.31	0.10	0.26	0.26	0.09	0.28	0.13	0.10	0.24	0.24
s, saturation flow rate [veh/h]	1810	1900	1783	1810	1900	1821	1810	3618	1615	1810	1900	1784
c, Capacity [veh/h]	223	612	574	214	602	577	198	1074	479	213	580	544
d1, Uniform Delay [s]	47.23	36.38	36.51	47.59	34.58	34.60	48.03	37.94	31.36	47.63	35.01	35.02
k, delay calibration	0.19	0.41	0.42	0.26	0.31	0.31	0.16	0.50	0.50	0.24	0.50	0.50
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
d2, Incremental Delay [s]	14.62	22.35	24.79	20.48	7.53	7.90	12.85	18.38	2.99	18.70	10.56	11.21
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	0.85	0.95	0.95	0.86	0.81	0.82	0.84	0.95	0.45	0.86	0.79	0.79
d, Delay for Lane Group [s/veh]	61.86	58.73	61.29	68.08	42.11	42.49	60.88	56.32	34.35	66.33	45.57	46.22
Lane Group LOS	E	E	E	E	D	D	E	E	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.89	18.29	17.71	6.10	12.98	12.52	5.00	15.54	4.82	5.89	12.50	11.84
50th-Percentile Queue Length [ft/ln]	147.23	457.16	442.65	152.51	324.54	312.97	125.09	388.48	120.48	147.17	312.57	296.11
95th-Percentile Queue Length [veh/ln]	9.87	25.30	24.61	10.15	18.89	18.32	8.67	22.00	8.42	9.87	18.30	17.49
95th-Percentile Queue Length [ft/ln]	246.73	632.48	615.17	253.78	472.26	458.04	216.80	550.10	210.49	246.65	457.54	437.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.86	59.69	61.29	68.08	42.27	42.49	60.88	56.32	34.35	66.33	45.81	46.22
Movement LOS	E	E	E	E	D	D	E	E	C	E	D	D
d_A, Approach Delay [s/veh]	60.25			46.44			53.51			49.36		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	52.77											
Intersection LOS	D											
Intersection V/C	0.928											

Emissions

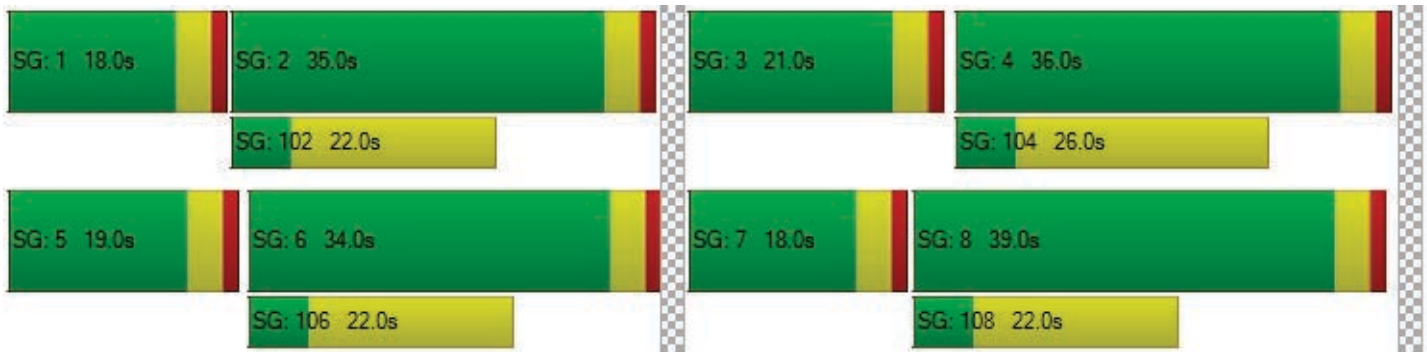
Vehicle Miles Traveled [mph]	94.40	287.99	272.43	12.45	33.19	31.85	19.45	120.72	25.23	17.67	44.51	41.81
Stops [stops/h]	192.74	598.46	579.47	199.65	424.85	409.71	163.75	1017.10	157.72	192.66	409.18	387.64
Fuel consumption [US gal/h]	7.67	23.12	22.29	4.52	8.66	8.36	4.75	28.52	4.32	4.98	9.86	9.36
CO [g/h]	535.86	1616.28	1558.07	316.30	605.51	584.66	331.80	1993.56	302.08	348.24	689.51	653.97
NOx [g/h]	104.26	314.47	303.14	61.54	117.81	113.75	64.56	387.87	58.77	67.75	134.15	127.24
VOC [g/h]	124.19	374.59	361.10	73.30	140.33	135.50	76.90	462.03	70.01	80.71	159.80	151.57

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.976	2.856	3.059	2.956
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]	636	582	564	545
d_b, Bicycle Delay [s]	25.57	27.65	28.37	29.09
l_b,int, Bicycle LOS Score for Intersection	2.647	2.504	2.717	2.443
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 12: S Indian Hill Blvd/Auto Center Dr

Control Type:	Signalized	Delay (sec / veh):	46.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.122

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
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	2	0	0	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	140.00	100.00	120.00	75.00	100.00	75.00	100.00	100.00	50.00
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]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
Base Volume Input [veh/h]	28	828	19	83	764	221	307	33	84	28	18	86
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	67	0	0	55	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]	31	986	21	92	903	245	341	37	93	31	20	95
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
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]	8	251	5	23	230	62	87	9	24	8	5	24
Total Analysis Volume [veh/h]	32	1004	21	94	920	249	347	38	95	32	20	97
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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	17	0	7	19	0	10	35	0	10	10	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	10.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	22.0	0.0	10.0	23.0	0.0	44.0	49.0	0.0	9.0	14.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
Minimum Recall	No	No		No	No		Yes	No		Yes	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

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	R	L	C	R	C	R
C, Calculated Cycle Length [s]	90	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	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	2.8	23.6	23.6	6.1	26.9	26.9	48.3	48.3	39.3	48.3	15.4
g / C, Green / Cycle	0.03	0.26	0.26	0.07	0.30	0.30	0.54	0.54	0.44	0.54	0.17
(v / s)_i Volume / Saturation Flow Rate	0.02	0.19	0.19	0.05	0.25	0.15	0.12	0.68	0.06	0.42	0.06
s, saturation flow rate [veh/h]	1810	3618	1880	1810	3618	1615	1295	329	1615	123	1615
c, Capacity [veh/h]	55	800	416	123	936	418	328	279	771	168	371
d1, Uniform Delay [s]	43.05	33.55	33.56	41.21	33.16	29.23	23.79	24.38	13.06	13.43	28.39
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11	0.50	0.11
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
d2, Incremental Delay [s]	9.18	10.51	18.49	9.25	25.54	6.14	1.12	21.73	0.07	4.74	0.37
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
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
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

Lane Group Results

X, volume / capacity	0.58	0.84	0.84	0.76	0.98	0.60	0.49	0.81	0.12	0.31	0.26
d, Delay for Lane Group [s/veh]	52.23	44.06	52.05	50.45	58.69	35.37	24.91	46.11	13.13	18.17	28.76
Lane Group LOS	D	D	D	D	E	D	C	D	B	B	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.83	7.52	8.75	2.32	12.21	4.96	2.68	5.32	1.14	0.69	1.88
50th-Percentile Queue Length [ft/ln]	20.73	188.05	218.67	58.01	305.31	123.91	67.12	133.10	28.61	17.14	46.97
95th-Percentile Queue Length [veh/ln]	1.49	12.02	13.60	4.18	17.94	8.61	4.83	9.11	2.06	1.23	3.38
95th-Percentile Queue Length [ft/ln]	37.32	300.49	339.92	104.42	448.59	215.19	120.82	227.70	51.50	30.85	84.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.23	46.69	52.05	50.45	58.69	35.37	36.16	46.11	13.13	18.17	18.17	28.76
Movement LOS	D	D	D	D	E	D	D	D	B	B	B	C
d_A, Approach Delay [s/veh]	46.96			53.48			32.52			25.07		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	46.30											
Intersection LOS	D											
Intersection V/C	1.122											

Emissions

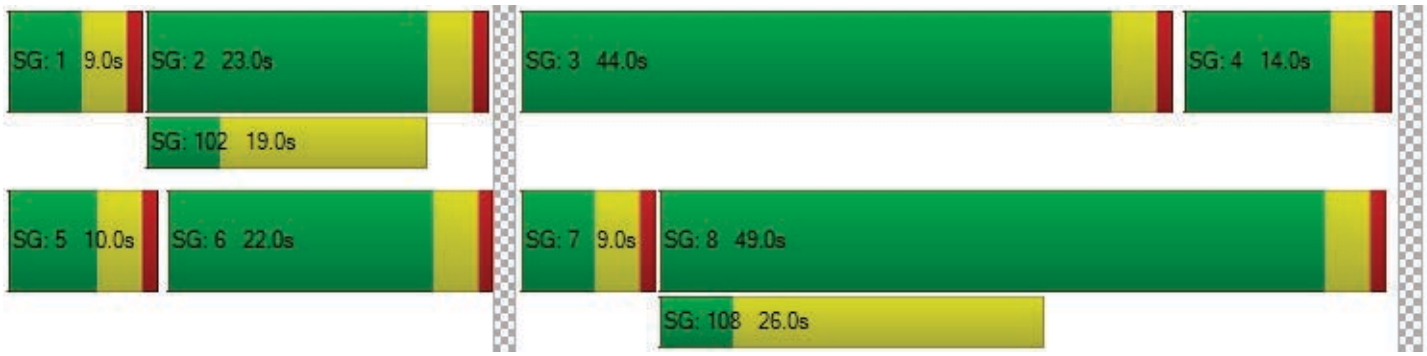
Vehicle Miles Traveled [mph]	2.52	53.03	27.58	4.75	46.52	12.59	6.44	9.09	3.83	1.69	3.16
Stops [stops/h]	33.17	601.75	349.86	92.82	976.99	198.26	107.40	212.96	45.78	27.42	75.15
Fuel consumption [US gal/h]	0.69	12.59	7.40	1.84	20.11	3.76	1.67	3.66	0.66	0.41	1.11
CO [g/h]	47.92	880.24	517.07	128.92	1405.57	263.05	116.62	256.11	46.46	28.90	77.79
NOx [g/h]	9.32	171.26	100.60	25.08	273.47	51.18	22.69	49.83	9.04	5.62	15.14
VOC [g/h]	11.11	204.00	119.84	29.88	325.75	60.96	27.03	59.35	10.77	6.70	18.03

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	0.00	36.45	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.927	0.000	2.323	0.000
Crosswalk LOS	C	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	422	1200	1133
d_b, Bicycle Delay [s]	28.80	28.01	7.20	8.45
l_b,int, Bicycle LOS Score for Intersection	2.141	2.602	2.352	1.805
Bicycle LOS	B	B	B	A

Sequence

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



HORIZON YEAR PLUS PROJECT CONDITIONS

Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.610

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
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	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	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]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	37	929	5	72	623	6	3	8	23	4	13	168
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	30	2	4	36	0	0	0	0	5	0	12
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]	41	1061	8	84	728	7	3	9	26	9	14	198
Peak Hour Factor	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310	0.9310
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]	11	285	2	23	195	2	1	2	7	2	4	53
Total Analysis Volume [veh/h]	44	1140	9	90	782	8	3	10	28	10	15	213
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	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	12	0	5	12	0	0	51	0	0	51	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	41.0	0.0	9.0	41.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
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]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	57.0	48.7	48.7	57.0	49.9	49.9	15.0	15.0
g / C, Green / Cycle	0.71	0.61	0.61	0.71	0.62	0.62	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.06	0.34	0.34	0.16	0.24	0.01	0.03	0.16
s, saturation flow rate [veh/h]	718	1710	1705	579	3256	1454	1561	1470
c, Capacity [veh/h]	561	1041	1038	450	2029	906	341	322
d1, Uniform Delay [s]	4.11	9.24	9.24	5.68	7.47	5.71	27.15	31.50
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.06	2.12	2.12	1.00	0.55	0.02	0.16	3.32
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	0.55	0.55	0.20	0.39	0.01	0.12	0.74
d, Delay for Lane Group [s/veh]	4.16	11.35	11.36	6.68	8.02	5.72	27.30	34.82
Lane Group LOS	A	B	B	A	A	A	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.15	5.25	5.24	0.44	2.86	0.05	0.68	4.67
50th-Percentile Queue Length [ft/ln]	3.67	131.31	131.02	10.90	71.43	1.17	17.07	116.75
95th-Percentile Queue Length [veh/ln]	0.26	9.01	9.00	0.78	5.14	0.08	1.23	8.21
95th-Percentile Queue Length [ft/ln]	6.60	225.28	224.88	19.62	128.58	2.10	30.73	205.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.16	11.36	11.36	6.68	8.02	5.72	27.30	27.30	27.30	34.82	34.82	34.82
Movement LOS	A	B	B	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.09			7.87			27.30			34.82		
Approach LOS	B			A			C			C		
d_I, Intersection Delay [s/veh]	12.57											
Intersection LOS	B											
Intersection V/C	0.610											

Emissions

Vehicle Miles Traveled [mph]	11.15	145.77	145.39	7.04	61.20	0.63	0.97	23.57
Stops [stops/h]	6.60	236.36	235.84	19.62	257.16	2.10	30.73	210.15
Fuel consumption [US gal/h]	0.50	8.87	8.85	0.54	5.54	0.05	0.32	3.55
CO [g/h]	35.06	620.21	618.71	37.64	387.53	3.42	22.62	248.31
NOx [g/h]	6.82	120.67	120.38	7.32	75.40	0.67	4.40	48.31
VOC [g/h]	8.12	143.74	143.39	8.72	89.81	0.79	5.24	57.55

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.877	1.777	1.933
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	925	925	650	650
d_b, Bicycle Delay [s]	11.56	11.56	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.544	2.286	1.627	1.952
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	20.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.580

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
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	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	96	697	39	36	496	118	153	207	138	46	252	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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	0	4	34	3	3	0	0	0	0	5
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]	107	798	43	44	585	134	173	230	153	51	280	107
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
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]	30	222	12	12	163	37	48	64	43	14	78	30
Total Analysis Volume [veh/h]	119	887	48	49	650	149	192	256	170	57	311	119
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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	9	27	0	6	24	0	0	25	0	0	25	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	15.0	27.0	0.0	12.0	24.0	0.0	0.0	31.0	0.0	0.0	31.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	6.0	28.7	28.7	3.1	25.8	25.8	26.2	26.2	26.2	26.2	26.2	26.2
g / C, Green / Cycle	0.09	0.41	0.41	0.04	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.07	0.25	0.25	0.03	0.22	0.22	0.20	0.13	0.11	0.06	0.16	0.07
s, saturation flow rate [veh/h]	1810	1900	1866	1810	1900	1779	973	1900	1615	977	1900	1615
c, Capacity [veh/h]	157	779	765	83	702	658	318	707	601	343	707	601
d1, Uniform Delay [s]	31.25	16.20	16.20	32.74	17.77	17.77	26.45	15.94	15.41	21.12	16.49	14.89
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	7.33	3.47	3.54	6.42	3.58	3.83	1.84	0.31	0.25	0.23	0.43	0.16
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	0.76	0.61	0.61	0.59	0.59	0.59	0.60	0.36	0.28	0.17	0.44	0.20
d, Delay for Lane Group [s/veh]	38.58	19.67	19.74	39.16	21.34	21.60	28.30	16.25	15.67	21.35	16.92	15.04
Lane Group LOS	D	B	B	D	C	C	C	B	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.16	5.86	5.77	0.92	5.40	5.11	3.04	2.74	1.77	0.72	3.46	1.19
50th-Percentile Queue Length [ft/ln]	53.96	146.43	144.15	22.90	135.03	127.71	75.89	68.61	44.14	17.97	86.42	29.79
95th-Percentile Queue Length [veh/ln]	3.88	9.83	9.70	1.65	9.21	8.82	5.46	4.94	3.18	1.29	6.22	2.14
95th-Percentile Queue Length [ft/ln]	97.12	245.65	242.61	41.22	230.32	220.38	136.60	123.49	79.45	32.35	155.56	53.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.58	19.70	19.74	39.16	21.44	21.60	28.30	16.25	15.67	21.35	16.92	15.04
Movement LOS	D	B	B	D	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.84			22.49			19.83			16.98		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.82											
Intersection LOS	C											
Intersection V/C	0.580											

Emissions

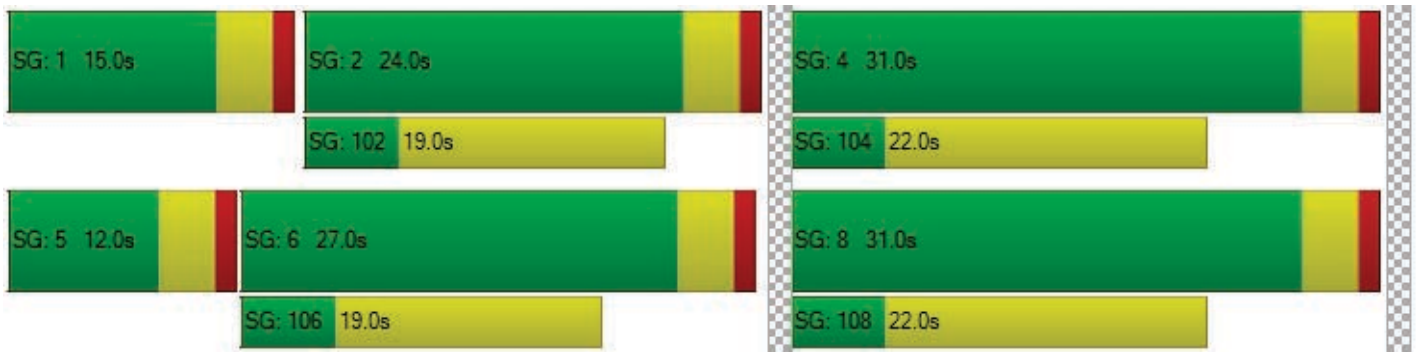
Vehicle Miles Traveled [mph]	9.19	36.41	35.76	12.42	104.51	97.96	12.27	16.35	10.86	14.20	77.48	29.65
Stops [stops/h]	111.00	301.22	296.55	47.11	277.78	262.72	156.11	141.13	90.80	36.97	177.78	61.28
Fuel consumption [US gal/h]	2.35	6.15	6.06	1.30	8.26	7.79	2.75	2.53	1.64	1.07	5.36	1.96
CO [g/h]	164.53	430.01	423.25	90.73	577.64	544.43	192.03	176.93	114.55	74.58	374.74	136.68
NOx [g/h]	32.01	83.67	82.35	17.65	112.39	105.93	37.36	34.42	22.29	14.51	72.91	26.59
VOC [g/h]	38.13	99.66	98.09	21.03	133.87	126.18	44.51	41.01	26.55	17.28	86.85	31.68

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.872	3.094	2.460	2.359
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	657	571	771	771
d_b, Bicycle Delay [s]	15.78	17.86	13.21	13.21
l_b,int, Bicycle LOS Score for Intersection	2.429	2.259	2.579	2.363
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	8	19	15	242	337	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	4	5	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]	10	21	17	273	379	2
Peak Hour Factor	0.8800	0.8800	0.8800	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	6	5	78	108	1
Total Analysis Volume [veh/h]	11	24	19	310	431	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.03	0.04	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.54	11.26	8.19	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.22	0.22	0.03	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.52	5.52	0.80	0.80	0.00	0.00
d_A, Approach Delay [s/veh]	12.60		0.47		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.75					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.160

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
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	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	24	1	2	0	0	6	5	36	13	0	104	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
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	3	1	0	1	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]	27	1	2	0	0	7	6	43	15	0	116	0
Peak Hour Factor	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230	0.8230
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]	8	0	1	0	0	2	2	13	5	0	35	0
Total Analysis Volume [veh/h]	33	1	2	0	0	9	7	52	18	0	141	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	795	946	896	883
Degree of Utilization, x	0.05	0.01	0.09	0.16

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.14	0.03	0.28	0.57
95th-Percentile Queue Length [ft]	3.55	0.72	7.03	14.17
Approach Delay [s/veh]	7.74	6.84	7.40	7.85
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.67			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	27.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.795

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
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	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	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]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	814	374	351	610	0	388	2	351	0	0	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	36	6	78	38	0	52	0	2	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]	0	940	421	468	715	0	483	2	392	0	0	0
Peak Hour Factor	1.0000	0.9220	0.9220	0.9220	0.9220	1.0000	0.9220	0.9220	0.9220	1.0000	1.0000	1.0000
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	255	114	127	194	0	131	1	106	0	0	0
Total Analysis Volume [veh/h]	0	1020	457	508	775	0	524	2	425	0	0	0
Presence of On-Street Parking	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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	12	0	30	46	0	0	16	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
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				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	0.0	23.0	0.0	26.0	49.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	
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]	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	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	20.8	20.8	20.8	21.3	46.2	15.8	15.8	15.8	
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.66	0.23	0.23	0.23	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.23	0.23	0.28	0.21	0.18	0.18	0.20	
s, saturation flow rate [veh/h]	3618	1633	1615	1810	3618	1810	1738	1615	
c, Capacity [veh/h]	1074	485	479	552	2384	410	394	366	
d1, Uniform Delay [s]	21.74	22.36	22.43	23.51	5.18	25.40	25.60	26.00	
k, delay calibration	0.50	0.50	0.50	0.33	0.50	0.22	0.24	0.28	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.60	10.79	11.34	17.03	0.36	6.43	8.41	13.86	
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	0.69	0.76	0.77	0.92	0.33	0.78	0.81	0.86	
d, Delay for Lane Group [s/veh]	25.34	33.15	33.77	40.54	5.54	31.82	34.01	39.86	
Lane Group LOS	C	C	C	D	A	C	C	D	
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.43	6.49	6.56	10.12	1.96	5.26	5.47	5.99	
50th-Percentile Queue Length [ft/ln]	135.76	162.16	163.97	252.96	49.04	131.52	136.68	149.86	
95th-Percentile Queue Length [veh/ln]	9.25	10.66	10.76	15.34	3.53	9.02	9.30	10.01	
95th-Percentile Queue Length [ft/ln]	231.30	266.58	268.98	383.38	88.26	225.56	232.55	250.25	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.61	33.65	40.54	5.54	0.00	32.69	34.01	38.37	0.00	0.00	0.00
Movement LOS		C	C	D	A		C	C	D			
d_A, Approach Delay [s/veh]	29.40			19.40			35.22			0.00		
Approach LOS	C			B			D			A		
d_I, Intersection Delay [s/veh]	27.43											
Intersection LOS	C											
Intersection V/C	0.795											

Emissions

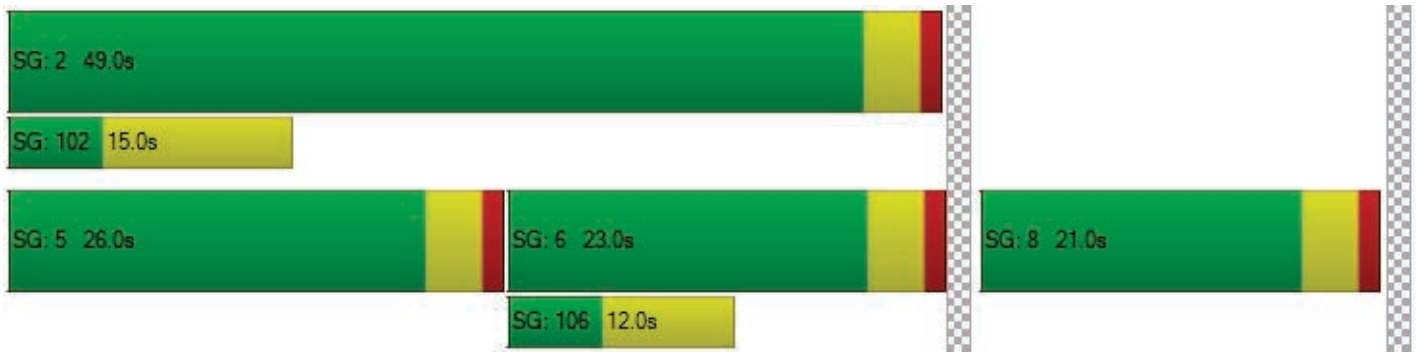
Vehicle Miles Traveled [mph]	37.63	18.82	18.82	22.92	34.96	27.38	27.28	27.08
Stops [stops/h]	558.55	333.58	337.32	520.38	201.74	270.55	281.17	308.29
Fuel consumption [US gal/h]	9.44	5.72	5.79	8.01	3.43	5.70	5.94	6.55
CO [g/h]	660.08	399.63	404.82	559.85	239.64	398.56	414.90	458.15
NOx [g/h]	128.43	77.75	78.76	108.93	46.63	77.55	80.72	89.14
VOC [g/h]	152.98	92.62	93.82	129.75	55.54	92.37	96.16	106.18

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.341	2.175
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	543	1286	486	0
d_b, Bicycle Delay [s]	18.58	4.46	20.06	35.00
l_b,int, Bicycle LOS Score for Intersection	2.372	2.618	3.129	4.132
Bicycle LOS	B	B	C	D

Sequence

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



Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	37.6
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.945

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
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	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
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			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	468	746	0	0	679	460	0	0	0	237	1	206
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	84	0	0	114	77	0	0	0	2	0	53
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]	523	912	0	0	868	588	0	0	0	265	1	282
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
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]	148	258	0	0	245	166	0	0	0	75	0	80
Total Analysis Volume [veh/h]	592	1032	0	0	982	665	0	0	0	300	1	319
Presence of On-Street Parking	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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	30	71	0	0	37	0	0	0	0	0	11	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	33.0	73.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	17.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	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
l1_p, Permitted Start-Up Lost Time [s]	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
g_i, Effective Green Time [s]	29.1	69.2	36.1	36.1		12.8	12.8	12.8
g / C, Green / Cycle	0.32	0.77	0.40	0.40		0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.33	0.29	0.19	0.41		0.12	0.12	0.12
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1688	1615
c, Capacity [veh/h]	584	2781	2077	648		258	240	230
d1, Uniform Delay [s]	30.47	3.37	19.91	26.94		37.64	37.66	37.68
k, delay calibration	0.46	0.50	0.50	0.50		0.28	0.29	0.29
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	38.93	0.38	0.77	42.14		17.60	19.19	20.26
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.01	0.37	0.47	1.03		0.85	0.85	0.85
d, Delay for Lane Group [s/veh]	69.40	3.75	20.68	69.08		55.24	56.86	57.94
Lane Group LOS	F	A	C	F		E	E	E
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	18.42	2.24	5.03	20.68		5.76	5.50	5.35
50th-Percentile Queue Length [ft/ln]	460.59	55.88	125.85	516.96		144.02	137.62	133.68
95th-Percentile Queue Length [veh/ln]	25.69	4.02	8.71	28.66		9.70	9.35	9.14
95th-Percentile Queue Length [ft/ln]	642.14	100.58	217.84	716.51		242.43	233.82	228.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	69.40	3.75	0.00	0.00	20.68	69.08	0.00	0.00	0.00	55.72	56.86	57.55
Movement LOS	F	A			C	F				E	E	E
d_A, Approach Delay [s/veh]	27.68			40.22			0.00			56.63		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	37.60											
Intersection LOS	D											
Intersection V/C	0.945											

Emissions

Vehicle Miles Traveled [mph]	26.70	46.55	36.41	24.66		18.24	17.10	16.41
Stops [stops/h]	736.95	178.81	604.09	827.13		230.44	220.20	213.89
Fuel consumption [US gal/h]	13.53	3.69	8.97	14.93		5.37	5.15	5.01
CO [g/h]	945.79	258.08	626.96	1043.81		375.62	359.73	349.94
NOx [g/h]	184.02	50.21	121.98	203.09		73.08	69.99	68.09
VOC [g/h]	219.20	59.81	145.30	241.91		87.05	83.37	81.10

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.330	2.210
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1533	800	0	289
d_b, Bicycle Delay [s]	2.45	16.20	45.00	32.94
l_b,int, Bicycle LOS Score for Intersection	2.899	2.465	4.132	2.583
Bicycle LOS	C	B	D	B

Sequence

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



Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	23.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
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	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	71	790	102	40	760	20	41	79	183	216	101	62
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	21	116	0	0	173	7	3	2	0	2	3	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]	100	993	113	44	1017	29	49	90	203	242	115	69
Peak Hour Factor	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450	0.8450
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]	30	294	33	13	301	9	14	27	60	72	34	20
Total Analysis Volume [veh/h]	118	1175	134	52	1204	34	58	107	240	286	136	82
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	8	36	0	5	33	0	0	27	0	0	27	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	19.0	36.0	0.0	12.0	29.0	0.0	0.0	32.0	0.0	0.0	32.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	6.8	36.5	36.5	3.5	33.2	33.2	28.0	28.0	28.0	28.0	28.0	28.0
g / C, Green / Cycle	0.08	0.46	0.46	0.04	0.42	0.42	0.35	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.07	0.35	0.35	0.03	0.23	0.23	0.05	0.06	0.15	0.27	0.07	0.05
s, saturation flow rate [veh/h]	1810	1900	1833	1810	3618	1873	1182	1900	1615	1050	1900	1615
c, Capacity [veh/h]	156	865	835	81	1497	775	415	665	565	391	665	565
d1, Uniform Delay [s]	35.73	18.23	18.31	37.59	17.75	17.75	22.12	17.91	19.85	28.01	18.20	17.80
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.29	0.11	0.11
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
d2, Incremental Delay [s]	7.26	6.46	6.88	8.29	1.43	2.74	0.15	0.11	0.51	6.81	0.15	0.12
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	0.76	0.77	0.77	0.64	0.54	0.54	0.14	0.16	0.42	0.73	0.20	0.15
d, Delay for Lane Group [s/veh]	42.99	24.69	25.19	45.89	19.18	20.49	22.27	18.02	20.36	34.82	18.35	17.92
Lane Group LOS	D	C	C	D	B	C	C	B	C	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.52	10.93	10.76	1.15	5.38	5.86	0.81	1.31	3.27	5.84	1.72	1.02
50th-Percentile Queue Length [ft/ln]	62.93	273.37	268.90	28.63	134.60	146.51	20.27	32.64	81.86	145.99	43.03	25.42
95th-Percentile Queue Length [veh/ln]	4.53	16.36	16.13	2.06	9.19	9.83	1.46	2.35	5.89	9.80	3.10	1.83
95th-Percentile Queue Length [ft/ln]	113.27	408.95	403.36	51.53	229.73	245.77	36.48	58.76	147.35	245.06	77.45	45.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.99	24.91	25.19	45.89	19.60	20.49	22.27	18.02	20.36	34.82	18.35	17.92
Movement LOS	D	C	C	D	B	C	C	B	C	C	B	B
d_A, Approach Delay [s/veh]	26.43			20.68			20.01			27.63		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.84											
Intersection LOS	C											
Intersection V/C	0.768											

Emissions

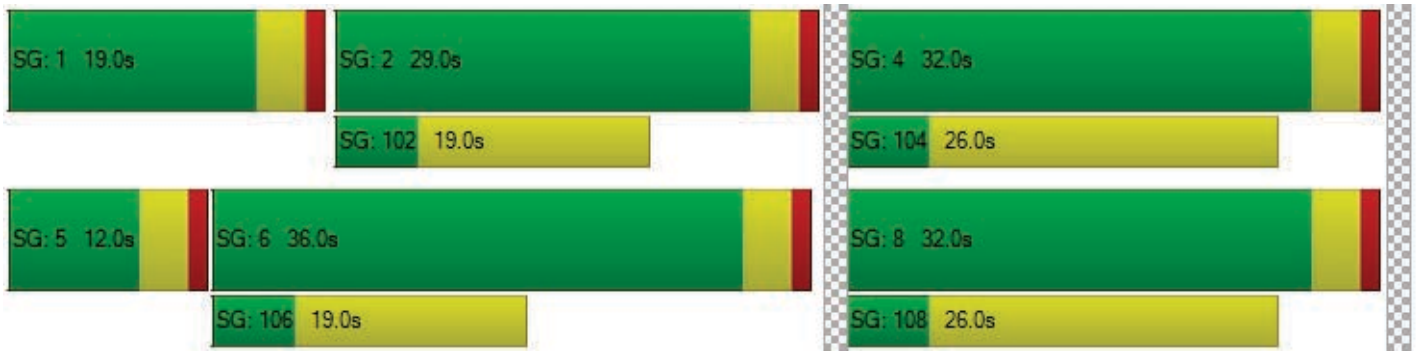
Vehicle Miles Traveled [mph]	5.04	28.33	27.54	25.84	405.20	209.88	3.46	6.39	14.33	16.37	7.78	4.69
Stops [stops/h]	113.27	492.07	484.01	51.53	484.55	263.72	36.48	58.76	147.35	262.78	77.45	45.76
Fuel consumption [US gal/h]	1.87	7.22	7.12	1.92	22.46	11.87	0.67	1.08	2.65	4.15	1.26	0.75
CO [g/h]	130.39	504.67	497.42	134.01	1569.79	829.73	46.78	75.35	185.15	290.23	87.82	52.08
NOx [g/h]	25.37	98.19	96.78	26.07	305.42	161.44	9.10	14.66	36.02	56.47	17.09	10.13
VOC [g/h]	30.22	116.96	115.28	31.06	363.81	192.30	10.84	17.46	42.91	67.26	20.35	12.07

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.368	3.095	2.324	2.321
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	800	625	700	700
d_b, Bicycle Delay [s]	14.40	18.91	16.90	16.90
l_b,int, Bicycle LOS Score for Intersection	2.737	2.269	2.228	2.391
Bicycle LOS	B	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.679

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
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	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	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]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	4	2	2	38	3	79	35	77	2	5	275	47
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
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	4	0	0	3	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]	4	2	2	42	3	88	39	89	2	6	308	52
Peak Hour Factor	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130	0.7130
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]	1	1	1	15	1	31	14	31	1	2	108	18
Total Analysis Volume [veh/h]	6	3	3	59	4	123	55	125	3	8	432	73
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	603	677	628	739	756
Degree of Utilization, x	0.02	0.27	0.29	0.00	0.68

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.06	1.12	1.18	0.01	5.38
95th-Percentile Queue Length [ft]	1.52	27.91	29.50	0.31	134.52
Approach Delay [s/veh]	9.09	10.32	10.66		17.20
Approach LOS	A	B	B		C
Intersection Delay [s/veh]	14.32				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	262.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.906

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	220	660	490	88	26	111
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	1	3	3	1
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]	244	736	545	101	32	124
Peak Hour Factor	0.8580	0.8580	0.8580	0.8580	0.8580	0.8580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	71	214	159	29	9	36
Total Analysis Volume [veh/h]	284	858	635	118	37	145
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	0.33	0.01	0.01	0.00	0.91	0.30
d_M, Delay for Movement [s/veh]	11.17	0.00	0.00	0.00	262.53	15.65
Movement LOS	B	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	1.44	0.00	0.00	0.00	3.49	1.25
95th-Percentile Queue Length [ft/ln]	35.89	0.00	0.00	0.00	87.29	31.33
d_A, Approach Delay [s/veh]	2.78		0.00		65.84	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	7.30					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	46.7
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.181

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	74	656	432	24	11	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	1	1	3	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]	82	728	481	28	15	28
Peak Hour Factor	0.8370	0.8370	0.8370	0.8370	0.8370	0.8370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	217	144	8	4	8
Total Analysis Volume [veh/h]	98	870	575	33	18	33
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
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	0.10	0.01	0.01	0.00	0.18	0.06
d_M, Delay for Movement [s/veh]	9.08	0.00	0.00	0.00	46.68	17.39
Movement LOS	A	A	A	A	E	C
95th-Percentile Queue Length [veh/ln]	0.33	0.00	0.00	0.00	0.93	0.93
95th-Percentile Queue Length [ft/ln]	8.31	0.00	0.00	0.00	23.16	23.16
d_A, Approach Delay [s/veh]	0.92		0.00		27.73	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	1.42					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	43.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.840

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
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	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	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]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	159	523	202	64	447	35	51	391	163	150	702	81
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	115	3	29	175	29	19	0	2	3	0	19
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]	177	696	227	100	671	68	76	434	183	170	779	109
Peak Hour Factor	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380	0.8380
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	208	68	30	200	20	23	129	55	51	232	33
Total Analysis Volume [veh/h]	211	831	271	119	801	81	91	518	218	203	930	130
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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	31	49	0	8	26	0	5	22	0	5	22	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	21.0	37.0	0.0	15.0	31.0	0.0	13.0	26.0	0.0	22.0	35.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
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	

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	L	C	R	L	C	C
C, Calculated 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]	2.00	2.00	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]	13.6	32.8	32.8	8.2	27.5	27.5	6.5	29.7	29.7	13.2	36.5	36.5
g / C, Green / Cycle	0.14	0.33	0.33	0.08	0.27	0.27	0.06	0.30	0.30	0.13	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.12	0.30	0.30	0.07	0.24	0.24	0.05	0.14	0.13	0.11	0.28	0.29
s, saturation flow rate [veh/h]	1810	1900	1743	1810	1900	1839	1810	3618	1615	1810	1900	1820
c, Capacity [veh/h]	246	623	572	149	522	505	118	1074	479	240	692	663
d1, Uniform Delay [s]	42.27	32.31	32.45	45.04	34.42	34.42	46.01	28.85	28.58	42.37	28.24	28.28
k, delay calibration	0.20	0.34	0.35	0.11	0.29	0.29	0.11	0.50	0.50	0.11	0.50	0.50
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
d2, Incremental Delay [s]	14.29	15.58	18.07	9.59	10.37	10.67	10.19	1.55	3.09	7.98	8.52	9.00
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	0.86	0.92	0.93	0.80	0.86	0.86	0.77	0.48	0.45	0.85	0.78	0.78
d, Delay for Lane Group [s/veh]	56.55	47.89	50.52	54.63	44.79	45.09	56.20	30.41	31.67	50.35	36.76	37.28
Lane Group LOS	E	D	D	D	D	D	E	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.91	15.24	14.54	3.25	11.49	11.17	2.48	5.05	4.43	5.28	12.45	12.06
50th-Percentile Queue Length [ft/ln]	147.84	380.91	363.50	81.23	287.27	279.17	62.02	126.35	110.81	132.01	311.15	301.57
95th-Percentile Queue Length [veh/ln]	9.90	21.64	20.79	5.85	17.05	16.65	4.47	8.74	7.89	9.05	18.23	17.76
95th-Percentile Queue Length [ft/ln]	247.55	540.95	519.84	146.21	426.25	416.18	111.64	218.52	197.13	226.22	455.79	443.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.55	48.71	50.52	54.63	44.92	45.09	56.20	30.41	31.67	50.35	36.98	37.28
Movement LOS	E	D	D	D	D	D	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	50.34			46.09			33.58			39.16		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	43.02											
Intersection LOS	D											
Intersection V/C	0.840											

Emissions

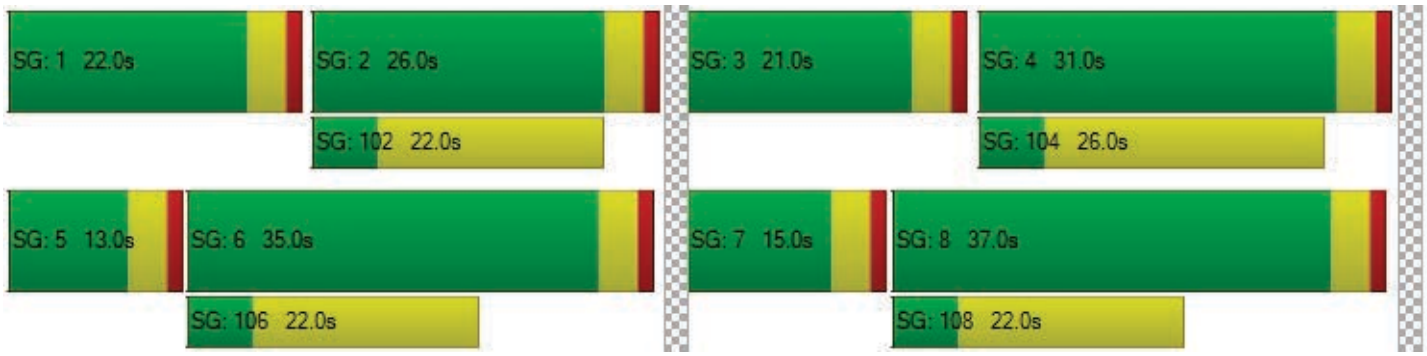
Vehicle Miles Traveled [mph]	104.83	284.19	263.33	8.05	30.33	29.37	10.73	61.07	25.70	19.71	52.47	50.45
Stops [stops/h]	212.89	548.51	523.44	116.96	413.67	402.00	89.31	363.88	159.57	190.09	448.05	434.26
Fuel consumption [US gal/h]	8.27	21.14	20.02	2.51	8.35	8.12	2.52	9.82	4.27	4.65	10.32	10.01
CO [g/h]	578.39	1477.79	1399.63	175.41	583.76	567.81	176.07	686.61	298.47	325.25	721.63	700.01
NOx [g/h]	112.53	287.53	272.32	34.13	113.58	110.48	34.26	133.59	58.07	63.28	140.40	136.20
VOC [g/h]	134.05	342.49	324.38	40.65	135.29	131.60	40.81	159.13	69.17	75.38	167.24	162.24

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	41.41	41.41	41.41	41.41
l_p,int, Pedestrian LOS Score for Intersectio	2.966	2.774	2.959	2.871
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]	660	540	440	620
d_b, Bicycle Delay [s]	22.45	26.65	30.42	23.81
l_b,int, Bicycle LOS Score for Intersection	2.643	2.385	2.242	2.602
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 12: S Indian Hill Blvd/Auto Center Dr

Control Type:	Signalized	Delay (sec / veh):	27.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.700

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
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	2	0	0	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	140.00	100.00	120.00	75.00	100.00	75.00	100.00	100.00	50.00
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]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
Base Volume Input [veh/h]	49	886	38	146	718	192	82	14	24	63	12	132
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	42	0	0	40	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]	54	1025	42	162	837	213	91	16	27	70	13	147
Peak Hour Factor	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870	0.9870
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]	14	260	11	41	212	54	23	4	7	18	3	37
Total Analysis Volume [veh/h]	55	1039	43	164	848	216	92	16	27	71	13	149
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	16	10	0	25	19	0	10	164	0	10	164	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	10.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	20.0	0.0	12.0	23.0	0.0	24.0	31.0	0.0	17.0	24.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
Minimum Recall	No	No		No	No		Yes	No		Yes	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

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	R	L	C	R	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
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
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	3.5	24.1	24.1	9.0	29.6	29.6	34.8	34.8	17.8	34.8	14.8
g / C, Green / Cycle	0.04	0.30	0.30	0.11	0.37	0.37	0.44	0.44	0.22	0.44	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.20	0.09	0.23	0.13	0.02	0.62	0.02	0.52	0.09
s, saturation flow rate [veh/h]	1810	3618	1862	1810	3618	1615	1243	133	1615	161	1615
c, Capacity [veh/h]	80	1092	562	204	1341	599	212	209	360	212	299
d1, Uniform Delay [s]	37.69	24.29	24.29	34.61	20.69	18.29	24.64	22.52	24.57	24.40	29.26
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11	0.50	0.11
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
d2, Incremental Delay [s]	10.06	3.05	5.85	7.17	2.28	1.69	0.25	5.47	0.09	5.47	1.28
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
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
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

Lane Group Results

X, volume / capacity	0.69	0.65	0.65	0.80	0.63	0.36	0.12	0.39	0.08	0.40	0.50
d, Delay for Lane Group [s/veh]	47.75	27.34	30.14	41.78	22.97	19.97	24.90	27.99	24.66	29.88	30.54
Lane Group LOS	D	C	C	D	C	B	C	C	C	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.25	5.98	6.60	3.40	6.45	2.99	0.37	1.45	0.40	1.56	2.61
50th-Percentile Queue Length [ft/ln]	31.29	149.55	164.99	85.02	161.19	74.81	9.33	36.33	10.09	38.89	65.21
95th-Percentile Queue Length [veh/ln]	2.25	9.99	10.81	6.12	10.61	5.39	0.67	2.62	0.73	2.80	4.69
95th-Percentile Queue Length [ft/ln]	56.32	249.83	270.32	153.04	265.30	134.66	16.79	65.39	18.17	70.00	117.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.75	28.21	30.14	41.78	22.97	19.97	27.03	27.99	24.66	29.88	29.88	30.54
Movement LOS	D	C	C	D	C	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	29.23			24.95			26.73			30.30		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27.28											
Intersection LOS	C											
Intersection V/C	1.700											

Emissions

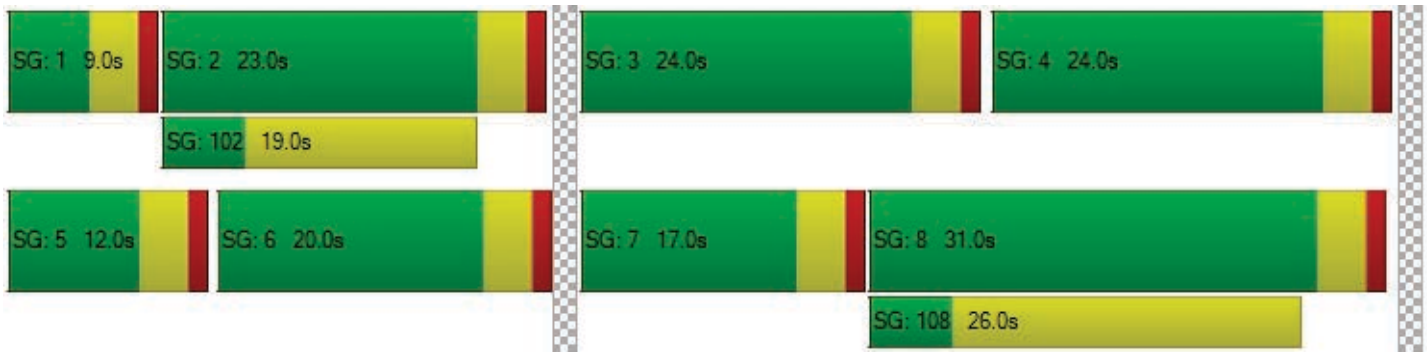
Vehicle Miles Traveled [mph]	4.30	55.89	28.79	8.36	43.21	11.01	0.61	1.95	0.64	1.99	3.54
Stops [stops/h]	56.32	538.38	296.99	153.04	580.28	134.66	16.79	65.39	18.17	70.00	117.37
Fuel consumption [US gal/h]	1.12	10.15	5.59	2.86	9.97	2.31	0.25	0.91	0.26	0.98	1.72
CO [g/h]	78.44	709.67	390.54	200.19	697.24	161.49	17.42	63.55	18.33	68.47	120.23
NOx [g/h]	15.26	138.08	75.98	38.95	135.66	31.42	3.39	12.36	3.57	13.32	23.39
VOC [g/h]	18.18	164.47	90.51	46.40	161.59	37.43	4.04	14.73	4.25	15.87	27.87

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	0.00	31.51	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.963	0.000	2.229	0.000
Crosswalk LOS	C	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	475	1100	1100
d_b, Bicycle Delay [s]	25.60	23.26	8.10	8.10
l_b,int, Bicycle LOS Score for Intersection	2.185	2.573	1.782	1.944
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 13: Project Driveway/W American Ave

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Project Driveway		West American Avenue		West American Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	15.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway		West American Avenue		West American Avenue	
Base Volume Input [veh/h]	0	0	0	85	185	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	17	6	0	0	1
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]	4	17	6	94	205	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	4	2	24	51	0
Total Analysis Volume [veh/h]	4	17	6	94	205	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.01	0.02	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.40	9.40	7.62	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.01	2.01	0.25	0.25	0.00	0.00
d_A, Approach Delay [s/veh]	9.59		0.46		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.76					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: Indian Hill Blvd/W American Ave

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

Intersection Setup

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
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	1	0	0	0	0	0	0
Entry Pocket Length [ft]	125.00	100.00	100.00	100.00	100.00	130.00	100.00	100.00	100.00	100.00	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]	40.00			35.00			15.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			South Indian Hill Boulevard			West American Avenue			West American Avenue		
Base Volume Input [veh/h]	70	837	12	95	815	16	4	31	80	25	32	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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	67	6	13	55	0	0	0	0	3	0	7
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]	78	996	19	118	960	18	4	34	89	31	36	77
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
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]	21	265	5	31	256	5	1	9	24	8	10	21
Total Analysis Volume [veh/h]	83	1061	20	126	1022	19	4	36	95	33	38	82
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	Yes
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow	No			No								
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	37	0	5	37	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	7.0	0.0	0.0	10.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	41.0	0.0	9.0	41.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	R	C	C
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80
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]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	62.3	53.6	53.6	62.3	54.1	54.1	9.7	9.7
g / C, Green / Cycle	0.78	0.67	0.67	0.78	0.68	0.68	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.14	0.32	0.32	0.21	0.31	0.01	0.09	0.10
s, saturation flow rate [veh/h]	609	1710	1699	601	3256	1454	1578	1531
c, Capacity [veh/h]	525	1144	1136	520	2197	981	239	242
d1, Uniform Delay [s]	3.31	6.42	6.42	3.62	6.16	4.28	33.80	34.17
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	1.41	1.42	1.11	0.71	0.04	2.08	2.71
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	0.16	0.47	0.47	0.24	0.47	0.02	0.56	0.63
d, Delay for Lane Group [s/veh]	3.45	7.83	7.84	4.73	6.87	4.32	35.88	36.88
Lane Group LOS	A	A	A	A	A	A	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.16	3.63	3.61	0.41	3.27	0.09	2.70	3.04
50th-Percentile Queue Length [ft/ln]	3.98	90.66	90.17	10.18	81.68	2.22	67.57	76.11
95th-Percentile Queue Length [veh/ln]	0.29	6.53	6.49	0.73	5.88	0.16	4.86	5.48
95th-Percentile Queue Length [ft/ln]	7.16	163.18	162.31	18.33	147.02	3.99	121.62	136.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.45	7.84	7.84	4.73	6.87	4.32	35.88	35.88	35.88	36.88	36.88	36.88
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.53			6.60			35.88			36.88		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.29											
Intersection LOS	B											
Intersection V/C	0.518											

Emissions

Vehicle Miles Traveled [mph]	21.03	137.39	136.53	9.95	80.68	1.50	3.20	15.15
Stops [stops/h]	7.16	163.18	162.31	18.33	294.04	3.99	121.62	136.99
Fuel consumption [US gal/h]	0.88	7.39	7.35	0.64	6.72	0.10	1.33	2.36
CO [g/h]	61.65	516.49	513.44	44.61	469.47	7.26	92.90	164.62
NOx [g/h]	12.00	100.49	99.90	8.68	91.34	1.41	18.08	32.03
VOC [g/h]	14.29	119.70	118.99	10.34	108.80	1.68	21.53	38.15

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	0.000	2.893	1.860	1.971
Crosswalk LOS	F	C	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	925	925	650	650
d_b, Bicycle Delay [s]	11.56	11.56	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.520	2.522	1.782	1.812
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 2: Indian Hill Blvd/San Bernardino Ave

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.731

Intersection Setup

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
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	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	40.00			40.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Indian Hill Boulevard			Indian Hill Boulevard			San Bernardino Avenue			San Bernardino Avenue		
Base Volume Input [veh/h]	120	692	91	82	701	175	145	394	171	63	276	72
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	63	0	5	50	3	5	0	0	0	0	5
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]	133	831	101	96	828	197	166	437	190	70	306	85
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
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	216	26	25	215	51	43	113	49	18	79	22
Total Analysis Volume [veh/h]	138	863	105	100	860	205	172	454	197	73	318	88
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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	10	23	0	11	24	0	0	24	0	0	24	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	14.0	27.0	0.0	15.0	28.0	0.0	0.0	28.0	0.0	0.0	28.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	6.8	28.9	28.9	5.1	27.2	27.2	24.0	24.0	24.0	24.0	24.0	24.0
g / C, Green / Cycle	0.10	0.41	0.41	0.07	0.39	0.39	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.08	0.26	0.26	0.06	0.29	0.29	0.17	0.24	0.12	0.09	0.17	0.05
s, saturation flow rate [veh/h]	1810	1900	1829	1810	1900	1775	995	1900	1615	793	1900	1615
c, Capacity [veh/h]	177	782	753	134	737	688	284	651	554	189	651	554
d1, Uniform Delay [s]	30.83	16.35	16.36	31.77	18.46	18.48	28.30	19.86	17.21	30.67	18.15	15.99
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.22	0.11	0.11	0.11	0.11
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
d2, Incremental Delay [s]	7.20	3.83	3.99	8.04	6.78	7.30	2.08	2.75	0.39	1.30	0.57	0.13
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	0.78	0.63	0.63	0.75	0.75	0.75	0.61	0.70	0.36	0.39	0.49	0.16
d, Delay for Lane Group [s/veh]	38.04	20.19	20.34	39.82	25.25	25.78	30.38	22.61	17.60	31.97	18.72	16.12
Lane Group LOS	D	C	C	D	C	C	C	C	B	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	2.48	6.21	6.02	1.85	8.01	7.61	2.82	6.26	2.23	1.21	3.79	0.92
50th-Percentile Queue Length [ft/ln]	61.95	155.31	150.41	46.35	200.24	190.13	70.59	156.59	55.71	30.31	94.87	23.00
95th-Percentile Queue Length [veh/ln]	4.46	10.30	10.04	3.34	12.65	12.13	5.08	10.37	4.01	2.18	6.83	1.66
95th-Percentile Queue Length [ft/ln]	111.50	257.50	250.97	83.42	316.28	303.20	127.07	259.20	100.29	54.56	170.77	41.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.04	20.25	20.34	39.82	25.44	25.78	30.38	22.61	17.60	31.97	18.72	16.12
Movement LOS	D	C	C	D	C	C	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	22.48			26.73			23.03			20.26		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.70											
Intersection LOS	C											
Intersection V/C	0.731											

Emissions

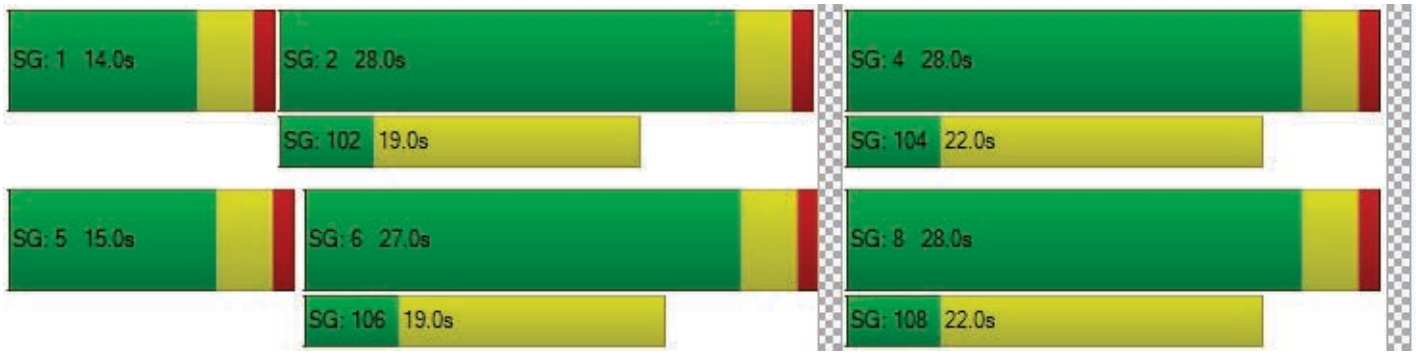
Vehicle Miles Traveled [mph]	10.65	38.06	36.66	25.34	139.34	130.53	10.99	29.00	12.59	18.19	79.23	21.92
Stops [stops/h]	127.43	319.50	309.41	95.34	411.93	391.12	145.22	322.13	114.61	62.35	195.16	47.32
Fuel consumption [US gal/h]	2.70	6.53	6.32	2.65	11.86	11.22	2.57	5.62	2.05	1.64	5.70	1.48
CO [g/h]	188.84	456.28	441.68	185.55	829.22	784.31	179.94	392.61	143.11	114.43	398.37	103.47
NOx [g/h]	36.74	88.78	85.93	36.10	161.34	152.60	35.01	76.39	27.84	22.26	77.51	20.13
VOC [g/h]	43.76	105.75	102.36	43.00	192.18	181.77	41.70	90.99	33.17	26.52	92.33	23.98

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	2.974	3.128	2.542	2.444
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	657	686	686	686
d_b, Bicycle Delay [s]	15.78	15.11	15.11	15.11
l_b,int, Bicycle LOS Score for Intersection	2.472	2.521	2.918	2.350
Bicycle LOS	B	B	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: College Ave/San Bernardino Ave

Control Type:	Two-way stop	Delay (sec / veh):	21.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

Intersection Setup

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	25.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	College Avenue		San Bernardino Avenue		San Bernardino Avenue	
Base Volume Input [veh/h]	1	19	22	509	376	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	5	5	1
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]	2	21	24	570	422	4
Peak Hour Factor	0.9230	0.9230	0.9230	0.9230	0.9230	0.9230
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	6	7	154	114	1
Total Analysis Volume [veh/h]	2	23	26	618	457	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.01	0.04	0.02	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	21.73	11.27	8.27	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.04	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.69	3.69	1.10	1.10	0.00	0.00
d_A, Approach Delay [s/veh]	12.11		0.33		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: College Ave/American Ave

Control Type:	All-way stop	Delay (sec / veh):	7.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.159

Intersection Setup

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
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	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	College Avenue			South College Avenue			West American Avenue			East American Avenue		
Base Volume Input [veh/h]	11	5	5	1	2	3	6	86	17	5	73	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	0	0	2	1	0	3	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]	13	6	6	1	2	3	7	97	20	6	84	0
Peak Hour Factor	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630	0.8630
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]	4	2	2	0	1	1	2	28	6	2	24	0
Total Analysis Volume [veh/h]	15	7	7	1	2	3	8	112	23	7	97	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	820	859	901	872
Degree of Utilization, x	0.04	0.01	0.16	0.12

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.11	0.02	0.56	0.40
95th-Percentile Queue Length [ft]	2.75	0.53	14.07	10.12
Approach Delay [s/veh]	7.55	7.22	7.75	7.69
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	7.70			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 5: S Indian Hill Blvd/I-10 Eastbound Ramps

Control Type:	Signalized	Delay (sec / veh):	21.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
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	0	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	145.00	100.00	100.00	100.00	265.00	100.00	265.00	100.00	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]	35.00			30.00			40.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Eastbound Ramps			I-10 Eastbound Ramps		
Base Volume Input [veh/h]	0	641	458	377	910	0	194	3	237	0	0	0
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	73	1	119	63	0	145	0	5	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]	0	785	509	537	1073	0	360	3	268	0	0	0
Peak Hour Factor	1.0000	0.9530	0.9530	0.9530	0.9530	1.0000	0.9530	0.9530	0.9530	1.0000	1.0000	1.0000
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	206	134	141	281	0	94	1	70	0	0	0
Total Analysis Volume [veh/h]	0	824	534	563	1126	0	378	3	281	0	0	0
Presence of On-Street Parking	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]	70
Active Pattern	Pattern 1
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 (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Maximum Green [s]	0	19	0	25	48	0	0	14	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	7.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
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				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	0.0	23.0	0.0	29.0	52.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	C	R	L	C	L	C	R	
C, Calculated Cycle Length [s]	70	70	70	70	70	70	70	70	
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]	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	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	22.9	22.9	22.9	23.7	50.6	11.4	11.4	11.4	
g / C, Green / Cycle	0.33	0.33	0.33	0.34	0.72	0.16	0.16	0.16	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.21	0.21	0.31	0.31	0.13	0.13	0.13	
s, saturation flow rate [veh/h]	3618	1615	1615	1810	3618	1810	1742	1615	
c, Capacity [veh/h]	1182	528	528	612	2611	296	285	265	
d1, Uniform Delay [s]	19.53	20.09	20.09	22.26	3.93	28.04	28.06	28.10	
k, delay calibration	0.50	0.50	0.50	0.30	0.50	0.15	0.15	0.16	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	2.04	5.94	5.94	14.40	0.52	6.11	6.54	7.45	
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	0.57	0.64	0.64	0.92	0.43	0.78	0.78	0.79	
d, Delay for Lane Group [s/veh]	21.57	26.03	26.03	36.66	4.45	34.16	34.60	35.55	
Lane Group LOS	C	C	C	D	A	C	C	D	
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	4.50	5.16	5.16	10.61	2.24	3.92	3.83	3.65	
50th-Percentile Queue Length [ft/ln]	112.52	128.89	128.89	265.16	56.00	98.01	95.66	91.13	
95th-Percentile Queue Length [veh/ln]	7.98	8.88	8.88	15.95	4.03	7.06	6.89	6.56	
95th-Percentile Queue Length [ft/ln]	199.50	221.99	221.99	398.68	100.80	176.42	172.18	164.03	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	21.57	26.03	36.66	4.45	0.00	34.34	34.60	35.34	0.00	0.00	0.00
Movement LOS		C	C	D	A		C	C	D			
d_A, Approach Delay [s/veh]		23.80			15.19			34.75			0.00	
Approach LOS		C			B			C			A	
d_I, Intersection Delay [s/veh]	21.83											
Intersection LOS	C											
Intersection V/C	0.734											

Emissions

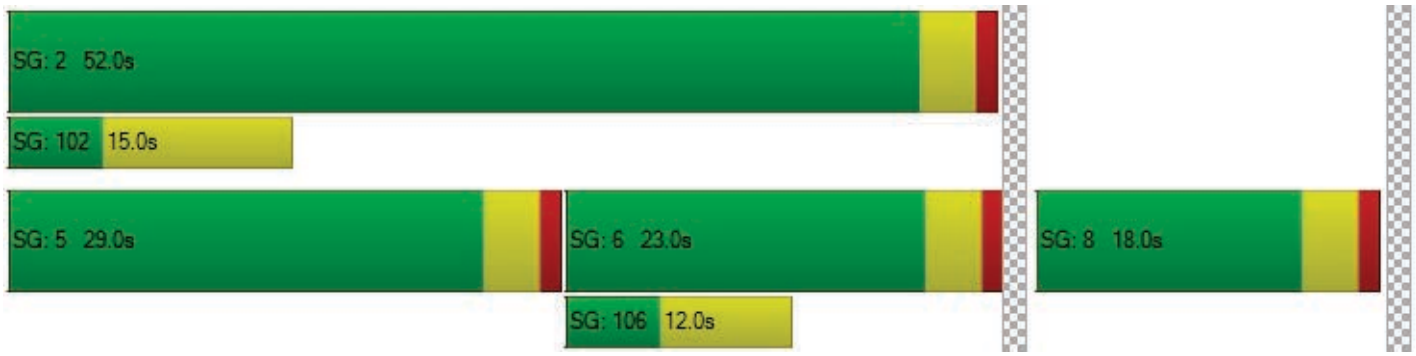
Vehicle Miles Traveled [mph]	34.13	17.06	17.06	25.40	50.79	19.81	19.17	17.92
Stops [stops/h]	462.93	265.15	265.15	545.47	230.40	201.63	196.78	187.46
Fuel consumption [US gal/h]	7.76	4.44	4.44	8.26	4.38	4.29	4.19	3.99
CO [g/h]	542.63	310.56	310.56	577.31	306.46	300.05	292.86	279.05
NOx [g/h]	105.58	60.42	60.42	112.32	59.63	58.38	56.98	54.29
VOC [g/h]	125.76	71.98	71.98	133.80	71.02	69.54	67.87	64.67

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.216	2.240
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	543	1371	400	0
d_b, Bicycle Delay [s]	18.58	3.46	22.40	35.00
l_b,int, Bicycle LOS Score for Intersection	2.307	2.953	2.652	4.132
Bicycle LOS	B	C	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 6: S Indian Hill Blvd/I-10 Westbound Ramps

Control Type:	Signalized	Delay (sec / veh):	40.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.908

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
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	1	0	0	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	285.00	100.00	285.00
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			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			I-10 Westbound Ramps			I-10 Westbound Ramps		
Base Volume Input [veh/h]	325	587	0	0	815	416	0	0	0	344	3	346
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	215	0	0	177	116	0	0	0	5	0	147
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]	364	867	0	0	1082	578	0	0	0	387	3	531
Peak Hour Factor	0.8840	0.8840	1.0000	1.0000	0.8840	0.8840	1.0000	1.0000	1.0000	0.8840	0.8840	0.8840
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]	103	245	0	0	306	163	0	0	0	109	1	150
Total Analysis Volume [veh/h]	412	981	0	0	1224	654	0	0	0	438	3	601
Presence of On-Street Parking	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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Split	Split	Split
Flashing Yellow Arrow												
Signal Group	1	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	30	83	0	0	49	0	0	0	0	0	29	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
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	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	34.0	87.0	0.0	0.0	53.0	0.0	0.0	0.0	0.0	0.0	33.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Calculated Cycle Length [s]	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
l1_p, Permitted Start-Up Lost Time [s]	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
g_i, Effective Green Time [s]	29.1	84.0	51.0	51.0		28.0	28.0	28.0
g / C, Green / Cycle	0.24	0.70	0.42	0.42		0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.23	0.27	0.24	0.40		0.19	0.21	0.22
s, saturation flow rate [veh/h]	1810	3618	5176	1615		1810	1664	1615
c, Capacity [veh/h]	439	2532	2195	685		422	388	377
d1, Uniform Delay [s]	44.57	7.41	26.06	33.44		43.65	44.58	44.93
k, delay calibration	0.37	0.50	0.50	0.50		0.30	0.35	0.37
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	24.45	0.45	1.03	24.92		10.45	19.52	24.50
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.39	0.56	0.95		0.82	0.89	0.92
d, Delay for Lane Group [s/veh]	69.02	7.86	27.09	58.36		54.10	64.10	69.43
Lane Group LOS	E	A	C	E		D	E	E
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	14.91	4.94	8.92	22.65		10.78	11.86	12.40
50th-Percentile Queue Length [ft/ln]	372.84	123.45	222.90	566.28		269.53	296.59	310.03
95th-Percentile Queue Length [veh/ln]	21.25	8.58	13.81	30.46		16.17	17.51	18.18
95th-Percentile Queue Length [ft/ln]	531.18	214.55	345.33	761.41		404.15	437.81	454.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	69.02	7.86	0.00	0.00	27.09	58.36	0.00	0.00	0.00	56.17	64.10	67.18
Movement LOS	E	A			C	E				E	E	E
d_A, Approach Delay [s/veh]	25.95			37.98			0.00			62.54		
Approach LOS	C			D			A			E		
d_I, Intersection Delay [s/veh]	40.03											
Intersection LOS	D											
Intersection V/C	0.908											

Emissions

Vehicle Miles Traveled [mph]	18.58	44.25	45.39	24.25		29.00	29.00	29.00
Stops [stops/h]	447.41	296.27	802.45	679.53		323.43	355.91	372.03
Fuel consumption [US gal/h]	9.02	5.03	13.05	12.52		8.04	9.06	9.60
CO [g/h]	630.72	351.39	912.09	875.07		561.94	633.64	671.05
NOx [g/h]	122.72	68.37	177.46	170.26		109.33	123.28	130.56
VOC [g/h]	146.18	81.44	211.39	202.81		130.24	146.85	155.52

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	51.34	51.34
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.251	2.407
Crosswalk LOS	F	F	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1383	817	0	483
d_b, Bicycle Delay [s]	5.70	21.00	60.00	34.50
l_b,int, Bicycle LOS Score for Intersection	2.709	2.593	4.132	3.279
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 7: S Indian Hill Blvd/W San Jose Ave

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.700

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
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	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	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	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			40.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West San Jose Avenue			West San Jose Avenue		
Base Volume Input [veh/h]	169	748	106	39	732	43	53	157	224	147	133	65
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	337	2	0	269	8	6	4	0	1	4	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]	211	1167	120	43	1082	56	65	178	249	164	152	72
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
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]	58	319	33	12	296	15	18	49	68	45	42	20
Total Analysis Volume [veh/h]	231	1275	131	47	1183	61	71	195	272	179	166	79
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]	80
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	18	34	0	8	24	0	0	26	0	0	26	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	14.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0
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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	22.0	38.0	0.0	12.0	28.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	5	10	0	0	10	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	

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	L	C	R	L	C	R
C, Calculated Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
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	2.00	0.00	0.00	2.00	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	2.00	2.00
g_i, Effective Green Time [s]	12.2	39.5	39.5	3.3	30.6	30.6	25.2	25.2	25.2	25.2	25.2	25.2
g / C, Green / Cycle	0.15	0.49	0.49	0.04	0.38	0.38	0.31	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.13	0.37	0.38	0.03	0.23	0.23	0.06	0.10	0.17	0.19	0.09	0.05
s, saturation flow rate [veh/h]	1810	1900	1839	1810	3618	1853	1153	1900	1615	941	1900	1615
c, Capacity [veh/h]	277	939	908	77	1387	710	347	596	507	288	596	507
d1, Uniform Delay [s]	32.90	16.34	16.49	37.66	19.69	19.69	25.72	21.00	22.66	30.80	20.65	19.81
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.14	0.11	0.11
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
d2, Incremental Delay [s]	6.51	5.64	6.16	7.70	1.87	3.63	0.29	0.32	0.89	2.88	0.25	0.14
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	0.83	0.76	0.77	0.61	0.59	0.59	0.20	0.33	0.54	0.62	0.28	0.16
d, Delay for Lane Group [s/veh]	39.41	21.98	22.66	45.36	21.56	23.32	26.00	21.31	23.54	33.67	20.90	19.95
Lane Group LOS	D	C	C	D	C	C	C	C	C	C	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.72	10.93	10.94	1.03	5.88	6.37	1.10	2.69	4.09	3.47	2.29	1.05
50th-Percentile Queue Length [ft/ln]	118.12	273.33	273.45	25.77	147.09	159.37	27.42	67.15	102.21	86.66	57.18	26.13
95th-Percentile Queue Length [veh/ln]	8.29	16.36	16.36	1.86	9.86	10.52	1.97	4.83	7.36	6.24	4.12	1.88
95th-Percentile Queue Length [ft/ln]	207.24	408.90	409.05	46.38	246.54	262.89	49.35	120.86	183.99	155.98	102.92	47.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.41	22.28	22.66	45.36	22.10	23.32	26.00	21.31	23.54	33.67	20.90	19.95
Movement LOS	D	C	C	D	C	C	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	24.73			23.00			23.06			26.11		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.08											
Intersection LOS	C											
Intersection V/C	0.700											

Emissions

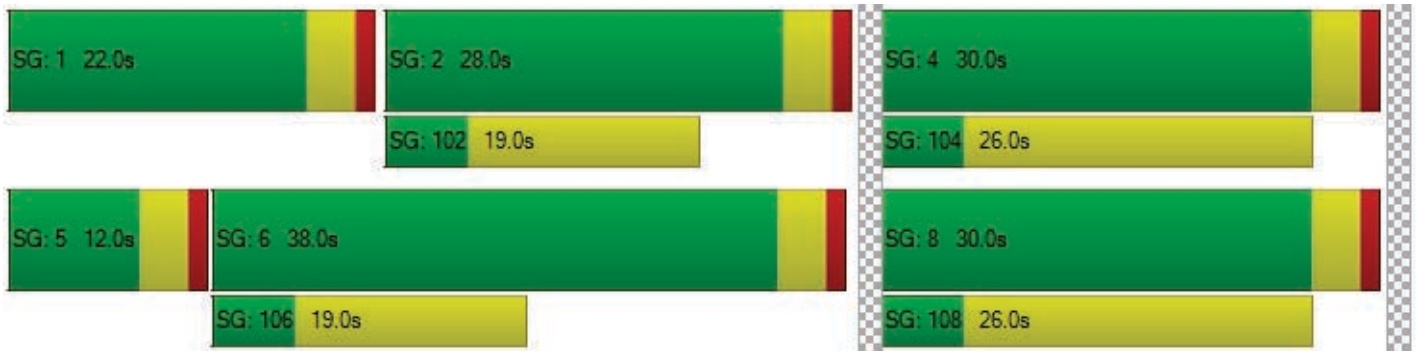
Vehicle Miles Traveled [mph]	9.86	30.27	29.75	23.35	408.69	209.37	4.24	11.65	16.24	10.25	9.50	4.52
Stops [stops/h]	212.61	492.00	492.22	46.38	529.54	286.86	49.35	120.86	183.99	155.98	102.92	47.04
Fuel consumption [US gal/h]	3.43	7.14	7.16	1.73	23.45	12.32	0.91	2.20	3.31	2.51	1.67	0.77
CO [g/h]	239.97	498.90	500.27	120.64	1639.22	860.99	63.50	153.69	231.10	175.45	116.43	53.60
NOx [g/h]	46.69	97.07	97.33	23.47	318.93	167.52	12.36	29.90	44.96	34.14	22.65	10.43
VOC [g/h]	55.61	115.63	115.94	27.96	379.90	199.54	14.72	35.62	53.56	40.66	26.98	12.42

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	3.235	3.138	2.410	2.321
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	850	600	650	650
d_b, Bicycle Delay [s]	13.23	19.60	18.23	18.23
l_b,int, Bicycle LOS Score for Intersection	2.910	2.270	2.447	2.259
Bicycle LOS	C	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 8: S College Ave/W-E San Jose Ave

Control Type:	All-way stop	Delay (sec / veh):	11.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.510

Intersection Setup

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
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	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	170.00	100.00	100.00	100.00	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]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South College Avenue			South College Avenue			West San Jose Avenue			East San Jose Avenue		
Base Volume Input [veh/h]	1	4	3	68	2	53	87	198	1	0	152	34
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
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	4	0	0	6	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]	1	4	3	75	2	59	97	224	1	0	175	38
Peak Hour Factor	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250	0.9250
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	1	1	20	1	16	26	61	0	0	47	10
Total Analysis Volume [veh/h]	1	4	3	81	2	64	105	242	1	0	189	41
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	662	690	680	812	752
Degree of Utilization, x	0.01	0.21	0.51	0.00	0.31

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.04	0.80	2.92	0.00	1.30
95th-Percentile Queue Length [ft]	0.92	20.08	73.02	0.09	32.40
Approach Delay [s/veh]	8.50	9.63	13.36		9.88
Approach LOS	A	A	B		A
Intersection Delay [s/veh]	11.47				
Intersection LOS	B				

Intersection Level Of Service Report
Intersection 9: S Mills Ave/E San Jose Ave

Control Type:	Two-way stop	Delay (sec / veh):	113.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.810

Intersection Setup

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	80.00	100.00	100.00	90.00	100.00	130.00
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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	North Mills Avenue		South Mills Avenue		East San Jose Avenue	
Base Volume Input [veh/h]	113	594	521	109	73	189
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	2	3	5	4	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]	126	661	581	126	85	210
Peak Hour Factor	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
Total 15-Minute Volume [veh/h]	33	171	150	33	22	54
Total Analysis Volume [veh/h]	130	684	601	130	88	217
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	0.15	0.01	0.01	0.00	0.81	0.43
d_M, Delay for Movement [s/veh]	9.78	0.00	0.00	0.00	113.27	17.43
Movement LOS	A	A	A	A	F	C
95th-Percentile Queue Length [veh/ln]	0.52	0.00	0.00	0.00	4.60	2.14
95th-Percentile Queue Length [ft/ln]	12.89	0.00	0.00	0.00	114.91	53.52
d_A, Approach Delay [s/veh]	1.56		0.00		45.08	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	8.12					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: N-S Mills Ave/E American Ave

Control Type:	Two-way stop	Delay (sec / veh):	32.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.164

Intersection Setup

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0
Entry Pocket Length [ft]	40.00	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]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	South Mills Avenue		North Mills Avenue		East American Avenue	
Base Volume Input [veh/h]	43	559	553	36	22	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	1	0	3	2	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]	48	621	614	43	26	59
Peak Hour Factor	0.9860	0.9860	0.9860	0.9860	0.9860	0.9860
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	157	156	11	7	15
Total Analysis Volume [veh/h]	49	630	623	44	26	60
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
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	0.05	0.01	0.01	0.00	0.16	0.12
d_M, Delay for Movement [s/veh]	9.08	0.00	0.00	0.00	32.49	17.10
Movement LOS	A	A	A	A	D	C
95th-Percentile Queue Length [veh/ln]	0.17	0.00	0.00	0.00	1.16	1.16
95th-Percentile Queue Length [ft/ln]	4.16	0.00	0.00	0.00	28.90	28.90
d_A, Approach Delay [s/veh]	0.65		0.00		21.76	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.62					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 11: S Indian Hill Blvd/W Arrow Hwy

Control Type:	Signalized	Delay (sec / veh):	53.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.929

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
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	1	0	1	1	0	0
Entry Pocket Length [ft]	75.00	100.00	100.00	75.00	100.00	100.00	120.00	100.00	140.00	145.00	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]	40.00			35.00			45.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			West Arrow Highway			West Arrow Highway		
Base Volume Input [veh/h]	167	508	175	122	499	62	95	897	186	156	640	89
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	337	5	44	269	44	56	0	3	5	0	56
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]	186	901	199	179	823	113	161	996	209	178	710	155
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
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]	48	232	51	46	211	29	41	256	54	46	182	40
Total Analysis Volume [veh/h]	191	926	205	184	846	116	165	1024	215	183	730	159
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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	17	35	0	14	32	0	15	31	0	14	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	17.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0	17.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	21.0	39.0	0.0	18.0	36.0	0.0	19.0	35.0	0.0	18.0	34.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
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	

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	L	C	R	L	C	C
C, Calculated 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]	2.00	2.00	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]	13.5	35.5	35.5	13.0	35.0	35.0	11.9	32.5	32.5	13.0	33.5	33.5
g / C, Green / Cycle	0.12	0.32	0.32	0.12	0.32	0.32	0.11	0.30	0.30	0.12	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.11	0.31	0.31	0.10	0.26	0.26	0.09	0.28	0.13	0.10	0.24	0.24
s, saturation flow rate [veh/h]	1810	1900	1783	1810	1900	1821	1810	3618	1615	1810	1900	1784
c, Capacity [veh/h]	224	613	575	214	602	577	198	1070	478	213	579	543
d1, Uniform Delay [s]	47.21	36.37	36.49	47.59	34.59	34.60	48.03	38.06	31.47	47.60	35.06	35.07
k, delay calibration	0.20	0.41	0.42	0.26	0.31	0.32	0.16	0.50	0.50	0.24	0.50	0.50
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
d2, Incremental Delay [s]	14.81	22.55	25.05	20.48	7.59	7.96	12.96	18.99	3.05	19.03	10.66	11.31
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	0.85	0.95	0.96	0.86	0.81	0.82	0.84	0.96	0.45	0.86	0.79	0.79
d, Delay for Lane Group [s/veh]	62.01	58.91	61.55	68.08	42.18	42.56	60.98	57.04	34.52	66.64	45.72	46.38
Lane Group LOS	E	E	E	E	D	D	E	E	C	E	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.93	18.37	17.79	6.10	13.01	12.54	5.01	15.64	4.86	5.94	12.53	11.87
50th-Percentile Queue Length [ft/ln]	148.26	459.22	444.82	152.51	325.17	313.61	125.23	391.07	121.44	148.43	313.15	296.67
95th-Percentile Queue Length [veh/ln]	9.92	25.40	24.71	10.15	18.92	18.35	8.68	22.13	8.47	9.93	18.33	17.52
95th-Percentile Queue Length [ft/ln]	248.10	634.94	617.76	253.78	473.03	458.82	216.99	553.22	211.80	248.34	458.25	437.91

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.01	59.89	61.55	68.08	42.34	42.56	60.98	57.04	34.52	66.64	45.97	46.38
Movement LOS	E	E	E	E	D	D	E	E	C	E	D	D
d_A, Approach Delay [s/veh]	60.46			46.49			54.06			49.56		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	53.04											
Intersection LOS	D											
Intersection V/C	0.929											

Emissions

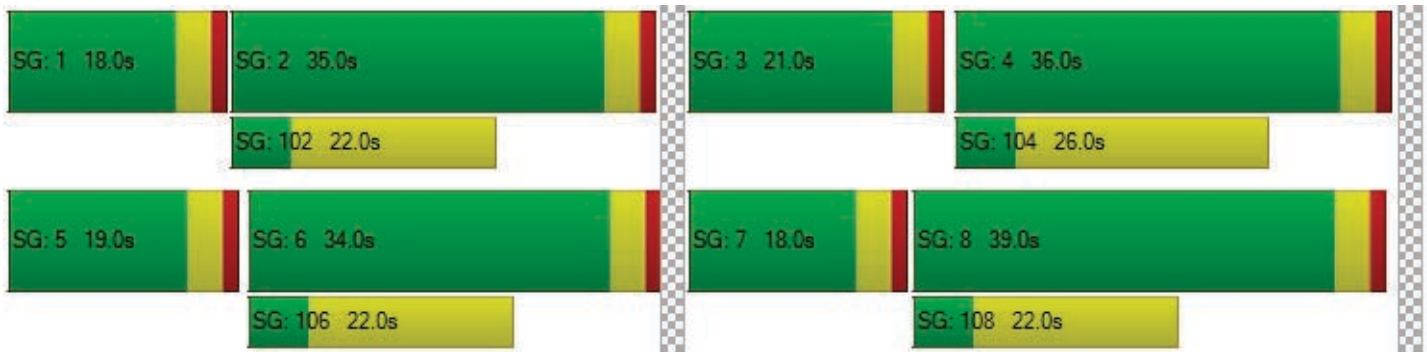
Vehicle Miles Traveled [mph]	94.90	288.79	273.13	12.45	33.23	31.89	19.45	120.72	25.35	17.77	44.51	41.81
Stops [stops/h]	194.08	601.16	582.31	199.65	425.67	410.54	163.94	1023.88	158.97	194.31	409.94	388.37
Fuel consumption [US gal/h]	7.72	23.22	22.39	4.52	8.68	8.38	4.75	28.75	4.36	5.03	9.89	9.38
CO [g/h]	539.34	1622.95	1564.97	316.30	606.81	585.98	332.20	2009.89	304.47	351.36	691.02	655.45
NOx [g/h]	104.94	315.77	304.49	61.54	118.06	114.01	64.63	391.05	59.24	68.36	134.45	127.53
VOC [g/h]	125.00	376.14	362.70	73.30	140.63	135.81	76.99	465.81	70.56	81.43	160.15	151.91

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.37	46.37	46.37	46.37
l_p,int, Pedestrian LOS Score for Intersectio	2.978	2.856	3.059	2.957
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]	636	582	564	545
d_b, Bicycle Delay [s]	25.57	27.65	28.37	29.09
l_b,int, Bicycle LOS Score for Intersection	2.650	2.505	2.718	2.444
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
12: S Indian Hill Blvd/Auto Center Dr

Control Type:	Signalized	Delay (sec / veh):	48.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.657

Intersection Setup

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
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	2	0	0	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	140.00	100.00	120.00	75.00	100.00	75.00	100.00	100.00	50.00
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]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	South Indian Hill Boulevard			South Indian Hill Boulevard			Auto Center Drive			Auto Center Drive		
Base Volume Input [veh/h]	28	828	19	83	764	221	307	33	84	28	18	86
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 [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	74	0	0	68	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]	31	993	21	92	916	245	341	37	93	31	20	95
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
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]	8	253	5	23	233	62	87	9	24	8	5	24
Total Analysis Volume [veh/h]	32	1011	21	94	933	249	347	38	95	32	20	97
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
Active Pattern	Pattern 1
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 (Basic)

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Maximum Green [s]	5	16	0	6	17	0	41	46	0	6	11	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
Walk [s]	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Pedestrian Clearance [s]	0.0	10.0	0.0	0.0	14.0	0.0	0.0	21.0	0.0	0.0	10.0	0.0
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
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
Advanced 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
Advanced 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

Phasing & Timing: Pattern 1

Split [s]	9.0	20.0	0.0	10.0	21.0	0.0	45.0	50.0	0.0	10.0	15.0	0.0
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	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
Minimum Recall	No	No		No	No		Yes	No		Yes	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	

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	R	L	C	R	C	R
C, Calculated Cycle Length [s]	90	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	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	2.8	24.6	24.6	6.1	28.0	28.0	47.3	47.3	37.3	47.3	10.3
g / C, Green / Cycle	0.03	0.27	0.27	0.07	0.31	0.31	0.53	0.53	0.41	0.53	0.11
(v / s)_i Volume / Saturation Flow Rate	0.02	0.19	0.19	0.05	0.26	0.15	0.10	1.26	0.06	0.27	0.06
s, saturation flow rate [veh/h]	1810	3618	1880	1810	3618	1615	1295	201	1615	191	1615
c, Capacity [veh/h]	55	1083	563	123	1219	544	241	182	627	190	191
d1, Uniform Delay [s]	43.05	27.20	27.21	41.21	26.66	23.39	30.09	29.17	17.90	14.97	37.21
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.50	0.11	0.43	0.11
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
d2, Incremental Delay [s]	9.18	2.75	5.23	9.24	4.62	2.76	1.93	205.48	0.11	3.02	2.08
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
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
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

Lane Group Results

X, volume / capacity	0.58	0.63	0.63	0.76	0.77	0.46	0.55	1.39	0.15	0.27	0.51
d, Delay for Lane Group [s/veh]	52.23	29.95	32.44	50.45	31.28	26.15	32.03	234.65	18.01	17.98	39.29
Lane Group LOS	D	C	C	D	C	C	C	F	B	B	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.83	6.70	7.36	2.32	9.66	4.57	2.40	13.59	1.21	0.64	2.10
50th-Percentile Queue Length [ft/ln]	20.73	167.59	184.04	57.98	241.49	114.37	60.11	339.81	30.15	15.98	52.44
95th-Percentile Queue Length [veh/ln]	1.49	10.95	11.81	4.17	14.76	8.08	4.33	23.66	2.17	1.15	3.78
95th-Percentile Queue Length [ft/ln]	37.32	273.74	295.29	104.37	368.92	202.06	108.19	591.48	54.28	28.76	94.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.23	30.77	32.44	50.45	31.28	26.15	154.82	234.65	18.01	17.98	17.98	39.29
Movement LOS	D	C	C	D	C	C	F	F	B	B	B	D
d_A, Approach Delay [s/veh]	31.45			31.69			136.05			31.85		
Approach LOS	C			C			F			C		
d_I, Intersection Delay [s/veh]	48.49											
Intersection LOS	D											
Intersection V/C	2.657											

Emissions

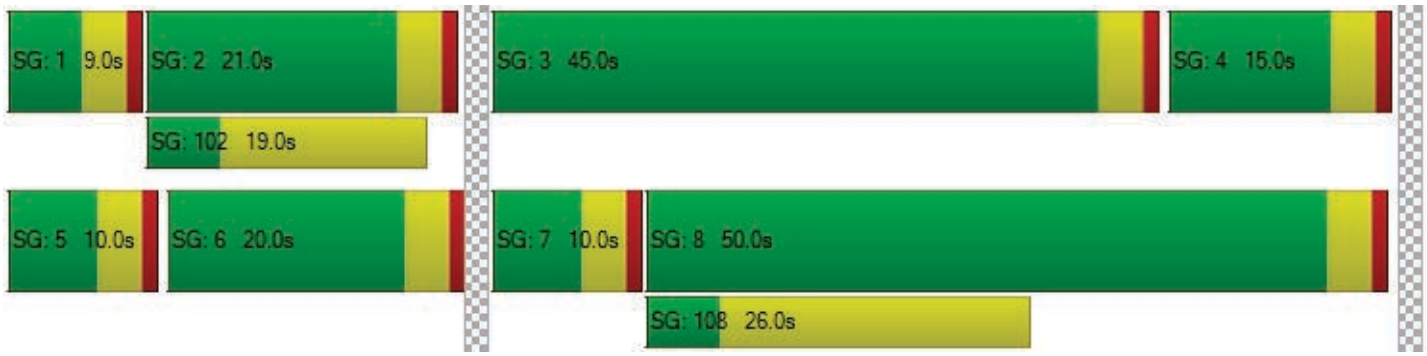
Vehicle Miles Traveled [mph]	2.53	53.60	27.88	4.72	46.89	12.52	3.13	6.00	2.25	1.23	2.30
Stops [stops/h]	33.17	536.28	294.47	92.77	772.78	182.99	96.17	543.70	48.25	25.57	83.90
Fuel consumption [US gal/h]	0.69	10.21	5.61	1.84	13.54	3.18	1.52	15.33	0.71	0.38	1.33
CO [g/h]	47.94	713.98	392.00	128.81	946.38	222.18	106.29	1071.52	49.46	26.73	93.23
NOx [g/h]	9.33	138.91	76.27	25.06	184.13	43.23	20.68	208.48	9.62	5.20	18.14
VOC [g/h]	11.11	165.47	90.85	29.85	219.33	51.49	24.63	248.33	11.46	6.19	21.61

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	0.00	36.45	0.00
l_p,int, Pedestrian LOS Score for Intersectio	2.931	0.000	2.323	0.000
Crosswalk LOS	C	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	356	378	1244	1133
d_b, Bicycle Delay [s]	30.42	29.61	6.42	8.45
l_b,int, Bicycle LOS Score for Intersection	2.145	2.612	2.352	1.805
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 13: Project Driveway/W American Ave

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Project Driveway		West American Avenue		West American Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	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]	15.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway		West American Avenue		West American Avenue	
Base Volume Input [veh/h]	0	0	0	138	120	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	10	19	0	0	4
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]	3	10	19	153	133	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	5	38	33	1
Total Analysis Volume [veh/h]	3	10	19	153	133	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
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	0.00
d_M, Delay for Movement [s/veh]	10.50	8.98	7.49	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.03	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.17	1.17	0.80	0.80	0.00	0.00
d_A, Approach Delay [s/veh]	9.33		0.83		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.82					
Intersection LOS	B					

APPENDIX F

SIGNAL WARRANT WORKSHEETS

PEAK HOUR VOLUME WARRANT
URBAN CONDITIONS

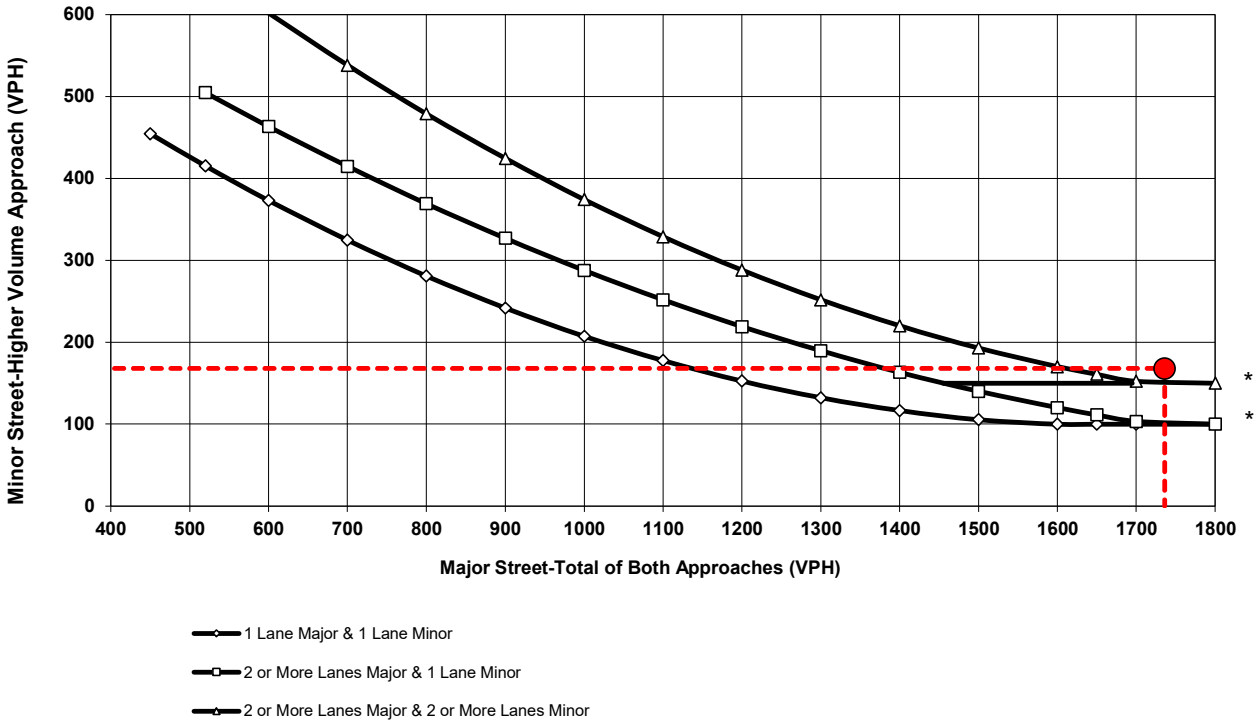
Peak Hour: AM **Scenario:** OY

Major Street: Mills Ave **Minor Street:** San Jose Ave

Total of Both Approaches (VPH):	1736	Higher Volume Approach (VPH):	168
Number of Approach Lanes:	1	Number of Approach Lanes:	1

SIGNAL WARRANT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:
150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

OY Conditions
AM Peak Hour Volume Warrant
Mills Ave / San Jose Ave

PEAK HOUR VOLUME WARRANT
URBAN CONDITIONS

Peak Hour: AM

Scenario: Horizon Year

Major Street: Mills Ave

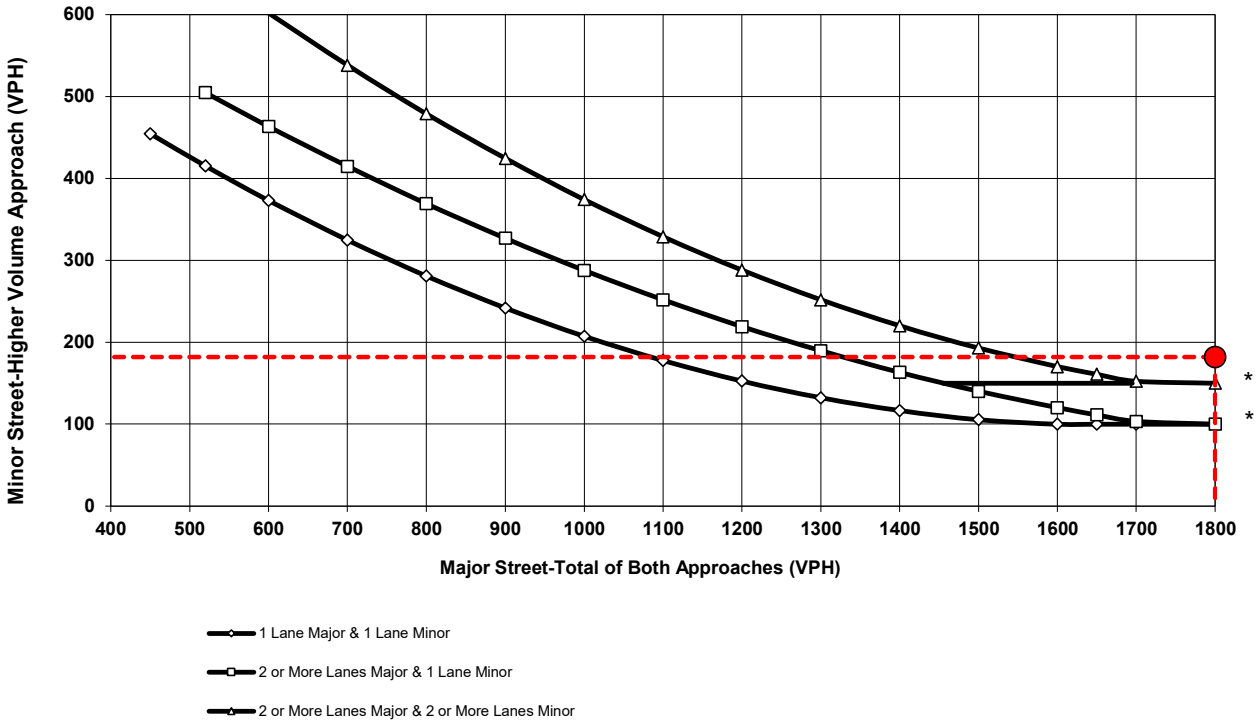
Minor Street: San Jose Ave

Total of Both Approaches (VPH): 1890
Number of Approach Lanes: 1

Higher Volume Approach (VPH): 182
Number of Approach Lanes: 1

SIGNAL WARRANT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:
150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

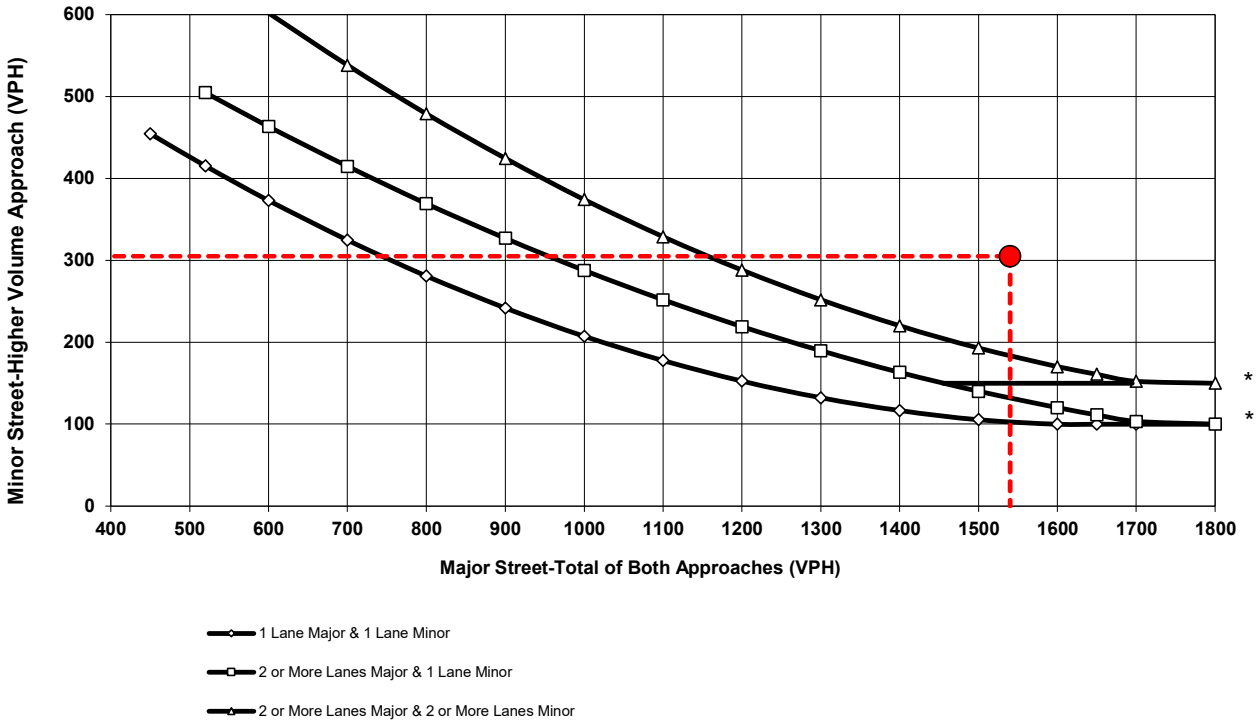
Horizon Year Conditions
AM Peak Hour Volume Warrant
Mills Ave / San Jose Ave

PEAK HOUR VOLUME WARRANT
URBAN CONDITIONS

Peak Hour:	**PM**	**Scenario:**	**Horizon Year**
Major Street:	**Mills Ave**	**Minor Street:**	**San Jose Ave**
Total of Both Approaches (VPH):	**1540**	Higher Volume Approach (VPH):	**305**
Number of Approach Lanes:	**1**	Number of Approach Lanes:	**1**

SIGNAL WARRANT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:
150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

Horizon Year Conditions
PM Peak Hour Volume Warrant
Mills Ave / San Jose Ave